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Subject: Public Comments on 2026–28 EE and DR Plan – Case No. NEPR-MI-2026-0002 | Uplight Supplemental Comments

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

IN RE:

ENERGY EFFICIENCY AND DEMAND RESPONSE THREE-YEAR PLAN

CASE NO.: NEPR-MI-2026-0002

SUBJECT: Supplemental Public Comments of Uplight on DERMS Cost-Effectiveness and Competitive Procurement

UPLIGHT SUPPLEMENTAL PUBLIC COMMENTS ON 2026–28 EE AND DR PLAN – CASE NO. NEPR-MI-2026-0002: DERMS COST-EFFECTIVENESS AND COMPETITIVE PROCUREMENT

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

Uplight respectfully submits these supplemental public comments regarding LUMA Energy's (LUMA) proposed 2026–2028 Energy Efficiency and Demand Response Three-Year Plan (TYP). Uplight recognizes that the Energy Bureau's April 10, 2026 Resolution and Order established deadlines of April 28, 2026 for stakeholder comments and May 12, 2026 for reply comments. Accordingly, Uplight respectfully requests that the Energy Bureau accept and consider these comments on a limited supplemental basis in light of material developments in the proceeding following the close of the original comment period.

Specifically, the Energy Bureau's September 22, 2026 information request and LUMA's October 6, 2026 response provided additional information regarding the administrative costs of the existing Customer Battery Energy Sharing (CBES) program, opportunities for automation, and the potential costs and capabilities

of a distributed energy resource management system (DERMS). These disclosures materially inform the evaluation of future technology investments and were not available during the original stakeholder comment period. Given the Energy Bureau's May 29, 2026 interim approval and continued evaluation of the TYP, Uplight offers these targeted recommendations to support a transparent, competitive, and cost-effective approach to DERMS procurement that maximizes benefits for Puerto Rican customers. These comments are not intended to reopen previously resolved issues or delay ongoing CBES operations, which Uplight strongly supports.

I. INTRODUCTION AND SUMMARY OF RECOMMENDATIONS

Puerto Rico has already assembled a substantial and growing portfolio of customer-sited solar and battery resources. In its October 2026 response, LUMA reported approximately 115,000 enrolled CBES customers, demonstrating the scale of the existing program.[1] The next challenge is to convert that installed capacity into dependable, affordable, and increasingly flexible grid services without imposing unnecessary administrative costs or compromising customer resilience. A utility-facing Edge DERMS can help accomplish that transition by coordinating existing aggregators and customer resources, automating program operations, and supporting additional technologies over time. It should be

[1] LUMA Energy, Motion to Comply with Resolution and Order of September 22, 2026, Exhibit 1, Case No. NEPR-MI-2026-0002 (Oct. 6, 2026) (CBES customer enrollment), https://energia.pr.gov/numero_orden/nepr-mi-2026-0002/

evaluated as shared infrastructure for the broader portfolio of demand flexibility—not simply as software for one emergency battery program.

The case for this investment should be grounded in measurable outcomes. A DERMS is not an end in itself; it is worthwhile when its avoided administrative costs, improved resource performance, customer benefits, and additional system value justify its full lifecycle cost. Similarly, the Energy Bureau need not prescribe a particular vendor, technical architecture, or detailed product specification. It can provide high-level guidance on the capabilities and customer outcomes LUMA should seek through a transparent, competitive third-party procurement process.

Uplight respectfully recommends that the Energy Bureau: (1) require a comparative DERMS business case with transparent costs and benefits; (2) establish high-level, technology-neutral requirements for a phased Edge DERMS and related implementation services; (3) request a market-informed competitive solicitation of qualified providers; (4) protect current CBES operations and existing aggregator relationships; and (5) require customer-experience, affordability, and performance reporting commitments as part of any proposed implementation.

II. AFFORDABILITY AND THE BUSINESS CASE FOR A UTILITY-FACING EDGE DERMS

A. A direct opportunity to reduce administrative burdens and improve value

The Energy Bureau's September 22 request appropriately asked LUMA to compare the cost of DERMS capabilities against proposed program planning and administration (PP&A) spending. LUMA responded that approximately $0.8 million to $1.2 million annually of proposed PP&A costs support manual workarounds that technology could mitigate as the portfolio expands or becomes more dynamic. LUMA also identified estimated one-time planning costs of $2.5 million for edge-device management, $0.5 million to $0.8 million for a standardized aggregator interface, and $0.8 million to $1.2 million for System Operations integration. These are preliminary estimates, not vendor proposals, and LUMA expressly noted that a DERMS would not replace the entire proposed PP&A increase.[2]

These disclosures support a structured, like-for-like comparison rather than a presumption that any software investment will pay for itself. LUMA should evaluate total costs over a common multiyear horizon, including setup, licenses or managed services, utility integration, aggregator and device interfaces, cybersecurity, customer support, maintenance, evaluation, and future upgrades. Benefits should separately identify realistically avoidable administrative

[2] LUMA October Response, Exhibit 1, Response to PREB-06, at 9-11 (describing current manual administration, approximately $0.8-$1.2 million of annual administrative expense potentially mitigated by technology, and preliminary technology and integration estimates).

spending, documented improvements in dispatch availability or performance, energy and capacity value, and any distribution-system value demonstrated by locational studies. Future values should be risk-adjusted, and the same avoided cost or MW should not be counted twice across programs.

The comparative assessment should also consider how platform costs change as LUMA adds new aggregators, device manufacturers, customer rate classes, and grid services. Vendors should identify the incremental licensing, integration, implementation, and ongoing support costs associated with expanding beyond the existing CBES program. A solution with a lower initial cost may not necessarily provide the lowest cost per additional MW or the greatest long-term value if each new resource class or operational capability requires substantial additional investment. This distinction is particularly important where a common DERMS platform could support multiple future programs without duplicating core infrastructure.

PREB should encourage practical, streamlined reporting of DERMS performance, affordability, and customer benefits without creating additional administrative burdens for LUMA. The selected DERMS provider should be capable of automatically generating key metrics through routine program operations, including verified MW and MWh delivered, forecast-to-delivered performance, administrative cost savings, participant incentives, and overall cost-effectiveness. Reporting should leverage data already collected through enrollment, dispatch, measurement and verification, and settlement activities, with appropriate

distinctions between benefits to participating customers and system-wide benefits. This approach would provide PREB and LUMA with greater transparency into program value while minimizing manual reporting requirements and additional demands on utility personnel.

B. More ways to use the resource—not simply more emergency events

LUMA has explained that its existing aggregator-mediated CBES program can continue to provide emergency service without a full DERMS. Uplight agrees that modernization should not delay or disrupt that demonstrated capability. At the same time, LUMA describes present CBES administration as reliant on manual dispatch and settlement, with increasing operational complexity as additional aggregators, events, resource classes, and grid services are introduced. LUMA identifies materially different requirements for a more dynamic VPP than for static emergency dispatch.[3]

A shared Edge DERMS could help LUMA obtain additional value from customer resources through scheduled or event-driven capacity reduction, faster verification and settlement, economically justified load shifting, and selective support for locations facing identifiable grid constraints. Where these services can reduce costly generation, purchased energy, or the timing of otherwise necessary infrastructure investments, some of the resulting value can support customer incentives and lower total costs. Each service should be enabled only

[3] LUMA October Response, Exhibit 1, Response to PREB-06, at 9-11 (current program operation and anticipated needs); Solar and Energy Storage Association of Puerto Rico (SESA), Comments on Proposed Three-Year Plan, Case No. NEPR-MI-2026-0002, at 3-4 (May 12, 2026).

after its value, data needs, performance standards, and customer impacts are established.

Beyond enabling additional grid services, a utility-facing DERMS should support cost-based portfolio optimization to identify the lowest-cost combination of eligible resources capable of meeting a defined grid need. Rather than relying on a single asset class or aggregator, LUMA should be able to evaluate batteries, controllable loads, C&I resources, and other verified demand reductions based on their expected performance, dispatch costs, location, availability, and operational constraints. This would allow LUMA to select the most cost-effective multi-asset portfolio for a particular grid service while respecting customer preferences, backup reserves, and reliability requirements. The value of this optimization should be demonstrated through transparent comparisons of alternative dispatch strategies and their associated costs and benefits.

III. DESIGN FOR PUERTO RICO'S OPERATING CONDITIONS: SYSTEM-WIDE, LOCATIONAL, AND SOLAR-ABSORBING SERVICES

Puerto Rico's DER portfolio creates an opportunity to manage both sides of flexibility: reducing net load or increasing net exports when the system needs capacity, and increasing useful demand or battery charging when solar production is abundant relative to local net load. These are distinct grid services requiring different dispatch objectives, operating constraints, and measurement methods. The platform selected today should be capable of both, even if some services are introduced through later pilots.

A. Locational dispatch to support resilience and grid constraints

Rather than dispatching every available battery or flexible load uniformly across Puerto Rico, LUMA should be able to maintain a resource registry that associates enrolled resources with a usable electrical location, such as a feeder, substation, transmission-constrained service area, or utility-defined operational zone, subject to the accuracy of existing network data. This capability is particularly important in Puerto Rico, where outages or constraints affecting critical transmission facilities can limit electricity delivery to particular areas and create significant reliability and resilience challenges. For near-term programs, System Operations personnel could identify priority areas using available engineering information, then request targeted events through the Edge DERMS. A future Grid DERMS or advanced distribution management system (ADMS) could provide more automated signals, but neither is a prerequisite for beginning location-aware programs.

Locational dispatch could help LUMA manage demand and available distributed resources in constrained areas, including ahead of or during certain grid contingencies, where electrical service remains available. Its value may include improved reliability and resilience, overload mitigation, voltage-related benefits where technically demonstrated, or deferral of discrete investments. These benefits should be evaluated based on verified network conditions and should not be assumed for every dispatched kW. LUMA should report resources enrolled

and activated by zone and distinguish locational reliability and resilience benefits from system-wide capacity benefits.

B. “Solar soaking” and midday demand-building capabilities

As distributed solar deployment grows, there may be periods or locations in which photovoltaic production is high and net demand is comparatively low. When economically and operationally appropriate, a VPP should be able to absorb otherwise constrained solar generation by scheduling battery charging, advancing eligible EV charging, or shifting flexible building loads into those hours. Later, the same portfolio may discharge or reduce consumption during the evening peak. Any charging event must respect customer backup reserves, battery state-of-charge limits, equipment warranties, and interconnection requirements, while accounting for local distribution conditions to ensure that charging absorbs excess solar generation without creating new grid constraints.

The DERMS should therefore support both load reduction and load build, differentiated by location and time, with day-ahead schedules, same-day adjustments, and operator overrides. The benefit of solar absorption must be measured against a credible baseline or avoided-curtailment case; increased midday electricity use is not, by itself, evidence of savings. The preferred approach is to select a platform capable of supporting this service now and activate it where LUMA has the operational data and demonstrated need.

IV. SUPPORT FUTURE EXPANSION ACROSS ADDITIONAL RESOURCE TYPES

A DERMS procurement should consider Puerto Rico's broader demand flexibility potential rather than focusing exclusively on today's emergency battery dispatch. The Energy Bureau's September 2025 Energy Efficiency Market Baseline and Potential Study identifies additional electricity end uses that could support future programs, although equipment prevalence does not necessarily establish connectivity or dispatch capability.[4] The selected DERMS should provide a common foundation for incorporating these resources as their technical and economic potential is demonstrated.

A. Residential cooling

Residential cooling represents a potential complementary resource, particularly when coordinated with batteries already enrolled in CBES. The market study indicates that approximately 75% of Puerto Rican homes use air conditioning, including mini-split systems in approximately 58% of homes. While many systems may not currently be controllable, a DERMS should accommodate their future integration to provide additional flexibility without relying on frequent, stand-alone cooling events or compromising customer comfort.

[4] Puerto Rico Energy Bureau (PREB), Puerto Rico Energy Efficiency Market Baseline and Potential Study, prepared by NV5, Slipstream, and IBTS (Sept. 24, 2025), Case No. NEPR-MI-2022-0001, https://energia.pr.gov/wp-content/uploads/sites/7/2025/09/20250924-PR-EE-Market-Baseline-and-Potential-Study.pdf

B. Commercial and industrial storage and flexible loads

Commercial and industrial customers offer opportunities to expand demand flexibility through behind-the-meter storage, HVAC and building controls, refrigeration, and other processes capable of verified curtailment or load shifting. Although CBES permits commercial battery participation, LUMA's proposed TYP does not include broader C&I demand response offerings. A common DERMS platform should allow LUMA to incorporate these resources and additional rate classes as new programs are introduced, providing a cost-effective pathway to additional MWs without duplicative technology infrastructure.

C. Electric vehicles and emerging technologies

Managed EV charging could provide additional opportunities to shift electricity consumption toward lower-cost or solar-abundant periods and away from periods of system constraints. Building on its previous EV time-of-use experience, LUMA should ensure that the selected DERMS can accommodate managed charging and other emerging flexible loads as programs and adoption develop, without requiring separate orchestration platforms.

D. Behavioral demand response and equitable participation

As advanced metering infrastructure (AMI) deployment progresses, behavioral demand response (BDR) could expand demand flexibility participation to customers without batteries or connected devices, including renters and lower-income households. Through integration with customer

engagement and program delivery partners, a DERMS should be capable of incorporating forecasted and verified behavioral reductions into portfolio planning, event coordination, and performance reporting. This would help LUMA expand participation and access additional cost-effective MWs while accounting for the different performance characteristics of behavioral versus directly controlled resources.

V. A PHASED OPERATING ARCHITECTURE THAT DOES NOT DEPEND ON FUTURE GRID SYSTEMS

Uplight recommends separating the capabilities that should be available at initial deployment from those whose full value depends on additional utility data, operating processes, or future grid-management investments.

1. **Near term:** deploy a utility-facing Edge DERMS with a secure resource registry, portfolio forecasting, aggregator and device interfaces, event planning and dispatch, operator controls, performance measurement, reconciliation, reporting, and auditable settlement support. Retain the current CBES aggregator-mediated control model; do not require direct-to-device utility control for assets already effectively managed by qualified aggregators. Allow manual or scheduled operator requests and a defined emergency dispatch fallback if communications are interrupted.
2. **Next stage:** enable qualified economic and locational services, load-build and load-reduction events, and additional resource classes as LUMA validates distribution mapping, system conditions, participant agreements,

and program economics. Introduce cost-based portfolio optimization capable of evaluating the lowest-cost mix of eligible resources to meet specific grid needs, accounting for expected performance, location, availability, and customer constraints. As AMI deployment progresses, support the integration of behavioral demand response through customer engagement and program delivery partners, allowing verified behavioral reductions to contribute to portfolio planning and performance reporting. Incorporate cost-effective coordination with utility rates, energy-efficiency offerings, and customer acquisition channels where appropriate.

3. **Longer term:** integrate the Edge DERMS with additional Grid DERMS, ADMS, operational forecasting, outage-management, and distribution planning capabilities through documented, secure interfaces as those upstream systems become operationally ready. This future integration should make dispatch more automated and locationally precise, not create a dependency that prevents useful services from launching earlier.

The functional boundary is important. The utility should retain authority to set dispatch priorities, geographic targeting, safety limitations, and program rules. The Edge DERMS should translate those instructions into coordinated actions through secure aggregator and equipment interfaces, while preserving aggregator innovation and customer relationships. Interface standards should be open and documented at the utility-facing boundary, with secure manufacturer-specific application programming interfaces (APIs) permitted when appropriate. The procurement should discourage vendor lock-in, support portability of

customer and asset records, and provide clear responsibilities for cybersecurity and data access.

As the VPP expands, LUMA should retain the ability to independently coordinate resources across multiple aggregators, manufacturers, and customer programs through a common operational platform. The selected DERMS should allow LUMA to establish dispatch objectives, prioritize resources by location and availability, and evaluate portfolio performance without depending on any single aggregator or equipment provider for system-wide orchestration. This capability would preserve competition among aggregators, strengthen utility operational visibility, and provide flexibility as customer participation and grid-service requirements evolve.

VI. CUSTOMER EXPERIENCE, TRUST, AND EQUITABLE ACCESS SHOULD BE CORE REQUIREMENTS

A successful VPP depends not only on technical capabilities but also on customer understanding, participation, and trust. Puerto Rico's existing CBES program relies primarily on aggregators to manage customer relationships, including enrollment, communications, and ongoing engagement. A DERMS implementation should preserve this model while ensuring that customers receive a consistent, transparent, and positive experience regardless of their aggregator or participating technology.

The Energy Bureau should encourage LUMA to evaluate how a DERMS can support these customer-facing activities through its integrations with

aggregators and other program partners. This includes enabling accessible enrollment, effective customer education, appropriate event communications, and clear information regarding program participation, performance, and incentives earned. The objective should not be to shift these responsibilities directly to LUMA, but to ensure that the underlying platform provides the data, coordination, and reporting capabilities necessary for aggregators to deliver a high-quality customer experience as the VPP expands.

Customer protections and equitable access should also remain central to program design. Participating customers should retain appropriate controls over their resources, including battery backup reserves and applicable opt-out provisions, while receiving transparent information about program benefits and compensation. As additional technologies and customer classes are introduced, LUMA should consider opportunities to expand participation across income levels and geographic areas, including customers who may face equipment or connectivity barriers. As AMI deployment expands, behavioral demand response could provide an additional participation pathway for customers who do not have access to connected devices or behind-the-meter storage, helping ensure that VPP benefits are not limited to customers able to invest in new technologies. A common DERMS platform should support the integration of these offerings through aggregators and program partners, improving coordination, reducing duplicative administrative costs, and maintaining customer benefits and equitable participation as central measures of VPP success.

VII. AN OPEN, COMPETITIVE PROCUREMENT SHOULD MAXIMIZE CUSTOMER VALUE

LUMA has indicated that it is evaluating technology providers and will bring a formal proposal to the Energy Bureau following additional assessment. Given the potential costs and long-term implications of a DERMS investment, Uplight recommends that PREB direct LUMA to undertake an open, competitive request for proposals (RFP) before selecting a provider. A competitive process would allow LUMA to compare alternative solution designs, implementation approaches, capabilities, and lifecycle costs, while ensuring that Puerto Rican customers receive the greatest achievable value from the investment.

Rather than prescribing a particular vendor or proprietary architecture, PREB should establish high-level, technology-neutral evaluation criteria addressing:

1. **Affordability and lifecycle costs:** Total implementation and operating costs, realistically avoidable administrative expenses, incremental costs for additional aggregators and resource classes, and measurable customer and system benefits.
2. **Utility control and existing program operations:** Independent utility visibility and coordination across multiple aggregators and manufacturers; resource registration, forecasting, scheduling, dispatch, verification, and

settlement; preservation of CBES operations; and the ability to operate without a fully integrated Grid DERMS or ADMS.

3. **Multi-asset optimization and grid services:** Demonstrated ability to identify the lowest-cost feasible mix of eligible resources for defined grid needs, accounting for performance, location, availability, customer constraints, and dispatch costs. Capabilities should support both load reduction and load building, including economic, locational, and solar-absorption services.
4. **Scalability and interoperability:** Ability to incorporate additional residential and C&I resources, managed EV charging, and future behavioral demand response as AMI becomes available; documented interfaces; data portability; and expansion without duplicative technology platforms.
5. **Customer protections and delivery:** Support for aggregator-led customer engagement, enrollment, communications, incentive reporting, backup reserves, cybersecurity, privacy, and equitable participation.
6. **Implementation readiness and vendor accountability:** Demonstrated production functionality, relevant utility experience, staged implementation milestones, transparent future integration costs, performance commitments, and the ability to add or replace participating aggregators or technology partners.

LUMA should evaluate qualified providers using consistent, scenario-based demonstrations reflecting Puerto Rico's operating conditions. These could include multi-aggregator coordination, geographically targeted dispatch, battery

charging and discharging, customer backup protections, and cost-based selection of a multi-asset portfolio. Vendors should distinguish existing production capabilities from functionality requiring future development or additional utility investments.

Following the solicitation, LUMA should provide PREB with a non-confidential summary of the alternatives evaluated, selection rationale, expected costs and benefits, and implementation milestones. If LUMA proposes an alternative to open competition, it should demonstrate why that approach provides comparable assurance of cost-effectiveness and customer value. This process need not disrupt existing CBES operations or delay their continued delivery.

VIII. REQUESTED ENERGY BUREAU ACTION

For the foregoing reasons, Uplight respectfully requests that the Energy Bureau:

1. Accept and consider these limited supplemental comments in light of information developed following the original comment period.
2. Require LUMA to present a multiyear business case comparing continued manual operations, targeted automation, and an integrated utility-facing Edge DERMS, including lifecycle costs, avoided administrative expenses, and measurable customer and system benefits.
3. Direct LUMA to conduct an open, competitive, technology-neutral solicitation of qualified DERMS providers, including scenario-based

demonstrations of relevant operational capabilities, before selecting a long-term technology solution.

4. Ensure that the selected solution maintains CBES continuity and existing aggregator relationships while supporting future grid services, additional resource classes, and cost-effective portfolio optimization.
5. Require transparent reporting on implementation costs, operational performance, verified MWs delivered, administrative savings, and customer benefits.

Uplight respectfully submits these recommendations to support a transparent, affordable, and scalable approach to demand flexibility modernization in Puerto Rico.

IX. ABOUT UPLIGHT

Uplight is a clean energy technology company that works with electric utilities and energy providers to help customers generate, shift, and save energy. Our offerings combine customer education and engagement, energy-efficiency and rate-program experiences, demand response and virtual power plant program delivery, and Flex, our utility-facing Edge DERMS. Our technology and services support customer outreach and enrollment, device and aggregator integrations, forecasting, event management, measurement and verification, incentive processing, and portfolio coordination across residential and commercial customers.

Our experience informs these comments, and Uplight may participate as a potential provider of the types of capabilities discussed if a competitive solicitation is undertaken. We offer the recommendations here as a constructive contribution to an open regulatory record, with the objective of helping Puerto Rico procure the functionality necessary to deliver durable, verifiable customer and system benefits at reasonable cost.

WHEREFORE, Uplight respectfully requests that the Energy Bureau consider these supplemental public comments in its ongoing evaluation of LUMA's Three-Year Plan and any future DERMS proposal.

RESPECTFULLY SUBMITTED.

Dated: November 16, 2026

/s/ Adam Farabaugh

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CERTIFICATE OF SUBMISSION

I certify that on November 16, 2026, I submitted the foregoing Supplemental Public Comments of Uplight to the Puerto Rico Energy Bureau by electronic mail to comentarios@jrsp.pr.gov, in Case No. NEPR-MI-2026-0002, using the public-comment submission address identified in the Bureau's March 4, 2026 Resolution and Order.