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

IN RE:	**CASE NO.:** NEPR-MI-2022-0001 **SUBJECT:** Submittal of Proposal for Expanded Customer Battery Energy Sharing Program and Revised Technical Conference Presentation in Compliance with Resolution and Order of April 30, 2025
ENERGY EFFICIENCY AND DEMAND RESPONSE TRANSITION PERIOD PLAN	

MOTION TO SUBMIT PROPOSAL FOR EXPANDED CUSTOMER BATTERY ENERGY SHARING PROGRAM AND REVISED TECHNICAL CONFERENCE PRESENTATION IN COMPLIANCE WITH RESOLUTION AND ORDER OF APRIL 30, 2025

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:

I. Introduction

As the Puerto Rico transmission and distribution system operator, LUMA is responsible for facilitating the implementation of Puerto Rico's public energy policy, including key customer initiatives such as Energy Efficiency ("EE") and Demand Response ("DR") Programs, which are required by law and mandated by the Puerto Rico Energy Bureau ("Energy Bureau"). LUMA has been implementing a Transition Period Plan containing various quick-start or pilot EE and DR programs ("TPP"), including, among others, a pilot battery DR program (now called "Customer

Battery Energy Sharing" ("CBES"). The purpose of the TPP is to set the stage for the design and implementation of larger scale, more permanent programs that will form part of a Three-Year EE and DR Plan to be prepared and submitted by LUMA for approval by the Energy Bureau.

The deadline to submit the Three-Year EE and DR Plan and concomitant deadlines were extended by the Energy Bureau, and, as a result, the term of the TPP was also extended. Relatedly, and in compliance with Energy Bureau directives, on January 31, 2025, LUMA filed with the Energy Bureau a revised TPP and a proposed permanent version of the CBES program. Also pursuant to Energy Bureau directives, LUMA has been reporting to the Energy Bureau on the development of a proposed program for the use of backup generators as a DR resource in emergency situations (the "Emergency Load Reduction Program") to be implemented for the summer of 2025.

As established in a Resolution and Order issued on April 3, 2025, the Energy Bureau held a Technical Conference on April 24, 2025, to discuss the above submittals and/or programs and the progress of the Three-Year EE and DR Plan. LUMA gave a presentation in accordance with the agenda established by the Energy Bureau, discussing the above programs/submittals, as well as potential programs for consideration to partially address the projected summer 2025 generation shortfall through its DR portfolio, including a CBES Emergency Expansion Program (referred to as "CBES+") to increase available capacity under that program during the period from May 31, 2025, until October 31, 2025. Relatedly, by Resolution and Order issued on April 30, 2025, the Energy Bureau ordered LUMA to submit the detailed proposals for the CBES+ and the Emergency Load Reduction Program and a revised/updated presentation by May 8, 2025, providing that the full proposal for the Emergency Load Reduction Program should be filed as soon as LUMA is ready to do so, if the full proposal is not filed on or before May 8, 2024.

In compliance with the Energy Bureau's Resolution and Order of April 30, 2025, LUMA is submitting herein its detailed proposal for the CBES+ and a revised and updated version of the presentation it provided during the April 24th Technical Conference, to reflect a minor correction and the information in this filing. As further explained in this motion, LUMA is requesting this Honorable Energy Bureau to approve its CBES+ proposal and associated budget and the submittal of the CBES+ costs for recovery as part of the quarterly Power Purchase Cost Adjustment ("PPCA") process in Case No. NEPR-MI-2020-0001, *In re: Puerto Rico Electric Power Authority Permanent Rate,* among others.

LUMA is also informing that it is still in the process of preparing the full proposal for the Emergency Load Reduction Program and it will be filed as soon as completed.

II. Relevant Background and Procedural History

1. On October 23, 2024, the Energy Bureau issued a Resolution and Order ("October 23rd Resolution and Order") in which it determined to defer the deadline to present to stakeholders a draft of the Three-Year EE and DR Plan to on or before April 15, 2025, and the deadline to file the Three-Year EE and DR Plan to on or before July 15, 2025[1]. *See* October 23rd Resolution and Order, p. 5. In addition, the Energy Bureau determined to extend the current TPP[2] (scheduled to expire on June 30, 2025) by an additional six months, until December 31, 2025, and ordered

[1] The deadlines for these tasks in effect prior to this determination were December 2, 2024 and March 1, 2025, respectively, as per a Resolution and Order issued by the Energy Bureau on November 29, 2023. On September 16, 2024, LUMA requested the Energy Bureau to extend these deadlines given delays in the completion of the Market Baseline and Potential Studies required under the Regulation for Energy Efficiency, Regulation 9637, and needed to prepare the Three-Year Plan. *See Informative Motion, Request for Clarification Regarding Delayed Timeline for Completion of Market Baseline and Potential Studies, And Request for Extension to Submit Draft Three-Year Plan and Associated Tasks and Deadlines*. The Energy Bureau granted this request in its October 23rd Resolution and Order.

[2] The original TPP, covering fiscal years 2023 and 2024, was submitted by LUMA on June 21, 2022 in Case No. NEPR-MI-2021-0006, *In Re: Demand Response Plan Review, Implementation and Monitoring*, and approved with modifications by the Energy Bureau by Resolution and Order issued on February 16, 2023, in the instant case. On December 20, 2023, LUMA submitted a revised version of this TPP extending its term until the end of fiscal year 2025, which revised TPP is currently under implementation.

LUMA to file a revised TPP ("Revised TPP"). *See id*. The Energy Bureau further ordered LUMA to file a proposed form of a permanent CBES program and develop and implement a program for the use of backup generators as a DR resource in emergency situations (now referred to by LUMA as the "Emergency Load Reduction Program") before the summer of 2025. *See id*., pp. 3-4.

2. On January 31, 2025, LUMA filed with the Energy Bureau the proposed permanent CBES ("Permanent CBES Program").[3] *See Motion to Submit Permanent Customer Battery Energy Sharing Program Proposal in Compliance with Resolutions and Order of October 23, 2024 and December 5, 2024*. In addition, on that same date, LUMA filed with the Energy Bureau a Revised TPP and requested the Energy Bureau to leave without effect the deadlines to have the draft Three-Year EE and DR Plan and concomitant activities, given delays in the completion of the Market Baseline and Potential Studies needed to prepare this document. *See Motion to Submit Revised Energy Efficiency and Demand Response Transition Period Plan and Request for Modification of Deadlines Relating to Three-Year Energy Efficiency and Demand Response Plan*, pp. 7 and 11-12. Consistent with this request, the Revised TPP submitted by LUMA covered the period from July 1, 2025 to June 30, 2026. *See id*., p. 7.

3. On April 3, 2025, the Energy Bureau issued a Resolution and Order ("April 3rd Resolution and Order") determining that the Three-Year EE and DR Plan shall cover the period from July 1, 2026 until June 30, 2028, and ordering LUMA to present the draft Three-Year EE and DR Plan to interested stakeholders on or before October 1, 2025, and file the Three-Year EE and DR Plan with the Energy Bureau on or before February 1, 2026. *See* April 3rd Resolution and Order, p. 2.

[3] January 31, 2025 was the deadline to submit this document, as well as the Revised TPP, as provided in a Resolution and Order issued by the Energy Bureau on December 5, 2024, in attention to a request by LUMA in a *Motion for Extension of Deadlines and Modification of a Reporting Requirement in Resolution and Order of October 23, 2024*, filed on November 25, 2024.

4. In the April 3rd Resolution and Order, the Energy also partially approved the Permanent CBES Program proposal for three years, indicating that this approval applies to "all aspects of program design that were unchanged from the pilot stage and dictate customer and aggregator interface to the program (such as kWh incentive level, aggregator enrollment model, and option for customers to opt-out of DR events)". *See id.*, p. 3. With respect to the changes to the CBES Program, the Energy Bureau indicated that it would address the "necessary changes" before the start of the full program based on stakeholder comments and the discussion at a Technical Conference, which the Energy Bureau scheduled for April 24, 2025 ("April 24th Technical Conference") to discuss the Permanent CBES Program proposal, as well as the Emergency Load Reduction Program, the Revised TPP, and the progress of the EE and DR Three-Year Plan. *See id.*, p. 4.

5. The Energy Bureau also provided a preliminary agenda for the April 24th Technical Conference ("April 24th Agenda"), invited interested persons to participate, and ordered LUMA to attend it. *See id.*, pp. 4-5. Furthermore, the Energy Bureau invited LUMA, the public and other stakeholders to submit comments on the matters discussed at the Technical Conference or otherwise raised in LUMA's motions on or before June 5, 2024. *See id.*, p. 5. Finally, the Energy Bureau ordered LUMA to amend its planned schedule and process for the Three-Year EE and DR Plan as detailed in the April 3rd Resolution and Order. *See id.*

6. On April 23, 2025, LUMA submitted to the Energy Bureau a copy of LUMA's presentation for the April 24th Technical Conference covering the subjects set forth in the April 24th Agenda established by the Energy Bureau, as well as LUMA's proposals to partially address the summer 2025 generation shortfall leveraging its DR portfolio.

7. On April 24, 2025, the Energy Bureau held the April 24th Technical Conference. With respect to the programs to partially address the summer 2025 generation shortfall, LUMA discussed the Emergency Load Reduction Program and a potential new proposal to rapidly expand the CBES program for summer 2025 by auto-enrolling customers in the CBES program, referred to as the "CBES Emergency Expansion" or "CBES +". In addition, in attention to an item in the April 24th Agenda, LUMA discussed its preliminary exploration of cogeneration as an option for DR.[4]

8. On April 30, 2025, the Energy Bureau issued a Resolution and Order ("April 30th Resolution and Order") ordering LUMA to submit a filing with additional information regarding its proposed quick-start DR programs for summer 2025 no later than May 8, 2025 and to include in its submission its proposal for the CBES+ and Emergency Load Reduction Program and address the topics brought up by stakeholders, the Energy Bureau and the Energy Bureau's consultants during the April 24th Technical Conference. *See* April 30th Resolution and Order, p. 2. In addition, the Energy Bureau indicated that LUMA should clearly state what actions it is requesting from the Energy Bureau. *See id.*

9. In the April 30th Resolution and Order, the Energy Bureau discussed specific additional information that LUMA should include in its May 8th filing regarding the CBES+ and the Emergency Load Reduction Program. *See id.* p. 2. With respect to the CBES+, the Energy Bureau directed LUMA to provide a detailed proposal for this program, including: (a) an "estimate of the total installed battery capacity and an estimate of the total firm capacity expected for summer 2025, including any associated "derating" assumptions LUMA used, such as percent of battery

[4] LUMA also provided information to correct a typographical error in one slide of its Presentation, clarifying that the "2000MW" figure in the second blue box from left to right and the first bulleted sentence in slide 27 referring to the dispatchable capacity of the more than 135,0000 distributed battery energy storage systems in Puerto Rico, should be "2000MWh".

customers eligible for participation, percentage of battery capacity they are enrolling in the program and expected participation rates in events" (providing its estimates in terms of number of customers, battery capacity (kW), energy (kwh), and the duration of the effective resource hours); (b) "expected quarterly budget, broken out by the cost categories required in EE and DR administrative cost quarterly reports"; (c) "how it plans to mitigate any negative customer experiences and minimize un-enrollments due to adverse customer experiences" (to address the Energy Bureau's particular "concern with ensuring customers are satisfied with the CBES program and will continue to participate beyond 2025"); and (d) "its plan for the transition between the summer 2025 and the remainder of the year and program term" (explaining in particular "what will happen to customers at the end of the summer period who are auto enrolled, and how LUMA's CBES+ proposal affects its Permanent CBES as submitted on January 31"). *See id.*

10. Regarding the Emergency Load Reduction Program, the Energy Bureau noted that the Regulation for Demand Response "does not allow for the use of combustion fossil fuel generators except for in case of emergency" and that, therefore, "LUMA should clearly explain in its filing its strategy for dispatching back-up generators in compliance with this regulation". *See id*. The Energy Bureau also directed LUMA to provide "further support" for the $8.2 million budget for this program "(including LUMA's expectation for the participant compensation structure), the timing of how it proposes to collect the funds given the uncertainty around the program feasibility, and "greater detail around the timing of program launch". *See id.* The Energy Bureau also indicated that they expected LUMA to **file a full [Emergency Load Reduction**

Program] proposal for approval as soon as it is ready to do so, if that full proposal is not filed on or before May 8. *See id*. (Emphasis added.)[5]

11. Finally, in its April 30th Resolution and Order, the Energy Bureau directed LUMA to include in is May 8th filing a "revised [April 24th] Technical Conference presentation consistent with the rest of the filing, and any additional information LUMA may deem necessary for the Energy Bureau to make a determination". *See id*., p. 3.

III. Submittal of CBES+ Proposal and Revised Presentation in Compliance with April 30th Resolution and Order

12. In compliance with the April 30th Resolution and Order, LUMA is submitting herein, as *Exhibit 1*, its detailed proposal for the CBES+, containing the information required by the Energy Bureau in the April 30th Resolution and Order ("CBES+ Proposal"). In addition, LUMA is submitting herein, as *Exhibit 2*, a revised version of the April 24th Technical Conference Presentation which was updated to conform with this filing and to include the correction of the typographical error previously mentioned.

13. *Exhibit 1* describes the CBES+ Proposal in detail and, among other things, it explains that this program proposes expanding the Permanent CBES Program beyond its enrollment threshold to reach an enrollment of about 60,000 customers, using auto-enrollment and traditional enrollment methods, to be able to dispatch up to 50 MW of capacity per four-hour event. *See Exhibit 1*, pp. 5 and 16. LUMA emphasizes that the CBES+ necessitates the use of the Grid-Edge Distributed Energy Resource Management System ("DERMS") platform for safe, reliable, and optimized dispatch of the CBES resources, minimizing manual errors and system risks.[6] *See*

[5] The Energy Bureau also briefly addressed the cogeneration DR option, noting that LUMA had stated it had a limited near-term proposal and that LUMA need not include it in its filing, but the Energy Bureau expected to address this potential resource as part of the consideration of the DR pilots in the TPP. *See id*., pp. 2-3.
[6] The multiple benefits of this platform are discussed in Exhibit 1. *See id*.

id., p.6. Hence, the CBES+ Proposal assumes that the Permanent CBES Program, which proposes the use of DERMS, is also approved.

14. In the CBES+ Proposal, LUMA describes three potential implementation scenarios for the CBES+, referred to as Scenarios A, B and C. *See id*., pp. 15, 17-18. Scenario A provides for the CBES+ to be in effect from June 1, 2025, until October 31, 2025, and for the auto-enrolled customers to be unenrolled after October 31, 2025. *See id*. The proposed total budget for Scenario A is $18.83 million, including the FY2026 budget for the Permanent CBES Program. *See id*., pp. 17-18.

15. Scenario B provides for the continuation of the CBES+ beyond October 31, 2025, maintaining the full fleet of customers enrolled for CBES+ for the rest of Fiscal Year ("FY") 2026 with limited discharge of all batteries to meet resource needs. The proposed total budget for Scenario C is $21.18 million, including the FY2026 budget for the Permanent CBES Program. *See id.*, pp. 15 and 18.

16. Scenario C provides for the continuation of the CBES+ beyond October 31, 2025, maintaining the full fleet of customers enrolled for CBES+ for the rest of FY2026 and dispatching all batteries at full capacity. The proposed total budget for Scenario C is $24.77 million, including the FY2026 budget for the Permanent CBES Program. *See id*.

17. For the reasons set forth in *Exhibit 1*, LUMA recommends the implementation of Scenario B. *See id*., pp. 15 and 18. Accordingly, LUMA respectfully requests that the Energy Bureau approve the CBES+ Proposal, and its Scenario B as described in *Exhibit 1* and the associated FY2026 Budget of $21.18 million, which includes the budget for the Permanent CBES Program. In addition, LUMA respectfully requests that the Energy Bureau approve that LUMA submit the costs of the CBES+ for recovery as part of the quarterly Power Purchase Cost

Adjustment ("PPCA") process in Case No. NEPR-MI-2020-0001, *In re: Puerto Rico Electric Power Authority Permanent Rate* ("Permanent Rate Docket") subject to later reconciliation based on actual expenditures.

18. As mentioned, the Energy Bureau partially approved the Permanent CBES, limited to all aspects of program design that were unchanged from the pilot stage and that dictate customer and aggregator interface to the program (such as kWh incentive level, aggregator enrollment model, and option for customers to opt-out of DR events). However, LUMA notes that the approval of the full program remains pending. Given that the design of the CBES+ builds upon the implementation of the Permanent CBES, LUMA respectfully requests this honorable Energy Bureau to issue a determination approving the Permanent CBES Program and its associated budget. LUMA clarifies that the FY2026 budget of the Permanent CBES Program, as submitted on January 31, 2025, has been updated to account for an increase in forecasted events, to a total budget of $6.13 Million. The updated information appears in the CBES+ Proposal and the updated April 24th Technical Conference Presentation in Exhibits 1 and 2, respectively. *See Exhibit 1*, p. 17, and *Exhibit 2*, p. 11. LUMA further requests that the Energy Bureau approve that LUMA submit the costs of the Permanent CBES for recovery as part of the quarterly PPCA process in the Permanent Rate Docket subject to later reconciliation based on actual expenditures.

19. LUMA informs that it continues working on the full proposal for the Emergency Load Reduction Program, which will address the information on this program required by the Energy Bureau in the April 30th Resolution and Order, and its submittal to the Energy Bureau is forthcoming.

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned; **accept** *Exhibits 1* and *2* herein in compliance with the Energy Bureau's

Resolution and Order of April 30, 2025; **approve** the CBES+ Proposal and its Scenario B, as described in *Exhibit 1*, and its budget for FY2026 of $21.18 million (which includes the FY2026 Permanent CBES Program budget) and the submittal of the costs of the CBES+ in the PPCA factors filing in the Permanent Rate Docket (NEPR-MI-2020-0001); and **approve** the Permanent CBES proposal submitted by LUMA on January 31, 2025 and associated budget for FY2026 of $6.13 Million and submittal of these program costs in the PPCA factors filing in the Permanent Rate Docket (NEPR-MI-2020-0001).

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 8th day of May 2025.

We hereby certify that we filed this Motion using the electronic filing system of this Energy Bureau and that we will send an electronic copy of this Motion the Independent Office for Consumer Protection at hrivera@jrsp.pr.gov; PREPA at arivera@gmlex.net; and mvalle@gmlex.net; and agraitfe@agraitlawpr.com; info@sesapr.org; bfrench@veic.org evand@sunrun.com, jordgraham@tesla.com, forest@cleanenergy.org, customerservice@sunnova.com, javrua@sesapr.org, pjcleanenergy@gmail.com, cfl@mcpr.com; mqs@mcvpr.com; and mrios@arroyorioslaw.com.

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Exhibit 1

CBES+ Proposal

LUMA

Summer 2025 Emergency Demand Response Program Proposals

May 8, 2025

Customer Battery Energy Sharing Emergency Expansion (CBES +)

Exhibit Contents

Requests for Approval

- LUMA requests that the Energy Bureau approves the expansion for participation in the CBES program above the previously requested 19, 500 participating devices based on additional available devices and an increased need based on resource adequacy forecasts. For purposes of modeling and assumptions, LUMA has estimated there to be ~60,000 customers enrolled through a combination of manual and automatic enrollment during Summer 2025.
- LUMA is seeking approval from the Energy Bureau to use the Purchased Power Charge Adjustment (PPCA) to recover costs for this expansion of CBES and to include this program in the FY2026 Q1 PPCA forecast.
- To reach these enrollment targets, LUMA requests the Energy Bureau grant the authority for qualified aggregators to enroll customers automatically (auto-enroll) into the program, where contractually permissible between that customer and their respective lender or third party.
- For the purposes of adequately and responsibly administrating the CBES program, LUMA requests the Energy Bureau approve the use of a DERMS platform to safely and adequately manage the program.
- The current CBES pilot also only allows for dispatch Monday thru Friday, LUMA would request that this parameter be adjusted to include all days of the week in pursuit of leveraging the resource to meet system needs. Holidays and Weather Events would remain non-dispatchable event parameters.

CBES+ Program Description

Emergency expansion of LUMA Customer Battery Energy Sharing (CBES) Program due to the severity of forecasted generation shortfall and immediacy of the summer 2025 peak season

- LUMA is requesting approval for emergency expansion of the CBES Program beyond the 19,500-enrollment threshold set forth in the Permanent CBES proposal submitted by LUMA on January 31, 2025
- Incentive payments will remain at $1.25 / kWh.
- Assumptions: 75 events from June to October 2025, with **4-hour** duration (300 hours total).
- Optionality to continue CBES+ beyond October 2025.
- Aggregators with existing contractual ability to "Auto-Enroll" customers will be able to do so (opt-out); In addition to enrollment of customers via the traditional manual enrollment pathway (opt-in).
- Customer choice is preserved, and all customers will maintain their ability to adjust reserve level settings, opt-out of the events, or completely unenroll from the program, mirroring the ability of manually enrolled customers.

Auto-Enrollment

60,000 systems

Total of 50 MW per 4 Hour Event

June – October 2025 (option to continue)

Customer Choice Preserved

Dispatch & Reporting via DERMS*

*Event notice will also be provided to Aggregators via Email in parallel to DERMS process.

CBES+ Program Description: Grid-Edge Distributed Energy Resource Management System (DERMS)

The CBES Program proposal, as well as the CBES+ expansion both necessitate a DERMS platform for safe, reliable, and optimized dispatch of the CBES resource, minimizing manual errors and system risks.

Benefits Associated with DERMS

- **Operational Efficiency** – DERMS enables integration of various Aggregators systems into one platform, ensuring VPP is controlled as one cohesive, utility-scale resource.
- **Reliable, Automated Dispatch** – More accurate dispatch and event participation with reduced probability of manual errors and lesser operational burden.
- **Near-real Time Reporting** – More granular and timely reporting of enrollments, event participation, post-event metrics to ensure continuous optimization and necessary adjustments.
- **Enhanced Dispatch Strategies for Grid Safety & Reliability** - Ability to ramp up/down resources (e.g. 25MW every 15 min) to maintain grid stability, including operations at scale and better coordinated with other generation sources.
- **DER Roadmap & Scale** – DERMS will also support expansion to DERs such as Electric Vehicles and Thermostats, enabling additional cost-effective DR program for consideration across a variety of system needs and use cases.

Costs Associated with DERMS*

- One-Time Set Up Fee (Fixed)
- Annual Platform Fee (Fixed)
- Per Device Fees (Variable/Tiered)

*DERMs platforms are all uniquely priced relative to the scope of services and #/type of devices being managed.

CBES+ Eligible Customers

CBES+ Eligible Customers

- Customers with aggregator-owned or third-party owned BESS and existing agreements with participating aggregators that already enable “Auto-Enroll“ contractually (similar to: Massachusetts Connected Solutions & California DSGS programs).
- High-visibility enrollment communications with one-step “Auto-Enroll” processes supported by participating aggregators.
- ~20% of available battery capacity will be enrolled; with customers reserving the ability to adjust their individual reserve level settings at any time.
- Continuation of eligibility for customers which fall outside the above "auto-enroll" (opt-out) eligibility criteria will be maintained through established manual enrollment process (opt-in).

CBES+ Eligible Aggregators

▪CBES-qualified Aggregators who have the functional capability and contractually authorized to auto-enroll customers with aggregator-owned or third-party owned BESS.

▪The LUMA team is actively engaging with all current CBES aggregators to:
-Discuss plans for expansion to this new model.
-Understand the specific technical and legal ability of each individual aggregator to auto-enroll customers.
-Encourage the ongoing manual enrollment of customers in parallel to "auto-enroll" activities.

CBES+ Incentive Strategy

- The incentive structure, informed by similar programs across North America, is a pay for performance model with a $ /per kWh incentive of load reduction during emergency DR events to the Aggregator of record for that specific resource.
- The CBES incentive amount will **remain unchanged** for CBES+ at $1.25 per kWh of load reduction during emergency DR events.
- LUMA will maintain the design which pays Aggregators who in turn will be responsible for paying customers based on the specifics of their unique agreements with the customer.

Event Performance
$1.25/kWh

CBES+ Enrollment Process

LUMA will partner with approved & participating Aggregators to auto-enroll eligible customers into CBES+ emergency program.

LUMA qualified aggregators from CBES confirm their participation in CBES+.	LUMA and participating aggregators align on and approve customer communications about auto-enrollment.	Participating aggregators notify all eligible customers via email or in-app notifications about automatic enrollment in CBES+.	Customers may choose to unenroll by contacting the aggregator at any time for the duration of program.	Participating aggregators ensure only a limited amount (~20%) of available battery capacity is dispatched for auto-enrolled customers.
In Progress	In Progress	Not Started	Not Started	Not Started

CBES+ Customer Experience

CBES+ Customer Experience

- CBES+ Customer experience will remain similar to that of the original CBES.
- Under CBES+, the Aggregators will still be responsible for direct customer relationships to the program including primary roles in enrollment, engagement, and payments.
- Like CBES, CBES+ was designed with customer experience in mind; customer choice is preserved under CBES+ allowing customers the opportunity to opt out of events, adjust their reserve level, and opt-out of the program entirely.
- LUMA will work with aggregators to develop informative and accurate communications to inform customers on the new program changes, expectations, event notifications, opt-out and unenrollment processes.

LUMA's Role in Customer experience for CBES+

- LUMA will support aggregators in promoting a positive experience for customers by prioritizing active communication, advance notice for events, and education on customer choice.

Customer Experience if CBES+ *does not continue* past October 2025

- If not continued past Summer 2025, auto-enrolled customers will automatically be unenrolled from the program.
- This would be communicated to customers both before and during the season in order to minimize confusion.
- However, LUMA maintains a recommendation to allow customers to remain in the program and modify dispatch parameters according to system needs while balancing an optimal customer experience and expectations.

Event Process: Summer Dispatch Standard Operating Procedure

System Operator Schedule

- LUMA as the system operator will use day-ahead and day-of forecasts to determine which incremental resources are required to meet forecasted energy demand, reducing event or impacts of potential manual load shed. CBES+ is likely to be dispatched as the first resource in stack to help achieve system balance and sufficient reserves.* (~6-24 hours in advance of event).

Event Notification

- Qualified participating aggregators will be notified in advance of anticipated Emergency DR Events. Notifications will be sent via the DERMS platform, and all aggregators will be notified in parallel of the dispatch via email by LUMA.

Aggregator Confirmation

- Upon receipt of LUMA event notification, all qualified aggregators will reply to LUMA via email confirming their participation status and provide an estimate of available dispatch capacity.

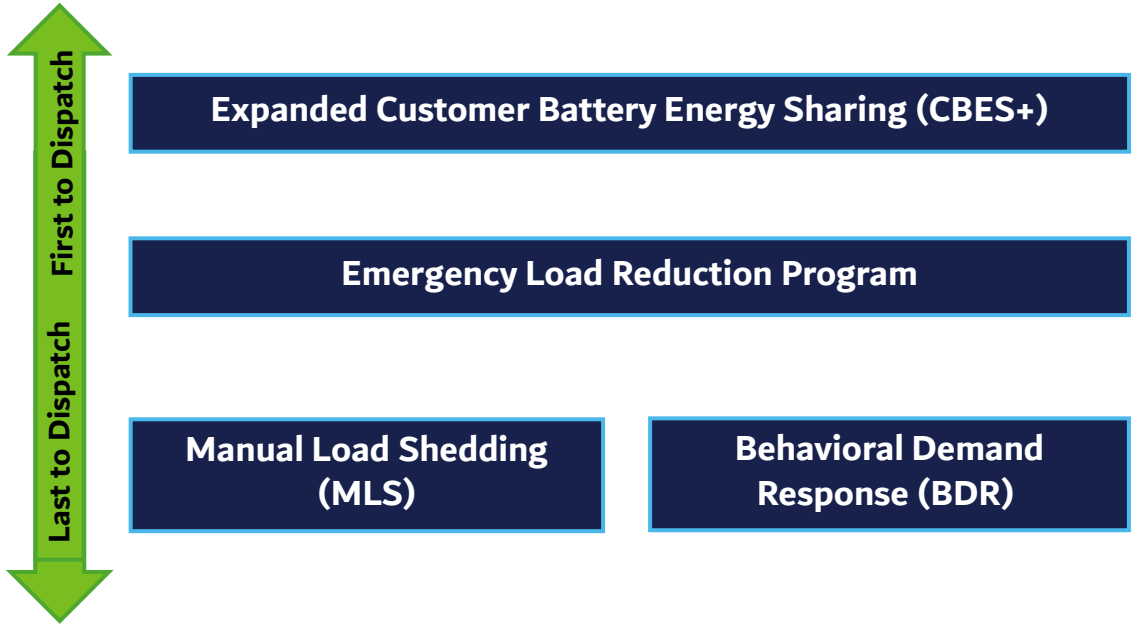
Customer Notification

- Aggregators will inform customers of the Emergency DR Events according to their specific customer experiences.

Event Dispatch

- At the prescribed start time, dispatch of batteries will occur according to the event parameters.

Event Process: Summer Dispatch Standard Operating Procedure



- Residential and small Commercial battery sites participating through third-party aggregators; Expanding CBES beyond 19,500 total battery systems.
- The Emergency Load Reduction Program (ELRP) targets large commercial and industrial customers that can shift their load to backup generators, or other onsite generation sources. In line with the Regulation for Demand Response, fossil fuel-backup generators will only be dispatched in power supply or grid contingency scenarios where customers might otherwise lose electric service.
- Depending upon day ahead or dynamic system generation realities, the system operator will choose whether or not a limited number of premises may require manual load shed (MLS) to balance the system.
- In cases where more extreme generation deficits are forecasted, the system operator may elect dispatch Behavioral Demand Response (acute energy reduction ask of all customers) to reduce the potential impacts of the deficit. This resource (BDR) will only be dispatched on limited number events (best practice not to exceed 10x annually) in which generation shortfall is forecasted to be it's largest, to preserve the efficacy of the resource. Using a variety of communication channels to request reduction in consumption from all customers on the island.

*System Operator will use initial dispatch of expanded DR resources in stack to determine the unique and ongoing nature in which dispatch order and magnitude should be pursued relative unique characteristics of forecasted generation deficiency scenarios.

Event Process: Example Dispatch Scenarios

Programs activated are dictated by the reserve level from day ahead or day of forecasts.

First to Dispatch

Last to Dispatch

< 200 MW		< 100 MW		< 0 MW	
Program	**Capacity**	**Program**	**Capacity**	**Program**	**Capacity**
CBES+	50 MW	CBES+	50 MW	CBES+	50 MW
ELRP	0 MW	ELRP	50 MW	ELRP	50 MW
Limited Manual Load Shedding	0 MW	Limited Manual Load Shedding	0 MW	*Potential Manual Load Shedding*	*TBD MW*
Behavioral Demand Response	0 MW	Behavioral Demand Response	0 MW	*Potential Behavioral Demand Response*	*150 MW*
Total	50 MW	**Total**	100 MW	**Total**	250 MW +

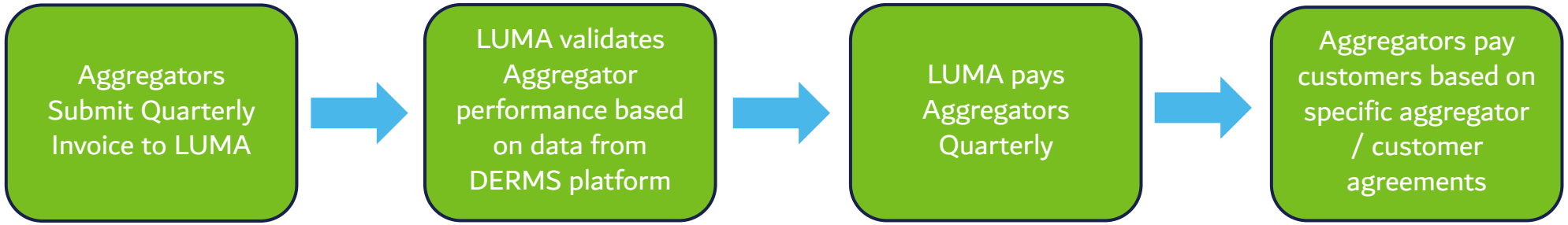
All available capacity will be dispatched as needed to promote reliability and adequate reserve level best practices.

Additional dispatch levers available to address system needs, based on specific shortfall scenario.

*System Operator will use initial dispatch of expanded DR resources in stack to determine the unique and ongoing nature in which dispatch order and magnitude should be pursued relative unique characteristics of forecasted generation deficiency scenarios.

Payment Process

The payment process will remain unchanged under this proposal. The current payment process is as follows:



CBES+ Emergency Expansion Cost Structure: Framework for Expanded Program and Additional Customers

- **Post Summary Scenarios***

Scenario A: Unenrollment of Auto-enrolled segment of customers after October 2025.

Scenario B: Keep full fleet of 60k customers enrolled for FY2026 with limited discharge of all batteries to meet resource needs.

Scenario C: Keep full fleet of 60k batteries enrolled for FY2026 and dispatch all batteries at full capacity.

- **Pros of Keeping Full 60k (CBES+ Enrolled Sites)**
  - Resource will be available for future generation shortfall or alternate adequacy and balancing needs.
  - **Customer experience will be improved** for new participants who will remain in the program and continue to be incentivized for their participation.

- **Cons of Keeping Full 60k (CBES+ Enrolled Sites)**
  - Total device fee paid for enrolled resources remains high.
  - Existing customers may see a reduction in overall incentive earned because less energy may be required from the system operator as resource adequacy improves.

Recommendation -> Scenario B: Proceed with keeping the full fleet of batteries enrolled and modify dispatch parameters according to system needs; re-evaluate this strategy annually based on customer experience, expectations and system demands.

*Period after October 31, 2025.

CBES+ Modeling Assumptions & Input Values

Assumed Summer 2025 CBES+ Program Metrics

Program Level Metrics

Metric	Total
Total Customers	60,000
Nameplate Capacity Per Event	384 MW
Nameplate Energy Per Event	984 MWh
Assumed Average Participation Rate	90%
Average Reserve Level	80% (20% available for discharge)
Average Event Length	4 Hours
Estimated # of Events	75 Events
Estimated Total Resource Hours	300 Hours

Event Level Metrics

Metric	Total
Average Customers per Event*	54,000
Average Capacity per Customer per Event	0.93 kW
Average Energy per Customer per Event	3.7 kWh
Average Total Capacity per Event	50 MW
Average Total Energy per Event	200 MWh

Assumptions

- Estimated total kWh per event is based on past (CBES Pilot) event participation & discharge data along with the estimated battery reserve level of auto-enrolled customers.
- Average Reserve Level is a conservative estimate based on the settings customers will be auto-enrolled in the program at.

*Also considers new enrollments and unenrollment

CBES+ Emergency Expansion Cost Structure: Summer 2025 Only

Scenario: Enrollment period from June 1 to October 2025, assuming 46,500 customers will be unenrolled after October 2025.

	Updated Proposal for FY26	Emergency Auto-Enrollment	Summer 2025 Only
Element	**CBES Proposal for FY26***	**Expansion of CBES**	**Scenario A: CBES+ Proposal Summer Only**
Anticipated Enrolled Sites	**13,500**	**46,500**	**60,000**
Capacity - MW Per Event	**15 MW / Event**	**Expected - 35 MW / Event**	**Expected - 50 MW / Event**
Enrollment & Dispatch Period	June – October 2025 75 Events	June – October 2025 75 Events	June – October 2025 75 Events
Enrollment Method(s)	Opt-in Enrollment	Opt-out Auto-Enrollment	Both Opt-In and Auto-Enrollment
FY2026 Incentive Budget	**$5.07M**	**$11.76M**	**$16.83M**
FY2026 Admin Budget Includes DERMs	**$1.06M**	**$1.6M**	**$2.0M****
FY2026 Total Budget	**$6.13M**	**$13.36M**	**$18.83M**
Value Provided Households/Event & Total Hours avoiding service interruption	**15,000 Households/Event 4.5M Total Loss of Load Hours**	**35,000 Households/Event 10.5M Total Loss of Load Hours**	**50,000 Households/Event 15M Total Loss of Load Hours**

Numbers are based on **4-hour events** and **75 total events for Summer Period**.

*Forecasted Transition Period Plan FY26 budget for CBES was $5.3Million with participation from 13,500 sites. Quarterly PPCA forecasts will reflect an increased CBES budget forecast due to increase in forecasted events and enrolled sites (to 19,500 sites) to be approved.

**The cost of scenario A is realized in the administrative efficiency in scaling the program which shows the value of 2.0M.

CBES+ Emergency Expansion Cost Structure: Post Summer

Scenario: All 60K participants stay enrolled past October 2025 with an option for smaller dispatch per participant.

	Summer 2025 Only	Continue for FY26	Continue for FY26
Element	**Scenario A: CBES+ Full Discharge Summer Only**	**Scenario B: CBES+ Modified Discharge* All Year**	**Scenario C: CBES+ Full Discharge All Year**
Anticipated Enrolled Sites	**60,000**	**60,000**	**60,000**
MW Per Event	**Expected - 50 MW / Event**	**Expected - 10 - 50 MW / Event***	**Expected - 50 MW / Event**
Enrollment & Dispatch Period	*June – October 2025* *75 Events*	July 2025 – June 2026 94 Events	July 2025 – June 2026 94 Events
Enrollment Method(s)	Both Opt-In and Auto-Enrollment	Both Opt-In and Auto-Enrollment	Both Opt-In and Auto-Enrollment
FY2026 Incentive Budget	**$16.83M**	**$18.68M**	**$22.27M**
FY2026 Admin Budget Includes DERMs	**$2.0M**	**$2.5M**	**$2.5M**
FY2026 Total Budget	**$18.83M**	**$21.18M**	**$24.77M**
Value Provided Households/Event & Total Hours avoiding service interruption	**50k Households/Event** **15M Total Loss of Load Hours**	**10k – 50k Households/Event** **3.8M - 18.8M Total Loss of Load Hours**	**50k Households/Event** **18.8M Total Loss of Load Hours**

Numbers are based on **4-hour events** and **94 total events for FY26** (75 summer events)

*LUMA Recommendation : Scenario B, post-summer dispatch to be assessed for modified energy output to account for customer experience, expectations & grid balancing needs.

Anticipated Timeline – CBES+ Emergency Summer Expansion

- May 8, 2025: Emergency Order Motion Filing
- May 19, 2025: Deadline to submit Stakeholder Comments on LUMA's Filing
- June 1, 2025: Proposed start of CBES+ Summer Emergency Program
- July 1, 2025: Start of FY2026
- October 31, 2025: Summer Emergency Period Ends

Requested Procedural Changes

To address this summer's unprecedented demands on the electrical system, LUMA is formally requesting that the Energy Bureau:

Critical CBES Pilot-to-Program Elements Required for CBES+

- Direct LUMA to use a grid-edge DERMS Platform to safely and precisely manage CBES (and CBES+)programs.

CBES+ Elements

- Authorize the number of enrolled devices in the program above the proposed cap of 19,500.
- Authorize participating Aggregators in CBES+ to have the ability to Auto-Enroll customers.
  - Only qualified and eligible Aggregators who have the legal authority to auto-enroll customers, does not prevent manual enrollment pathways for any other Customer or Aggregator.
- Review event minimum on an annual basis based on Resource Adequacy Forecasts.
  - The number of events called in any fiscal year must be prudent both in terms of grid needs and continuity of customer experience.
  - Consideration should be given to leveraging existing resources for other capacity and balancing means beyond bulk system emergency needs.
- Approve dispatch on Saturday and Sunday; no dispatch on holidays or emergency weather events such as storms and hurricanes.
- Allow LUMA to unenroll customers who have not participated in any events for the preceding quarter.
  - - Unenrolling non-participating customers will ensure lower variable costs attributing to DERMS per device fees and ensure resource and cost enhancement practices are maintained by all parties.
- Confirm the use of PPCA funding mechanism to pay for CBES expansion.


La gente primero.
La seguridad siempre.
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Exhibit 2

Revised Presentation

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Revised - LUMA's Presentation for Technical Conference on Customer Battery Energy Sharing (CBES), Demand Response (DR) & Energy Efficiency Transition Period Plan (TPP)

April 24, 2025

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Agenda and Acronyms

Agenda:

PREB's Preliminary agenda for the Technical Conference

Subject	Time
Welcome and introductions	5 minutes
Permanent CBES Program proposal	**1 hour**
Presentation of proposal by LUMA representative	20 minutes
Process and timelines	10 minutes
Proposal substance	20 minutes
Proposal costs and funding	10 minutes
Emergency Demand Response program status	**30 minutes**
Discussion of status and options (including limitations resulting from air permit limitations and potential participation by organizations that operate co- generation facilities)	
Lunch Break	**1 hour**
Transition Period Plan	**1 hour**
Presentation of proposed plan changes by LUMA representative	20 minutes
Process and timelines	10 minutes
Plan's substance and programs	20 minutes
Plan costs and funding	10 minutes
2026-2028 EE and DR Plan	45 minutes
Process and Timelines	15 minutes
Stakeholder Engagement	30 minutes

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Acronyms

LUMA's Relevant Acronyms

Acronym	Definition
ADMS	Advanced Distribution Management System
BESS	Battery Energy Storage System
CBES	Customer Battery Energy Sharing
DERMS	Distributed Energy Resource Management System
DER	Distributed Energy Resource
DR	Demand Response
DRNA	Departamento de Recursos Naturales y Ambientales
CBES+	Emergency Battery Energy Seasonal Sharing
EE	Energy Efficiency
ELRP	Emergency Load Reduction Pilot Program
EPA	Environmental Protection Agency
kW	kilowatt
kWh	kilowatt hour
MLS	Manual Load Shed
MW	Megawatt
NAA	No Action Assurance
PPCA	Power Purchase Charge Adjustment
TPP	Transition Period Plan
TYP	Three-Year Plan
VPP	Virtual Power Plan

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Customer Battery Energy Sharing (CBES) Pilot-to-Program

Permanent CBES Program Proposal Overview

Pilot Period

"Opt-In" through Aggregator Model

~20 MW Energy

~9,800 Customers

50 Event Minimum

$1.25/kWh Incentive

CBES Pilot Highlights:

- System Operator (LUMA) leverages CBES during resource adequacy events and emergencies, when power supply is limited, potentially leading to service disruptions or significant threat to grid stability and reliability.
- Operates under an aggregator model, where customers "opt-in," or self-enroll in the program through a PREB approved ESC & LUMA qualified third-party aggregator.
- Customers can "opt-out" of events or shift their battery reserve level setting, as well as "unenroll at any time.
- The program operating procedures developed with system operator is leveraged when 100MW or less of operating peak reserve is forecasted.
- To date 119 events have been dispatched over the period of the pilot leading to initial findings which supported the proposed CBES program (participation rate, reserve level setting, etc.).
- Initial estimated program cap of 6500 Customers was exceeded as the results of kWh dispatch per customer enabled higher participation rates given available budget and grid needs.

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Permanent CBES Program Proposal Overview

3 Year Term FY26-28

19,500 Customers

40 MW Energy

DERMS Integration

CBES Program Changes:

- All program elements remain the same from Pilot to Program except those specified here:
  - For the benefit of confidence of all stakeholders, the CBES Program is recommended to be executed for a three-year period FY26-28.
  - Using a historical resource adequacy and event performance data as a basis, the CBES program proposes a growth in the total number of customers (19,500) and total dispatchable energy (40MW) available to support a majority of emergency events.
  - A grid-edge Distributed Energy Resource Management system (DERMS) is required to dispatch CBES events both in coordination and safely for the magnitude and ramp rate of power which will be required to do so in unison with other grid assets by system operator.

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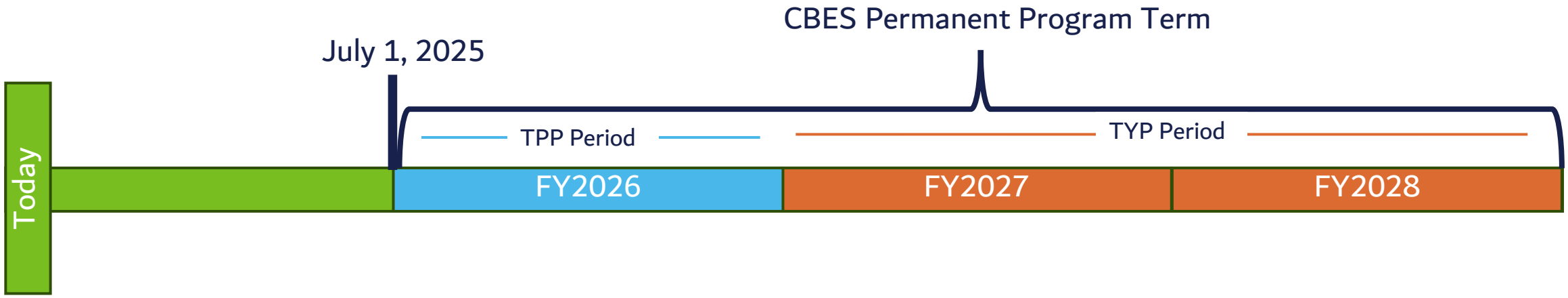
Permanent CBES Program Proposal: Process and Timelines

- Program Year One (1) Implementation to begin on July 1, 2025.
- CBES Permanent Program Term will be from July 1, 2025 – June 30, 2028.
  - Transition Period Plan (TPP) in FY26 and Three-Year Plan (TYP) in FY27 and FY28.
- Quarterly review of enrollment target and budget.
- Quarterly Energy Bureau Reporting.
- FY25Q4 DERMS platform integration to enable system balancing, automation and improved reporting.



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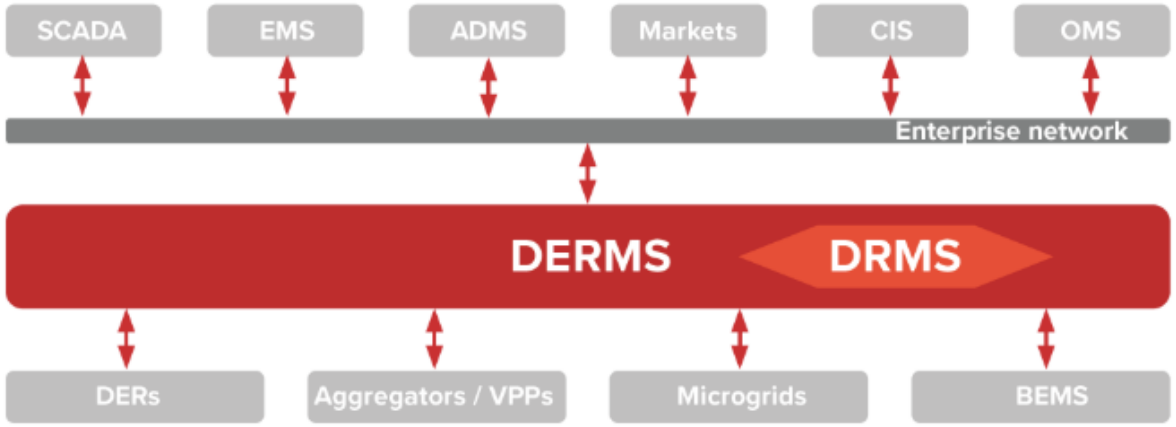
Permanent CBES Program Proposal: DERMs

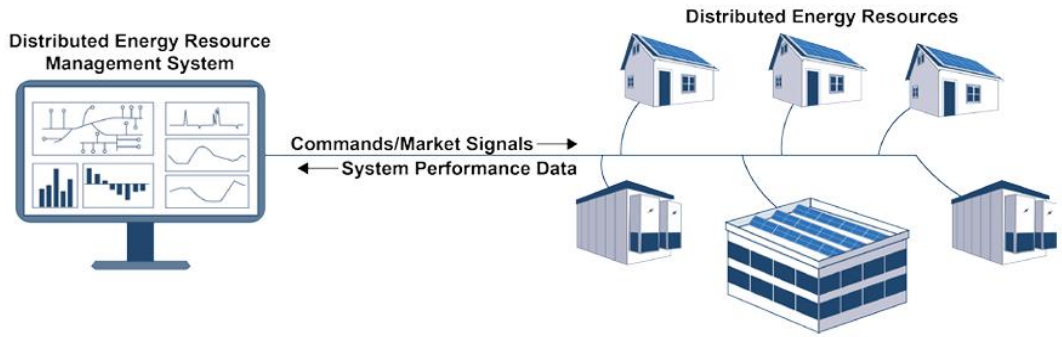
DERMS – "The Functional Nervous system of the VPP"

DERMS is a software platform that aggregates, controls and optimizes Distributed Energy Resources (DERs) such as batteries, electric vehicle, smart thermostats and other home energy systems. A grid-edge DERMS system is expected to perform the following functions:

- Manage event dispatch or communication of events to DER Aggregators and participating customers.
- Provide timeline reporting of participation metrics and event performance.
- Track the operation of the distribution architecture through the ADMS (forthcoming at LUMA) to target the usage of the resources to maximize the efficiency and effectiveness of the system.

VPPs vs DERMS is not an either/or strategy for utilities.





Permanent CBES Program Proposal: DERM Benefits

- Operational Efficiency & Real Time Visibility
- Grid Stability
- Better Demand Response & Load Shaping
- Admin Consistency & Modernization
- Advancement of BESS DR Use Cases
- Scale into additional DR Resources

CBES Program:

- LUMA's existing portfolio administrator and procurement from FY23, solicited and contracted a DERMS provider which can be implemented without pause or impact to the CBES Pilot to Program transition.

DERMS Benefits for CBES:

- Operational Efficiency – DERMS enables integration of various Aggregators systems into one platform, ensuring VPP is controlled as one cohesive, utility-scale resource.
- Automation & Near Real-time Visibility – DERMS enables provision of near real-time data and event dispatch, improving event automation, timing/ramp rates, accuracy and timeliness of data provision from *many* aggregators, dynamic forecasting and more.
- Grid Safety – DERMS integrated into the utility's system ADMS can enable end-to-end visibility of distribution system. As the VPP scales, it must operate with a **DERMS** to be safe, reliable and coordinated with other generation sources by LUMA system operations team, avoiding frequency imbalance and other risks.

DERMS Benefits for LUMA's DR Portfolio:

- Precision Dispatch – DERMS may also enable precision dispatch of DER resources to address regional or local grid needs.
- DER Roadmap & Scale – DERMS will also support expansion to DERs such as Electric Vehicles and home energy systems, enabling additional cost-effective DR programs.

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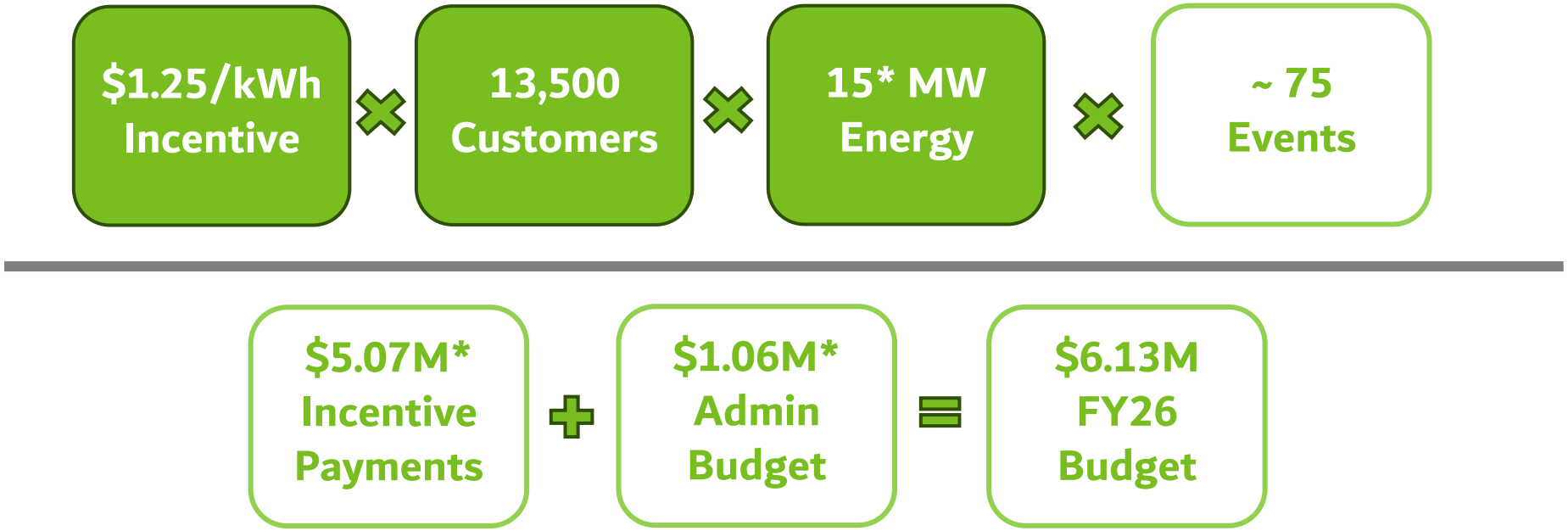
Permanent CBES Program Proposal: *FY26* Proposal Costs and Funding



*Modified figures presented represent an adjusted forecast for CBES Pilot to Program budget given adjusted length of event assumption of 4 hours as opposed to the initial proposal where the length of event average was assumed to be 2.5 hours events

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Emergency Demand Response Program Status

Emergency Load Reduction Program

Largest Industrial and Commercial Customers

+50 MW Firm Energy by FY26

Firm Commitment $/kW Monthly

Event Performance $/kWh

- This program is being marketed to large industrial and commercial customers as the Emergency Load Reduction Program (ELRP) with the goal of enrolling 50 MW of load reduction capacity by the start of FY26.
- Through this program, customers would be compensated for temporarily reducing their load demand from the grid and shifting it to backup generators in response to an emergency grid event.
- Participants will be paid quarterly:
  - A monthly capacity payment of per kW of load reduction.
  - An incentive of per kWh of actual load reduction during events.
- Participants must commit firm load reduction available during the hours of 5-11 PM seven days a week during established peak season period.
- How it would work:
  - Customer determines available load (MW) that can be committed.
  - LUMA and Customer review and sign a participation agreement.
  - Customer begins receiving event notifications.
  - LUMA verifies customer participation through meter data and/or generator runtime documentation.
  - Bill credits will appear on customer bill quarterly.

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Eligible Load Reduction Strategies

- LUMA is seeking the Energy Bureau's approval to allow a broader set of load reduction strategies within the scope of the program, beyond shifting load to backup generators. Examples include shifting load to cogeneration facilities, batteries or other onsite generation.

- The Emergency Load Reduction Program was designed in such a way to allow for a variety of verifiable load reduction strategies beyond backup generation. Thus, including cogeneration load reduction strategies will not require changes to program parameters, operation and incentive strategy.

- A key criteria for inclusion of additional load reduction strategy in the program will be the ability to measure and verify actual load reduction during emergency DR events.

- LUMA proposes to evaluate and validate additional load reduction strategies that can meet this criteria for inclusion in the program.

Backup Generation for Load Reduction

Removing Air Permitting Regulatory Barriers to Participation

EPA and **DRNA** air permits associated with backup generators limit the number of hours a generator can run during the year.
This limitation may have an impact on whether a company may decide to participate in the program.

EPA Discussion Status - Positive Progress
Working with EPA on “No Action Assurance” for Permit Holders

DRNA Discussion Status – Positive Progress
Working with DRNA on waiver to allow customer generators to exceed limits.

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Emergency Load Reduction Program

Next Steps to Program Launch

1. Energy Bureau approval of program and use of PPCA funding mechanism to pay for the program.
2. Finalize administrative determinations from Puerto Rico Department of Natural and Environmental Resources (DRNA) and the U.S. Environmental Protection Agency (EPA) to remove a key barrier to customer enrollment.
3. Program Launch by June 1st.
4. Interested customers sign participation agreements and can participate in events.
5. LUMA enrollment and recruitment efforts continue.

LUMA continues working in preparation for the assumed program launch by June 1st

Backup Generation
50MW Budget:

$6.6M Incentive Payments + **$2.2M Admin Budget** = **$8.8M Budget**

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Emergency Demand Response Programs

Options for Cogeneration Export Demand Response

How it could work:

- Customer must have an approved interconnection agreement that ensures cogeneration project does not pose risks to the grid.
- Interconnection process would need to be adapted to study and enable cogeneration facilities to export power to the grid.
  - Current process requires facility safeguards to ensure that power does not feed into the grid.
  - Additional system study costs.
- Once interconnection and export are approved, cogeneration facilities could enroll in DR program and begin exporting during emergency DR events.
- Customers could be paid through bill credits funded through PPCA rider as an interim solution.

LUMA believes the near-term, 6-month potential for Cogeneration Export DR is very limited

- Near term, there are two (2) cogeneration facilities operating under approved interconnection agreements, each with limited excess capacity.
- For cogeneration already in current interconnection pipeline, conservatively will need an additional set of months to complete modified processes for evaluation.
- Extensive additional data gathering, analysis needed to develop pilot proposal to consider cogeneration DR for future use.
- As a part of Emergency Load Reduction Program outreach, recruitment and enrollment, LUMA will be gathering information on customer use of cogeneration facilities and the potential for exporting cogeneration for demand response.

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Emergency Demand Response Programs

Options for Load Reduction Demand Response via Cogeneration

How it could work:

- Customer with cogeneration facilities use those facilities in a wide variety of ways to support their energy needs. Customers may have the ability to participate in the Emergency Load Reduction program by reducing their load on the grid and shifting it to their cogeneration facilities.
- The Emergency Load Reduction Program was designed in such a way to allow for a variety of verifiable load reduction strategies beyond backup generation. Thus, including cogeneration load reduction strategies will not require any changes to program parameters, operation and incentive strategy.

LUMA has not yet assessed the grid stability and safety implications for load reduction DR via cogeneration. Nor does LUMA yet have the information from customers needed to estimate potential load reduction capacity from cogeneration facilities.

- LUMA can evaluate implications of load reduction using cogeneration facilities for safety and stability of the grid.
- As a part of Emergency Load Reduction Program outreach, recruitment and enrollment, LUMA will be gathering information on customer use of cogeneration facilities and the potential for using cogeneration for load reduction demand response.

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Transition Period Plan

Transition Period Plan – Proposed Changes for Energy Efficiency

- Transition Period Programs – now a little over 1 year of executed programs - will continue to mature in extended TPP.
  - Maturation of customer intake and management tools included.
- Enhanced market monitoring in Year 3 focuses on increasing collection and analysis of data to fine tune measure mix and incentive levels.
  - A key example being Residential Lighting market transformation; This extremely cost-effective measure will be mostly eliminated in the Year 3 portfolio due to Energy Star sunsetting, increasing the cost of meeting energy efficiency targets going forward.
  - Participant data collected is our best tool to forecast and model future TYP impacts and costs associated.
- The TPP extension plan proposes a maturing Education and Outreach programs focused on expanding program reach through strategic partnerships and a more integrated marketing and communications.
- We also propose development of tailored program delivery initiatives with new strategic partners that will address needs of harder-to-reach customers.
- TPP extension changes are designed to enable seamless ramp-up to the Three-Year Plan period launch, which is integral in the jump in associated savings targets in Three-Year Plan.

TPP Year 3 Changes

- Enhanced Market Monitoring
- Continual Eligible Measures List Enhancement
- Shift Away from Residential Retail Lighting Measures
- Strategic Partnerships
- Tailored Initiatives for Target Audiences
- Integrated Marketing and Communications

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Transition Period Plan – Proposed Changes for Demand Response

Already Discussed: CBES, BUGS

Remaining Proposal: Demand Response Pilots Initiative

- Demand Response Pilots Initiative will create the needed program function to respond more nimbly to emerging power sector needs for new demand response resources throughout the year.
- Piloting additional cost and impact-effective demand response approaches and use cases will support ramp-up to Three Year Plan launch.
- Pilots may include testing for variables like fixed capacity design, dynamic resource pricing, locational dispatch in support of NWA, and ancillary services.
- Today's discussion on Backup Generation and Emergency Expansion of Customer Battery Energy Sharing is a model of how mid-year demand response pilot proposals can be evaluated and approved by the Energy Bureau.
- New program piloting and launch administration would be greatly supported by a DERMs system to properly isolate, monitor and evaluate those resources a part from other Demand Response programs already in place.

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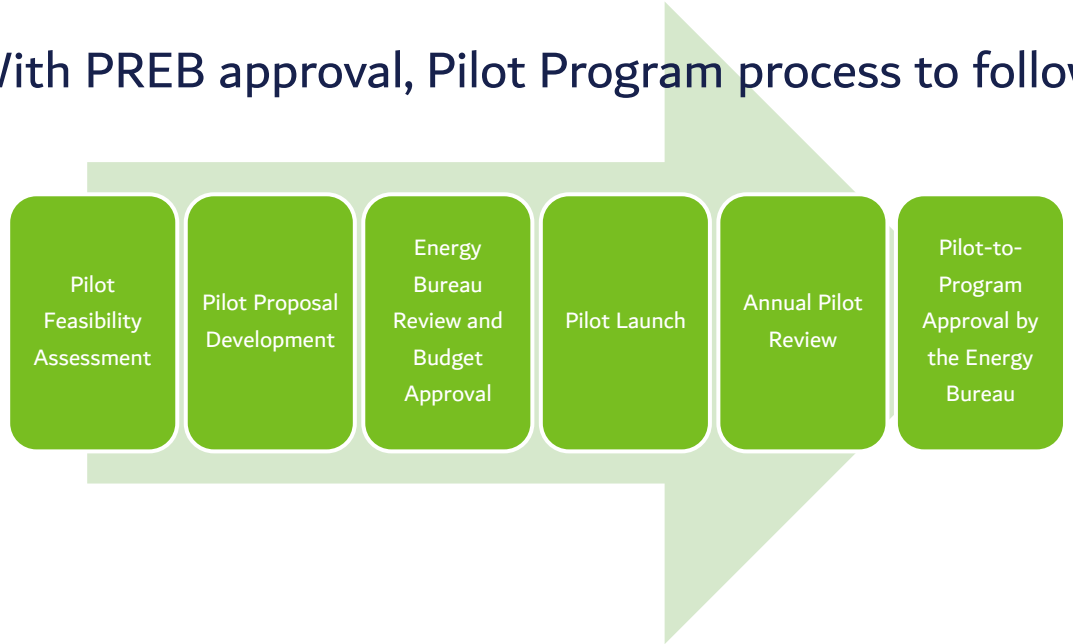
Demand Response Pilot Initiative

Core Functions of DR Pilot Program Development

- Technology testing
- Incentive strategy
- Customer engagement and participation strategy
- Operational risks and risk assessment
- Data Collection and EM&V approach
- Scalability and market integration
- Other tasks to evaluate potential for new cost-effective DR programs

With PREB approval, Pilot Program process to follow:

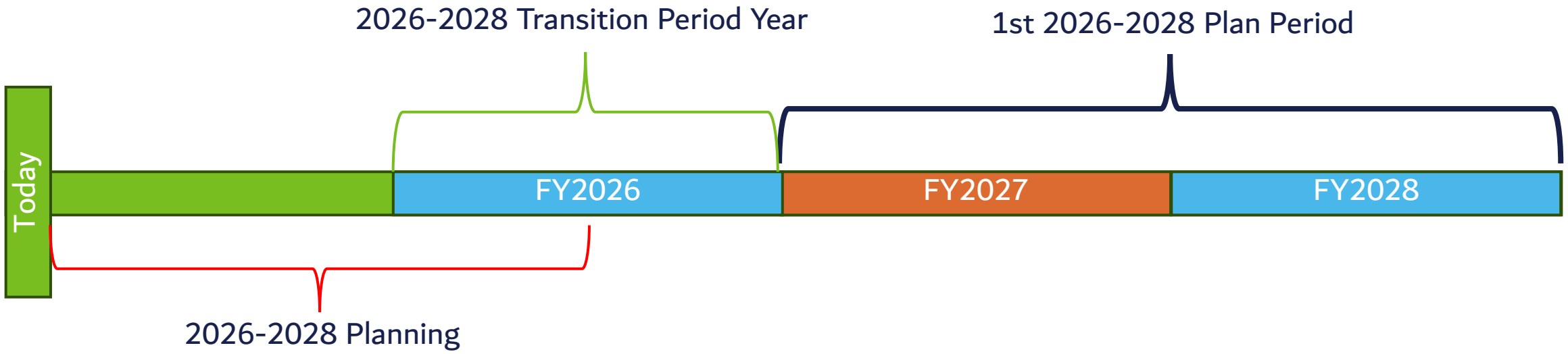


Potential DR Programs to analyze via core function in FY26:

- New Sources of Emergency Demand Response
  - Behavioral Demand Response
  - Managed EV charging
  - Commercial building load reduction
  - Cogeneration
- Geographically-deployed demand response to address locational grid constraints

Transition Period Plan: Process and timelines

- Transition Period extended through June 30, 2026.
- Quarterly & Annual submission of Demand Response & EE Forecasts through PPCA & EE Rider adjustments.
- Quarterly and Annual Stakeholder Meetings & PREB Reporting.



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Transition Period Plan Program Portfolio

New proposals in green

Education & Outreach

- Integrated Marketing, Communications and Campaigns
- Strategic Partnerships
- Private Sector, SME and Low-Income Initiatives

Residential

- Residential Rebates
- In-Store Discounts
- Residential Energy Efficiency Kits
- Customer Battery Energy Sharing
- Additional Demand Response Pilots

Commercial and Industrial

- Business Rebates
- Business Energy Efficiency Kits
- Customer Battery Energy Sharing
- Emergency Backup Generation Pilot
- Additional Demand Response Pilots

Streetlights

- Street Light Repair & Replacements

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Demand Response: FY26 Costs and Funding

Program	A) Total Planned Program Budget ($M)	C) Allocation of funds from existing rates and other programmatic revenues ($M)	D) Incremental ratepayer funds required from PPCA ($M)
CBES Program	$5,285,375	$0	$5,285,375
Emergency Backup Generation Pilot	$6,304,560	$0	$6,304,560
DR Pilot Program Initiative	$2,000,000	$0	$2,000,000
Total Portfolio of Programs	**$13,589,935**	**$0**	**$13,589,935**

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Energy Efficiency: FY26 Costs and Funding

PROGRAM	A) TOTAL PLANNED PROGRAM BUDGET ($M)	C) ALLOCATION OF FUNDS FROM EXISTING RATES AND OTHER PROGRAMMATIC REVENUES ($M)	D) INCREMENTAL RATEPAYER FUNDS REQUIRED FROM EE RIDER ($M)
Residential Programs	$24,050,000	$0	$24,050,000
C&I Programs	$10,350,000	$0	$10,350,000
Education & Outreach Program	$4,400,000	$0	$4,400,000
Cross-Cutting Planning, Administration & Startup Costs	$2,200,000	$0	$2,200,000
Total Portfolio of Programs	**$41,000,000**	**$0**	**$41,000,000**

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Summer 2025 Generation Shortfall

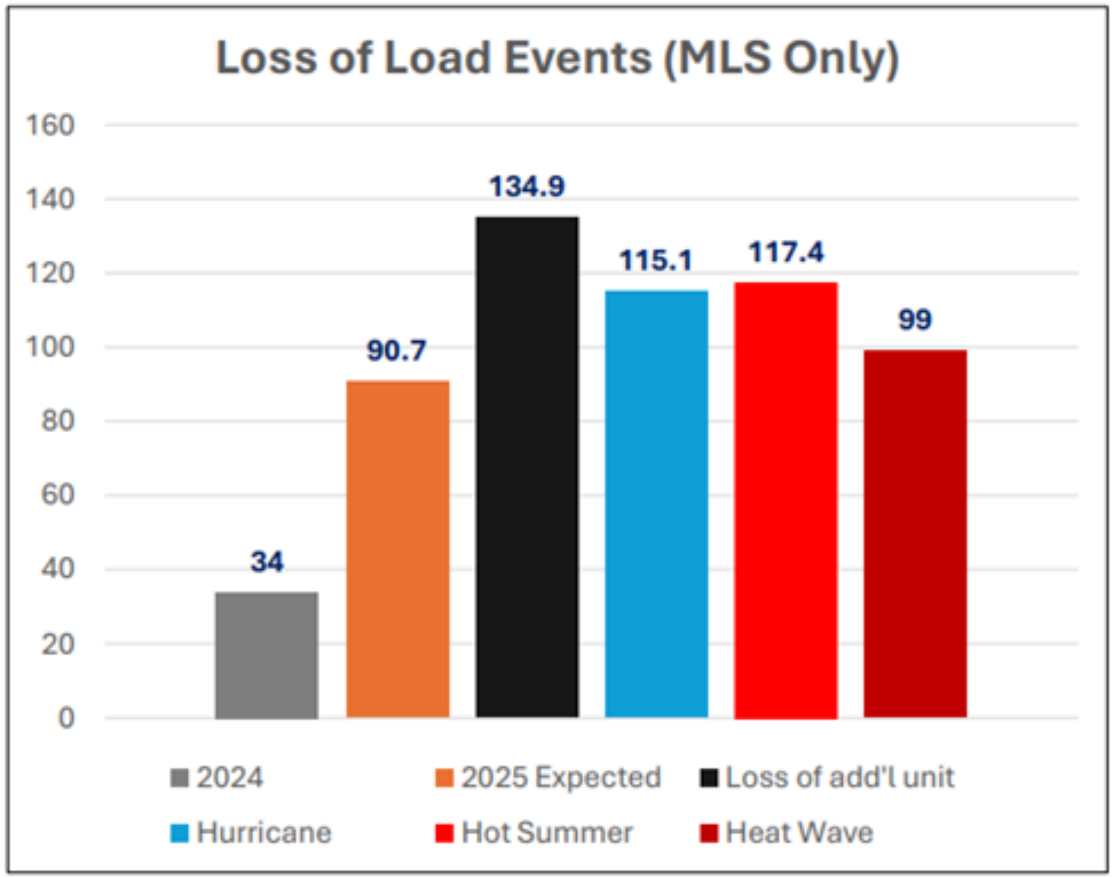
Why Emergency DR for Summer 25'?

- For Summer 2025 (May 1 – Oct 31) there is significant potential for upwards of 500MW generation shortfall.

- Resource Adequacy forecasts have projected that Puerto Rico will likely have 90+ generation shortfall manual load shed events this summer, lasting an average of 5.5 hours. If any other variables are to worsen, the resource adequacy forecast will follow that same trend (hurricane, base load failure, heat wave, etc.).

- There is also significant challenge of system wide outages if systems response to acute shifts in demand and available supply cannot be modulated dynamically and rapidly.

- Given this emergency LUMA is aggressively exploring quick-start Energy Demand Response programs and seeks PREB feedback today on the following:
  - Backup Generation for load reduction.
  - Seasonal emergency battery sharing building on CBES.
  - Options for Cogeneration.



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Opportunity to Expand Customer Battery Demand Response

May 1 – October 31

- Resource Widely & Readily Available
- 135K Systems 2000 MWh
- Fastest Growing Solar in NA
- ~100% BESS Attachment Rate
- Customer Empowerment & Participation
- Clean & Sustainable Fuel Source

- No other energy resource in PR is as readily available and dispatchable today to the extent as is the Distributed Battery Energy Storage Systems (BESS); with over 135K systems and 2000 MWh of capacity island-wide.
- These numbers continue to grow - Puerto Rico is still the fastest growing geography for distributed solar installations in North America with nearly 100% BESS attachment rate today on those systems.
- CBES is already the 2nd largest Battery VPP in North America and has the most emergency dispatch events. LUMA, leveraging CBES's DERMS-enhanced infrastructure, would be well-positioned to manage more of the island's BESS capacity for demand response.
- Harnessing the island's massive distributed BESS capacity on the island will rely on the "law of large numbers" – with more participating BESS, less of each BESS is needed, lowering the commitment burden of each customer resulting in a firmer resource.
- Critically, BESS is a sustainable resource which can be dispatched and replenished every day with no emissions or adverse air quality impacts.

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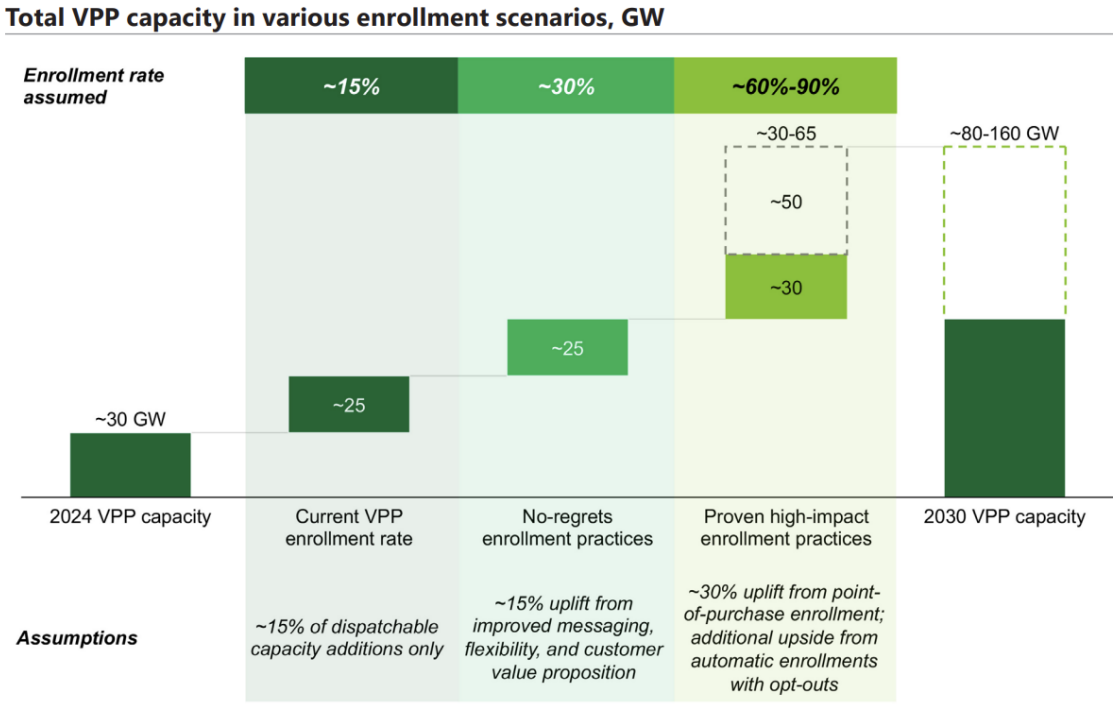
Emergency Expansion of Customer Battery Energy Sharing (CBES+)

Quick-Start Strategy to Mitigate Summer 2025 Generation Shortfall

- Given the immediacy of the peak season, severity of the forecasted generation shortfall, and need for load shed events, LUMAs recommends an **"Auto-Enroll"** enrollment strategy.
- The Program will initially only be available during summer, from **May – October 2025.**
- **Target Participants**
  - Customers or Aggregators which have the ability to leverage **existing or new agreements that enable "Auto-Enrollment**" of customers.
  - Customer choice is preserved, and all customers will maintain their ability to adjust reserve level settings, opt-out of the events, or completely unenroll from the program, mirroring the ability of manually enrolled customers
  - A limited percentage of available battery capacity will be enrolled (eg 20%), with customers still reserving the ability to adjust their individual reserve level settings at any time.
  - Auto-enroll programs are already in place in California (DSGS) & Massachusetts (Connected Solutions).



Source: DOE Pathways to Commercial Liftoff: Virtual Power Plants Update

With the approval of an Auto-Enroll design, LUMA estimates that 50MW of dispatchable power can be available from target participants and aggregators

CBES+ Emergency Expansion Cost Structure: Summer 2025 Only

Scenario: Enrollment period from June to October 2025, assuming 46,500 customers will be unenrolled after October 2025

	Updated Proposal for FY26	Emergency Auto-Enrollment	Summer 2025 Only
Element	**CBES Proposal for FY26**	**Expansion of CBES**	**Scenario A: CBES+ Proposal Summer Only**
Enrolled Sites	**13,500**	**46,500**	**60,000**
Capacity - MW Per Event	**15 MW / Event**	**Expected - 35 MW / Event**	**Expected - 50 MW / Event**
Enrollment & Dispatch Period	June – October 2025 75 Events	June – October 2025 75 Events	June – October 2025 75 Events
Enrollment Method(s)	Opt-in Enrollment	Opt-out Auto-Enrollment	Both Opt-In and Auto-Enrollment
FY2026 Incentive Budget	**$5.07M**	**$11.76M**	**$16.83M**
FY2026 Admin Budget Includes DERMs	**$1.06M**	**$1.6M**	**$2.0M**
FY2026 Total Budget	**$6.13M**	**$13.36M**	**$18.83M**
Value Provided Households/Event & Total Hours avoiding service interruption	**15,000 Households/Event 4.5M Total Loss of Load Hours**	**35,000 Households/Event 10.5M Total Loss of Load Hours**	**50,000 Households/Event 15M Total Loss of Load Hours**

Numbers are based on **4-hour events** and **75 total events for Summer Period**

Emergency Expansion of Customer Battery Energy Sharing (CBES+)

Next Steps

To address this summer's unprecedented demands on the electrical system, LUMA is formally requesting that the Energy Bureau:

- **Direct LUMA to use a grid-edge DERMS Platform to safely and precisely manage CBES and CBES+ programs**
- **Authorize the number of enrolled devices in the program above the current cap of 19,500**
- **Authorize participating Aggregators in CBES+ to have the ability to Auto-Enroll customers**
  - Only qualified and eligible Aggregators who have the legal authority to auto-enroll customers, does not prevent manual enrollment pathways for any other Customer or Aggregator
- **Review event minimum on an annual basis based on Resource Adequacy Forecasts**
  - The number of events called in any fiscal year must be prudent both in terms of grid needs and continuity of customer experience
  - Consideration should be given to leveraging existing resources for other capacity and balancing means beyond bulk system emergency needs
- **Approve dispatch on Saturday and Sunday; no dispatch on holidays or emergency weather events such as storms and hurricanes**
- **Allow LUMA to unenroll customers who have not participated in any events for the preceding quarter**
  - Unenrolling non-participating customers will ensure lower variable costs attributing to DERMS per device fees and ensure resource and cost enhancement practices are maintained by all parties
- **Confirm the use of PPCA funding mechanism to continue to pay for the program.**

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Emergency Expansion of Customer Battery Energy Sharing (CBES+)

Next Steps

The following steps are required for launch this summer:

1. LUMA is requesting approval for the temporary expansion of CBES (**CBES+**) for the summer 2025 period from May 1 – October 31 beyond 19,500 customers.

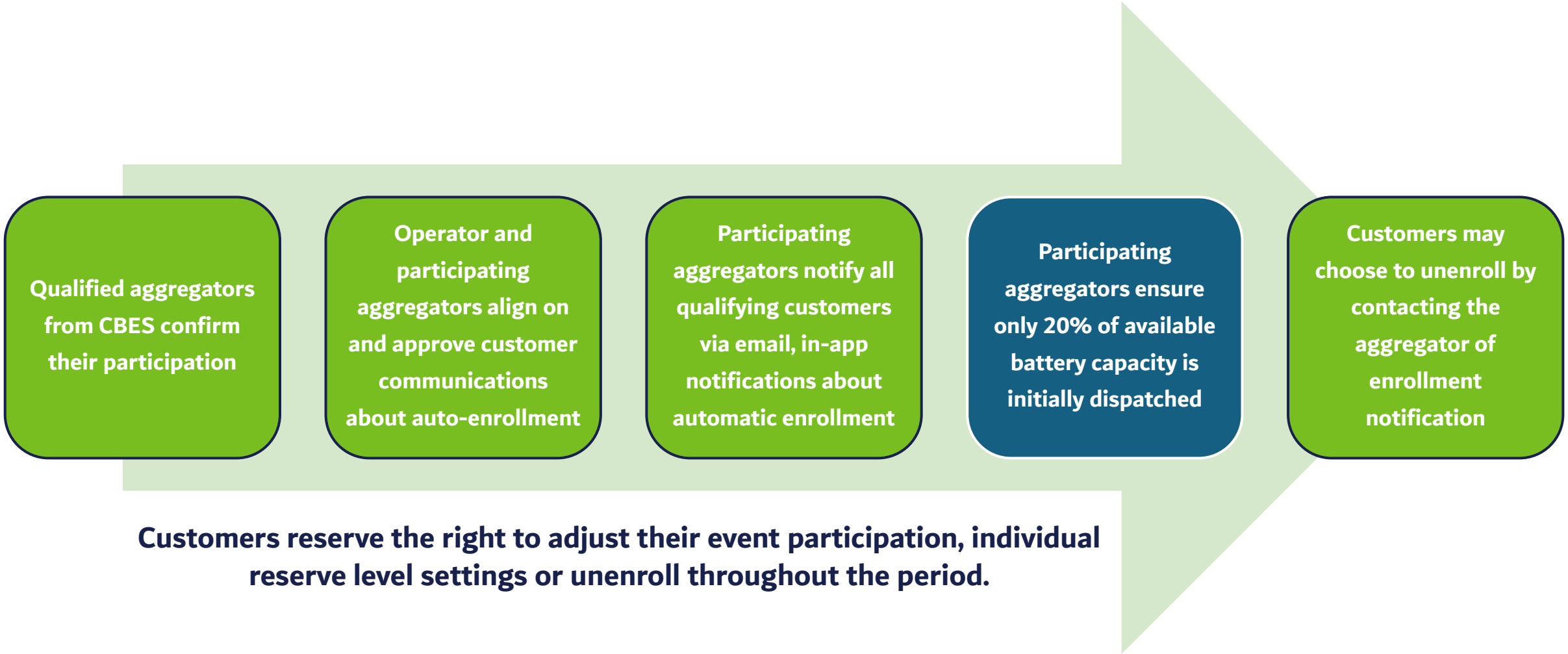
2. Confirm the use of PPCA funding mechanism to continue to pay for the program.

3. LUMA will leverage existing DERMS to be able to efficiently enroll, dispatch/ramp, monitor, control and evaluate demand response resource capacity based on grid needs.

4. LUMA will update materials and website to provide program information and instructions on how to both effectively participate and/or unenroll.

5. Aggregators will begin to “Auto-Enroll” of eligible customers.

CBES+: Auto-Enrollment Process



Customers reserve the right to adjust their event participation, individual reserve level settings or unenroll throughout the period.

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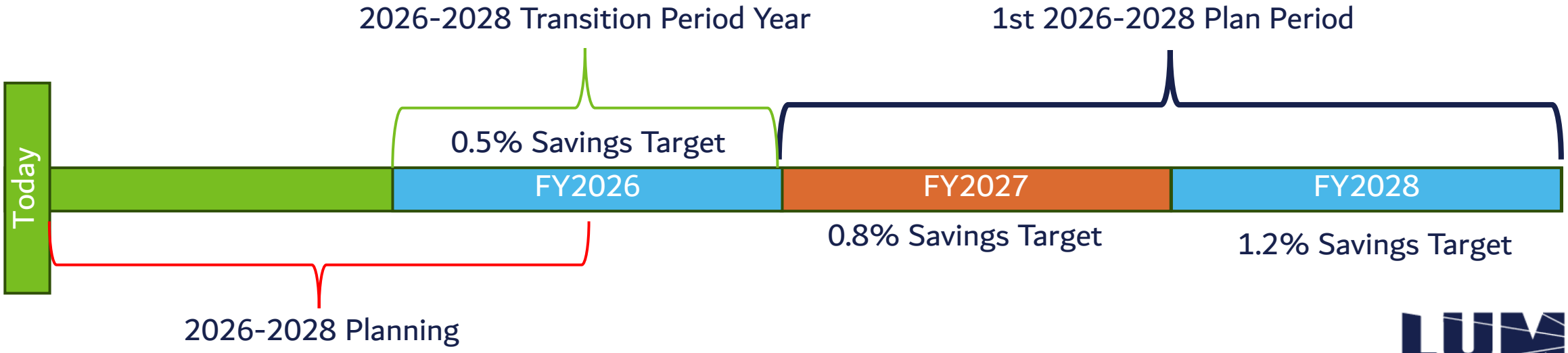
2026-2028 EE and DR Plan

2026-2028 EE and DR Plan: Process and timelines

- Develop 2026-2028 Plan draft.
- Draft 2026-2028 Plan presented to Stakeholders by October 1, 2025.
- Final 2026-2028 Plan submitted to PREB by February 1, 2026.
- First 2026-2028 Plan Period begins July 1, 2026, extending for two years through June 30, 2028.



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2026-2028 EE and DR Plan: Key Milestones

The following are the key milestones that will inform the drafting of the Three-Year Plan

Stakeholder Engagement throughout the planning period

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2026-2028 EE and DR Plan: Stakeholder Engagement

LUMA plans to engage a variety of stakeholders to support 2026-2028 Planning such as:

- Market Actors
- Government
- NGO's
- Customers
- Energy Bureau

LUMA is planning for a range of engagements to garner input into plan development and the draft plan such as:

- 1-on-1 consultations
- Focus groups
- Survey's
- Meetings/Workshop

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La gente primero.
La seguridad siempre.
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