

Puerto Rico Electric Vehicle (EV) Infrastructure Deployment Plan under the National Electric Vehicle Infrastructure (NEVI) Formula Program

PUERTO RICO HIGHWAYS & TRANSPORTATION AUTHORITY



PLAN APPROVAL

PUERTO RICO HIGHWAYS AND TRANSPORTATION AUTHORITY

Signed:



Edwin González, PhD, PE

Date:

AUG 01 2022

Table of Contents

List of Figures.....	6
List of Tables	6
List of Abbreviations.....	7
Introduction.....	8
Dates of State Plan for Electric Vehicle Infrastructure Deployment Development and Adoption	10
State Agency Coordination.....	12
Cross Agency Coordination	12
Department of Transportation and Public Works (DTPW)	12
Puerto Rico Electric Bureau (PREB)	12
LUMA Energy.....	12
Department of Economic Development and Commerce (DEDC).....	12
Upcoming coordination needed	13
Public Engagement	14
Public Involvement Vision, Goals and Objectives.....	14
Vision.....	14
Goals	14
Objectives.....	14
Stakeholders Involved in Plan Development	14
Stakeholders Meetings.....	15
Stakeholders Meetings for Plan Draft Discussion	15
Stakeholders Workshops organized by PREB – Deployment of Electric Vehicle Charging Infrastructure.....	16
Outreach and Communications Strategies.....	16
Outreach and Communications	16
Community Outreach effort	17
Plan Vision and Goals	19
Vision.....	19
Goals	20
Objectives.....	20
Contracting	21
Eligible funding use.....	21
□ Construction and installation	21
□ Workforce development and training	21
□ Planning.....	21

□ Construction and installation	21
□ Installation.....	21
□ Maintenance and operation.....	21
□ Renewable energy generation and storage	22
Contract Terms and Conditions	22
Competitive Site Selection Process.....	22
Selection and award process.....	24
Contract award.....	24
PRHTA's Role.....	24
Buy American Act	24
Existing and Future Conditions Analysis	26
General Geography and Terrain	26
Climate.....	26
Emergency Evacuation Routes	27
Land Use Patterns	27
Demographic Overview.....	27
Existing EV Ownership in Puerto Rico	29
Grid Capacity.....	29
EV Charging Infrastructure Deployment	31
Funding Sources.....	31
2022 Infrastructure Deployments/Upgrades.....	31
Alternative Fuel Corridors.....	32
PR-2.....	32
PR-22	32
PR-52	32
Charging Stations Requirements.....	34
Approximate Locations.....	36
Grid Connectivity.....	37
Planned Investments	38
o Energy Support Program	38
o Volvo Cars Initiative	38
o Vieques and Culebra.....	38
o Volkswagen Funds.....	38
FY23-26 Infrastructure Deployments	38
State, Regional and Public Policy.....	41
1. Act 57-2014; which created the PR Energy Bureau (PREB)	41
2. Act 81-2014, Law to promote Vehicles Driven Mainly by Electricity	41

3. Act 17-2019 ; Puerto Rico Energy Public Policy Act	41
4. Act 33-2019, Puerto Rico Climate Change Mitigation, Adaptation and Resiliency Act	41
5. LUMA EV Charging Infrastructure Deployment Plan.....	41
Civil Rights	42
Compliance with Title VI:.....	42
Compliance with ADA:.....	42
Equity Considerations	44
Identification and Outreach to Disadvantaged Communities (DACs)	45
Process to Identify, Quantify, and Measure Benefits to DACs	46
Benefits to DACs through this Plan	46
Labor and Workforce Considerations.....	47
Cybersecurity	48
Program Evaluation.....	49
Appendix A: Supporting Materials (As Applicable).....	50

List of Figures

Figure 1: Puerto Rico Interstate System Map	9
Figure 2: Puerto Rico NEVI Plan Timeframe Roadmap.....	11
Figure 3: DTOP NEVI Grants Web Site (https://act.dtop.pr.gov/nevi-grants/).....	17
Figure 4: Puerto Rico Population by years. Source: US Census Bureau, International Database	28
Figure 5: Puerto Rico Population by Age; 2010 – 2020, International Database	28
Figure 6: Puerto Rico Population Projection Source: US Census Bureau, International Database	29
Figure 7: Existing challenges for EV market in Puerto Rico.....	30
Figure 8: Corridors to be submitted on Round 07 Alternative Fuel Corridor Designation.....	33
Figure 9: Alternative Fuel Corridors Approved and to be Submitted on Round 07	33
Figure 10: Puerto Rico Electric Vehicle Charging Corridors for PR-22.....	34
Figure 11: Puerto Rico Electric Vehicle Charging Corridors for PR-52	35
Figure 12: Puerto Rico Electric Vehicle Charging Corridors for PR-2.....	36
Figure 13: Commercial Activity PR-52 within 1 mile Radius	37
Figure 14: Commercial Activity PR-232 within 1 mile Radius	37
Figure 15: Upcoming activities for NEVI Deployment	40
Figure 16: Argonne National Laboratory Map Tool for PR.....	44

List of Tables

Table 1: Table of Stakeholders.....	15
Table 2: Statistics of Social Media Participation.....	17
Table 3: Table of Deployment Activities by Federal Fiscal Year	39

List of Abbreviations

ADA	American Disabilities Act
AFC	Alternative Fuel Corridors
BIL	Bipartisan Infrastructure Law
CFR	Code of Federal Regulations
CRO	Civil Rights Office
DACs	Disadvantaged Communities (DACs)
DC	Direct Current
DEDCC	Department of Economic Development and Commerce
DTPW	Department of Transportation and Public Works
EVs	Electric Vehicles
EVSE	Electric Vehicle Supply Equipment
FFY	Federal Fiscal Year
FHWA	Federal Highways Administration
Guidance	NEVI Formula Program Guidance dated Feb. 10, 2022
IHS	Interstate Highways System
ISTEA	Intermodal Surface Transportation Equity Act
kW	Kilowatt
LRTP	2045 Long Range Transportation Plan
LUMA	LUMA Energy
MPO	Metropolitan Planning Organization
NHS	National Highways System
NEVI	National Electric Vehicle Infrastructure
NEVI Formula Program	National Electric Vehicle Infrastructure Formula Program
PIP	Public Involvement Plan
PR	Puerto Rico
PREB	Puerto Rico Energy Bureau
PREPA	Puerto Rico Energy and Power Authority
PRHTA	Puerto Rico Highway and Transportation Authority
PREV Plan	Puerto Rico Electric Vehicle Infrastructure Deployment Plan
PRPB	Puerto Rico Planning Board
PRSN	Puerto Rico Seismic Network
PUT	Plan Uso de Terrenos (Land Use Plans)
RFP	Request for Proposals
TOU	Time of Use Rates
US	United States of America
USDOT	United States Department of Transportation

Introduction

The Puerto Rico Highways and Transportation Authority (PRHTA) is a public corporation created to construct, operate and maintain Puerto Rico's toll road network, major highways, and mass transportation facilities. Since its creation, PRHTA continues to have the opportunity to reconstruct the road network serving as a catalytic of social and economic development. Currently, PRHTA is driving a transformation process that promotes the use of best practices to achieve the reconstruction of the infrastructure while increasing all user's safety and reducing the impact to the environment.

The U.S. Departments of Transportation and Energy made available \$5 billion on funding under the new National Electric Vehicle Infrastructure (NEVI) Formula Program established by President Biden's Bipartisan Infrastructure Law (BIL), to build out a national electric vehicle charging network. This initiative certainly fits with the local Government's efforts and overall public policy that has consistently promoted during the past decades a transition from traditional fuel technologies to more efficient and environmentally friendly alternatives. As the grantee of federal funds received from the Federal Highway Administration (FHWA) in Puerto Rico, the PRHTA has been leading the efforts of the development of the Puerto Rico Electric Vehicle Infrastructure Plan (hereafter "the Plan") that will establish the framework of Electrical Vehicles (EVs) charging infrastructure along the major and most important corridors in Puerto Rico under the Plan.

On May 13, 2022, the PRHTA nominated for the first time, three (3) major corridors to be designated as Alternative Fuel Corridors (AFC) as corridor pending. This nomination, approved on July 2022, was a critical step into the development of the Plan. The corridors submitted and approved were the PR-2, PR-22 and PR-52 which are important corridors within the Interstate Highway System (IHS) shown in Figure 1.

PUERTO RICO INTERSTATE HIGHWAY SYSTEM



Figure 1: Puerto Rico Interstate System Map

It is PRHTA's intention to submit the remaining corridors that constitute the IHS to be nominated and approved as AFCs during the next available Designation Round, expected to be published in 2023.

Even prior the submission of the AFCs designation, the PRHTA was and has continued coordinating with important stakeholders in the development of Plan. Particularly, initiatives have been discussed with the Department of Transportation and Public Works (DTPW), the PR Energy Bureau (PREB), LUMA Energy (LUMA) and the Department of Economic Development and Commerce (DEDC).

The main objectives of the Plan are:

- Provide guidelines to coordinate the federal, state and municipal governments initiatives to provide equitable adoption of electrical vehicles while developing groundwork and framework to manage current challenges
- Integrating infrastructure in our transportation system to improve the quality of life of our communities by reducing transportation related greenhouse gas emissions
- Integrating EV infrastructure that will provide confidence and flexibility for drivers to travel long distances
- Improve and/or provide public access to electric vehicle charging facilities

- Increase the number/inventory of electrical vehicles in Puerto Rico by encouraging drivers to invest on an EV
- Enable the transition to clean transportation to achieve current transportation and climate goals, such as Goal of 2050 Net Zero Emissions

Dates of State Plan for Electric Vehicle Infrastructure Deployment Development and Adoption

Upon completion of the Plan and submittal to FHWA for review, PRHTA will continue coordinating with the principal stakeholders to start drafting request for proposals for EV Charging Stations as further defined on EV Charging Infrastructure Deployment Section.

REMAINING OF PAGE LEFT BLANK INTENTIONALLY

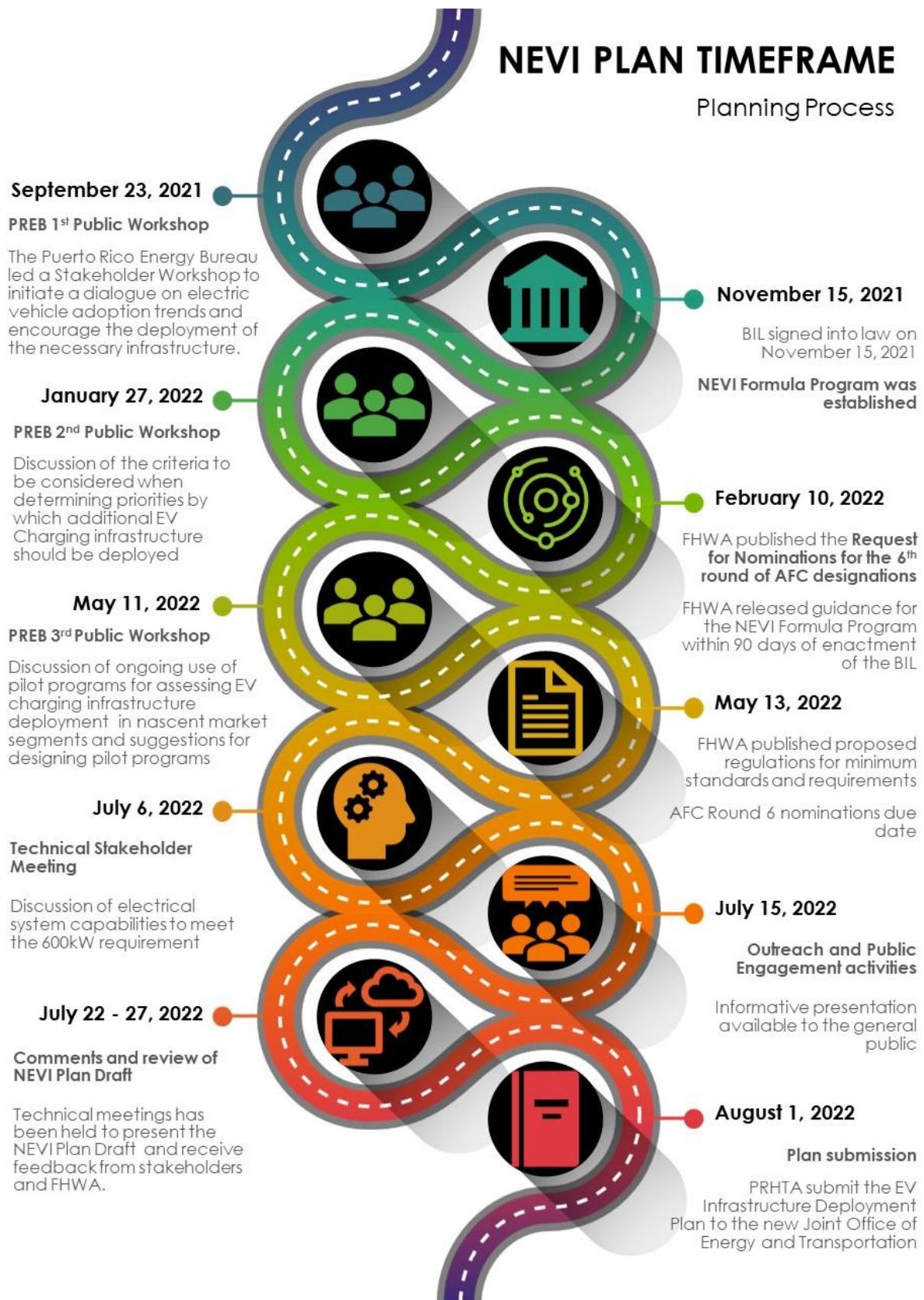


Figure 2: Puerto Rico NEVI Plan Timeframe Roadmap

State Agency Coordination

Throughout the past decades, Puerto Rico has been active in developing framework to promote reliable, efficient, and innovative technologies to reduce transportation related greenhouse gas emissions. These initiatives include to endorse a transparent electric system, which provides power services at reasonable prices and from multiple alternate sources.

Cross Agency Coordination

Prior and during the development of this Plan, multiple meetings have been held with various entities and agencies that have a significant impact in creating, implementing, and enforcing public policy that will result in the development of strategies that will incentive the ownership of electric vehicles and other alternative fuel to oil derivates. The Table 1 under the Public Engagement Section of this Plan, includes the contact information of the entities that have provided feedback during the development of the Plan. From these, the following stakeholders are key:

Department of Transportation and Public Works (DTPW): Created by the Constitution of Puerto Rico in 1952 with the original purpose of highway construction. In 1965, with the creation of the Highways Authority, the role and duties of the DTPW was directed to the maintenance of roads and provide services to constituents. DTPW's mission is to develop and promote an integrated transportation system that, together with the road infrastructure and services provided to the constituents, and to facilitate the economic development of Puerto Rico in harmony with the environment. Along with that, the DTPW acknowledges and supports the vision that an efficient and safe transportation system is key to move forward Puerto Rico's economy.

Puerto Rico Electric Bureau (PREB) The PREB is an independent and specialized body created by virtue of Act 57-2014, as amended, to serve as key component for the full and transparent implementation of the Energy Reform. Specifically, the PREB has the responsibility to regulate, monitor and enforce the energy public policy of the Government of Puerto Rico, following its mission to achieve a reliable, efficient, and transparent electric system, which provides power services at reasonable prices

LUMA Energy: Power company responsible for the power distribution in Puerto Rico. Previously, that responsibility was in charge of the government-run Puerto Rico Electric Power Authority (PREPA). This entity is also in charge of maintaining and modernizing the power transmission and distribution infrastructure. LUMA's vision is to provide the people of Puerto Rico with reliable electrical energy and transform the system that illuminates every home, every business, and every corner of Puerto Rico.

Department of Economic Development and Commerce (DEDC): Created in 1994 is the leading entity in the executive branch of the Government of Puerto Rico that establishes the vision and public policy of economic development and acts as coordinator and integrator of the strategies and initiatives of its attached entities. Within the DEDC there is the State Energy Office.

Coordination with the Department of Environment and Natural Resources (DENR) are currently being made to adopt and incorporate important data and considerations in the solicitation document.

Upcoming coordination needed

Upon plan submission, meetings will be held with the DENR to coordinate language and considerations to be included during the competitive process and evaluation criteria for scoring. Also, cross agency coordination needs to continue with LUMA and the PREB to continue discussions on the following:

- Identify and streamline the planning and approval of grid connections for EV charging infrastructure, including energy storage and renewable energy generation, to support operations within six months of procurement. This will include coordinating efforts with LUMA's Feeder Rebuilding Program and other relevant programs.
- Evaluate strategies to be implemented to streamline permitting processes for EV charging infrastructure installation.
- Estimate the concentrations of EV charging sites and stations to meet the needs of current and future EV drivers in order to offer the appropriate power level and quantity of charging stations.
- Estimate future needs for EV charging stations to support the adoption and use of EVs in shared mobility solutions, such as micro-transit, transportation network companies, and medium- and heavy-duty EVs. Develop an analytical model to allow a city, county, or other political subdivision of a State or a local agency to compare and evaluate different adoption and use scenarios for EVs and EV charging stations.
- Establish an adequate rate structure (\$/kWh) to offer a cost of EV charging at a price that is reasonable, competitive and affordable rates.

Public Engagement

Public participation is a key component of any planning process. Promoting the integration of the public seeks to have a better understanding of their needs and concerns based on their roles (private sector, public sector, citizens, etc.) as well as to promote collaboration efforts in the planning process while providing an equitable and fair participation.

This section describes the strategies to promote public participation through the planning and implementation process for the Plan for Electric Vehicle Infrastructure Deployment. These strategies are based on the principal statements of the *Public Involvement Plan (PIP) in the Transportation Planning Process*¹ revised and approved by the members of the Metropolitan Planning Organization (MPO)- Draft Amendment on August 22, 2018.

Public Involvement Vision, Goals and Objectives

Public involvement initiatives resulting from this Plan will be in accordance with the MPO PIP Vision, Goals, and Objectives, as described following:

Vision – Involve and enable agencies, the interested parties, and the community to provide meaningful input to the State Plan for Electric Vehicle Infrastructure.

Goals:

- Consult with the public and stakeholders to gather their ideas for solutions to transportation needs as users or potential users of EV.
- Inform and involve the public throughout the process.

Objectives:

- Develop a proactive, and ongoing public participation process that involve the general public, stakeholders, and government agencies (local and federal).
- Create communication channels with the general public to promote encourage public participation and gather their input.
- Use a variety of methods to involve and engage the public.
- Encourage the participation of minority and low-income populations in the Plan

Stakeholders Involved in Plan Development

Ever since the Bipartisan Infrastructure Law was approved in 2021, both the DTPW and the PRHTA have been holding meetings with important stakeholders to share ideas, incentives, initiatives and possible funding available to promote EV Charging Stations throughout Puerto Rico.

Since the NEVI Program Guidance was published, stakeholder coordination efforts increased.

¹ [2018-Public-Involvement-Plan-approved-Nov-6.pdf](#)

Company/Entity Name	Classification	Contact Information
Department of Transportation and Public Works	Agency Coordination-Public Policy	Lynette Alicea
Governor's Office	Government Coordination	Yolanda Díaz Rivera
PREB	Regulation and Oversight	Edison Avilés, Lilian Mateo, Ferdinand Ramos
PREB	Engineering	Edgardo J. Contreras
DEDIC	Government – Energy Public Policy Program	Francisco Berrios
LUMA Energy	Power Distribution-Grid Modernization	María H. Rivera
LUMA Energy	Power Distribution-Planning	Noel Rivera
metropistas	Concession PR-22- CEO	Julián Fernández
metropistas	Concession PR-22- Commercial	Eduardo Canelas
metropistas	Concession PR-22- Program Management	Joan Sánchez
Colegio Peritos Electricistas	Professional Association	Frances Berrios
Glen International	Charging Station Distributor	Ignacio Díaz
Chargepoint	Charging Station Distributor	Justin Ackley
EP Energy	Engineering Consultant	Edward Previdi
AZ Engineering	Engineering Consultant	Angel Zayas

Table 1: Table of Stakeholders

Stakeholders Meetings

Were scheduled as needed and will continue as necessary.

Stakeholders Meetings for Plan Draft Discussion

July 21, 2022

The NEVI Plan Draft was discussed internally in PRHTA.

July 22, 2022

Stakeholders from across sectors, including the PREB, participated to discuss the draft of the Plan. The discussion focused on specific topics that are of main concern due to the impact on the power grid of potential locations and their requirements. After the discussion agreements were made to keep the discussion on how to approach those concerns thru the process. Upcoming meetings will be scheduled to continued discussion as needed. There was also an agreement of the importance to have a committee to monitor the progress of the Plan.

July 26, 2022

The NEVI Plan was also presented to the FHWA to receive valuable feedback and validated that is according to the program requirements. Challenges due to specific conditions of the Island were discussed and received feedback on how to approach those into the Plan. Also received comments to validate some information from EV models and from FHWA Memos shared with DOTs.

July 29, 2022

The NEVI Plan was presented to LUMA Energy to discuss the draft of the Plan. The discussion was focused on actions that will be required from LUMA to make the implementation feasible and get LUMA's endorsement to the NEVI Plan.

Stakeholders Workshops organized by PREB – Deployment of Electric Vehicle Charging Infrastructure

Although it was not prepared specifically during the development of the Plan, these workshops' feedback was evaluated, reviewed and considered in the Plan content and framework.

- 3 workshops took place from 2021 to present
- The main objective was to initiate a dialogue on electric vehicle adoption trends and to encourage the deployment of the necessary infrastructure.

PRHTA has met with stakeholders to understand EV charging market opportunities and challenges, along with potential solutions to address them. Coordinated planning across private and public investments is necessary to provide a seamless and convenient national network.

Outreach and Communications Strategies

Target Audiences. As the market of EV is growing in Puerto Rico it is imperative to have key stakeholders from across the sectors onboard in this process aiming for a successful implementation of EV infrastructure across the Interstate Highway System (IHS)

Private Sector:

- LUMA Energy
- EV infrastructure suppliers
- Metropistas
- Engineering Consultants- EV Design and Installation

Governmental Sector:

- Governor's Office
- Puerto Rico Department of Transportation and Public Works – PRDTPW
- Puerto Rico Energy Bureau – PREB
- Department of Economic Development and Commerce- DEDC
- Puerto Rico Energy and Power Authority- PREPA
- Metropolitan Buses Authority -AMA for its acronym in Spanish
- Puerto Rico Integrated Transportation Authority- PRITA
- Puerto Rico Information Technology Service- PRITS

Professional Organizations

- Puerto Rico College of Electrical Technicians
- College of Engineers and Surveyors of Puerto Rico

Outreach and Communications

Strategies seeks to raise awareness of the plan and encourage participation in the process. The main goal is to provide multiple opportunities across the timeframe to inform and gather the necessary information to implement EV infrastructure across the island.

Communications and outreach efforts are focus on a cross-section approach. This provided and will continued providing feedback from general public as well feedback from technical stakeholders.

Community Outreach effort:

A presentation of the planning process for the Plan has been published through the agency website. This presentation (available in Spanish and English) aimed to inform the general public about the planning process and provided an opportunity to receive comments.

The screenshot shows the homepage of the DTOP NEVI Grants website. At the top, there is a navigation bar with the logo of the Autoridad de Carreteras y Transportación (Autoridad de Puerto Rico) on the left and links for SERVICIOS, REUNIONES, OFICINAS, INNOVACIÓN, SUBASTAS, NOTICIAS, and a search icon on the right. Below the navigation bar, a breadcrumb trail indicates the user is at 'YOU ARE HERE: HOME > NEVI GRANTS'. The main title 'NEVI Grants' is displayed in large bold letters. Underneath it, the text 'Programa Nacional de Infraestructura para Vehículos Eléctricos (NEVI)' is shown. Below this, there are two links: 'NEVI Grants (English version)' and 'Fondos NEVI (versión Español)'. The page is divided into two main sections: 'CONTÁCTENOS:' and 'OFICINA DEL INSPECTOR GENERAL:'. The 'CONTÁCTENOS:' section provides the physical address and contact information for the Centro Gubernamental Roberto Sánchez Viella. The 'OFICINA DEL INSPECTOR GENERAL:' section provides information on reporting irregularities or fraud. At the bottom of the page, there is a copyright notice: 'Copyright 2021 Autoridad de Carreteras y Transportación' and 'Solicitud CEE-SA-2020-5388'.

Figure 3: DTOP NEVI Grants Web Site (<https://act.dtpop.pr.gov/nevi-grants/>)

Table 2 below shows a summary of the public involvement resulting from this initiative:

Media	Quantity
Link Visitors	301
Facebook Views	65
Facebook Comments	2
Facebook Shares	1
Emails to plan.nevi@dttop.pr.gov	0

Table 2: Statistics of Social Media Participation

Due to the short time from AFC Designation submission to Plan's deadline, future events will be coordinated as needed. As for example:

- **Interactive engagement**
 - Interactive map to inform and gather input about EV charging potential locations
- **Workshops**
 - Keep informing the general public about the progress and continue gather input.
 - Will be announced through public notice in newspaper and website.
- **Social Media**
 - Notify the public about the process and events
- **Educational campaigns**
 - Inform the public of EV Charging locations and the rules of use
- **Email account**
 - As aforementioned an email account was created to receive comments or any feedback from the general public and stakeholders.
Email: plan.nevi@dttop.pr.gov

Plan Vision and Goals

The Puerto Rico Climate Change Mitigation, Adaptation and Resiliency Act (Act 33-2019) establishes the Government of Puerto Rico's public policy regarding the reduction of gas emissions and how the island will address the climate change issues. Specifically, Act 33-2019 details pathways to phase out fossil fuels, achieve 100% clean energy by 2050, improve energy efficiency, reduce greenhouse gas emissions, promote electric car use, and conduct reforestation and ecosystem service restoration.

In terms of transportation, the Puerto Rico Long Range Transportation Plan (LRTP) strives to develop a multimodal transportation system will offer safe, efficient, and effective accessibility and mobility for people and goods, focusing on infrastructure resilience, promoting livable and accessible communities and the substantial socioeconomic development. The 2045 LRTP developed goals and objectives emphasize the imperative to adapt to climate change, and the capability of the transportation infrastructure to withstand extreme weather events.

The vision, goals, and objectives of the PREV Plan infrastructure plan is aligned with the LRTP more precisely with the following goal/objective:

- Focus on the environment's sustainable development: incorporate a careful and responsible environmental management to harmonize the need of a clean environment, social justice, and a well-functioning economy.
- Promote transportation infrastructure that preserves balanced ecosystems minimizing adverse impacts to the Islands natural environments.
- Reduce greenhouse gas emissions, energy consumption, and carbon footprint emittance; promote "smart growth", livable communities and improve air quality.
- Improve transportation mobility and access for people and goods: achieve better mobility and access for all the transportation system users; provide more travel choices, integration between modes and connections between major population centers.
- Improve connectivity between the Island's fundamental activity Regions, such as, but no limited to employment centers, touristic areas, and dense residential districts.
- Invest in areas where users get the most benefit.
- Reinforce Economic Vitality: Procure sustainment of livable and viable communities by encouraging economic strength, competitiveness, and the flexibility to withstand economic difficulties.
- Encourage potential public-private collaborations
- Focus in providing commercial connectivity throughout the island.

Vision:

- To give all Puerto Ricans and visitors the ability to use an EV and find convenient, affordable, and accessible fast-charging stations through an electric vehicle charging network across the island.
- Encourage the expansion of electric vehicle use in the island
- Have a comprehensive plan that involve and enable agencies, interested parties, and the community to provide meaningful input to the Puerto Rico Plan for Electric Vehicle

Infrastructure. For PRHTA, the stakeholder input on key questions to be addressed by the Plan is fundamental.

Goals:

- Expand Electric Alternative Fuel Corridors
- Work with the private sector to install DC Fast Charge stations corridors according to FHWA requirements.
- Identify future roadways and communities for the installation of new stations.
- Prioritize the economically disadvantaged, rural communities, and other low-income population, and work with rural municipalities and other small urban areas to install DC Fast Charge stations near those areas.
- Collect data from the network to assess usage and identify trends for future development. Modeling EV charging demand on highway corridors.
- In compliance with the government's transparency policy, consult with the public and stakeholders to gather their ideas for solutions to transportation needs as users or potential users of EV.
- Inform and engage the public from the very beginning and throughout the process until ends.
- Build partnerships with the private sector to develop new strategies.

Objectives:

- Provide guidelines to coordinate state and municipal governments initiatives to provide equitable adoption of electrical vehicles while developing groundwork and framework to manage current challenges
- Integrating infrastructure in our transportation system to improve the quality of life of our communities by reducing transportation related greenhouse gas emissions
- Integrating EV infrastructure that will provide confidence and flexibility for drivers to travel long distances.
- Improve and/or provide public access to electric vehicle charging facilities
- Increase the number/inventory of electrical vehicles in Puerto Rico by encouraging drivers to invest on an EV
- Enable the transition to clean transportation to achieve current transportation and climate goals, such as Goal of 2050 Net Zero Emissions

Contracting

All funding distributed under the NEVI Formula Program shall be for projects directly related to the charging of a vehicle and only to support EV Charging infrastructure that is open to the general public or to authorized commercial motor vehicle operators from more than one company. Public Accessible locations may include public parking facilities, parking at public buildings, public transportation stations, park and rides, public schools, public parks, private parking facilities available for public use, visitors' centers, and other public locations on federal lands.

Funds made available under the NEVI Formula Program may be used to contract with a private entity for acquisition, installation, and operation and maintenance of publicly accessible EV charging infrastructure and the private entity may pay the non-Federal share of the cost of a project funded. States can own or lease EV charging infrastructure in accordance with 2 CFR part 13200. States should demonstrate a contracting strategy that makes maximal efficient use of Federal funding.

PRHTA encourages to develop programs with cost-share requirements or rebates to leverage private investment in EV charging and maximize the impact of NEVI Formula Program funding to optimize infrastructure deployment providing the opportunity to partner with existing EV infrastructure providers without bearing additional risk of upfront funding prior to deployment and diminishing the risk of half-built or stranded assets.

Eligible funding use

Upon the approval of this Plan, PRHTA will have access to \$2,000,000 on an annual basis for a period of five (5) consecutive years through the NEVI Formula Program. Contracts with private entities will be awarded on a competitive basis. PRHTA will issue a Request for Proposals (RFP) that will include scoring criteria. The RFP will allow for different business models, encourage competition resulting in better sites and stretches public funds by leveraging private investment.

Interest proponents may request funding for any or a combination on the following eligible uses:

- **Construction and installation** of EV Charging Infrastructure including parking facilities and utilities
- **Workforce development and training** related to EV Infrastructure
- **Planning** for EV Charging Infrastructure related projects
- **Construction and installation** of EV charging infrastructure to support operational, resiliency, national energy security, environmental and community goals for freight transportation
- **Installation** of EV Charging infrastructure as part of transit capital projects eligible under Chapter 53 of title 49 USC.
- **Maintenance and operation** of EV Charging Infrastructure (minimum standards and requirements associated will be provided)

- **Renewable energy generation and storage**, such as on-site solar panels would be considered directly related if it leads to lower overall construction and operation costs, and therefore would be eligible.

Although this Plan focuses on the funding available for the NEVI Formula Program, PRHTA is planning to participate in the submittal of proposals through the NEVI Discretionary Grant which allocates an additional \$2.5 Billion. PRHTA is aware and will be monitoring additional guidance and information on the Corridor and Community Charging Grant Programs that will be forthcoming in a future notice(s) of funding opportunity. The discretionary grant is divided into two distinct \$1.25 billion grant programs to support EV charger deployment:

Corridor Charging Grant Program. This program will strategically deploy publicly accessible EV charging infrastructure and hydrogen, propane, and natural gas fueling infrastructure along designated Alternative Fuel Corridors.

Community Charging Grant Program. This program will strategically deploy publicly accessible EV charging infrastructure and hydrogen, propane, and natural gas fueling infrastructure in communities.

Contract Terms and Conditions

Contract terms and conditions established will follow state and federal requirements and regulations. The contract will include clauses to address, at a minimum, the following:

- Language indicating the contract term and authorized use of federal funding to be provided through the NEVI Program
- Language for compliance with all state and federal requirements and guidelines applicable
- Language for compliance, specifically pursuant with Buy American Act, American Disabilities ACT, Title VI of the Civil Rights Act of 1964 and Equal Employment Opportunity statement, among others
- Terms and conditions on data collection, sharing and storage
- Terms and conditions related to cybersecurity and personal privacy
- The long-term operation and maintenance of publicly available EV charging infrastructure to avoid stranded assets and protect the investment of public funds in that infrastructure will be considered in the contract for at least 5 Years operations and maintenance terms and conditions.
- The specific EV Charging site deployment plan and related documentation submitted and agreed upon the evaluation and award of the proposal during the solicitation process
- Subject to contract terms, ownership of EV charging infrastructure does not need to revert to the PRHTA when contracting with a private entity to install, operate, or maintain EV charging infrastructure

Competitive Site Selection Process

PRHTA will continue coordination with LUMA to identify areas in which grid capabilities seem adequate for EV Charging Stations deployment; this will be nominated “preferred sites”. Nonetheless, the final site selection will be delegated to the proponent. As indicated earlier on this section, upon approval of the Plan, the PRHTA will issue a request to entities interested in

submitting proposals in solicitation of a share of the available funding to be obligated during the federal fiscal year (FFY). The soliciting entity will propose site locations for the implementation of EV charging stations based on the following conditions:

- 1) Proposed location shall be within an Alternate Fuel Corridor (AFC) as designated by PRTHA and approved by FHWA or on a radius of one (1) mile from an exit within the AFC. If proponent fails to comply with this requisite, the proposal will be disqualified without further consideration.
- 2) Proposed location of EV Charging Stations should have feasible grid connection. Proponent shall demonstrate that there is enough capacity within existing feeders (preferably 13kV) and/or the substation to which the charging stations will be connected to. As an alternative, the proponent may choose alternate energy sources to power the stations. For example, the inclusion of distributed renewable energy resources (e.g. solar arrays, energy storage) and electric distribution and switching equipment where practicable.
- 3) Proposed location for EV Charging Stations should be maintained at the same location for a period of no less than 5 years from the installation date with the consideration of service beyond the NEVI Formula Program funds.
- 4) Proposed location shall be a Publicly Accessible location as defined on the NEVI Formula Program Guidance and this Plan.
- 5) Proposed location shall have enough space to accommodate at least four (4) DC Fast Charging Stations of a minimum capacity of 150kW per charger.
- 6) Proposed location shall have enough space to accommodate at least four (4) EVs simultaneously. Applicants that submit locations with future plan that allows expansion for growing demand and higher power levels will receive higher scoring.
- 7) Proposed location shall be ADA compliant when submitting the application or proponent shall state what corrections of physical barriers to disabled persons' accessibility that will be performed to comply with ADA requirements. Higher scoring will be provided to locations at or immediately adjacent to land uses with publicly accessible restrooms, appropriate lighting, and sheltered seating areas such as travel centers, food retailers, convenience stores, visitor centers on Federal lands, small businesses with an Americans with Disabilities Act (ADA) accessible pathway between the EV charging infrastructure and the front door of the identified establishment, and other comparable facilities

Other Considerations that may impact or increase scoring are:

- 1) Upgrade to connections to the electric grid, including electric distribution upgrades; vehicle-to-grid integration, including smart charge management or other protocols that can minimize impacts to the grid; alignment with electric distribution interconnection processes, and plans for the use of renewable energy sources to power charging and energy storage.
- 2) The station location includes fire protection and other traffic safety and security features.
- 3) The use of station-level load management or smart charge management in a transparent manner that can encourage grid stability and reduce costs to EV charging station users.
- 4) Stations should be designed to allow for future upgrades and updates to power levels and number of chargers, to the extent possible and within reason. The Joint Office will publish best practices for EV charging infrastructure construction that will seek to allow flexibility in future upgrades.
- 5) Billing to end users of EV charging stations shall be on an (\$/kWh) basis, and not time based (\$/minute).

Selection and award process. Upon receipt, the PRHTA will evaluate and rank the proposals from highest to lowest. Funding allocations will be distributed sequentially based on the ranking provided. Proponents may include within their solicitations a plan contemplating various phases and/or project funding needs in continuous years. Contracts will be executed with entities to allocate and obligate apportioned funding. If submitted proposals do not meet the NEVI Formula Program requirements or if the proposals submitted do not exceed the available funding amount allocated on a given federal year, the PRHTA will request new solicitations.

Contract award. Upon contract award to one or more entities, the proponent(s) is responsible to obtain all permits, including environmental clearance. The successful proponent(s) will be responsible of the installation, operation and maintenance of the charging station.

PRHTA's Role. The PRHTA will oversee the construction process until completion. Also, the PRHTA will oversee compliance with the contract terms and conditions while monitoring usage over time.

Buy American Act

In November 2021, the President signed into law the *Infrastructure Investment and Jobs Act* (IIJA), which includes the *Build America, Buy America Act* ("the Act"). The Act establishes, among others, a National Electric Vehicle Infrastructure Formula Program ("NEVI Formula") to provide funding to states to strategically deploy electric vehicle (EV) charging infrastructure and to establish an interconnected network to facilitate data collection, access, and reliability.

The Act strengthens Made in America laws and will bolster America's industrial base, protect national security, and support high-paying jobs. The Act requires that no later than May 14, 2022—180 days after the enactment of the IIJA—the head of each covered U.S. agency shall ensure that "none of the funds made available for a Federal financial assistance program for infrastructure, including each deficient program, may be obligated for a project unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States." The Act affirms the U.S. government's priority to "use terms and conditions of Federal financial assistance awards to maximize the use of goods, products, and materials produced in, and services offered in, the United States."

Consistent with this, the Office of Management and Budget (OMB) issued Memorandum No. M-22-11 titled "*Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance programs in Infrastructure*", providing implementation guidance to federal agencies on the application of the provisions of the law. Please note that a federal financial assistance program for infrastructure is any program under which an award may be issued for an infrastructure project, regardless of whether infrastructure is the primary purpose of the award. The term "project" means any activity related to the construction, alteration, maintenance, or repair of infrastructure in the United States.

Federal financial assistance means assistance that non-Federal entities receive or administer in the form of grants, cooperative agreements, non-cash contributions or donations of property, direct assistance, loans, loan guarantees, and other types of financial assistance. The term "non-Federal entity" includes states, local governments, territories, Indian tribes, institutions of

higher education (IHE), and nonprofit organizations.²

In light of this, the OMB instructed federal agencies to determine how this guidance is best applied to their infrastructure programs and processes, and consult with OMB, as needed, on establishing criteria, processes, and procedures for applying a Buy America preference and issuing waivers. Section II of the Memorandum M-22-11 establishes the guidance that applies to all federal financial assistance as defined in section 200.1 of Title 2, Code of Federal Regulations (CFR) —whether or not funded through IIJA— where funds are appropriated or otherwise made available and used for a project for infrastructure.

It is important to note that IIJA's definition of "infrastructure" encompasses public infrastructure projects. Thus, the term "infrastructure" includes structures, facilities, and equipment that generate, transport, and distribute energy - including electric vehicle (EV) charging – as infrastructure.³

Puerto Rico will comply with the Buy America requirements issued for NEVI. It is expected that FHWA guidance will be interpreted on a flexible and workable way that can allow states and territories access to these funds expeditiously but complying with all stated requirements. The proponents are free to choose any charging station manufacturer as long as it complies with this regulation, and it is not a considered a proprietary network.

² See 2 CFR §200.1

³ See Memorandum M-22-11, U.S. Office of Management and Budget, April 2022.

Existing and Future Conditions Analysis

General Geography and Terrain

Puerto Rico is a U.S. territory located 1,000 miles from the mainland states. The Puerto Rico archipelago is isolated from the continental US and depends heavily on maritime commerce for major resources. The geography of the main Island further complicated relief efforts. Stretching 100 miles across and 35 miles north to south, the Island is covered with vastly different terrain: rainforest, deserts, beaches, caves, oceans and rivers. Puerto Rico has three (3) main physiographic regions: the mountainous interior which covers approximately 60% of the Island, the coastal lowlands, and the karst area characterized by underground drainage systems with sinkholes and caves.

Climate

Climate considerations must be taken in consideration when choosing sites for EV Charging Infrastructure. In Puerto Rico during the different times of the year our climate presents conditions that expose us to the risk of suffering the effects of atmospheric phenomena such as rainfalls, hurricanes, storms, depressions, waves, troughs, convective rains, hailstorms, waterspouts and droughts. Among these weather phenomena, the first seven are capable of producing severe flooding, while hurricanes⁴ can produce significant damage to life and property as a result of their strong winds and rains that can lead to severe flooding and landslides across the entire municipality.

The climate of Puerto Rico is dominated regionally by oceanic influence and the equatorial current from the north, the movements of the intertropical convergence zone, the tropical and extratropical weather systems including the trade winds as they are influenced by the high pressure or anticyclone system of the Azores islands in the central portion of the North Atlantic, the central Atlantic. This combination has made a tropical climate prevail greatly influenced by the oceanic presence and by the orographic effect of the central bear interior. This induces greater rainfall on the windward slopes while on the southern slopes it dominates an area of rainfall shadowing that causes a decrease in rainfall. The dangers were identified from their historical recurrence.

Another natural hazard that can impact the EV charging infrastructure can be the earthquake. Puerto Rico is located near the boundary between the North American and Caribbean tectonic plates, a subduction area where one plate slowly moves down under the other. These subduction zones are subject to substantial seismic activity and lateral displacement. According to the Puerto Rico Seismic Network (PRSN) the relative speed between the movement of those two plates is 2 centimeters (cm) for each year. Also, the area of subduction where one plate moves slowly down below the other.

On January 6, 2020, a fully active seismic activity was recorded, registering an earthquake of magnitude 5.8 on, and another of 6.4. Since then, replicas have been felt, particularly in the southern area of the island.

For a detailed list of the earthquakes located by the Puerto Rico Seismic Network (PRSN) at present, or any information related to earthquakes and tsunamis, in the Region of Puerto Rico

⁴ The hurricane season in Puerto Rico begins from June 1 to November 30.

and Virgin Islands you can visit the General Catalog of Earthquakes of the RSPR on the official electronic portal of www.redsismica.uprm.edu

Emergency Evacuation Routes

As part of the EV Deployment strategies and considerations for siting, emergency evacuation routes from specific prone areas to flooding or tsunamis events will be considered. Since EV Charging stations may be located within an emergency evacuation route, PRHTA will coordinate with the State Emergency Management Agency, so language is included on existing Emergency Evacuation Plans. At Municipal and state level, the emergency evacuation plans should consider emergency and evacuation needs, including considerations for growing number of EVs using designated evacuation routes.

Land Use Patterns

Puerto Rico's transportation infrastructure includes 16,694 paved roads which represents 4.86 miles of paved road per square mile of land. This is significant when compared with other jurisdictions as established on the statistics developed by the World Bank Organization.

The Puerto Rico Land Use Plan (PUT for its acronym in Spanish) was adopted by the Puerto Rico Planning Board (PRPB) under Law No. 550 of October 3, 2004, as amended (Puerto Rico Land Use Plan Act). This Law establishes the PUT as Puerto Rico's main planning instrument that favors the sustainable development of our country and the optimal use of the land, based on a comprehensive approach to social justice and the broadest participation of all sectors of society.

In general, land use patterns for the Island are a function of conditions such as:

- Site topography;
- Adequacy of infrastructure (i.e., electric power, potable water, sewage sewer system, etc.);
- Adequacy of access to highway and/or maritime facilities; and
- Availability of Qualified Labor force.

The availability or lack of each one of the mentioned conditions, has resulted in specific area characteristics dictating land use patterns across the Island. Areas exhibiting significant land use patterns for industrial and residential purposes share and easy access to major highway corridors while agricultural uses have been typically flourished within the mountainous interior of the Island, which lacks adequate primary terrestrial connections.

As stated in the 2045 PR Long Range Multimodal Transportation Plan, industrial complexes have been established in the municipalities of Aguadilla, Barceloneta, Guayama, Manatí and Peñuelas, where there is a variability to easy access to and from major highways facilitate heavy traffic movement.

Demographic Overview

Over the past years, Puerto Rico has been facing a downward in population since mid 2000's. Multiple factors have been contributing to that trend. The economic contraction for a long period; approximately since 2007, has been one of those significant factors. In response, said economic contraction results in migration patterns, mostly to the mainland.

The island populations it's also facing what is called an inverted pyramid; population is getting older. This represents a series of challenge to the island in broad of aspects, new needs of transportation, health, labor, socio economics, services among others.

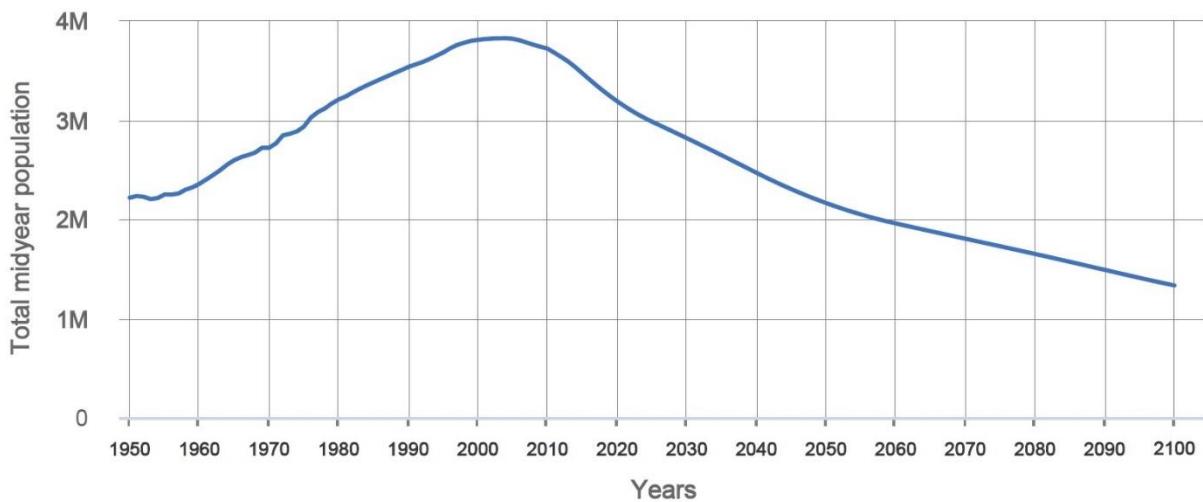


Figure 4: Puerto Rico Population by years. Source: US Census Bureau, International Database

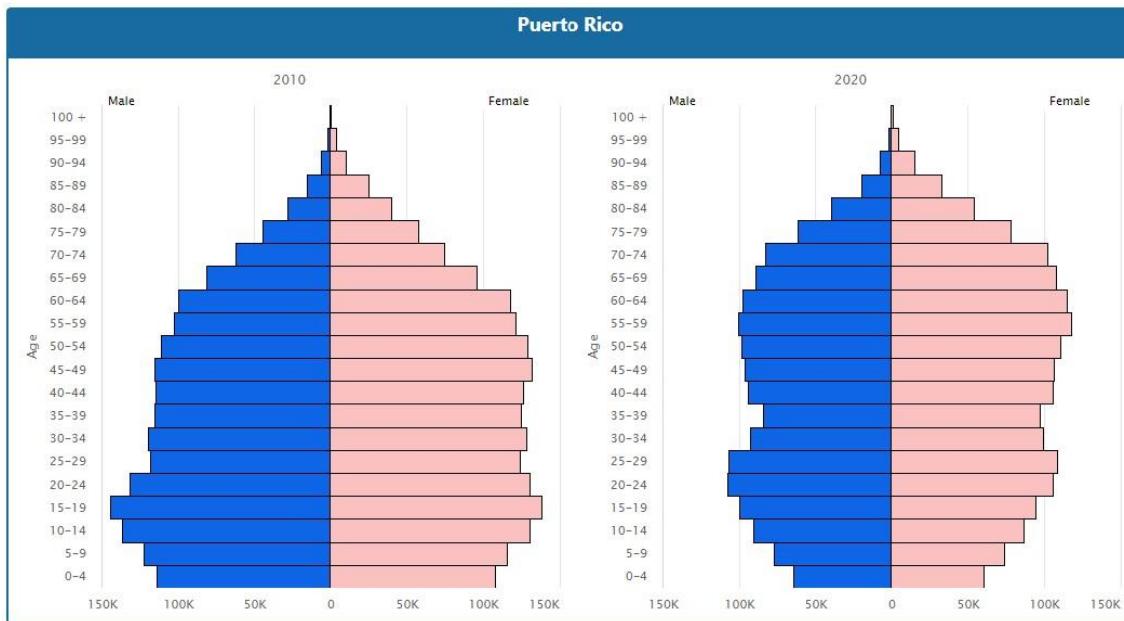


Figure 5: Puerto Rico Population by Age; 2010 – 2020, International Database

As seen on Figure 6, US Census projects that Puerto Rico will continue with the downward trend over the upcoming years. Following figure, shows the projected population trend by decade from 1990 to 2100

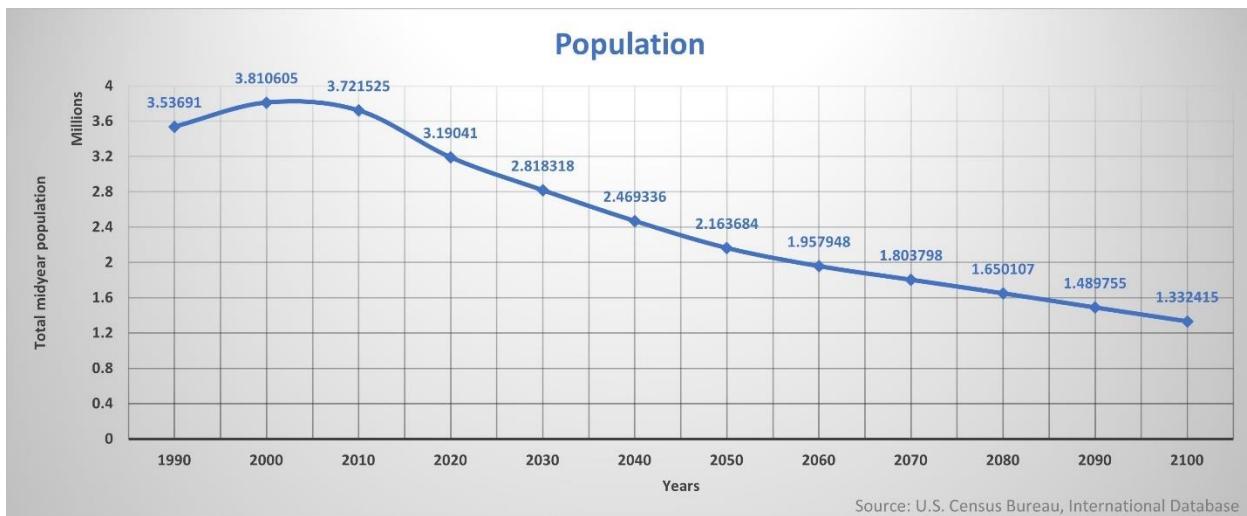


Figure 6: Puerto Rico Population Projection Source: US Census Bureau, International Database

Existing EV Ownership in Puerto Rico

The current number of EVs in Puerto Rico is rather low, reaching a little over 3,000 vehicles. As provided by the National Renewable Energy Laboratory (NREL) based on data from Experian, the number of EVs in Puerto Rico as of the third quarter of 2021 (Q3/2021) was of 3,210 EVs. Since then, EVs acquisition has increased in 2022. Currently, the PRHTA is working with the DTPW's database to update this number which is expected to be near the 3,500 vehicles.

The PRHTA and all participating agencies and stakeholders are confident that by building and supporting the right infrastructure inside and outside the highways network, drivers will consider purchasing EVs having more confidence and flexibility when traveling regardless the distance, time of travel, reason of traveling and/or weather conditions.

Grid Capacity. Puerto Rico has 2,400 miles of transmission lines, 30,000 miles of distribution lines and 342 substations. All these were severely damaged during the hurricane Irma and María events in 2017. Before the hurricanes, The PR Energy and Power Authority (PREPA) was already an underfunded public utility in need of an estimated \$4 billion to overhaul its outdated power plants and reduce its reliance on imported oil. In July 2017, PREPA filed for bankruptcy with \$9 billion in debt, according to the Puerto Rico Fiscal Agency and Financial Advisory Authority.

In 2020, the contract with LUMA Energy was signed for maintaining and modernizing the power distribution infrastructure. Since the system's transition to LUMA in 2021, multiple requests have been presented by various policy makers such as the PR Energy Bureau. Most recently and related to EVs, on November 2021 the PREB issued a Resolution and Order setting forth directives for initiating the EVs infrastructure deployment, including principles to guide the adoption of plans, regulations and procedures related to the electric vehicle energy sector in Puerto Rico. By September 2022, LUMA shall file the First Phase of an EV Charging Infrastructure Deployment Plan (hereafter the "Phase I EV Plan") reflecting principles and

compliance with requirements as set forth in the November Order. LUMA issued a Draft of Electric Vehicle Rate Design Proposal on July 21, 2022. From this document, the following challenges that need to be overcome were identified:

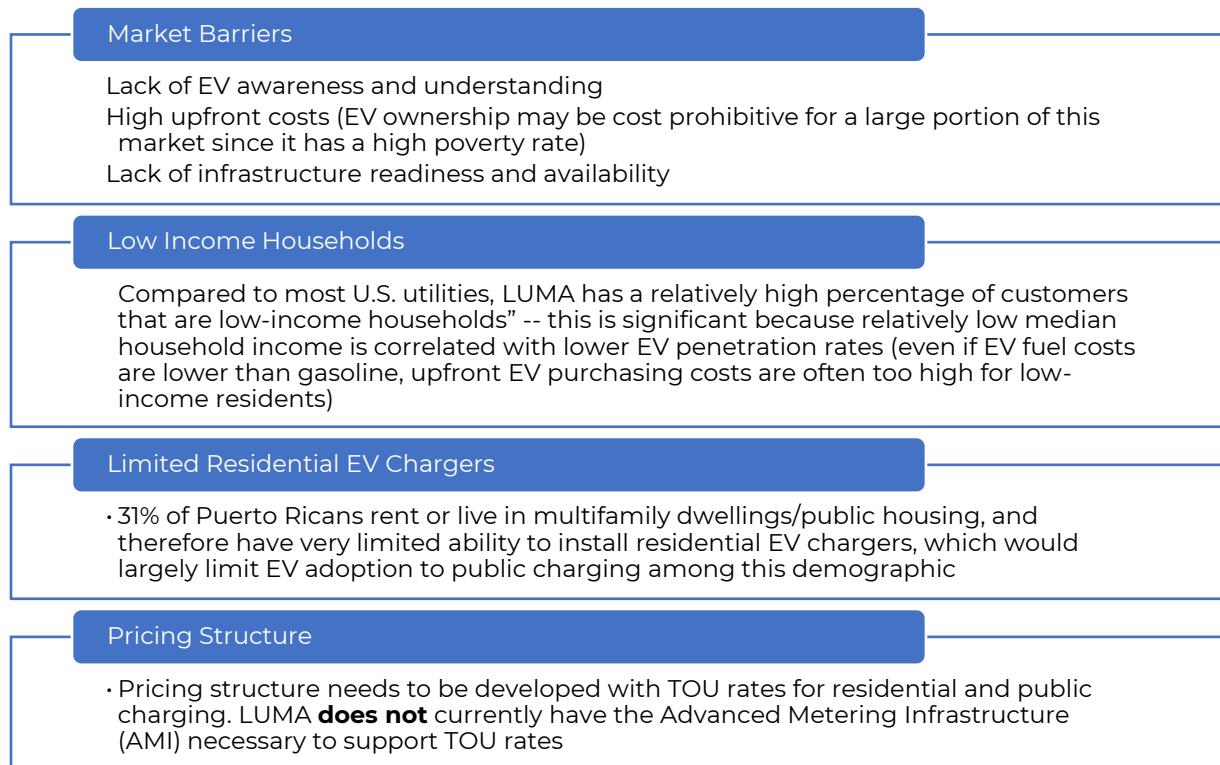


Figure 7: Existing challenges for EV market in Puerto Rico

Although LUMA has a plan to reconstruct, rebuild, rehabilitate, and update the power grid, this will take long years to be completed. Understanding that the power infrastructure is currently on a fragile condition it may be required to strategize that during the first years of the EV Infrastructure deployment, the PRHTA may need to submit a request to FHWA to consider allowing sites in which initially the 600kW requirement could be waived to future deployment phases. Puerto Rico has unique geographic and infrastructure limitations and it could benefit from exemptions like this one.

EV Charging Infrastructure Deployment

The Puerto Rico Government, through the PRHTA, will partner with private entities to create the Electrical Vehicles infrastructure required to develop a convenient, affordable, reliable and equitable network. Although that Puerto Rico currently has charging stations near the AFC designated corridors, these charging stations do not comply with the NEVI Formula Program requirements.

Funding Sources

Under the NEVI Formula Program there is federal cost share of 80%. Private and State funds can be used to provide the remaining 20% cost-share. NEVI Formula Program funds can be spread further by combining them with other eligible USDOT funding for EV charging infrastructure projects if the eligibility requirements are met for both programs and the total Federal cost-share does not exceed 80 percent.

The FHWA has also authorized, for PRHTA to use Toll Credits for matching, cost share purposes. Toll credits were first enacted in Section 1044 of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and modified in Section 111(c) of the Transportation Equity Act for the 21st Century (TEA-21). 23 USC 120(j) allows certain toll revenue expenditures to count as credit toward the local matching share of highway projects authorized under Title 23. Toll credits are/were earned while Puerto Rico invested state money on federally approved toll roads. For the past decade, PRHTA has been benefiting from Toll Credits to fund projects from a 100% federal funding as these credits account for the 20% or 10% required match accordingly.

During the competitive process, private entities should address alternatives for cost sharing; project finances and financial prudence will be part of the proposals scoring criteria and ranking.

The purpose of public funding is not to discourage private investment, but instead to catalyze additional private investment and supplement and fill gaps to provide a convenient, reliable, affordable, and equitable national EV charging network.

2022 Infrastructure Deployments/Upgrades

NEVI Formula Program funds are directed to designated Alternative Fuel Corridors to build out convenient, reliable, affordable, and equitable public charging network. As indicated in the NEVI Formula Program Guidance Puerto Rico will first prioritize investments along the Interstate Highway System (IHS). Once the IHS is provided with charging stations, funding may be used elsewhere on designated corridors along the National Highways System (NHS).

Any EV charging infrastructure acquired or installed with NEVI Formula Program funds shall be located along a designated Alternative Fuel Corridor. Currently, Puerto Rico's priority is the Interstate Highway System.

Once Puerto Rico Government determines, and FHWA certifies, that the designated Alternative Fuel Corridors for electric vehicles are fully built out, then the funds provided under the NEVI Formula Program may be used for EV charging infrastructure on any public road or in other publicly accessible locations that are open to the general public or to authorized commercial motor vehicle operators from more than one company.

Alternative Fuel Corridors

Three of the major corridors in Puerto Rico were recently designated as Alternative Fuel Corridors: PR-2, PR-22 and PR-52. These corridors were submitted as “corridor pending”. Corridor pending means that a corridor does not have sufficient alternative fuel facilities to support alternative fuel vehicle travel.

PR-2, named the Military Route (classified as a Principal Arterial/Interstate), forms a major north, west and south corridor which runs from San Juan passing through north, west, and south municipalities ending in Ponce. With 143 miles (230 km) long, it is Puerto Rico's longest singled-signed highway. PR-2 has become an important freight distribution corridor which directly serves 27 municipalities through its route. It carries a range between 12,500 to 76,600 vehicles per day which serves different urban and rural communities. From its origins, the facility has been an important icon for Puerto Rico's social and economic development. Along this nearly 156-mile section of PR-2, the corridor exhibits a stable and diverse employment base with state government and services along with private sector business and industries which serves the citizens. Also serves as a connection for the interchange between PR-22 Highway in Hatillo.

PR-22, also known as the José De Diego Expressway (classified as an Interstate), is a 52 miles (84.3 km) long toll road that connects the cities of San Juan and Hatillo along the north coast of Puerto Rico. The eastern start point is at PR-26 (a non-tolled freeway) in Santurce and passes through the Minillas Tunnel. Administered by Autopistas Metropolitanas de Puerto Rico, LLC (“metropistas”), PR-22 has become an important corridor used by freight distribution which directly serves 12 municipalities as a mode to efficiently save travel time by helping to reduce congestion in PR-2. The freeway bypasses all the city's PR-2 passes through and includes seven electronic gates, including the Buchanan station, through which more than 25 million vehicles pass each year and serves an area that stands out the location of large multinational companies in the commercial, industrial, and pharmaceutical sectors along with the San Juan Metropolitan Area where the most employers have their main operational facilities. PR-22 connects in the km. 2.8 with PR-52, in km. 10.2 with PR-5 and with PR-2 in km. 83.8. This corridor provides important key connection for businesses and residents in the region carrying between 31,800 to 234,100 vehicles per day which also serves different urban and rural communities.

PR-52, also known as the Autopista Luis A. Ferré (classified as an Interstate), is a 68 miles (109 km) long toll road that connects the cities of San Juan and Ponce, it runs from PR-1 in southwest Río Piedras and heads south until it intersects with highway PR-2 in Ponce running concurrent with PR-1. Toll stations are in San Juan, Caguas, Salinas, Juana Díaz, and Ponce. PR-52 has become an important corridor used by freight distribution which directly serves 7 municipalities as a mode to efficiently save travel time by helping to reduce congestion in PR-1. This corridor provides important key connection for businesses and residents between the Metropolitan Area of San Juan and Ponce Area carrying between 32,900 to 153,300 vehicles per day which also serves different urban and rural communities.

For Round 07 of the Request for Nominations for Alternative Fuel Corridors, it is intended to submit the remaining corridors that comprise the IHS



Figure 8: Corridors to be submitted on Round 07 Alternative Fuel Corridor Designation

ALTERNATIVE FUEL CORRIDOR APPROVED AND TO BE SUBMITTED



Figure 9: Alternative Fuel Corridors Approved and to be Submitted on Round 07

Charging Stations Requirements

Under the NEVI Formula program, the charging stations need to meet the following requirements:

- Must be within a designated Alternative Fuel Corridor (AFC)
- Charging stations must be Direct Current (DC) Fast Charging
- Stations should not be separated by more than 50 miles
- Location of station/site no more than 1 mile from Interstate exits or highway intersections along the AFC
- Each EV Charging infrastructure must include at least four (4) 150kW Direct Current (DC) Fast Chargers with Combined Charging System (CCS) ports capable of simultaneously DC charging 4 electrical vehicles.
- EV Charging infrastructure shall have a minimum station capability at or above 600kW and supports at least 150kW per port simultaneously across four ports for charging.
- US made EV supply equipment is preferred.
- Achieve a high-level of reliability (>97 percent at the individual station level);
- EV charging infrastructure should be maintained in good working order and in compliance with all EV charging infrastructure manufacturer requirements; In compliance with all requirements in the forthcoming minimum standards issued by FHWA.

Figure 10 to Figure 12 show existing charging station on designated Alternate Fuel Corridors or within a mile of each exit within the corridor.

PUERTO RICO ELECTRIC VEHICLE (EV) CHARGING CORRIDORS

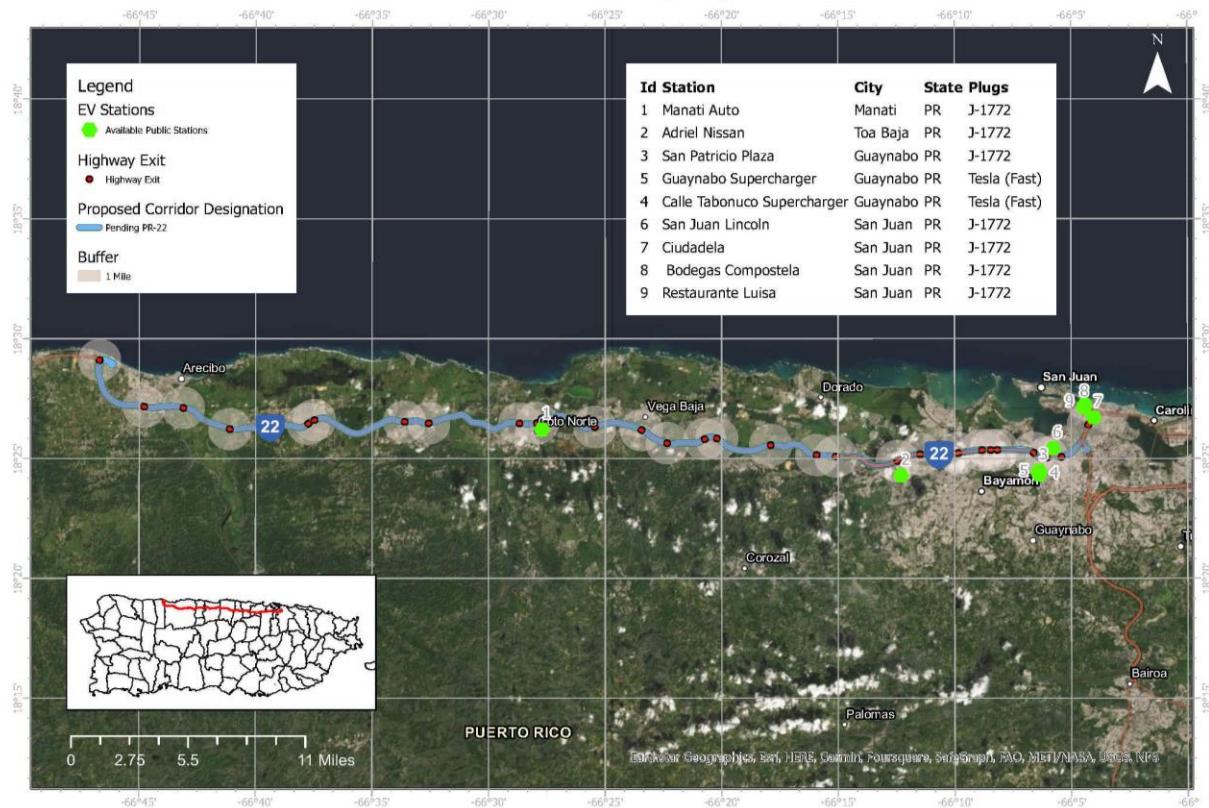


Figure 10: Puerto Rico Electric Vehicle Charging Corridors for PR-22

PUERTO RICO ELECTRIC VEHICLE (EV) CHARGING CORRIDORS

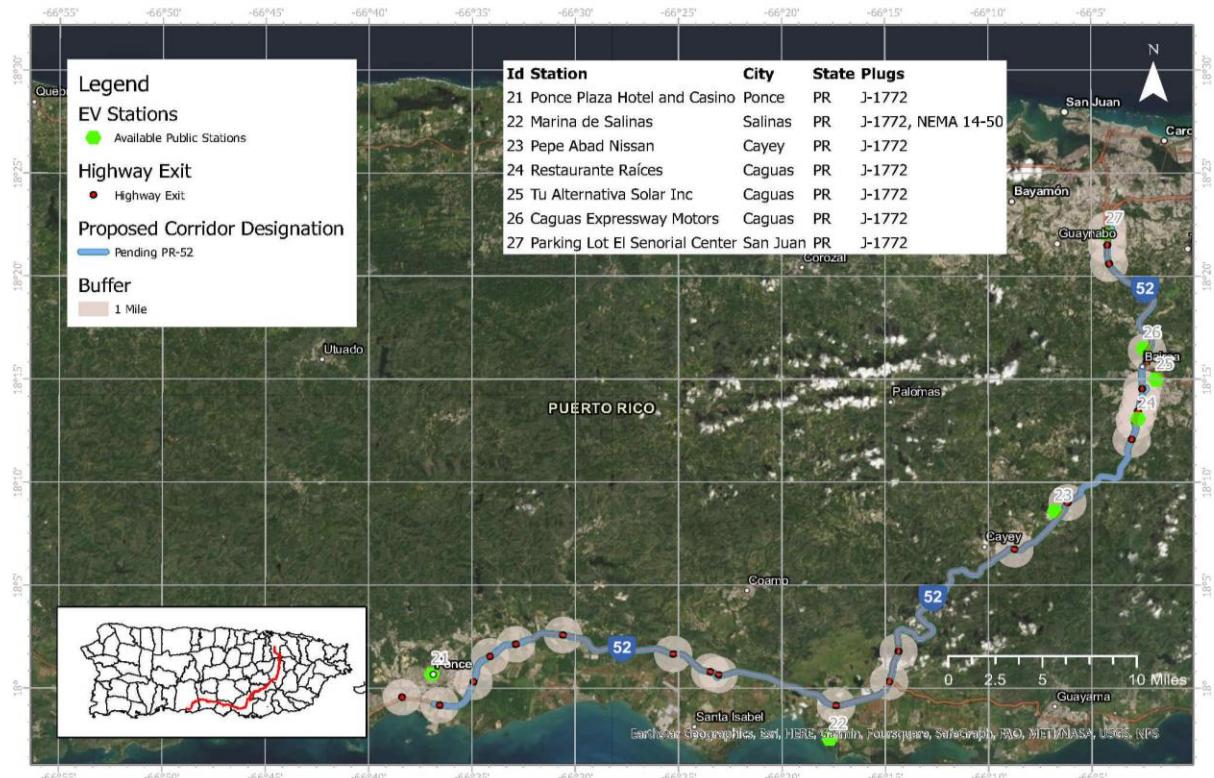


Figure 11: Puerto Rico Electric Vehicle Charging Corridors for PR-52

REMAINING OF PAGE LEFT BLANK INTENTIONALLY

PUERTO RICO ELECTRIC VEHICLE (EV) CHARGING CORRIDORS

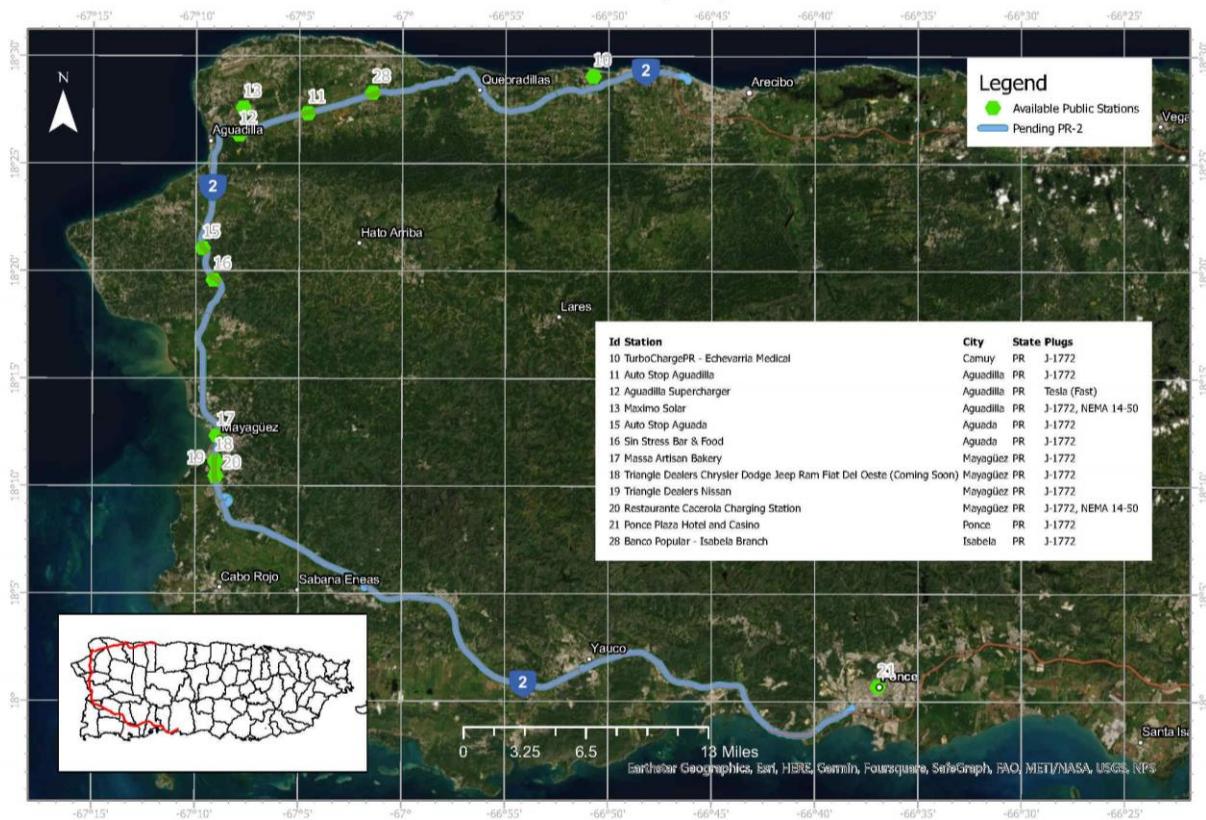


Figure 12: Puerto Rico Electric Vehicle Charging Corridors for PR-2

Existing stations do not meet program requirements because they are not DC Fast chargers. Tesla chargers do not qualify because they are considered a proprietary network that does not meet the criteria for public access designation.

Approximate Locations

The Interstate Highway System in Puerto Rico is no ordinary network. Puerto Rico has 410 km (250 mi) of Interstate highways. There are three designated Interstate Highways — officially I-1, I-2 and I-3 — in Puerto Rico. As with Interstate Highways in Alaska and Hawaii, these routes do not connect to the rest of the United States Interstate Highway System, but still receive funding in a similar fashion to the Interstates in the contiguous US. Also, Puerto Rico Interstate routes are unsigned. They do not follow the rules of even and odd numbers determining direction used in mainland United States. Per Section 103(c)(1)(B) (ii), Title 23, United States Code (23 U.S.C.) Puerto Rico is exempt from the design standards of Section 109(b).

Based on the above, the IHS basically runs through multiple municipalities and significant commercial activity is near or within the main corridors. Commercial activity within the one (1) mile radius requirement was researched for the AFCs. There are several locations that may qualify as eligible sites along these corridors such as banks, department stores, hospitals, hotels, pharmacy, restaurants, shopping malls, supermarket, theaters, and universities; a high percentage of which have big parking spaces with public access 24 hours a day. This fact is important as some of the best locations to build charging stations may be along these corridors and facilities.

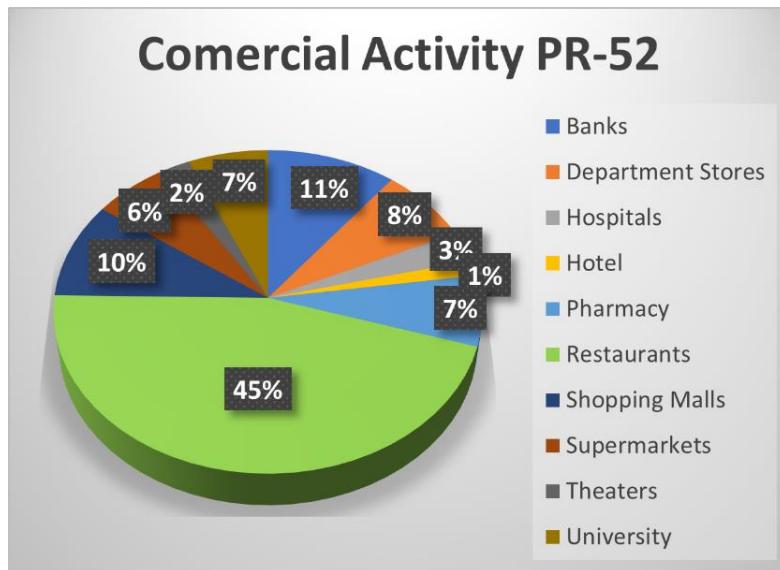


Figure 13: Commercial Activity PR-52 within 1 mile Radius

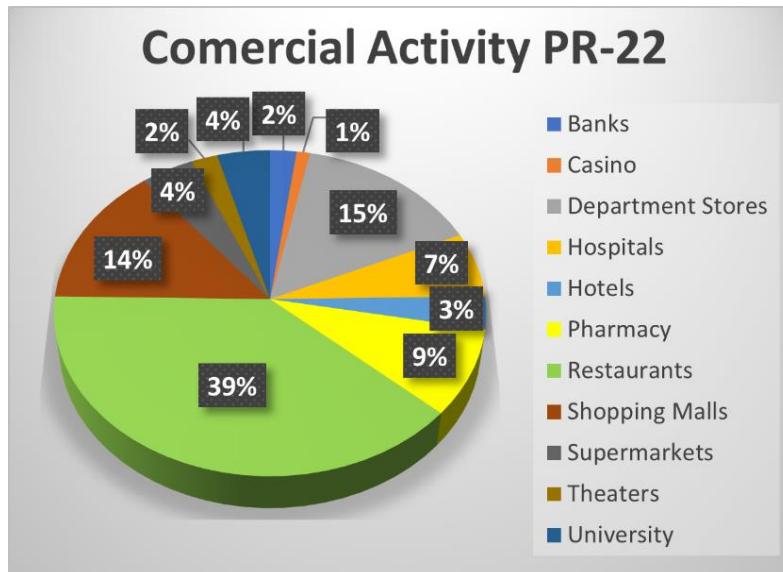


Figure 14: Commercial Activity PR-22 within 1 mile Radius

Grid Connectivity

Electricity rate design shall encourage and incentivize consumer behavior. Hence, on the residential sector, the deployment shall be synchronized with concurrent implementation of a time of use (TOU) rate. Nonetheless, the infrastructure and technologies to be deployed shall match market demand and ensure flexibility for emerging technologies and that's why the connectivity is also been analyzed and incentivized at a public policy level through the PREB for locations where parking occurs for an extended period of time and locations where user seeks quick charge. The later, is aligned with NEVI Formula Program requirements, goals and objectives.

EV Charging deployment shall be coordinated with energy efficient deployment and demand response implementations to decrease and redirect load toward renewably generated electricity, to expedite the process of transition from carbon and derived fossils.

Planned Investments

The following are other initiatives that cooperative other agencies are currently implementing for EV Charging Stations

- **Energy Support Program.** Deployment of ninety-nine (99) Level 2 charging stations to be installed at small and medium size businesses under the “Apoyo Energetico” Program. The stations will be eligible activities under the DEDC incentive program.
- **Volvo Cars Initiative.** Coordination with Volvo Cars to deploy 100 Level 2 Station islandwide. Volvo will pay for the charging stations to promote the use of EVs while businesses will have the opportunity to offer this service to all clients, regardless of the car brand.
- **Vieques and Culebra.** Pilot Project in the municipalities of Vieques and Culebra to provide 1 electrical vehicle to each municipal government while installing 2 charging stations that will be available and open for public use. During the initial phase, there will be no charging fee.
- **Volkswagen Funds.** The government of Puerto Rico has received \$8.7M from the Volkswagen (VW) settlement. These funds are currently overseen by the Department of Natural Resources. They can be used for EV incentives and infrastructure related expenses. The funds have not yet been used; a planning process is still underway. These funds may be reassigned to the Energy Bureau.

FY23-26 Infrastructure Deployments

Puerto Rico will begin deploying NEVI formula funding in FY23, following the implementation goals as outlined in Plan Goals and Vision section and procurement strategy as outlined in the Contracting section. Puerto Rico will implement this plan within the 5-year funding cycle of the NEVI program as indicated on Table 3 below.

Anticipated Dates	Tasks to be performed
Year 1 – FFY 2023	<ul style="list-style-type: none">▪ Plan is approved and adopted.▪ Continue meetings with PREB to establish rates▪ Continue meetings with LUMA and PREB to overcome grid challenges.▪ Prioritization of Alternative Fuel Corridors (AFCs).▪ Submitting nominations for additional Interstates on Round 07 as AFCs.▪ Continue public outreach.▪ Issue RFP, select projects, award contracts▪ Construction begins▪ Create and Nominate the Monitoring and Compliance Team▪ Review NEVI Discretionary Grant Guidance
Year 2 – FFY 2024	<ul style="list-style-type: none">▪ Revise Plan for required amendments and modifications▪ Issue annual RFP, select projects, award contracts▪ Monitor and evaluate implementation progress▪ Collect, analyze and report data▪ Continue coordination with stakeholders.▪ Submit Projects under the Discretionary Plan Program

Year 3 – FFY 2025	<ul style="list-style-type: none"> ▪ Issue annual RFP, select projects, award contracts ▪ Construction of charging stations ▪ Monitor and evaluate implementation progress ▪ Collect, analyze and report data
Year 4 – FFY 2026	<ul style="list-style-type: none"> ▪ Issue annual RFP, select projects, award contracts ▪ Construction of Charging Stations ▪ Monitor and evaluate implementation progress ▪ Collect, analyze and report data
Year 5 – FFY 2027	<ul style="list-style-type: none"> ▪ Issue annual RFP, select projects, award contracts ▪ Construction of charging stations ▪ Monitor and evaluate implementation progress ▪ Collect, analyze and report data ▪ Conduct gap analysis to identify remaining network discontinuities ▪ Final report of program's goals and achievements. ▪ Contract renewals.

Table 3: Table of Deployment Activities by Federal Fiscal Year

Figure 15 below shows the roadmap of future activities that will be performed upon Plan submission on August 1, 2022.

REMAINING OF PAGE LEFT BLANK INTENTIONALLY

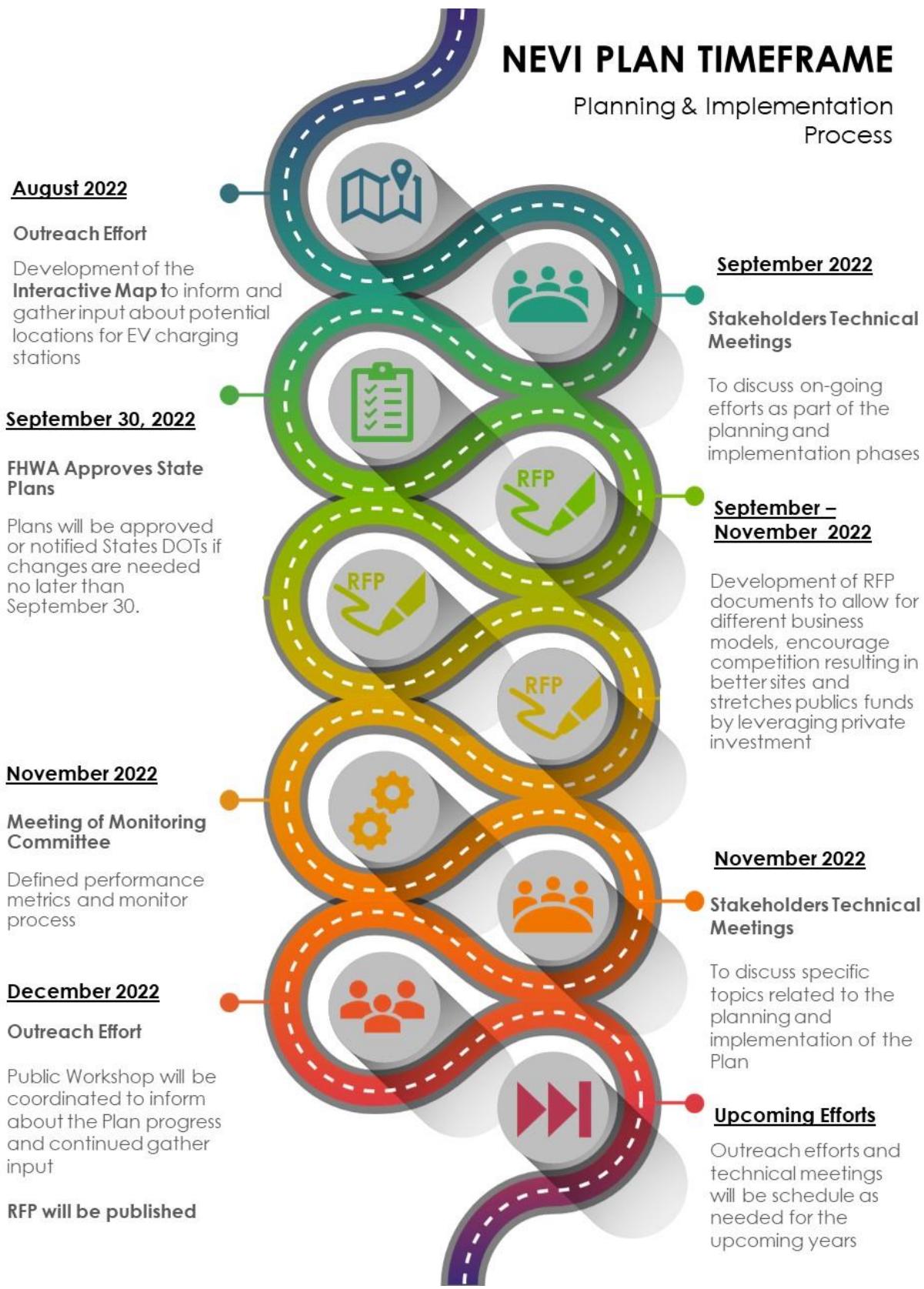


Figure 15: Upcoming activities for NEVI Deployment

State, Regional and Public Policy

This Plan has been developed following the NEVI Formula Program Guidance and will converge into the existing legal framework and initiatives already taking place in Puerto Rico. The following are just a few of the most important approved laws that will be complemented and supported by this Plan:

1. **Act 57-2014; which created the PR Energy Bureau (PREB)**, an independent and specialized body created to serve as a key component for the full and transparent implementation of the Energy Reform.
2. **Act 81-2014, Law to promote Vehicles Driven Mainly by Electricity**, which promotes the use of more efficient and less polluting vehicles to reduce environmental pollution and seeks to exempt from the payment of excise taxes any vehicle powered mainly by electricity, a concept that includes plug-in hybrid vehicles ("plug-in") and electric vehicles. The act also provides for the elimination of any obstacle in the public infrastructure that could discourage the construction of charging stations.
3. **Act 17-2019 ; Puerto Rico Energy Public Policy Act**, establish the public policy regarding energy in Puerto Rico. Under this law, Puerto Rico established the energy public policy in order to set the parameters for a resilient, reliable, and robust energy system with just and reasonable rates for all class of customers; make it feasible for energy system users to produce and participate in energy generation; facilitate the interconnection of distributed generation systems and microgrids, and unbundle and transform the electrical power system into an open system.
4. **Act 33-2019, Puerto Rico Climate Change Mitigation, Adaptation and Resiliency Act**, details pathways to phase out fossil fuels, achieve 100% clean energy by 2050, improve energy efficiency, reduce greenhouse gas emissions, promote electric car use, and conduct reforestation and ecosystem service restoration
5. **LUMA EV Charging Infrastructure Deployment Plan** (Phase I EV Plan). This plan shall identify near term transportation electrification action LUMA can take to undertake challenges that will allow for the adoption of EVs in Puerto Rico starting in the residential sector. This plan shall identify actions, required infrastructure, rate design, services and programs to comply with Act 17-2019 and Act 33-2019.

Civil Rights

This Plan is based and will required that all proposed guidelines, procedures and recommendations for the deployment of EV charging stations will be created pursuant to all federal, state, local laws and applicable regulations. This includes, but is not limited to, compliance with Title VI of the Civil Rights Act and with the American with Disabilities Act (ADA).

The DTPW/PRHTA's Civil Rights Office (CRO) has as primary goal ensuring equality of opportunity, both within our agency in construction projects and in all programs. A civil right is the common name given to those rights guaranteed to all citizens by the Constitution of the Commonwealth of Puerto Rico and the United States and other legislation, guaranteeing equal treatment. Such treatment is guaranteed without distinction as to race, color, religion, gender (including equal pay for equal work) or gender identity, pregnancy, actual or perceived sexual orientation, genetic information, national origin, age, social status, political ideologies, serological status, veteran status, by becoming a victim or perceived victim of domestic violence, sexual assault or disabilities irrelevant to the requirements of an occupation. Any person who believes he or she have been excluded from participation in, denied the benefits of, or otherwise subjected to discrimination under a DTPW/PRHTA program or activity because of their race, color, national origin, age, sex, or disability may file a formal complaint with DTPW's/PRHTA's CRO. The complaint must be filed within one hundred eighty (180) days of the alleged discrimination.

Compliance with Title VI:

The PRHTA commits to include language in the RFP documents and in the contract agreement between the PRHTA and the private sector towards compliance with Title VI requirements. If a contractor does not comply with the nondiscrimination statutes outlined in the agency's Title VI plan, the agency will impose sanctions on the contractor (for example, terminating the contract or withholding payments until compliance is met).

Upon this Plan's approval, the PRHTA will continue outreach and public involvement activities that will include maps indicating possible preferred sites for EV Charging stations, NEVI Program information, developments and amendments related to this Plan and any other significant information.

The CRO will have available information about the NEVI Formula Program, EV Charging Infrastructure and environmental benefits and requirements while implementing this alternate fuel stations along Puerto Rico's major corridors.

Compliance with ADA:

Federal accessibility standards do not explicitly address electric vehicle charging stations. However, it is required to incorporate ADA accessibility requirements in the design of commercial charging station equipment and installation plans. EV Charging stations deployed under this Program are a service offered to the public. Hence, charging stations shall be manufactured and installed to meet accessibility requirements of federal, state and local laws. To comply with ADA requirements, the EV Charging station locations must consider:

- General parking accessibility requirements
- Including adequate signage for ADA designated parking spaces
- Including adequate signage for EV Charging Stations and not allowing ADA designated parking spaces to be designated as "EV Charging Only"

- If EV Charging Stations are located within a large parking lot, and not necessarily close to the business entrance, an appropriate accessible path of travel should be considered for people with disabilities.
- As a consideration during solicitation of proposals for EV Charging stations, it would be an evaluation criterion for proponents to certify that the site is ADA Compliant or that corrections of physical barriers to disabled persons' accessibility will be performed to comply with ADA requirements.
- While selecting charging equipment, preference must be given to charging stations and equipment designed for accessibility (accessible reach range, accessible controls, accessible card reader devices, among other parameters).
- Outreach events must be extensive to and account for public feedback from the disability community.

Equity Considerations

According to the Argonne National Laboratory's page Electric Vehicle Charging Equity Considerations and the Electric Vehicle Charging Justice40 Map tool, all of Puerto Rico falls under the DOT's interim definition of "disadvantaged group," therefore the entire island is eligible for Justice40-covered grant programs (which establish the "goal of 40% of the benefits of Federal investments in clean transportation going to disadvantaged communities"), meaning the entire island is a priority for NEVI funds.

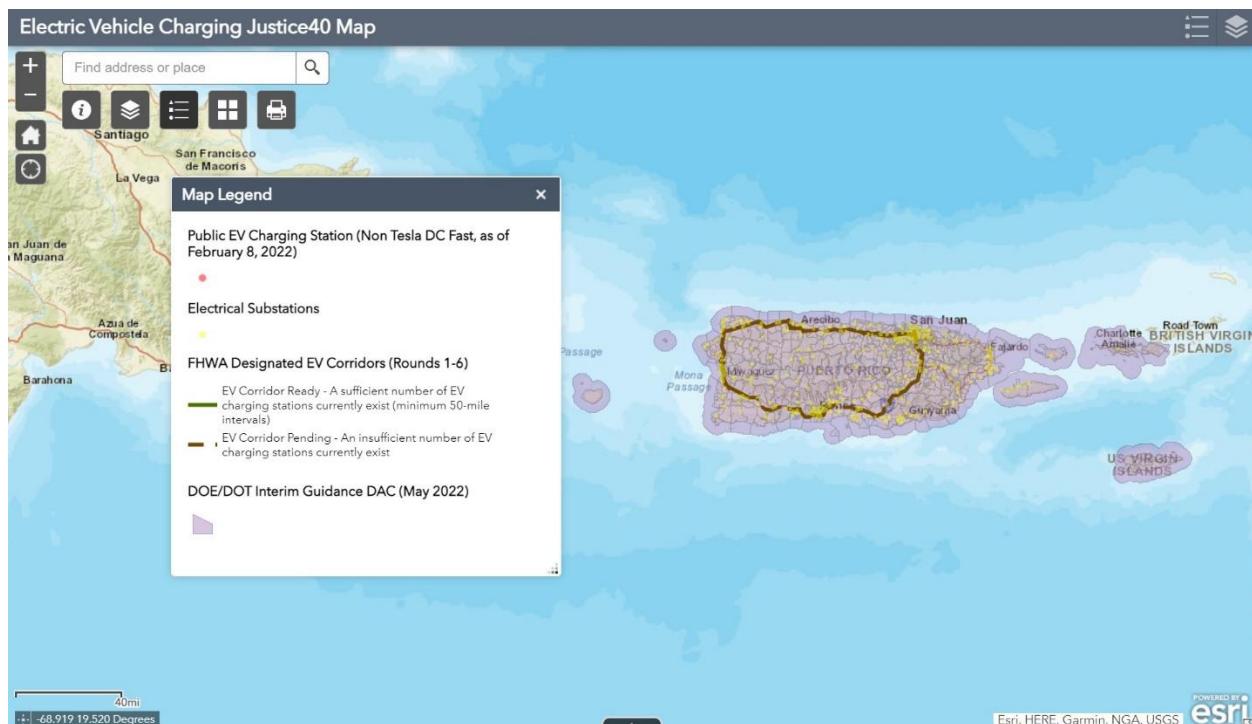


Figure 16: Argonne National Laboratory Map Tool for PR

The distribution of EV charging infrastructure across Puerto Rico designated and future designated Alternate Fuel Corridors (AFCs) will be targeted to provide charging facilities and accessibility to safe, convenient, affordable and equitable network.

Once the additional technical guidance is provided for the NEVI Formula Program and Guidance for the Discretionary Grant Program for Charging and Fueling infrastructure are published by the Federal Highway Administration (FHWA), Puerto Rico will be also redirecting efforts towards Community Charging Grant program to deploy publicly accessible EV charging infrastructure in communities; prioritizing access of EV charging infrastructure to serve rural, underserved and disadvantaged communities and identifying gaps in existing service and charging stations. In addition to initiatives listed under the EV Charging Infrastructure Deployment section of this Plan, there are other funding sources available, such as Community Development Block Grants for Mitigation (CDBG-MIT) funding, administered by the PR Department of Housing (PRDOH) which will soon become available. CDBG-MIT includes programs targeted to incentivize alternative fuel initiatives while assisting DACs.

Identification and Outreach to Disadvantaged Communities (DACs)

Compared to most U.S. utilities, Puerto Rico has a relatively high percentage of customers that are low-income households-- this is important since comparatively low median household income is correlated with lower EV penetration rates (even if EV fuel costs are lower than gasoline, upfront EV purchasing costs are often too high for low-income residents). However, there are low-income electricity rates to eligible customers (roughly 18% of total customers), and “may be able” to maintain these subsidies for low-income adopters of residential EV charging.

Low-income households tend to be renters (31% of Puerto Ricans rent or live in multifamily dwellings/public housing), and therefore have very limited ability to install residential EV chargers, which would largely limit EV adoption to public charging among this demographic. Therefore, identifying sites that will encourage affordable, reliable and equitable EV charging network is a big step when in combination with current efforts by the PREB and their request to LUMA to develop their EV Charging Infrastructure Deployment Plan. The following are the 3 pilot pricing structures for Puerto Rico:

- Residential charging with a Time of Use (TOU) rate (most expensive at times of peak energy demand and least expensive at times of lowest demand, separate meter used exclusively for EV charging)
- Public charging with a TOU rate and a fixed and/or reduced demand charge (primarily so that customers who cannot install residential chargers can better afford to charge at public stations during peak times)
- A residential, monthly subscription model (fixed monthly price for all EV charging up to a specified maximum, separate meter used exclusively for EV charging)

From the pricing structures mentioned, the public charging with TOU rate structure will continue to be discussed between PRHTA and LUMA in order to incorporate NEVI Formula Program requirements established through this Plan.

At a contracting level, the PRHTA will encourage policies established by the CRO such as Disadvantaged Business Enterprise (DBE) Program which offers contracting opportunities to local enterprises certified as DBEs (must be at least “51% owned and controlled by one or more individuals who are socially and economically disadvantaged” and the owners must have a net worth of less than \$1.32 million). For 2021-2023, the FHWA has established the goal of 18.25% of the businesses it collaborates with in Puerto Rico being DBEs and the FTA has established the goal of 52.8% of such businesses being DBEs in Puerto Rico

Other initiatives include:

- Affirmative Action Program for women, which focuses on providing agency employment opportunities to women -- a group which has historically been excluded/underrepresented from the industry. DTPW maintains a Bill of Rights for Female Workers, which outlines a non-exhaustive list of protections for women in the workplace

- On the Job Training Program: FHWA and PRHTA have On-The-Job training programs designed for women, youth, and individuals facing social and/or economic disadvantages; these programs aim to provide technical training and job opportunities to individuals with no previous experience in construction. Participants receive transportation stipends, basic construction attire and tools, childcare stipends, and certificates of participation
- The PRHTA Contract Compliance Program encourages the participation of women in the construction process, with the goal of women holding 6.9% of construction positions.

Process to Identify, Quantify, and Measure Benefits to DACs

The PRHTA is committed to work with other important stakeholders to identify, quantify and measure benefits to DACs resulting from the initiatives included in this Plan and in coordination with other efforts and initiatives from collaborative agencies and entities in Puerto Rico. PRHTA will adopt any standards and guidelines provided by the FHWA and the Federal Department of Energy (DOE) towards the performance measurement strategies to be implemented nationwide to record and quantify benefits to DACs.

Benefits to DACs through this Plan

PRHTA commits to identify, develop and implement strategies that will result in benefits to DACs. PRHTA will seek guidance from local and federal agencies on defining benefits to DACs and the evaluation of significant criteria that will conduce to the development of Key Performance Indicators (KPIs) to quantify and measure such benefits.

Labor and Workforce Considerations

It is critical that labor and workforce considerations are taken as part of the Plan implementation strategies. These considerations must be extended to charging station equipment distributors, the contractors responsible for the installation of stations and the private entities that will be operating and maintaining the charging stations. The main objective is to promote diversification and inclusion in the workforce. Since the EV acquisition in Puerto Rico is still rather low, training needs to be developed for skilled labor for the installation, operation and maintenance of EV Charging infrastructure.

Most of the Puerto Rican workforce is Spanish-speaking, and the 2015 census indicates that 78.9% of the population speaks English "less than very well". Therefore, public job notices, work contracts, complaint forms, Title VI related documentation, etc. that the PRHTA and DTPW publishes internally are all be available in both Spanish and English. For NEVI, interested private entities should include strategies and initiatives that they currently have for labor and workforce considerations.

As a consideration to be included in the request for proposal document when requesting solicitations for NEVI Formula funding obligation, there will be considerations for labor and workforce. As part of the scoring criteria included in the request for proposals, labor and workforce considerations will be considered. Similar practices that the one established by the CRO and adopted by PRHTA and DTPW will be encourage during the competitive process for additional scoring.

Cybersecurity

PRHTA is committed to ensuring that the electric vehicle charging networks are secured and do not represent a risk of cybersecurity or personal privacy. To comply with this, the Plan focuses in the following initiatives to be accomplished:

- 1) Continue coordination with the Puerto Rico Innovation and Technology Service (PRITS) Office. PRITS was created in 2019 to implement the government's digital transformation through technology and collaborative efforts.
- 2) Request during the solicitations, the proponent's approach and strategy towards Cybersecurity for data production and processing throughout the contract term
- 3) Include language in Contract with third parties that will be receiving NEVI funding for EV charging stations or any other eligible activity, that requires the secured environment for data storage and data sharing processes.
- 4) Include language in Contract with third parties that will be receiving NEVI funding requesting the approach that will be implemented for the transfer of required recurring data and
- 5) the publication of station reference and usage data such as station location, cost per kWh, power usage and power rating.

Program Evaluation

PRHTA is committed to successfully implementing the Plan. Among the ideas and initiatives that are currently under evaluation and pending additional technical guidance from USDOT, is the creation of a Monitoring and Compliance Committee (MCC) to evaluate and monitor the progress of the plan and recommended adjustments needed to ensure a successful implantation. The details and framework in which this Monitoring and Compliance Committee will be created are still pending and under evaluation. Yet, it must be developed during FFY 23. At a public policy level, important stakeholders should be members of the MCC to oversee not only the NEVI Formula Plan initiatives but the universe of initiatives and programs that will be implemented with the next decades in Puerto Rico.

It is PRHTA intention that the evaluation process to be implemented will assess performance, collect data of EV charging infrastructure, and the utilization rates for charging stations funded with NEVI Formula Grant. As required by the program, data will be provided to the Joint Office of Energy and Transportation. Also, the evaluation process shall document and assess, at minimum, the following:

- Program compliance with requirements
- Funding distributions
- Number of funding recipients
- Time required to construct new charging stations
- Number of charging stations constructed

Appendix A: Supporting Materials (As Applicable)

- NEVI Presentations published in social media and PRHTA's Website
- Support Letters



State Plan for Electric Vehicle Infrastructure Deployment

National Electric Vehicle Infrastructure Program
(NEVI)

Objectives



- ❑ Inform about the National Electric Vehicle Infrastructure(NEVI) program
 - ✓ Program objectives
 - ✓ Eligibility criteria
- ❑ Inform about the Designation of Alternative Fuel Corridors
 - ✓ Selection criteria
 - ✓ Designation proposal on the island
- ❑ Inform about the process of the development of the State Plan for Electric Vehicle Infrastructure Development

NEVI – National Electric Vehicle Infrastructure

EV – Electric Vehicles

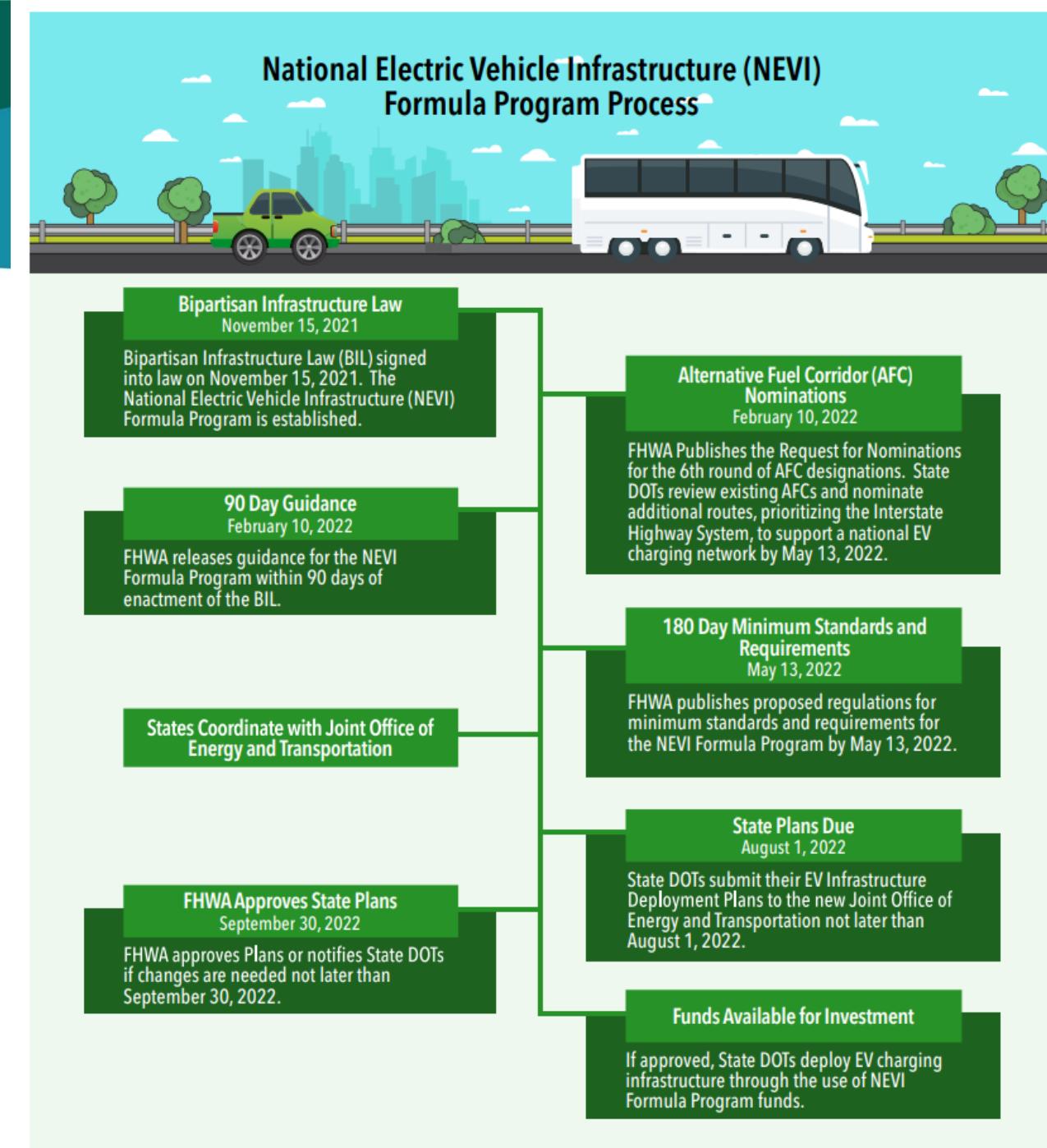
PRHTA – Puerto Rico Highway and Transportation Authority

FHWA –Federal Highway Administration

NHS – National Highway System

Introduction

- The National Electric Vehicle Infrastructure (NEVI) Program is authorized under the Highway Infrastructure Program of the Bipartisan Infrastructure Law (BIL).
- States are required to submit an EV Infrastructure Deployment Plan that describes how it intends to use its apportioned formula funds.
- Any EV charging infrastructure acquired or installed with NEVI Formula Program Funds shall be located along a designated Alternate Fuel Corridor.
- PRHTA submitted PR-2, PR-52, and PR-22 as “corridor pending” in May 2022. **FHWA approved on July 6, 2022.**



NEVI Objectives

EQUITABLE Adoption of Electrical Vehicles

Reduce transportation related
greenhouse gas emissions

Goal of 2050 Net Zero
Emissions

Position US Industries to lead
global transportation
electrification

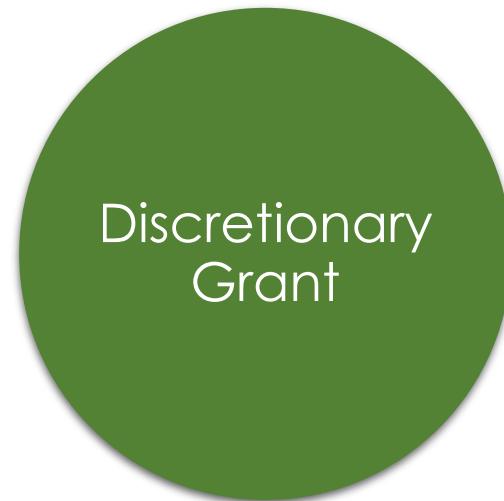
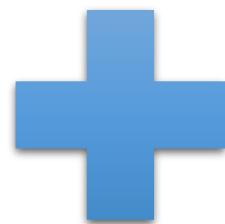
Help create family sustaining
union jobs



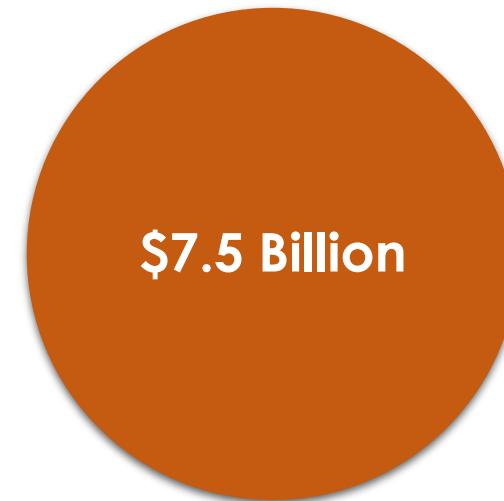
Funding Available



\$5 Billion Nationwide
(\$2 Million/Yr for 5 Years for PR)



\$1.25 Billion for Corridor Charging Grant
\$1.25 Billion for Community Charging Grant



Funds Use Eligibility

- ❑ **Construction and installation** of EV Charging Infrastructure including parking facilities and utilities
- ❑ **Workforce development and training** related to EV Infrastructure
- ❑ EV **acquisitions** and engine conversions
- ❑ **Planning** for EV Charging Infrastructure related projects
- ❑ **Construction and installation** of EV charging infrastructure to support operational, resiliency, national energy security, environmental, and community goals for freight transportation.



Funds Use Eligibility (Cont.)

- ❑ **Installation** of EV Charging infrastructure as part of transit capital projects eligible under Chapter 53 of title 49 USC.
- ❑ **Maintenance and operation** of EV Charging Infrastructure (minimum standards and requirements associated will be provided)
- ❑ **Renewable energy generation and storage**, such as on-site solar panels would be considered directly related if it leads to lower overall construction and operation costs, and therefore would be eligible.



Eligible Locations



- ❑ Because NEVI Formula Program funds are directed to designated Alternative Fuel Corridors to build out a convenient, reliable, affordable, and equitable public charging network, States should first prioritize investments along the **Interstate Highway System**.
- ❑ As necessary, States may also use NEVI Formula Program funding elsewhere on designated corridors along the National Highways System (NHS) to ensure a convenient, affordable, reliable, and equitable national network.
- ❑ The objective is to ensure a convenient, affordable, reliable, and equitable network.

Alternative Fuel Corridors

Those corridors, as approved by FHWA, where alternative fueling facilities are or will be located.

Corridor Designation Process

PUERTO RICO
HIGHWAYS &
TRANSPORTATION
AUTHORITY



Designation Approved on
July 6



Proposal for Designation of
Alternative Fuel Corridors in
Puerto Rico

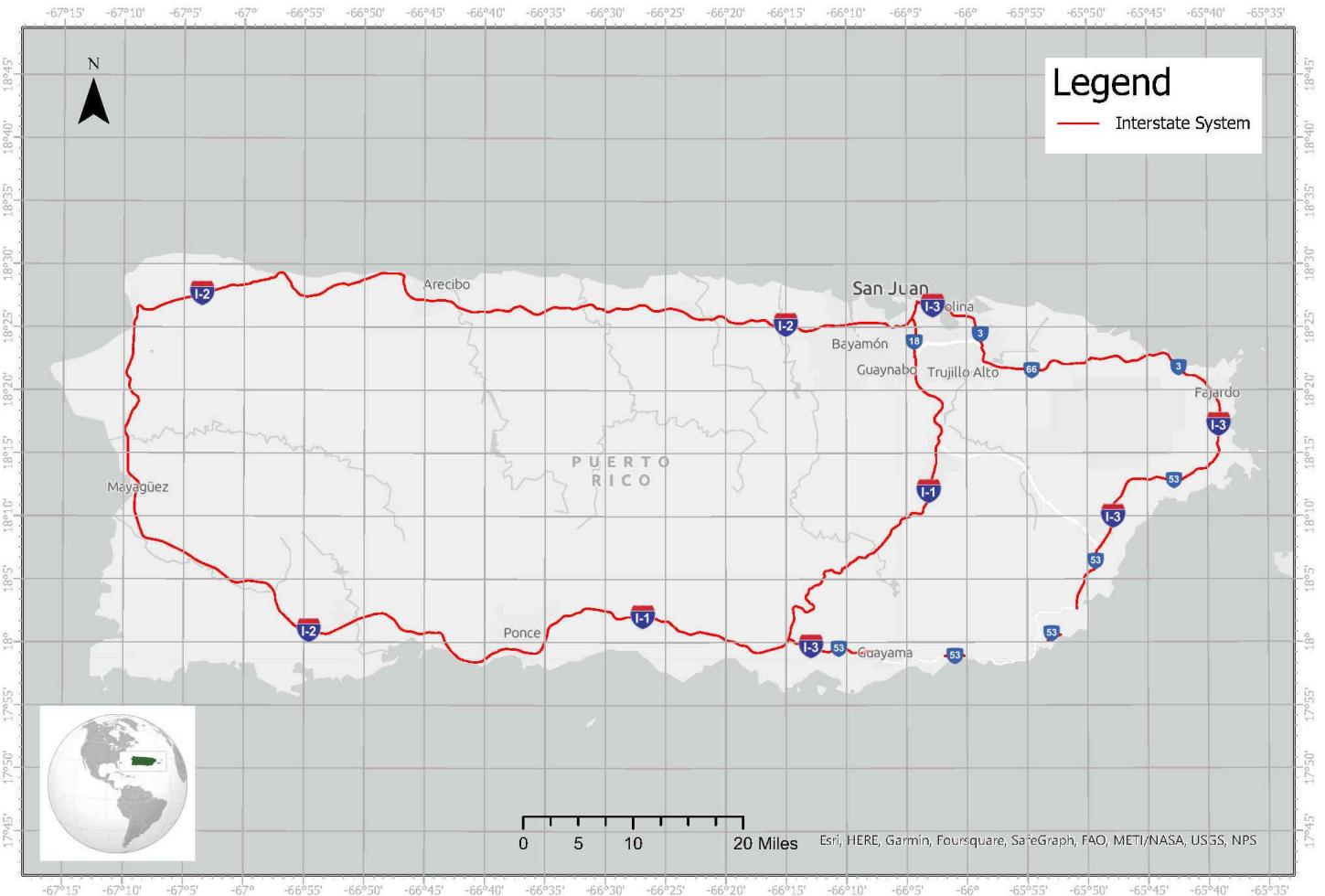
2022 Request for Nominations (Round 6)

Submitted by: Puerto Rico Highway Authority

05/13/22

Submitted to: The U.S. Department of Transportation – Federal

PUERTO RICO INTERSTATE HIGHWAY SYSTEM



Corridor Selection requisites



- Corridor designated as Interstate Highway System
- Requires DC Fast Charging
- Separated by no more than 50 miles
- Location of station/site no more than 1 mile from Interstate exits or highway intersections along the corridor
- Exceptions are permitted if justified

Corridors by Categories

Corridor Ready

A segment that currently has several alternative fueling facilities that allow for travel along the corridor.

Corridor Pending

A segment that currently does not have enough alternative fueling facilities to allow travel along the corridor.

Corridor Selection requisites

All funding distributed under the NEVI Formula Program shall be for projects directly related to the charging of a vehicle and only to support EV Charging infrastructure that is open to the general public or to authorized commercial motor vehicle operators from more than one company.

Public Accessible locations may include public parking facilities, parking at public buildings, public transportation stations, park and rides, public schools, public parks, private parking facilities available for public use, visitors' centers, and other public locations on federal lands.



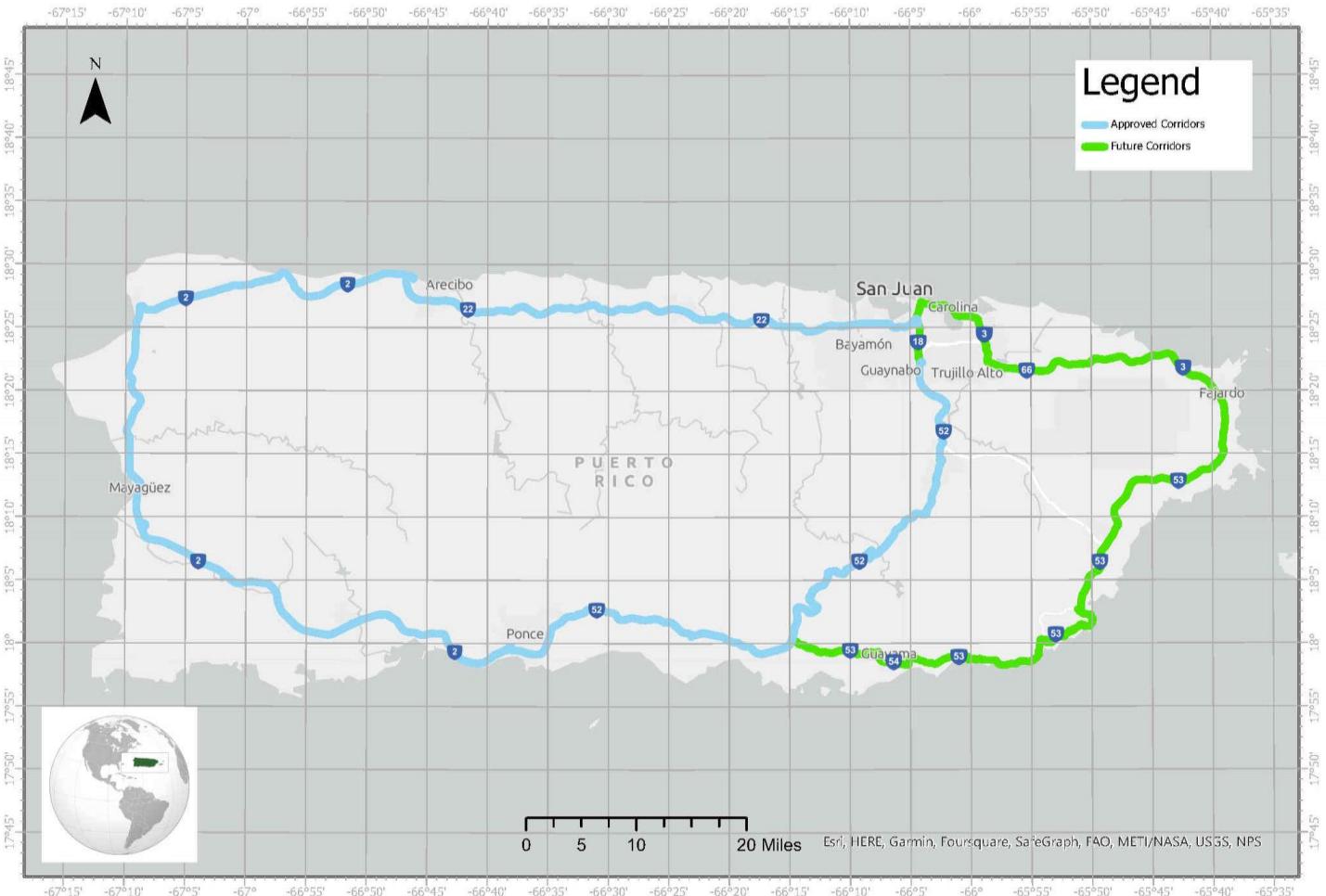
Alternative Fuel Corridors



ALTERNATIVE FUEL CORRIDOR APPROVED AND TO BE SUBMITTED

- Approved Corridors** (as corridor pending):
 - ✓ PR-2
 - ✓ PR-22
 - ✓ PR-52

- In future rounds will nominate the following :
 - ✓ PR-18
 - ✓ PR- 3
 - ✓ PR-53
 - ✓ PR-54
 - ✓ PR-66



EV Charging Requirements

- Each EV Charging infrastructure includes at least four (4) 150kW Direct Current (DC) Fast Chargers with Combined Charging System (CCS) ports capable of **simultaneously DC charging 4 electrical vehicles.**
- ✓ EV Charging infrastructure has minimum station capability at or above **600kW and supports at least 150kW per port** simultaneously across four ports for charging.
- Maximize opportunities for US-made EV supply equipment.
- High level % of reliability > 97%



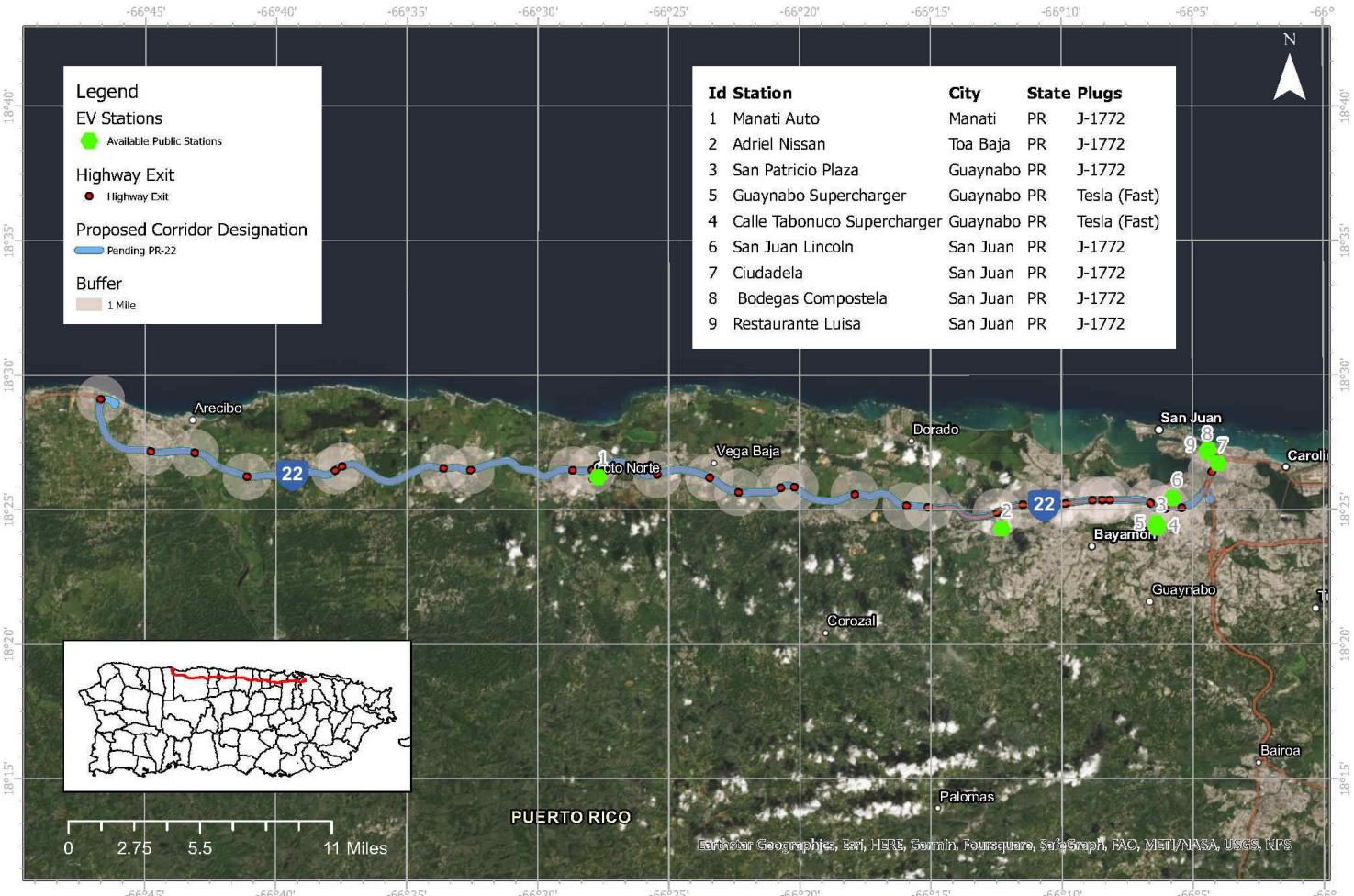
Existing Charging Stations within 1 mile radius of PR-22



Note: Existing stations do not meet program requirements because they are not DC Fast chargers.

Tesla chargers do not qualify because they are considered a proprietary network that does not meet the criteria for public access designation.

PUERTO RICO ELECTRIC VEHICLE (EV) CHARGING CORRIDORS



Existing Charging Stations within 1 mile radius of PR-52

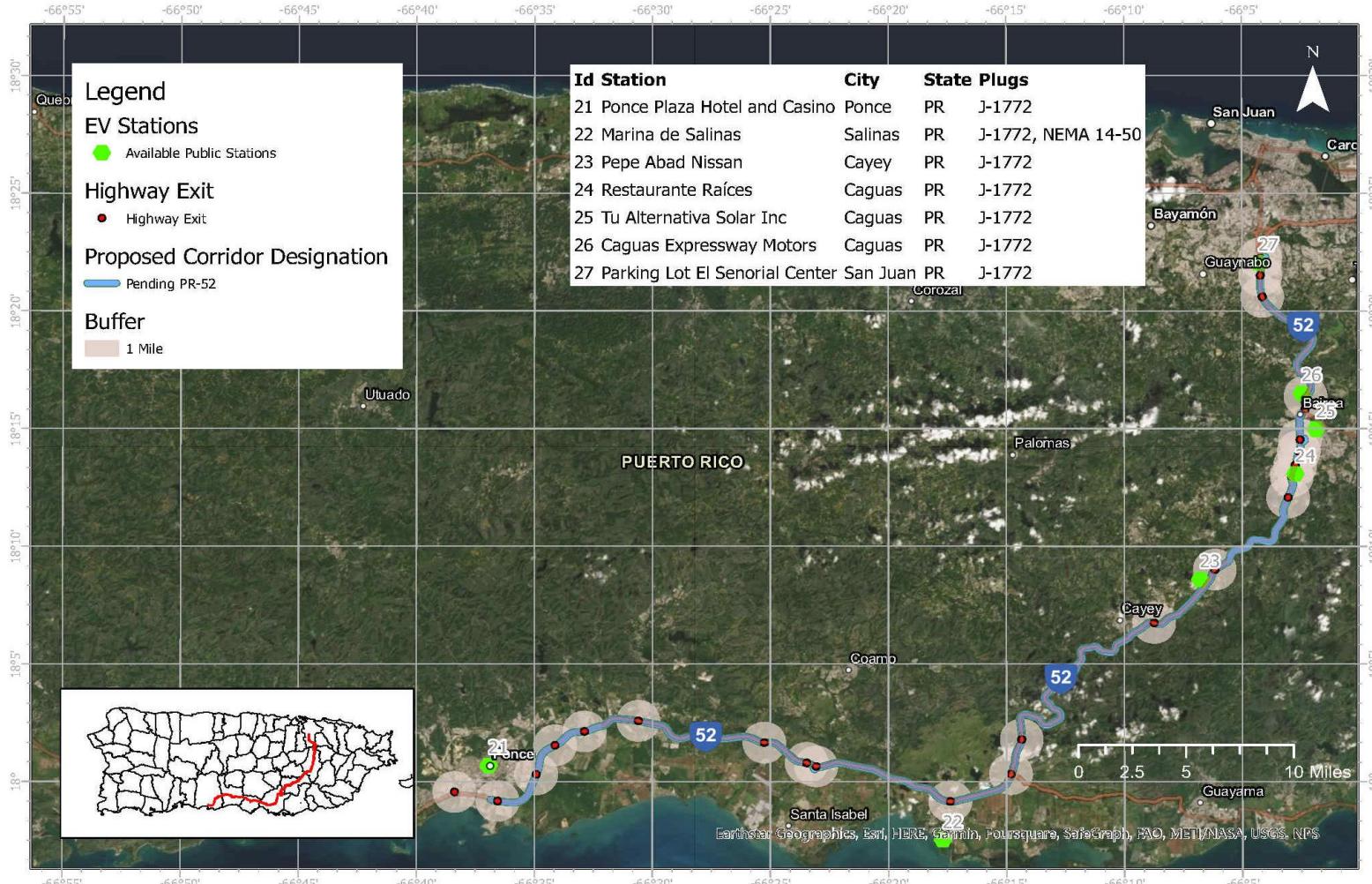
PUERTO RICO
HIGHWAYS &
TRANSPORTATION
AUTHORITY



Note: Existing stations do not meet program requirements because they are not DC Fast chargers.

Tesla chargers do not qualify because they are considered a proprietary network that does not meet the criteria for public access designation.

PUERTO RICO ELECTRIC VEHICLE (EV) CHARGING CORRIDORS



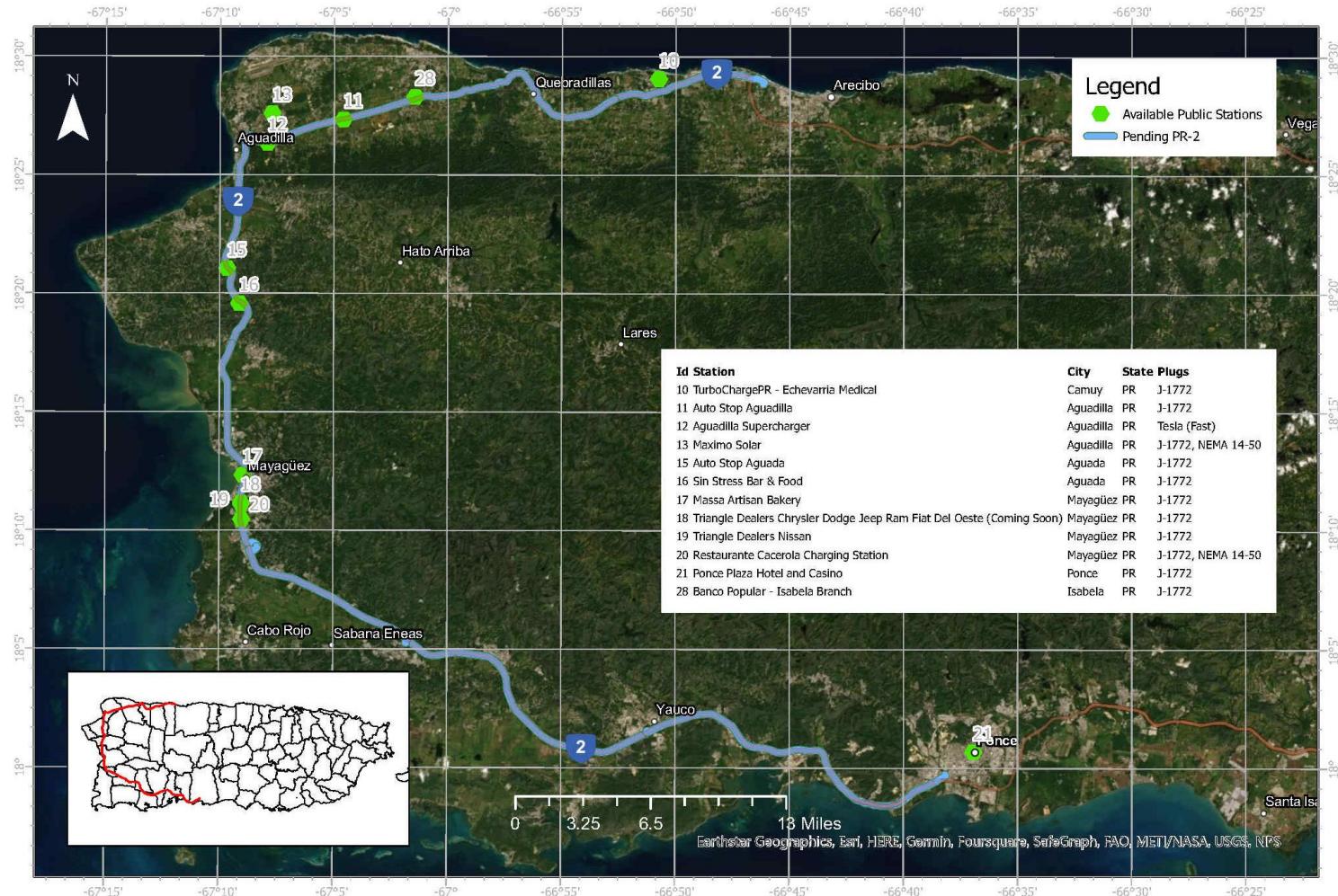
Existing Charging Stations within 1 mile radius of PR-2



Note: Existing stations do not meet program requirements because they are not DC Fast chargers.

Tesla chargers do not qualify because they are considered a proprietary network that does not meet the criteria for public access designation.

PUERTO RICO ELECTRIC VEHICLE (EV) CHARGING CORRIDORS



Plan Development Strategy



- Plan has fourteen (14) sections
- Sections have been prioritized based on:
 - ✓ level on effort required
 - ✓ stakeholders that are involved
 - ✓ Relevance to other sections



Review by Stakeholders



Section preparation



Data analysis



Data collection

Public Engagement



- The Puerto Rico Energy Bureau, as the independent and specialized body created by Act 57-2014*, is responsible for regulating, monitoring, and enforcing the energy public policy of the Government of Puerto Rico.
- As part of the implementation of the energy policy, the Bureau initiated a citizen participation process to begin to identify the necessary requirements to promote the efficient and orderly deployment of electric vehicle charger infrastructure to allow and facilitate their proliferation on the island.
- These participation efforts will be incorporated into the development of the State Plan for the Development of Electric Vehicle Infrastructure.
- A public engagement Section will be developed in the Plan to continue with outreach efforts and information gathering from stakeholders and the general public.



* Known as Puerto Rico Energy Transformation and RELIEF Act, as amended.

Plan Content

❑ Introduction

- ✓ Plan Overview
- ✓ Plan Development Process
- ✓ Plan Milestones
- ✓ Plan Adoption Authority

❑ State Agency Coordination

- ✓ Coordination with other state agencies

❑ Public Engagement

- ✓ Public Involvement Plan
- ✓ Involvement of Stakeholders
 - MPO/Regional Transportation Planning Organizations
 - State Energy and Environmental Departments

❑ Plan Visions and Goals

- ✓ PR's vision to strategically deploy EV Charging Infrastructure
- ✓ Goals: data collection, equitable access, and reliability

❑ Contracting

- ✓ Contracts with Private entities
- ✓ Contracting Strategies
- ✓ Ongoing operation and maintenance
- ✓ Community engagement
- ✓ SBE/MBE participation

❑ Existing and Future Conditions Analysis

- ✓ State Geography, terrain, climate (temperature and precipitation patterns)
- ✓ Industry and market conditions
- ✓ Land Use patterns (JP)
- ✓ Extreme weather events (hurricanes)
- ✓ State travel patterns, public transportation needs, Freight Chain Needs
- ✓ AFC Corridor Pending information
- ✓ Existing Locations



Plan Content (cont.)

❑ EV Charging Infrastructure Deployment

- ✓ Strategy for EV Charging Infrastructure Installations
- ✓ State, Regional and Local Policies
- ✓ Funding Sources: **Non-federal Match**
- ✓ Infrastructure Deployment or Upgrades
- ✓ Maps
- ✓ Electric Vehicle Freight Considerations
- ✓ Public Transportation Freight Considerations
- ✓ FY23-26 Future Deployments

❑ Implementation

- ✓ Ongoing operation and maintenance of EV
- ✓ Strategies for identifying Vehicle Charger Services Providers and Station Owners
- ✓ Data Collection and Sharing Strategies
- ✓ Strategies to address resilience & seasonal needs
- ✓ Strategies for Strong labor safety, training, and installation standards



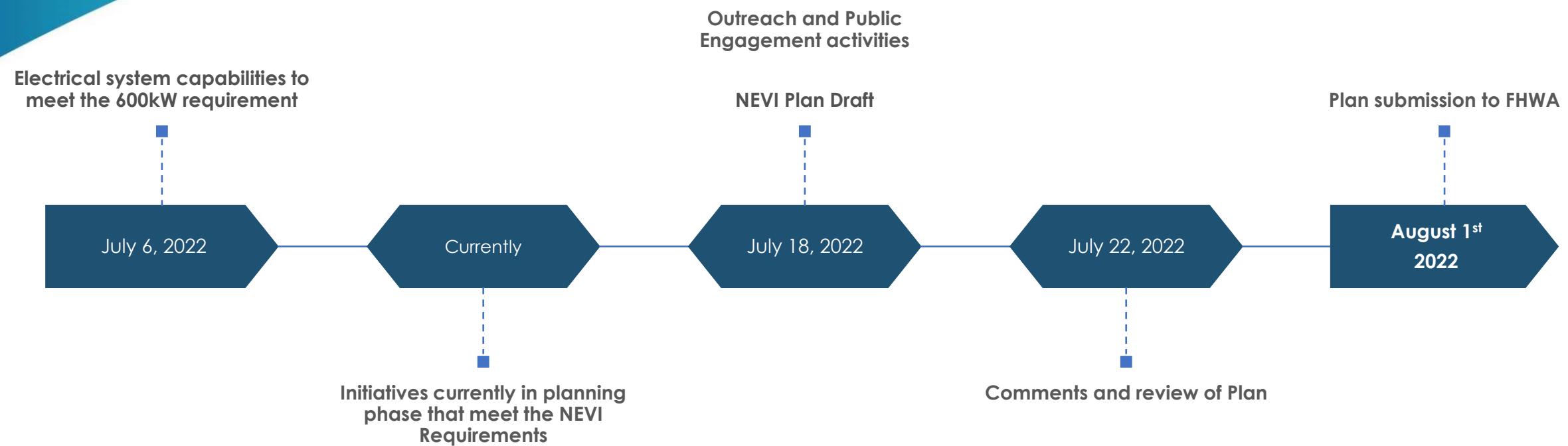
Plan Content (cont.)

- ❑ Civil Rights
 - ✓ Compliance with state and federal civil rights laws (Title VI)
- ❑ Equity Considerations
 - ✓ Justice 40 Initiative
 - ✓ Outreach and benefits to Disadvantaged Communities
- ❑ Labor and Workforce Considerations
 - ✓ Training Strategies/ Diversity of Workforce
- ✓ Cybersecurity
 - ✓ How to address cybersecurity at EV Stations

- ❑ Program Evaluation
 - ✓ Strategy to monitor and report progress of AFC network
- ❑ Discretionary Exceptions (if Any)
- ❑ Supporting Material
 - ✓ Support Letters
 - ✓ Contracts/Agreements



Next Steps



For further information and/or comments please write to
the following e-mail address:

plan.nevi@dttop.pr.gov





July 29, 2022

Ms. Diane Turchetta
U.S. Department of Transportation
Federal Highway Administration
1200 New Jersey Ave., SE
Washington, DC 20590

Dear Ms. Turchetta:

On behalf of the Puerto Rico Department of Transportation and Public Works (DTOP, for its Spanish Acronym) I am pleased to submit this letter supporting the Puerto Rico Plan for Electric Vehicle Infrastructure Deployment (the Plan) to build out a convenient, reliable, affordable, and equitable public charging network throughout our Island's most important corridors. By making Electric Vehicles (EV) charging stations more accessible along strategic corridors, our government is supporting the use of cleaner energy for commercial and personal uses, contributing to economic prosperity while also promoting U.S. energy security.

Puerto Rico's Interstate and National Highway System (NHS) serves as the backbone for the transportation of the people and goods throughout the island and providing connections to Puerto Rico's economic centers. With advancements in electric charging technology, increasing numbers of vehicles powered by electricity travel Puerto Rico's roadway facilities and rely on available charging to safely make these trips.

Notable investments in charging stations will be made throughout Puerto Rico for electric vehicles (EV). These charging technologies will facilitate reliable travel by clean powered vehicles within and through the island.

DTOP is the governmental entity responsible for promoting an integrated transportation system that, together with the road infrastructure and services provided to the constituents, facilitates the economic development of Puerto Rico in harmony with the environment. As such, we support the Plan's objectives to:

Ms. Diane Turchetta

Page 2

July 29, 2022

- Provide guidelines to coordinate the federal, state and municipal governments initiatives to provide equitable adoption of electrical vehicles while developing groundwork and framework to manage current challenges.
- Integrating infrastructure in our transportation system to improve the quality of life of our communities by reducing transportation related greenhouse gas emissions.
- Integrating EV infrastructure that will provide confidence and flexibility for drivers to travel long distances.
- Improve and/or provide public access to electric vehicle charging facilities.
- Increase the number/inventory of electrical vehicles in Puerto Rico by encouraging drivers to invest on an EV.
- Enable the transition to clean transportation to achieve current transportation and climate goals, such as Goal of 2050 Net Zero Emissions.

We are proud to endorse this important initiative to expand EV charging infrastructure within Puerto Rico, growing the national network of charging stations while promoting alternative energy sources such as solar to power stations.

Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eileen M. Vélez Vega".

Eileen M. Vélez Vega, PE
Secretary



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

August 1, 2022

BY EMAIL:

diane.turchetta@dot.gov

Ms. Diane Turchetta

U.S. Department of Transportation
Federal Highway Administration
1200 New Jersey Ave., SE
Washington, DC 20590

Plan for Electric Vehicle Infrastructure Deployment

Dear Ms. Turchetta:

On behalf of the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("PREB") I am pleased to submit this letter supporting the Puerto Rico Plan for Electric Vehicle Infrastructure Deployment ("Plan") to build out a convenient, reliable, affordable, and equitable public charging network throughout our Island's most important corridors. By making Electric Vehicles ("EV") charging stations more accessible along strategic corridors, our government is supporting the use of cleaner energy for commercial and personal uses, contributing to economic prosperity while also promoting United States energy security.

Puerto Rico's Interstate and National Highway System ("NHS") serve as the backbone for moving people and goods throughout the island and providing connections to Puerto Rico's economic centers. With advancements in electric charging technology, increasing numbers of vehicles powered by electricity travel Puerto Rico's roadway facilities and rely on available charging to safely make these trips.

Notable investments in charging stations will be made throughout Puerto Rico for EVs. These charging technologies will facilitate reliable travel by clean powered vehicles within and through the island.

PREB is the governmental entity responsible for regulating, monitoring, and enforcing the energy public policy of the Government of Puerto Rico. As such, we support the Plan's objectives to:

- Provide guidelines to coordinate the federal, state and municipal governments initiatives to provide equitable adoption of electrical vehicles while developing groundwork and framework to manage current challenges;
- Integrating EV charging infrastructure in our transportation system to improve the quality of life of our communities by reducing transportation related greenhouse gas emissions;
- Integrating EV infrastructure that will provide confidence and flexibility for drivers to travel long distances;
- Improve and/or provide public access to EV charging facilities;
- Increase the number/inventory of EVs in Puerto Rico by encouraging drivers to invest on EVs; and
- Enable the transition to clean transportation to achieve current transportation and climate goals, such as Goal of 2050 Net Zero Emissions and Puerto Rico public policy on climate change.

We endorse this important initiative to expand EV charging infrastructure within Puerto Rico, growing the national network of charging stations while promoting alternative energy sources such as solar to power EV charging stations.

Thank you for your consideration.

Sincerely,


Edison Avilés Deliz
President

PUERTO RICO
**HIGHWAYS &
TRANSPORTATION**
AUTHORITY

