

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

**NEPR**

**Received:**

**Feb 1, 2024**

**10:02 PM**

**IN RE: THE DEPLOYMENT OF  
ELECTRIC VEHICLE INFRASTRUCTURE**

**CASE NO. NEPR-MI-2021-0013**

**SUBJECT: Motion to Submit Presentation Offered  
During Hybrid Technical Conference of February 1, 2024  
Regarding LUMA's Customer Outreach Memorandum**

**MOTION TO SUBMIT PRESENTATION OFFERED DURING HYBRID TECHNICAL  
CONFERENCE OF FEBRUARY 1, 2024 REGARDING LUMA'S CUSTOMER  
OUTREACH MEMORANDUM**

**TO THE HONORABLE PUERTO RICO ENERGY BUREAU:**

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

1. On January 13, 2023, the Puerto Rico Energy Bureau of the Public Service Regulatory Board ("Energy Bureau") issued a Resolution and Order (the "January 13<sup>th</sup> Resolution and Order") making various findings and determinations regarding the Draft Phase I EV Plan filed by LUMA on September 1, 2022<sup>1</sup> and the Revised EV Rate Design Proposal filed by LUMA on July 21, 2022,<sup>2</sup> as well as issuing associated orders.<sup>3</sup>

2. In what is pertinent to this Motion, in the January 13<sup>th</sup> Resolution and Order, the Energy Bureau ordered LUMA to "[o]ver the next six months, review and propose improvements

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<sup>1</sup> See *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* filed by LUMA on September 1, 2022. On September 2, 2022, LUMA resubmitted the Draft Phase I EV Plan document with certain technical repairs and requested this Energy Bureau to accept this corrected version in substitution of the version submitted on September 1, 2022. See LUMA's *Motion Re-Submitting Exhibit 1 Filed on September 1, 2022 with Technical Repairs and Requesting Substitution of Original Exhibit* of that date. The term "Draft Phase I EV Plan" as used in this Motion refers to this corrected version.

<sup>2</sup> See LUMA's *Motion Submitting Revised EV Rate Design Proposal* filed by LUMA on July 21, 2022 and its Exhibit 1.

<sup>3</sup> On that same date, the Energy Bureau also issued a *Resolution Nunc Pro Tunc* correcting *motu proprio* a clerical error related to two deadlines set forth in the January 13<sup>th</sup> Resolution and Order.

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” (the latter, the “Customer Outreach Memorandum” (January 13<sup>th</sup> Resolution on pages 3 and 14)); and “[o]ver the next nine months, engage in outreach with low-income and disadvantaged communities to determine what they consider their transportation electrification priorities to be” (“Customer Outreach Implementation”) (*id.* at pages 4 and 14).

3. On March 29, 2023, the Energy Bureau issued a Resolution and Order (the “March 29<sup>th</sup> Resolution and Order”) in which it granted LUMA an extension until December 31, 2023, to submit the Customer Outreach Memorandum and until September 30, 2023 to begin Customer Outreach Implementation. *See id.*

4. On June 6, 2023, the Energy Bureau issued a Resolution and Order (“June 6<sup>th</sup> Resolution and Order”) in which it ordered LUMA to file, by July 13, 2023, the Customer Outreach Memorandum setting out the actions LUMA plans to adopt based on its review of its outreach and public access policies and proposed improvements thereof; prepare for a Virtual Technical Conference to be scheduled by the Energy Bureau within thirty (30) days of LUMA filing the Customer Outreach Memorandum to “discuss the feedback LUMA collects from its low-income customers and articulate the next steps LUMA will take to address barriers to low-income EV adoption”; and “[c]onsider targeting public transportation, school buses, and fleets as a means to provide low-income customers with access to the benefits created by transportation electrification”. *See* June 6<sup>th</sup> Resolution and Order on page 3.

5. On July 13, 2023, LUMA submitted a motion requesting clarification of various aspects of the June 6<sup>th</sup> Resolution and Order. *See* Motion to Request Clarification of Resolution and Order of June 6, 2023.

6. On August 11, 2023, the Energy Bureau issued a Resolution and Order (“August 11<sup>th</sup> Resolution and Order”) in which, among others, it clarified that the deadlines for the Customer Outreach Memorandum and the Customer Outreach Implementation were those set forth in the March 29<sup>th</sup> Resolution and Order. *See* August 11<sup>th</sup> Resolution and Order on page 3. The Energy Bureau then ordered LUMA to begin Customer Outreach Implementation by September 30, 2023, submit the Customer Outreach Memorandum by December 31, 2023, prepare for a Virtual Technical Conference within thirty (30) days of LUMA filing the Customer Outreach Memorandum and “[c]onsider targeting public transportation, school buses, and fleets as a means to provide low-income customers with access to the benefits created by transportation electrification as part of its engagement with low-income and disadvantaged communities and provide a discussion of its findings related to this topic in its December 31<sup>st</sup> Customer Outreach Memorandum”. *See id.* at page 5.

7. On January 2, 2023, LUMA filed the Customer Outreach Memorandum by means of a *Motion to Submit 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.*

8. On January 12, 2024, the Energy Bureau issued a Resolution and Order (“January 12<sup>th</sup> Resolution and Order”) taking notice of the Customer Outreach Memorandum filed by LUMA and scheduling a Hybrid Technical Conference “on the topic of LUMA’s Customer Outreach Memorandum, its efforts to collect information from low-income customers related to electric transportation, and the steps LUMA will take to address barriers to low-income EV adoption.” *See* January 12<sup>th</sup> Resolution and Order on page 3.

9. The Hybrid Technical Conference was held on February 1, 2024. LUMA representatives offered a presentation in PowerPoint format, regarding LUMA's Customer Outreach Memorandum, its efforts to collect information from low-income customers related to electric transportation, and the steps that LUMA will take to address barriers to low-income EV adoption.

10. LUMA hereby submits as *Exhibit 1*, the presentation that was discussed during the Hybrid Technical Conference.

**WHEREFORE**, LUMA respectfully requests the Energy Bureau to **take notice** of the aforementioned and **accept** *Exhibit 1* with the presentation that was discussed during the Hybrid Technical Conference.

**RESPECTFULLY SUBMITTED**

In San Juan, Puerto Rico, this 1<sup>st</sup> day of February, 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 the attorney for PREPA, Joannely Marrero-Cruz, jmarrero@diazvaz.law; lionel.santa@prepa.pr.gov; and to the Independent Office of Consumer Protection by submittal to Hannia Rivera, hrivera@jrsp.pr.gov. 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; carlosxcdeno@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;

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*Exhibit 1*

*Presentation on Customer Outreach Memorandum*



# LUMA's Electric Vehicle Customer Outreach Progress

NEPR-MI-2021-0013  
February 1, 2024



# Agenda

Introduction

LUMA's Progress

Objectives of Stakeholder Outreach

Overall Community Engagement

- ✓ Activities Attended
- ✓ Collaborative Efforts

Ongoing Collaborative Efforts

Sample Feedback for Interviews with Community Leaders

- ✓ Findings
- ✓ Concerns

Surveys

Recommendations to Address Low-income EV Adoption



# Introduction

As the operator of the island's transmission and distribution system, LUMA is responsible for the implementation of Puerto Rico's energy policy set forth by the Energy Bureau, and act as a trusted advisor and facilitator in enabling greater adoption of Electric Vehicles.

In alignment with its commitment and in compliance with the Energy Bureau's guidance, LUMA has actively engaged in community outreach, collaborated with government entities and industry stakeholders, and conducted surveys to understand customer needs and challenges in the context of transportation electrification.

While exciting work remains, the clean energy transformation of Puerto Rico is well underway and LUMA affirms its commitment to working collaboratively to build a more reliable, more resilient, more customer-focused, and cleaner energy system for its 1.5 million customers in every corner of Puerto Rico.



The nearly 4,500 men and women of LUMA are making infrastructure improvements every day to build the next-generation electric grid Puerto Rico deserves.

## ACCELERATED FEMA PROJECTS

**400**

Projects initiated representing

**\$11.1B**

in investments

**117**

Projects completed or in construction



## BETTER CUSTOMER SUPPORT

**\$129M+**

Supported in critical financial assistance to customers

**7.5M+**

Calls answered with a <1 minute average call wait time last year



## CLEARED VEGETATION

**3,900+**

Miles of transmission and distribution powerlines cleared of vegetation



## INCREASED RESILIENCY

**90,000+**

Streetlights replaced through the Community Streetlight Initiative



**16**

Substation reconstructions and upgrades started or completed



**10,400+**

Utility poles replaced



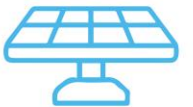
**3,500+**

Distribution automation devices installed

## EXPANDED RENEWABLES

**84,000+**

Customers connected to rooftop solar



**4,100**

New solar connections per month

# Objectives of Stakeholder Outreach

- Conduct outreach with low-income and disadvantaged communities to understand what they consider their transportation electrification needs.
- Determine what next steps are needed to support the growth of EV adoption across Puerto Rico and reasonably incorporate the needs to low-income communities in electric transportation.

# Overall Community Engagement

- “*Electrificación de la Transportación en Puerto Rico*” Event (Sponsored by the Puerto Rico Energy Public Policy Office)
- Solar and Energy Storage Association (SESA) 2023 Summit
- Solutions for the Energy Transformation for Puerto Rico (SETPR) Meetings
- Association of Restaurants of Puerto Rico (ASORE) 2023 Annual Convention
- Interviews with Low Income Community Leaders
- J.D. Power Survey
- LUMA EV webpage online survey publication
- LUMA Voice of Customer

# Activities Attended

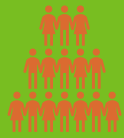
Activity	Objectives
“Electrificación de la Transportación en Puerto Rico” (Sponsored by PPPE)	<ul style="list-style-type: none"><li>• Met with key government representatives and industry stakeholders to discuss the status of transportation electrification and future efforts to accelerate electric vehicle adoption.</li></ul>
Solar and Energy Storage Association (SESA) 2023 Summit	<ul style="list-style-type: none"><li>• Distributed educational material about Electric Vehicles.</li><li>• Engaged with visitors, participants, and stakeholders to provide details on LUMA’s commitment to and progress on the EVAP and the EV TOU rate.</li></ul>
Solutions for the Energy Transformation for Puerto Rico (SETPR) Meetings (Ten meetings across the island)	<ul style="list-style-type: none"><li>• Distributed educational material about electric vehicles and the interim EV TOU rate.</li><li>• Engaged with visitors, participants, and stakeholders to discuss LUMA's efforts about the EVAP and the interim EV TOU rate.</li></ul>

# Activities Attended

Activity	Objectives
National Infrastructure Vehicle Infrastructure Program (NEVI)	<ul style="list-style-type: none"><li>• Provide technical support for the installation of a series of electric vehicle chargers using federal funding.</li></ul>
Association of Restaurants of Puerto Rico (ASORE) Annual Convention	<ul style="list-style-type: none"><li>• Distribute educational material about electric vehicles.</li><li>• Engage with convention participants and visitors at the LUMA booth to discuss EV initiatives such as the EV-TOU rate.</li></ul>

# Collaborative Efforts

## Outreach with Low-income Community Leaders



LUMA met with community leaders who are engaged directly with low-income communities. A questionnaire specifically tailored for community leaders was developed to gather their feedback and obtain a better understanding of low-income customer's needs and desires regarding transportation electrification.



Interviews were conducted with community leaders from:

San Juan	Caguas
Corozal	Naguabo



The interview focused on:

- Perception of electric vehicles
- Obstacles
- Possible solutions to accelerate the adoption of EVs

# Ongoing Collaborative Efforts



## Public Transportation

LUMA has signed a partnership letter related to the Clean (Electric) School Bus Program, to support the first transportation company in Puerto Rico seeking to incorporate electric buses and EV chargers in their facilities through a grant from the United States Environmental Protection Agency (EPA).

- The company intends to add 25 electric buses to its fleet
- Their services will help to support transportation electrification available for low-income communities

# Ongoing Collaborative Efforts

## EV Market Study with Puerto Rico's Department of Economic Development and Commerce DDEC

- Study will provide information related to the availability and affordability of EVs in the coming years.
- It will provide data on the electrical load generated by charging for each vehicle model and its performance.
- The gathered data will serve as input for accurate forecasts of energy consumption and costs.
- These forecasts are crucial for projects, like capital investments in the electric grid, to support the growth of EVs.

# Ongoing Collaborative Efforts

## DDEC Electric Vehicle (EV) Infrastructure Market Study Update

G In progress
 Y Pending action
 R Critical action required
 C Complete

Key Activity Summary
<ul style="list-style-type: none"> <li>GDS Associates, Inc was selected contracted to render professional services to support and collaborate with the Energy Public Policy Program (EPPP).</li> <li>Are the below items part of the design and timetable? If this is agreed-upon scope, then say so.</li> <li>The Electric Vehicle Market Study will explore Public Transportation - Mobility, and EV Adoption in Low-income Communities.</li> <li>The Study will evaluate Puerto Rico’s Public Transportation System and its ability to meet the transportation needs of low-income communities. Physical and cultural factors will be analyzed and convenience, reliability, accessibility, safety, comfort, and diversity of routes.</li> <li>The Study will also cover EV/Plug-in Hybrid Electric Vehicle (PHEV) adoption to meet the transportation needs of low-income communities.                         <ul style="list-style-type: none"> <li>- Assessment of interest in EV car-sharing program</li> <li>- Assessment of affordability of shared mobility options from community scale up to large scale, under a region-wide focus.</li> </ul> </li> <li>The Study will assess present and future tax impacts on EV/PHEV sales and evaluate existing policy recommendations that enhance the utilization of EV/PHEVs on a large scale for low and middle-income communities (e.g., expanded bus routes, addition of smaller vehicles to expand bus routes and stops, building codes and EV/PHEV chargers at multifamily units.</li> </ul>

Key Milestones	Date	Status
Finalizing Consulting firm contract.*	October 2023	C
Developing market study design and timetable.	December 2023	G
RFP published and vendor evaluation	January – February 2024	Y
Market study kickoff (phase 1)	March 2024	Y
Market study mid-term report (phase 2)	TBD	TBD
Market study close-out (phase 3)	TBD	TBD
Market study final report and results (including publication) – (phase 4)	TBD	TBD

Risks / Issues:
<ul style="list-style-type: none"> <li>Timeline delays due to vendor evaluation.</li> <li>GDS Associates, Inc. (consulting firm) will generate proposals, among other tasks.</li> </ul>



# Sample feedback from interviews with community leaders

- Anonymous quotation from one leader: **“Massive education, lower cost of the electrical vehicles and integration with the public transportation. A combination of municipal, state and federal incentives. This is how I see this can reach to the low-income communities”**
- During the interviews with community leaders, it was expressed that **their communities have competing priorities such as conventional public transportation accessibility, housing, food and health needs.**
- **Transportation electrification appears to be a very low priority** for some of these communities, at least for the moment. This low priority also includes the electrification of public transportation given the fact based on the response of one of the leaders interviewed where it was expressed that some of these communities do not have access to a reliable and adequate conventional transportation system to fulfill their daily transportation needs.

# Outreach with Low-Income Community Leaders Outreach Findings

## Poor Awareness

- 5 out of 6 interviewees expressed poor awareness in their communities.

## Limited Presence

- 2 interviewees reported seeing 1 to 3 electric vehicles in their communities.

## Mixed Support

- 1 interviewee noted general support, while others had not discussed it within their communities.

## No Ongoing Initiatives

- No ongoing initiatives or programs promoting electric transportation.

## Mass Education and Initiatives

- Actions like mass education, lower EV costs, and incentives are considered effective.

## Infrastructure Concerns

- Interviewees express concerns about the existing electrical system and the need for infrastructure improvements.

## Support through Tariff Reduction

- Interviewees proposed LUMA's support through lower electricity tariffs.

## Unified Call for Subsidies

- All interviewees agree on the need for subsidies or incentives, suggesting tax exemptions and financial support.

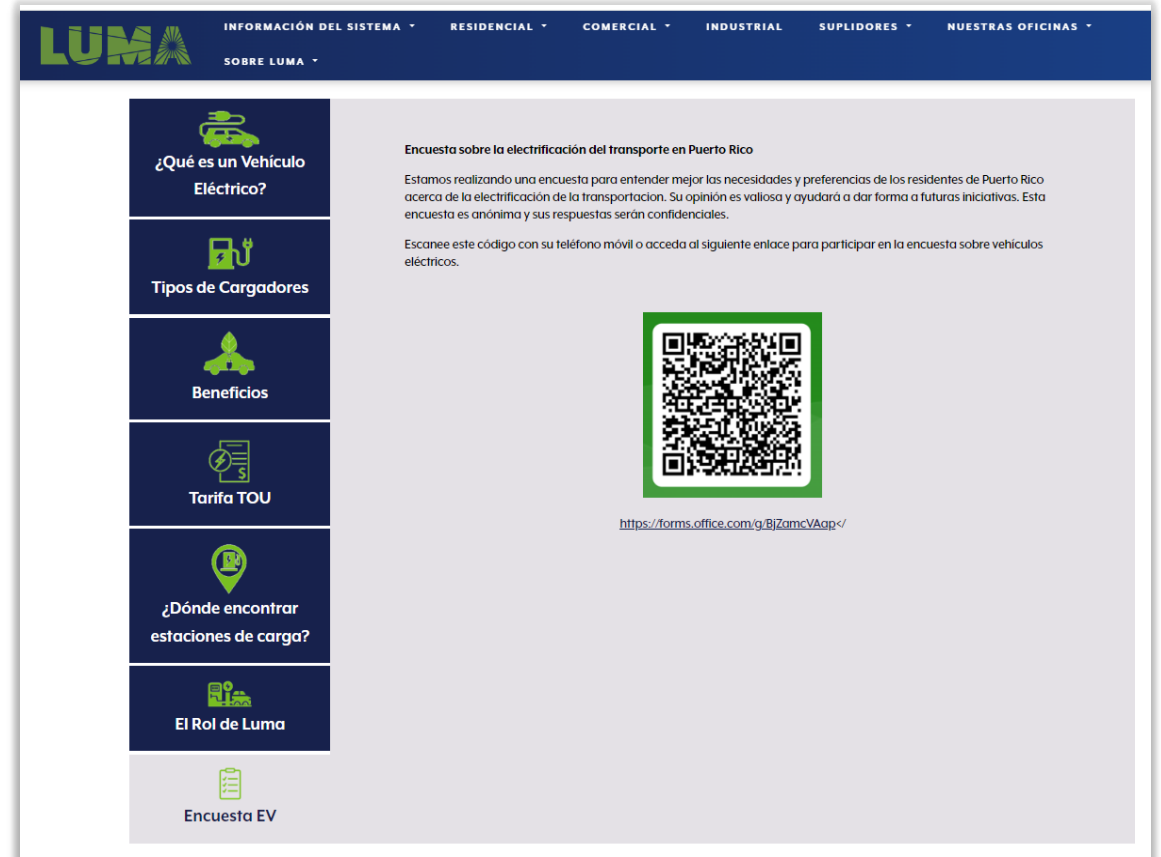


# Surveys

- **Online Surveys:** LUMA conducted an online survey, accessible at <https://lumapr.com/vehiculos-electricos/>, to collect feedback on EV awareness and challenges.
- **J.D. Power Survey Partnership:** 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.

# LUMA Online Survey

- LUMA published an online survey on [lumapr.com](https://lumapr.com) to gather insights into customers' knowledge, awareness, challenges and opinion regarding EVs. Customers can provide their insights anytime on LUMA's website.
- By analyzing responses related to income levels, LUMA can identify feedback from low-income respondents.
- A Quick Response (QR) Code has been incorporated into the Electric Vehicle Brochure and LUMA webpage – distributed to all community and professional groups engaged with to date.



# J.D. Power Survey

LUMA has partnered with J.D. Power and Associates (J.D. Power) to conduct EV customer surveys which include Low-income Customers to better understand EV adoption barriers and market characteristics in Puerto Rico

## 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.

# J.D. Power Survey

## Methodology

- Online survey, drawing from LUMA’s extensive customer database.
- Survey results collected in two periods.
- Rigorous data integrity controls ensure reliable and significant results.

**Customer Survey Timeline and Number of Respondents**

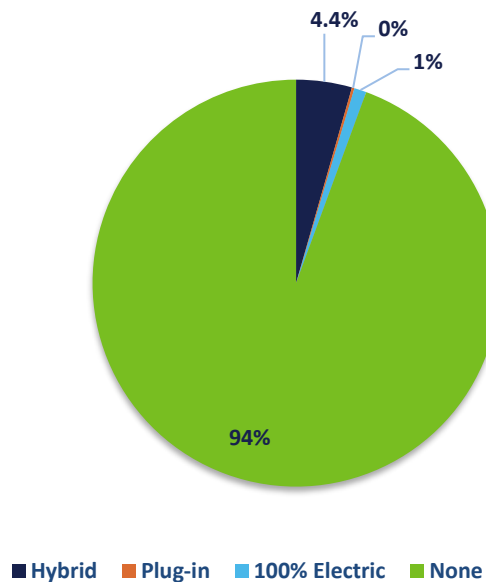
Time Frame	2022 (Q1 – Q4)	2023 (Q1-Q3)
Total Number of Respondents	4,269	1,873



# J.D. Power Electric Vehicles Survey

## Electric Vehicle Ownership

Low ownership among low-income customers: Only about 1% of surveyed low-income customers own a fully electric vehicle, and about 0.2% own a plug-in hybrid vehicle.



## Comparison with Non-Low-Income Respondents

Lower ownership percentages: Low-income respondents showed a lower percentage (1% vs. 2.9%) of fully electric vehicle ownership compared to non-low-income respondents. The gap was larger (0.2% vs. 2.3%) for plug-in hybrid vehicle ownership.

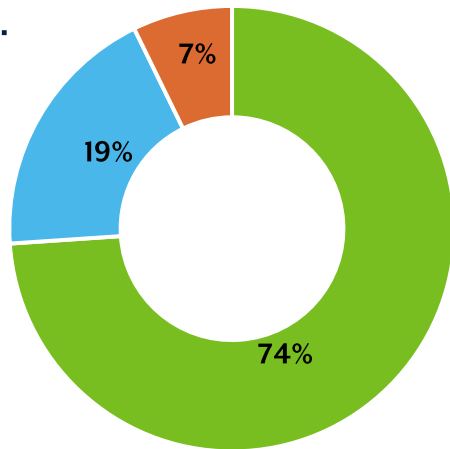
EV Ownership Type	Low-income		Non-Low-Income		Total	
	%	n	%	n	%	n
Hybrid	4.4	64	6.5	155	5.7	219
Plug-in hybrid	0.2	3	2.3	56	1.5	59
100% Electric	1.0	14	2.9	70	2.2	84
None	94.4	1,364	88.3	2,119	90.6	3,483
Total	100.0	1,445	100.0	2,400	100.0	3,845



# J.D. Power Survey

## Familiarity with Electric Vehicles

Limited familiarity: 74% of low-income respondents have heard about electric vehicles but do not know much about them. This contrasts with non-low-income respondents, where 51% have heard of EVs but lack detailed knowledge.



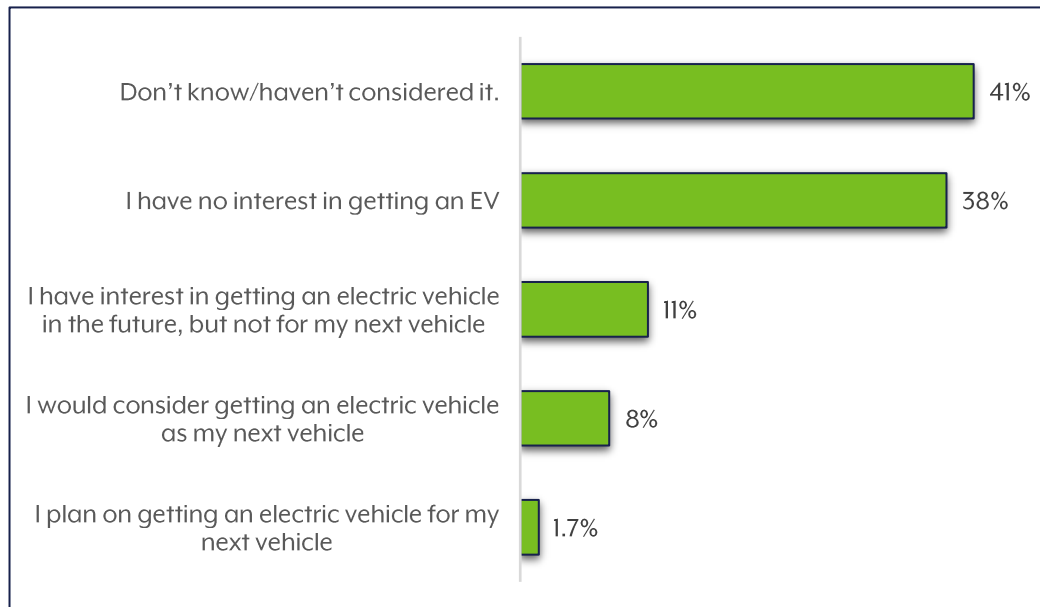
- I've heard of electric vehicles but don't know much about them
- I have heard of electric vehicles and know quite a bit about them
- I know a lot about electric vehicles

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

# J.D. Power Survey

## Interest in Electric Vehicles

Low interest: Only 1.7% of low-income respondents plan on getting an electric vehicle for their next vehicle, compared to 9.9% of non-low-income respondents.

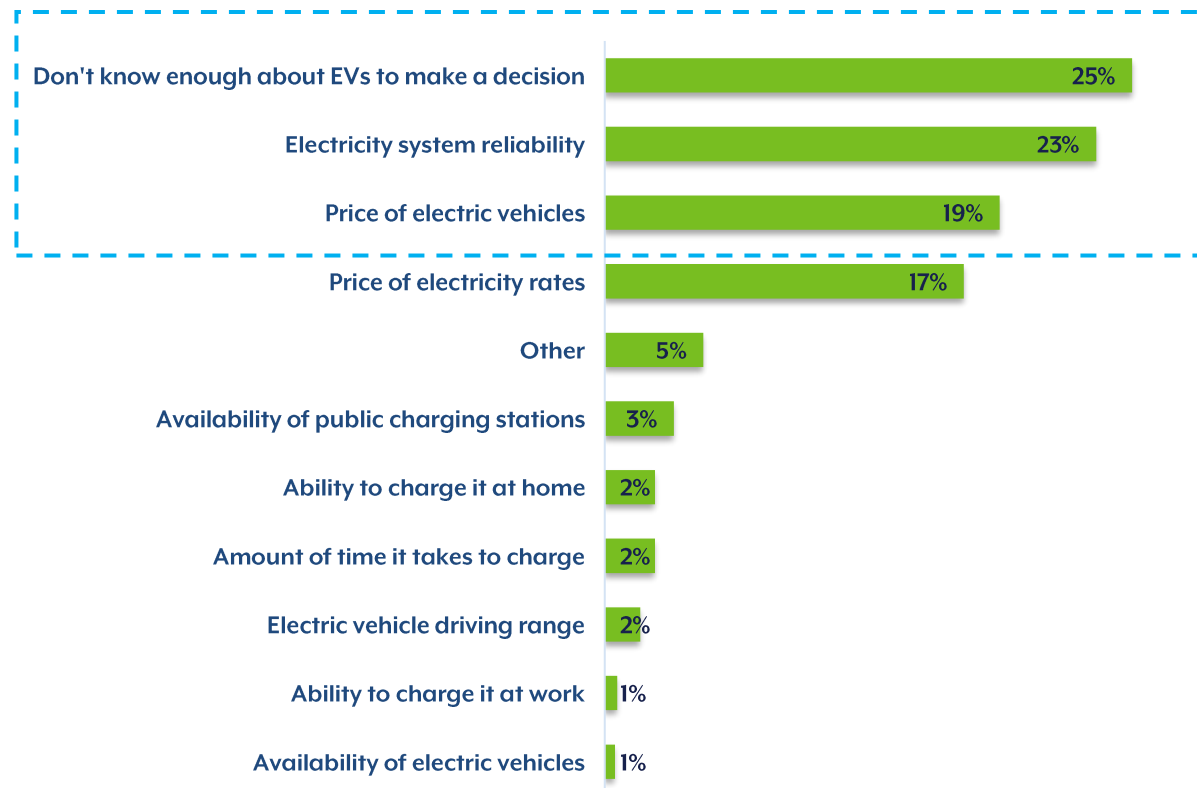


Interest in EVs	Low-income		Non-Low-Income		Total	
	%	n	%	n	%	n
I plan on getting an electric vehicle for my next vehicle	1.7	23	9.9	221	6.7	244
I would consider getting an electric vehicle as my next vehicle	8.0	110	22.1	493	16.7	603
I have interest in getting an electric vehicle in the future, but 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

# J.D. Power Survey

## Concerns in Purchasing Electric Vehicles

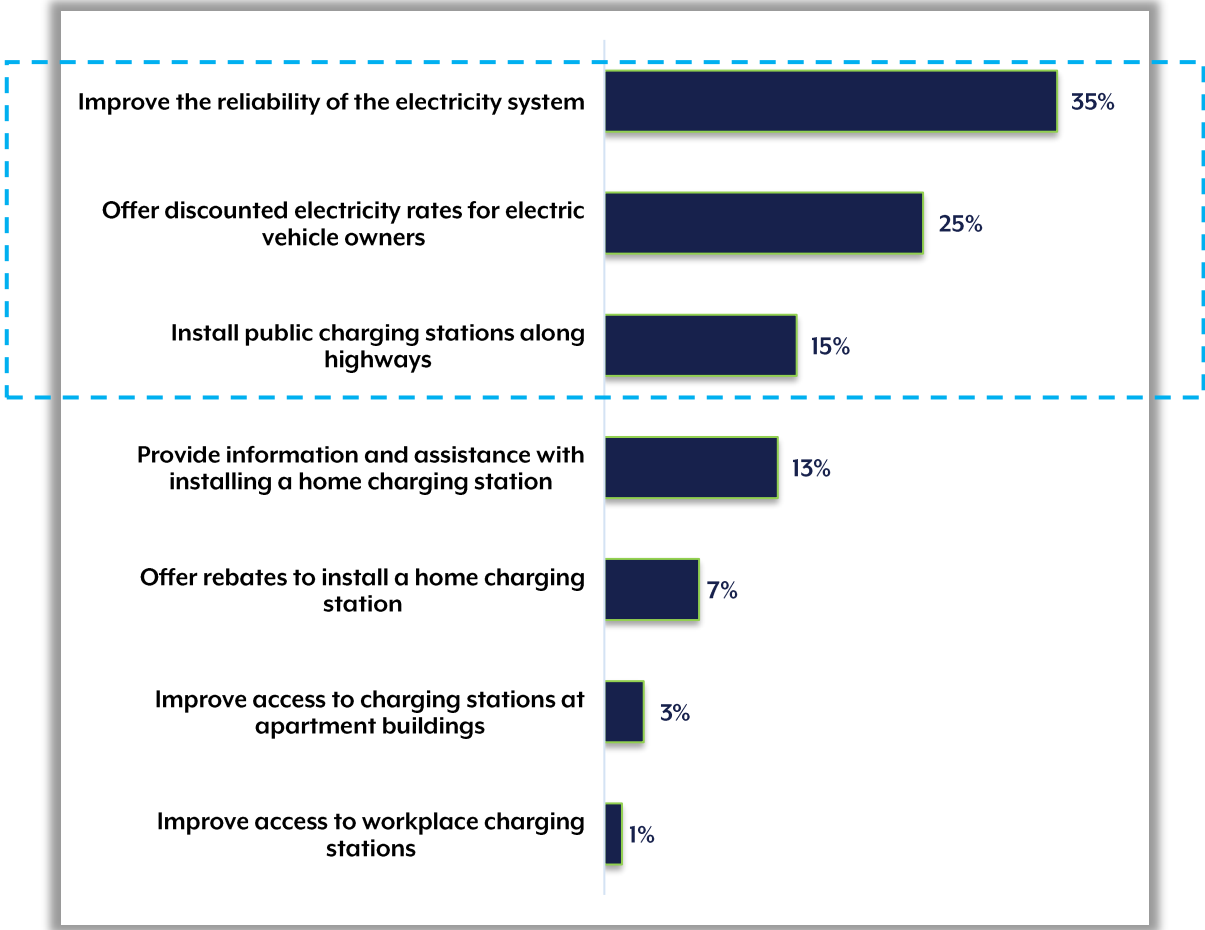
Top concerns: The top three concerns for low-income customers are knowledge about EVs (25%), reliability of the electric system (23%), and the price of the vehicle (19%).



# J.D. Power Survey

## Factors Influencing Likelihood of EV Purchase

Influencing factors: Improving the reliability of the electrical system (35%), offering discounted electricity rates for EV owners (24.7%), and installing public charging stations along highways (14.9%) are the top factors that would increase interest in purchasing or leasing an electric vehicle among low-income respondents.



# Recommendations to address low-income EV adoption

- Engage with more community leaders to expand the educational outreach effort and ensure educational information is reaching low-income communities.
- Continue participating in community-related events where EV educational material can be distributed.
- Expand the amount of educational information on the existing EV webpage based on industry best practices and update information related to the actual EV market.
  - e.g., Show a comparison between EV maintenance costs versus Internal Combustion Engine (ICE) maintenance costs.
- Continue the existing collaborative effort with DDEC to support and identify new strategies to improve awareness about electric vehicles based on the market study results.



# Recommendations to address low-income EV adoption

- Continue collaboration and support efforts with entities related to public transportation in Puerto Rico who are actively promoting the transportation electrification.
- Timing for engagement with the low-income communities should consider including an appropriate value proposition that shows there is an adequate level of cost parity against Internal Combustion Engine (ICE) vehicles (e.g., a combination of lower average prices and economic incentives). This should incentivize a faster adoption of EVs by both the mid and low-income groups.
- Future market studies will be key to developing a strategic value proposal that can solve the existing economic barrier for low-income communities.





Thank You!