



Battery Emergency Demand Response Program

Program Terms & Conditions (v1.0)

September 7, 2023

1.0 Program Overview

The Battery Emergency Demand Response Program (“BEDRP” or “Program”) is a Demand Response (“DR”) program designed to develop and test operational procedures for leveraging distributed batteries as a DR resource. The Program is directed at residential and commercial LUMA Customers with behind the meter (“BTM”) batteries who are registered in the Net Energy Metering Program.¹ Under the BEDRP, participants receive compensation for operating their BTM batteries during BEDRP Events (as defined further below). BTM batteries could potentially provide significant grid benefits, which will be tested through the Program.

The BEDRP will be delivered by “DR Aggregators”, who are third-parties authorized to act as an interface party between LUMA and end-use Customers to deliver demand response resources to LUMA and who are authorized and qualified to provide such services and have fully executed a standardized agreement with LUMA governing the DR Aggregator’s enrollment of DR resources and the DR Aggregator’s responsibilities and obligations under the BEDRP and associated terms, conditions and requirements (“Master Aggregation Agreement”) that is in full force and effect. With the execution of the Master Aggregation Agreement, each DR Aggregator must submit to PREPA an Eligibility Self-Certification in the form set forth in Schedule A-3.

DR Aggregators will enroll Eligible Customers, dispatch battery resources of these enrolled Eligible Customers during BEDRP Events and compensate these Participating Customers for the energy provided. Eligible Customers may only participate in the Program by enrolling with a DR Aggregator. The DR Aggregator will manage communication with its Participating Customers’ storage devices to ensure the battery resources dispatch in accordance with instructions provided by LUMA.

Customer participation in BEDRP Events is voluntary, and Participating Customers may opt out of any BEDRP Event at any time.

LUMA will provide a standard, non-negotiable performance payment of \$1.25/kWh to DR Aggregators who, in turn, must provide compensation to Participating Customers for operating their batteries during BEDRP Events according to their unique business model and customer value proposition.

The BEDRP will be in effect from the date when LUMA publishes these Terms and Conditions (“Program Start Date”) until June 30, 2024 (the “Program End Date”) (the period from the Program Start Date until the Program End Date, the “Program Term”). The Program may be earlier terminated as a result of changes in the law or as per order from the Energy Bureau or other Governmental Authority with jurisdiction, in which case the Program End Date would be the effective date of such earlier termination.

¹ The “Net Energy Metering Program” is the service provided to LUMA Customers with generating facilities that use renewable energy sources interconnected with the PREPA electric power system as per Act 114-2007, known as the “Puerto Rico Net Metering Act”, as amended, and the Aggregate Net Metering Program and Shared Net Metering Program established in accordance with the Puerto Rico Energy Bureau (“Energy Bureau”) orders in Case No. CEPR-MI-2014-0001.

A summary of key program parameters is given in the table below:

| | |
|---|--|
| Definition of BEDRP Event | A period when all available generation resources are in use and the T&D System is not expected to be able to meet forecast energy requirements as determined by LUMA in its sole discretion and during which LUMA may seek capacity from DR Aggregators. |
| Performance-based Payment | \$1.25 per kWh standard offer for all DR Aggregators |
| Months Events Can Occur | Year-Round (higher likelihood in Apr-Dec) |
| Days Events Can Occur | Workdays, excluding holidays and weekends |
| Time Events Can Occur | Primarily 7pm -11pm local time. Events could be called at other times. |
| Minimum Event Duration | 30 minutes |
| Expected Average Event Duration | 2 hours |
| Maximum Event Duration | 4 hours |
| Minimum Number of Events per Year | 50 |
| Expected Number of Events per Year | 75-100 events (150-200 hours) |
| Customer Event Opt-Out | No constraints |

2.0 Program Eligibility and Enrollment

To be eligible for this Program, the customer must be a residential or commercial LUMA Customer and:

- Have BTM batteries and be registered in LUMA's Net Energy Metering Program; and
- not have its electric service account simultaneously enrolled in another DR program offered by LUMA or with another DR Aggregator.

The LUMA Customers meeting these requirements, hereinafter the "Eligible Customers" or, individually, "Eligible Customer."

2.1 Enrollment Process

Eligible Customers may only participate in the BEDRP by enrolling through a DR Aggregator and entering into a standard customer service agreement with a DR Aggregator containing the terms and conditions of participating in the BEDRP and the Services provided by DR Aggregator and in which the customer authorizes the DR Aggregator to use its battery resources in the BEDRP and agrees to receive payment from DR Aggregator for the use of these resources (the "Service Agreement"). The Service Agreements must be consistent with and comply with the Master Aggregation Agreement and these Terms and Conditions, including Schedule A-2 (Disclosures and Terms Required in Service Agreements). The

enrollment process for Eligible Customers will be determined by the DR Aggregator and must be fully compliant with the requirements of the Master Aggregation Agreement and these Terms and Conditions.

Once the DR Aggregator has entered into the Service Agreement with each Eligible Customer, DR Aggregator must deliver to LUMA a “Notice to Add or Delete Participating Customers” following the template in Schedule A-1 (Notice to Add/Delete Participating Customers) (“Add/Delete Notice”) (in batch Excel format). In the Add/Delete Notice, the DR Aggregator must nominate an estimated target dispatch capacity for each Service Agreement to be achieved during an BEDRP Event and, if applicable, must provide information about their Participating Customer’s BTM battery capacity including, but not limited to: (1) the customer’s electric service account, (2) location (address), (3) the nameplate battery energy capacity (kWh), and (4) the nameplate battery power capacity (kW).

Within 5 business days of receiving an Add/Delete Notice, LUMA will provide a response to the DR Aggregator with one of following status flags for each customer included in the Add/Delete Notice:

- Approved.
- Ineligible, which means that the customer electric service account does not meet the eligibility requirements.
- Invalid, which means that LUMA is unable to determine whether the customer is eligible (likely due to customer electric service account transcription error or incorrect address).

DR Aggregators are free to re-submit customers flagged as Invalid with a corrected customer electric service account or other new information as required in a subsequent Add/Delete Notice.

The Service Agreement(s) for all customers approved by LUMA in its response to an Add/Delete Notice can be included in the DR Aggregator’s BEDRP Portfolio. Additions to the DR Aggregator’s BEDRP Portfolio will be effective upon LUMA’s approval date. LUMA will notify the DR Aggregator of each Service Agreement acceptance into the DR Aggregator’s BEDRP Portfolio via secure means (i.e., SFTP).

An Eligible Customer who elected to participate in the BEDRP through a DR Aggregator and has executed a Service Agreement with a DR Aggregator, and such Service Agreement has been approved by LUMA for inclusion in the DR Aggregator’s BEDRP Portfolio is also referred to in these Terms and Conditions as a “Participating Customer.” A customer will be considered a Participating Customer under this definition so long as its Service Agreement continues in effect and is included in the BEDRP Portfolio.

2.2 Disenrollment Process

DR Aggregator must notify LUMA that it has dropped a Service Agreement from its BEDRP Portfolio by delivering to LUMA an Add/Delete Notice within 5 business days of dropping such agreement. DR Aggregator must deliver such additional information to LUMA as specified in the Add/Delete Notice.

Within 5 business days of receiving the Add/Delete Notice to drop a Service Agreement, LUMA will provide a response to the DR Aggregator with one of following status flags for each Participating Customer the DR Aggregator has requested to disenroll in the Add/Delete Notice:

- Disenrolled
- Invalid, which means LUMA is unable to match the Participating Customer with any customers it has approved for participation in the BEDRP (likely due to customer electric service account transcription error)

DR Aggregators are free to re-submit Participating Customers for disenrollment that have been flagged as Invalid with a corrected customer electric service account as required in a subsequent Add/Delete Notice.

Deletions from the DR Aggregator's BEDRP Portfolio will be effective upon date of submission by the DR Aggregator.

2.3 Voluntary Participation

Service Agreements shall prescribe that participation in any BEDRP Event will be voluntary for Participating Customers. The terms of such agreements will specify that Participating Customers may opt-out of participation or can be opted out by the DR Aggregator, of any BEDRP Event, for any reason, and that, if a Participating Customer opts out of a BEDRP Event or has some communication or other issue that prevents them from discharging during an event, they will receive no performance payment for that BEDRP Event. Given the pay-for-performance nature of the BEDRP, there will be no constraints on the number of permissible Participating Customer opt-outs.

2.4 Enrollment Target

The BEDRP currently has a budget limit of \$5.1M for Fiscal Year 2024. LUMA will manage this budget limit primarily by controlling the number of new customer enrollments. The preliminary enrollment target is 6,500 customers for Fiscal Year 2024, which represents a total 43 MWh of energy dispatched, assuming a total of 150 event hours are called and an average customer battery reserve of 50%. However, Participating Customers have the flexibility to adjust their battery reserve, which could affect the pace of spending. LUMA will monitor how these, and other factors, affect the pace of spending and this enrollment target will be revisited at LUMA's discretion. LUMA will provide regular communications to Aggregators on the status of the enrollment target. Once the target has been reached, LUMA will not approve further enrollment requests until further notice.

No single DR Aggregator may enroll more than 50% of enrollment target within the time period from the Program Start Date until the end of the first month of the Program Operation Start Date (as defined in Section 3.0 (Launch, Testing and Completion)).

3.0 Launch, Testing and Completion

The DR Aggregator will notify LUMA of the proposed launch date for the commencement of the operational phase of the BEDRP- that is, when LUMA will start calling BEDRP Events ("Program Operation Start Date").

Prior to the Program Operation Start Date, LUMA and the DR Aggregator will execute the start-up and testing plan to confirm communications between LUMA and the DR Aggregator. The start-up and testing plan will include the following communications, at minimum:

- Submittal of a test Add/Delete Notice from DR Aggregator to LUMA (using the template in Schedule A-1 (Notice to Add/Delete Participating Customers) in batch Excel format) via email;
- Test Add/Delete Notice response from LUMA to DR Aggregator via email;
- Submittal of a test Available Capacity Report (as defined in Section 4.2 (Available Capacity Report from DR Aggregator) below) from DR Aggregator to LUMA via email.
- Test Available Capacity Report response from LUMA to DR Aggregator via email.
- Submittal of a test Event Notice (as defined in Section 4.1 (Event Notices) below) from LUMA to DR Aggregator via email;

- Acknowledgement of Receipt of an Event Notice from DR Aggregator to LUMA via email; and
- Submittal of a Dispatch Data Report (as defined in Section 7.0) verifying Event dispatch.

Upon successful completion of the start-up and testing plan, LUMA will inform the DR Aggregator of its approval to participate in the BEDRP consistent with the BEDRP operating procedures in Section 4.0 (Operating Procedures), other provisions of these Terms and Conditions and the Master Aggregation Agreement.

Regardless of grid system conditions, LUMA may choose to implement up to 4 test events per year for the types of communications described in Section 3.0 (Launch, Testing and Completion). Energy provided by the DR Aggregator during test events may be included in the Quarterly Energy (as defined in Section 5.0) provided by the DR Aggregator.

4.0 Operating Procedures

The following are key provisions of the operating procedures to be used for the BEDRP.

4.1 Event Notices

As appropriate based on LUMA's forecast and actual system conditions, LUMA will provide the following notices to the DR Aggregator via email communication.

LUMA will call BEDR Events when LUMA's forecast or actual system conditions show that reserve capacity will be deficient on the following day or in the current day. An Event Notice will be communicated by email and the aggregator will acknowledge receipt of the Event Notice.

LUMA will provide an Event Notice as soon as it can be established that reserve capacity is forecast to be deficient, up to a day ahead. BEDRP Events can start no earlier than 15 minutes after an Event Notice is communicated by LUMA. The Event Notice will include the start time of the event at 0, 15, 30, or 45 min after the hour and the BEDRP Event duration in increments of 15 minutes.

BEDRP Events will not be cancelled once called except if the BEDR Event jeopardizes grid operations. To cancel a BEDR Event, LUMA will provide an Event Cancellation Notice, communicated by email or other mutually agreed upon means, that contains the end time of the BEDRP Event.

4.2 Available Capacity Report from DR Aggregator

The DR Aggregator must provide a report on the energy capacity that is expected to be available from all of its Participating Customers in the aggregate ("Available Capacity") via email no later than 5:00 pm Friday on a weekly basis. This report is referred to in these Terms and Conditions as the "Available Capacity Report."

If DR Aggregator does not provide a weekly Available Capacity Report, the Available Capacity for the DR Aggregator's Participating Customers will remain unchanged from that reported in the most recent Available Capacity Report provided by the DR Aggregator.

4.3 Severe Weather Exception

LUMA will not call a BEDRP Event prior-to or during severe weather. For purposes of the BEDRP severe weather is a weather incident that is likely to have significant impacts on the T&D System, such as

hurricanes and tropical storms, flooding, storm surge, thunderstorms, heavy rain, landslides, lightning, windstorms, wildfires, hailstorms, and tornadoes.

5.0 Quarterly Energy

The DR Aggregator will provide LUMA information on the total net energy discharged through DR Aggregator for each Event Quarter (as defined in Section 7.0 (Invoicing and Provision of Participating Customer Dispatch Data)). This information is referred to in these Terms and Conditions as the “Quarterly Energy.”

The Quarterly Energy will be the sum of the total net energy provided by all of the DR Aggregator’s Participating Customers and discharged during each BEDRP Event within an Event Quarter and across all time intervals in the BEDRP Events, as measured by battery telemetry data. When providing the Quarterly Energy to LUMA, the DR Aggregator will also provide the breakdown of the total net energy discharged by each Participating Customer during each BEDRP Event within an Event Quarter used to determine the Quarterly Energy (“Participating Customer Quarterly Energy”).

6.0 Compensation

LUMA will provide a standard, non-negotiable Performance-based Payment of \$1.25/kWh to DR Aggregators, which will be based on the Quarterly Energy provided by the DR Aggregator, as approved by LUMA as provided in Section 9.0 (Settlement) (as defined in that Section “Approved Quarterly Energy”). The Performance-based Payment will be the sole and only payment provided by LUMA for the DR Aggregator’s participation in the BEDRP. This performance payment is a standard offer provided to all DR Aggregators and is not subject to negotiation.

7.0 Invoicing and Provision of Participating Customer Dispatch Data

For each quarterly period during which at least one BEDRP Event has been called (an “Event Quarter”), the DR Aggregator must provide to LUMA no later than the 10th business day after the month-end of the last month in the Event Quarter the following:

- A report including information on the dispatch of Participating Customers with the information described below (the “Dispatch Data Report”), together with
- an invoice for the total compensation requested by the DR Aggregator for the Event Quarter in accordance with the requirements below (“Quarterly Invoice”).

The Dispatch Data Report must include the following:

- a. Time stamped 15-minute interval data of the battery charging / discharging rate in the LUMA-specified format for each Participating Customer served by the DR Aggregator for all time periods in the quarter. Unless otherwise agreed by LUMA, positive values will represent discharges FROM the battery and negative values will represent charging TO the battery.
- b. The DR Aggregator’s measurement of the Participating Customer Quarterly Energy.
- c. The DR Aggregator’s estimate of the Quarterly Energy.

The Quarterly Invoice to LUMA must comply with the invoicing provisions of the Master Aggregation Agreement and include the total compensation requested by the DR Aggregator based on:

- a. The DR Aggregator’s estimate of the Quarterly Energy, multiplied by
- b. The Performance-based Payment for the BEDRP.

All data submitted by DR Aggregators will be subject to verification and auditing by LUMA or its designee. LUMA or its designee will specify the format of data submissions and provide details for electronic data transfer.

8.0 Customer Payment Data

No later than the Program End Date or the expiration or earlier termination of the DR Aggregator's Master Aggregation Agreement (whichever occurs earlier), the DR Aggregator shall provide LUMA with an interim report indicating the payments to date made to each Participating Customer, along with the kWh associated with the payment (the "Interim Customer Payment Report"). If the Program Term is extended, the DR Aggregator shall also provide LUMA with another an Interim Customer Payment Report at the end of the term of such extension covering the mentioned information with respect to the extension period.

No later than three months after the Program End Date, or the expiration or earlier termination of the DR Aggregator's Master Aggregation Agreement (whichever occurs earlier) the DR Aggregator shall provide LUMA with a final report indicating the payments made to each Participating Customer during the Program Term, along with the kWh associated with the payment ("Final Customer Payment Report"). The Final Customer Payment Report shall also indicate the amount of any customer payments outstanding and the reasons such payments are outstanding. The customer payments provided in this report will include those payments listed in the Interim Customer Payment Report. If the Program Term is extended, the DR Aggregator shall also provide another Final Customer Payment Report no later than three months after the end of the term of such extension covering the mentioned information with respect to the extension period.

9.0 Settlement

Following its review of the Dispatch Data Report and the Quarterly Invoice submitted by the DR Aggregator, LUMA will determine what Participating Customer Quarterly Energy and Quarterly Energy provided by the DR Aggregator it will approve for the Event Quarter (the latter, the "Approved Quarterly Energy" (based on these Terms and Conditions and the Master Aggregation Agreement); and LUMA's determination of the Approved Quarterly Energy, the "Approved Quarterly Energy Determination") and will determine the payment to the DR Aggregator based on the Approved Quarterly Energy Determination (this payment, the "Approved Quarterly Performance-based Payment"). The Approved Quarterly Performance-based Payment to the DR Aggregator will be equal to the Approved Quarterly Energy multiplied by the Performance-based Payment. LUMA will endeavor to complete this review and notify the DR Aggregator of the Approved Quarterly Energy Determination and of its determination regarding the Approved Quarterly Performance-based Payment within 30 business days of receipt of a Quarterly Invoice.

10.0 Settlement with DR Aggregators

LUMA will pay the undisputed amounts of the Approved Quarterly Performance-based Payment for an Event Quarter to the DR Aggregator within 45 business days of LUMA's notification to the Aggregator of the Approved Quarterly Energy Determination for such Event Quarter. Any disputes regarding the Approved Quarterly Energy Determination or Approved Quarterly Performance-based Payment shall be resolved in accordance the provisions of the Master Aggregation Agreement.

11.0 Revisions to Program Guidelines

LUMA may publish minor revisions to these Program Guidelines based on lessons learned during Program operations. Any revisions to Program Guidelines will be discussed with DR Aggregators prior to implementation.

Schedule A-1: Notice to Add / Delete Participating Customers

This schedule is to be used by the DR Aggregator to inform LUMA of the addition or deletion of Participating Customers in the Battery Emergency Demand Response Program. The specific data fields required may change pending discussions between LUMA and DR Aggregators.

Notice by DR Aggregator to Add / Delete Participating Customers

| | A (Add) / D (Delete) | Customer Name | Address | Account Number | Battery Energy Capacity (kWh) | Battery Power Capacity (kW) | Target Capacity (kW) | Battery Reserve (%) |
|---|-------------------------|------------------|---------|-------------------|--|--------------------------------------|----------------------------|---------------------------|
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |

Schedule A-2: Disclosures and Terms Required in Service Agreements

DR Aggregator shall, in its Service Agreements with Participating Customers provide for the following:

- (i) Obtain acknowledgment from the Participating Customer that the Participating Customer understands the terms and conditions of the BEDRP and the DR Aggregator Customer Service Agreement and that the Participating Customer consents and agrees to participate in the BEDRP.
- (ii) Provide explicit notice to, and acknowledgement from, the Participating Customer that the DR Aggregator will be the entity responsible for accepting compensation from LUMA for participation in the BEDRP and that compensation shall be payable by the DR Aggregator to the Participating Customer upon performance of the customer systems during BEDRP Events in accordance with the terms of the BEDRP.
- (iii) Clearly indicate, and have the Participating Customer acknowledge and agree to, the following:
 - (a) that the Service Agreement is only between the DR Aggregator and the Participating Customer and that neither LUMA nor PREPA is party to the Service Agreement;
 - (b) describe the schedule or method by which the Participating Customer will be paid for performance by the DR Aggregator and how these payments and the Participating Customer's performance will be documented and reported to the Participating Customer by the DR Aggregator;
 - (c) that the Participating Customer will not receive from LUMA or PREPA any compensation, refunds or other payments relating to the BEDRP;
 - (d) that any Participating Customer inquiries about the DR Aggregator's payments or services shall be directed to the DR Aggregator;
 - (e) that the BEDRP is not part of the Participating Customer's electric service contract with LUMA nor the LUMA Net Energy Metering Program;
 - (f) that compensation, refunds or other payments related to the BEDRP and any aspects of the Participating Customer's performance in the Program will not appear in the Participating Customer's LUMA/PREPA bill; and that
 - (g) neither LUMA nor PREPA will have any obligations to the Participating Customers in connection with any services, actions or omissions of the DR Aggregator relating to the BEDRP.
- (iv) Provide clear and explicit information indicating the scope of the Participating Customer's participation, the effective date of participation, the ability to end their participation, the financial consequences of ending their participation, and other instances when the Participating Customer's participation may be ended or the DR Aggregator's services may be discontinued—all in accordance with the Terms and Conditions of the BEDRP and the Master Aggregation Agreement.
- (v) Provide that the Participating Customer agrees to (i) collect and exchange data with DR Aggregator from their account and their battery to confirm eligibility and provide DR Aggregator reporting data on battery operation, and that this data can be shared by DR Aggregator with LUMA; and that (ii) the Participating Customer authorizes the DR Aggregator to request from LUMA the necessary data to enroll the Participating Customer and for LUMA to provide such information to the DR Aggregator.
- (vi) Provide that each Participating Customer agrees to participate in and complete surveys from DR Aggregator or LUMA needed to enhance the BEDRP.
- (vii) Provide that the Participating Customer represents that it has not, and understands it should not, enroll in any Demand Response program that could result in double counting of the DR Resources during the term of the Service Agreement and that such behavior may be subject to removal from the program.

- (viii) Inform the Participating Customer and have the Participating Customer acknowledge that the BEDRP is being implemented pursuant to applicable laws² and Puerto Rico Energy Bureau regulations³, resolutions and orders⁴, that these laws, regulations, resolutions and orders may be modified, amended or revised at any time; and that the Energy Bureau may issue at any time an order or directive to terminate or modify the BEDRP. Any modification or termination of the BEDRP as a result of any of the foregoing, will be at no liability or penalty to the DR Aggregator, LUMA or PREPA.
- (ix) Make the necessary disclosures and obtain the necessary consents from the Participating Customer for the legal validity of their electronic signature of the Service Agreement and with respect to the payment method to be used for the DR Aggregator to compensate the Participating Customer.

² Making reference to Act 17-2019, known as the Puerto Rico Energy Public Policy Act, and Act 57-2014, known as the Puerto Rico Energy Transformation and RELIEF Act, as amended.

³ Making reference to the Regulation on Demand Respond, Regulation 9246 approved by the Energy Bureau.

⁴ Making reference to the Resolutions and Orders issued by the Energy Bureau in Case No. Case No. NEPR-MI-2021-0006, *In Re: Demand Response Plan Review, Implementation, and Monitoring*, and Case No. NEPR-MI-2022-0001, *In Re: Energy Efficiency and Demand Response Transition Period Plan*.

Schedule A-3: Aggregator Eligibility Self Certification Statement

_____ [DR Aggregator] hereby certifies that it:

- A. Satisfies any applicable qualification requirements established by the Energy Bureau for the provision of services of aggregation of DR resources, if any, under the Energy Bureau Administrative Rules, including as clarified, waived or conditioned by the Energy Bureau's Resolution and Order of June 15, 2023, in Case No. NEPR-MI-2022-0001, as may modified or amended.
- B. As of the date of this self-certification, has the necessary capabilities and resources to:
 - (i) Enroll Eligible Customers and execute Service Agreements;
 - (ii) Manage and dispatch behind-the-meter batteries of Participating Customers as per BEDRP Terms and Conditions during BEDRP Events;
 - (iii) Securely collect, manage and transfer each Participating Customer's battery telemetry data, from every BEDRP Event, to verify each Participating Customer's performance;
 - (iv) Provide all necessary customer service and technical support for BEDRP Participating Customers;
 - (v) Execute customer payments or compensation for BEDRP participation;

DR Aggregator

By:

[Name]

[Title]