

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

NEPR

Received:

Apr 12, 2021

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IN RE: REVIEW OF LUMA'S INITIAL
BUDGETS

CASE NO. NEPR-MI-2021-0004

SUBJECT: Responses to April 5th Resolution and Order
and to Requests for Information on Initial Budgets Filing.

**MOTION IN COMPLIANCE WITH RESOLUTION AND ORDER OF APRIL 5,
2021 AND SUBMITTING RESPONSES TO REQUESTS FOR INFORMATION**

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

COME now **LUMA Energy, LLC** ("ManagementCo"), and **LUMA Energy ServCo, LLC** ("ServCo"), (jointly referred to as "**LUMA**"), and respectfully state and request the following:

1. On February 24, 2021, LUMA filed before this Honorable Puerto Rico Energy Bureau ("Energy Bureau" and/or "Bureau") a Petition for Approval of Initial Budgets and Related Terms of Service ("Initial Budgets Petition"), pursuant to Section 6.22 of Act 57-2014, as amended, the "Puerto Rico Energy Transformation and Relief Act" (Act 57-2014), to the Rate Case proceeding conducted by this Bureau in Case No. CEPR-AP-2015-0001 ("2017 Rate Case"), and per LUMA's obligations under Section 4.2 (e) of the Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement dated as of June 22, 2020, by and among the ("Puerto Rico Electric Power Authority ("PREPA"), the Puerto Rico Public-Private Partnerships Authority ("P3 Authority") ("OMA").

2. On April 6, 2021, LUMA submitted clarifications to the proposed Initial Budgets that were filed as Exhibit 1 to LUMA's Initial Budgets Petition ("Initial Budgets").

3. On April 5, 2021, this honorable Energy Bureau issued a Resolution and Order on “Completeness of LUMA’s Initial Budgets Filing.” (“April 5th Order”). *See* April 5th Order at page 3. This honorable Bureau stated that additional discussion on “key matters, supporting data, analysis, and assessments [is] necessary for the Energy Bureau to make an adequate evaluation [of the Initial Budgets].” *Id.*

4. In the April 5th Order, this Bureau directed LUMA to, on or before April 12, 2021, provide information and responses to requests included in Attachment A to the April 5th Order (“Requests for Information”), modify the February 24 Petition accordingly, and submit an updated Generation Budget and any related information and all documentation.

5. With this Motion, LUMA is submitting LUMA’s responses to the nine requests for information that are included in Attachment A to the April 5th Order. *See* Exhibit 1 (Responses). The Responses are accompanied by the following attachments, some of which will be filed for the record using the Bureau’s electronic filing platform, while others will be sent by email as they are being submitted in Microsoft Excel format:

Initial Budgets Request Number	Attachment Number(s)	Format of Attachment and mode of submission
01	Attachment 1	Excel table, via email (partial confidentiality)
02	Attachment 1	Excel table, via email (confidential document)
03	Attachments 1 and 3	Excel tables, via email (confidential documents)
03	Attachments 2 and 4	Pdf documents, submitted using the filing docket (confidential documents)
05 (a)	Attachment 1	Pdf document, submitted using the filing docket (partial confidentiality)
05(b)	Attachment 1	Pdf document, submitted using the filing docket (confidential)

05(b)	Attachment 2	Excel table, via email (confidential)
05(b)	Attachment 3	Pdf document, submitted using the filing docket (confidential)
05(b)	Attachment 4	Excel table, via email (confidential)
05(b)	Attachment 5	Excel table, via email (confidential)
05(d)	Attachment 1	Pdf document, submitted using the filing docket
05(d)	Attachment 2	Pdf document, submitted using the filing docket
05(d)	Attachment 3	Pdf document, submitted using the filing docket (confidential)
05(d)	Attachment 4	Pdf document, submitted using the filing docket
05(f)	Attachment 1	Pdf document, submitted using the filing docket
07	Attachments 1 and 2	Pdf documents, via email (confidential)
08	Attachment 1	Excel table, via email (confidential)
09	Attachments 1 and 2	Excel table, via email (confidential)

6. Under separate cover, LUMA will be submitting a request to file some of the aforementioned attachments under seal of confidentiality.

7. It is respectfully submitted that with this Motion, LUMA does not require to modify the February 24 Petition and is not submitting additional revisions to the Initial Budgets. As mentioned above, on April 6, 2021, LUMA submitted before this Bureau revisions and clarifications to the Initial Budgets.

8. In the April 5th Resolution, this honorable Bureau also referenced the fact that LUMA had not received a Generation Budget from PREPA and that the proposed Generation Budget included in the Initial Budgets is a projected allocation. *Id.* The Bureau then requested “an

updated Generation Budget and related information and all documentation.” *Id.* With this Motion, LUMA is submitting a response to said request, informing that as of the date of this filing, despite significant effort LUMA has not received the PREPA Generation Budget and is unable to provide the requested information. *See* Response to Request No. 8. LUMA is also requesting that this Bureau approve LUMA’s proposed allocation of the Generation Budget for the Fiscal Year 2022, in lieu of the PREPA Generation Budget. *Id.* Attachment 1 to Response No. 8 is the Generation Budget Schedule in Microsoft Excel format.

WHEREFORE, LUMA respectfully requests that the Bureau **take notice** of aforementioned, **accept** LUMA’s Responses to the Requests for Information that are being submitted today, and **deem** that LUMA complied with the April 5th Order.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 12th day of April 2021.

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



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NEPR-MI-2021-0004

Initial Budgets Response to April 5, 2021 RFI

List of Response Attachments

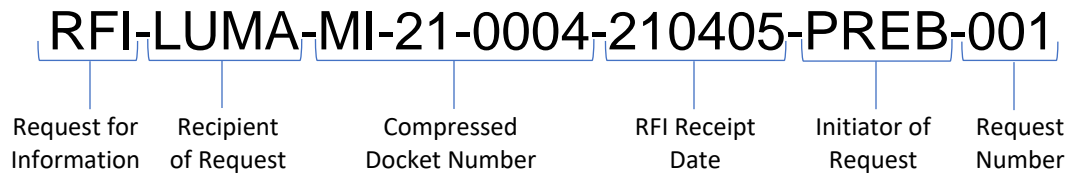
Response ID	Attachment Name	Description
RFI-LUMA-MI-21-0004-210405-PREB-001	Attachment 1*	2017 Rate Order and Generation Budget Allocation Supporting Workpapers
RFI-LUMA-MI-21-0004-210405-PREB-002	Attachment 1*	Historical PREPA General Ledger Information
RFI-LUMA-MI-21-0004-210405-PREB-003	Attachment 1*	Pro Forma LUMA and PREPA Working Papers
	Attachment 2	Reconciliation Check to FY2021 Certified Budget by the FOMB
	Attachment 3*	PREPA Account Hierarchy
	Attachment 4	Responsibility Flex Field Hierarchy
RFI-LUMA-MI-21-0004-210405-PREB-005a	Attachment 1	Gap Assessments
RFI-LUMA-MI-21-0004-210405-PREB-005b	Attachment 1	Distribution Line Inspections (Paper Copies)
	Attachment 2*	Distribution Line Inspections Data
	Attachment 3	Substation Inspections (Paper Copies)
	Attachment 4*	Transmission Substation Inspections Data
	Attachment 5*	Distribution Substations Inspections Data
RFI-LUMA-MI-21-0004-210405-PREB-005d	Attachment 1	Generation Resource Adequacy Assessment
	Attachment 2	Generation Operations Dispatch Assessment
	Attachment 3	Generation Plant Assessment
	Attachment 4	System Reliability Performance Assessment
RFI-LUMA-MI-21-0004-210405-PREB-005f	Attachment 1	Program Brief Template
RFI-LUMA-MI-21-0004-210405-PREB-007	Attachment 1	Federal Funding Procurement Manual Summary
	Attachment 2	Non-Federal Funding Procurement Manual Summary
RFI-LUMA-MI-21-0004-210405-PREB-008	Attachment 1*	Generation Budget
RFI-LUMA-MI-21-0004-210405-PREB-009	Attachment 1*	Capital Supporting Workpapers
	Attachment 2*	Operations & Maintenance Supporting Workpapers

Note: * Denotes attachments that have been provided in Microsoft Excel format.

Request Naming Convention

Please note that LUMA proposes to use the following naming convention to categorize and reference any requests made in this process and future processes.

Example:



Initial Budgets

Docket ID: NERP-MI-2021-004

Information Response Round 1 to: PREB

Reference: RFI-LUMA-MI-21-0004-210405-PREB-001

Request:

Provide all supporting workpapers used to determine that Initial Budgets are consistent with PREPA's current rate order, issued by the Energy Bureau through the January 10, 2017 Final Resolution and Order and the March 8, 2018 Final Resolution and Order in Case No.: CEPR-AP-2015-0001 (collectively, "2017 Final Rate Order").

Response:

Please refer to RFI-LUMA-MI-21-0004-210405-PREB-001 Attachment 1, provided in Microsoft Excel format. As described within Initial Budgets, LUMA informed its budgeting approach from its review of the 2017 Rate Order, more specifically from the total approved PREPA Base Rate Revenue Requirement. This attachment outlines information supporting the PREPA Base Rate Revenue Requirement limit, which supports information contained in Schedule 5.6, as well as LUMA's allocation of the Generation Budget. As confirmed within the clarification filed April 6, 2021 LUMA's proposed annual budgets are within limits approved in the January 10, 2017 Final Resolution and Order and the March 8, 2017 Final Resolution.

Initial Budgets

Docket ID: NERP-MI-2021-0004

Information Response Round 1 to: PREB

Reference: RFI-LUMA-MI-21-0004-210405-PREB-002

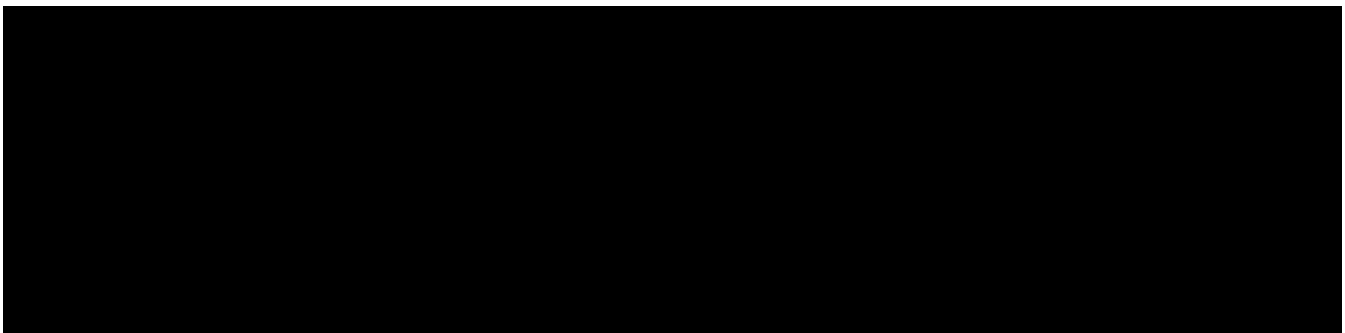
Request:

Provide for the three (3) previous calendar years a copy of the consolidated summary of PREPA historical financial results, developed by LUMA, showing accordance to Federal Energy Regulatory Commission ("FERC") Uniform System of Accounts (FERC Form 1), and including PREPA's O&M Expense Benchmark Profile.

Response:

LUMA has sought an informative context to understand and assess PREPA's historic and budgeted T&D operating expenses and, ultimately, to characterize future budgets under the OMA. During the T&D Operator solicitation process (i.e., the 2019-20 era leading to the OMA), LUMA used PREPA's Oracle EBS general ledger (GL) data (provided to all qualified bidders) to classify these records, as far as practical under the circumstances, to the FERC Uniform System of Accounts (USoA, and reported in FERC Form 1). LUMA's original objective was to both identify patterns and trends and potentially investigate some external comparisons to other utility systems.

Later, at the beginning of LUMA's Front-end Transition period (circa August 2020), LUMA extended its prior GL classification work to append FY2020 actual results (then recently concluded on June 30, 2020) and FY2021 budget data in a parallel dataset. A summary of PREPA's Non-Fuel Operating and Maintenance (NFOM) expenses, classified at a highly aggregated level of FERC USoA categories, is summarized below:



The requested details of the FERC USoA are presented in the RFI-LUMA-MI-21-0004-210405-PREB-002-Attachment 1 (provided in Microsoft Excel format) and they are linked to the LUMA working papers (i.e. GL data source with LUMA classifications.)

The following background is essential for understanding any potential use of this data:

- PREPA's financial results are unaudited for the periods in question. Any assessment that relies on this data is necessarily qualified by this uncertainty in the underlying accounting records.
- PREPA's general ledger accounts are not recorded strictly according to the FERC USoA, although there is close alignment. Nevertheless, LUMA made classifications and interpretations of PREPA NFOM accounts to the best of our professional ability to align them as far as practical to the USoA. PREPA has not reviewed or validated any classification completed by LUMA.
- It is important to note that the FERC USoA are required for U.S. *investor-owned* electric utilities (IOUs) and publicly available data is available for these same systems for potential comparative use. PREPA is a government-owned system. Different types of utility systems often have different operating characteristics (e.g. pension systems, asset capitalization policies, outsourcing strategies, management organizations, etc.) that affect overall costs.
- None of the attached data has been validated by PREPA and GL account data was only provided by PREPA at a summary level. Any final use of this data for definitive benchmarking would require review of accounts a transaction level data that was not available to LUMA.
- LUMA's professional view of, and any potential use of, such benchmarks is that they are one of numerous management tools available to enhance the understanding of PREPA's system and support planning and budgeting. In short, any such benchmarking analysis is informative but not definitive or prescriptive to any specific management action. It offers comparative information for reference and should be used to understand root causes of operational differences (with an aim to identifying potential improvement opportunities), not as a strict ranking or assessment of "good" vs. "bad".

LUMA has not performed or validated a full *PREPA O&M Expense Benchmark Profile* (as implied in the request above).

Using the GL data source (RFI-LUMA-MI-21-0004-210405-PREB-002 Attachment 1) as a foundation, LUMA did perform various preliminary comparative analyses to gain an understanding of PREPA's relative NFOM cost levels to US IOUs. These analyses relied on a variety of LUMA assumptions and inputs, including:

- Considering various potential adjustments (a.k.a. *normalizations*) to both PREPA accounts and FERC references to try to account for material differences in operations and improve comparability. Some illustrative examples include:
 - Eliminating the impact of transmission wheeling fees paid by IOUs, as PREPA is an unconnected island system.
 - Eliminating the impact of pension and benefit costs to reduce differences due to different pension system.
 - Accounting for potential variation in wage rates, material costs, etc.
- Varying the comparison peer groups (e.g. all U.S. IOU's vs. semi-tropical ones only (e.g. Florida, Hawaii, Carolinas, etc.)

None of the comparative analyses described above were validated by PREPA, directly used by LUMA in forming or assessing the Initial Budget or prepared in any completed form for use by LUMA management. Moreover, LUMA has not reached any conclusions about the many and various assumptions (e.g. peer groups, potential normalizations, applicability of comparison to US IOUs, etc.) necessary to complete a benchmark profile suitable for stakeholder review.

Initial Budgets

Docket ID: NERP-MI-2021-0004

Information Response Round 1 to: PREB

Reference: RFI-LUMA-MI-21-0004-210405-PREB-003

Request:

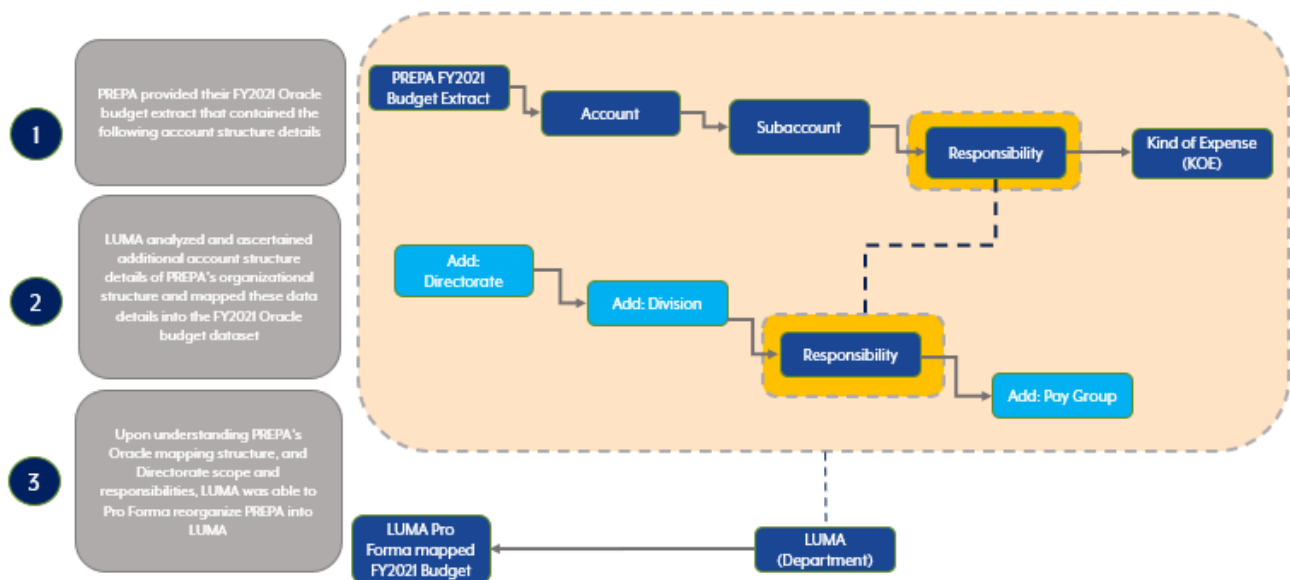
Provide an account map and a Pro Forma LUMA and PREPA workpapers and supporting materials, that shows PREPA's remap to the new organization structure that includes LUMA and Generation (Current PREPA -> Pro Forma LUMA and PREPA).

Response:

Account Map

LUMA provides the below account map to illustrate how LUMA obtained and analyzed PREPA's hierarchy of accounts and structure and Pro Forma reorganized this data to reflect LUMA's roles and responsibilities.

Account Map - PREPA to Pro Forma LUMA¹



¹ The Pro Forma mapping of PREPA's Budget to LUMA is simply additional information on how PREPA would look if organized like LUMA. LUMA's budget is a bottom's up build-up of LUMA's Organization, which understands PREPA's Organization, but is not PREPA.



Pro Forma LUMA and PREPA workpapers and supporting materials

Refer to RFI-LUMA-MI-21-0004-210405-PREB-003-Attachement 1 (provided in Microsoft Excel format) for the Pro Forma LUMA and PREPA working papers.

RFI-LUMA-MI-21-0004-210405-PREB-003-Attachment 1 includes:

- Tab 1: PREPA FY2021 GL Budget Details and Pro Forma mapping of PREPA to LUMA (column AD),
- Tab 2: A reconciliation check done by LUMA to verify that the PREPA budget details aligns with the FY2021 Certified Budget by the FOMB (RFI-LUMA-MI-21-0004-210405-PREB-003-Attachment 2),
- Tab 3: A reconciliation of the FY2021 Operational Budgets of PREPA, at the Directorate level, and the Pro Forma mapping of the budget over to LUMA's Organizational structure, including separation of Generation and PREPA Legacy accounts.

LUMA notes that the Pro Forma view is for information only and that this only depicts what PREPA's FY2021 would look like if structured like LUMA. It is not LUMA's budget buildup. LUMA is not PREPA, and as such, our budget build-ups as filed within our Initial Budget are LUMA's developed budgets. Understanding PREPA's Organization and how its department level budget allocation linked over to LUMA was information utilized in the development of LUMA's budget.

LUMA further provides the following chart of account mappings utilized to understand PREPA's chart of account mapping in the development of the Pro Forma LUMA view.

- RFI-LUMA-MI-21-0004-210405-PREB-003-Attachment 3 (PREPA Account Hierarchy), provided in Microsoft Excel format.
- RFI-LUMA-MI-21-0004-210405-PREB-003-Attachment 4 (Responsibility Flex Field Hierarchy).

Initial Budgets

Docket ID: NERP-MI-2021-0004

Information Response Round 1 to: PREB

Reference: RFI-LUMA-MI-21-0004-210405-PREB-004

Request:

To the extent it is not fully addressed in items #2 and #3 above, provide a comparison and reconciliation of PREPA's capital, O&M and administrative and other cost expenditures, over the most recent five-year period, that is sufficiently detailed to allow a comparison with LUMA's proposed spending accounts and categories in the Initial Budgets.

Response:

LUMA has provided historical O&M and administrative and other cost expenditures data in response to RFI-LUMA-MI-21-0004-210405-PREB-002 and RFI-LUMA-MI-21-0004-210405-PREB-003 (5-years of PREPA unaudited actual data and 1-year of PREPA Budget) and the datasets contained therein used to inform LUMA within the development of the Initial Budgets.

As discussed within the PREB Technical Conference for NEPR-MI-2019-0007 on February 22, 2021, during LUMA's budget development and after repeated requests to PREPA, PREPA did not provide LUMA with detailed historical capital spending data. However, through other requests LUMA received an unofficial breakdown of capital and is able to provide the following aggregated data pertaining to capital PREPA information supporting the 2020 Fiscal Plan (however no further detail was provided). While it was denoted as 'Actual', LUMA has in no way validated this information, nor can attest to this information being actual information for PREPA during Fiscal Years (FY) 2017-2020.

Note 1 - PREPA reallocated approximately \$50 million of unspent Necessary Maintenance Expense to Generation costs near the end of the 2019 year. Adjusted to remove end of year reallocation of budget to Generation.

Note 2 – information in table above considered Confidential.

Initial Budgets

Docket ID: NERP-MI-2021-0004

Information Response Round 1 to: PREB

Reference: RFI-LUMA-MI-21-0004-210405-PREB-005

Request:

Provide workpapers and supporting documentation underlying the following:

- a) Organizational Health Assessment identified on the Initial Budgets, page 22, and summarized in Appendix C of the Initial Budgets;
- b) The Asset Condition Assessment identified on the Initial Budgets, page 22, and summarized in Appendix C of the Initial Budgets;
- c) The System Operations Assessment identified on the Initial Budgets, page 23, and summarized in Appendix C of the Initial Budgets;
- d) The Generation Resource Adequacy assessment and System Reliability Performance assessment summarized in Appendix C.3 and C.4 of the Initial Budgets;
- e) The Program Sequencing and Prioritization Process illustrated in the Initial Budgets, Figure 1-6 of the Initial Budgets; and
- f) The Program Brief developed by LUMA to detail the scope of work for each Initial Budgets program including cost estimates, benefits, timeframe, and resource requirements, as discussed in the Initial Budgets, page 62, and as summarized in Schedule 5.4 and Appendix D.

Response:

- a) The Organization Health Assessment was completed as part of the Gap Assessments. The Gap Assessments in their entirety are a comprehensive document that includes the Organization Health Assessment and all associated workpapers and supporting documentation. Please refer to the Gap Assessments in RFI-LUMA-MI-21-0004-210405-PREB-005a Attachment 1.
- b) The Asset Condition Assessment was completed through a series of asset inspections. Please refer to the following attachments for all asset inspection workpapers and supporting documentation:
 - i. For paper copies of distribution line inspections, please refer to RFI-LUMA-MI-21-0004-210405-PREB-005b Attachment 1.
 - ii. For all distribution line inspection data, please refer to RFI-LUMA-MI-21-0004-210405-PREB-005b Attachment 2.
 - iii. For paper copies of all substation inspections, please refer to RFI-LUMA-MI-21-0004-210405-PREB-005b Attachment 3.
 - iv. For all transmission substation inspections data, please refer to RFI-LUMA-MI-21-0004-210405-PREB-005b Attachment 4.
 - v. For all distribution substation inspections data, please refer to RFI-LUMA-MI-21-0004-210405-PREB-005b Attachment 5.

- c) The System Operations Assessment can be found in Section XI of the Utility Transformation Gap Assessment. Section XI of the Utility Transformation Gap Assessment includes all workpapers and supporting documentation associated with the System Operations Assessment. Please refer to the Utility Transformation Gap Assessment in RFI-LUMA-MI-21-0004-210405-PREB-005a Attachment 1.
- d) The Generation Resource Adequacy assessment was conducted as part of Front-End Transition. During the Front-End Transition field work, the LUMA team visited major power plants, conducted numerous visits to system operations transmission centers and spent time in the main control room in Monacillos. Data availability was a challenge, but the LUMA team interviewed operators to develop an understanding of how plants are dispatched today and the daily problems and challenges they encounter. The PowerPoint presentation assessment examined operating data to understand how the plants are dispatched and the major related issues.

Please refer to the following attachments for all Generation Resource Adequacy assessment workpapers and supporting documentation:

- i. For the Generation Resource Adequacy Assessment, please refer to RFI-LUMA-MI-21-0004-210405-PREB-005d Attachment 1.
- ii. For the Generation Operations Dispatch Assessment, please refer to RFI-LUMA-MI-21-0004-210405-PREB-005d Attachment 2.
- iii. For the Generation Plant Assessment, please refer to RFI-LUMA-MI-21-0004-210405-PREB-005d Attachment 3.

The System Reliability Performance assessment was conducted as part of the Front-End Transition. LUMA's review took place before December 2020 and was executed by dedicated teams to focus on the reliability of the system. Please refer to RFI-LUMA-MI-21-0004-210405-PREB-005d Attachment 4 for further details regarding this process and assessment.

- e) For a description of the basis, methodology and rationale of LUMA's Prioritization and Sequencing, please refer to RFI-LUMA-MI-21-0004-210405-PREB-006. For rating information by improvement program, please refer to RFI-LUMA-MI-21-0004-210405-PREB-009 Attachment 1.
- f) Concurrently with the Prioritization and Sequencing process as defined in RFI-LUMA-MI-21-0004-210405-PREB-006, individuals responsible of each program brief were provided a template to populate with the details for each program. Please refer to RFI-LUMA-MI-21-0004-210405-PREB-005f Attachment 1 for the program brief template provided. After completion of these templates, the program briefs were drafted directly and compiled as part of Appendix D of Initial Budgets and Section 6 of the System Remediation Plan filings as detailed in Table 1 below. No further working papers were prepared for program briefs.

Table 1: Program Brief Details.

Customer Service Portfolio		
Program Brief	Initial Budgets Reference Starting PDF Page Number	System Remediation Plan Reference Starting PDF Page Number
Distribution Streetlighting	135	101
Billing Accuracy and Back Office	140	106
Standardized Metering and Meter Shop Setup	148	114

AMI Implementation Program	151	N/A
Distribution Meter Replacement & Maintenance	157	N/A
Modernize Customer Service Technology	161	N/A
Loss Recovery Program	165	N/A
Voice of the Customer	169	N/A
Streetlight Billing	173	121
Distribution Portfolio		
Program Brief	Initial Budgets Reference Starting PDF Page Number	System Remediation Plan Reference Starting PDF Page Number
Distribution Line Rebuild	179	127
Distribution Pole & Conductor Repair	191	134
Distribution Automation	191	N/A
Distribution Lines Inspection	195	139
Distribution Technology	201	N/A
Transmission Portfolio		
Program Brief	Initial Budgets Reference Starting PDF Page Number	System Remediation Plan Reference Starting PDF Page Number
IT OT Telecom Systems & Network	207	147
Transmission Line Rebuild	214	154
Transmission Priority Pole Replacements	220	160
Inspection of Transmission Lines	225	165
Technology Monitoring Systems	230	N/A
Substation Portfolio		
Program Brief	Initial Budgets Reference Starting PDF Page Number	System Remediation Plan Reference Starting PDF Page Number
Transmission Substation Rebuilds	237	172
Distribution Substation Rebuilds	243	178
Transmission Substation Reliability Improvements	248	N/A
Transmission Substation Security	252	183
Compliance & Studies	256	187
Distribution Substation Reliability Improvements	264	N/A
Physical Security for Distribution Facilities	268	195
Transmission Substation T&G Demarcation	270	198
Regional & Technical Facilities Security	276	N/A
Control Center and Buildings Portfolio		

Program Brief	Initial Budgets Reference Starting PDF Page Number	System Remediation Plan Reference Starting PDF Page Number
Facilities Development & Implementation	281	205
Critical Energy Management System Upgrades	287	211
Control Center Construction & Refurbishment	291	215
Critical System Operation Strategy & Processes	295	219
Critical Energy Management & Load Generation Balancing	299	223
Warehouse Security	303	
Enabling Portfolio		
Program Brief	Initial Budgets Reference Starting PDF Page Number	System Remediation Plan Reference Starting PDF Page Number
Vegetation Management	310	230
T&D Fleet	315	235
Capital Programs, PMO & Funding Management Office Setup	322	N/A
Tools Repair & Management	328	242
HSEQ and Technical Training	335	249
Asset Data Integrity	341	255
Project Management Software & Tools	346	N/A
Permits Processes & Management	351	260
Emergency Response Preparedness	356	N/A
Workflow Processes & Tracking	362	265
Project Controls, Risk Management & Estimating Offices	370	N/A
Construction & Commissioning Management Office	375	N/A
Materials Management	380	273
Operator Training	388	281
Support Services Portfolio		
Program Brief	Initial Budgets Reference Starting PDF Page Number	System Remediation Plan Reference Starting PDF Page Number
HR Programs	396	289
Renewables Integration, Minigrids & Generation Studies	405	N/A
IT OT Asset Management	410	297
IT OT Cybersecurity Program	417	304

IT OT Enablement Program	424	311
Critical Financial Controls	431	318
Critical Financial Systems	438	325
Land Record Management	445	332
Supporting Shared Services for Generation	449	N/A
Resource Planning and Processes to Improve Resource Adequacy and Cost Tracking	452	336
Improvements to Systems Dispatch for Increased Reliability and Resiliency	457	341
Land Acquisition & Dispute Management	462	N/A
Performance Metrics Process & System Upgrades	467	N/A
Financial Management Functions	471	N/A
Waste Management	478	346
Update to Third Party Use, Audit, Contract and Billing Procedures	482	350
IT OT Collaboration & Analytics	488	N/A
Technical Training, Test Lab & Historian	494	N/A
Safety Equipment	498	356
Integrated Safety & Operational Management System	502	360
Public Safety	506	364

Initial Budgets

Docket ID: NERP-MI-2021-0004

Information Response Round 1 to: PREB

Reference: RFI-LUMA-MI-21-0004-210405-PREB-006

Request:

Provide, in connection with Schedule 5.6 titled 2017 Rate Order Base Rate Revenue Requirement Limit Comparison, the following:

- (i) the basis, methodology and rationale for the prioritization of the spending initiatives, programs and/or capital expenditures proposed by LUMA;
- (ii) a detailed list of any spending initiatives, programs and/or capital expenditures that due to LUMA's prioritization approach differ in current order or ranking from the budget allocation approved in the 2017 Final Rate Order; and
- (iii) the anticipated impact of the spending initiatives, programs and/or capital expenditures proposed by LUMA on the electric system's operation, restoration and transformation, due to such prioritization.

Response:

(i) PRIORITIZATION AND SEQUENCING - BASIS, METHODOLOGY AND RATIONALE

LUMA's improvement programs were prioritized on the basis of the benefits that they are expected to produce. LUMA used the Recovery and Transformation Mission and Goals, which include improving customer satisfaction, federally funded grid recovery and resiliency initiatives, addressing system remediation concerns, and enabling the sustainable energy transformation. Improvement program investments were also prioritized and sequenced based on operational execution and funding source eligibility considerations.

LUMA's Recovery and Transformation Framework was developed by synthesizing the complex landscape of policy objectives, stakeholder needs, and regulatory and contractual requirements into a comprehensive strategic framework to guide planning and decision-making. LUMA's Recovery and Transformation Framework provides a comprehensive set of guiding principles that align LUMA's strategy and operations with Puerto Rico's public policy objectives and customer needs.

The rationale for using this Recovery and Transformation Framework to guide prioritization was to provide a basis for making trade-offs, to prevent overinvestment in one area or Goal at the expense of others. We also wanted to avoid prioritizing solely on the basis of LUMA's contractual requirements (System Remediation Plan) or performance metrics because we understood the need to comply with broader policy goals (e.g. IRP, Act 17) and stakeholder considerations. The process of prioritization and sequencing involved substantial technical and managerial judgement.

Methodology

LUMA used a qualitative prioritization matrix to guide investment planning, combined with subject matter expert judgement of operational considerations and needs. The planning team recognized that an entirely quantitative benefit cost analysis approach was not feasible or advisable given the a) lack of data, b) difficulty in quantifying less tangible or indirect benefits, and c) the need to consider other non-quantitative goals that would be overlooked by a benefit cost analysis approach. The planning team used available data and applied technical and professional judgement taking into account the duration and activity scope of the Front-End Transition Period.

It should be noted that the breadth and magnitude of improvements proposed within our Initial Budgets are different from the typical utility. Utilities typically improve incrementally, focusing efforts on select areas with targeted benefits and programs, whereas LUMA has been tasked with making large foundational improvements across the T&D System and organization to make up for decades of neglect and deterioration. Further, it is difficult to measure, compare and attribute benefits of specific programs when a multitude of interdependent, critical, foundational, but very different investments are required simultaneously.

Despite these difficulties, LUMA's investment decision-making was guided by a systematic and structured process. This process first needed a set of guiding principles to provide a common vision and direction, hence the development of the Recovery and Transformation Framework. The process of using the Recovery and Transformation Framework for prioritization was as follows:

1. **Step 1 - Program Scope and Cost Development.** Program teams developed a scope of work for each program including cost estimate and resource requirements. These program scopes were based on information known to LUMA at the time of development, though program teams found varying quality and availability of data. Program costs were developed using multiple data sources, historical PREPA costs where available, appropriate documentation from FEMA Fixed Cost Estimates, and professional judgement from past experience. A description of each program scope is provided in the program briefs developed for each program.
2. **Step 2 - Program Ratings Development.** Program benefits were rated in terms of impact toward the Recovery and Transformation Goals and Objectives for the T&D System. This encouraged program teams to design programs that maintained focus on these Goals and Objectives. Each program was rated on a 0-3 scale according to their level of impact on each Goal. A rating of 0 meant that the program did not have benefits or impacts in that category; a rating of 1 indicated some or indirect benefits, a rating of 2 indicated moderate impacts and a rating of 3 indicated high impacts. Figure 1 below provides an illustrative depiction of the outcome of the program benefits ratings process. Please refer to the Program Prioritization tab in RFI-LUMA-MI-21-0004-210405-PREB-009 Attachment 1 for the rating information.

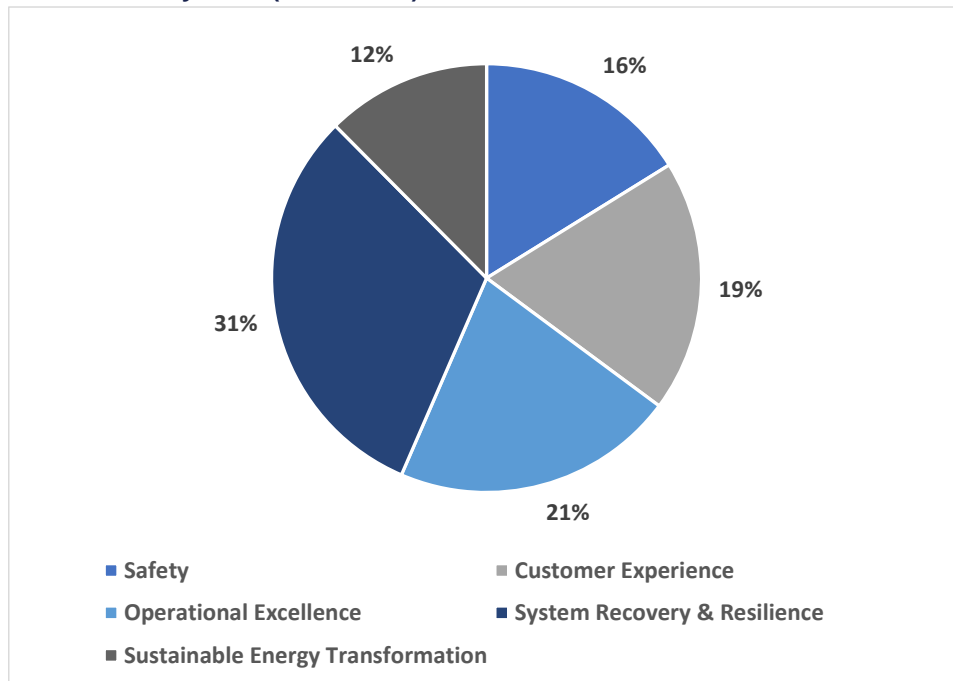
Figure 1: Program Benefit Ratings

PROGRAM RANK	PRIORITIZE SAFETY	IMPROVE CUSTOMER SATISFACTION	SYSTEM REBUILD AND RESILIENCY	OPERATIONAL EXCELLENCE	SUSTAINABLE ENERGY TRANSFORMATION	TOTAL BENEFIT POINTS
1	High Impact (3)	High Impact (3)	High Impact (3)	High Impact (3)	High Impact (3)	15
2	High Impact (3)	High Impact (3)	Med Impact (2)	Med Impact (2)	Low Impact (1)	11
Last	No Impact (0)	No Impact (0)	Med Impact (2)	Low Impact (1)	No Impact (0)	3

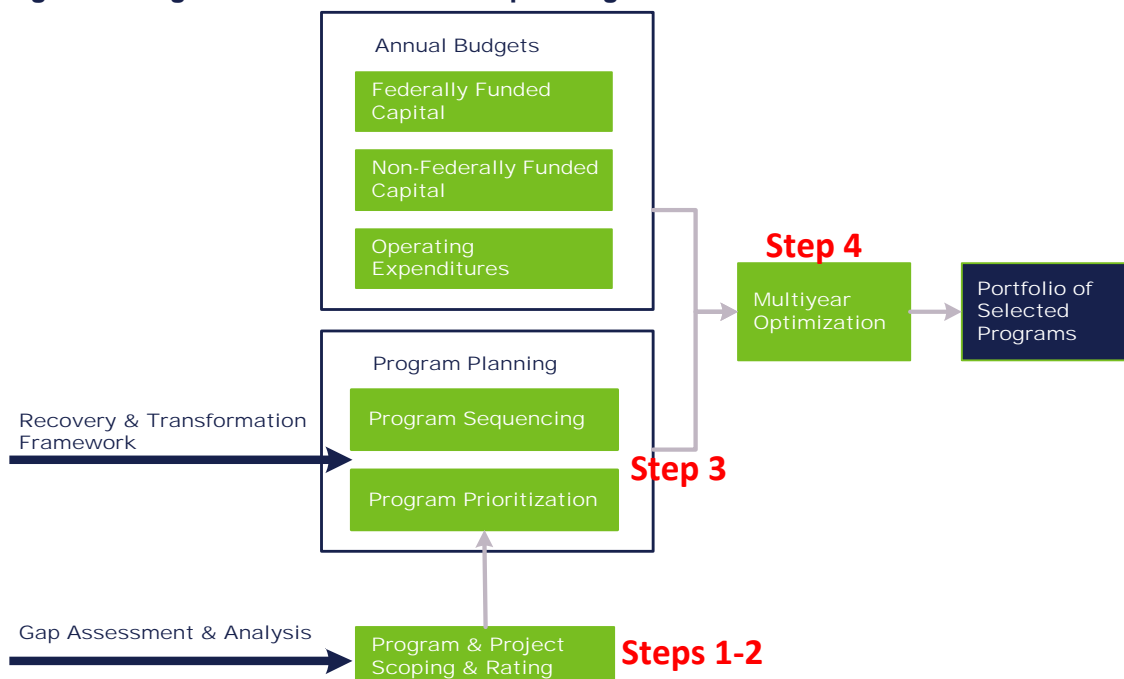
A 0-3 scale was used to ensure a consistent ‘apples-to-apples’ basis for comparing across initiatives with different benefits. Many of these benefits are not easily quantified and would therefore have been omitted or underestimated in a purely quantitative method. The rationale for these benefit ratings is presented for each program in its Program Brief, as filed within Initial Budgets (please refer to Response RFI-LUMA-MI-21-0004-210405-PREB-005(f) for further information where to find each specific Program Brief).

The planning team also provided oversight during the ratings process to standardize and calibrate the benefits ratings provided by teams as a due diligence and quality control review. The planning team discussed program ratings and identified areas where teams may have under or over-estimated likely program benefits and adjusted accordingly. These ratings are provided in the Program Prioritization tab of RFI-LUMA-MI-21-0004-210405-PREB-009 Attachment 1.

3. **Step 3 - Program Prioritization.** These program benefit ratings were used to rank the programs according to their relative benefits. The highest value programs were those that had direct benefits across multiple goals. The main use for these ratings was to achieve a balance of investment across all goals. This priority list was used as a starting point for program sequencing, providing the basis for a series of subsequent budget planning workshops.
4. **Step 4 - Budget Workshops.** Budget workshops were used to determine program sequencing in the first three years of LUMA’s operation to achieve impact across all Goals with available budget and resources. The prioritization ratings were factored in alongside consideration of LUMA’s experience and professional judgement including operational and logistical risk, timelines, and interdependencies. This process was meant to ensure LUMA laid the foundation for future investments (such as investing in basic communications and data networks prior to rapid implementation of AMI and ADMS) and dealt with the most critical or urgent needs (PPE, vegetation management), while maintaining a balance of investment across all Goals. Figure 2 below demonstrates the total investment allocated to each Goal for fiscal years 2022-2024. This information is provided in the Portfolio Summary tab of RFI-LUMA-MI-21-0004-210405-PREB-009 Attachment 1. The total investment by Goal is the cost of each program weighted according to the assigned Goal benefit points for each program.

Figure 2: Total Investment by Goal (FY2022-24)

This process was not used to cut programs off the list, it was meant to schedule activities and some initiatives with less benefits across Goals were extended across multiple years. Teams used the outcome and conclusions of these workshops to develop annual expenditure budgets, including supporting improvement programs, as well as operation and maintenance activities to ensure alignment for all activities budgeted in the first three years of operations, as included in Initial Budgets.

Figure 3. Program Prioritization and Sequencing Process

(ii) PRIORITIZATION COMPARISONS

As described within the prioritization and sequencing process as outlined in (i) above, LUMA balanced investment across improvement programs within available labor and funding resources. This is typical of any budgeting process. The prioritization and sequencing process did not provide an outcome where only the improvement programs with the most benefits went forward and were allocated funds, as well as it did not result in the improvement programs with less benefits being left unfunded. In fact, this prioritization and sequencing process considered spending across all activities. The ultimate outcome was informed from various inputs known at the time, such as the 2017 Final Rate Order, LUMA's gap assessment, LUMA's experience and professional judgement, discussions with PREPA, as well as the Modified Action Plan of the IRP, and 2020 Fiscal Plan. A detailed list of initiatives and programs, which make up all of LUMA's capital expenditures, is provided in RFI-LUMA-MI-21-0004-210405-PREB-009 Attachment 1.

As Schedule 5.6 within Initial Budgets demonstrates, LUMA ensured that its **total** non-federal funded expenditures, which includes funds forecast for non-federal funded capital along with the Generation Budget allocation, did not exceed the total approved PREPA Base Rate Revenue Requirement from the 2017 Rate Order. Consistent with the approach used by PREPA within the Fiscal Plan process, and as demonstrated within response RFI-LUMA-MI-21-0004-210405-PREB-001, LUMA did not provide a line by line, or component by component analysis compared to the 2017 Rate Order.

(iii) ANTICIPATED IMPACT OF THE SPENDING INITIATIVES, PROGRAMS AND/OR CAPITAL EXPENDITURES

As described in the prioritization and sequencing efforts in (i) above, the breath and magnitude of improvement programs means that many benefits are far reaching and difficult to quantify. LUMA has identified associated impacts where possible and through its filing as:

- **Key Outcomes:** Please refer to Section 2.3.1 Key Outcomes, which detail key outcomes for the people of Puerto Rico for the first three years of recovery and transformation, as contemplated and a result of activities forecast in the Initial Budgets.
- **Program Benefits:** Each Program Brief included in both the System Remediation Plan and Initial Budgets included a discussion of impacts within Section 2.5. Program Benefits includes indicating where items are addressed (Primary Goals, Objectives, Direct or Indirect Impact), and an associated discussion of these items.

In addition, LUMA has projected the following improvements in Performance Metrics:

Performance Metric	Fiscal Year 2022	Fiscal Year 2023	Fiscal Year 2024
Customer Service	11%	26%	31%
Safety	22%	36%	48%
System Average interruption Frequency Index (SAIFI)	7%	20%	30%
System Average interruption Duration Index (SAIDI)	10%	25%	40%

Note – cumulative improvements shown

Initial Budgets

Docket ID: NERP-MI-2021-0004

Information Response Round 1 to: PREB

Reference: RFI-LUMA-MI-21-0004-210405-PREB-007

Request:

Submit copies of the following documents: (i) the Federal Funding Procurement Manual; and (ii) the Non-Federal Procurement Manual required under the OMA.

Response:

The Federal Funding Procurement Manual and the Non-Federal Procurement Manual are not yet complete and as such we do not currently have manuals to provide to PREB. LUMA will provide the two manuals after the review and approval processes required under the OMA are complete. We have included summary information for each manual, including the list of topics covered and the scope of the document. Please refer to following attachments:

1. For the summary of the Federal Funding Procurement Manual, please refer to RFI-LUMA-MI-21-0004-210405-PREB-007 Attachment 1.
2. For the summary of the Non-Federal Procurement Manual, please refer to RFI-LUMA-MI-21-0004-210405-PREB-007 Attachment 2.

Initial Budgets

Docket ID: NERP-MI-2021-0004

Information Response Round 1 to: PREB

Reference: RFI-LUMA-MI-21-0004-210405-PREB-008

Request:

Submit an updated Generation Budget based on the information provided by PREPA and include supporting documentation.

Response:

As per Section 4.2(e) of the OMA, LUMA is required to submit the Generation Budget as part of its Initial Budget filings “provided that for purposes of the Generation Budget, [LUMA] shall only be required to submit (if received by [LUMA]) the Generation Budget as prepared by [PREPA] and delivered to [LUMA] by [PREPA]. LUMA shall have a reasonable time to review such Generation Budget prior to completing and submitting the balance of the Initial Budgets to [P3A].”

As of the date of filing this response, LUMA has not received the PREPA Generation Budget, and is unable to provide the requested information. While the Generation Budget remains PREPA’s responsibility, LUMA proposes that the PREB approve LUMA’s allocation of the Generation Budget for the Fiscal Year 2022 in lieu of the PREPA Generation Budget.

LUMA’S ACTIVITIES TO RECEIVE THE PREPA GENERATION BUDGET

LUMA’s activities to receive the PREPA Generation Budget, were two-fold, LUMA regularly communicated with PREPA’s executives regarding the Generation Budget requirements in the OMA and worked with the Generation Directorate to provide support in developing the required initial budget.

LUMA’s activities included:

- Actively requesting the PREPA Generation Budget and enquiring on status of this request through:
 - Ongoing bi-weekly PREPA/LUMA meetings, with the PREPA Generation Budget being a regular topic on the agenda from the inception of these meetings in August 2020, with increased focus starting in October 2020,
 - Ongoing weekly PREPA/LUMA CFO meetings, with PREPA Generation Budget being a regular topic on the agenda from the inception of these meetings in November 2020, and
 - Weekly PREPA Governing Board updated meetings.
- Formal request for information to PREPA for its Generation Budget.
- Assisting the PREPA Generation Directorate team with a detailed line by line understanding of past PREPA Generation Budgets and support in developing the required forecasted budgets. Additional details provided below.

LUMA provided support where possible to encourage PREPA to complete its Generation Budget, considering the following:

- PREPA Generation Directorate personnel were not familiar with, and required clarification regarding, several aspects of the OMA,
- Information on potentially what will be or will not be included in “GenCo” based on LUMA’s understanding of the OMA and the shared services,

Below outlines LUMA’s support to PREPA in the Generation budget development process during Fall and Winter 2020. Activities resulted in a LUMA supported and reviewed bottoms up Generation Budget and a PREPA Draft Requested Budget. The following activities were undertaken by LUMA:

1. **Planning for budget development required by OMA** – in September 2020 LUMA developed and presented to PREPA budget input templates, a budget instruction memo and a detailed schedule to develop a bottoms-up Generation budget estimate in the new, three-year planning horizon required by the OMA. LUMA further reconciled the budget input templates to PREPA’s historical expenditure reports for each plant and Category of Expense (KOE). LUMA also facilitated a budget preparation workshop with the Generation management team describing what would be required over the upcoming two months to develop budgets required by the OMA.
2. **Field verification of budget process and proposed projects** – LUMA conducted a two-day workshop with each of the four major plant’s management and budget coordination teams to explain how the GridCo-GenCo separation would occur, and why these detailed budgets were required. The LUMA teams also reviewed the historical O&M and capital (non-federally funded) expenditures and budget preparation process on a line-by-line basis and field verified proposed major projects with visual inspections to validate the prioritization of those projects.
3. **Compilation of each plant’s budgets into a GenCo summary budget** – LUMA conducted an initial allocation of the budgeted line items from each plant based upon historical data and consolidated into a Generation budget in the format required by the OMA and reviewed with the Generation Directorate’s management and budget coordination teams. LUMA provided direction and templates for how the Generation Directorate was to develop a PREPA initial budget.
4. **Continued follow-up and offering of assistance to PREPA** – From when LUMA’s consolidated Generation budget was provided to PREPA on September 23rd to October 26th, LUMA communicated by phone, text or email with PREPA at least 26 times to enquire about status, offer additional assistance and discuss schedule and missed deadlines.
5. **LUMA received draft requested Generation budget from PREPA** – LUMA was provided a draft requested Generation budget from the Generation Directorate which included a significant increase in spending over the previous year’s budget. LUMA notes that, based on discussions with PREPA personnel, this is consistent with previous budgeting processes where PREPA Directorates request budgets in excess of last year’s budget and the finance team reduces initial budgets to align with previous years’ budget. LUMA conducted a high-level review.

6. **Reviewed draft Generation Budget from PREPA** - In response to a request from PREPA, LUMA reviewed PREPA's draft requested Generation budget over a two-week period. Activities included:
 - a. Reviewing detailed line items for each plant through half day calls with six to seven LUMA and PREPA personnel,
 - b. Reviewing significant new increases in O&M budget with.
7. **Conclusion of PREPA's Draft Generation Budget** – Based on a detailed review of PREPA's proposed O&M budget increase, LUMA failed to see the justification of such expenditures. LUMA also reviewed the non-federally funded capital expenses (NME) and a prioritization based on improvements to plant availability and Resource Adequacy.
8. **Presentation of initial budgets to PREPA Senior Management** – in early December, LUMA presented two budget compilations to PREPA's CFO – the LUMA-reviewed Generation budget and the draft PREPA requested Generation budget – along with a high-level assessment of issues with PREPA's budget preparation process. Approximately one week after LUMA's presentation to PREPA, LUMA was informed that PREPA could complete the budget from there and LUMA's team discontinued further assistance.

From the working drafts within Fall 2020, LUMA's opinions included:

- The Generation Directorate should continue FY2021 operating budget assumptions for FY2022 and beyond, until third party operator is selected.
- LUMA reviewed a potential increase over last year's non-federally funded capital expenditures in order to improve plant reliability and Resource Adequacy above existing levels. As such, , assuming similar operational expenditures to FY2021, under LUMA's allocation for Genco there is allowance for more non-federally funded capital than budgeted in FY2021.
- Strict project controls over each step of the engineering, procurement and construction cycle will be needed to effectively manage any capital expenditures and execute planned outage scope in the allotted time.

GENERATION ACTIVITIES

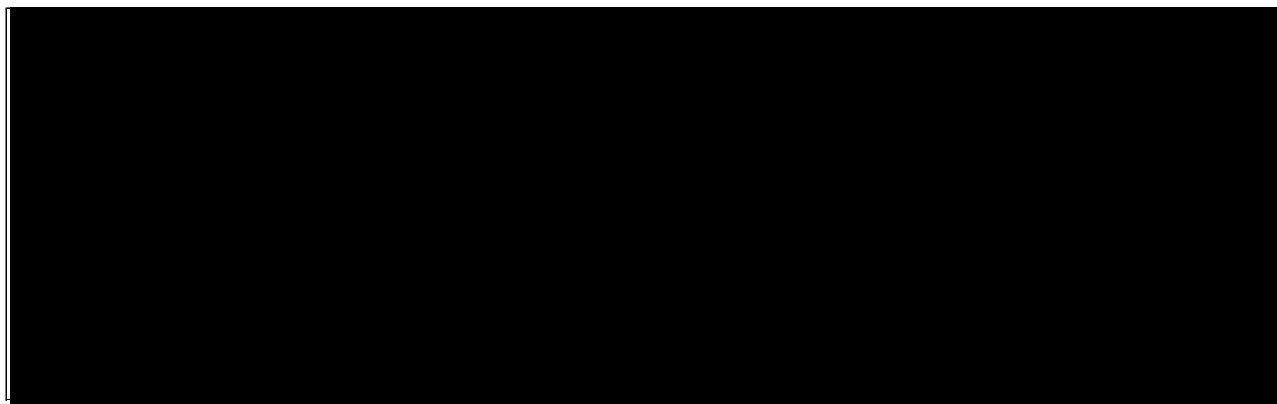
LUMA encourages Genco to focus on implementing the capital projects that will increase reliability and restore derated capacity which has been lost. This includes, for example, previously deferred generator maintenance, as well as potential boiler repairs. In addition, the LUMA team reviewed the benefits of improving black start capability and Automated Generation Control (AGC) and Automated Voltage Regulator (AVR) capability which could allow available plants to be operated more efficiently.

The other major area of focus that would support improved system operations are to better utilize several management tools that have been installed but have not been fully utilized. The installed tools include data systems such as the OSIsoft PI, as well as various refurbishments to equipment and procedures that improve communications between the plants and the System Dispatch Center. The optimization of these existing management tools will support many of the elements of the System Operation Principles.

GENERATION BUDGET SCHEDULE

The following Generation Budget Schedule, also included in Microsoft Excel format, is based on LUMA's reviewed Generation Budget and supports the allocation made by LUMA in the Initial Budgets. Please refer to RFI-LUMA-MI-21-0004-210405-PREB-001 Attachment 1 for supporting workpapers of LUMA's allocation of the Generation Budget. The schedule does not include any federally funded capital expenditures which may be available for generation.

(In \$000s)



The information contained in the table above is considered **confidential**.

Initial Budgets

Docket ID: NERP-MI-2021-0004

Information Response Round 1 to: PREB

Reference: RFI-LUMA-MI-21-0004-210405-PREB-009

Request:

Provide all supporting workpapers used to develop the Initial Budgets estimates, including re-organization and re-map budgets, budget templates, and Initial Budgets consolidation, showing the interdependencies with the System Remediation Plan and Performance Metrics proposals. Budget templates should be populated with estimated cost data, both pre- and post-consolidation to spending categories. These workpapers should include underlying Excel workbooks, with formulae intact, including workbooks and workpapers used to derive data presented in Schedules 5.1 through 5.6 of Exhibit 1.

Response:

CAPITAL (SCHEDULES 5.4 AND 5.5)

For a description of the basis, methodology and rationale of LUMA's Prioritization and Sequencing, please refer to RFI-LUMA-MI-21-0004-210405-PREB-006.

For supporting workpapers please refer to RFI-LUMA-MI-21-0004-210405-PREB-009 Attachment 1 (provided in Microsoft Excel format) for the Improvement Programs supporting workpapers, which include:

- Input (tabs in blue highlight), including listing by initiatives ('Input_Initiatives' tab which includes name, scope, and total spend) and improvement program basis ('Programs_Estimates' tab which includes estimating methods & assumptions and System Remediation Plan basis),
- Model (tabs in orange highlight), including improvement program cost and rating listing ('Program Prioritization' tab) which includes expenditure categories by year and total investments (Federal/Non-Federal/Operating Expenditures (Opex)/SRP expenditure), along with ratings and investment allocation by LUMA goal). This information provides source data for Initial Budget Schedule 5.4 (Improvement Portfolios – Summary),
- Output (tabs in green highlight), including information and summary tables included in System Remediation Plan and Initial Budget filings, and the Initial Budget Schedule 5.5 (Improvement Portfolios – Total Capital Expenditures), and program brief reconciliation to Initial Budget and System Remediation Plan filings ('Program Filing Reconciliation' tab).

OPERATIONS AND MAINTENANCE (SCHEDULE 5.2)

As described within Section 2.1.3 Process, LUMA supported Initial Budgets development by completing Operations and Maintenance (O&M) expenditure budgets within templates to ensure reporting consistency across various teams. This information was then combined and consolidated for LUMA final review informed by activities identified in prioritization and sequencing, Performance Metrics, the System Remediation Plan, the Annual Business Plans, as well as comparisons to the 2017 Rate Order and 2020 PREPA Fiscal Plan.

For supporting workpapers please refer to RFI-LUMA-MI-21-0004-210405-PREB-009 Attachment 2 (provided in Microsoft Excel format) for the LUMA Department O&M supporting workpapers, which include:

- Input Templates (tabs in blue highlight), including link from budget templates to supporting LUMA schedules, and
- Output (tabs in green highlight), including link from supporting LUMA schedules to Schedule 5.2 – Transmission & Distribution Operating Expenditures for Fiscal Year 2022.

LUMA provides O&M supporting working papers for the budgeted fiscal year 2022, as fiscal years 2023 and 2024 are projected budgets and will be updated for the next annual budget examination.

SCHEDULES 5.1, 5.3, AND 5.6

Initial Budgets Section 5 Schedules (Microsoft Excel file) at filing provided all necessary links and formulae to support Schedule 5.1 (Initial Budgets Summary, which is a summary of Schedules 5.2 to 5.6), as well as Schedule 5.3 (Other, which included all relevant info required within the formulae or mentioned notes).

Please refer to RFI-LUMA-MI-21-0004-210405-PREB-001 for supporting workpapers for Schedule 5.6 (2017 Rate Order Base Rate Revenue Requirement Limit Comparison).