

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

<p>NEPR</p> <p>Received:</p> <p>May 24, 2024</p> <p>5:00 PM</p>

**IN RE: ELECTRIC VEHICLE
CHARGING INFRASTRUCTURE
DEPLOYMENT**

CASE NO. NEPR-MI-2021-0013

**SUBJECT: Motion to Submit Corrected Exhibit 1 to
Motion to Submit a Revised Semi-Annual Report in
Compliance with Order of April 23, 2024**

**MOTION TO SUBMIT CORRECTED EXHIBIT 1 TO MOTION TO SUBMIT A
REVISED SEMI-ANNUAL REPORT IN COMPLIANCE WITH ORDER OF APRIL 23,
2024**

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

COMES now **LUMA Energy ServCo, LLC** (“LUMA”), through the undersigned legal counsel, and respectfully states, submits and requests the following:

1. Last night, at midnight, LUMA submitted a *Motion to Submit a Revised Semi-Annual Report in Compliance with Order of April 23, 2024*, which included, in its Exhibit 1, a revised version of LUMA’s Fiscal Year 2024 Semi-Annual Report in compliance with the Puerto Rico Energy Bureau’s Resolution and Order of April 23, 2023.

2. After this submittal, it came to LUMA’s attention that the mentioned Exhibit 1 included, by inadvertence, an internal comment indicating that section 1.8 of the report was missing, which comment was placed in brackets on page 7 of the report and meant to be deleted prior to finalizing the report. This comment was inapplicable because the report template does not require said section. Additionally, LUMA identified other minor corrections: fixing section references in the table of contents (Sections 1, 3.7, 8.1-8.4, and 9), repositioning Table 3, and reorganizing the sequence and placement of certain Figures. These are mainly formatting and

typographical changes, not affecting the report's substantive content. However, to avoid any potential confusion in the review of the report and for clarity of the record, LUMA has prepared a corrected version which is attached as Exhibit 1 to this motion. LUMA respectfully requests the Energy Bureau to substitute the Exhibit 1 in LUMA's *Motion to Submit a Revised Semi-Annual Report in Compliance with Order of April 23, 2024* with the attached Exhibit 1.

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned and **accept** the Corrected **Exhibit 1** herein in substitution of the Exhibit 1 included in LUMA's *Motion to Submit a Revised Semi-Annual Report in Compliance with Order of April 23, 2024*.

RESPECTFULLY SUBMITTED

In San Juan, Puerto Rico, this 24th day of May 2024.

We hereby certify that we filed this motion using the electronic filing system of this Energy Bureau and that we will send an electronic courtesy copy of this motion to PREPA's General Counsel, Lionel Santa, lionel.santa@prepa.com, to the Independent Office of Consumer Protection by submittal to Hannia Rivera, hrivera@jrsp.pr.gov and to arivera@gmlex.net and mvalle@gmlex.net. LUMA understands that other participants or stakeholders in this proceeding will be notified as a result of the publicity of the filings in this process. Notwithstanding, LUMA will send a courtesy copy of the filing to the following stakeholders: agalloza@aggpr.com; alberto.cortes@warrendelcaribe.com; aldo@skootel.com; angel.d.rodriguez@outlook.com; antonio@velocicharge.com; apietrantoni@pmalaw.com; azayas@azeng.net; bigwheelcorp@gmail.com; blazquezmalu@gmail.com; brightsunpr@gmail.com; carloscedeno@gmail.com; clrivera@caguasexpressway.com; flota@caguasexpressway.com; cnegrette@solrenew.com; CR.Tejera@ddec.pr.gov; dacosta@aggpr.com; daniel.perez@totalenergies.pr; dcordero@group-em.com; direxec@ciapr.org; divine.energy@hotmail.com; ecruz@pmalaw.com; eduardo.pinera@toyota.com; Edwin.Acevedo@ddec.pr.gov; emelyies.torres@toyota.com; epenergypr@gmail.com; erica.cosme@gsonnell.com; Fberrios@peritoselectricistas.org; francisco.berrios@hotmail.com; franciscojrullan@yahoo.com; gerard.berlinski@toyota.com; gerardo_cosme@solartekpr.net; gperez@solrenew.com; hamely@motorambar.net; ialsina@plazalasamericas.com; idiaz@glenninternational.com; info@carlosmatta.com; jack@pantekpartners.com; jameauxl@aim.com; jan.rodriguez@toyota.com; javrua@sesapr.org; jbouza@caguasexpressway.com; jcardona@aggpr.com; jmartinez@pmalaw.com; jorrodriguez@motorambar.net; jortiz@caguasexpressway.com; jose.maeso@crowley.com; jpibernus@motorambar.com; JSantana@motorambar.com; jtosado@motorambar.net; juan.diaz.galarza@guidehouse.com; jvazquez905@gmail.com;

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Exhibit 1

Corrected Revised Semi-Annual Report



Puerto Rico's Electric Vehicle Adoption Plan (PR-EVAP)

Semi-Annual Report July-December 2023

NEPR-MI-2021-0013

REVISED MAY 23, 2024

PR-EVAP Semi-Annual Report (Revised)

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Transmittal Letter

LUMA is determined to build a cleaner energy future for all Puerto Ricans and embraces its role as a trusted advisor on Puerto Rico's Electric Vehicle Adoption Plan (PR-EVAP) as filed on May 1, 2023, to help ensure all customers and industry stakeholders have effective and equitable access to Electric Vehicles (EVs).

Through PR-EVAP, LUMA endeavors to ensure all Puerto Ricans, along with industry stakeholders, have equitable access to Electric Vehicles (EVs), marking a significant step towards sustainability and resilience in the energy sector. Central to this commitment is LUMA's dedication to transparency and accountability, as evidenced by its Semi-Annual Report, which encompasses various facets of the EV program's implementation, including customer education, infrastructure development, and workforce initiatives.

This journey began with the Resolution and Order from the Puerto Rico Energy Bureau ("Energy Bureau") on January 13, 2023, making several determinations regarding the draft electric vehicle plan LUMA had submitted on September 1, 2022 (precursor to the PR-EVAP) and a Revised Draft EV Rate Design Proposal submitted by LUMA on July 21, 2022 and imposing requirements relating to the implementation of the draft electric vehicle plan, including mandating the submittal of semi-annual reports to report on specified indicators and provide updates on progress and initiatives undertaken (January 13th Resolution and Order).

Following this, LUMA navigated a series of milestones, including the submission of the Project Schedule on February 17, 2023, which sought modifications to certain deadlines and was subsequently approved by the Energy Bureau on March 29, 2023 (March 29th Order).

Following the successful approval of the Project Schedule by the Energy Bureau, LUMA embarked on a series of strategic initiatives aimed at advancing Puerto Rico's Electric Vehicle Adoption Plan (PR-EVAP) and fostering a cleaner energy future. These endeavors culminated in the meticulous preparation of LUMA's Semi-Annual Report, a document designed to provide the Energy Bureau with insight into the progress and initiatives undertaken by LUMA.

The purpose of LUMA's Semi-Annual Report is to provide information on a broad spectrum of actions, including customer education and engagement, planning for grid infrastructure and system improvement, support for EV charging infrastructure, workforce development, and EV rates and charging. LUMA tracks and reports on various indicators and progress, ensuring transparency and accountability in its endeavors to build a more sustainable and resilient energy ecosystem for the benefit of its 1.5 million customers.

As informed in the PR-EVAP, due to the novelty of the EV program in Puerto Rico, the first Semi-Annual Report, as filed on February 29, 2024, reflected the best and most accurate information available at the close of the first half of FY2024 (i.e. July 1, 2023, to December 31, 2023). As Puerto Rico's EV program matures, the quality, accuracy and availability of data will improve, as will LUMA's ability to leverage such information to continue evolving the program to the benefit of its customers. In the PR-EVAP, LUMA provided examples of reporting limitations faced by other utilities during the early stages of their EV programs and the approach implemented to meet reporting requirements. LUMA, like other utilities, made it a priority to ensure that as the program progresses and data becomes available, a comprehensive and

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detailed Semi-Annual Report would be filed with the Energy Bureau. LUMA's approaches implementation of the EV program in phases and, as it does so, may identify, through experience and program progress, that some indicators are more effective to implement than others. LUMA will continue communicating these advances to the Energy Bureau through its Semi-Annual Report.

LUMA has made significant efforts to educate and engage with different stakeholders, including low-income community leaders, to share useful information about EVs and the Interim EV Time of Use rate (EV TOU) to ensure equitable access is considered in the adoption of EVs in Puerto Rico. The successful adoption of EVs is critically dependent on other actors and industry stakeholders taking coordinated action under effective public policies implemented by the Government of Puerto Rico. Although there is much work to be done, the transition towards clean energy in Puerto Rico is already in progress. LUMA reiterates its steadfast commitment to work in concert with all stakeholders to build a more reliable, resilient, customer-focused, and cleaner energy system for Puerto Rico. In the near-term, and as intended by the PR-EVAP, the transition to electrified transportation is, to some extent, an educational journey to understand customer behavior and preferences and to learn what processes or programs best serve these customers' needs.

Reporting Indicators

The reporting indicators serve as tools for evaluating various aspects of LUMA's EV programs under the PR-EVAP. By tracking these indicators and data points, LUMA can assess the programs' performance, identify areas for improvement, and comply with regulatory requirements outlined in the Energy Bureau's January 13, 2023, Resolution and Order. The implementation of these indicators will be determined based on the assessment of the information collected and gathered over time and the pace at which the EV programs evolve. As the program's advisor, LUMA will apply its expertise and industry knowledge to leverage available information and optimize the implementation of the PR-EVAP, including any and all relevant reporting indicators.

1. Action 1: Customer Education

1.1. Summary and overview of progress during the reporting period

LUMA has crafted an array of educational resources tailored both for general understanding and program-specific insights into EVs. These resources cover diverse topics ranging from charging technology to the advantages of EVs, along with details on specific EV programs like the ongoing implementation of the interim EV Time-of-Use (TOU) rate. Building on this initiative, in October 2023, LUMA introduced a dedicated webpage focused on EVs, offering easily accessible and comprehensive educational content curated for its customers.

1.2. Number of monthly unique visits to LUMA's EV landing webpage

Table 1: Visits to LUMA's EV Landing webpage

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Month	Amount
October	67
November	100
December	89
Total	256

1.3. Number of direct mailings containing EV customer education resources sent to customers

Direct mailing is one of the potential options to educate the customers about EVs. LUMA is currently determining the appropriate timing for implementing this approach based on its assessment of customer needs and readiness and the extent to which such mechanism best serves the objectives of the EV Program.

1.4. Number of bill inserts containing EV customer education resources sent to customers

Similar to direct mailings, bills inserts are one of the options available to LUMA to educate customers about EVs. LUMA is currently evaluating how this mechanism can be deployed to best serve the objectives of the EV Program and the timeline for its deployment.

1.5. Number of emails containing EV customer education resources sent to customers

LUMA is currently planning to use emails as an educational mechanism during the second half of the PR-EVAP implementation. LUMA is evaluating the most effective and impactful way to educate customers on EVs by either combining strategies or by selecting the single most effective way to reach its customers. LUMA expects to identify a precise timeline for launching this initiative as the EV Program evolves and information regarding customer needs is becomes available.

1.6. Number of face-to-face meetings up to the reporting period.

During the reporting period, LUMA participated in five (5) distinct events where face-to-face meetings occurred with key stakeholders and industry representatives.

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Table 2: Face to Face meetings¹

Sponsoring Entity	Event	Event description	Month
Puerto Rico Public Energy Policy Office (PPPE)	Electrificación de la Transportación en Puerto Rico	Met with key government representatives and industry stakeholders to discuss the status of transportation electrification and future efforts to accelerate EVs adoption.	September 2023
Puerto Rico Highways & Transportation Authority (PRTHA)	National Electric Vehicle Infrastructure Program (NEVI)	LUMA provided preliminary planning support related to infrastructure location for the installation of future EV charging stations.	October 2023
Puerto Rico Association of Restaurants (ASORE)	ASORE Annual Convention	Engaged with convention participants and visitors at the LUMA booth to discuss LUMA's efforts with the EVAP and the interim EV TOU rate. Distributed educational material about EVs.	October 2023
Solar and Energy Storage Association (SESA)	SESA 2023 Summit	Engaged with visitors, participants, and stakeholders to discuss LUMA's efforts with the EVAP and the interim EV TOU rate. Distributed educational material about EVs.	November 2023

¹ This table was presented in the Semi-Annual Report submitted on February 29, 2024. See [*Slides 8 and 9 of the PR-EVAP's Semi-Annual Report, as referenced in Exhibit 1 attached to the Motion to Submit Semi-Annual Report in Compliance with Order of January 13, 2023 filed on February 29, 2024.*](#)

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Sponsoring Entity	Event	Event description	Month
Solutions for the Energy Transformation for Puerto Rico (SETPR)	Integrated Resource Planning meetings across the island	Engaged with visitors, participants, and stakeholders to discuss LUMA's efforts with the EVAP and the interim EV TOU rate. Distributed educational material about EVs and the interim EV TOU rate.	October & November 2023

1.7. Total spending on customer education in dollars (\$) and percent (%) of total budget

As part of the initial phases of implementation of the PR-EVAP, LUMA is currently developing the procedures to identify and report on customer education expenditures in the levels of granularity requested by the Energy Bureau. LUMA estimates it incurred \$26,475 in expenses during the reporting period. These are related to the attendance of different events, meetings, development of the educational material on the new EV webpage, development of the EV educational brochure, and distribution of the EV brochure to the attendees of the events and meetings. This represents 13.2% of the allocated budget (\$200,000) for EV Education and Outreach efforts.

Table 3: Total spending on customer education

FY2024 Budget*	Reporting Period Spend (\$)²	Reporting Period Spend (% of Budget)
\$200,000	\$26,475	13.2%

2. Action 2: Customer Engagement

LUMA is pleased to provide an overview of its activities during the reporting period, which encompasses various facets of its engagement efforts. This Semi-Annual report includes a summary of our progress during this period, along with a detailed list of stakeholder meetings, workshops, and events in which LUMA actively participated. These engagements not only involved interactions with stakeholders but also provided platforms to discuss pertinent subjects relevant to LUMA's customer base. Furthermore, the report includes the number of customer engagement events held, representing both underserved and non-underserved communities. Each event is accompanied by a description of the topics covered, the date of the event, and the estimated attendance figures.

² This is an estimation of the customer outreach costs, as the process to collect more accurate data is still ongoing. LUMA is currently gathering comprehensive data to provide a more precise assessment. Once this data collection is complete, LUMA will update the cost analysis to reflect the most accurate figures.

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2.1. Summary and overview of progress during the reporting period

LUMA has implemented several customer outreach and education initiatives to promote EV adoption in Puerto Rico. These initiatives include:

- **Educational Material Distribution:** LUMA has developed informative brochures, pamphlets, and online resources about EVs. These materials cover topics such as the benefits of EVs, charging infrastructure, available incentives, and frequently asked questions. The next step is to continue distributing these materials through various channels, including community centers, events, and online platforms.
- **Community Engagement:** LUMA has actively engaged with community leaders and organizations to understand the specific needs and concerns of different communities, including low-income groups. This engagement helps in tailoring outreach efforts to address the unique challenges faced by these communities.
- **Collaborative Partnerships:** LUMA has collaborated with local government agencies, non-profit organizations, and industry stakeholders to leverage their expertise and resources in promoting EV adoption. These partnerships help to expand the reach of educational initiatives and create a unified approach towards EV education. The next step is to strengthen these partnerships and explore new collaborations to enhance the impact of outreach efforts.
- **Events and Conferences:** LUMA has participated in various events and conferences related to clean energy and sustainable transportation. These platforms provide opportunities to showcase EVs, share success stories, and engage with a wider audience. The next step is to utilize the survey data to refine and enhance LUMA's customer engagement strategies, ensuring they effectively address the identified needs and concerns.
- **Surveys and Feedback:** LUMA has conducted surveys to gather insights into customers' knowledge, awareness, challenges, and opinions regarding EVs and transportation. These surveys help understand the specific barriers and concerns that customers may have, allowing LUMA to tailor its education initiatives accordingly.

2.2. List of stakeholder meetings, workshops, and events in which LUMA participated (Should also include a description of the subjects covered at each customer event, the date of the event, the number of customers in attendance)

Table 4 below includes the information regarding stakeholder meetings. For those stakeholder events included in this report which were not hosted by LUMA, the exact number of customers in attendance is not available. However, LUMA is providing estimates of attendance based on observations from LUMA representatives in attendance.

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Table 4 also includes information on the topics discussed during such stakeholder meetings, including topics beyond or unrelated to EVs and EV infrastructure.³

Table 4: LUMA's participation in Stakeholder events

Customer Engagements	Underserved Communities Represented	Event (s) Date(s)	Estimated Attendance ⁴	Subjects covered at each event
Event 1: "Mesa Redonda- Electrificación de la Transportación en Puerto Rico" (Sponsor- Puerto Rico Energy Public Policy Office)	X	Sept 7, 2023	45	<i>Status of Transportation Electrification</i> <i>What is missing to enable greater EV Adoption?</i> <i>Barriers for the Adoption of EV's</i> <i>EV Time of Use Rate</i> <i>Proposed Initiatives Education & Outreach</i> <i>EV Infrastructure & System Improvement Initiative</i>
Event 2: Solar and Energy Storage Association (SESA) 2023 Summit	X	Nov 6-7, 2023	600	<i>Solar energy storage mitigating daytime blackouts</i> <i>Federal funding opportunities from DOE, EPA, USDA, HUD and others</i> <i>Growing the Biggest Virtual Power Plant in Latin America</i> <i>Retiring Coal by 2028</i> <i>LUMA's support of renewables</i>

³ In the Semi-Annual-Report, LUMA limited itself to report EV-related subjects and/or EV-related activities that took place in these events. See Slides 8 and 9 of the PR-EVAP's *Semi-Annual Report*, as referenced in Exhibit 1 attached to the *Motion to Submit Semi-Annual Report in Compliance with Order of January 13, 2023*, filed on February 29, 2024.

⁴ The estimated attendance numbers provided are based on observational estimates from LUMA representatives who were present. While LUMA did not host these events nor directly request attendance figures from the event hosts, these estimates are intended to offer a reasonable approximation of participant numbers for reporting purposes.

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Customer Engagements	Underserved Communities Represented	Event (s) Date(s)	Estimated Attendance ⁴	Subjects covered at each event
Events 3: Solutions for the Energy Transformation for Puerto Rico (SETPR) Meetings	X	October and November 8, 2023	250*	<i>Increase Net Metering Rate</i> <i>Integrated Microgrids</i> <i>Promoting Energy Cooperatives</i> <i>Diversify Generation Resources</i> <i>Maximizing Hydroelectric Resources</i> <i>Smart Grid Technologies</i> <i>Energy Storage Importance</i> <i>Infrastructure for Electric Vehicles*</i> <i>Resilient Electrical System</i> <i>Improving Interconnection Processes</i>
Event 4: Association of Restaurants of Puerto Rico (ASORE) 2023 Annual Convention	X	Oct 20-21, 2023	400*	<i>Energy Efficiency</i> <i>SETPR Events</i> <i>Electric Vehicle Implementation</i>
Interviews with Low-Income Community Leaders	X	Dec 11-15, 2023	6*	<i>Need for education</i> <i>Government incentives</i> <i>Improved infrastructure to support the transition to electric transportation.</i>
J.D. Power Survey	X	Dec. 2022 – Sep 2023	6,142*	<i>Identifying low-income customers perspective and demographics</i>

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Customer Engagements	Underserved Communities Represented	Event (s) Date(s)	Estimated Attendance ⁴	Subjects covered at each event
				<i>Understanding adoption barriers and market characteristics in Puerto Rico.</i>
LUMA EV webpage online survey publication	X	N/A	8*	<i>Identifying low-income customers perspective and demographics</i>

* The attendance provided for events hosted by LUMA is not estimated.

Figure 1: LUMA's participation in Stakeholders events



As the EV Program continues to evolve, LUMA plans to continue hosting tailored events designed to enable meaningful interactions with its customers, providing them with valuable insights, fostering collaborative partnerships, and addressing their specific needs and challenges.

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2.3. Number of customer engagement events held representing underserved communities⁵

For engagement with underserved communities, LUMA met directly with community leaders who represent such communities and conducted interviews. Such interviews were conducted to gather feedback and obtain a better understanding of low-income customers' needs and desires regarding transportation electrification. A total of six (6) interviews were conducted, and the survey results were compiled and included in the Semi-Annual Report. On January 2, 2024, LUMA submitted a summary of comments from these interviews as part of the Customer Outreach Memorandum submission.⁶

A total of three (3) interviews were held using Teams on the following dates: December 11, 12, and 15, 2023. The other three (3) community leaders answered the interview questions via Microsoft Forms on the following dates: December 12, 13, and 15, 2023.

2.4. Number of customer events held for non-underserved communities

LUMA participated in four (4) events where non-underserved community members participated (See Table 2-4 above). LUMA displayed a booth and engaged with attendees to educate and answer questions about the benefits of transportation electrification and the upcoming EV TOU Pilot program. An EV brochure was provided to visitors or could be downloaded directly from the LUMA EV webpage by the attendees. Customers were engaged with the information shared by LUMA representatives, and most attendees shared their e-mails to receive additional information.

2.5. Total spending on customer engagement in dollars (\$) and percent (%) of total PR-EVAP Plan budget

Table 5: Customer engagement spending

FY2024 Budget*	Reporting Period Spend (\$) ⁷	Reporting Period Spend (% of Budget)
\$200,000	\$26,475	13.2%

⁵ See Slides 21 and 22 of the PR-EVAP's Semi-Annual Report, as referenced in Exhibit 1 attached to the [Motion to Submit Semi-Annual Report in Compliance with Order of January 13, 2023](#), filed on February 29, 2024.

⁶ See [Motion To Submit Report On Customer Outreach Memorandum In Compliance With Resolutions And Orders Of January 13, 2023, As Modified By Resolutions And Orders Of March 29, 2023, June 6, 2023, And August 11, 2023](#).

⁷ This is an estimation of the customer engagement costs, as the process to collect more accurate data is still ongoing. Once this process is complete, LUMA will update the cost analysis to reflect the most accurate figures. Additionally, in this reporting period, LUMA utilized the same materials for customer engagement initiatives as those used for customer education, as no events were hosted. Consequently, Customer Education Spending aligns with Customer Engagement Spending.

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3. Action 3: Planning for Grid Infrastructure and System Improvement

3.1. Summary and overview of progress during the reporting period

As contemplated in the PR-EVAP, section **3.10 EV Infrastructure & System Improvement Initiatives in the US**, LUMA stated that it analyzed more than 40 EV Infrastructure & System Improvement initiatives from 24 different utilities to determine the essential actions to support key stakeholders on charging infrastructure deployment. From the initiatives reviewed, 13 of those provided EV Hosting Capacity Maps to customers requiring an accurate system model to perform the analysis of available feeder capacity. As informed in the PR-EVAP, performing emerging studies, like EV hosting capacity, would be premature as the system reconstruction is currently being planned and engineered. However, LUMA has published maps that communicate hosting capacity for distributed energy resources. LUMA will continue to be transparent and communicate with the Energy Bureau and its customers the different initiatives that form part of its infrastructure and system improvement initiatives through forthcoming Semi-Annual Reports.

3.2. Number of monthly, unique visits to the EV Hosting Capacity Map

EV Hosting Capacity Map is not part of LUMA’s EV Infrastructure & System Improvement Initiatives.

3.3. Total spending on EV Hosting Capacity Map in dollars (\$) and percent (%) of total PR-EVAP budget

EV Hosting Capacity Map is not part of LUMA’s EV Infrastructure & System Improvement Initiatives. Hence, no spending associated to this initiative was incurred.

Table 6: EV Hosting Capacity Map spending

FY2024 Budget*	Reporting Period Spend (\$)	Reporting Period Spend (% of Budget)
\$250,000	\$0	0%

3.4. List of stakeholders LUMA partnered with and the outcome of that partnership

As previously reported, LUMA has partnered with key stakeholders to discuss different initiatives regarding Grid Infrastructure and System Improvements. Some key partnerships that took place during the reporting period are the partnership with the Department of Economic Development and Commerce, PRHTA and partnership letter regarding the Clean School Bus Program. Additional details regarding partnerships that have accelerated the transition to clean

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transportation are further detailed in section 4. Support for EV charging Infrastructure of this report.

3.5. All updates to LUMA's detailed EV load projections

EV load projections will be contemplated as part the EV Market study to be commissioned by the Department of Economic Development and Commerce.

3.6. Progress towards the development and publishing of the EV Hosting Capacity Map and estimated date of completion

EV Hosting Capacity Map is not part of LUMA's EV Infrastructure & System Improvement Initiatives.

3.7. List of local transportation partners and third-party data providers with whom LUMA coordinated

Please refer to section 9 for more information about local transportation partners and third-party data providers.

4. Action 4: Support for EV Charging Infrastructure

4.1. Summary and overview of progress during the reporting period

Below is an overview of stakeholder engagement in Planning and System Improvement, which has been a crucial aspect of LUMA's initiatives, particularly concerning the development and integration of EV infrastructure in Puerto Rico.

- Puerto Rico Highway and Transportation Authority (PRTHA) - LUMA provided preliminary planning support related to infrastructure location for the installation of future EV Charging stations sponsored by the National Electric Vehicle Infrastructure program (NEVI) in Puerto Rico. The U.S. Department of Transportation's (DOT) Federal Highway Administration (FHWA) NEVI Formula Program provides funding to states to strategically deploy EV charging stations and to establish an interconnected network to facilitate data collection, access, and reliability.
- *Grupo Unido de Importadores de Automóviles (GUIA)* - Meetings to discuss LUMA's support role within the EV market.
- *Department of Economic Development & Commerce (DEDC)* - Meetings to discuss and develop the scope of an EV market study commissioned by the Puerto Rico Energy Policy Office.
- *Sonnell Transportation* - 2023 Clean School Bus Rebates Program Electric Utility Partnership letter signed by LUMA to affirm the discussion of the future project plans for the fleet and

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charging infrastructure at Sonnell's Facilities. EPA's Clean School Bus (CSB) Program provides \$5 billion over five (5) years (FY 2022-2026) to replace existing school buses with zero-emission and low-emission models. LUMA's support to Sonnell Transportation facilitates grant request and federal funding access to install Sonnell's EV Infrastructure.

- Puerto Rico Department of Transportation and Public Works (DTOP) - LUMA obtained an updated inventory list of EVs in Puerto Rico, which will provide useful data on LUMA's infrastructure planning efforts.

Grid Infrastructure Planning & System Improvement scenarios are being developed within the IRP proceeding.

4.2. The number and percentage of customers, by customer class for whom EVSE installation guidebooks were distributed

Information on the number and percentage of customers, as well as customer class, for whom guidebooks were distributed, was not available during the reporting period because the guidebook had not yet been developed. LUMA is currently determining the appropriate timing for distribution of guidebooks based on its assessment of customer needs and readiness and the extent to which doing so best serves the objectives of the EV Program.

4.3. The number and percentage of customers, by customer class for whom EV Readiness Checklists were distributed

The number and percentage of customers, categorized by customer class, for whom EV Readiness Checklists were not provided and is currently unavailable because such material has not yet been developed. LUMA is currently determining the appropriate timing for distribution of EV Readiness Checklists based on its assessment of customer needs and readiness and the extent to which doing so best serves the objectives of the EV Program. As outlined in the PR-EVAP, the process for installing EV charging stations can vary across U.S. jurisdictions depending on existing laws, regional requirements, and customer needs. LUMA continues to explore means to gain visibility into EV charging stations to further inform the development of guidance materials for customers regarding EV Infrastructure.

4.4. The number and percentage of customers, by customer class that received the Interconnection Guidelines and/or Project Connection Manual

The number and percentage of customers categorized by customer class who received the Interconnection Guidelines and/or Project Connection Manual were not available for reporting because instructional materials have not yet been created or distributed. LUMA is currently determining the appropriate timing for distribution of these materials based on its assessment of customer needs and readiness and the extent to which doing so best serves the objectives of the EV Program.

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4.5. Total spending on guidebooks, checklists, guidelines and/or manuals in dollars (\$) and percentage (%) of total PR-EVAP Plan budget

Total spending on guidebooks, checklists, guidelines and/or manuals in dollars (\$) and percentage (%) of total PR-EVAP Plan budget was not available as no costs have been incurred.

LUMA is committed to the development and implementation of different forms of documentation and communication that can effectively support customers through their journey toward the electrification of transportation. Among other methods, LUMA will use publicly available EVSE installation guidebooks and EV Readiness Checklists as starting points. LUMA will then revise and/or add necessary information and steps tailored to fit the needs of customers and the infrastructure in Puerto Rico's electric grid.

The path to completion of all different indicators and initiatives is not linear. LUMA and stakeholders may gain information throughout the many stages of the planning process and revisit earlier actions and initiatives previously implemented or projected. As EV technology and awareness evolve, so does the process for EV infrastructure planning and implementation. LUMA is committed to addressing the needs in the EV ecosystem and expected future needs and ensuring that planning is done carefully and coordinated.

Table 7: Expenditures on Guidebooks, Checklists, Guidelines and/or Manuals

FY2024 Budget*	Reporting Period Spend (\$)	Reporting Period Spend (% of Budget)
\$250,000	\$0	0%

5.Action 5: Workforce Development

5.1. Summary and overview of progress during reporting period

LUMA is committed to developing and educating its workforce to meet the demands of the expanding EV industry. Understanding the importance of a comprehensive workforce development, LUMA aims to establish a solid foundation that will nurture a flourishing EV market in Puerto Rico.

As part of LUMA's ongoing efforts to train its workforce on EVs, two (2) LUMA employees have completed several comprehensive EV training courses sponsored by the Federal Energy Management Program (FEMP). LUMA will leverage this knowledge to develop a general training session for the rest of the workforce.

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5.2. A description of each training session offered to employees, including related instructional materials

- **Electric Vehicle (EV) Champion Training Series hosted by the National Renewable Energy Lab (NREL).** A four-part training focusing on EV technology, financial considerations, EVSE power and installation, EV site assessments, and EV advanced site operations.
 - **Training 1:** Focuses on the importance of EV technology and financial considerations for agencies considering fleet electrification. It serves as an introduction to EV technology and considerations for electric vehicle supply equipment (EVSE) installation.
 - **Training 2:** Focuses on the importance of EVSE power requirements and electric utility infrastructure. It serves as an introduction to selecting the best EVs for a fleet and the planning and installing the necessary EVSE.
 - **Training 3:** Focuses on the importance of EV technology and EVSE and serves as an introduction to site planning and design of the necessary EVSE.
 - **Training 4:** Focuses on considerations for EV site assessments, optimally operating a fleet of EVs, and managing workplace charging.

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5.3. Number and percent of employees trained⁸

During the reporting period, LUMA’s trained workforce consisted of two (2) individuals who underwent specialized training initiatives aimed at strengthening their capabilities in serving EV customers, representing an approximate of 0.23% of the trained workforce⁹. These individuals represent the vanguard of a broader initiative to cultivate expertise within the organization. Moving forward, their role extends beyond direct customer interaction; they will serve as the cornerstone for expanding the workforce through knowledge dissemination and mentorship. Empowered with the insights gained from their training, they will take on the responsibility of training others, thus catalyzing the growth of a skilled workforce dedicated to addressing the evolving needs of EV customers.

5.4. Total spending on training in dollars (\$) and percent (%) of total PR-EVAP Plan budget

Table 8: Total spending on training

FY2024 Budget	Reporting Period Spend (\$) ¹⁰	Reporting Period Spend (% of Budget)
\$200,000 ¹¹	\$1,400.00	.07%

Training for customer service representatives and leaders was provided in preparation for the launch of the new Time-of-Use (TOU) Rate for EVs. The training covered the details of the EV TOU tariff, customer eligibility, roles, and responsibilities of LUMA and EV platform vendor, and the planned procedures for addressing customer questions and concerns.

6. Action 6: EV Rates and Charging

LUMA is aware of the significance of including information on EV rates and charging in its Semi-Annual report. However, the EV time-of-use (EV-TOU) rate was introduced on April 30, 2024, outside of the reporting period.

Moving forward, LUMA will include updates on the EV-TOU in the corresponding Semi-Annual Report.

⁸ See Slide 13 of the PR-EVAP’s *Semi-Annual Report*, as referenced in Exhibit 1 attached to the *Motion to Submit Semi-Annual Report in Compliance with Order of January 13, 2023*, filed on February 29, 2024.

⁹ The approximate number of employees designed for Customer Experience and Service totals 860.

¹⁰ This is an estimation of the workforce development costs, as the process to collect more accurate data is still ongoing. Once this process is complete, LUMA will update the cost analysis to reflect the most accurate figures

¹¹ The budget allocated for Workforce Development derives from the Education Outreach budget delineated in the PR-EVAP. See *PR-EVAP, Section 8.0, p.89*.

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Figure 2: May Billing Integration Report

EV Billing Integration Status Update

G On target Y Caution R Off plan C Complete

Key Activity Summary		Key Milestones		Date	Status																																								
<ul style="list-style-type: none"> The Final end-to-end billing Integration User Acceptance Test (UAT) was successfully executed. All Customer Outreach and Enrollment Implementation tasks have been completed: <ul style="list-style-type: none"> EV Program website has been updated and information harmonized across various portals. Vehicle and Charging Eligibility Infographics have been finalized. Customer Support Training has been successfully conducted. A reviewed tariff sheet was sent to clients via email before integration of the interim rate. This was to inform interested customers that were reached out through the LUMA EV email. Website was re-launched with educational material to inform customers how to enroll and provide guidance through the enrollment journey. Media Interviews were conducted to educate about the benefits of the EV-Time use rate. Enrollment validation process was successfully tested and implemented. 		<table border="1"> <thead> <tr> <th colspan="2">Key Milestones</th> <th>Date</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td colspan="2">Enrollment Test (Soft Launch)</td> <td>March</td> <td>C</td> </tr> <tr> <td colspan="2">Validated Manual Enrollment Process</td> <td>March</td> <td>C</td> </tr> <tr> <td colspan="2">Secured File Transfer Procedure</td> <td>March</td> <td>C</td> </tr> <tr> <td colspan="2">Printed Customer Invoice Design</td> <td>March</td> <td>C</td> </tr> <tr> <td colspan="2">Finance Integration to CC&B</td> <td>March</td> <td>C</td> </tr> <tr> <td colspan="2">Build and Test Oracle CC&B Process for EV TOU Data</td> <td>March - April</td> <td>C</td> </tr> <tr> <td colspan="2">Enrollment Website Launch and Email Campaign Completed</td> <td>April</td> <td>C</td> </tr> <tr> <td colspan="2">Deploy Production-Ready Processes and Systems</td> <td>April</td> <td>C</td> </tr> <tr> <td colspan="2">EV- Time of Use rate launched and implemented</td> <td>April 30th</td> <td>C</td> </tr> </tbody> </table>		Key Milestones		Date	Status	Enrollment Test (Soft Launch)		March	C	Validated Manual Enrollment Process		March	C	Secured File Transfer Procedure		March	C	Printed Customer Invoice Design		March	C	Finance Integration to CC&B		March	C	Build and Test Oracle CC&B Process for EV TOU Data		March - April	C	Enrollment Website Launch and Email Campaign Completed		April	C	Deploy Production-Ready Processes and Systems		April	C	EV- Time of Use rate launched and implemented		April 30 th	C		
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Deploy Production-Ready Processes and Systems		April	C																																										
EV- Time of Use rate launched and implemented		April 30 th	C																																										
Monitoring Implementation																																													
<ul style="list-style-type: none"> LUMA is committed to the successful implementation and continues monitoring and verifying the production of the rate. LUMA will continue to support the implementation with education efforts. 																																													

6.1. Summary and overview of progress during reporting period

The information regarding this indicator will be provided in the corresponding Semi-Annual Report.

6.2. The number and percentage of residential customers participating in the Interim EV TOU Rate

The information regarding this indicator will be provided in the corresponding Semi-Annual Report.

6.3. The number of EV charging meters installed.

The information regarding this indicator will be provided in the corresponding Semi-Annual Report.

6.4. 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

The information regarding this indicator will be provided in the corresponding Semi-Annual Report.

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6.5. Average frequency of charging

The information regarding this indicator will be provided in the corresponding Semi-Annual Report.

6.6. Average length of charging

The information regarding this indicator will be provided in the corresponding Semi-Annual Report.

6.7. Timing (by hour) of charging

The information regarding this indicator will be provided in the corresponding Semi-Annual Report.

6.8. Average and maximum kWh delivered per charging session

The information regarding this indicator will be provided in the corresponding Semi-Annual Report.

7. PR-EVAP Budget and Expenditure Tables

Table 9: PR-EVAP Plan Budgets and Expenditures by Initiative¹²

Initiative	FY2024 Budget	Reporting Period Spend (\$)	Reporting Period Spend (% of Budget)	Total FY Spend (\$)	Total PR-EVAP Spend (\$)
Education and Outreach	\$200,000	\$26,475	13.2%	\$26,475	\$26,475
EV Infrastructure & System Improvement	\$250,000 ¹³	\$0.00	0%	\$0.00	\$0.00
EV Rates & Load Management	\$180,000	\$172,772	96%	\$172,772	\$172,772
Total	\$630,000	\$199,247	31%	\$199,247	\$199,247

¹² These are estimates, as the process to collect more accurate data is still ongoing. Once this process is complete, LUMA will update the cost analysis to reflect the most accurate figures.

¹³ The allocated funds remained unutilized due to the delayed initiation of fleet electrification. However, in line with the strategic roadmap, LUMA is designating FY2024 Q4 for fostering collaboration between LUMA Key accounts and recipients of DOE funding grants dedicated, among others, to fleet electrification. This initiative will facilitate partnerships and provide technical assistance for system enhancements and seamless grid integration.

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Table 10: PR-EVAP Plan Budgets and Expenditures by Spending Category

Initiative	FY2024 Budget	Reporting Period Spend (\$)	Reporting Period Spend (% of Budget)		Total FY Spend (\$)	Total PR-EVAP Spend (\$)
Internal Resources	\$385,000	\$109,247	28%		\$109,247	\$109,247
Third-Party Contractor	\$245,000	\$90,000	37%		\$90,000	\$90,000
Total	\$630,000	\$199,247	32%		\$199,247	\$199,247

8. Appendices

8.1. Appendix A: Customer Education Materials

In this section, LUMA includes a copy of EV customer education resources and program materials in the form of EV webpage links and screenshots. The EV webpage offers easily accessible and comprehensive educational content curated for its customers.

EV Brochure – [Link to EV-Brochure](#)

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Figure 3: EV Brochure (Page 1)

El Rol de LUMA

Es importante señalar que el rol de LUMA no es comprar, poseer u operar infraestructura de carga a corto plazo, esta responsabilidad recae en los proveedores de servicios especializados en la instalación y operación de Equipos de Suministros de Energía para Vehículos Eléctricos, así como en las agencias gubernamentales de Puerto Rico que tienen acceso a fondos para su implementación.

El rol de LUMA consiste en respaldar y facilitar a los actores del mercado en proyectos continuos de implementación de infraestructura, al tiempo que trabaja para mejorar la resiliencia y confiabilidad de la red eléctrica y reparar la infraestructura crítica necesaria para respaldar el crecimiento de la adopción de Vehículos Eléctricos.

Además, LUMA tiene como objetivo colaborar de manera conjunta con las partes interesadas y entidades locales para facilitar la interconexión de la infraestructura de Vehículos Eléctricos mediante la simplificación de procesos y actuando como un asesor de confianza para ayudar a Puerto Rico a alcanzar su objetivo de: una energía más confiable, mas resiliente y más limpia.

Para obtener más información sobre nuestro progreso en energía limpia, visite www.progresodelumapr.com



Escanea este código con tu móvil para participar en encuesta sobre los Vehículos Eléctricos.



Información de Contacto

Email: ev@lumapr.com
www.lumapr.com



VEHÍCULOS ELÉCTRICOS

Impulsando la aceleración de energía limpia en Puerto Rico.



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Figure 4: EV Brochure (Page 2)

¿Qué es un Vehículo Eléctrico?

Los vehículos eléctricos, a menudo conocidos como EV por sus siglas en inglés, son automóviles que funcionan con electricidad en lugar de gasolina o diésel. Utilizan motores eléctricos impulsados por energía almacenada en baterías recargables. Estas baterías se cargan enchufando el vehículo a una toma de corriente o a una estación de carga. Hay dos tipos principales de vehículos eléctricos:

Vehículo Eléctrico de Batería (BEV): Funcionan únicamente con energía eléctrica almacenada en la batería. No tienen motor de combustión interna y no producen emisiones.

Vehículo Eléctrico Híbrido Enchufable (PHEV): Funcionan con una combinación de batería y un motor de gasolina que normalmente se utiliza como respaldo.

Tipos de Cargadores

Los cargadores de vehículos eléctricos vienen en tres tipos de niveles: Nivel 1, Nivel 2 y Carga Rápida de Corriente Directa (DC). Los cargadores Nivel 1 y Nivel 2 son más comunes en los hogares, lugares públicos como centros comerciales y lugares de trabajo. Por otro lado, los cargadores de carga rápida usualmente están localizados a lo largo de carreteras y autopistas y son más adecuados para viajes largos.

	Nivel 1	Nivel 2	Carga Rápida de Corriente Directa (DC)
Voltaje	120 V AC	208 – 240 V AC	208 – 480 V AC
Rango Estimado por Cada Hora de Carga	2 – 5 millas	10 – 20 millas	180 – 240 millas
Tiempo Estimado de carga desde cero	40 – 50 horas	4 – 10 horas	20 minutos – 1 hora
Localización	Hogar	Hogar, Lugares Públicos y de Trabajo	Lugares Públicos

Fuente: <https://www.transportation.gov/bureau/ev/ev/ev-basics/charging-speeds>

Si bien LUMA no construye, opera ni mantiene estaciones de carga para vehículos eléctricos, continuaremos mejorando la red eléctrica para Apoyar la expansión de las redes de carga en toda la Isla.

Beneficios de los Vehículos Eléctricos

Ahorre Dinero: Los vehículos eléctricos son más eficientes energéticamente hablando y tienen un costo de operar más bajo que los vehículos tradicionales. Los costos de mantenimiento de los vehículos eléctricos son menores debido a que no requieren cambios de aceites, bujías, filtros de aires y otras piezas de reemplazo que necesitarían cambio en un vehículo de motor de gasolina.

No Más Gasolineras: Con los vehículos eléctricos no hay gasolina que quemar ni comprar. Cargue su automóvil en casa durante la noche o en el trabajo si su empleador ofrece estaciones de carga en el lugar de trabajo.

Rendimiento: Los motores eléctricos ofrecen un torque instantáneo, lo cual produce una mayor aceleración y desempeño.

Beneficios para el Medio Ambiente: Los vehículos eléctricos no producen emisiones, lo que reduce la contaminación del aire y las emisiones de gases de efecto invernadero los cuales contribuyen al cambio climático.

Funcionamiento Suave y Silencioso: Los vehículos eléctricos son más silenciosos y ofrecen una aceleración suave en comparación con los vehículos tradicionales, lo que contribuye a reducir la contaminación por ruido en las zonas urbanas.

Incentivos: Los clientes también podrán recibir incentivos por la compra de un vehículo eléctrico. Actualmente el Departamento de Hacienda otorga un reintegro de los arbitrios pagados sobre vehículos eléctricos o híbridos. Para conocer más, visita: <https://hacienda.pr.gov/publicaciones/determinacion-administrativa-num-11-08>

Tarifa por Tiempo de Uso (TOU)

LUMA está trabajando para ofrecer pronto una tarifa residencial conocida como Tiempo de Uso (TOU), donde los cargos de energía varían según la hora del día. Al utilizar esta tarifa especial, es posible que pueda ahorrar dinero pagando una tarifa más económica por cargar su vehículo.

Horas más económicas para cargar EV

9AM – 5PM

\$

Horas Pico

5PM – 11PM

\$\$\$

Horas de Pico parcial

11PM – 9AM

\$\$

Si usted posee un vehículo eléctrico y tiene interés en inscribirse una vez sea lanzada esta tarifa especial, no dude en contactarnos a: EV@lumapr.com, enviándonos su nombre y le contactaremos una vez el programa este disponible.

¿Dónde Encontrar Estaciones de Carga?

En Puerto Rico existen estaciones de carga alrededor de la Isla donde puede cargar su vehículo. Para localizar las estaciones puede utilizar la aplicación [PlugShare.com](https://plugshare.com). Esta es una herramienta en línea libre de costo que le ayudará a planificar su viaje y localizar estaciones de carga disponibles en Puerto Rico.

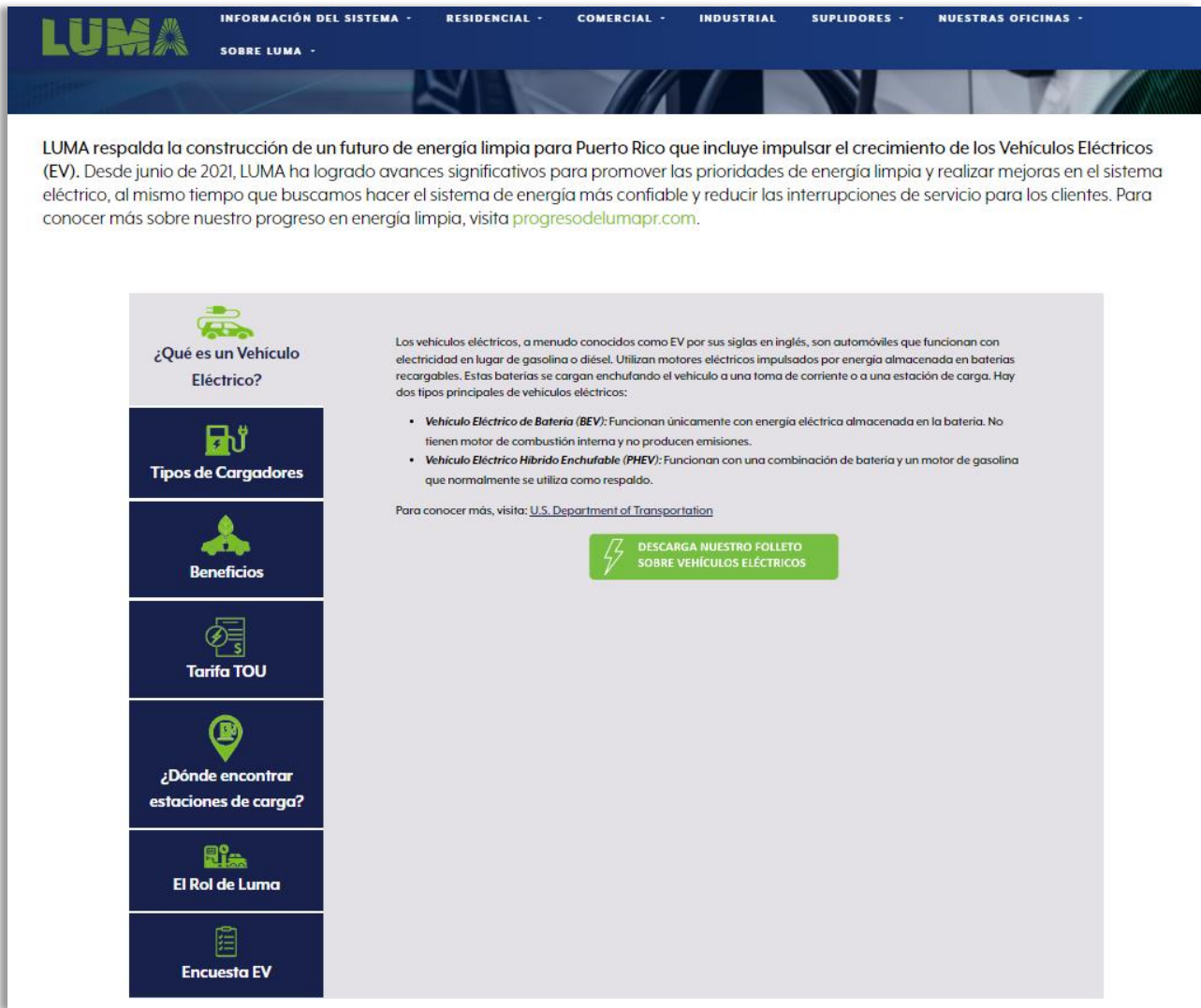




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EV Website - [Electric Vehicle - Luma Energy Website](#)

Figure 5: EV Website



8.2. Appendix B: Customer Engagement Materials

In this reporting period, LUMA utilized the same materials for customer engagement initiatives as those used for customer education, as no events were hosted. As LUMA continues to evolve and refine its program development, it will introduce new materials once assessments are completed.

8.3. Appendix C: Support for EV Charging Infrastructure: Guidebooks, Checklists, Guidelines/Manuals

In the PR-EVAP LUMA outlined plans to provide support for EV Charging Infrastructure through the development of guidebooks, checklists, and guidelines/manuals and potentially, a Project Connection Manual. This support package includes essential resources such as EVSE installation guidebooks and EV readiness checklists. However, as of the end of the period, these

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materials were still in the planning phase and have not been fully developed or distributed. LUMA is actively working towards finalizing these resources to facilitate the smooth integration of EV charging infrastructure in LUMA's operations, with the intention of implementation in the short-term.

8.4. Appendix D: Workforce Development Materials

EV-specific content for the customer contact center and the EV FAQs list was not available for the reporting period because LUMA planned to develop these closer to the Interim EV TOU Rate launch. However, as part of its workforce development, LUMA informed that employees had taken several Federal Energy Management Program (“FEMP”) comprehensive trainings. Evidence of the referenced training certificates are included below.

Figure 6: Workforce Development Certificates



9. Reached Milestones and Next Steps

In compliance with the directives of the Energy Bureau, LUMA has included the delineation of a strategy for increased engagement with the public transportation and fleet sectors, particularly those serving disadvantaged communities, within the forthcoming Puerto Rico's Electric Vehicle Adoption Plan (PR-EVAP) Semi-Annual Report. Additionally, LUMA has considered modifications to the PR-EVAP based on insights gained from its Customer Outreach Memorandum.

Moreover, as part of its role as a trusted advisor, LUMA has facilitated access to federal funds for electric transportation entities, aiming to support sustainable transportation initiatives across Puerto Rico. LUMA continues to support the PRHTA in its many efforts as leader in the

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establishment of the framework and construction of Electric Vehicles charging infrastructure along the major and most important highways and corridors of Puerto Rico. Key milestones reached and ongoing efforts will continue to be reported on each PR-EVAP Semi-Annual report.

LUMA also plans to enhance engagement with the public transportation and fleet sectors, particularly those located in or serving disadvantaged communities.

LUMA has signed a partnership letter regarding the Clean School Bus Program, to support Sonnell Transportation in seeking to incorporate electric buses and EV chargers in its facilities through a grant from the United States Environmental Protection Agency (EPA). The company will add twenty-five (25) electric buses to its fleet. Their services will help to support transportation electrification serving low-income communities. Electric buses operate more quietly, producing less noise pollution, and have zero (0) harmful tailpipe emissions, which will improve local air quality.



Figure 7: Electric School Bus

Based on the feedback received during the latest EV technical conference, LUMA will add the following initiatives to engage with the public transportation and fleet sector:

- Identify public transportation and school bus companies that provide services to low-income and disadvantaged communities.

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- Create a survey directly targeted to fleets and school bus companies or entities to obtain their feedback and have a better understanding of the barriers related to the electrification of their fleets.
- Engage in sessions with public transportation companies and entities to share educational information about the benefits of fleet electrification.
- Highlight the benefits of fleet electrification through a new section on the EV webpage.
- Advise on acquiring federal funding for the implementation of EV Charging Infrastructure.

9.1. Summary of Customer Outreach Efforts

LUMA undertook extensive customer outreach initiatives to gain insights into customers' understanding, challenges, and viewpoints concerning EVs and transportation electrification in Puerto Rico. This included interviews with community leaders from around twenty (20) low-income communities, a J.D. Power Survey with 6,502 participants, and an online survey on LUMA's EV webpage, open to all 1.5 million LUMA customers. These efforts enabled LUMA to gather valuable feedback and achieve a deeper comprehension of customer needs and preferences regarding transportation electrification. For further information on these outreach endeavors and their outcomes, please refer to the Appendix section.

In addition, LUMA collaborated with the GUIA group to raise awareness and educate about LUMA's involvement in the EV sector, leading to LUMA's participation in the GUIA EDUCA initiative. Continuing this partnership, LUMA will maintain regular meetings with GUIA to exchange market insights and utility information, fostering a smoother transition to EVs and bolstering grid infrastructure. Furthermore, LUMA plans to enhance its existing online EV survey by incorporating data on family composition. This modification aims to accurately place respondents within the appropriate income bracket, offering LUMA and stakeholder's clearer insights into market dynamics to inform utility decisions with greater customer impact. As part of its ongoing engagement, LUMA will take part in the upcoming GUIA EDUCA event on March 5th, 2024, engaging with GUIA members and other attendees to showcase LUMA's initiatives in supporting EV adoption in Puerto Rico.

9.2. Community Outreach: Low-income Communities

As part of its initiatives to engage with low-income customers and gain deeper insights into their requirements, LUMA initiated meetings with community leaders well-versed in the dynamics of low-income neighborhoods. To effectively collect feedback on transportation electrification for these communities, LUMA devised a customized questionnaire aimed at community leaders. Interviews were subsequently conducted with representatives from various regions, including San Juan, Corozal, Caguas, and Naguabo. These discussions were centered on key aspects such as perceptions of EVs, existing obstacles, and potential solutions to expedite the adoption of EVs within these communities.

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Figure 8: Low-Income Community Outreach Findings

Poor Awareness	• 5 out of 6 interviewees expressed poor awareness in their communities.
Limited Presence	• 2 interviewees reported seeing 1 to 3 EVs in their communities.
Mixed Support	• 1 interviewee noted general support, while others had not discussed it within their communities.
No Ongoing Initiatives	• Interviewees noted that they had no awareness of ongoing initiatives or programs promoting electric transportation in their communities.
Mass Education and Initiatives	• In general, interviewees consider that actions like mass education, lower EV costs, and incentives are effective.
Infrastructure Concerns	• Interviewees expressed concerns about the existing electrical system and the need for infrastructure improvements.
Support through Tariff Reduction	• Interviewees proposed LUMA's support for EV adoption through lower electricity tariffs.
Unified Call for Subsidies	• All interviewees agree on the need for subsidies or incentives, suggesting tax exemptions and financial support.

9.2.1. LUMA Online Survey

LUMA published an online survey on lumapr.com to gather insights into customers' knowledge, awareness, challenges, and opinions regarding EVs.

The key objectives of this survey include the following:

- Evaluate customers' familiarity with EVs.
- Analyze responses regarding income levels to specifically identify feedback from low-income respondents.
- Capture customers' concerns on buying an EV.
- Understand the key factors influencing the likelihood of EV purchases.
- Identify transportation preferences.

An update of the survey will be included in the next reporting period.

9.2.2. LUMA Online Survey Findings as of December 31, 2023

Respondent Profile:

- Seven (7) of the eight (8) respondents are knowledgeable about EVs.
- Six (6) of the respondents have an income over \$60,000.
- Five (5) of the respondents own an EV, and three (3) have an internal combustion engine (ICE) vehicle.
- The most common way respondents get from one place to another is by driving their own car.
- Most of the respondents never use public transportation.

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- Five (5) of the eight (8) respondents think that it is very important to switch to electric transportation.

Top Concerns in Purchasing an EV:

- Lack of public charging infrastructure.
- Concerns about the availability of EV maintenance and repair services.
- Cost of electricity rates.

Top Factors Influencing EV Adoption:

- Offers discounts on installing a charging station at their home.
- Offers for discounted electric rates for EV owners.
- Financial incentives or subsidies.






9.2.3. LUMA’s Voice of the Customer

LUMA plans to engage low-income customers by enhancing its website, allowing users to submit program needs and feedback online. As part of its next steps to implement these improvements, LUMA will leverage its Voice of the Customer (VOC) program to continuously refine the website and EV programs based on customer input and community outreach. The VOC program aims for customer excellence by collecting data through surveys, call recordings, and AI technologies to capture speech sentiment. This data is analyzed against target indicators to identify improvement opportunities and drive initiatives that enhance customer satisfaction, tailored to the unique needs of Puerto Rico.

9.2.4. J.D Power Survey Findings as of December 31, 2023

LUMA collaborated with J.D. Power for the execution of EV customer surveys, identifying low-income customers and aiming to understand adoption barriers and market characteristics in Puerto Rico. Please find in the following, the objectives of said survey:

Key Objectives

-  Measure customers EV ownership and assess where to charge.
-  Evaluate customer familiarity with EVs to determine educational needs.
-  Capture customers thoughts and concerns on buying and leasing EVs.
-  Understand the key factors influencing the likelihood of EV purchase.
-  Utilize survey findings to support the development of the PR-EVAP initiatives.

Customer Survey Timeline and Number of Respondents		
Time Frame	CY2022 (Q1 – Q4)	CY2023 (Q1 – Q3)
Total Number of Respondents	4,269	1,873

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Figure 9: J.D Power Survey Key Objectives

Interest in EVs

Interest in EVs	Low-income		Non-Low-Income		Total	
	%	n	%	n	%	n
I plan on getting an electric vehicle for my next vehicle	1.7	23	9.9	221	6.7	244
I would consider getting an electric vehicle as my next vehicle	8.0	110	22.1	493	16.7	603
I have interest in getting an electric vehicle in the future, but not for my next vehicle	11.4	158	20.4	457	17.0	615
I have no interest in getting an EV	38.2	528	25.9	579	30.6	1,107
Don't know/haven't considered it	40.7	562	21.7	485	29.0	1,047
Total	100.0	1,381	100.0	2,235	100.0	3,616

EV Ownership

EV Ownership Type	Low-income		Non-Low-Income		Total	
	%	n	%	n	%	n
Hybrid	4.4	64	6.5	155	5.7	219
Plug-in hybrid	0.2	3	2.3	56	1.5	59
100% Electric	1.0	14	2.9	70	2.2	84
None	94.4	1,364	88.3	2,119	90.6	3,483
Total	100.0	1,445	100.0	2,400	100.0	3,845

Familiarity with EVs

Familiarity with EVs	Low-income		Non-Low-Income		Total	
	%	n	%	n	%	n
I've heard of electric vehicles but don't know much about them	73.9	1,021	51.0	1,140	59.8	2,161
I have heard of electric vehicles and know quite a bit about them	18.8	260	33.9	758	28.2	1,018
I know a lot about electric vehicles	7.2	100	15.1	337	12.1	437
Total	100.0	1,381	100.0	2,235	100.0	3,616