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

IN RE: THE DEPLOYMENT OF ELECTRIC VEHICLE CHARGING INFRASTRUCTURE	**CASE NO.:** NEPR-MI-2021-0013 **SUBJECT:** Draft Phase I EV Plan and Revised EV Rate Design

RESOLUTION AND ORDER

I. Introduction and Background

On September 1, 2022, LUMA Energy Servco, LLC, and LUMA Energy, LLC (collectively, "LUMA") filed before the Puerto Rico Energy Bureau of the Public Service Regulatory Board ("Energy Bureau"), a document titled *Motion Submitting Draft Phase I EV Plan and Request to Postpone Compliance Technical Hearing No. 3 and Concomitant Deadline to Submit Revised Phase I EV Plan* ("September 1 Motion"). Through the September 1 Motion, LUMA includes the Phase I EV Plan as Exhibit 1, requests a postponement of the Compliance Technical Hearing No. 3 scheduled for September 15, 2022, until September 29, 2022, and requests a postponement of the revised Phase I EV Plan two weeks from the rescheduled Compliance Technical Hearing.[1]

LUMA indicates that its Phase I EV Plan, as amended, supports the deployment of infrastructure to enable equitable and accessible use of EV's while advancing the remediation of the electric system to improve reliability and resiliency for customers.[2] LUMA also establishes that its revised rated design proposal "incorporates suggestions made during Compliance Technical Hearing #2 and proposes to establish a Residential EV TOU Rate."[3]

On September 2, 2022, LUMA filed a document titled *Motion Re-Submitting Exhibit 1 Filed on September 1, 2022, with Technical Repairs and Requesting Substitution of Original Exhibit* ("September 2 Motion").[4]

On September 7, 2022, the Energy Bureau issued a Resolution to reschedule the Compliance Technical Hearing No. 3 for October 12, 2022, and to order LUMA to submit the revised Phase I EV Plan on or before October 28, 2022 ("September 7 Resolution"), also granted LUMA's September 2 Motion request and substituted Exhibit 1 from LUMA's September 1, filing with the Amended Exhibit 1.[5]

Upon further review of the Draft Phase I EV Plan and considering that LUMA personnel are still focused on the restoration efforts caused by Hurricane Fiona, on October 7, 2022, the Energy Bureau issued a Resolution ("October 7 Resolution") cancelling until further notice (i) the Compliance Technical Hearing No 3, and (ii) the filing of the revised EV Plan.

NEGOCIADO DE ENERGÍA DE PUERTO RICO — NEPR — JUNTA REGLAMENTADORA DE SERVICIO PÚBLICO

[1] September 1 Motion, p. 6, ¶9.

[2] *Id.*, p. 3, ¶7.

[3] *In re: The Deployment of Electric Vehicle Charging Infrastructure,* Case No.: NEPR-MI-2021-0013, *Motion Submitting Revised EV Rate Design Proposal*, filed on July 21, 2022 p.¶9.

[4] LUMA identified technical issues with some of the hyperlinks for references to figures and external websites in Exhibit 1 to the September 1 Request which resulted in some of the links not working properly. LUMA addressed these technical issues and re-submitted the Exhibit 1 with the corrected links ("Amended Exhibit 1").

[5] September 7 Resolution, Re-Submittal of Exhibit 1 filed on September 1, 2022 with Technical Repairs; Request for Substitution of Original Exhibit 1; and Request to Postpone Compliance Technical Hearing No. 3.

II. Phase I EV Plan and Analysis

A. Provisions for Low-Income Customers

The Energy Bureau's November 18, 2021 Resolution and Order required LUMA to file a Phase I EV Plan that complies with a set of requirements which specifies that LUMA shall seek to address barriers to the adoption of electrified transportation in the residential and low-income sectors with particular attention to disadvantaged communities.[6]

The Energy Bureau finds that LUMA's Phase I EV Plan as filed, does not adequately address barriers to low-income and disadvantaged communities. While portions of the Phase I EV Plan, including LUMA's proposed time of use rate (TOU) design and education and outreach, are targeted toward residential customers, but it does not sufficiently detail how LUMA will address the needs of low-income customers. The Phase I EV Plan does not articulate what the needs of low-income customers may be in the electric transportation sector. It describes the EV-related interests and opportunities of its residential customers and concludes that low-income customers are not well situated to take advantage of those opportunities.[7]

The Energy Bureau will use LUMA's Phase I EV Plan and this Resolution and Order as an opportunity to provide direction to LUMA to see that its transportation electrification planning applies the needed to focus on its low-income customers, and develops a plan that, as LUMA puts it, "considers the unique mobility challenges of low/moderate income households, ensuring that the benefits of clean transportation are broadly shared."[8]

The Energy Bureau recognize that LUMA has relied on J.D. Power customer surveys in the past to gauge the interests of its customers.[9] It now needs to consider taking further steps to learn more from its low-income customers and the communities they represent. The Energy Bureau expects LUMA to demonstrate that it prioritizes low-income accessibility and affordability, in addition to its focus on market transformation and the acceleration of EV adoption.

The Energy Bureau finds that public meetings would be useful to low-income customers' understanding of LUMA's plans and proposed programs. Perhaps even more important, public meetings would provide an opportunity for LUMA to engage communities whose transportation needs, for many reasons, may have been overlooked or misreported. LUMA and the public will also benefit from the exchange of information that could result from sharing its low-income electric transportation proposals. LUMA and its customers will further benefit from a full airing of the low-income and disadvantaged communities' views on related challenges and benefits of accessing the benefits of EVs.

The Energy Bureau **ORDERS** LUMA to consider undertaking the following efforts:

- Adopt new practices to promote greater access and meaningful public engagement;
- Engage in community outreach to inform and improve its understanding of low-income customer needs; and
- Adopt the goal of ongoing improvement in its public access practices and use of public participation to help inform its policies and the development of its programs.

For example, in its review of practices governing the conduct of public meetings, LUMA should consider taking the following actions:

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[6] Resolution and Order, *In Re: The Deployment of Electric Vehicle Charging Infrastructure,* Case No.: NEPR-MI-2021-0013, November 18. 2021.

[7] Amended Exhibit 1 at pg. 17.

[8] Amended Exhibit 1 at pg. 52.

[9] Amended Exhibit 1 at pg. 75. the Energy Bureau directed LUMA to conduct customer surveys using electronic platforms and social media to inform its development of its Plan.

- Timing: Hold informal public meetings at different hours of the day and days of the week to increase the likelihood of getting more representative participation.
- Notice and Publicity: Adopt notice practices designed to reach community members who may otherwise be more difficult to reach and publicize meetings liberally using various media to promote attendance.
- Outreach Intermediaries: Utilize indirect methods of outreach to publicize meetings, including coordinating with intermediary organizations that possess their own networks, supporting the ability of intermediaries to assist with reducing barriers associated with the need for childcare and transportation.
- Venues: In addition to providing virtual meeting locations, hold meetings in a variety of neighborhoods whose populations have an average income consistent with the Plan's definition of low income. Make sure venues are physically accessible and provide basic amenities.
- Languages: Provide translation in American Sign Language or an equivalent, and the top two spoken languages, which are Spanish and English.
- More Incentives: Consider motivating attendance by providing guest speakers or other incentives.
- Non-Technical Information: Provide relevant information and data to the public that is accessible to a non-technical audience.

While public meetings can prove especially useful in this context, LUMA should seek other means of obtaining input, as well. This would include, for example, augmenting in-person and virtual meetings, to include telephone, email, online comment portals, surveys, polls, and other means.

As low-income customers and other members of the public can benefit from improvements to in-person, public meetings, website visitors should be able to engage more fully with improvements to LUMA's digital presence and resources. LUMA's efforts could include:

- Review of all LUMA website language;
- Community outreach to inform this work; and
- Securing the assistance of website specialists.

To be more transparent to low-income customers, LUMA's review could address the following barriers:

- Overly technical information;
- Languages; and
- Limited means of customer input.

The Energy Bureau is encouraged by LUMA's proposed "Action 2: Engage Customers and Stakeholders in the EV Ecosystem." This Action recognizes the need to "directly engage with customers and stakeholders to raise awareness and enable LUMA to have a better understanding of customers' needs and help support the growth of EV adoption in Puerto Rico."[10] LUMA first should develop a better understanding of what its low-income customers want and need from transportation electrification before developing customer offerings. With that understanding, it is reasonable to expect that LUMA will be better equipped to develop a plan to meet low-income customer needs.

As a first step to developing electric transportation programs for its low-income customers, LUMA should:

1. Over the next six months, review and propose improvements to its outreach and public access policies and practices, and submit a memorandum to the Energy Bureau setting out the actions it plans to adopt;

[10] Amended Exhibit 1 at pg. 57.

2. Over the next nine months, engage in outreach with low-income and disadvantaged communities to determine what they consider their transportation electrification priorities to be; and
3. Be prepared to meet with the Energy Bureau to discuss the feedback it collects from its low-income customers, and to articulate next steps it will take to address barriers to low-income EV adoption.

B. Estimating Federal Funding

In section 3.1.4 of its Phase I EV Plan, LUMA indicates there are non-utility funding opportunities available that could "help shape the roadmap and types of actions that LUMA can take to promote EV adoption in Puerto Rico."[11] LUMA has provided no specific actions regarding this funding. It states that because these funds are not directly available to LUMA, it is "aware of and prepared to support" these deployments when they occur.[12] As summarized below, there is significant potential for federal investment in Puerto Rico and the Energy Bureau does not consider LUMA to have sufficiently planned for the impact of these funds on Puerto Rico's transportation sector. LUMA's Phase I EV Plan should reasonably reflect the likelihood of Puerto Rico and Puerto Ricans' securing significant federal financial transportation electrification support.

- **Inflation Reduction Act** – For example, the *Inflation Reduction Act of 2022* (IRA)[13] modifies the *Internal Revenue Code* ("IRC" or "tax code") to provide tax credits over 10 years to purchasers of electric vehicle and charging infrastructure.[14] Specifically, the IRA amends section 30D of the tax code to provide a $7,500 consumer credit for the purchase of a qualified new clean vehicle. It amends section 25E of the code to provide a credit (the lesser of $4,000 or 30% of the vehicle cost) for the purchase of owned clean non-commercial vehicles. Section 45W of the IRA amends the tax code to provide a $7,500 tax credit for the purchase of Class 1-3 electric vehicles (up to 14,000 lbs.), and for a credit of up to $40,000 for Class 4 vehicles (over 14,000 lbs.) The IRA also amends section 30C of the tax code to provide homeowners with tax credits another 10 years for the purchase and installation of electric vehicle chargers. Homeowners can get a credit for 30 percent of the cost of the materials (including charger) and installation, up to $1,000. In 2023 a tax credit for business and home installations will cover bidirectional chargers.

- **The Infrastructure Investment and Jobs Act** – H.R.3684, the *Infrastructure Investment and Jobs Act* (IIJA) also known as the *Bipartisan Infrastructure Law*[15], sets out to support the development of a network of EV chargers to facilitate long-distance travel and provide convenient charging options.[16] Under this law it is estimated that Puerto Rico would expect to receive about $13.6 million over five years to support the expansion of an EV charging network in the Commonwealth.[17] Puerto Rico will also have the opportunity to apply for grants drawn from the $2.5 billion for EV charging.

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[11] LUMA lists six examples of funding opportunities including, Federal Transit Administration, Low and No Emission Bus Grant, National Electric Vehicle Infrastructure Formula Program, and Charging and Fueling Infrastructure Grants.

[12] Amended Exhibit 1 at pgs. 28-29.

[13] H.R.5376 - *Inflation Reduction Act of 2022*, Public Law 117-169, Available at: https://www.congress.gov/bill/117th-congress/house-bill/5376/text (last visit, December 27, 2022)

[14] A number of these provisions are subject to limitations based on vehicle prices and individual income eligibility, and additional conditions apply related to battery content and vehicle assembly location.

[15] Public Law 117-58

[16] H.R.3684, the Infrastructure Investment and Jobs Act. Available at: https://www.congress.gov/bill/117th-congress/house-bill/3684/text (last visit December 27, 2022)

[17] See The Bipartisan Infrastructure Law Will Deliver for Puerto Rico, US DOT. Available at: https://www.transportation.gov/briefing-room/bipartisan-infrastructure-law-will-deliver-puerto-rico.

- **Upgrading Our Electric Grid and Ensuring Reliability and Resiliency program**[18] – This program is also provided for by the IIJA and provides federal financial assistance for demonstrating innovative approaches to transmission, storage, and distribution infrastructure to harden and enhance resilience and reliability; and to demonstrate new approaches to enhance regional grid resilience. The IIJA provides for the annual appropriation of $1 billion through fiscal year 2026 to States, local governments, and utility commissions to coordinate with electric sector owners and operators to demonstrate innovative approaches to transmission, storage, and distribution infrastructure to harden and enhance resilience and reliability.

- **The Justice40 Initiative** – Affecting all federal programs is the administration's adoption of "Justice40 Initiative." When President Biden signed Executive Order 14008 in March 2021, he made it the goal of his administration that 40 percent of the overall benefits of certain Federal investments would flow to communities marginalized, underserved, and overburdened by pollution.[19] The categories of investment are broad, but include climate change, clean energy, and clean transit. According to the administration, existing and new programs created by the IRA and IIJA that make investments in these categories can also be considered Justice40-covered programs.[20]

With billions of federal dollars for transportation electrification being made available to states and local jurisdictions, LUMA needs to be more than simply aware and inclined to support others in their efforts to secure this needed funding.[21] LUMA's Phase I EV Plan should reflect specific steps it can take to help its ratepayers and others in securing this support. The plan should include, for example, a reasonable articulation of the effects on utility load growth and EV adoption of federal support to businesses and individuals. The Phase 1 EV Plan should also explore the benefits to its distribution system that one should expect from a sustained rollout of federally supported charging infrastructure.

In its Final Phase I Plan, LUMA is **ORDERED** to:

I. Consider and analyze federal funding that can reasonably be expected to benefit Puerto Ricans and Puerto Rico's transportation and utility systems;

II. Provide specific characterization of steps that the company can take to assist in securing this funding, including parties with whom LUMA could partner; and

III. Produce an analysis that reflects the likely effects of federal funding on (a) EV load and (b) charging infrastructure buildout on the company's distribution system.

C. *Phase I EV Plan Reporting Metrics*

In Section 6.0 of its Phase I EV Plan, LUMA proposes to prepare and file three annual reports that summarize (i) expenditures to-date against budget, (ii) progress on expected outcomes of its Plan, and (iii) customer and/or stakeholder participation for each action and initiatives in the Plan. First, from a process standpoint, the Energy Bureau finds LUMA's proposal to file annual reports to be less than useful. Second, from a substantive perspective, the Energy Bureau find the proposal to be vague and not directly tied to the expected outcomes set out in its proposed Portfolio of Actions as described in Section 4.0 of its Phase I EV Plan.

EV adoption is relatively new in Puerto Rico, as is LUMA's role in electrification of the transportation sector. The Energy Bureau finds that more extensive reporting is necessary

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[18] Department of Energy, *Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency.* Available at: https://www.energy.gov/oced/program-upgrading-our-electric-grid-and-ensuring-reliability-and-resiliency (last visit, January 11, 2023).

[19] Regulation.gov, *Executive Order 14008: Tackling the Climate Crisis at Home and Abroad, January 27, 2021*. Available at: https://www.regulations.gov/document/EPA-HQ-OPPT-2021-0202-0012 (last visit, January 11, 2023).

[20] The White House, *Delivering on Justice40*, Dr. Cecilia Martinez and Dr. Candace Vahlsing, December 2021. Available at: https://www.whitehouse.gov/ceq/news-updates/2021/12/02/delivering-on-justice40/ (last visit, January 11, 2023).

[21] Amended Exhibit 1 at pgs. 28-29.

than what would normally be considered for a more typical utility program. This is particularly important with respect to ensuring transparency and the need for useful data. Specifically, as LUMA's efforts proceed, it is important that the utility provide the Energy Bureau performance information to demonstrate its progress to ensure that the Energy Bureau can take meaningful corrective action and that the Energy Bureau can do so in a sufficiently timely manner to be impactful.

In 2017, the Washington Utilities and Transportation Commission ("UTC") reached a similar conclusion regarding a reporting proposal by one of its state's utilities. The UTC approved a pilot for Avista Utilities that required submission of quarterly reports on program participation levels, expenditures, and revenues for each EV-related service that the utility planned to offer.[22] It is noteworthy that in a subsequent order, the UTC —after having developed comfort with Avista's program and reporting— approved the company's request to change from quarterly to semi-annual reporting.[23] It is also notable that, even with the formal reporting requirement somewhat relaxed, Avista agreed to provide "informal quarterly updates" to staff and other parties.[24]

The Energy Bureau finds that in an initial program rollout, it makes little sense to rely on an annual report as a source for timely and actionable information. It would be far more useful to have key metrics reported more often. The Energy Bureau therefore **ORDERS** LUMA to file semi-annual reports with the Energy Bureau instead of the three annual reports as proposed in the Phase I EV Plan. As data comes in and the Energy Bureau can see the progress LUMA is making with various aspects of its program, the Energy Bureau will revisit the issue of reporting frequency.

In its semi-annual filings, LUMA should follow through and account for its proposed actions, and report on the specific outcomes of each action. The Energy Bureau therefore **ORDERS** LUMA to report on the following metrics and information requests in each of its semi-annual reports.

Action 1: Customer Education

1. Number of monthly, unique visits to the LUMA's EV landing webpage.
2. Number of direct mailings containing EV customer education resources sent to customers.
3. Number of bill inserts containing EV customer education resources sent to customers.
4. Number of emails containing EV customer education resources sent to customers.
5. Number of face-to-face meetings.
6. Total spending on customer education in dollars ($) and percent (%) of total budget.

LUMA shall also include in a copy of all EV customer education resources and program materials to include in its filing.

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[22] Washington Utilities and Transportation Commission, Docket UE-160799, Draft Policy and Interpretive Statement, January 13, 2017, paragraph 6 (citing Washington Utilities and Transportation Commission, Docket UE- 160082, Order on April 28, 2016). For another similar example where the preference for relatively more frequent reporting is articulated, see California Public Utilities Commission, Application 14-04-014, Decision 16-01-045 on January 28, 2016. Available at: https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M158/K241/158241020.PDF (last visit, January 13, 2023).

[23] Washington Utilities and Transportation Commission, Docket UE-160082, Order on February 8, 2018, p. 7. Retrieved from https://www.utc.wa.gov/_layouts/15/CasesPublicWebsite/GetDocument.ashx?docID=126&year=2016&docketNumber=160082 (last visit, January 11, 2023).

[24] Washington Utilities and Transportation Commission, 2018, p. 5.

Action 2: Customer Engagement

1. Number of customer engagement events held representing underserved communities.
2. Number of customer events held for non-underserved communities.
3. Total spending on customer engagement in dollars ($) and percent (%) of total EV Phase I Plan budget.

LUMA shall also describe subjects covered at each customer event, the date of the event, the number of customers in attendance, and copies of materials distributed or presented at the event. LUMA shall provide a list of the stakeholder meetings, workshops, and events in which it participated. LUMA shall also describe how its customer engagement activities incorporate the Energy Bureau's findings in Section II(A) of this Resolution and Order about low-income customers.

Action 3: Planning for Grid Infrastructure and System Improvement

1. Number of monthly, unique visits to the EV Hosting Capacity Map (once completed).
2. Total spending on EV Hosting Capacity Map in dollars ($) and percent (%) of total EV Phase I Plan.

LUMA shall also include the following:

a. List of stakeholders LUMA partnered with and the outcome of that partnership.
b. All updates to its detailed EV load projections.
c. Progress towards the development and publishing of the EV Hosting Capacity Map and estimated date of completion.
d. List of local transportation partners and third-party data providers with whom LUMA coordinated.

Action 4: Support for EV Charging Infrastructure

1. The number and percentage of customers, by customer class for whom EVSE installation guidebooks were distributed.
2. The number and percentage of customers, by customer class for whom EV Readiness Checklists were distributed.
3. The number and percentage of customers, by customer class that received the Interconnection Guidelines and/or Project Connection Manual.
4. Total spending on guidebooks, checklists, guidelines and/or manuals in dollars ($) and percent (%) of total EV Phase I Plan budget.

LUMA shall also include a copy of the EVSE installation guidebooks, EV Readiness Checklists, and Interconnection Guidelines and/or Project Connection Manual.

Action 5: Workforce Development

1. A description of each training session offered to employees, including related instructional materials.
2. Number and percent of employees trained.
3. Total spending on training in dollars ($) and percent (%) of total EV Phase I Plan budget.

LUMA's filing should also include a copy of EV-specific content for the customer contact center and the EV FAQs list.

Action 6: EV Rates and Charging

1. The number and percentage of residential customers participating in the Interim EV TOU Rate.
2. The number of EV charging meters installed.
3. The number and percentage of Interim EV TOU Rate participants where LUMA used vehicle telematics, data from customers' EV chargers, data from charging networks or aggregators, or other non-meter data sources.
4. Average frequency of charging.
5. Average length of charging.
6. Timing (by hour) of charging.
7. Average and maximum of kWh delivered per charging session.

D. *Cost Recovery*

In Section 9.0 of the Phase I EV Plan, LUMA proposes to expand the proposed energy efficiency and demand response rider ("EE/DR Rider") to include funding for the Phase I EV Plan.[25] LUMA describes this new single rider as a Clean Energy Programs ("CEP") rider. LUMA further indicates that the naming of the rider, its associated policies and procedures, and the timing of its introduction should be carefully considered through a separate proceeding. [26]

The Energy Bureau agrees with LUMA that any proposal for a rider or modification of the proposed EE/DR Rider should be carefully considered in coordination with the Case No: NEPR-MI-2022-0001 relating to LUMA's Energy Efficiency and Demand Response Transition Period Plan.

LUMA states that, meanwhile, it proposes to shift existing resources from other related initiatives to support implementation of the EV Plan.[27] The Energy Bureau is unable to assess this proposal because LUMA does not indicate from where it intends to shift funding, nor does LUMA state what portions of its proposed Phase I EV Plan can be covered using existing funds.

The Energy Bureau **ORDERS** LUMA to include in its Final Phase I EV Plan the following information:

1. Funding for Fiscal Year 1 of the Phase I EV Plan.

2. An explanation of how LUMA will fund any budget shortfall for Fiscal Year 1 of the EV Plan, including options without a new rider.

3. Identification of the program or programs from which LUMA proposes to shift funds to support the Phase I EV Plan, and the total funds shifted from each program.

4. The remaining budget for the program or programs from which LUMA is shifting funds and a description regarding the expected impacts from the reduced budget.

E. Updates to Future Modeling and Analysis in Final Phase 1 EV Plan

The Energy Bureau finds that LUMA's Revised Rate Design Proposal and Phase I EV Plan contain several methodological issues that should be discussed in future modeling. Section 3(A)(7) of the Phase I EV Plan, describes these in detail and provides more specific direction

[25] Amended Exhibit 1 at pg. 78

[26] *Ibid.*

[27] Page 79.

on modeling and analysis in developing future EV rates. LUMA should also apply this guidance broadly to future modeling and analysis of EV demand and associated load growth, including in the Final Phase I EV Plan, future Integrated Resource Planning (IRP) proceedings, general rate cases, and future tariffs and programs developed to support transportation electrification.

III. Proposed EV TOU Rate Design and Analysis

The Energy Bureau's findings and conclusions related to *LUMA's Revised Rate Design Proposal* filed on July 21, 2022[28], and as included in LUMA's Phase I EV Plan, as submitted with corrections on September 2 Motion are presented below.

The Energy Bureau **APPROVES** the Interim Rate subject to the following modifications:

In its filing, LUMA seeks approval to:

1. Proceed with the further development of the Residential EV TOU Rate, including the detailed implementation planning and costing described in the proposal.
2. Establish two deferral accounts for recovery in the next rate rebasing period as part of the introduction of the Residential TOU Rate with a separate meter as follows:
   I. A deferral account for any revenue shortfalls accruing from the introduction of the Residential TOU Rate as compared with the revenue LUMA would have otherwise earned on the EV charging consumption covered by the rate.
   II. A deferral account for additional costs incurred to establish the IT and billing infrastructure for billing participating customers; promote the Residential EV TOU Rate to residential EV owners in Puerto Rico; and evaluate the effectiveness of this rate. These costs will be estimated by LUMA based on further implementation planning and costing to be completed as part of the Phase 1 EV Plan.[29]

LUMA notes that its "draft EV rate design proposal is submitted in draft form as any formal rate discussions should be conducted through an Adjudicative Proceeding bolstered by more comprehensive analysis."[30]

A. LUMA Request #1 – Proceed with Implementation of LUMA's Proposed Residential EV TOU Rate as an Interim Rate

The Energy Bureau believes that LUMA should proceed quickly with final development and launch of the EV TOU Rate design proposed in the September 1Motion, subject to exceptions about certain implementation details discussed below.

In support of this decision, the Energy Bureau makes the following observations:

- EV adoption is low in Puerto Rico but expected to increase as vehicle manufacturers expand options to customers and fleet operators replace old vehicles with electric-powered models;
- Recent federal legislation and support is intended to increase EV adoption, particularly in areas with low current adoption;
- Avoiding excessive charging during peak demand periods will be important as EV adoption grows while Puerto Rico addresses risks of generation shortages;
- Local data on charging profiles is limited; and
- Electrifying transportation as Puerto Rico integrates large additions of low-carbon renewable energy sources supports clean energy goals.

[28] Motion Submitting Revised EV Rate Design Proposal ("July 21 Motion").

[29] LUMA Revised EV Rate Design Proposal July 21, 2022. at pages 6-7.

[30] Id. Exhibit 1 at page 2.

The Energy Bureau believes that LUMA should pursue transportation electrification instead of reactive to future challenges as they emerge. As an initial step in the Phase I EV Plan, the Energy Bureau supports the 3-period TOU rate proposed by LUMA and **ORDERS** LUMA that an Interim Rate should be launched by September 30, 2023. This Interim Rate will remain in effect until a successor is developed by LUMA and approved by the Energy Bureau in its next general rate case or within 24 months if a rate case is not filed. The successor EV TOU Rate should be developed according to the guidance in Section 3(A)(7) of the Phase I EV Plan and this Resolution and Order.

Moving forward on this element of the Phase I EV Plan will allow LUMA and all stakeholders to gain experience on vehicle charging patterns, while discouraging excessive charging during the evening peak period. The Energy Bureau expects that the information gained through customers' participation in this Interim Rate will inform a more comprehensive discussions on rate design in the future and a more sophisticated rate offerings that other jurisdictions with higher numbers of EVs, are testing now. The Energy Bureau's approval of the Interim Rate is also conditioned on the following requirements:

1. *Data Sharing Requirement*

Participants in the Interim EV TOU Rate shall have to share charging data with LUMA.

2. *Interval Meter Data Collection and Integration*

LUMA claims that large-scale implementation of its proposed TOU rate "will require enabling technologies such as interval metering and AMI infrastructure to gather data, and to calculate and generate bills under a TOU rate structure."[31] LUMA adds that it "currently lacks interval metering and AMI infrastructure." LUMA further indicates that it:

> [P]lans to explore the services and capabilities available from EV charging infrastructure providers, EV manufacturers and EV charging software solutions companies to facilitate the deployment of the proposed EV rate on an interim basis prior to LUMA's full AMI deployment."[32]

The Energy Bureau finds that LUMA's "plan to explore" these data-collection methods are insufficiently detailed to give the Energy Bureau confidence that the data collection methods can be implemented to enable a timely rollout of the EV TOU Rate before LUMA's longer-term AMI rollout is completed.

Therefore, the Energy Bureau **ORDERS** LUMA to first use vehicle telematics or usage data from residential EV chargers equipped with communications modules to calculate the bills of Residential EV TOU Rate participants, instead of installing a separate interval meter to collect data on EV charging activity. The Energy Bureau further **ORDERS** LUMA to evaluate the work that will be needed to integrate the collected data into its billing system.

As demonstration of its compliance with these directives, the Energy Bureau **ORDERS** LUMA to:

1. Issue a request for proposals (RFP) to vendors to obtain their technical requirements, capabilities, and costs. This shall be done immediately, despite any other proceedings or initiatives that LUMA has under way.
2. Evaluate the vendor bids received.
3. Select the least-cost solution or, if it perceives potential insight or value in evaluating a second method, a second vendor bid.
4. Submit the estimated costs and expected capabilities of the selected system(s) to the Energy Bureau for approval as recoverable costs.

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[31] Motion Re-Submitting Exhibit 1 Filed on September 1, 2022, with Technical Repairs and Requesting Substitution of Original Exhibit ("September 2 Motion") at 65.

[32] Id at 65-66.

5. Report to the Bureau every 30 days after this order on the progress with data collection and billing to integrate the Interim EV Rate.

The Energy Bureau **DENIES** LUMA's request to bill customers for any method of interval data collection and integration until the RFP is completed and vendor bids selected.

3. *TOU Rate Customer Outreach and Enrollment*

LUMA shall develop a customer outreach plan that details the timeline and approach for enrolling customers in the EV TOU Rate.

This plan shall describe market barriers to customer enrollment in TOU rates and how LUMA's outreach plan will address each barrier.

LUMA shall enroll customers in the order in which they apply and bill them under the new tariff upon enrollment, instead of conducting its proposed randomized control trial.

As part of the customer outreach plan, LUMA shall provide the Energy Bureau with estimates of the number planned customer enrollments by year, and what percent of known registered EVs this represents, and demonstrate how its planned enrollment matches the revised adoption forecast as described in "Estimating adoption rates" in Section 3(A)(7)(a) of the Phase I EV Plan.

LUMA shall develop its customer information about the new EV TOU Rate, including the complete tariff sheet and a description of all costs (including any costs for data collection), and send it to EV owners before implementing the tariff, to advise them of the rate and invite them to enroll in it. This marketing outreach may not be delayed by LUMA's other related initiatives.

In its customer tariff sheet for the new EV TOU Rate, LUMA shall present a complete itemization of all charges, including any base and PPCA charges and all components of its FCA charges, so customers can see the complete set of fully itemized charges they will pay.

4. *Requisite Vendors and Project Partners*

To the extent necessary to implement the Interim EV TOU Rate in full, LUMA shall issue an RFP inviting any requisite external vendors and partners to submit bids to provide services to LUMA. LUMA shall issue the RFP no later than February 15, 2023 and give vendors until March 15, 2023 to submit their proposals.

5. *Schedule*

LUMA shall develop a project schedule that: (i) details each task that LUMA has identified as being important to align with the rollout of the EV TOU Rate, (ii) articulates precisely what other partners, programs, initiatives, etc. must be engaged to proceed with the EV Plan, and when it expects to engage with them,(iii) specifies how LUMA will conduct the RFP for data collection and billing integration methods and costs, and (iv) specifies a timeline for LUMA's cost-benefit analysis as it decides how to implement the requisite enhancements to its IT and billing systems.

LUMA shall submit this project schedule by February 10, 2023.

6. *Billing*

In the July21, LUMA states it intends to calculate the billing under its EV TOU Rate "separately" until it is able to upgrade its billing system to handle interval meter data. LUMA shall explain the precise methods by which they will calculate these bills.

Until LUMA can implement the Interim EV TOU Rate in its billing system, LUMA shall provide rebates to the rate's participants each month. If LUMA can present enough justification for

why it is impossible to provide monthly rebates, recognizing that it only expects around 300 participating customers in the initial EV TOU Rate rollout, LUMA may provide rebates on a quarterly basis.

7. *Updates to Future Modeling and Analysis of Successor TOU Rate*

In Section II(E) of this Resolution and Order, the Energy Bureau finds that LUMA's Revised Rate Design Proposal and Phase I EV Plan contain several methodological issues that should be addressed in future modeling.

The Energy Bureau **ORDERS** LUMA to revise its successor EV TOU Rate in accordance with the following guidance on modeling and analysis as part of its next rate case. If LUMA does not file a general rate case within 24 months of this Resolution and Order, it is **ORDERED** to propose a successor EV TOU Rate in accordance with this section as a stand-alone filing to the Energy Bureau.

a) *Estimating Adoption Rates*

The EV adoption forecast for EVs in LUMA's Phase I draft EV Plan dated September 1, 2022, is based on the growth rates in what they imply are comparable US states (Arkansas, Louisiana, and Mississippi).[33] These states have some of the lowest EV adoption rates in the US.[34]LUMA then applies those growth rates against the vehicle registration forecast for Hawaii. LUMA's preliminary EV forecast shows EV growth not climbing above 5% until 2034.[35] The Energy Bureau finds this to be an unreasonably conservative estimate, given LUMA's stated expectation that customers will save money by switching to EVs under their new EV TOU Rate, and that adoption rates across the US and in other countries are much higher.

In LUMA's characterization of the US EV adoption trend, EVs made up "approximately 4% of new vehicle sales in the US in 2021, compared to about 2% in 2020," a near doubling.[36] The United States has even more recently joined 18 other countries whose EV adoption rates exceed 5%.[37] For example, according to Bloomberg, "[i]f the US follows the trend established by 18 countries that came before it, a quarter of new car sales could be electric by the end of 2025."

Bloomberg also notes that "behind every country that crossed an EV tipping point is a program of federal incentives and pollution standards." [38] The Energy Bureau noted above in Section B, that LUMA has yet to account for any effects associated with Federal funding that could be reasonable expected to stimulate EV adoption in Puerto Rico, as well as in states like Arkansas, Louisiana, and Mississippi. When it revises its EV TOU Rate and projects EV demand in other proceedings, the Energy Bureau expect LUMA to base its adoption forecast on the actual adoption rates observed up until that time and any other factors that could be reasonably expected to affect EV adoption.

b) *Estimating Load for EV TOU Rate Customers*

On page 73 of its September 2 Motion, LUMA states it is "unable to accurately estimate the actual participation rate" or "quantify the potential impact of the rate on peak demand,

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[33] Motion Re-Submitting Exhibit 1 Filed on September 1, 2022, with Technical Repairs and Requesting Substitution of Original Exhibit ("September 2 Motion") p. 31.

[34] *Id.*

[35] *Id.*, p.31.

[36] *Id.*, p.23.

[37] US Crosses the Electric-Car Tipping Point for Mass Adoption by Tom Randall July 9, 2022. Available at: https://www.bloomberg.com/news/articles/2022-07-09/us-electric-car-sales-reach-key-milestone (Last verified January 13, 2023).

[38] *Id.*

resource adequacy and customer outages" given the "novelty" of the EV TOU Rate in Puerto Rico. To develop its forecast of the grid impact of EV charging, as explained on page 33 of the September 2 Motion, it uses charging profiles that "assume that the majority of EV drivers charge their vehicles on the standard residential rate and start charging their vehicles at the time that is most convenient for them (typically from 6PM–8PM)."

To better represent reasonably likely charging behavior, LUMA should estimate the expected load of future EV TOU Rate participants based on experience gained with the Interim Rate and, where local experience is not available yet, apply recent experience from other jurisdictions with similar EV rate designs and programs.

c) *Customer Charging Behavior and Estimating EV Rate Revenues*

As LUMA states on page 65 of its Phase I EV Plan, in its justification for proposing the Residential EV TOU Rate, "This rate…will encourage EV owners to shift their residential EV charging from the evening to other periods of the day." However, LUMA then projects revenues collected under the rate if customers shift their charging to take advantage of lower daytime rates, LUMA would lose revenue. First, given the lack of data to support this assumption, the Energy Bureau is not adopting these conclusions until there is a stronger base of evidence to support LUMA's assertion. Second, since LUMA has assumed limited demand from EV charging, there is a basis to treat revenues collected under the Interim Rate as incremental to revenue assumed under past rate-setting decisions. Third, the Energy Bureau believes that LUMA should estimate revenues based on customers modifying charging behavior consistent with the proposed rate design. Finally, the Energy Bureau is mindful of the current system conditions and near-term trajectory with the additions of renewable projects. LUMA is experiencing higher risk conditions for meeting system peaks and as new renewable projects come online the marginal cost of generation during the daytime is expected to decrease. Both factors follow the three-period price structure in the proposal aligning with the costs to serve EV charging. The Energy Bureau will consider these factors more comprehensively in the upcoming IRP, future rate cases, and successor to the Interim Rate.

Therefore, in future filings in these proceedings, LUMA should base EV revenue projections using data collected under the Interim Rate, recent experience from other jurisdictions with similar EV rate designs and programs where applicable, and assuming customer charging behavior consistent with the pricing structure.

d) *Estimating EV Rate Participant Savings*

Similar to the guidance in Section 3(A)(7)(e) of the Phase I EV Plan, in future filings LUMA should estimate rate participant savings based on data collected under the Interim Rate, recent experience from other jurisdictions where applicable, and assuming customers modify charging behavior consistent with the pricing structure.

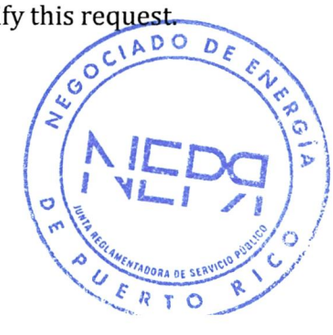
B. *LUMA Request #2 - Deferral Account 1*

The Energy Bureau **DENIES** LUMA request to develop a deferral account for revenue shortfall from the EV TOU Rate. The Energy Bureau assumes that the majority of EV charging represents new load and should not impact LUMA's test year revenue requirements.

In addition, the Energy Bureau is approving the EV TOU Rate on an interim basis and the information collected on customer charging patterns, should inform redesign of the EV TOU Rates, including any requisite cost recovery.

C. *LUMA Request #2 - Deferral Account 2 -*

The Energy Bureau also **DENIES** LUMA's second request for a deferral account related to billing and IT systems. LUMA has not presented adequate information to justify this request.



V. Conclusion

The Energy Bureau **ORDERS** LUMA to:

1. For the Final EV Phase I Plan:

   a. Over the next six months, review and propose improvements to its outreach and public access policies and practices, and submit a memorandum to the Energy Bureau setting out the actions it plans to adopt;

   b. Over the next nine months, engage in outreach with low-income and disadvantaged communities to determine what they consider their transportation electrification priorities to be;

   c. Be prepared to meet with the Energy Bureau to discuss the feedback it collects from its low-income customers, and to articulate next steps it will take to address barriers to low-income EV adoption;

   d. Consider and analyze federal funding that can reasonably be expected to benefit Puerto Ricans and Puerto Rico's transportation and utility systems;

   e. Provide specific characterization of steps that the company can take to assist in securing this funding, including parties with whom LUMA could partner;

   f. Produce an analysis that reflects the likely effects of federal funding on (i) EV load and (ii) charging infrastructure buildout on the company's distribution system;

   g. File semi-annual reports with the Energy Bureau consistent with the directions set out in Section II C of this Resolution and Order;

   h. Include in its Final Phase I EV Plan the following information:

      1. Funding for Fiscal Year 1 of the Phase I EV Plan;

      2. An explanation of how LUMA will fund any budget shortfall for Fiscal Year 1 of the EV Plan, including options without a new rider;

      3. Identification of the program or programs from which LUMA proposes to shift funds to support the Phase I EV Plan, and the total funds shifted from each program; and

      4. The remaining budget for the program or programs from which LUMA is shifting funds and a description regarding the expected impacts from the reduced budget; and

   i. File a Final EV Phase I Plan by March 30, 2023, that incorporates this guidance and contains plans for future updates.

2. For the EV TOU Rate and Interim Rate:

   a. Update data collection and analysis methods related to the planning and design of its successor EV TOU Rate in its next rate proceeding or within 24 months of the issuance date of this order;
   b. Submit Project Schedule for implementation of the Interim EV TOU rate by January 10, 2023; and
   c. Finish development and launch its Interim Rate by September 30, 2023.

Be it notified and published.

Edison Avilés Deliz
Chairman

Lillian Mateo Santos
Associate Commissioner

Ferdinand A. Ramos Soegaard
Associate Commissioner

Sylvia B. Ugarte Araujo
Associate Commissioner

Antonio Torres Miranda
Associate Commissioner

CERTIFICATION

I hereby certify that the majority of the members of the Puerto Rico Energy Bureau has so agreed on January 13, 2023. I also certify that on January 13, 2023 a copy of this Order was notified by electronic mail to laura.rozas@us.dlapiper.com y ana.rodriguerivera@us.dlapiper.com. I also certify that today, January 13, 2023, I have proceeded with the filing of the Order issued by the Puerto Rico Energy Bureau.

For the record, I sign this in San Juan, Puerto Rico, today January 13, 2023.

Sonia Seda Gaztambide
Clerk

NEGOCIADO DE ENERGÍA DE PUERTO RICO
JUNTA REGLAMENTADORA DE SERVICIO PÚBLICO