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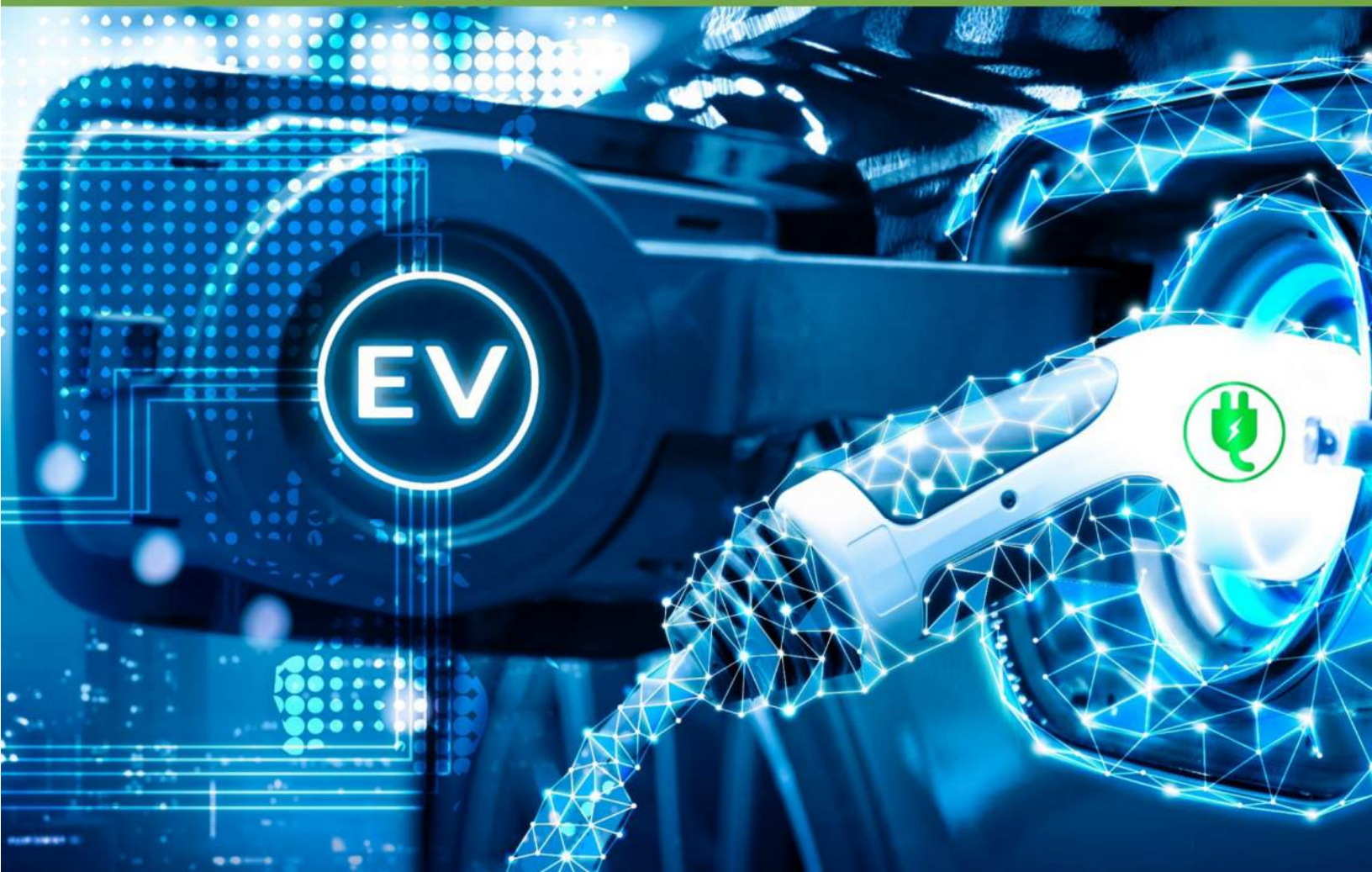
State Plan for Electric Vehicle Infrastructure Deployment



Rhode Island Electric Vehicle Infrastructure Deployment State Plan

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00	07/12/22	First draft review	C. Burns	A. Lahav	M. Sluder	D. Herstine
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00	00	07/12/22	Internal team	Internal working team to edit and update
01	01	07/15/22	Core team	Updates based on DEM and OER comments and stakeholder feedback
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Executive Summary

As part of the Infrastructure Investment and Jobs Act (IIJA), and after approval of this State Plan for Electric Vehicle Infrastructure Deployment ("Plan") by the Secretary of Transportation, the Rhode Island Department of Transportation (RIDOT) will be receiving $3.8 million in fiscal year 2022, and $22.9 million over the next 5 years under the U.S. Department of Transportation (USDOT) Federal Highway Administration (FHWA) National Electric Vehicle Infrastructure (NEVI) Formula Program to establish an interconnected network to facilitate data collection, access, and reliability. RIDOT partnered with the Rhode Island Office of Energy Resources (OER) and the Rhode Island Department of Environmental Management (DEM) to develop this Plan and an electric vehicle (EV) charging station network. Existing charging stations have been deployed across the state over the past 10 years. About 300 publicly accessible charging stations in the state are operated by different public and private entities.[1] As of July 1, 2022, there are almost 6,000 EVs in Rhode Island.[2] The Program will be used not only to build out main corridors but also to help coordinate the use of all direct current fast charger (fast charging stations, DCFC) stations, workforce development, and plan maintenance and upgrades. The State of Rhode Island has one designated Alternative Fuel Corridor (AFC), Interstate 95, that is prioritized for investment. Site ID 167864 off Interstate 95, Exit 24 is a Walmart DCFC station in Providence operated by Electrify America. Less than a mile from Interstate 95, this privately owned site satisfies the federal requirements.[3] After the Secretary of Transportation certifies the corridor build-out, RIDOT can prioritize the funding strategically to fill gaps in the market, support our transportation network, develop the local workforce, and serve the most Rhode Islanders possible while balancing the impact on the grid, coastal areas, and rural access. RIDOT will use the funds to create value for the public, to decrease driver anxiety regarding fast EV charging station availability, and as a proof of concept to help local businesses enter the market with fast EV charging stations and amenities. RIDOT has developed the following approach to infrastructure deployment.

1. RIDOT plans to use its resources to **increase fast EV charging station awareness and reliability** of existing fast charger charging stations. Based on feedback, the existing fast station reliability and uptime have been consumer issues. RIDOT will work with the private sector to help improve and promote all DCFC infrastructure sites. Public survey results indicated that the existing network needs to be promoted on smartphone apps, signage, websites, advertisements, and targeted areas. Maintenance can be supported using the NEVI funding to meet NEVI requirements, particularly reliability standards (24/7 service, 97 percent reliability, Americans with Disabilities Act [ADA] accessibility, and so on).

2. To serve Rhode Islanders, we must **provide access to fast EV charging stations in the Providence metropolitan area**. The public is car-centric, and although RIDOT has successfully provided Park 'n Ride facilities to facilitate shared transport, none exist on the northern portion of Interstate 95, where most of Rhode Island's population and almost all of our Justice40 communities are located. Ideally, RIDOT would have access to large areas around Providence to help build new dedicated fast EV charging stations, but the impacts, cost, and grid constraints will create issues in the near term. Listening to stakeholder feedback that local businesses and convenience stores are eager to install fast charging stations and provide amenities, we will use the funds to work with interested local parties and private partners to provide fast, low-cost charging at locations within a mile of Interstate 95, Interstate 195, and Interstate 295. This will help offset low use at first, increase grid capacity, encourage private participation, and critically address uptime reliability requirements, particularly with local businesses and parties. It also allows for resources to be allocated on the eastern side of the state in Bristol County, creating increased access. The funds' benefit is expanded by leveraging public-private partnerships, creating opportunities for near-term metropolitan and statewide deployment. RIDOT will structure contracts to require its partners to meet the federal fast charging station requirements for reliability, security, and access while prioritizing the participation requirement for disadvantaged business enterprises.

3. In the Providence metropolitan area, Route 146, a major corridor connecting local and through travelers, is currently undergoing rehabilitation. RIDOT will **work with Planning on EVSE near Route 146** and stakeholders to promote the integration of EV charging access along the route during the planning of the rehabilitation. Planning will work with stakeholders and coordination to include EVSE in large capital investment projects moving forward. We will explore ESVE along the Route 146 corridor to build out EV charging, including electrical infrastructure, to NEVI standards. There are also several businesses and potentially interested parties that RIDOT could partner with to provide EVSE along this route.

4. We plan to **upgrade existing Park 'n Ride facilities** along Interstate 95 that RIDOT owns, providing amplified benefits to encourage drivers to use shared transport in Rhode Island, a historical priority for RIDOT. The Ashaway Park 'n Ride facility along the Interstate 95 corridor in Hopkinton is near the Connecticut border. Connecticut does not have an existing fast charging station near this border or near-term plans to install one. RIDOT will prioritize the Ashaway location as important to increasing access by creating national interstate connectivity. The site will require upgrading the current two DCFCs to four DCFCs. This is also in a rural area and will also support tourist travel into the state. Another priority is updating the Route 117 Park 'n Ride facility in Warwick, where there are two DCFCs and three Level 2 chargers. By reducing the time needed to

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[1] https://afdc.energy.gov/stations/#/analyze?region=US-RI&fuel=ELEC

[2] https://ridemgis.maps.arcgis.com/apps/webappviewer/index.html?id=f164da525c77463b98cf55b72950beb7

[3] This site is nonproprietary, less than a mile from the highway, allows for open-access payment methods, is publicly available, and includes four direct current fast chargers (DCFCs), at least one of which is a 350-kilowatt (kW) charger.

complete these fast charging stations with upgrades to the existing DCFCs instead of building out new DCFC stations, RIDOT will provide more immediate public benefit to our most-traveled corridor, serving local, through, and tourism travelers. RIDOT will meet its goal in the next 5 years by fully building out Interstate 95 with two additional DCFCs at each location, meeting the NEVI requirements, including providing 97 percent reliability.

5. Data collection and sharing, particularly among the transportation, energy, and environmental agencies, provides feedback paramount to reacting to public needs, improving customer and fast charging station host satisfaction, and promoting equitable and efficient investments. All data collected and reported must be available to the public in an easily digestible format. The data from NEVI and public usage must be made available to **use data to inform future policy and program decisions**. RIDOT will work with stakeholders, including the U.S. Joint Office of Energy and Transportation, to ensure that our contracts require a suitable data management plan that satisfies the NEVI requirements and specifications.

6. RIDOT will spend the U.S. Department of Transportation (USDOT) apportionment of Highway Infrastructure Program funds with a responsible, practical approach, fostering local electric vehicle supply equipment (EVSE) workforce development for the operations, maintenance, and markets emerging from this new technology. Several universities, community colleges, and technical groups are feeding into the local market. Our contracts will foster competitive grants to increase local participation, especially for disadvantaged business enterprises. We have included outreach efforts to ensure resources are spent to grow, build upon, and **help employ the Rhode Island workforce**. We will also follow all Buy America requirements when procuring fast charging stations and infrastructure components.

7. Support EVSE Coastal Development and Contingency Reserve. The market is moving; we are not the only state performing installation activity. Although our estimates were conservative, inflation is at an all-time high and we want this Plan to address the areas that need access immediately. However, we hope that the money will go further. We expect the installation, construction and maintenance costs to go down and requirements to shift. Our stated goals allow us to pivot and potentially expand our grant program to coastal areas. For example, if we have appropriate station density along a corridor, and allow for charging on both sides of Providence, we can move south quickly. In particular, Aquidneck Island is a current gap with a need to reduce using bridges or making long trips for fast charging. Tesla plans to install at a Target with public access, which we are focused on for coastal development. And based on the initial results of the survey, serving the coast is a common public priority.

This approach considers the current and projected needs of Rhode Islanders, federal guidance, and stakeholder feedback. We urge the public and our private entities to read and provide feedback on this Plan, particularly concerning areas along or near our major corridors and methods to develop the local workforce. We ask the U.S. Joint Office of Energy and Transportation to approve our Plan to allow for immediate efforts to improve access for EVs in the Ocean State. We are excited that this is the beginning of a long-term commitment by RIDOT to provide a better EV charging experience for the public. We will have more opportunities for public feedback and assess the program based on feedback, data collection, and reporting. The report will be updated annually, and we are open to incorporating future feedback to reflect the public interest.

Table of Contents

Appendices

List of Tables

List of Figures

List of Acronyms and Abbreviations

µg/m³	microgram(s) per cubic meter
ADA	Americans with Disabilities Act
AFC	alternative fuel corridor
BEV	battery-electric vehicle
CMAQ	Congestion Mitigation and Air Quality Improvement
CMP	Congestion Management Process
DAC	disadvantaged community
DCFC	direct current fast charger
DEM	Department of Environmental Management
DOA	Department of Administration
DOE	U.S. Department of Energy
EC4	Executive Climate Change Coordinating Council
EPA	U.S. Environmental Protection Agency
EV	electric vehicle
EVSE	electric vehicle supply equipment
FCEV	fuel cell electric vehicle
FHWA	Federal Highway Administration
FY	fiscal year
IIJA	Infrastructure Investment and Jobs Act
kg/day	kilogram(s) per day
kW	kilowatt(s)
MoU	*Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding*
NECSEMA	New England Convenience Store and Energy Marketers Association
NESCAUM	Northeast States for Coordinated Air Use Management
NEVI	National Electric Vehicle Infrastructure
OCPP	Open Charge Point Protocol
OER	Office of Energy Resources
PHEV	plug-in hybrid electric vehicle
PZEVF	Partners for a Zero Emission Vehicle Future
RIAC	Rhode Island Airport Corporation
RIDOT	Rhode Island Department of Transportation
RIPTA	Rhode Island Public Transit Authority
USDOT	U.S. Department of Transportation
ZEV	zero-emission vehicle

1. Introduction

Rhode Island Department of Transportation (RIDOT) is excited to present this Rhode Island State Plan for Electric Vehicle Infrastructure Deployment ("the Plan," "Rhode Island EVSE Plan") for strategies to help build out the state's electric vehicle (EV) charging infrastructure. Although it is the smallest state in the nation, Rhode Island has over a million residents. The Providence metropolitan area, the Interstate 95 corridor, connects Connecticut and the tri-state area to Massachusetts, serving as the gateway to New England for commuters, seasonal travelers, and freight traffic.

RIDOT partnered with the Rhode Island Office of Energy Resources (OER) and the Rhode Island Department of Environmental Management (DEM) to help plan and strategize the build-out of a fast EV charging station network. As part of the Infrastructure Investment and Jobs Act (IIJA), RIDOT plans to use $3.38 million this year to build out the state's electric vehicle supply equipment (EVSE) charging infrastructure, prioritizing Rhode Island's designated Alternative Fuel Corridor (AFC) along the Interstate Highway System. The U.S. Department of Transportation (USDOT) apportionment of Highway Infrastructure Program funds for the National Electric Vehicle Infrastructure (NEVI) Program provides Rhode Island with $22.9 million over 5 years.

The Plan follows the Federal Highway Administration (FHWA) format provided at www.driveelectric.gov by the U.S. Joint Office of Energy and Transportation. In addition to the U.S. Joint Office of Energy and Transportation guidance, our overarching strategy for EV charging infrastructure is to use the federal funds to provide the most benefit for the public and to create a sustainable, efficient, and equitable transportation system network. Our state is uniquely dense, with short-run segments supporting local, regional, tourism, and freight traffic. Over the past decade, Rhode Island has collaborated in regional strategies for deploying EVSE to support the emerging EV ecosystem. Various approaches, incentive programs, and funding streams have supported infrastructure investments to continue developing the EV market.[4] In developing this EVSE Plan, we have invested in exploring and promoting incentives, performing outreach, and improving reliability. Data collection and sharing are paramount to optimizing investments and information among agencies to react to public needs. The foundational data sets include publicly available data that capture vulnerable populations, health, transportation access and burden, energy burden, fossil fuel dependence, resilience, and environmental and climate hazards, consistent with Justice40.

Before receiving notice of funding from the IIJA, RIDOT had already implemented an EV charging station pilot program in fall 2020. In conjunction with the OER and Rhode Island Energy, formerly National Grid, free EV charging stations were built at two Park 'n Ride lots immediately off Interstate 95.[5] One is in central Rhode Island on Route 117 (Centerville Road) at Exit 10 in Warwick, and the other is on Route 3 (Main Street) at Exit 1 in Hopkinton, close to the Connecticut border. Both feature 240-volt Level 2 charger and direct current fast charger (DCFC) stations. The Level 2 chargers can provide 25 miles of range per hour of charging, whereas the DCFCs can provide approximately 250 miles in an hour. Charging times can vary slightly based on the vehicle model. Each Park 'n Ride lot can accommodate up to six cars using the Level 2 chargers and two cars using the DCFCs.

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

The Rhode Island EVSE Plan has been a collaborative effort, building on over a decade of innovation, research, outreach, planning, policy implementation, and investment in our clean transportation system. As part of the development process, RIDOT has coordinated and hosted stakeholder engagement sessions to discuss the state agency's role in the federal funding rollout. This Plan, developed in July 2022, is intended to outline a near-term strategy for EVSE deployment of the NEVI funds, focused on building out existing infrastructure along Interstate 95. This Plan also outlines strategies for deployments and spending in future years. In 2022, RIDOT created a schedule of milestones (Figures 1 and 2):

Step 1: Identify the EVSE Needs for Rhode Island	April to June 2022
Step 2: Program Funding and Eligibility	May to July 2022
Step 3: Collaboration and Stakeholder Engagement	May to Aug. 2022
Workshop 1: Stakeholder Working Group	June 9, 1:30 PM
Workshop 2: Public Session A	June 22, 10:30 AM
Workshop 3: Public Session B	June 22, 1:30 PM
Workshop 4: Public Session C	June 23, 3:00 PM
Workshop 5: Public & Stakeholder Electric Vehicle Infrastructure Deployment Plan Review Session	July 14, 11:00 AM

[4] Investments include, but are not limited to private, federal, state, utility, one-time settlement dollars, and local private-public partnerships.

[5] Funding was provided by the OER Electrify RI program. Funds for Electrify RI came from the Volkswagen Diesel Settlement Environmental Mitigation Trust and were invested according to the state's Beneficiary Mitigation Plan. The utility provided additional funding to cover installation costs.

Step 4: RIDOT EVSE Plan Submittal	July 21, 2022
Step 5: Anticipated Federal Approval and Award	Oct. 2022

While on a limited schedule, RIDOT engaged with the public early and hosted stakeholder engagement sessions to explain the federal funding, NEVI requirements, current EV charging stations, and priorities. The stakeholder engagement sessions successfully hosted over 60 participants from various industries and asked questions about future maintenance and operation. After the first workshop, RIDOT received critical feedback from a user at an EV DCFC station along Interstate 95 who experienced payment and operating errors. This is important because our public has issues with the existing stations, which impacts their anxiety about relying on EVSE. We followed up and increased our awareness of shared experience and perception. The Green Energy Consumers Alliance also offered feedback that RIDOT includes specific questions in stakeholder engagement to facilitate more participation. RIDOT thanks the public and stakeholders for all feedback provided to date. All feedback was insightful to the design of this EVSE Plan.

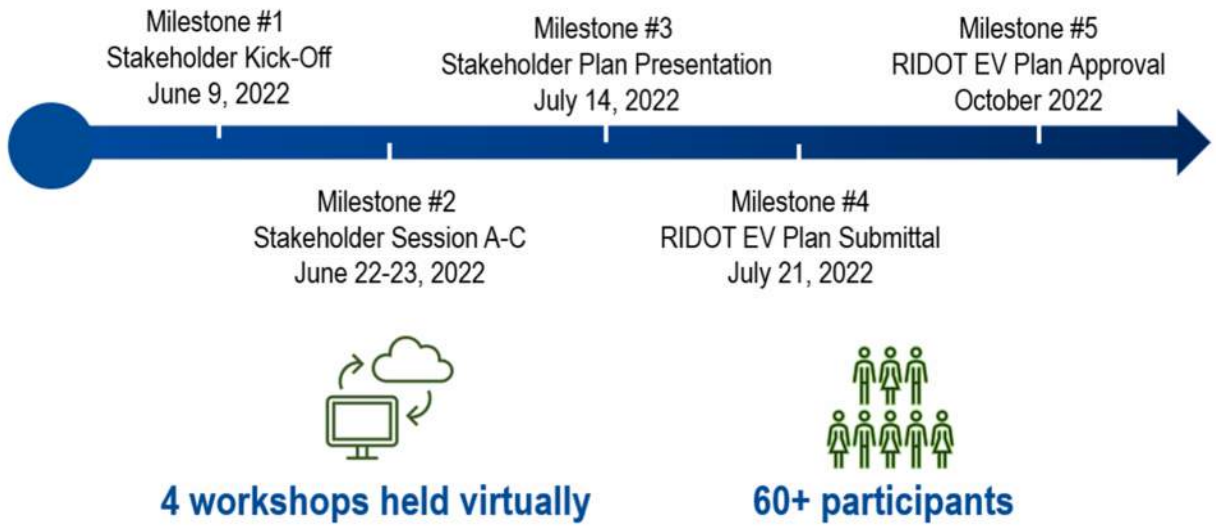


Figure 1: RIDOT EVSE Plan Milestones

For Milestone 5 and beyond for the implementation and annual updates, RIDOT's intended role is to facilitate NEVI Formula Program funding spending. This is the beginning of a long-term commitment by RIDOT to provide a better EV charging experience for the public. We will have more opportunities for public feedback.

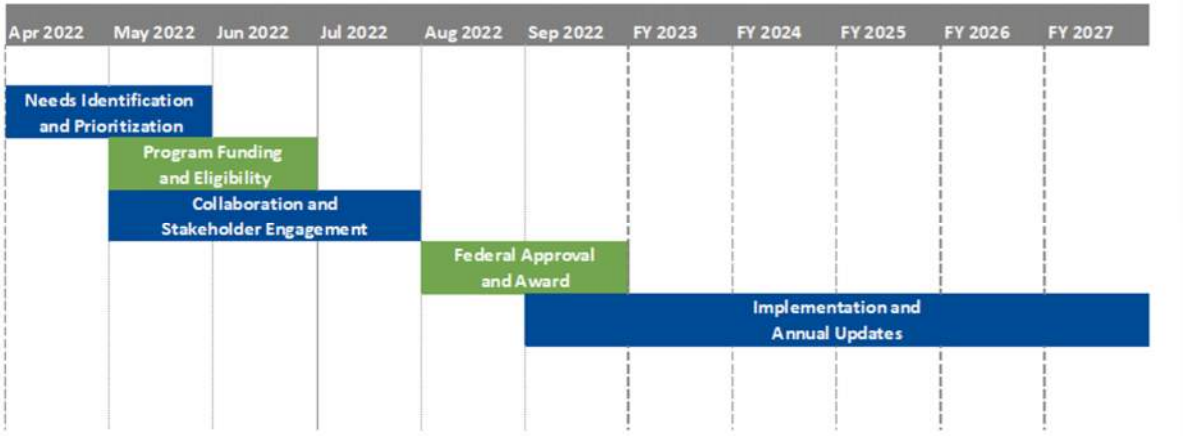


Figure 2: Long-term RIDOT EVSE Schedule

2. State Agency Coordination

RIDOT is highly engaged with other state and local agencies working collaboratively to develop this Plan. To incorporate the extensive EVSE efforts and knowledge in Rhode Island, RIDOT established a working group. Within this group, there are two participant categories:

1. Core team members who contributed to and reviewed the Plan
2. Technical advisory committee members who are advisers to the Plan (further defined in Section 3.1)

The NEVI Core Team includes the following agencies:

- Rhode Island Department of Transportation (RIDOT)
- Rhode Island Office of Energy Resources (OER)
- Rhode Island Department of Environmental Management (DEM)

The NEVI Core Team provides direct feedback in developing this Plan, including other interagency and public engagement efforts. This group started to meet biweekly in May 2022 and plans to continue to meet regularly to support this Plan and NEVI development into 2027. The core team will also consult with the State's Executive Climate Change Coordinating Council (EC4) for discussion and feedback on EVSE plans moving forward.

RIDOT's core technical group met with the Connecticut Department of Transportation on May 18, 2022. The purpose of the meeting was to introduce the state teams, share work done to date and lessons learned, and discuss practical next steps. Interstate 95 was of prime importance because it is the only designated AFC in Rhode Island and is shared between the two states. Following the meeting, RIDOT met with the Connecticut Department of Transportation and the Massachusetts Department of Transportation on June 8, 2022. The three neighboring states discussed their immediate plans, stakeholder outreach, and ongoing initiatives to improve the public's future-proof systems and improve reliability. We plan to continue meeting to discuss plan progress, lessons learned, and the best way to serve the regional needs of the public.

3. Public Engagement

Providing effective communication channels for questions, concerns, and suggestions and obtaining stakeholder input is vital in building and supporting an effective EV network. RIDOT plans to broaden its current stakeholder distribution list to include ongoing stakeholder outreach with the general public; governmental entities; federally recognized Tribes; labor organizations; private sector and industry representatives; representatives of the transportation and freight logistics industries; state public transportation agencies; and urban, rural, and underserved or disadvantaged communities. The focus is to ensure that the deployment, installation, operation, and use of EV charging infrastructure achieve equitable and fair benefits.

Stakeholder and public feedback is welcome throughout this Plan development and in the future. The RIDOT EV Charging Stations webpage, https://www.dot.ri.gov/projects/EVCharging/index.php, includes a form for active feedback. All material has been posted to the landing page. Based on these meetings, the RIDOT core team has connected with public members to solicit immediate feedback. We are committed to working with the public to help connect resources and near-term opportunities. For example, RIDOT has had conversations with landowners such as Anchor Subaru and Cardi's Furniture to install publicly available chargers that meet the NEVI requirements. At Anchor Subaru, the owner is also an EV driver committed to providing a safe, well-lit, 24-hour–access, fast charging station with restrooms. The owner of Cardi's Furniture Warwick facility (1681 Quaker Lane) is interested in working with RIDOT to provide public charging. Cardi's Furniture's current plans include installing new publicly available chargers with 24-hour access, restroom, lights, and Wi-Fi.

On July 11, 2022, RIDOT released a public survey to solicit feedback. Our survey includes a brief background for participants to understand that we are collecting feedback from the public on EV charging stations and EVs in general. The results of this survey will impact our deployment plans moving forward. A full printout of the survey has been attached as Appendix A. RIDOT will continue to work with interested stakeholders as we move forward. This includes the public release of any material on the landing page and the RIDOT website so as not to exclude companies that have not reached out.

3.1 Stakeholders Involved in Plan Development

Following federal guidance and ongoing local efforts, RIDOT has worked with the group core team, including the OER and the DEM. Our core team has been working with a large group of technical advisers. The technical advisers include the following:

- Federal
    - Federal Highway Administration
    - National Renewable Energy Laboratory
    - U.S. Joint Office of Energy and Transportation
    - Volpe National Transportation Systems Center
- Governor's Office
- Rhode Island Executive Climate Change Coordinating Council (EC4)

- Rhode Island State Agencies
  - Rhode Island Airport Corporation (RIAC)
  - Rhode Island Department of Administration (DOA)
  - Rhode Island Department of Health
  - Rhode Island Department of Labor and Training
  - Rhode Island Division of Capital Asset Management and Maintenance
  - Rhode Island Division of Motor Vehicles
  - Rhode Island Division of Statewide Planning
  - Rhode Island Emergency Management Agency
  - Rhode Island Office of Accounts and Control
  - Rhode Island Public Utilities Commission and Division of Public Utilities and Carriers
- Quasi-public Agencies
  - Quonset Development Corporation
  - Rhode Island Coastal Resources Management Council
  - Rhode Island Commerce Corporation
  - Rhode Island Infrastructure Bank
  - Rhode Island Public Transit Authority (RIPTA)
- Community-based Organizations
  - Clean Fuels Alliance America
  - Environmental Council of Rhode Island
  - Green Energy Consumers Alliance
  - Ocean State Clean Cities Coalition
  - Rhode Island Environmental Education Association
  - Rhode Island League of Cities and Towns
- Regional Organizations
  - Georgetown Climate Center
  - New England Convenience Store and Energy Marketers Association (NECSEMA)
  - Northeast States for Coordinated Air Use Management (NESCAUM)
  - Partners for a Zero Emission Vehicle Future (PZEVF)
  - Transportation and Climate Initiative
- Utilities
  - Rhode Island Energy (formerly National Grid)
- Tribes
  - Mashantucket (Western) Pequot Tribal Nation
  - Narragansett Indian Tribe
  - Wampanoag Tribe of Gay Head (Aquinnah)
- Private-sector Operators
  - ChargePoint

RIDOT received feedback from several local organizations in June and July while developing this Plan. On June 10, 2022, NECSEMA's initial comments were received; the organization supports EVs and suggested convenience stores as ideal locations for hosting publicly accessible DCFCs to sustain tourism and business travel and support EV drivers who do not own a home charger. NECSEMA recommended a low, medium, and high ranking system based on traffic patterns. RIDOT agrees with NECSEMA that the prioritization for DCFC placement should incorporate average daily traffic counts to help prioritize build-out and that assigning a low, medium, and high ranking will help prioritize initial, interim, and final charger placement and build-out over the 5-year plan. On June 25, 2022, RIDOT received a letter from PZEVF regarding our Plan. We welcomed the feedback and agree that freight is an important consideration for emissions and climate change impacts. On July 1, 2022, RIDOT received comments from Green Energy Consumers Alliance, including comments on our first stakeholder meeting and planned report contents. Our core team met on July 5, 2022, to discuss the report, and agreed that the best approach is to align with mandates to help the public rather than on a corridor-by-corridor basis once the Interstate 95 designated AFC is certified as fully built out. Since developing this Plan, RIDOT has met with NECSEMA, and received feedback from Alliance for Automotive Innovation, Acadia Center, and the Charge Ahead Partnership. All written feedback and written recommendations have been attached as Appendix B.

3.2 Public Outreach

RIDOT must manage stakeholder expectations and communicate key messages to meet the outreach objectives. RIDOT developed immediate tools to help communicate the NEVI Plan and longer-term strategies to explain and solicit feedback from the community and stakeholders. RIDOT has launched a project website located here: https://www.dot.ri.gov/projects/EVCharging/index.php.

The website overviews federal funding and EVSE, the NEVI Formula Program, and the previous 2020 RIDOT Pilot Program. Visitors are encouraged to submit a comment and their email addresses to be kept up to date with events and information.

RIDOT intends to keep stakeholders informed through meetings, providing current information on the EV Charging Stations webpage, social media updates, and blasts to the mailing list.

In the future, RIDOT's website can be updated with the public survey results, maps, and new information as it becomes available. The website will be ADA compliant and include information regarding Title VI of the Civil Rights Act, local support for workplace development, and small-business participation.

4. Plan Vision and Goals

Under the NEVI Formula Program, the formula funding provides for DCFC stations to be located less than 50 miles apart, to be within 1 mile of a federally designated vehicle AFC, and to have at least four chargers supporting a speed of 150 kW with a total electric capacity of at least 600 kW.

Rhode Island intends to provide all current and future EV drivers with increased confidence that they can make short and long trips without running out of fuel and mitigate range anxiety. RIDOT's **vision** for this Plan is to have a safe and connected transportation system network that encourages EV adoption through improved public infrastructure supporting Rhode Island's climate, equity, and safety goals.

We are committed to following the national guidance combined with our local needs and expertise to provide the best possible transportation system network. To help guide our systems engineering process, our stakeholders have developed a high-level description of **overall goals** as follows:

- **Improve Local Access to EV Charging:** Rhode Islanders' access to electric vehicle charging is a top priority. Our state is car-centric and relies on our roadways and facilities to support driver needs. Local drivers' needs will only increase over the near term: President Biden outlined a target of 50 percent EVs by 2030, 18 out of the 20 largest vehicle manufacturers are committed to more affordable EVs, and there were more than 10 million electric cars on the road in 2020. Automakers, industry, and utilities continue to announce major progress in EVs and EV-related investments. 2022 will be a pivotal year as states invest. Coordination among states, utilities, the private sector, and the federal government over the next few years will be essential to improving access to EV charging and growing the EV market. Although most EV drivers are expected to charge their vehicles primarily at home, public charging infrastructure will provide them with options for charging while on the go and afford critical charging opportunities to EV drivers who do not have access to residential charging. This Plan outlines investment opportunities to provide publicly available charging stations close to interstates and National Highway System roadways where there are few driveways and garages, such as at commercial destinations and longer routes between cities. The next 5 years are key in providing access to additional charging stations for our public.
- **Deliver National Connectivity:** It takes a relatively short distance and amount of time to cross state borders in New England. The Interstate 95 corridor and local routes provide access to Massachusetts and Rhode Island for commuting, freight traffic, shopping destinations, vacation areas, and special events. As a local and through route, increasing access to EV charging along this route makes it more convenient for drivers traveling in both directions.
- **Focus on Equitable Access and Justice40 Communities:** As advocates for the people of Rhode Island, we encourage focused efforts to provide near-term AFCs to Rhode Islanders who have been historically underserved and overburdened in disadvantaged communities. Persons of disadvantaged status are less likely to have the outdoor space and authority to charge at home and need alternative access to charging stations. Based on the Justice40 Interim Guidance, provided by the U.S. Department of Transportation (USDOT) and U.S. Department of Energy (DOE), several DACs are in Providence Country and Bristol Country.[6] Each of these communities is served through increasing access to fast charging along Interstate 95. Our mission is to prioritize access for persons without household charging who need fast charging in safe places. Using the USDOT Screening Tool for Equity Analysis of Projects, only 7 percent of households statewide have zero vehicles. Along the Interstate 95 corridor in the Providence metropolitan area, only 18 percent of households have zero vehicles.[7]
- **Aid Rural Areas:** Based on the U.S. Department of Agriculture[8] and Rhode Island Statewide Planning Program,[9] a significant portion of Rhode Island meets rural area measurements. Including corridors in these rural areas, where charging station use rates could be lower, allows RIDOT to help lower fuel costs and costs of ownership, promote economic development, reduce emissions, and support partnerships to increase future benefits.
- **Help EV Workforce Development:** As a public agency, current and future EV workforce development is critical to state planning. By focusing on bringing EVSE along Interstate 95 to the DACs and fostering competitive grants to

[6] https://anl.maps.arcgis.com/apps/webappviewer/index.html?id=33f3e1fc30bf476099923224a1c1b3ee

[7] https://hepgis.fhwa.dot.gov/fhwagis/buffertool/

[8] https://www.ers.usda.gov/webdocs/DataFiles/53180/25594_RI.pdf?v=0

[9] https://planning.ri.gov/sites/g/files/xkgbur826/files/img/Transp_Urban_Rural_boundary_Map_1.pdf

increase local participation in build-out, especially for disadvantaged business enterprises, our proposed corridors will bring the best benefit to the Ocean State public and help develop tomorrow's EV workforce.

- **Reduce Emissions:** Transportation is our largest source of greenhouse gases, constituting about 40 percent of Rhode Island's greenhouse gas emissions.[10] Vehicle electrification and supporting infrastructure offer a technology pathway for continuing to move Rhode Island's people and goods with lower greenhouse gas and air pollutant emissions, improve air quality, and reduce reliance on foreign petroleum.
- **Support Coastal Urban Development:** Rhode Island experiences seasonal travelers and is a popular vacation destination. Along with the coastal communities and densely populated Newport and Washington Counties, no DCFC is publicly accessible. Target is opening with public chargers that are part of the Tesla network, and some hotels offer charging to clientele. As a state, we host several special events and music festivals that significantly contribute to an increase in vehicles. While not explicitly in the national requirements, the coastal communities and tourist travel are unique to Rhode Island and must be included. Many travelers and visitors cannot charge at their destinations, rentals, or event locations.

4.1 5-Year Goal

As part of this Plan, the federal template requires RIDOT to set a quantified target. To set this target, we reviewed the political priorities, available data, overall market impact, the Ocean State's needs, and what we have control over. On April 10, 2021, Governor Dan McKee signed the 2021 Act on Climate into law, which sets mandatory, enforceable climate emissions reduction goals to achieve net-zero emissions economy-wide by 2050.[11] As of March 2022, 16 states, including Rhode Island, have adopted California's ZEV regulations under Section 177 of the Clean Air Act, which requires the manufacturers to deliver a certain annual percentage of ZEVs to Rhode Island, increasing to 100 percent ZEVs by 2035.[12] Rhode Island has also announced its intent to adopt California's Advanced Clean Trucks (ACT) Rule, which requires manufacturers to deliver an increasing percentage of their annual sales as ZEVs.[13] We strive to make sales of all medium- and heavy-duty vehicles ZEVs by 2050.

On July 7, 2022, the Rhode Island OER launched the DRIVE EV rebate program. This $1.25 million initiative provides rebates "to support the adoption of electric vehicles by Rhode Island residents, small-businesses, non-profits, and public sector entities." Rebates are available for new and used battery-electric vehicles (BEVs), fuel cell electric vehicles (FCEVs), and plug-in hybrid electric vehicles (PHEVs). DRIVE EV provides an additional rebate based on income eligibility (www.drive.ri.gov). This program will support purchases of around 600 EVs.

In the near term, the governor has set a target of 43,000 ZEVs by 2025. Using the FHWA Congestion Mitigation and Air Quality Improvement (CMAQ) Program tool for emissions calculations, switching over just 20 percent of the current vehicle fleet in Rhode Island to EVs in the next 5 years leads to an emission reduction for carbon monoxide of 154 kilograms per day (kg/day), and almost 95 kg/day of nitrogen oxide, improving air quality and, ultimately, local health. ZEV adoption is critical to reducing smog and greenhouse gas emissions. Argonne National Laboratory's ATRAVEL shows that Rhode Island currently has a diesel particulate matter concentration of 0.52 microgram per cubic meter (µg/m³), which is higher than the national average of 0.48 µg/m³. RIDOT's role is to support charging station infrastructure and reduce range anxiety. Our overall goals support EV growth and adoption statewide. Our target to meet the federal requirement is within our control and the near term. For those reasons, **the goal is to fully build out Interstate 95 and build two additional stations, meeting the NEVI requirements, including 97 percent reliability. Data will be required as part of RIDOT contracts and released publicly to inform planning policy and program decisions.** As the program matures, we will establish more metrics, as discussed in Section 13, Program Evaluation.

5. Contracting

RIDOT plans to implement a competitive grant program that will involve legal agreements with the grant recipients to install, operate, and maintain fast EV charging stations throughout the Ocean State. These agreements will include requirements for data reporting, reliability, and disadvantaged business enterprise contract involvement. Working with the private sector, RIDOT can use the funds in the near term and include contract requirements for operations and maintenance, including uptime. RIDOT will reserve funds and make contract obligations to ensure 97 percent uptime, considering a re-release of the contract should a contractor not be able to meet its obligations. RIDOT is also considering multiple site operators to promote competition. In

[10] http://www.dem.ri.gov/programs/air/ghg-emissions-inventory/transportation-emissions-dashboard.php

[11] https://climatechange.ri.gov/act-climate

[12] https://ww2.arb.ca.gov/our-work/programs/zero-emission-vehicle-program/about

[13] https://www.nescaum.org/documents/mhdv-zev-mou-20220329.pdf/

addition to the contracting mechanism, RIDOT will explore a value-based procurement strategy that includes Justice40[14] benefits as a critical scoring mechanism through a request for proposal (RFP).

In addition to deployment activities, RIDOT may contract for data collection, analysis, and stakeholder outreach to continue supporting the program. This outreach will focus on communities and contractors in places where EV charging infrastructure will be installed.

6. Existing and Future Conditions Analysis

Rhode Island borders Connecticut, Massachusetts, and the Atlantic Ocean, with over a million residents. The state terrain along the ocean leads from coastal lowlands, including Aquidneck Island and Jamestown, into rural woodlands. Rhode Island experiences all four weather seasons, with large ranges of temperatures daily and annually and considerably diverse weather over short periods. The DEM reports that "annual precipitation averages 42 to 46 inches over most of the State, with a tendency for decreasing amounts from west to east. . . . The average annual snowfall in Rhode Island increases from about 20 inches on Block Island and along the southeast shores of Narragansett Bay to 40 to 55 inches in the western third of the state."[15] The National Oceanic and Atmospheric Administration National Centers for Environmental Information released a state climate summary for Rhode Island in 2022, stating that "temperatures in Rhode Island have risen almost 4°F since the beginning of the 20th century." Annual precipitation has increased since 1985, with the highest number of extreme events between 2004 and 2014. The sea level has also risen 9 inches faster than the global average.[16] This is a critical time to reduce Ocean State emissions negatively impacting climate change.

According to data from the DEM, as of June 2022, there are 5,627 registered EVs in Rhode Island. In February 2022, there were 4,869 registered EVs (Figure 3). That is a 115.4 percent increase over 5 months, even with supply chain, delivery, and economic issues. This increase is expected to be over 10 times the sales between 2015 and 2022. Government programs are also supporting this market growth. As mentioned, on July 7, 2022, the Rhode Island Office of Energy Resources launched the DRIVE EV rebate program. This $1.25 million initiative provides rebates "to support the adoption of electric vehicles by Rhode Island residents, small-businesses, non-profits, and public sector entities." Rebates are available for new and used BEVs, FCEVs, and PHEVs. DRIVE EV provides an additional rebate based on income eligibility (www.drive.ri.gov).

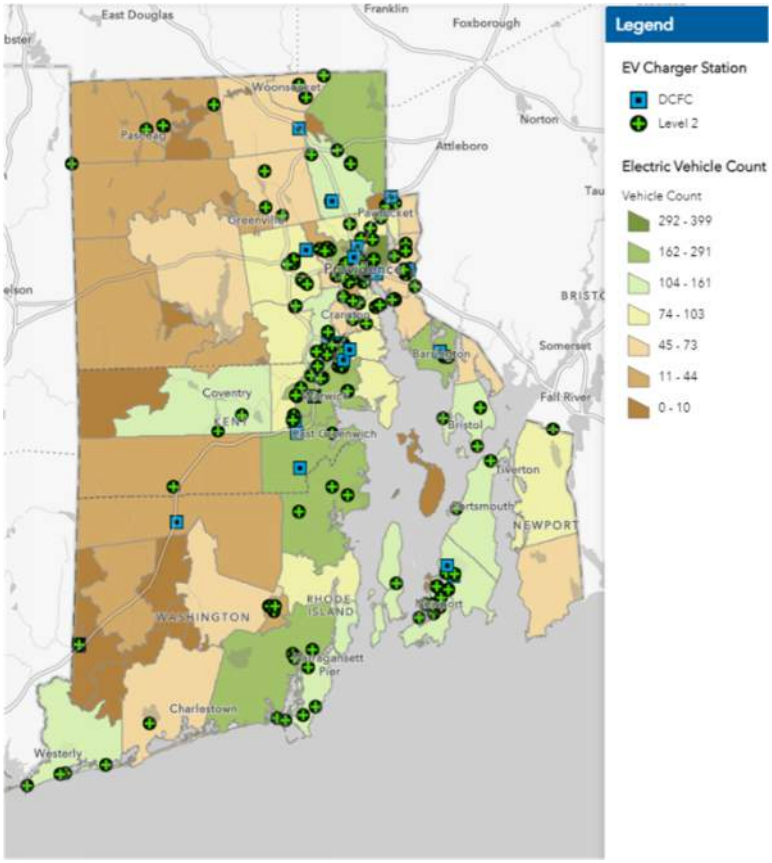


Figure 3: Rhode Island Electric Vehicle Registration by County Map

As of March 2022, 16 states, including Rhode Island, have adopted California's regulations that require the manufacturers to deliver a certain annual percentage of ZEVs to Rhode Island, increasing to 100 percent ZEV by 2035.[17] sales of a certain number of ZEVs by 2035. In the near term, the governor has set a target of 43,000 ZEVs by 2025.[18] Rhode Island has also announced its intent to adopt California's ACT Rule, which requires manufacturers to deliver an increasing percentage of their annual sales as ZEVs.[19] We strive to make sales of all medium- and heavy-duty vehicles ZEVs by no later than 2050.

[14] https://www.whitehouse.gov/omb/briefing-room/2021/07/20/the-path-to-achieving-justice40/

[15] http://www.dem.ri.gov/climate/climate-overview-ri.php

[16] https://statesummaries.ncics.org/chapter/ri/

[17] https://ww2.arb.ca.gov/our-work/programs/zero-emission-vehicle-program/about

[18] https://energy.ri.gov/sites/g/files/xkgbur741/files/documents/Transportation/Rhode-Island-ZEV-Action-Plan-Final-2016.pdf

[19] https://www.nescaum.org/documents/mhdv-zev-mou-20220329.pdf/

The electric grid is critical in servicing this increase in power demand at EV charging stations. Rhode Island Energy, formerly National Grid, provides services for 500,000 electric and 274,000 gas customers. Rhode Island Energy met with the EC4 Interagency Group on May 9, 2022, to discuss the current engagement process, the Rhode Island System Data Portal, and any related initiatives.

6.1 State Geography, Terrain, Climate and Land Use Patterns

The U.S. Census Bureau most recently defined rural as "any population, housing, or territory NOT in an urban area."[20] A significant portion of Rhode Island meets rural area measurements. An image file has been included that was used as a reference for rural counties using U.S. Census data (Figure 4).[21] Including routes for potential EVSE in these rural areas allows RIDOT financial contributions to lower fuel costs and costs of ownership, promote economic development, reduce emissions, and support partnerships to increase future benefits. Adding EVSE infrastructure is necessary to support rural areas.

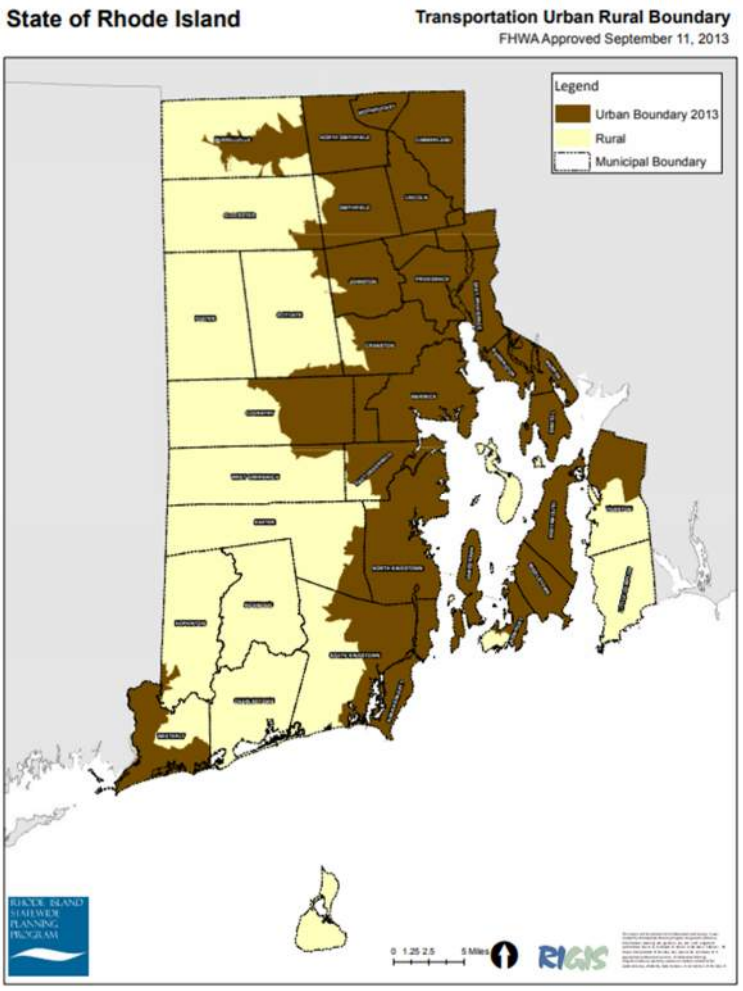


Figure 4: Rhode Island Rural and Urban Areas Map

The Rhode Island State Climatologist defines the state's geography, climate, and terrain as follows:

"[Rhode Island] extends for 50 miles in a north-south direction and has an average width of about 30 miles. The total area, including Block Island some 10 miles offshore, is 1,214 square miles.

"There are three topographical divisions of the State. A narrow coastal plain lies along the south shore and Narragansett Bay with an elevation of less than 100 feet. A second division lies to the north and east of the Bay with gently rolling uplands of up to 200 feet elevation. The western two-thirds of Rhode Island consist of predominantly hilly uplands of 200 to 600 feet elevation but rising to a maximum of 800 feet above sea level in the northwest corner of the State. . . .

"The chief characteristics of Rhode Island's climate may be summarized as follows: (1) equitable distribution of precipitation among the four seasons; (2) large ranges of temperature both daily and annually; (3) great differences in the same season of different years; and (4) considerable diversity of the weather over short time periods. These characteristics are modified by nearness to the Bay or ocean, elevation and nature of the terrain. . . .

"Annual precipitation averages 42 to 46 inches over most of the State, with a tendency for decreasing amounts from west to east. It varies from about 40 inches in the immediate southeastern Bay area and Block Island to 48 inches in the western uplands. . . .

"The average annual snowfall in Rhode Island increases from about 20 inches on Block Island and along the southeast shores of Narragansett Bay to 40 to 55 inches in the western third of the State. Areas near the western and northern shores of the Bay, including greater Providence, have an average range of 25 to 30 inches of snow per year. During mild winters, these snowfall totals can be significantly less."[22]

[20] https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=49cd4bc9c8eb444ab51218c1d5001ef6

[21] http://www.planning.ri.gov/img/Transp_Urban_Rural_boundary_Map_1.pdf

[22] http://www.dem.ri.gov/climate/climate-overview-ri.php

Land Use Patterns

The Ocean State is home to beautiful beaches, metropolitan areas, historic buildings, green spaces, and residential neighborhoods. Our land is a limited resource, and helping manage the land use for Rhode Island while planning is an essential public service to ensure that how we arrange our communities meets our needs. Rhode Island's current population and housing density are among the highest in the country, yet the state also ranks high in forested land. According to the Department of Planning, *Vision 2025 Rhode Island Land Use Policies and Plan*, "75 percent of the population resides in a 40-mile-long urban/suburban corridor along the shores of Narragansett Bay and in the valleys of the Blackstone and Pawtuxet rivers. This corridor contains nearly all of the public infrastructure, major transportation routes, and institutional and cultural centers. . . . R.I. Division of Planning's most recent profile of statewide land use, *Land Use Trends 1970-1995*, found that in those 25 years, Rhode Island developed its land at a rate much higher than historic trends. It took over 300 years to develop the first 20 percent of the state's land, and only 25 more years to develop another 9 percent." Since 1995, there have been vacant lots, redevelopment property projects, and land conversation investments. Sprawl continues. "About 30 percent of the land that was undeveloped in 1995" was developed by 2005. "In some of the more rapidly developing communities, building activity has consumed as much as 75 percent of vacant land."[23] Figure 5 was provided as part of the Long-Range Transportation Plan[24] to illustrate the state's population density. Most of the population lives near Providence, relying on the roadway network for critical needs.

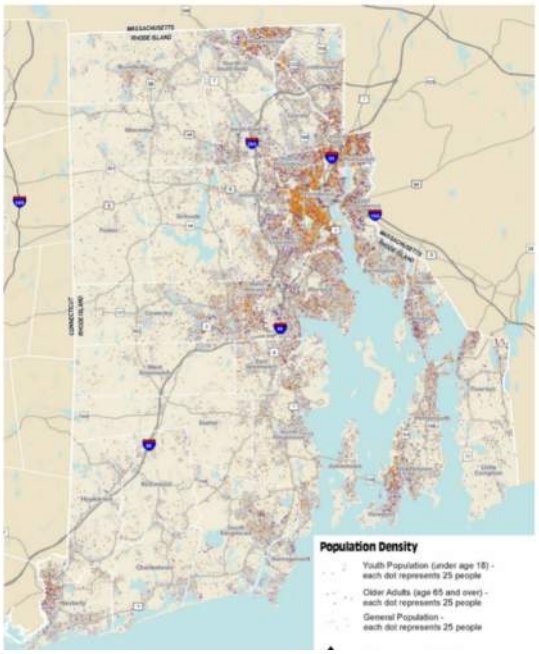


Figure 5: Rhode Island Population Density Map

6.2 State Travel Patterns, Public Transportation Needs, Freight and Other Supply Chain Needs

Travel Patterns

Most Rhode Islanders rely on their vehicles to travel to work, school, recreation, utility trips, and other locations. In 2016, 85 percent of people in Rhode Island drove alone to work, compared with the national average of 76 percent. Less than 3 percent of the public used public transportation. Due to the state's population density and car-centric nature, we experience congestion. Many segments of the interstates and freeways during peak travel hours surround the Greater Providence, Cranston, and Warwick areas. Rhode Island has access to travel time and reliability data.[25]

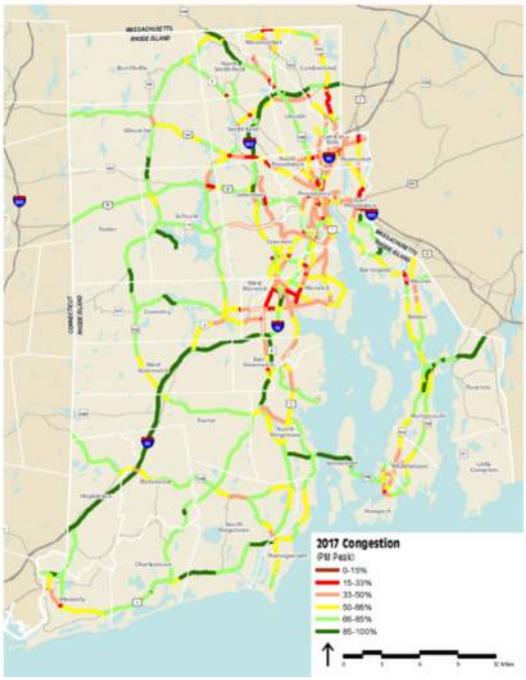


Figure 6: Rhode Island Congestion Map

The areas on Figure 6 highlighted in yellow and red experienced high congestion levels. These data are from 2017 to reflect pre-COVID-19 traffic patterns. Traffic patterns have fluctuated, but the state does typically experience congestion on these routes.[26] These are also daily traffic patterns. The Rhode Island DOA Congestion Management Process (CMP) Final Plan states, "The Providence Metro region is the most congested area in the state with roughly 10 percent of all highways within the CMP network congested during a typical morning peak hour and 17 percent of all highways congested during a typical evening peak hour. . . . The average congestion levels among all highways within the Providence Metro region varies between 15 and 20 percent through the year. The congestion level within the City of Providence is higher, varying between 35 and 55 percent of highways identified as congested. The higher levels of congestion appear in spring and fall while the congestion during the summer months appears to be lower. This may be related to schools and

[23] https://planning.ri.gov/sites/g/files/xkgbur826/files/documents/121/lu_exec.pdf

[24] https://planning.ri.gov/sites/g/files/xkgbur826/files/documents/trans/2020/Final-LRTP-December-2020.pdf

[25] https://planning.ri.gov/sites/g/files/xkgbur826/files/documents/trans/2020/Final-LRTP-December-2020.pdf

[26] https://planning.ri.gov/sites/g/files/xkgbur826/files/documents/trans/2020/Final-LRTP-December-2020.pdf

colleges and universities being open during spring and fall."[27] Because the Providence area, inside Interstate 295, is the most densely populated, the congestion along these roadways will continue to increase into the future.

In the summertime, Rhode Island experiences a rush of traffic to the coastal communities along the ocean. Washington, Bristol, and Newport Counties all have tourist areas that experience congestion and safety issues due to the large influx of tourists and automobiles in the summer. Roadways such as Route 1, Route 4, Route 114, Route 138, and Route 24 into Massachusetts experience traffic volumes much greater than average at lower speeds.[28] The CMP Final Plan noted that these roadways still experience more traffic during weekdays, host local commuting traffic, and are critical pathways connecting the state. Despite inflation and rising gas prices, RIDOT anticipates increasing vehicles traveling to the Ocean State for vacation, Newport music festivals, sports, and other special events this summer.

Figure 7 displays the Rhode Island Energy heat map for available vehicle fleet transportation and distribution feeders. The Rhode Island electric distribution circuits shown on this map are color-coded based on their most recent annually forecasted percent loading, with the specific year identified in the map legend (for example, 2019 Load/Feeder Rating). This map identifies where additional capacity is expected to exist and can accommodate beneficial electrification of high-efficiency heat pumps and EVs. This helps EV infrastructure developers identify locations on the National Grid electric distribution network.[29] Based on our review of the Rhode Island Energy data and maps, even during the July 4th, 2022, holiday, with peak seasonal travel and electricity usage, the distribution feeders did not appear to exceed 70 percent load. This suggests there is capacity in the network for additional load in the near term.

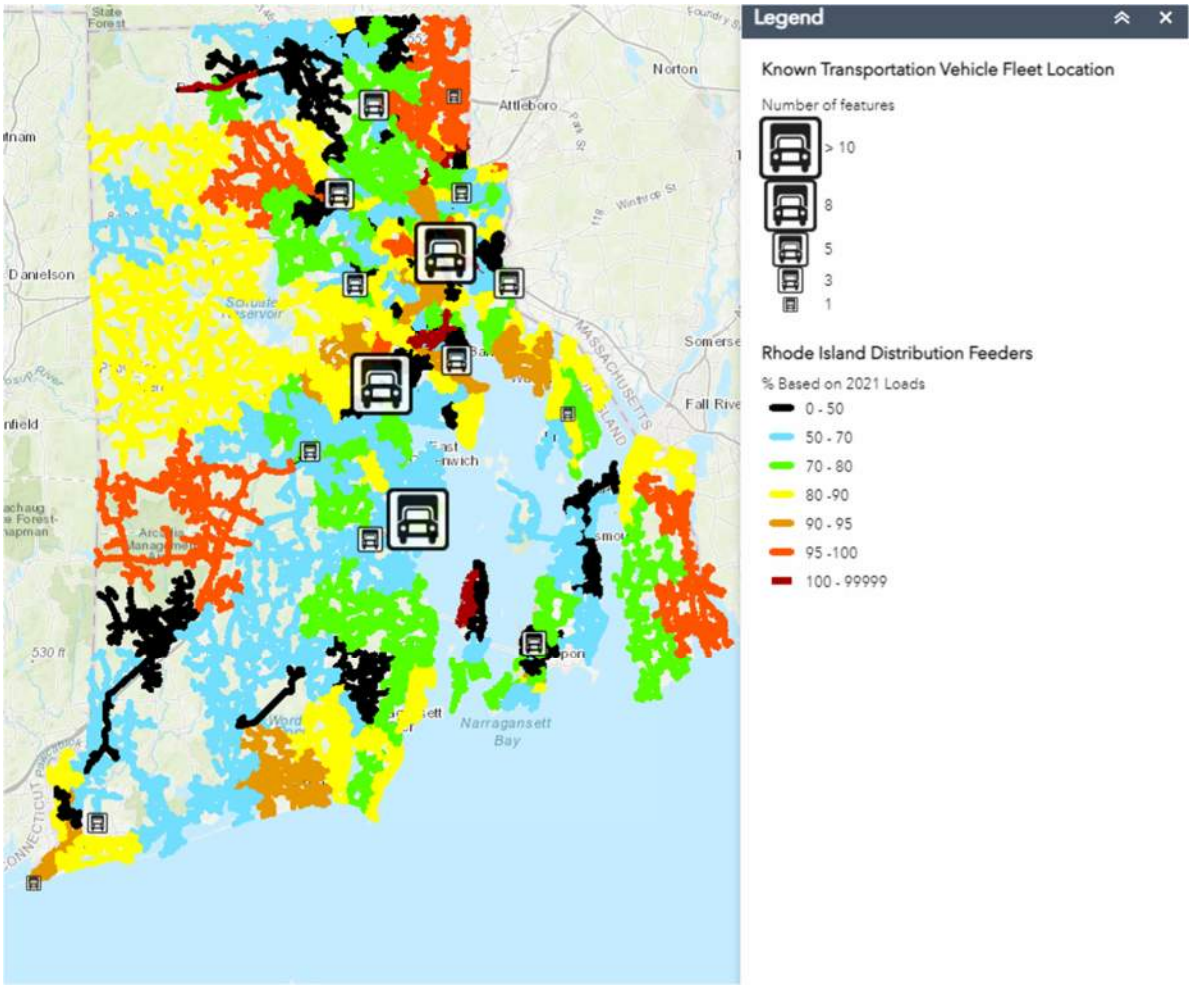


Figure 7: Vehicle Traffic and Rhode Island Distribution Feeders Capacity Map

[27] https://planning.ri.gov/sites/g/files/xkgbur826/files/documents/LRTP/Congestion-Management-Process.pdf

[28] https://www.rigis.org/maps/traffic-counts

[29] https://ngrid.apps.nationalgrid.com/NGSysDataPortal/RI/index.html

Public Transportation

The public transportation offered in Rhode Island includes the local RIPTA bus network, MBTA Commuter Rail, and Amtrak northeast. RIPTA serves 36 of the 38 communities, operates 7 days a week, and provides ADA-compliant paratransit services statewide. The RIPTA service includes stops at 32 Park n' Ride facilities. In 2020, RIPTA provided fixed-route bus service for 13,026,356 trips. RIPTA has conducted an electric bus pilot and ordered 14 new electric buses. The agency is committed to helping reduce emissions with more confidence as funding and the longer vehicle range are reliable.[30] RIPTA has long-term plans based on population and employment demand to continue serving the communities' needs best.

In addition to the bus system, there are six municipal ferry terminals throughout the state in Providence, Newport, Bristol, Portsmouth, North Kingstown, and New Shoreham.

Freight Network

Freight is a critical component of the supply chain, employment, and contributor to greenhouse gas emissions. At this point, our understanding of the NEVI guidelines refers to installing infrastructure to be publicly available or to accommodate multiple different duty vehicles. For example, RIDOT may choose to install chargers that would accommodate medium-duty and heavy-duty vehicles. DEM anticipates the adoption of California's ACT Rule, which requires the sale of at least 30 percent ZEV trucks by 2030 (depending on vehicle classification). By model year 2025, ZEV truck sales will need to be 55 percent of Class 2b to 3 truck sales, 75 percent of Class 4 to 8 truck sales, and 40 percent of truck tractor sales. The freight pathways through Rhode Island impact our network. We must now consider this impact when planning EVSE infrastructure for the Ocean State.

Interstate 95 is the hub of freight delivery and commuter traffic throughout the state, connecting intermodal facilities at Rhode Island T.F. Green International Airport, Port of Providence, and Port of Davisville. Additional truck corridors running north to the south include Interstate 295, Route 4, and Route 146. The main rail freight corridor is the Amtrak Northeast Corridor. The marine shipping corridor is Narragansett Bay via the Port of Davisville within the Quonset Business Park and the Port of Providence. East–west freight corridors are primarily limited to truck freight on Interstate 195, Route 6, and Route 44. In addition, rail connects Rhode Island to the national and Canadian rail networks through interchanges in Massachusetts, Connecticut, and New York.[31] Figure 8, prepared by RIDOT as part of the 2022 Freight and Goods Movement Plan,[32] illustrates the freight network, including the ports and Rhode Island T.F. Green International Airport. The Port of Davisville/Quonset Business Park and the Port of Providence are active international gateways.

Figure 8: Rhode Island Map of Freight and Port Network

6.3 AFC - Corridor Networks

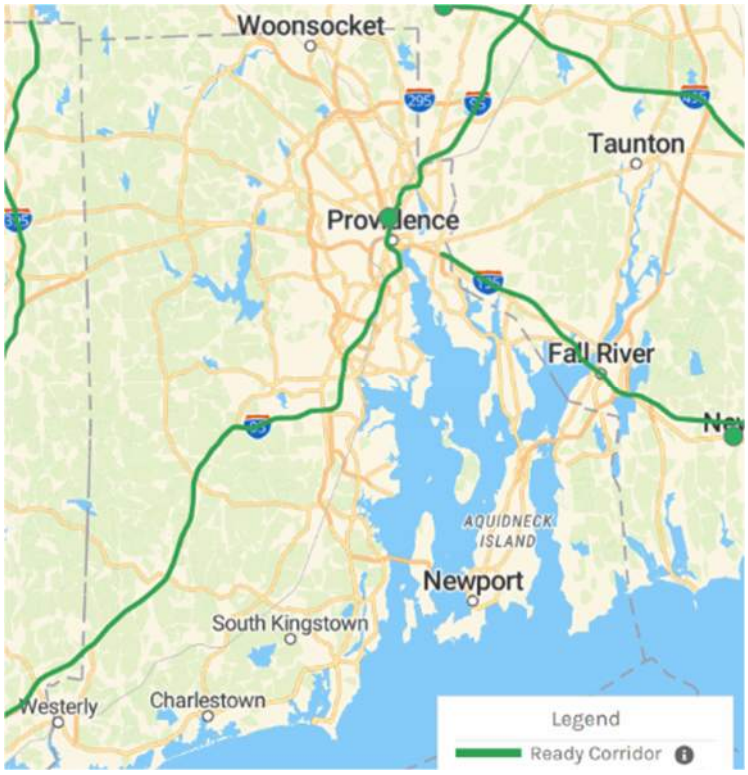
The existing AFCs (Table 1) were nominated during the first five rounds of the corridor designations. Following FHWA.gov, Interstate 95 is a designated AFC interstate, and Route 6 is a designated AFC U.S. Route/Highway. Interstate 95 was nominated in its entire length, from mile marker 0 at the Connecticut border to mile marker 43.2 at the Massachusetts state border. Interstate 95 includes Warwick, Cranston, Providence, and Pawtucket metropolitan areas, and three counties: Washington, Kent, and Providence. US 6 was also nominated as an essential link moving freight and goods throughout the state and region for hydrogen. The routes are displayed using federal tools online at driveelectric.gov as well. Presenting the existing corridors is to illustrate the current corridor status. No other corridors were nominated as part of the Round 6 nomination period. Interstate infrastructure is critical to the national build-out for Massachusetts and Connecticut connectivity.

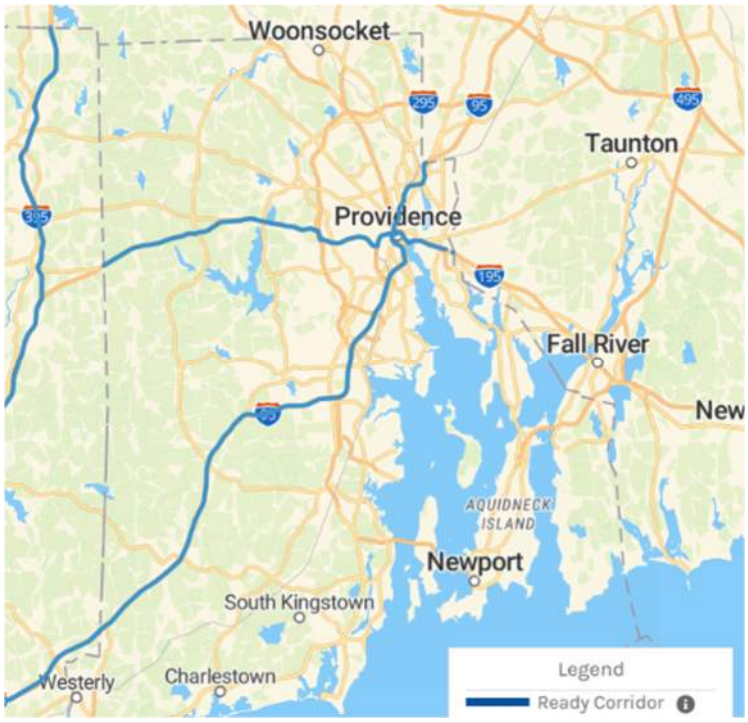
[30] https://www.ripta.com/electric-bus/

[31] https://planning.ri.gov/planning-areas/transportation/freight-planning

[32] https://planning.ri.gov/sites/g/files/xkgbur826/files/2022-06/2022_RI_Interim_Freight_Plan_Update_6_1_22.pdf

Table 1: Current Alternative Fuel Corridors

Alternative Fuel	Details	Map
Electric Vehicle Ready Corridor	Interstate 95 Start: 0 mi End: 43.2 mi Interstate 195 Start: 0 mi End: 0.7 mi	
Compressed Natural Gas Ready Corridor	Interstate 95 Start: 0 mi End: 43.2 mi	

Alternative Fuel	Details	Map
Hydrogen Pending Corridor	Interstate 95 Start: 0 mi End: 43.2 mi Route 6/ Interstate 195 Start: 0 mi End: 25.31 mi	

There are currently no corridors designated as liquefied natural gas or propane ready or pending corridors.

There are three propane stations open to the public during the daytime hours at different U-Haul facilities. One of the three, U-Haul in Warwick, Rhode Island, is within 5 miles of Interstate 95.[33]

6.4 Existing Locations of Charging Infrastructure Along AFCs

Existing charging stations have been deployed in the state over the past 10 years. There are about 300 charging stations in the state fielded and operated by different public and private entities.[34] The USDOT apportionment of Highway Infrastructure Program funds will be used not only to build out main corridors but also to help coordinate the use of all these stations and plan maintenance and upgrades. RIDOT funded an earlier EV charging station pilot project with 12 charging stations in two locations off Interstate 95. As a result of the IIJA, new formula and discretionary programs will be implemented for our state to strategically deploy EV infrastructure for publicly accessible EV charging and other alternative fuel infrastructure in designated AFCs.

Table 2 and Figure 9 include existing charging stations within a mile of Interstate 95, Rhode Island's Ready Corridor, that meet the NEVI requirements or that may be upgraded in the future to meet the NEVI requirements. Appendix C includes a full list of DCFC and Level 2 stations along Interstate 95.

Note that Site ID 167864 at Walmart in Providence is operated by Electrify America (the only one in the state) and includes four DCFCs, at least one of which is a 350-kW charger. It is also less than a mile from Interstate 95, so this privately owned Site ID 167864 satisfies Rhode Island's build-out requirements for the AFC. Similarly, Site ID 192735 includes a group of eight Tesla DCFCs at a shopping center off Interstate 95 in East Greenwich. On July 8, 2022,[35] the White House confirmed that Tesla will open up its Supercharger network. If this site becomes available to non-Tesla users soon, it will also satisfy NEVI build-out requirements, and this site is only 45 miles from the existing Waterford, Connecticut, EV charging site.

[33] https://afdc.energy.gov/stations#/find/nearest?fuel=LPG

[34] https://afdc.energy.gov/stations#/find/nearest?fuel=ELEC

[35] https://www.forbes.com/wheels/news/tesla-opens-supercharger-network/

Table 2: Existing Locations near AFC Interstate 95 as of July 2, 2022[36]

Station ID	Station Name	Charger Level	Near Route	Location	No. of EV Connectors	EV Network
167864	Walmart	DCFC	Interstate 95	51 Silver Spring Street, Providence RI	4	Electrify America
165561 165635	DOT Hopkinton	DCFC	Interstate 95	0 Nooseneck Hill Rd., Hopkinton, RI	2	ChargePoint Network
165560 181115	DOT RT117	DCFC	Interstate 95	Rt 117 Park 'n Ride, Warwick RI	2	ChargePoint Network
204944	Ocean State Harley-Davidson	DCFC	Interstate 95	435 Nooseneck Hill Rd. Exeter, RI	1	ChargePoint Network
49711	Speedcraft Nissan	DCFC	Interstate 95	885 Quaker Ln, West Warwick, RI	1	Non-Networked
221087	Balise Chevrolet	DCFC	Interstate 95	1338 Post Rd Warwick RI	1	Non-Networked
72476	Whole Foods	DCFC	Interstate 95	151 Sockanosset Cross Rd, Cranston RI	1	ChargePoint Network
165228	Ocean State Harley-Davidson	DCFC	Interstate 95	35 Albany Rd, Warwick, RI	1	ChargePoint Network
198373	Hilton Garden Inn	DCFC	Interstate 95	220 India St, Providence RI	1	EVgo Network
151843	Providence Place	DCFC	Interstate 95	1 Providence Pl, Providence Ri	1	Volta
102400	East Greenwich Square - Tesla Supercharger	DCFC	Interstate 95	1000 Division Street, East Greenwich RI	8	Tesla
202687	Capital Good Fund	DCFC	Interstate 95	333 Smith St. Providence, RI	1	ChargePoint Network
217373 192734 192735	Steingold Volvo Cars	DCFC	Interstate 95	1001 Roosevelt Ave, Pawtucket, RI	2	ChargePoint Network

[36] https://afdc.energy.gov/stations#/find/nearest?fuel=ELEC

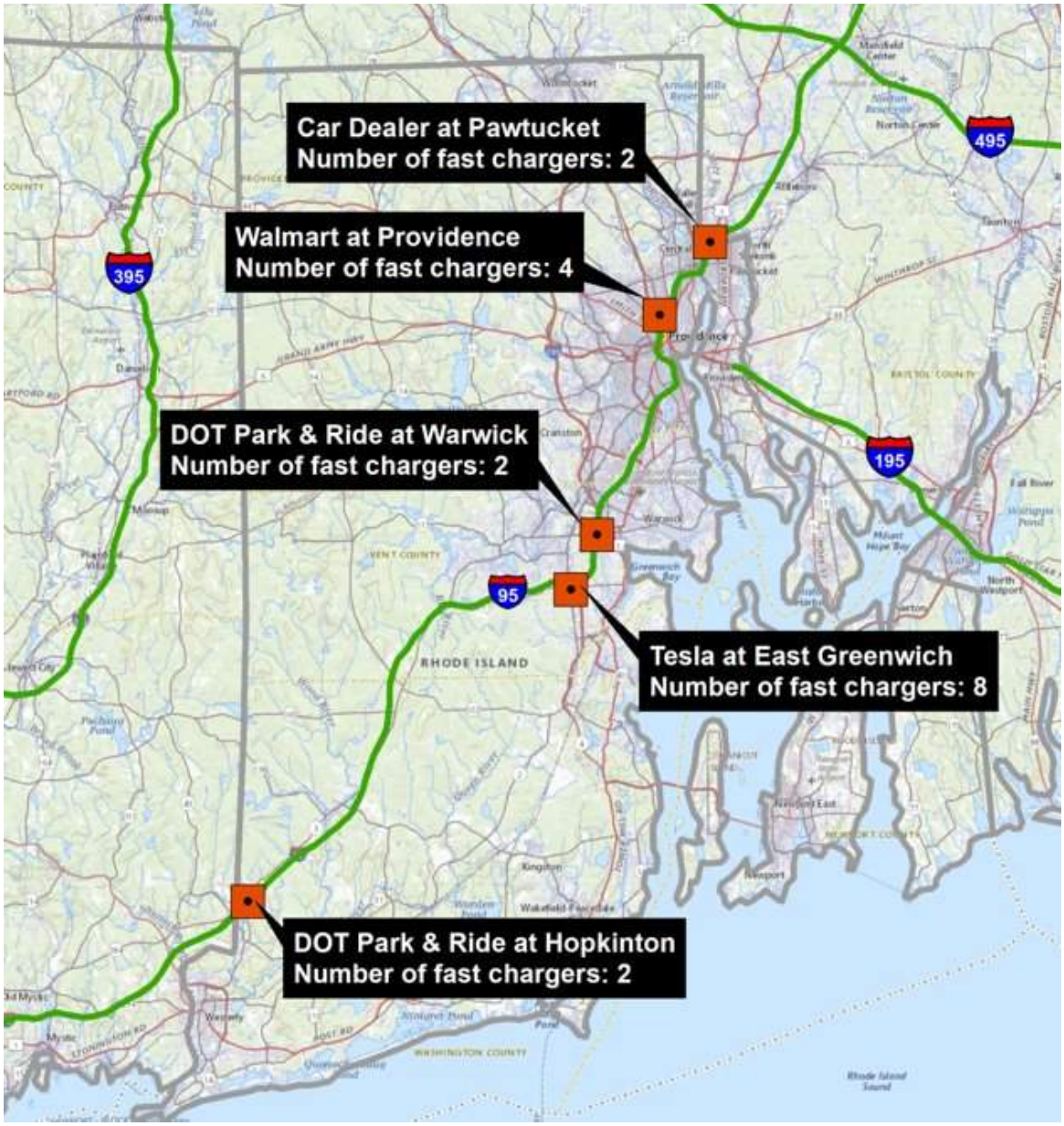


Figure 9: Rhode Island AFC and Existing DCFC Stations Map

6.5 Known Risks and Challenges

There are risks and challenges in the market and infrastructure to deliver our Plan in completion. EV availability has been a known issue, with many of the newest and most affordable EVs on backlog. During the pandemic, chip production has experienced pent-up demand and limitations, impacting the inventory. In spring 2022, with soaring gas prices and a lack of car inventory, the EV market depleted.

Based on our discussions with Rhode Island Energy, increasing the EV load can present uncertainty for planning and grid operations. We are working with the utility to mitigate the risk of transformer shortages. We will engage with Rhode Island Energy throughout all plans and take advantage of the public-facing distribution maps for planning. In addition, increasing the station density near Tesla locations may be a risk as the Tesla devices become public-facing. To deploy infrastructure on additional corridors, our challenge is to reach the rural and seasonal communities in the near term to reach most of the public while balancing private market deployments. Attracting operations and maintenance providers or contractors may be challenging due to our small number of EVSE devices, but we feel this may be an advantage to allow the workforce to ramp up to meet the

market's demand. A practical rollout along Interstate 95 in the near term helps alleviate the risk that direct revenues from providing charging services might not cover the cost of installation and operation of the equipment, or technologies might become obsolete.

For our vendors and contractors, the Buy America requirements may make procurement challenging for grant awardees. Rhode Island will meet with charging manufacturers to determine who considers their infrastructure as American and how to identify the label requirements for "Buy America." Rhode Island weather and coastal elements may also present issues in providing consistent and reliable service. RIDOT is aware of these issues and challenges, and we will work with the contractors and vendors to complete our projects on time and within budget while meeting the NEVI requirements.

7. EV Charging Infrastructure Deployment

Our overarching strategy for EV charging is to use the federal funds to provide the most benefit for the public to decrease driver range anxiety and support adoption. Our state is uniquely dense, with short-run segments supporting local, regional, seasonal, and freight traffic. We have an existing network based on the previous investments born from but not limited to the Volkswagen settlement, Rhode Island Energy, charger programs, and Park 'n Ride facilities. Our state agencies have invested in exploring and promoting incentives, performing outreach, and improving reliability.

Rhode Island's designated AFC for EVs is Interstate 95. There is some signage currently along the interstate. This is a critical roadway, and the NEVI Formula Program funding cannot be used outside designated AFCs until the Secretary of Transportation certifies that Interstate 95 is built out. Section 6.4 presents Site ID 167864 as an existing Electrify America station at the Walmart at 51 Silver Springs Street in Providence, Rhode Island. This station is less than a mile from the highway, 5 miles from the Massachusetts border, and 39 miles from the Connecticut border. This station also has four high-powered charging units that meet the requirements. It is also in a Justice40[37] disadvantaged community. We will work with the private sector and the vendor to help apply the funds to improve the station's signage, usability, and reliability in the first year, making the Interstate 95 AFC compliant with NEVI requirements for certification.

After the Secretary of Transportation certifies the corridor build-out, we will use the funding strategically to serve the most Rhode Island travelers possible while balancing the impact on the grid, coastal areas, and rural access.

1. RIDOT plans to use its resources to increase fast EV charging station awareness and reliability of existing fast charging stations. RIDOT will work with the private sector to help improve and promote the Walmart site. The existing network can be promoted on smartphone apps, signage, websites, advertisements, and targeted areas as determined in the public survey results. As stated, this location is also in a Justice40 community. Over the next 5 years, we are dedicating resources to increasing awareness, and our approach includes working with developers, signage, and public outreach strategies.

2. To serve Rhode Islanders, we must increase access to fast EV chargers in the Providence metropolitan area. The public is car-centric, and although RIDOT has had success in providing Park 'n Ride facilities to facilitate shared transport, none exist on the northern portion of Interstate 95, where most of Rhode Island's population and almost all of our Justice40 communities are located. Ideally, RIDOT would have access to large areas around Providence to help build new dedicated fast EV charging stations, but the impacts, cost, and grid constraints will create issues in the near term. Listening to stakeholder feedback that local businesses and convenience stores are eager to install fast EV charging stations and provide amenities, we will use the funds to work with interested local parties and private partners to provide fast, cost-effective charging at locations within a mile of Interstate 95, Interstate 195, and Interstate 295. This will help offset low use at first, increase grid capacity, encourage private participation, and critically address uptime reliability requirements, particularly with local businesses and parties. It also allows for resources to be allocated on the eastern side of the state in Bristol County, creating increased access. By investing with the private sector, the benefit of the funds is expanded, creating opportunity for near-term metropolitan and statewide deployment. RIDOT will structure contracts to require its partners to meet the federal station requirements for reliability, security, and access while prioritizing the participation requirement for disadvantaged business enterprises.

3. In the Providence metropolitan area, Route 146, a major corridor connecting local and through travelers, is currently undergoing rehabilitation. RIDOT will work with Planning on EVSE near Route 146 and stakeholders to promote the integration of EV charging access along the route during the planning of the rehabilitation. Planning will work with stakeholders and coordination to include EVSE in large capital investment projects moving forward. We will explore ESVE along the Route 146 corridor to build out EV charging, including electrical infrastructure, to NEVI standards. There are also several businesses and potentially interested parties that RIDOT could partner with to provide EVSE along this route.

4. We plan to upgrade two existing Park 'n Ride facilities along Interstate 95 that RIDOT owns. The Ashaway Park 'n Ride facility along the Interstate 95 corridor in Hopkinton is near the Connecticut border. Connecticut does not have an existing station near this border or near-term plans to install one. RIDOT will prioritize the Ashaway location as important to increasing access by

[37] https://anl.maps.arcgis.com/apps/webappviewer/index.html?id=33f3e1fc30bf476099923224a1c1b3ee

creating national interstate connectivity. This is also a great opportunity to build a user-friendly, inviting station at the entrance of Rhode Island for users to charge their EVs. We plan to provide adequate ADA parking space, lighting, physical security considerations, restrooms, and our best rest stop amenities. For example, any site partners must address the location's need to be publicly available 24/7 and report back to local authorities in the event of an incident. The site will require upgrading the current two DCFCs. If possible, both locations will include a 350-kW charger to help future-proof the technology and accommodate faster charging. Our contract documents will require data collection, monitoring, reporting, and reliability requirements of at least 97 percent. Upgrading this existing station rather than a larger build-out elsewhere helps minimize the burden on the energy grid. In the future, we will balance increasing station capacity in different areas based on the user data. For example, DCFC stations experiencing a lot of traffic and users will be explored to increase the capacity. Stations that experience low use will be examined for vehicle traffic, user experience, and other explanations.

Moving north along Interstate 95 toward Providence, there are two DCFCs and three Level 2 chargers at the Route 117 Park 'n Ride facility in Warwick, Rhode Island. This free, fast charging station is less than a mile from Interstate 95, providing critical access to travelers near Rhode Island T.F. Green International Airport or on their way to and from Providence. Upgrading both Park 'n Ride facilities allows RIDOT to have additional purchasing power without overburdening the grid or making long-term investments in areas with lower daily traffic volume.

In the next sections, we will illustrate the network connectivity provided through this installation. It is important to note that the Ashaway Park 'n Ride is less than a mile from the Connecticut border, Warwick Park 'n Ride is about 17 miles from the Massachusetts border, and the distance between the two Park 'n Ride facilities is about 27 miles. Both are within a mile of Interstate 95, fulfilling the build-out requirements for this corridor if the energy needs can be met for four DCFCs. In addition, we assessed the current RIDOT Maintenance Headquarters that houses Level 2 chargers. At this time, this location is less desirable as a 24/7 facility because RIDOT locks the fence outside of working hours.

When we successfully increase EVSE capacity at the two Park 'n Ride locations, RIDOT will meet its goal in the next 5 years to fully build out Interstate 95 and build two additional stations, meeting the NEVI requirements, including providing 97 percent reliability.

5. Data collection and sharing, particularly among the transportation, energy, and environmental agencies, provides feedback paramount to reacting to public needs, improving customer and station host satisfaction, and promoting equitable and efficient investments. All data collected and reported must be available to the public in an easily digestible format. The data from the NEVI federal program and public usage, and so on must be made available to use data to inform future policy and program decisions. RIDOT will work with stakeholders, including the U.S. Joint Office of Energy and Transportation, to ensure our contracts require a suitable data management plan that satisfies the NEVI requirements and specifications.

6. RIDOT will spend the USDOT apportionment of Highway Infrastructure Program funds with a responsible, practical approach, fostering local workforce development for the operations, maintenance, and emerging technology markets. Several universities, community colleges, and technical groups are feeding into the local market. We are committed to working with these groups as they prepare the local workforce. Our contracts will foster competitive grants to increase local participation, especially for disadvantaged business enterprises.[38] We have included outreach for the local workforce to ensure resources are spent to grow the local workforce and help employ our public. In addition, we will follow all Buy America requirements when procuring station and infrastructure components.[39]

7. Support EVSE Coastal Development and Contingency Reserve. The market is moving; we are not the only state performing installation activity. Although our estimates were conservative, inflation is at an all-time high and we want to this Plan to address the areas we know need access immediately. However, we hope that the money will go further. We expect the costs to go down and requirements to shift. Our stated goals allow us to pivot and potentially expand our grant program to coastal areas. For example, if we have appropriate station density along a corridor, and allow for charging on both sides of Providence, we can move south quickly. In particular, Aquidneck Island is a current gap with a need to reduce using bridges or making long trips for fast charging. Tesla plans to install at a Target with public access, which we are focused on for coastal development. And based on the initial results of the survey, serving the coast is a common public priority.

This approach considers the current and projected needs of Rhode Islanders, federal guidance, and stakeholder feedback received to date. We urge the public and our private entities to read and provide feedback to this Plan, particularly concerning areas along or near our major corridors and methods to develop the local workforce. We ask the U.S. Joint Office of Energy and Transportation to approve our Plan to allow for immediate efforts to improve EVSE access in the Ocean State.

[38] https://www.transportation.gov/civil-rights/disadvantaged-business-enterprise/definition-disadvantaged-business-enterprise

[39] https://www.federalregister.gov/documents/2022/06/22/2022-12704/national-electric-vehicle-infrastructure-formula-program

7.1 Funding Sources

While preparing this Plan, we reviewed potential federal formulas and discretionary funds related to alternative fuel infrastructure. A full list of federal and state programs and details can be found in Appendix D. All of the programs in Table 3, except for the National Highway Performance Program, are available for planning EV charging infrastructure and related projects. All of the programs, except for the Metropolitan Planning Program, are eligible for the construction and installation of EV charging infrastructure to support operational resiliency, national energy security, environmental, and community goals for freight transportation.

Table 3: Potential Federal FHWA Funding Opportunities for Alternative Fuel Infrastructure in Rhode Island (Formula)

Federal—Formula	Available Amount for Rhode Island				
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Surface Transportation Block Grant (STBG Funds)	$77.1M	$78.7M	$80.2M	$81.9M	$83.5M
National Electric Vehicle Infrastructure Formula Program (NEVI Formula)*	$3.4M	$4.7M	$4.7M	$4.7M	$4.7M
Carbon Reduction Formula Program	$6.9M	$7.0M	$7.2M	$7.3M	$7.4M
Congestion Mitigation and Air Quality Improvement Program	$11.4M	$11.6M	$11.8M	$12.1M	$12.3M
National Highway Performance Program	$158.5M	$161.7M	$164.9M	$168.2M	$171.6M
National Highway Freight Program	$7.6M	$7.7M	$7.9M	$8.1M	$8.2M
Metropolitan Planning Program	$2.5M	$2.5M	$2.6M	$2.6M	$2.7M

*Note: Rhode Island's NEVI for FY 2022–2026 is $22.9M; $3.4M was apportioned in FY 2022, then a yearly average of $4.7M will be apportioned in FY 2023–2026.

Of the federal discretionary funds, the Rebuilding American Infrastructure with Sustainability and Equity (RAISE), Infrastructure for Rebuilding America (INFRA), and Rural Surface grants are closed for 2022. However, all of the grants in Table 4, in addition to the Charging and Fueling Infrastructure Program, are available in the future for planning EV charging infrastructure and related projects and for the construction and installation of EV charging infrastructure to support operational resiliency, national energy security, environmental, and community goals for freight transportation.

Table 4: Potential Federal Funding Opportunities for Alternative Fuel Infrastructure in Rhode Island (Discretionary)

Federal—Discretionary	Nationally Available Amount					Agency	Match Requirement
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026		
Rebuilding American Infrastructure with Sustainability and Equity (RAISE)	$1.5B	$1.5B	$1.5B	$1.5B	$1.5B	FHWA	Local share: 20%
Infrastructure for Rebuilding America (INFRA)	$1B	$1.1B	$1.2B	$1.3B	$1.4B	FHWA	Local share: 20%
Charging and Fueling Infrastructure Program	$300M	$400M	$500M	$600M	$700M	FHWA	Local share: 20%
Low or No Emission Program (Transit)	$1.12B	$1.123B	$1.125B	$1.127B	$1.128B	FTA	Local share: Bus (15%), Bus related facilities (10%)
Advanced Transportation Technologies and Innovative Mobility Deployment	$60M	FY 2022–2026; $900M in total				FHWA	
Rural Surface Transportation Grant Program	$300M	FY 2022–2026; $1B in total				FHWA	Local share: 20%
Alternative Fuel Corridor Grant Program	$2.5B Total					FHWA	

In addition to federal funding sources, RIDOT plans to work with private companies, businesses, local jurisdictions, and potential sponsors for stations to provide a subsidy. Additional grants are being explored. For example, the location presented at the Community College of Rhode Island location will be paid for by RAISE grant funds. Currently, no state funding has been allocated to support this project.

7.2 2022 Infrastructure Deployments/Upgrades

We plan to upgrade two existing RIDOT facilities in 2022 (Table 5). First, upgrades will be made to the Ashaway Park 'n Ride facility in Hopkinton near the Connecticut border. There are currently two DCFCs and three Level 2 chargers at this location. It is near the Connecticut border, and RIDOT Park 'n Ride locations in rural areas of the Ocean State can help seasonal travelers. On the Interstate 95 corridor, this station is key to national connectivity, and Connecticut does not have an existing station near this border or near-term plans to build one. The second updated will be at the Route 117 Park 'n Ride facility in Warwick, Rhode Island. There are two DCFCs and three Level 2 chargers at this facility. We anticipate planning, outreach, design, development, construction, and maintenance spending of $3.38 million this year to fund the program.

Table 5: 2022 Infrastructure Upgrades

Station ID	Route	Location	Anticipated EV Network	Utility Territories	Anticipated Station Ownership
165561 165635	Interstate 95	Ashaway Park 'n Ride Hopkinton	Currently ChargePoint	South County West Chase Hill Substation Feeder 49_56_155F6	Local/Municipal Government Owned (LG)
165560 181115	Interstate 95	Route 117 Park 'n Ride Warwick	Currently ChargePoint	Central RI West Drumbrock Substation 49_56_14F3	Local/Municipal Government Owned (LG)

The existing Park 'n Ride facilities were not built with EV charging in mind. Getting gas may take a few minutes, but charging an EV will require more time. With the 150-kW chargers, we expect customers to spend about 30 minutes at the location. The facilities have been equipped with lighting and have received positive reviews, but additional amenities and investment will help increase station safety and usability. Our Plan includes providing adequate ADA parking space, lighting, physical security features, restrooms, and amenities. Our contract documents will require data collection, monitoring, reporting, and reliability requirements of at least 97 percent. If the minimum is not met, RIDOT can employ a different operations and maintenance provider or impose financial repercussions on the contractor. In the initial year we will be able to provide at least four DCFCs at each location, with the option to expand based on our contingency reserve.

Based on our review of the Rhode Island Energy data and maps, the power distribution around the two proposed locations is low or very low at the local substations. As previously stated, even during the July 4th, 2022, holiday, with peak seasonal travel and electricity usage, the distribution feeders did not appear to exceed 70 percent load based on our review. RIDOT will work with Rhode Island Energy to learn more about the hosting capacity available at each site.

Figure 10 excludes the current Tesla superchargers. When accessible, these devices increase the charger density. Based on the Park 'n Ride facilities and existing fast EV charging stations at Walmart, the station density for Interstate 95 is three stations over 43.4 miles, averaging a density of approximately one station every 14 miles. The fast EV charging stations at the Route 117 location are near Cardi's Furniture, which has plans to provide EVSE. In line with the NEVI requirements, RIDOT considers it in the public's best interest to use federal funds to increase from two to four fast chargers at these two Park 'n Ride locations. Doing so will increase access near Providence and seasonal areas. RIDOT also recognizes that private build-out of infrastructure is uncertain, and funneling of public traffic to Cardi's Furniture should not be relied on if their plans change.

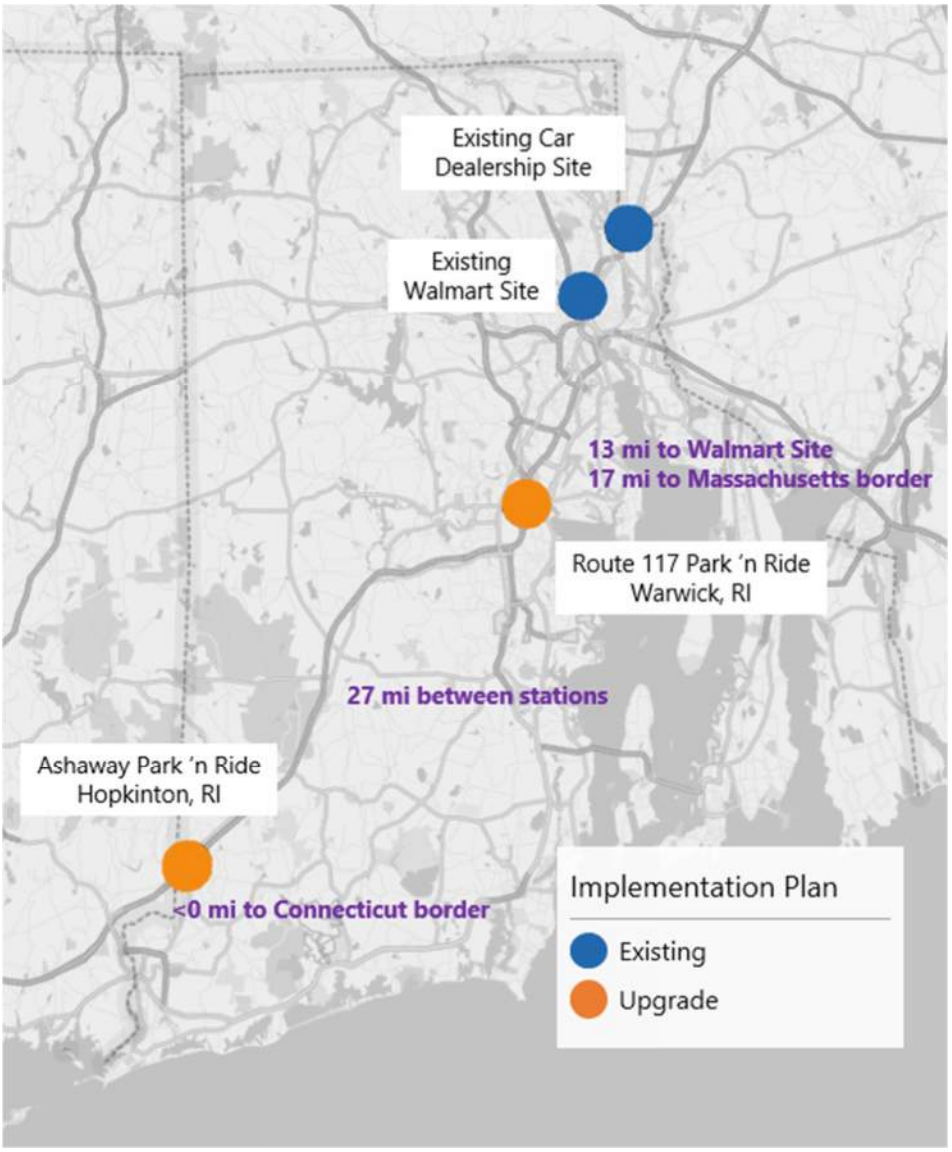


Figure 10: EVSE Implementation Plan Map

7.3 Upgrades of Corridor Pending Designations to Corridor Ready Designations

RIDOT and its state agency partners have discussed the benefits of proposing new corridors and determining which roadways qualify under the current guidance. At this time, RIDOT has decided not to nominate additional corridors to allow for more flexible spending to build out stations after Interstate 95 is certified by the U.S. Joint Office of Energy and Transportation. Based on our rural, regional, and through traffic patterns, focusing on large development areas or fast charging stations rather than installing stations along particular roadways will allow RIDOT to best serve its public. In addition, there are upcoming roadway projects, such as Route 146, that will impact and provide an opportunity for our land use, access to electric power, and traffic patterns.

7.4 Increases of Capacity/Redundancy along Existing AFC

Based on initial research, increasing the fast chargers by two at each station in the next year should meet the public's demand at these locations. After initial upgrades and contract requirements are in place for data collection, RIDOT will assess the current stations' usage as frequently as monthly and annually. If the power network can support the growing need, we believe larger stations with more capacity will benefit the public. With many chargers, safe spaces, and proper physical safety levels of lighting, these locations can be relied on and limit the risk of becoming obsolete by future-proofing the sites. The chosen sites also serve some seasonal traffic, and the site in Warwick may be a location to increase the capacity if seasonal traffic overwhelms the stations. In the near term, overflow may be directed to nearby locations, such as Cardi's Furniture.

Redundancy will be considered in the design, operation, maintenance contract documents, and station management. Although it may not be possible to provide battery backup for the fast EV charging stations at this time, RIDOT will look into lighting and security systems that can be supported during outages. Network redundancy for communication and potential network impacts are assessed site by site. In the future, as more devices help mitigate grid impacts and help increase reliability, RIDOT will evaluate installations and retrofitting in areas that are vulnerable or that have experienced reliability issues.

7.5 Electric Vehicle Freight Considerations

RIDOT will work closely with the Division of Statewide Planning for considerations for truck charging, along with local groups, to determine the near-term needs for freight charging along our corridors. As previously stated, by model year 2025, ZEV truck sales will need to be 55 percent of Class 2b to 3 truck sales, 75 percent of Class 4 to 8 truck sales, and 40 percent of truck tractor sales. The freight pathways through Rhode Island impact our network. We must now consider the impact when planning EVSE infrastructure for the Ocean State to reduce emissions and benefit the public effectively. Our Plan and data collection will work with the state plan to identify opportunities to support medium- and heavy-duty electrification. The *Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding* (MoU) signed by Rhode Island supports 100 percent ZEVs by 2035. As part of the Ocean State commitment to the MoU, this Plan supports and facilitates the successful commercialization of zero-emission medium- and heavy-duty vehicles and maximizes the use of renewable energy for ZEV charging and hydrogen fueling through interagency consultation and coordination with state public utility commissions and environmental, energy, planning, and transportation agencies, as appropriate.[40] No local EV freight fleets have been identified at this time, but RIDOT is eager to hear from any local fleet owners and operators transitioning to EVs and looking for public charging locations.

7.6 Public Transportation Considerations

Both Park 'n Ride facilities are currently on the RIPTA bus routes. RIDOT's increased access to fast charging EVSE and amenities will incentivize the public to use public transit at the Park 'n Ride facilities. There is the potential to work together further to build out these locations for the public, fleet, and employees and secure facilities to support EV operation. RIDOT will continue to work with and communicate our plans with RIPTA because their EV fleet procurement and management can benefit from passenger EVs and vice versa. The agencies are located on the same campus and can easily share lessons learned on operations, vendors, reliability, and maintenance.

7.7 FY23-26 Infrastructure Deployments

Over 5 years, there is $22.9 million to support EVSE deployment and support through the NEVI funding program (Table 6). In addition to about $1 million in construction costs per station, each station's operating and maintenance cost is expected to be around $100,000 in the first year to ensure safety and reliability.

Based on the two proposed sites, reserving $1 million per site in upgrade costs and $250,000 per year in operating costs with a conservative estimate of 3 percent inflation, the total reserved for Interstate 95 upgrades is $2.2 million.

If each station costs between $500,000 and $1,000,000 to design, construct, and install, with an additional $100,000 annual operations and maintenance cost, this investment could yield around 8 to 14 additional chargers with a contingency reserve. We have used conservative estimates for the operations and maintenance, and the warranty may provide coverage at a much lower cost. In developing the budget items listed in Table 6, we have considered the immediate federal requirements and all of the stakeholder feedback. The market is moving; we are not the only state performing installation activity. Although our estimates were conservative, inflation is at an all-time high and we want this Plan to address the areas that need access immediately. However, we hope that the money will go further. We expect the costs to go down and requirements to shift. Our stated goals allow us to pivot and potentially expand our grant program to coastal areas. For example, if we have appropriate station density along a corridor, and allow for charging on both sides of Providence, we can move south quickly. In particular, Aquidneck Island is a current gap with a need to reduce using bridges or making long trips for fast charging. Tesla plans to install at a Target with public access, which we are focused on for coastal development. And based on the initial results of the survey, serving the coast is a common public priority.

Construction estimates for new stations range from 1 to 2 years, averaging roughly 18 months. To avoid deploying assets in areas that may be stranded or obsolete, we plan to spend these funds first to build up charging capacity in areas that can handle the electrical load and safely meet the public's needs. Table 6 provides a cost breakdown based on the market prices and our seven-pronged EV charging approach. We have set aside reserves for awareness, data collection, and workforce development. We plan to include these in our contract documents, but this additional funding will focus on added improvements in these areas. Our total investment in the workforce is anticipated to be much higher through contracting mechanisms requiring local and disadvantaged business enterprise participation.

[40] https://www.nescaum.org/documents/mhdv-zev-mou-20220329.pdf/

Table 6: RIDOT EVSE Plan FY 2023–2026 Budget Breakdown

Item	Description	Cost	Total
Increase fast EV charging station awareness and reliability	Release RFPs to increase public awareness, smartphone applications, signage, websites, consumer groups, and tourist groups, including surveys. This contract will last 5 years to help increase consumer confidence in the network and work with the private sector with existing DCFC stations.	$250,000 per year	$1,250,000
Serve the Providence metropolitan area	Release RFPs from interested business owners in Providence, prioritizing the Justice40 communities, to leverage federal funds at local stations that can handle the increase in electrical load. In addition to installation and construction, RIDOT can contract operating and maintenance to ensure reliability.	If each smaller station location awarded is $500K–$1M in capital cost, and $100K in operating and maintenance support, this would result in about 7–14 new stations.	$8,250,000
Upgrade two existing fast chargers at Park 'n Ride facilities along Interstate 95	Release RFPs for upgrading the existing facilities, including ADA, cybersecurity, and physical security requirements, at the two Park 'n Ride facilities. The contract documents will include operations and maintenance support. Note that the RFPs will be funded using our first-year funding of $3.8M. There are two existing DCFCs, and we will meet or exceed the requirement of four DCFCs for each Park 'n Ride.	$1M for planning and construction of each location $100K for larger station annual operations and maintenance cost of each location plus $1.6M reserve	$3,800,000
Work with Planning on EVSE near Route 146	Work with RIDOT Planning and reserve funds for Route 146 EV charger construction, operations, and maintenance in the future. In the near term, identify local partners and release RFPs partnering with private companies to increase access to EV charging.	$2,000,000 reserve	$2,000,000
Data collection and analysis	Assess the monthly and annual data collected from the fast EV charging stations and ensure that all data are available in an easily digestible format and publicly available to make policy and planning decisions. A consultant is anticipated to help RIDOT with data collection, management, and reporting. Resources are allocated to purchase new data and analyze data.	$500,000	$500,000
Workforce development	RIDOT will invest in a consultant to work with local universities, community colleges, and technical groups feeding into the local market. Our Contracts will foster competitive grants to increase local participation, especially for disadvantaged business enterprises.	$500,000	$500,000
Support Coastal Development and Contingency Reserve	Release RFPs for DCFCs within 1 mile of National Highway System roadways, including ADA, cybersecurity, and physical security requirements. The contract documents will include operations and maintenance support.	$1M for planning and construction of each location $100K for larger station annual operations and maintenance cost of each location plus $2.6M reserve	$6,600,000
		Total	**$22,900,000**

Based on previous stakeholder feedback and guidance to focus on the National Highway System, Figure 11 summarizes the major roadways besides Interstate 95 for future consideration. These areas and public needs will be considered when evaluating all submitted RFPs. The Providence metropolitan area is a top priority moving forward. Most Ocean State residents considering purchasing an EV without the ability to charge at their rental or multi-unit dwelling will rely on safe, publicly available fast EV charging stations. We anticipate needing charging along the journey once they arrive in the Ocean State. Owners of Airbnb locations, bed-and-breakfasts, or rentals may not plan to install the infrastructure to accommodate charging. Coastal vacation destinations along southern routes are a priority as well. The plan is to evaluate new EVSE sites and proposed site upgrades in the RFPs in a data-driven and collaborative process, delivering the most benefits to the public. Our department has access to national data sets and local resources that help guide the ranking process. In the future, we are looking to purchase additional

data such as StreetLight data to assess local dwell times and travel patterns for more granular impacts if necessary. Our numerical assessment will result in an icon summary showing the major impact areas as shown on Figure 11. Decisions can be made by assessing multiple objectives, as illustrated on Figure 11, to measure deployment benefits if multiple business owners are applying for the same funds or agencies are split on deployment priorities.

Benefit to Public on Route	Example Route 1	Example Route 2	Example Route 3
AADT – Traffic Volumes	High	High	Low
Local Access	Medium	Medium	Medium
National Connectivity	Medium	Medium	Medium
Equitable Access – Justice 40	High	High	High
Rural Area	Medium	Medium	Low
Emissions Reduction	High	High	High
EV Workforce Development	Low	Medium	High

Legend: Low, Medium, High

Figure 11: RIDOT Future Deployment Areas and Criteria

At the time of developing this Plan, there was limited guidance on measuring benefits to Justice40 communities, and additional federal guidance is expected in workforce development and emerging areas. We are comfortable with committing to measuring the benefit, and our Plan needs to be data-driven and supported by the U.S. Joint Office of Energy and Transportation (Section 10). In the meantime, we are researching and working with our agencies, data collection, and performance groups to assess what data are already available.

In addition to the previous criteria, sites will be assessed based on the following criteria:

- Excess grid capacity, reliability, accessibility, safety, permitting, and potential solar or clean energy options
- Constructability, environmental impact, and terrain-related issues
- Inclusion of restrooms, or proximity to restrooms, small businesses, dog parks, and other amenities and seasonal attractions
- Accessibility for maintenance, snow removal, and operation to avoid stranded assets
- Any new or impacted related subnational EV charging infrastructure programs and incentives
- Partnership opportunities with public-private or private investment in EV charging infrastructure
- Existing market expectations for power levels, charging speeds, and future-proofed station design allowing maximum flexibility for future upgrades
- Location concerning evacuation routes and impact on resiliency
- Additional consumer protection and cybersecurity considerations

7.8 State, Regional, and Local Policy

RIDOT is committed to meeting and working with state, regional, and local policy constituents on the use, installation, maintenance, and operation of EV infrastructure. To promote use, education outreach and policy for informing drivers with signage and communication through targeted channels will help connect the public to the available stations.

RIDOT will work with contractors, consultants, and third-party entities to coordinate municipalities on zoning and to permit and work with utilities. For Park 'n Ride facilities, RIDOT will ensure proper local outreach and approval before upgrading existing stations. This includes discussing the power requirements, public safety considerations such as lighting and bollards, bathrooms, and ADA requirements.

In addition, RIDOT is committed to providing the best price per energy unit available to the public. RIDOT will require this in the contract documents and perform market research on the current rates being offered. Where RIDOT impacts the demand charge,

RIDOT will explore demand charge mitigation, such as time of use rates. This Plan and future strategies will be consistent with State, regional, and local policies.

Currently, the Rhode Island gas tax is $0.34 per gallon. This helps fund RIPTA and RIDOT. In the future, if there is an EV charger user taxation, RIDOT will follow all rules and State regulations. The current rate breakdown, and any taxes that are included, will be presented to the public on the RIDOT EV Charging Stations webpage, signage, and mobile applications. To help break the barrier for renters, RIDOT can help explore zoning changes to support EV charging in single- and multi-family dwellings. There may be "bonuses" or incentives that officials can help offer to promote adoption as more stations come online. We want to assess these as long-term strategies with impacts, even if the action may be shorter term and adjusted based on actual effect.

8. Implementation

RIDOT strategies for implementation and spending USDOT apportionment of Highway Infrastructure Program funds are summarized in this section. As a public agency, we have experience releasing competitive contracts with clear Civil Rights Act requirements, reliability, and performance specifications. The EV market is growing, as a result of demand that splits from our typical role. To serve the public without becoming an energy provider, we are looking at new strategies to implement the funds creatively and practically. This includes working with interested private businesses, networks, and emerging technologies solutions.

8.1 Strategies for EVSE Operations & Maintenance

Our Plan reserves a budget for every station's operations and maintenance expenditures. RIDOT is open to strategies that weigh the risk and reward for external versus internal employees performing maintenance of the devices. Currently, RIDOT uses a contractor to service roadside devices such as cameras, message board signs, field devices, associated commutations, and power infrastructure. The contracts released by RIDOT operations and maintenance contracts encourage local workforce participation. In the event of a grant application for operations and maintenance, the recipient will have contractual obligations to ensure station performance, data reporting for usage, uptime, and user satisfaction and to enforce idling fees.

8.2 Strategies for Identifying Electric Vehicle Charger Service Providers and Station Owners

A little over a third of our federal budget is reserved to support EV stations around Providence to serve Rhode Islanders. We have heard from the local convenience stores and plan to invite the group to the table to discuss practical next steps in meeting NEVI requirements under RIDOT contract documents. We are also communicating with local interested business owners and entities to increase EVSE devices. RIDOT is open to strategies to help identity EV charger service providers and station owners. In the near term, RIDOT plans to release RFPs to solicit interested parties for site hosts, owners, and/or operators for projects.

8.3 Strategies for EVSE Data Collection & Sharing

Our Plan reserves $500,000 to hire internal and external consultants and purchase data if necessary. Rhode Island's strategies combine listening to public priorities with data-driven solutions. Data collection and sharing are paramount to optimizing investment, and sharing information among agencies allows us to react to public needs. RIDOT will work with the U.S. Joint Office of Energy and Transportation to ensure our contracts require a data management plan that satisfies the NEVI requirements and specifications. At a minimum, RIDOT will require the following data to be available in real time:

- Location
- Status
- Connector types and availability, including ADA information for ports
- Power level
- Reliability
- Pricing ($/mi, $/kWh, or $/min)

RIDOT will ensure that the data collected from the program are available to the public, consultants, operators, potential partners, and policymakers to continue identifying policy positions to barriers to installing fast chargers.

8.4 Strategies to Address Resilience, Emergency Evacuation, Snow Removal/Seasonal Needs

Seasonal and coastal areas in Rhode Island are experiencing more frequent and intense storms, impacting water levels and power availability. While planning to support evacuation routes and seasonal communities, the locations of the EVSE devices will

be as resilient as possible to natural and human elements. The fast EV charging stations will be essential resources, and the State will need to include alternative fuel vehicles and EV infrastructure in its emergency response and preparedness plan. In line with our Rhode Island Statewide Climate Resilience Action Strategy, microgrids may provide some critical station infrastructure backup. In the future, when more emerging technologies are available, battery backup systems and solar and bi-directional charging capabilities may impact our strategies and improve the infrastructure response during extreme weather conditions. RIDOT evacuation routes and flooding plains need to be considered. Snow removal from fast EV charging stations will be included as a requirement for RIDOT contracts to operate and maintain the EV infrastructure.

8.5 Strategies to Promote Strong Labor, Safety, Training, and Installation Standards

We have reserved $500,000 to invest in local EV workforce development. RIDOT shall meet or exceed the FHWA minimum standards that address NEVI infrastructure workforce certification and safety requirements. In addition, RIDOT will ensure that vendors selected under this Plan will focus on safety in all aspects of station development, installation, and maintenance. RIDOT will work with local groups and universities to promote training and employment opportunities. RIDOT also includes background, training, and certification criteria for vendor evaluation in the solicitation process.

9. Civil Rights

This Plan will be implemented utilizing all proposed planning guidelines and recommendations for deployment. This will extend to any entity, contractor, or group participating in these funds after Plan approval. No person on the grounds of race, color, national origin, sex, age, disability, low income, or limited English proficiency, as provided by Title VI of the Civil Rights Act of 1964 and the Civil Rights Restoration Act of 1987, will be excluded from, denied the benefits of, or be otherwise subjected to discrimination under this Program and Plan. This will be according to all federal, State, and local regulations and statutes to ensure compliance with State and federal civil rights laws, including Title VI of the Civil Rights Act and accompanying USDOT regulations, the ADA Section 504 of the Rehabilitation Act.

All contract documents will require compliance with the Civil Rights Act and ADA. The site ADA requirements shall follow the U.S. Access Board recommendation for EV Accessibility Standards, with a 10- to 13-foot minimum for the space and 3 feet on each side (Figure 12).[41]

[41] https://www.access-board.gov/ada/guides/chapter-5-parking/#electric-vehicle-charging-stations

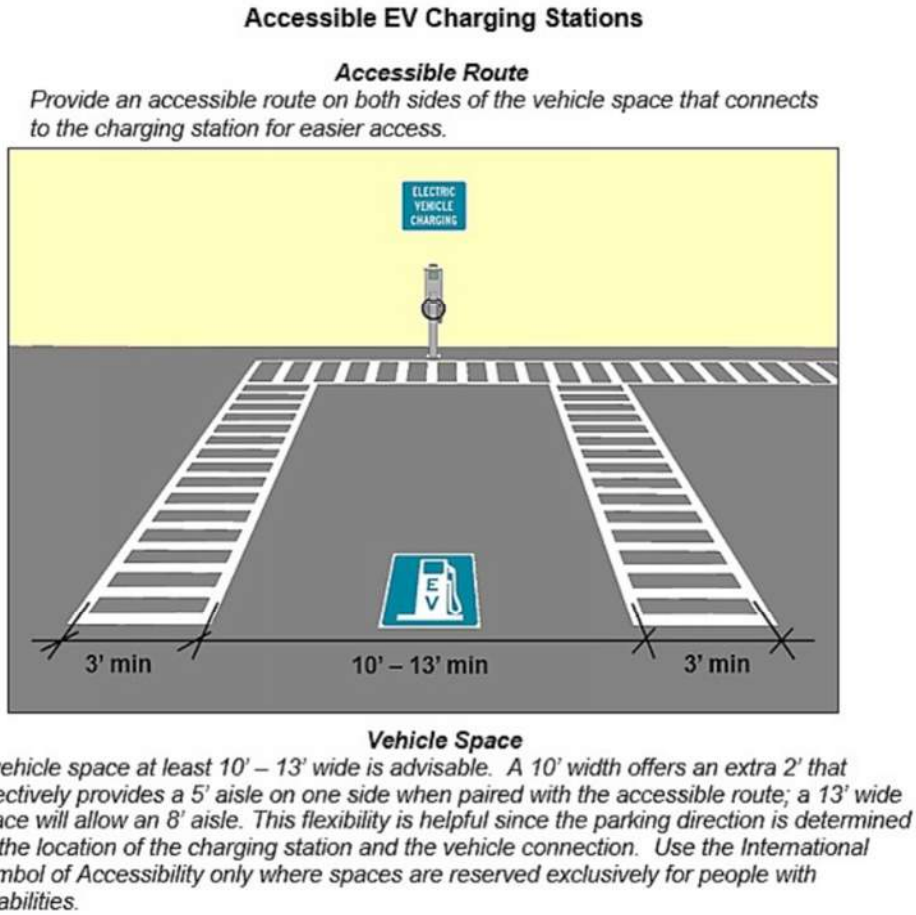


Figure 12: ADA Accessibility Standard Graphic S208.2

10. Equity Considerations

Unequal benefits from the transportation and energy systems have prevented disadvantaged communities and businesses belonging to members of those communities from equitably enjoying the benefits of investments. Equity is considered through RIDOT's Plan to address burdens from transportation and energy systems, which have been disproportionately borne by disadvantaged communities. The Plan will be used to support objectives identified in the February 10, 2022, Memorandum on National Electric Vehicle Infrastructure (NEVI) Formula Program Guidance[42] and Executive Order 14008: Tackling the Climate Crisis at Home and Abroad, establishing the Justice40 initiative, and will target at least 40 percent of the benefit of program spending toward disadvantaged communities (DACs). This analysis also considers State-recognized Rhode Island Enterprise zones, which are transportation infrastructure designations based on several distress criteria, including poverty, unemployment, and median household and per capita incomes.[43] We have overlapped the federal Justice40 communities with the statewide Enterprise zones to identify overlap in the results and gaps between the two assessments (Figure 13). Most Justice40 communities are in the northern portion of the state, around the Providence metropolitan area, including one in Bristol County. Most Justice40 communities also travel along the Interstate 95 corridor, our AFC roadway. Increasing access to these corridors and areas provides benefits improving air quality and public health and eliminating the barrier to EV charging.

[42] https://www.convenience.org/Media/Daily/2022/Feb/11/1-WhiteHouse-Release-5-Billion-Plan-EV-Charging_GR/90d_nevi_formula_program_guidance_Feb2022.pdf

[43] https://www.rigis.org/datasets/enterprise-zones/explore?location=41.777380%2C-71.336181%2C10.64

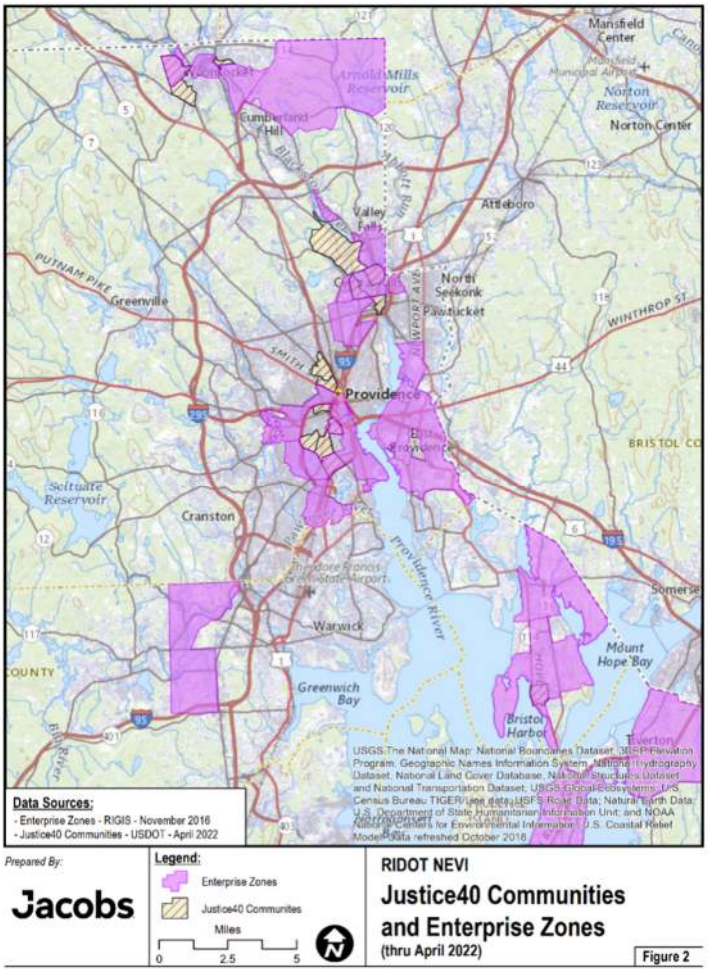


Figure 13: Rhode Island Justice40 Communities and Enterprise Zones

10.1 Identification and Outreach to Disadvantaged Communities (DACs) in the State

Through their respective Equity Action Plans, DOE, USDOT, and the U.S. Environmental Protection Agency (EPA) have prioritized the following:

- Expanding access
- Data integrity
- Wealth creation
- Power of community
- Stakeholder engagement
- Interventions

Table 7 summarizes the Justice40 considerations, the relevant Rhode Island stakeholder groups, and engagement tactics to reach disadvantaged communities. “Justice40 Considerations” are the listed priorities that we should consider. “RI Relevant Stakeholders Groups” are based on the categories previously established in the NEVI Stakeholder List 2022-04-25 spreadsheet. “Engagement Tactics” are various tactics that can be used to meet the listed priorities while engaging the stakeholders. These were generated based on Rhode Island’s unique needs based on the Bipartisan Infrastructure Law and the EPA Equity Action Plan.

Table 7: Equitable Engagement Considerations

Justice40 Considerations	RI Relevant Stakeholders Groups	Engagement Tactics
Bipartisan Infrastructure Law		
Underserved Communities	Community-Based Organization Regional Organization Public and Quasi-Public Agencies	Identify and survey need Public outreach
Clean Drinking Water	N/A	N/A
High-Speed Internet	N/A	N/A
Environmental Justice	Community-Based Organization Native American Tribe	Be intentional and inclusive with awareness and education
Zero Emissions	Public and Quasi-Public Agencies Regional Organizations	Technical assistance, policy analysis, and strategic communications and outreach Develop reporting tools and protocols Evaluate cost-effective technologies and strategies for reduction Explore any mitigation opportunities
Workforce Development	Department of Commerce Public and Quasi-Public Agencies	Seasonal hires opportunities Campaign for awareness for travelers through vacation homes and hotel industry
	Private-Sector Operator	Job vacancy listing
	RIDOT	Host virtual rooms/virtual open houses Multilingual presentations Dedicated email and hotline, etc.
Environmental Protection Agency (Action Plan)		
Civil Rights	RIDOT	Ensure applicability
Enforcement	Federal Agency	Engage elected officials, as well as relevant government agencies for input, support, and advocacy and to address challenges Target newly appointed representatives and leadership Provide regular updates, talking points and messaging
Operationalization	Federal Agency Regional Organizations	Advance alert system or warnings for road travelers (i.e., AM radio station) Multifunctional access such as fast EV charging stations and scooters/electric bikes
Environmental Justice	Community-Based Organizations RIDOT	Host virtual rooms/virtual open houses Multilingual presentations Dedicated email and hotline, etc.

Justice40 Considerations	RI Relevant Stakeholders Groups	Engagement Tactics
Department of Transportation (Equity Action Plan)		
Wealth Creation	Quasi-Public Agency	Identity small and disadvantaged business enterprises to provide services pre, during, and post Seek firm with long-term maintenance of facilities (i.e. Janitorial or landscape services)
	Regional Organizations	Ability to add convenience stores or smaller franchises similar to gas stations or rest stops to aid in producing additional jobs
Power of Community	Community-Based Organizations	Engage and inform the public using available and appropriate social media Measure engagement with available analytic tools
Interventions	Regional Organizations	Training and awareness
	Public and Quasi-Public Agencies	
Expanding Access	Regional Organizations	Design and produce materials for electronic and physical distribution to various stakeholders and other interested parties (i.e., press kits, handouts, graphics, etc.)
	RIDOT	Host virtual rooms/virtual open houses Multilingual presentations Dedicated email and hotline, etc.
Department of Energy (Equity Action Plan)		
Data	Regional Organizations	Host virtual rooms/virtual open houses Multilingual presentations Dedicated email and hotline, etc. Assess any gaps from prior studies and facilitate data-informed decision-making
New Applicant Opportunities	Regional Organizations	Provide multilingual applications Post any employment opportunities on various portals
Increase in R&D Funding	Public and Quasi-Public Agencies	Education for capacity building
Tribal & Stakeholder Engagement	Native American Tribes	Pursue speaking engagements for project and agency leadership to further publicize the study
Weatherization	N/A	N/A

10.2 Process to Identify, Quantify, and Measure Benefits to DACs

The project team considered important factors of EVSE deployment that support equitable distribution of benefits informed both by Executive Order 14008 and NEVI guidance, including primarily the following areas:

- Health
- Environmental exposures
- Economic
- Participation
- Energy cost burden
- Capital
- Workforce development
- Energy resilience
- Displacement

For the first year of the Plan, the project team considered the following place-based benefits particularly:

- Percentage of EV charging infrastructure in DACs
- Income characteristics of travelers to proposed locations of EV charging infrastructure

A main focus of the first year of the Plan is to bring the AFCs in Rhode Island into compliance. As those corridors are adequately served, it will become increasingly critical to identify benefits to DACs through this Plan, addressed in the next section.

10.3 Benefits to DACs through this Plan

One of the key benefits of directing benefit to disproportionately affected communities is direct spending in those communities. However, direct spending does not necessarily consider important indirect benefits. The Plan seeks to center overburdened and underfunded communities in the clean energy transition. RIDOT is committed to working with these communities throughout the planning process to define benefits and desired outcomes of the NEVI funding. The project team's approach to capturing these benefits emphasizes a flexible approach that enables the project team to quantify benefits in the short run, but continue to refine an approach to measurement over time. As this Plan is updated and more data are made available, these strategies and their measurement will be revisited. Community engagement will further refine these strategies.

- Benefits Measurement for DACs
    - Number 1: Prioritize direct benefits to DACs
        - Objective: Direct 40 percent of spending to DACs.
        - Data: Estimate future spending in DACs, previous year's spending in DACs (years 2 to 5).
    - Number 2: Prioritize workforce development opportunities within DACs and by DAC members
        - Objective: Increase recruitment to DACs, prioritize equitable investments within DACs
        - Data: Qualitative discussion of activities by various agencies on increasing outreach to DACs
    - Number 3: Measure indirect benefits
        - Objective: Strengthen measurement techniques to capture indirect benefits to DACs.
        - Data: Tracts located in nonattainment areas that have overlap with DACs
        - Data: Tracts that receive many / high-mileage trips from DACs
    - Number 4: Gather, through stakeholder outreach, measuring benefits, feedback on current incentives, within-community considerations for citing stations, displacement practices, and other topics.
        - Objective: Continue stakeholder engagement and outreach
        - Data: Summary of comments from stakeholders

11. Labor and Workforce Considerations

Rhode Island is committed to leveraging federal investment to grow the local workforce by fostering training programs focusing on reliability, performance, experience, and diversity in the workforce to maintain the EVSE infrastructure. We understand this is a growing field that needs installers, maintenance technicians, electrical workers, and personnel to serve the industry. When contracting work to outside entities, RIDOT is committed to ensuring proper staffing, workforce diversity, local registrations, and training requirements as outlined in the NEVI guidance. In addition, our qualification-based contracting process will require certain levels of education, years of experience, and certifications. As stated in Section 5, RIDOT will provide opportunities to contract with disadvantaged business enterprises and women-owned business enterprises as prime contractors or subcontractors. In addition to the contracting mechanism, RIDOT will explore a value-based procurement strategy and include Justice40 impact as a critical scoring mechanism.

In the future, RIDOT will explore opportunities to work with the Rhode Island Department of Labor and Training, local community colleges, technical groups, colleges, and universities to help develop training programs to respond to these work opportunities. We will also explore grant applications to maximize community residents' and stakeholders' local workforce engagement.

12. Cybersecurity

The network connectivity and safety of the fast EV charging station infrastructure need to be considered from a cybersecurity perspective. Safety is always RIDOT's top priority. In 2019, Rhode Island State published a Cybersecurity Strategy.[44] While EVs and fast EV charging stations are not mentioned explicitly, this Plan aligns with the requirements and approach to countering threats. RIDOT shall follow the FHWA outline for network connectivity requirements for charger-to-charger network communication, charging network-to-charging network communication, and charging network-to-grid communication. Our standard requirements will include secure remote monitoring, diagnostics, control, and updates. Proposed network connectivity requirements also would specifically require chargers to be capable of a smart charge management and Plug and Charge capabilities by requiring the ability to communicate through Open Charge Point Protocol (OCPP) in tandem with ISO 15118.

RIDOT agrees these requirements would help address cybersecurity concerns while mitigating stranded assets. At a minimum, the devices will meet the following cyber security requirements:

- OCPP1.6 (2.0 preferred)
- UL certified
- Wi-Fi or cellular networking
- Ability to be controlled remotely
- Open ADR 2.0b (or current IEEE 1547)
- Payment Card Industry Data Security Standards in compliance with ISO 15118 to accept payment
- California Senate Bill 327 for Security of Connected Devices

This public service will require a completely different set of deliverables and controls to maintain safety and security for this collaborative ecosystem. This solution must have some key attributes:

1. Maintain competing requirements of both safety and confidentiality
2. Deliver a cost-effective and durable product
3. Allow access and provide services to diverse economic and identity groups
4. Resiliency for power, access, physical, and cybersecurity

Many communities do not have established cybersecurity policies. Cybersecurity expenses can be provided through a base rate allocation, meaning that existing rates cover expenses.

13. Program Evaluation

RIDOT will monitor and report the progress of the overall statewide EVSE AFC network and update this Plan at least annually to address opportunities for improvement. These updates will occur during and after build-out. To monitor the program, we will ensure performance and contract management to measure contract success and the EV charging network. RIDOT has existing performance measures and data sources we will leverage to the best of our ability to determine a baseline.

To evaluate the success of the outreach of the program and this Plan, RIDOT plans to utilize resources to obtain a contractor to monitor, assess and report each month on the current status of the station and near-term action items delegated from our core working group. Flexibility, data, and stakeholder feedback will be critical in responding to market and public needs changes. As the program matures, the reporting may move to quarterly instead of monthly. Annually, the data will be compiled for assessment and reporting.

The goals in the near term are presented in Section 4. RIDOT's goal in the next 5 years is to fully build out Interstate 95 and build two additional stations, meeting the NEVI requirements and providing 97 percent reliability.

In Table 8, we have included our overall goals with our infrastructure deployment's short- and long-term action items. More information on the short term actions is available in Section 7. Longer term, to measure our Plan's effectiveness in meeting its goals, each one has been listed in Table 8, including actions, performance indicators, and potential performance measures and marks. Please note that some of these are ambitious future targets.

[44] https://admin.ri.gov/sites/g/files/xkgbur536/files/documents/Reports/cybersecurity/RI-Cybersecurity-Strategy-2019.pdf

Table 8: Future Program Evaluation and Potential Targets

Goal	Action	Target
Improve Local Access	- Increase fast EV charging station awareness and reliability - Serve the Providence metropolitan area - Support Coastal Development and Contingency Reserve	- Every station reporting at least 98% reliability
Deliver National Connectivity	- Upgrade two existing facilities Park 'n Ride facilities along Interstate 95 -Work with Planning on EVSE near Route 146 - Support Coastal Development and Contingency Reserve	- Average EVSE DCFC station density of 1 every 10 miles
Focus on Justice40	- Serve the Providence metropolitan area - Workforce development - Support Coastal Development and Contingency Reserve	- At least 40% of overall spending is directed to DACs - 50% of program benefits delivered to Justic40 communities - Over 50% positive Summary of comments from stakeholders
Aid Rural Areas	- Increase fast EV charging station awareness and reliability - Release contract to build two DCFC stations in the rural areas in the long term or with contingency reserves	- Two NEVI Compliant DCFC public charging stations in rural communities
EV Workforce Development	- Workforce development to engage local contractors, local universities, and tech organizations	-Hire 100% local employees to maintain fast EV charging stations
Reduce Emissions	- Increase fast EV charging station awareness and reliability - Serve the Providence metropolitan area - Upgrade two existing Park 'n Ride EVSE facilities along Interstate 95 -Work with Planning on EVSE near Route 146 - Help grant programs and support additional mandates for EV purchasing - Support Coastal Development and Contingency Reserve	- 43,000 ZEVs on the roadway by 2025 as set by Governor MoU
Coastal Urban Development and Support	- Support Coastal Development and Contingency Reserve	- Around four NEVI Compliant DCFC public charging stations in coastal communities Jamestown and/or Aquidneck Islands

In addition to internal measures and overall network impact, RIDOT is committed to collecting and reporting the FHWA Notice of Proposed Rule Making metrics in the future, including:

- Climate goals
  - Tracking EV adoption
    - Possible measurements include EV sales, EV registrations, statewide charging hours
  - Approximating greenhouse gas reduction attributed to EV use
  - Localized air quality monitoring
- Promoting equity
  - Demographics of EV registrations, EV sales, and fast EV charging station users based on surveys
  - EVSE education
    - Drive Change. Drive Electric Campaign is already doing this. If this campaign is continued, reach could be amplified across state agencies' outreach efforts.
    - Possible measurements include developing and tracking hits on an informational website, general surveys.
  - Air quality impacts in DAC
- Diversifying the economy
  - Surveys of business owners within 1 mile of new stations
  - Contractor training programs and employment requirements/data tracking tied to new infrastructure construction contracts
  - Employment and training partnerships with energy providers
- OEM surveys
  - Infrastructure implementation strategy
  - New/improved station usage

- Maintenance surveys
- Host location surveys
- In-person surveys of new station users

14. Discretionary Exceptions

At this time, Rhode Island has not identified the need for any requested exceptions from the requirement that charging infrastructure is installed every 50 miles along the state's portion of the Interstate Highway System within 1 travel mile of the interstate.

Appendix A. Public Survey – Active July 11, 2022

https://publicinput.com/H8140

Rhode Island Electric Vehicle Charging Stations Program

Translate

The Rhode Island Department of Transportation (RIDOT) is in the process of identifying locations best suited for electric vehicle (EV) charging stations.

Rhode Island will invest $4.5 million each year for the next five years on this technology, using funds from the new Infrastructure Investment and Jobs Act to dramatically expand the number of EV charging stations throughout the state.

As planning moves forward, we are collecting feedback from the public on EV charging stations and electric vehicles in general. We thank you for your participation.

How important are these attributes of public charging stations?

Select all that apply

	Very important	Somewhat important	Not Important
Access to the fastest Level 3 chargers	○	○	○
Access to standard Level 2 chargers	○	○	○
Free charging	○	○	○
Discount charging	○	○	○
Close to the Interstate and other highways	○	○	○

Very Somewhat Not

	Very important	Somewhat important	Not Important
In busy commercial corridors	Very important	Somewhat important	Not Important
In Downtown Providence	Very important	Somewhat important	Not Important
In other Providence neighborhoods	Very important	Somewhat important	Not Important
In other urban areas outside Providence	Very important	Somewhat important	Not Important
In villages and smaller downtown areas	Very important	Somewhat important	Not Important
In rural areas	Very important	Somewhat important	Not Important
Compatible with Tesla vehicles (which use a proprietary type of charger)	Very important	Somewhat important	Not Important
Other (please use comment box below)	Very important	Somewhat important	Not Important

Other important attributes of public charging stations?

Comment

How far do you travel in a typical day?

- 5-10 miles
- 10-25 miles
- 25-50 miles
- 50-100 miles
- 100 miles or more
- I don't drive
- Other

Select a response

If you owned an electric vehicle, would that change the distance you drive on a typical day?

- Yes
- No
- Other

Select a response

If you answered "yes" to the previous question, how much would you change the distance you drive?

- Reduce my trips slightly
- Reduce my trips significantly
- Increase my trips slightly
- Increase my trips significantly

- Only affect long-distance travel (e.g. trips out of state, vacations, etc.)

Select a response

Tell us where you travel or would travel with an electric vehicle

Select all that apply

- [ ] Short trips in Rhode Island
- [ ] Longer trips in Rhode Island
- [ ] Southeastern Massachusetts (e.g. Taunton, Fall River, New Bedford)
- [ ] Boston Area
- [ ] Worcester Area
- [ ] Eastern Connecticut
- [ ] Other Southern New England destinations (eg. Cape Cod, western Massachusetts, central or western Connecticut)
- [ ] Northern New England destinations (Maine, New Hampshire, Vermont)
- [ ] Trips outside New England
- [ ] All the same places I travel to today
- [ ] Other

Select a response

How long would you be willing to wait while charging an electric vehicle?

- About 5 minutes or less (roughly the same time it takes to fill up a gas-powered car)
- Up to 10 minutes

- [ ] As much as 20 minutes
- [ ] 30 minutes or longer

Select a response

What types of locations/services would you like to see near electric vehicle charging stations?

Click all that apply

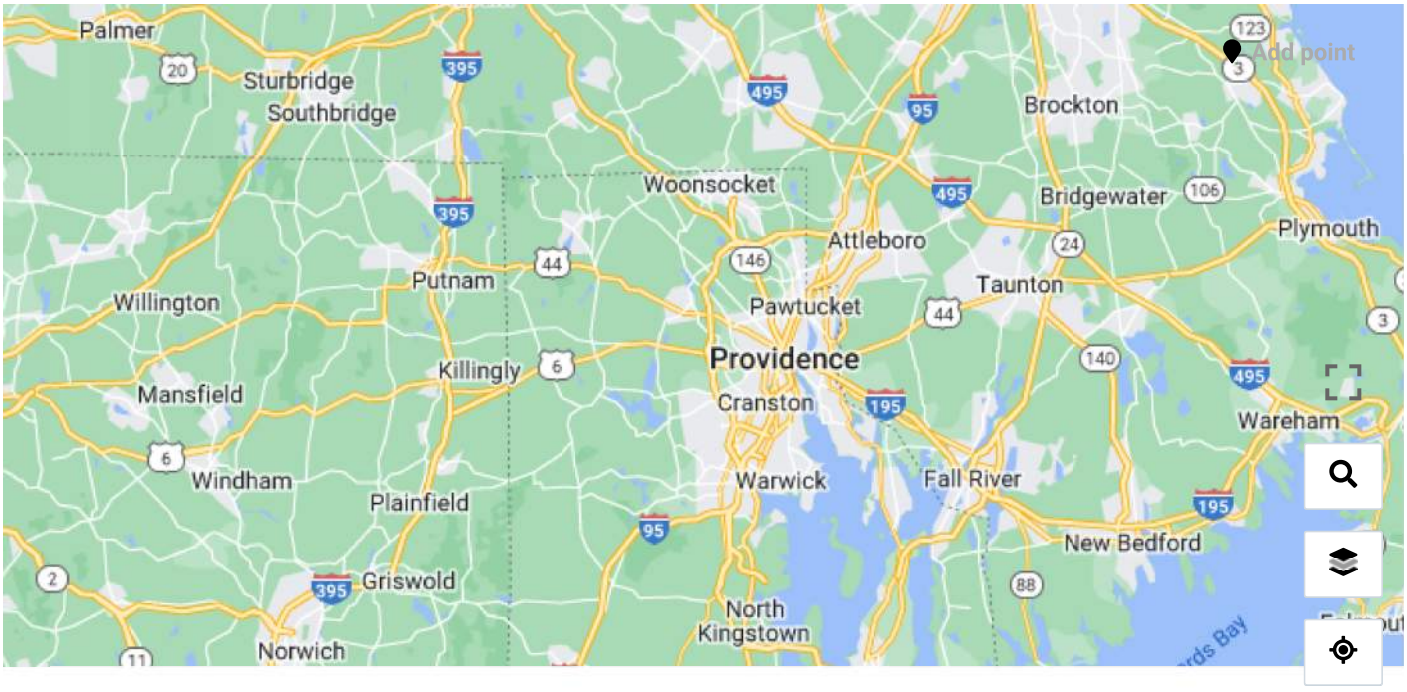
- [ ] Grocery stores
- [ ] Convenience stores
- [ ] Restaurants
- [ ] Medical offices or hospitals
- [ ] Apartment buildings
- [ ] Condominium complexes
- [ ] Mobile/Manufactured home parks or developments
- [ ] Large shopping centers and malls
- [ ] Small strip malls or plazas
- [ ] Independent or "mom and pop" stores
- [ ] Large employers or office parks
- [ ] Recreational areas (e.g. parks, beaches, campgrounds)
- [ ] Community centers (e.g. senior centers, recreational centers)
- [ ] Parking lots or garages in cities
- [ ] Transit services (e.g. bus, train or ferry)

- [ ] Restrooms
- [ ] Vending machines
- [ ] Wi-Fi
- [ ] Other

Select a response

Where would you like to see a public electric vehicle charging station?

Use the mouse wheel, the plus or minus buttons, or two fingers on a mobile device to zoom in and out as needed. Then click on "add point" and tap or click the map to add a point. Repeat to add additional points.



Do you have additional comments about the expansion of electric vehicle chargers in Rhode Island?

Comment

Do you drive an electric vehicle?

- Yes
- No

Select a response

If you answered yes to the previous question, what type of electric vehicle do you have?

- Plug In
- Plug In Hybrid
- Hybrid (no plug-in capabilities)
- Other

Select a response

What percentage of your electric vehicle charging takes place at the following places?

Select all that apply to you

	0 %	0-25 %	25-50 %	50-75 %	75-100 %	100 %
Home						
Public charging						

Public charging stations	0 %	0-25 %	25-50 %	50-75 %	75-100 %	100 %
Work	0 %	0-25 %	25-50 %	50-75 %	75-100 %	100 %
School	0 %	0-25 %	25-50 %	50-75 %	75-100 %	100 %

If you use public charging stations, what percentage of your charging time is at the following types of chargers?

Select all that apply to you

Level 2 (Basic type of public charger)	0 %	0-25 %	25-50 %	50-75 %	75-100 %	100 %
Level 3 (Direct current fast chargers)	0 %	0-25 %	25-50 %	50-75 %	75-100 %	100 %
Level 3 (Tesla Supercharger)	0 %	0-25 %	25-50 %	50-75 %	75-100 %	100 %

If you answered "No" to the question of whether you drive an electric vehicle, how likely are you to lease or purchase one?

- Very likely
- Somewhat likely
- Undecided
- Probably not
- Definitely not

Select a response

Please provide your contact information and email address if you wish to receive future updates on this project

Optional

First Name

First Name

Last Name

Last Name

Email

Email Address

Zip

02332

How we respect your privacy

Submit

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Appendix B. Feedback and Recommendations Received as of July 13, 2022

PARTNERS FOR A ZERO EMISSION VEHICLE FUTURE

Dear Rhode Island Office of Energy Resources,

Under the direction of the Biden Administration, the U.S. Department of Transportation has just announced significant funding for zero-emission vehicle (ZEV) charging infrastructure. The best use of this funding is to be decided upon by each state in an EV Infrastructure Deployment Plan that must be submitted to the federal government by August 1, 2022. This funding presents a timely and vital opportunity to kick-start the critical deployment of commercial ZEV charging infrastructure, which is negligible to nonexistent in many states.

States must factor ZEV truck charging into their NEVI plans.
Thanks to the Infrastructure Investment and Jobs Act signed into law last November, $5 billion in federal funds will be made available to states over the next five years to build out a nationwide electric vehicle charging network through the National Electric Vehicle Infrastructure (NEVI) Formula Program. This funding is a vital cornerstone of our nation's strategy to site, install and operate the ZEV charging infrastructure that will accelerate the transition to an emission-free transportation future.

An essential part of this clean transportation future is the shift from today's diesel trucks to the commercial ZEV fleets of the future.
Amid a wider shift toward e-commerce accelerated by the COVID-19 pandemic, commercial fleets will be increasingly relied upon to serve the consumer and business needs of communities across the United States. The American Trucking Associations predicts overall freight tonnage will grow to 20.6 billion tons in 2030 – an increase of more than 25 percent from 2019's projection of 16.4 billion tons.

The clean transportation shift must account for all vehicles, not just light-duty passenger cars.
The clean truck transition requires an environment that is supportive of a shift from diesel to ZEV trucks, as the high costs and short timelines involved are too much and too risky for commercial fleets to shoulder alone. Supporting that shift with NEVI funding also brings tangible nationwide economic and societal benefits, from the reduced public health impact of public emissions to maintaining the critical role the automotive and truck industry plays in our nation's economic health. Millions of jobs and families, living and working in communities and small businesses across every state and industry, are impacted by adverse economic impacts to trucking operations. Shifting from a globally priced, volatile commodity like petroleum to a fuel that is low and stable in price – as well as domestic and diverse in source – will strengthen long-term U.S. economic and national security.

NEVI funding is vital to creating that conducive environment.
When Rhode Island submits its EV Infrastructure Deployment Plan to the federal government, we urge the Rhode Island Office of Energy Resources to factor in vital medium- and heavy-duty ZEV charging infrastructure as part of those plans.

Sincerely,
Olivia

necsema
New England Convenience Store & Energy Marketers Association

June 10, 2022

John Verducci, NEVI Program Lead
Rhode Island Department of Transportation
Two Capitol Hill
Providence, Rhode Island 02903

By Email

Mr. Verducci:

The New England Convenience Store & Energy Marketers Association (NECSEMA) represents the convenience store and transportation fuel industries in Rhode Island, and throughout New England. NECSEMA members wholesale and/or retail most of the motor fuels sold in the state. Across Rhode Island, there are nearly 500 convenience stores that employ 7,000 people in Rhode Island.

NECSEMA appreciates the opportunity to provide initial comments as the Department of Transportation's (RIDOT) creates its National Electric Vehicle Infrastructure (NEVI) Deployment Plan to create a statewide network of Direct Current Fast Chargers (DCFCs).

Our industry understands the importance of reducing all forms of carbon emissions including those from transportation. We have supported legislation in our organizational footprint to require the investigation of Electric Vehicle (EV) charging rates. NECSEMA has also intervened in several Public Utility Commission EV charging rate design dockets and advocated for removing barriers to private investment in EV infrastructure, specifically the sustainable operation of Direct Current Fast Chargers (DCFC). Our members have also begun to install EV charging equipment, and most have begun future proofing "new" and "re-build" locations that will facilitate future deployment of EV charging equipment. All of this has occurred despite an uncertain return on investment model. NECSEMA is not against EVs or EV charging.

Our members sell gasoline and diesel because those are the predominant fuels in demand. As customer fuel choice evolves over the coming decades, whether that fuel is electricity, hydrogen fuel cells, or something else, we plan to evolve alongside them to provide options to our customers. Regardless of the fuel, convenience stores will continue to play a crucial role in refueling as these stores sit along the most heavily travelled roadways and highways across the state. Because of this, **C-Stores are ideal locations for hosting publicly accessible DCFC to sustain tourism, business travel, and support EV drivers who don't own a home charger.**

NECSEMA encourages states to establish NEVI eligibility criteria that create meaningful opportunities for both single operators and or multiple site operators to compete for NEVI

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program awards, as opposed to sole source awards and contracting approaches. The benefits of such an approach will create competition among equipment providers, thereby lowering necessary awards, and allow the state to invest these savings to further incentivize site hosts in rural and underserved communities.

NECSEMA offers the following additional perspectives, and program design considerations to aid in the development of a publicly accessible EV charging network within Rhode Island:

1) The NEVI program requires states to deploy four 150kW fast charging plugs every fifty-miles within 1-mile of our national highway corridors, thereby connecting states and reducing EV driver range anxiety. However, the long-term number of outlets necessary to support widespread electrified mobility will far outstrip these initial federal and state investments, and the majority of fast chargers will be left for private parties to identify the opportunity to invest in this emerging marketplace. In this emerging retail market, we implore Rhode Island to not advantage one participant or business model over others. We request all efforts be considered to maintain a level playing field for all - one that is open, transparent, and competitive.

2) The NEVI funding will subsidize up to 80% of infrastructure costs, however, considerable costs remain, including electricity costs, maintenance, and ongoing technology replacement. In tandem with this initial infrastructure investment, we believe it is imperative that states immediately address existing controllable impediments that public and privately owned site hosts face to sustainably operate this equipment. Specifically, the "who" and "how" site hosts pay for the electricity consumed, including demand charges or other alternative demand charges, and existing rate designs. Whether its taxpayer monies paying these electrical costs, or private parties charging EV users seeking a return on their investment by offering this service and convenience. These considerations are especially relevant as charger utilization slowly ramps up over the foreseeable future. While time of use rate designs provide important signals for home charging, they are ineffective for publicly accessible fast charging. As drivers "on the go" or away from their home charger have no choice when to charge.

The risks for investments in EV charging operations are large. Among the most significant of those risks are: (1) the revenues from the EV charging equipment may never pay for its installation and operation; (2) the sites for the EV charging equipment may not be economical for the way that market develops; and (3) the EV charging technology purchased may quickly become obsolete. Private investors understand those risks and are willing to bear them if they economically make sense. Electric distribution Companies (EDCs), using ratepayer funds, or NEVI funding do not need burden themselves with these risks, nor factor them into investments. Any proposals to address site host impediments must not advantage one business model or participant over another, particularly public utilities.

In Georgia[1], legislation has been introduced to level the playing field, including requirements that utilities must offer the same tariffs and electric rates they utilize, must be offered for all site host owners. While this larger issue is beyond the scope of the agencies developing and implementing the state's NEVI program plans, we believe it is an essential component for every state to address and protect consumers from the worst effects of a monopolized market, and instead retain a competitive, transparent, and innovative energy supply for sustainable operation of the NEVI funded chargers.

[1] https://www.legis.ga.gov/api/legislation/document/20212022/206076

3) NECSEMA recommends that targeted strategies be identified for specific categories of electric vehicles, including Light Duty Vehicles (LDV), Public Transit, School Buses, and Medium and Heavy-Duty trucks. Each possess unique locational, time of use, accessibility, equipment, and line load capabilities. Tailored plans and strategies will be needed to address the charging needs for each vehicle type and should be reflected in the initial and annual NEVI plans.

4) Existing charging infrastructure including charger type, utilization, should be integrated to compliment the NEVI plan, including port and connector types, electric service, and charger types. Efficiencies with a bordering state's existing or proposed charging locations should also be considered to meet the NEVI plan requirements.

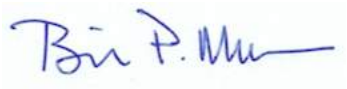
5) Responsible agencies need to continue to collaborate closely with regulated Public Utilities to identify "sweet-spots" where line load capabilities exist or with minimal necessary site host upgrades can accommodate fast charging. NECSEMA supports making this information publicly available to inform a market participant's decision making, and site host selection.

6) Charging locations must consider safety, convenience, and amenities offered during the initial and subsequent plan updates. Charging at an off-interstate location may work for some, but not all motorists. A phased NEVI Program spending plan should be targeted to increase charger density between chargers to shorter intervals such as 10-15 miles. Peak holiday travel times also need to be considered in the NEVI plans, as a four-plug charger will become overwhelmed during peak travel times as well as during holidays.

7) The prioritization for DCFC placement should incorporate average daily traffic counts to prioritize buildout of site host locations based on highest to lower density traffic along alternative fuel corridors. Assigning a high, medium, and low ranking will help prioritize initial, interim, and final charger placement and build-out over the 5-year plan.

Please let us know if you have any questions, and we hope you will consider us as a resource as you further develop this plan.

Respectfully,



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Advancing the Clean Energy Future

Acadia Center

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July 8, 2022

John-Paul Verducci
Chief Economic and Policy Analyst
Rhode Island Department of Transportation
2 Capitol Hill
Providence, RI 02903

Re: NEVI Project- Acadia Center Comments

Thank you for the opportunity to provide comments on the state's participation in the National Electric Vehicle Infrastructure (NEVI) Program. Acadia Center is a non-profit, research and advocacy organization committed to advancing the clean energy future by offering real-world solutions to the climate crisis. Acadia Center tackles complex problems, identifies clear recommendations for reforms, and advocates to create significant change that supports a low-carbon economy across the Northeast which can then be a model for application elsewhere. In Rhode Island, Acadia Center has participated in numerous clean transportation initiatives, including as member of the state's Mobility Innovation Working Group, the Power Sector Transformation (PST) Advisory Group's Electric Transportation and Energy Storage subcommittee, and as a lead advocate in support of the regional Transportation and Climate Initiative Program.

Recommendations for NEVI Project

Coordinate with Ongoing Electric Vehicle Charging Station Investment Programs

Acadia Center strongly recommends adding clean energy advocacy groups to the NEVI Core Team and Technical Advisory Committees that will continue regular meetings through 2027. As members of the above-referenced PST Advisory Group, Acadia Center and other organizations have helped oversee ratepayer-funded investments approved in the last Multi-Year Rate Plan that have supported hundreds of Level II and DCFC charging station installations throughout the state. These investments were guided by strategies, principles, and coordination with other programs that would benefit RIDOT's installation of NEVI-supported charging stations. One efficient logistical solution may be to co-convene the NEVI Core Team discussions as part of the ongoing PST Advisory Group meetings, rather than discuss multiple state-level charging station programs across siloed calls.

"Future Proof" Investments

As the world's automakers have indicated, electric vehicles will become the norm as these companies move to completely phase out production of gas-powered vehicles. Rhode Island has and must continue to plan for the future of electrified transportation and investments made today must look far beyond current in-state electric vehicle adoption rates—particularly as Rhode Island is at the center of New England's transportation corridors that must serve electric vehicle operators from around the region and beyond. RIDOT should plan near-term investments in the state's alternative fuel corridors with the mindset of supporting expansions of charging stations into the future. That may require locating additional electrical infrastructure to add ports iteratively over time.

To maximize cost-efficiencies, engineering studies in support of the NEVI program should look beyond immediate plans for EV charging port installations to envision the needs of the driving public in the longer term. Rather than

installing minimum required infrastructure to support a relatively small, but growing, number of EV drivers today, the charging stations developed as part of this program should incorporate "make-ready" work in front of the meter that will enable additional charging ports in the future.

Similarly, planned investments or maintenance of parking surfaces should incorporate plans for future growth of EV charging stations. For instance, a newly constructed or resurfaced parking lot should take the opportunity to lay a robust network of electrical infrastructure, both conduit and inactive wiring, to support expanded EV charging. Planning for the future of electric vehicle charging proactively can avoid future duplicative costs to excavate and install these systems in the future. At the same time, RIDOT should explore opportunities to partner with vendors that are developing modular, above-ground EV charging conduit platforms that may obviate the need for additional construction and generally reduce costs of utility "make-ready" work.

Coordinate Charging Station Development with Grid Modernization and Clean Energy

Acadia Center recommends RIDOT work very closely with the Core Team and Technical Advisory Committee members, including the additional stakeholders as recommended above, to optimize the development of electric vehicle charging infrastructure in a manner that most benefits Rhode Islanders and the visiting public, takes full advantage of clean energy development opportunities, and balances the needs of the grid. For instance, the NEVI Core Team and NEVI Technical Advisory Committee should work to identify areas of opportunity where renewable energy resources and energy storage solutions could work together to reduce negative impacts on the electric grid. Rhode Island is piloting the use of battery storage system co-located with a DCFC charging station to provide resiliency and reduce peak demand impacts. Taking additional steps to manage and avoid peak demand impacts is critically important for the successful transition to electric vehicles as drivers, particularly those on interstate journeys, may be less able to feasibly shift their electric demand to lower-level charging or preferable off-peak periods.

Further, the state should seek to co-locate electric vehicle charging stations and energy storage systems near areas of renewable energy production. This coordination with the utility and renewable energy developers can help avoid curtailment of renewable energy production at times when generation may exceed consumption and can make better use of local energy resources. Such a coordinated strategy may also optimize the buildout of other electric distribution infrastructure and could lower total ratepayer costs. For select sites, such as highway adjacent Rhode Island Welcome Centers, the state could Lead by Example and coordinate its own renewable energy investments to add solar and/or wind generation. The use of solar array carports, such as the type located on state property at 89 Jefferson Boulevard in Warwick, could provide both clean energy production as well as protection from sun, snow, and rain while potentially helping avoid renewable energy development on ecologically sensitive parcels.

Provide Charging Options in Environmental Justice Communities and Near Concentrations of Multi-Family Housing

Rhode Island is the second most densely populated state in the nation and much of the I-95 corridor has been built through communities and populations that have long-suffered from high levels of fossil fuel air pollution. RIDOT should ensure electric vehicle charging stations and electrified transit are equitably developed near and within these communities to help enable the transition to electric vehicles for all. RIDOT and the Division of Statewide Planning should coordinate with local planners to identify opportunities to avoid and/or eventually transition away from the development of fossil fuel stations which will further help reduce various forms of pollution and safety hazards

plaguing environmental justice communities. RIDOT's prioritization should also identify charging station opportunities near concentrations of multi-family housing where residents may lack control over charging that utilizes their residence's existing electrical infrastructure or a limited number of Level 2 stations. Reliable access to a DCFC charger may be enough to supplement other opportunities to access Level 2 and Level 1 chargers, thus enabling more drivers to transition to electric vehicles if public transportation and active mobility options are insufficient for their needs.

Safety and Amenities for Charging Stations

EV Charging Stations along designated Alternative Fuel Corridors should include adequate safety considerations, including but not limited to: adequate lighting; regular safety patrols; and access to restrooms. Acadia Center believes these amenities and safeguards should be foundational to public transportation and active mobility facilities as well to encourage higher usage levels of those low or zero-carbon mobility options. Partnering with private, commercial entities like retail or restaurant locations that offer these amenities may be one viable approach. However, RIDOT should also recognize that EV charging, like public transportation and active mobility, does not occur completely within limited prescribed hours. These basic amenities should be available around the clock and few private entities remain open around the clock. So complete reliance on the private sector for these services may not be prudent.

Advertise Charging Locations to Highway Travelers

As electric vehicle models and charging options expand, it is unclear how manufacturers and charging equipment companies will coordinate to communicate locations and availability of charging ports. At least one automaker includes real-time access to this information within their vehicles' operations and navigations system. RIDOT may have a role to play by advertising the location, number, and real-time availability/wait times for DCFC charging along these prioritized corridors. This could include static signage leading up to highway exits as we have today or more advanced and dynamic signage that can relay the number of currently available ports and, if necessary, which types of charging connectors are supported. To the extent the state controls pricing of any EV charging, dynamic price signals could help manage vehicle distributions across different charging locations—much like variable price tolling does.

Conclusion

The transition to electric vehicles will require ongoing collaboration and coordination with multiple agencies, entities, and stakeholder advocates. Acadia Center is committed to working with the state and all partners to advance the clean energy future and optimize the roll out of all clean energy solutions.

Sincerely,

Hank Webster
Rhode Island Director & Senior Policy Advocate
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401.276.0600 x402
401.239.8500 (c)

Date: July 1, 2022
To: JP Verducci <Johnpaul.verducci@dot.ri.gov> ; Catherine Burns <catherine.burns@jacobs.com> ; Daniel Herstine <daniel.herstine@jacobs.com> ; Allison Archambault <allison.archambault@dem.ri.gov>; Sara Canabarro <sara.canabarro@energy.ri.gov>
From: Mal Skowron <mal@greenenergyconsumers.org>

Re: Feedback on RIDOT's NEVI Plan

Thank you for the opportunity to provide feedback as RIDOT develops its plan for National Electric Vehicle Infrastructure (NEVI) formula funding. Green Energy Consumers Alliance is a non-profit organization based in Providence with the mission to harness the power of energy consumers to speed the transition to a low-carbon future. The organization uses its experience running clean energy programs to inform policy advocacy on climate and energy issues.

Since 2016, we have run a program called Drive Green to create a network of dealerships across Rhode Island and Massachusetts to improve the electric vehicle (EV) shopping experience. We specialize in consumer education to encourage drivers to choose EVs over gas-powered cars. We have talked to hundreds of EV drivers about their experience and thousands of potential EV drivers about their difficulty switching to an EV, so we have unique insight to inform the deployment of DC fast charging (DCFC). Below are several key learnings and recommendations that we believe can help RIDOT develop an effective plan to dispense its NEVI funds.

Public process and stakeholder engagement

We appreciate RIDOT's effort to engage stakeholders. However, the NEVI public engagement sessions did not pose direct questions to participants for feedback, so it was difficult to engage. In the future, we recommend preparing specific questions to elicit more meaningful participation from stakeholders. Direct questions will also ensure that RIDOT gets feedback that will be helpful in the development of its plan. MassDOT provides a good example in this survey designed to influence its own NEVI plan.[1]

Since NEVI will be a multi-year program, it would be a good idea to routinely provide updates on the agenda for the Executive Climate Change Coordinating Council (EC4) and to solicit feedback about the program through 2027.

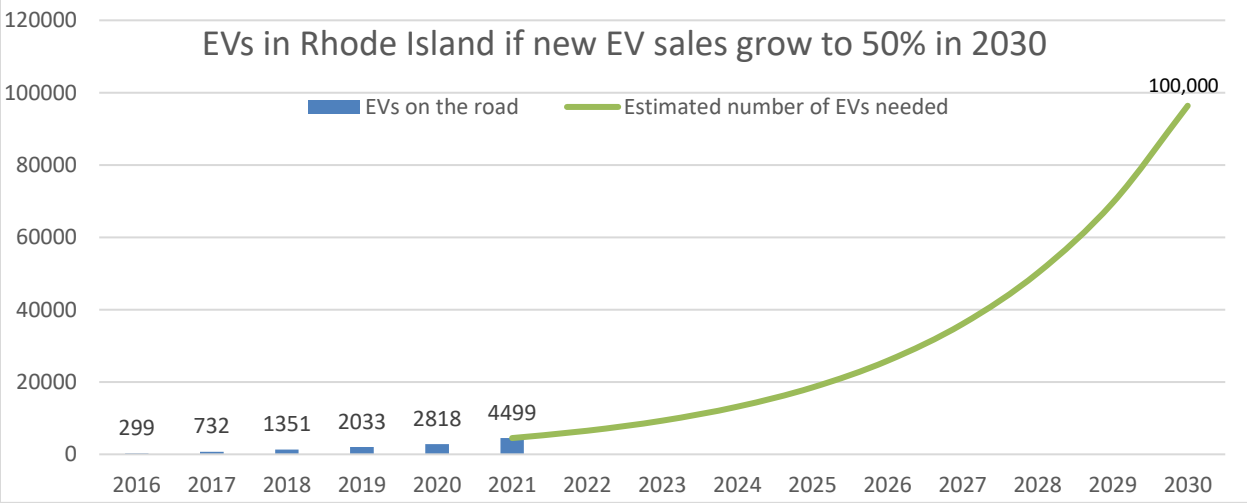
[1] See MassDOT's NEVI stakeholder feedback form at https://survey.alchemer.com/s3/6857723/MassDOT-EV-Infrastructure-Deployment-Plan

Finally, as we expect that RIDOT's involvement in Rhode Island's network of EV charging stations will continue to expand, RIDOT should consider requesting more staff in future state budgets to specialize specifically in EVs and climate.

Plan vision and climate goals

Broadly speaking, the intent for the NEVI program is to increase driver confidence in the network of EV charging stations to support long-distance travel in an EV. The effort to increase confidence in the EV charging network is critical for Rhode Island to meet the Act On Climate mandate to reduce emissions 45% by 2030 and reach net-zero by 2050. Transportation is the largest source of greenhouse gas emissions in Rhode Island, responsible for 35% of emissions. Green Energy Consumers Alliance anticipates meeting the 2030 mandate will require at least 100,000 EVs on the road in Rhode Island by then.[2] There are currently only about 4,500 EVs registered in Rhode Island.

Figure 1: The number of EVs in Rhode Island if sales grow to 50% in 2030.



Our estimates assume that new EV sales will grow from 3.5% in 2021 to 50% by 2030, with the majority of sales backloaded to the latter half of the decade. Increasing EV sales with greater pace than assumed in the scenario modelled above will lead to a greater cumulative reduction in greenhouse gas emissions. The expansion of charging

[2] Green Energy Consumers' assumption that new EV sales must grow to at least 50% of all new car sales in 2030 to meet state climate goals is based on modeling done in the draft 2030 Massachusetts Clean Energy & Climate Plan. Massachusetts based their modeling on what would be needed to decrease their statewide emissions 45% by 2030. Their final 2030 plan is sized to achieve 50% emissions reduction by 2030. See https://www.mass.gov/info-details/massachusetts-clean-energy-and-climate-plan-for-2025-and-2030

infrastructure between 2022 and 2027 can be a powerful tool to increase EV adoption. 100,000 EVs by 2030 may require as many as 8,300 public charging ports across the state.

Key use cases for DCFC

Considering Rhode Island's small size and the steep climb of EV adoption required to achieve Act On Climate compliance, the NEVI program is a powerful opportunity to support drivers to choose EVs over gas-powered cars. In this regard, we propose a few key use cases to guide EVSE deployment:

1. **Thru-travelers.** I-95 is the primary highway that enables interstate travel through Rhode Island. As a major corridor for both thru-travel and travel within Rhode Island, this corridor is a commonsense place to start. Where possible, there should be charging stations accessible for both the North and South routes relatively close to each other to make it more convenient for drivers travelling in both directions to access DCFC.
2. **Travelers <u>within</u> Rhode Island**. Because of Rhode Island's small size, it makes less sense to think of travel "corridors" in the traditional sense and more sense to think of charging as a mesh network. Rhode Islanders should be able to travel across the state and always be able to find a charging station. Focusing on one highway corridor at a time may not achieve a sufficient state-wide network to encourage Rhode Islanders to switch to EVs. We encourage RIDOT to take a "network" approach rather than a corridor-by-corridor approach.
3. **Coastal destinations.** The Ocean State is a popular vacation destination, particularly in the summertime. Long-distance travelers don't just need charging passing *through* Rhode Island, but at key destinations once they arrive here. There are currently zero DCFC stations in popular summertime towns on the southern coast, including Westerly, South Kingstown, Narragansett, and North Kingstown and communities on the East Bay. Aquidneck Island only has two DCFC stations. If the goal is to enable long-distance travel, then coastal vacation destinations should be a priority.
4. **Rural drivers.** Nearly all charging stations currently installed in Rhode Island are located on the eastern, more urbanized half of the state. However, rural drivers typically travel more miles by car and have fewer non-car alternatives compared to urban or suburban drivers. Failing to install chargers in the rural western part of Rhode Island will make it difficult for rural drivers to switch to EVs, though they would benefit the most from fuel savings and contribute more emissions reduction by switching away from gasoline. Failure to install DCFC in rural areas would lead to inequity in EV access.

5. **Urban core of Providence and the surrounding metro area.** I-95 runs directly through Providence, which is the state's largest metro area and a key destination for tourists, commuters, and travelers of all kinds. The city is also population dense and has many drivers who would be likely to purchase an EV if they had a convenient place to charge. Many residents in Providence, because they live in multi-unit dwellings or rent, will have a hard time installing charging at home, where most charging happens for existing EV drivers. Pushing EV ownership into the mainstream will require robust public charging nearby Providence.

Alternative fuel corridors and establishing a statewide charging network

The Infrastructure Investment and Jobs Act (IIJA) specifies that "any electric vehicle charging infrastructure acquired or installed … shall be located along a designated alternative fuel corridor."[3] However, there are relatively few AFCs in Rhode Island, and they span a short distance. The Rhode Island section of I-95 is less than 50 miles long; same goes for I-195. The NEVI guidelines Rhode Island's uniquely small size warrant two recommendations to ensure optimal deployment of NEVI funds:

First, for I-95 and I-195 (the existing AFC corridors), NEVI funds should be used to install larger sites than the minimum NEVI guidelines (4 ports per site). As an extreme example, it would be better for Rhode Island's section of I-95 to have 4 sites with 10 ports each than to have 10 sites with 4 ports each. Given the short travel distance of Rhode Island's interstates, this strategy reduces the chance that a driver will have to check multiple charging stops to find an open port. It will allow RIDOT to use NEVI funds more efficiently (given that per-port installation costs generally decrease as the number of ports at a single site increase).[4]

Second, for state highways, RIDOT's NEVI plan should prioritize geographic spread to maximize DCFC access and ensure flexibility. This means that RIDOT should propose multiple state highways as AFCs to be eligible for funding in the future. Some example corridors that align with the recommendations in the previous section include:

[3] According to this analysis by Atlas EV Hub: https://www.atlasevhub.com/weekly_digest/the-corridors-are-ready/?utm_source=EV+Hub&utm_campaign=3ac82eb532-EMAIL_CAMPAIGN_2019_01_07_05_37_COPY_01&utm_medium=email&utm_term=0_173e047b1f-3ac82eb532-293762305

[4] See this analysis on the cost of new vs retrofit EV charging installations by the Southwest Energy Efficiency Project in the context of EV-ready building codes. https://www.swenergy.org/transportation/electric-vehicles/building-codes#cost

- Route 1, which goes from Westerly through the southern coast and up to Providence.
- Route 6, which goes from Providence through North Scituate, the rural western part of the state, and into Connecticut.
- Route 138, which travels from North Kingstown, through Jamestown and Aquidneck Island.

The above list is not exhaustive; RIDOT should propose as many new AFCs as needed to ensure NEVI funds are distributed evenly across the state.

Elements of a good charging station location

Based on driver experience, we recommend the following elements to identify sites:

1. **Amenities**. Refilling a gas tank takes less than 5 minutes. Because EV drivers will typically wait much longer (30 minutes or more) for their EV to recharge at a DCFC, it's important to have amenities nearby each site. DCFC locations should be located at grocery stores, superstores, coffee shops, shopping centers, public parks, or other prime locations for EV drivers to spend their time as the vehicle recharges. There should also be access to restrooms if possible.
2. **Safety**. If travelers need a charge late at night, they should feel safe to wait in well-lit parking areas. This point emphasizes the need for amenities; if charging stations are sited in populated areas, they'll feel safer than in empty, isolated parking lots.
3. **Excess grid capacity.** The installation cost of DCFC can vary widely according to how congested the electric grid is at a particular site. All else being equal, NEVI sites should be located where there is excess capacity and the cost of adding new service is low. RIDOT should work with Rhode Island Energy to identify optimal DCFC locations on the I-95 corridor especially, since the sites are likely to be highly-power intensive.

Public and Private Roles and Responsibilities

To deliver on key amenities that DCFC sites need to provide value and good experience to EV drivers, we strongly encourage RIDOT to develop a model to work with private companies to own and operate the DCFC stations installed with NEVI funds. By getting businesses involved, DCFC is more likely to be sited in areas that will provide amenities and entertainment to drivers. One way to implement a private-public model would be to establish desired principles for site applications, then allow third-parties to apply for NEVI funding to install charging on their properties. RIDOT could then select site hosts based on

how closely the applications conform to their target criteria and the guidelines specified by the FHWA.

Third-party ownership of DCFC sites is common practice in the state's other incentive programs. National Grid (now Rhode Island Energy), for example, in their EV Charging Demonstration Programs, provided infrastructure incentives for their customers to install EV charging on their own properties. This model could be adapted to serve the needs of RIDOT.

In addition, if RIDOT, in collaboration with an agency like DEM, identifies key state properties that would be appropriate sites for DCFC (such as public parking at a state park or beach), it should reserve some NEVI funds to install DCFC there.

Data collection and use

FHWA guidelines require data collection on charging station use, reliability, maintenance, and installation costs. In addition to reporting this data to FHWA, it should be made available to policymakers in Rhode Island to inform further DCFC deployment and other policy changes needed to address barriers to ownership and operating of DCFC. For example, data collection on the cost of electricity used by DCFC installed with NEVI funds could be used to inform special EV rate designs by the Public Utilities Commission.

Leverage lessons from Power Sector Transformation & utility collaboration

As mentioned earlier, the utility company (then National Grid, now Rhode Island Energy) has ample experience installing EV charging infrastructure as part of the Power Sector Transformation (PST) settlement. The utility regularly convenes an advisory group for PST, which includes utility employees, state agency officials, and non-profit stakeholders. To coordinate efforts and share lessons learned, RIDOT should start attending the regular PST meetings.

Coordinating with the PST advisory group will have the added benefit of making sure that future state incentive programs to install EV charging do not duplicate the role of the NEVI program.

Future-proofing

NEVI guidelines require at least 4 ports at each site with a power of 150 kW per port. As the number of EVs increases, utilization of each site is going to increase. As utilization increases, sites will be more crowded and develop queues, and EV drivers will find it more difficult to charge quickly because they will have to wait to plug in. Since a large proportion

of the cost of installing new EVSE is excavation and trenching associated with adding new electric service underground, as well as soft costs associated with construction and permitting, it makes financial sense to future-proof stations by installing electric capacity to support 8-12 ports at each site, though only 4 ports will be installed initially.

Future-proofing will make it easier for site operators to add more ports in the future and at less cost and encourage private investment in more stations long after the NEVI program is spent out.

Reliability and operation

If RIDOT is to move forward with private-public partnerships to appropriate the NEVI funds, there needs to be a clear maintenance plan to make sure that stations installed with NEVI funds remain in a good state of repair. When private property owners have installed charging stations using utility and state incentives, it has been unclear who should be responsible for repairing stations if they break. Many EV drivers in Rhode Island have experienced frustration after reporting broken stations to their site operators without corrective action. If DCFC stations are unreliable, EV drivers have bad experiences that discourage other drivers to consider buying an EV to replace their gas car.

One possible model to ensure that DCFC is repaired in a timely manner is to appropriate some NEVI funds to cover maintenance/repair costs, but only if an operator responds to the broken station within a certain timeframe. If operators do not respond to complaints about broken EVSE promptly, then they should be on the hook for a larger proportion of the costs. There may be other models to ensure timely repair and maintenance that RIDOT should consider, but there needs to be a clear plan to ensure reliability and accountability.

Regarding the cost of electricity, we advise against using NEVI funds to cover the cost of electricity. Though high operating costs can be a barrier to DCFC deployment, site operators should be responsible for paying for electricity and collecting user fees from EV drivers who use the stations. To address the issue of long-term financial operability and ensure continued deployment of DCFC, RIDOT should collect data on utilization and operating costs for each site to inform the development of policy changes needed to design specific rates for DCFC. Regulators in other states, such as the Massachusetts Department of Public Utilities, are currently considering alternatives to demand charges to make operating a DCFC station more financially sustainable. RIDOT's experience dispensing NEVI funds and collecting data should provide valuable experience to inform rate design policy for the RI Public Utilities Commission in the future.

Another opportunity to limit the cost-impacts of operating DCFC would be to co-locate solar and storage. Rhode Island Energy currently has an active battery storage project at a Tesla Supercharger station and could possibly provide guidance and technical support for such projects in the future. RIDOT should consider additional support for DCFC sites that combine DCFC, solar, and storage together, as these sites will contribute more meaningfully to Rhode Island's Act On Climate mandate.

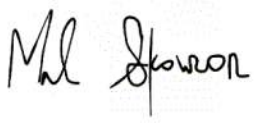
Conclusion

In summation, the recommendations of Green Energy Consumers Alliance are for RIDOT to:

1. Improve stakeholder engagement and public participation
2. Expand RIDOT capacity to specialize in EVSE deployment and other Act On Climate related initiatives
3. Focus NEVI funds to align with the Act On Climate mandate
4. Install fewer and larger sites along I-95 corridor to maximize cost-efficiency
5. Propose several new AFCs as needed to distribute NEVI funds across the state to develop a true charging network, rather than a more limiting "corridor-by-corridor" approach
6. Ensure that NEVI sites are located in sites that offer amenities and safety to drivers
7. Collaborate with Rhode Island Energy to identify sites that have excess load capacity, especially along I-95
8. Attend Rhode Island Energy's quarterly Power Sector Transformation advisory meetings to plug into in-state expertise about charging infrastructure programs
9. Propose a model of private-public partnership to deliver the most value to drivers
10. Make data from the program available to policymakers to continue to identify policy solutions to barriers for installing DCFC
11. Ensure reliability through a clear maintenance plan
12. Identify opportunities for the co-location of DCFC, solar, and storage where possible

Thank you for the opportunity to provide comment. Please do not hesitate to reach out if you have any questions about our experience in Rhode Island advocating on behalf of EV drivers.

Sincerely,



Mal Skowron
Transportation Policy & Program Coordinator
Green Energy Consumers Alliance

Submitted electronically to johnpaul.verducci@dot.ri.gov

July 8, 2022

Rhode Island Department of Transportation
2 Capitol Hill
Providence, RI

RE: Development of Guidance for National Electric Vehicle Infrastructure Formula Program Development

Dear Mr. Verducci:

The Alliance for Automotive Innovation ("Auto Innovators")[1] appreciates the opportunity to provide recommendations to the Rhode Island Department of Transportation (RIDOT) on the development of Rhode Island's investment plan for the National Electric Vehicle Infrastructure (NEVI) Formula Program.

The funding provided through the NEVI Formula Program provides an important down payment to jumpstart public and private investments in a nationwide charging network. To be meaningful, it is critical that states develop and implement plans that will efficiently install necessary EV charging infrastructure. To that end, we are happy to share our EV Charging Recommended Attributes[2] as an appendix to these comments. Released in December 2021, these recommendations are intended to help federal and state-level investment planning and funding considerations to expand EV charging across the nation.

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[1] Formed in 2020, the Alliance for Automotive Innovation is the singular, authoritative, and respected voice of the automotive industry. Focused on creating a safe and transformative path for sustainable industry growth, the Alliance for Automotive Innovation represents the manufacturers producing nearly 98 percent of cars and light trucks sold in the U.S. The newly established organization, a combination of the Association of Global Automakers and the Alliance of Automobile Manufacturers, is directly involved in regulatory and policy matters impacting the light-duty vehicle market across the country.

[2] https://www.autosinnovate.org/about/advocacy/Recommended%20Attributes%20for%20EV%20Charging%20Stations%2009DEC2021.pdf

In 2021, 4.6 percent of new vehicles sold in Rhode Island were electric vehicles.[3] EV model availability is expected to increase from around 70 models today to 130 by 2025. However, EV model availability is not enough to increase adoption. The reasons most often given for customers who choose not to purchase an EV are range anxiety and access to reliable charging.[4] As of June 22, 2022, Rhode Island had 550 public, non-proprietary EV charging ports.[5] The $23 million allocated to Rhode Island through the NEVI formula program certainly provides significant investment in the state's public charging network. We urge the state to use that funding as a kick-start to further increase EV charging availability for Rhode Island residents.

Again, we appreciate the opportunity to provide our EV Charging Recommended Attributes to RIDOT. This is a pivotal and transformative time in the auto industry as we transition to electrification, and the funding provided through the NEVI formula program is a good way to launch the expansion of EV charging across Rhode Island. We look forward to working with the DOT and all stakeholders to achieve a cleaner transportation future.

Respectfully submitted,

Dan Bowerson
Sr. Director, Energy & Environment

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[3] https://www.autosinnovate.org/posts/papers-reports/Get%20Connected%20EV%20Quarterly%20Report%20Q4.pdf
[4] https://www.consumerreports.org/hybrids-evs/cr-survey-shows-strong-interest-in-evs-a1481807376/
[5] https://afdc.energy.gov/stations/#/analyze?country=US&fuel=ELEC&ev_connectors=CHADEMO&ev_connectors=J1772COMBO&ev_connectors=J1772

Appendix – EV Charging Station Recommended Attributes

ALLIANCE FOR AUTOMOTIVE INNOVATION

PLANNING FOR THE ELECTRIC FUTURE: CHARGING STATION ATTRIBUTES

The automotive industry is at a pivotal and transformative point in history. The industry will invest over $330 billion in vehicle electrification by 2025 and more than double the available electric vehicle (EV) models within the same time span (roughly 60 EVs today growing to 130 models by 2026). A sustainable and equitable transition to electrification will require public and private collaboration across various industries and sectors. The Infrastructure Investment and Jobs Act (Infrastructure Bill), which includes up to $7.5 billion for EV infrastructure, is an important down payment to jumpstart the public and private investment in a nationwide charging network.

The Infrastructure Bill directs the U.S. Departments of Transportation and Energy (Agencies) to provide guidance to states to prioritize investment of $5 billion of the funds through the National Electric Vehicle Formula Program. The guidance is essential to assist states in meeting "current and anticipated market demands for electric vehicle charging infrastructure, including with regard to power levels and charging speed, and minimizing the time to charge current and anticipated vehicles."[1]

Much like the federal investment in the Interstate Highway System of the mid-1950s, this is a once-in-a-generation opportunity to build a nationwide charging and refueling infrastructure for EVs for decades to come. With this in mind, the Alliance for Automotive Innovation (Auto Innovators)[2] has developed a suite of attributes that should be included in the Agencies' guidance to meet the needs of current and future electric vehicles. In addition, these attributes can be used by states as they look to invest state and federal funding in EV charging infrastructure.

CHARGING RATE

Federally and state-funded DC fast chargers on corridors and at transit hubs must be capable of charging at a rate of 350 kW. It is imperative that customers have a convenient refueling experience. As more and more electric vehicles come to market with larger batteries, charging speed is going to become increasingly important. EV charging at 350 kW is needed for corridor charging not only to reduce the recharge time of each EV, but also to increase the throughput of EVs to allow more EVs to charge from the same connector. Additionally, it is more cost-effective to have charging sites made capable of 350 kW charging during construction as opposed to after the charger has been installed.[3] By requiring a minimum of 350 kW capability, the Agencies can help future-proof for new vehicle and charging technologies.

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[1] Infrastructure Investment and Jobs Act, H.R. 3684, 117th Cong., at 2627 (2021).

[2] Formed in 2020, the Alliance for Automotive Innovation is the singular, authoritative, and respected voice of the automotive industry. Focused on creating a safe and transformative path for sustainable industry growth, the Alliance for Automotive Innovation represents the manufacturers producing nearly 99 percent of cars and light trucks sold in the U.S. The newly established organization, a combination of the Association of Global Automakers and the Alliance of Automobile Manufacturers, is directly involved in regulatory and policy matters impacting the light-duty vehicle market across the country.

[3] Atlas Public Policy, 2021. "U.S. Passenger Vehicle Electrification Infrastructure Assessment." Available at: https://atlaspolicy.com/u-s-passenger-vehicle-electrification-infrastructure-assessment/

ALLIANCE FOR AUTOMOTIVE INNOVATION

CONNECTORS

Auto Innovators supports requirements in the Infrastructure Bill that **EV charging connectors should be SAE J1772 and SAE CCS connectors**. Federally funded EV chargers should not limit use to a single vehicle manufacturer or proprietary technology, which is why we supported language in the Infrastructure Bill that would exclude those chargers from funding eligibility.

PAYMENT METHODS

Federally funded EV chargers must accept credit cards via a credit card reader but can also accept other payment methods. Credit card payments are the most common form of payment for refueling gasoline-powered vehicles. Therefore, to make charging an electric vehicle as similar as possible to refueling a gasoline-powered vehicle, charging stations must, at a minimum, accept credit cards. Limiting charging to an exclusive mobile payment system may exclude groups of users who do not choose or do not have access to a device that supports mobile payment capabilities.

RELIABILITY AND REDUNDENCY STANDARD

Federally funded EV chargers must have a minimum uptime requirement and offer redundancy. Non-operational chargers do not support our customers and can negatively impact the market. It is unreasonable that a federally funded charging station be non-operational for any extended period of time. Therefore, we encourage the Agencies to adopt a standard method to measure reliability and require any federally funded charger to come with a minimum reliability standard. Auto Innovators welcomes the opportunity to work with the Agencies on the development of such standards.[4]

ACCESSIBILITY

Federally funded EV charging stations must be open 24/7 to allow access to a wide range of EV customers. Just as drivers of gasoline-powered vehicles have access to refueling stations 24 hours a day, the same must be true for EV drivers.

STATION LAYOUT

The EV charging station layout should support different vehicle configurations. Locations that are selected for federal funding for EV chargers should ensure that the layout, including cord, vehicle access, signage, etc., supports a wide range of electric vehicle designs. Additionally, **stations should have multiple ports per site and allow for pull-through for vehicles pulling a trailer**. Multiple ports per site mitigates overcrowding and offers redundancy.

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4 EV charger reliability standards have been implemented in states already. As part of a funding opportunity, New York requires that state-funded DC fast chargers must be operational at least 97% of the year (Program Opportunity Notice 4509). In model state grant and procurement contract provisions, the Northeast States for Coordinated Air Use Management (NESCAUM) recommends that each DC fast charging connector be operational at least 99% of the time.

While it may not be necessary to make it a requirement in the Agencies' guidance, station amenities such as rest rooms, overhead coverings or awnings, proper lighting, and security cameras should be considered.

NETWORK AND COMMUNICATION REQUIREMENTS

Federally funded public DC fast chargers must be networked. It is important that drivers know that a charger will be capable of charging their vehicle before they arrive at the station. Therefore, stations must be able to communicate to drivers to inform them if a station is operational and whether the vehicle can be charged at the site. The Agencies should consider options to facilitate customer access to this information.

Electric vehicles can provide grid services through vehicle grid integration, as long as they support customer needs to charge in an expeditious manner. There is a lot of progress on vehicle grid integration (VGI) through smart charging, vehicle telematics, time-of-use rates, and bidirectional charging, but **it is too early in the market to define specific VGI communication standards, especially for corridor charging given customer travel needs.**

EV CHARGING ON FEDERAL HIGHWAYS

EV charging should be permitted at federal highway and interstate properties. With federal restrictions on the location of EV chargers on federal highways, guidance from the White House, U.S. DOT, and DOE will be essential for states regarding the $5 billion in EV charging funding allocated via highway formula.

EV CHARGING SIGNAGE

EV charging signage must be permitted on highway service signs. Currently, the Federal Highway Administration prohibits EV charging signage on highway service signs, which is counter to creating a national EV charging network and counter to the need to increase consumer awareness of EVs and refueling stations for EVs. Customers need to have knowledge of where they can safely and conveniently refuel their vehicle. In addition to aiding existing EV customers, it is important for potential EV buyers to have confidence that there is an EV charging network available to charge their vehicle. Proper signage is also necessary to ensure that the investment in public charging is not under-utilized.

STANDARDIZED APPROACH TO COMMUNICATE PRICING

To help customers understand how much it will cost to charge their vehicle, **EV charging pricing should be communicated in a standard $/kWh value.** Gasoline customers go to a station understanding exactly how much a gallon of gasoline will cost, and the same should be true for electric vehicle customers. Other alternatives may be necessary in some states, as not all states have clarified that charging per kWh is permitted.[5]

[5] Standardized approaches to communicate EV charging pricing is an active topic within the National Institute of Standards and Technology (NIST) and the National Council of Weights and Measures (NCWM). Some states have not allowed electricity to be sold to EV drivers in a $/kWh; federal guidance to these states would be beneficial.

July 13, 2022

The Honorable Peter Alviti, Jr.
Director, Rhode Island Department of Transportation
Two Capitol Hill
Providence, RI 02903

RE: Response to the request for feedback on the Rhode Island Electric Vehicle Infrastructure Deployment Plan

Dear Director Alviti,

On behalf of a coalition of businesses, associations, and individuals that share the common goal of efficiently and effectively developing a charging network for electric vehicles ("EVs") across the United States, the Charge Ahead Partnership ("CAP") respectfully submits the following comments in response to the Rhode Island Department of Transportation's ("Department") request for feedback as you develop your Electric Vehicle Infrastructure Deployment Plan ("the Plan"). CAP looks forward to working with Rhode Island policymakers to create a robust marketplace for EV charging so that Rhode Island's system of charging locations is positioned to meet drivers' expectations of quality service, safety, and affordable, competitive pricing. CAP aims to empower the consumer and ensure that they have the confidence to transition to EVs knowing that they will be able to conveniently recharge no matter where they go in the country.

The Biden Administration has a goal to build out the national EV charging network to 500,000 publicly available fast chargers across the United States by 2030. In order to meet this goal, state policymakers should adopt solutions that will expand the current EV charging network as quickly as possible. CAP believes that a competitive, market-based approach is the most efficient and economical way to buildout Rhode Island's EV charging network in a way that promotes fair competition and encourages private investment in the EV charging business. Removing barriers for private businesses to install EV charging stations will ensure that a long-term market for EV charging develops, which will ensure Rhode Island's charging network continues to thrive, long after the NEVI funds are completely expended. The Infrastructure Investment and Jobs Act ("IIJA") – which allocates over $22 million to Rhode Island over five years – is a rare opportunity to jumpstart a burgeoning industry. This funding, however, is only a down payment. The Plan should ensure that the distribution of NEVI funds is done in a way that sparks private investment in the EV charging business. This will catalyze Rhode Island's EV charging industry for decades to come rather than simply distributing money to stranded assets such as broken, poorly maintained EV chargers that currently hinder EV adoption throughout the United States.[1]

In order to make consumers comfortable with purchasing EVs, a statewide network of EV fast chargers must be available to provide drivers with the refueling customer experience that they expect.

[1] CleanTechnica, A Quarter Of All EV Chargers Don't Work, Half Of Car Trips Are Less Than 3 Miles, May 16, 2022. https://cleantechnica.com/2022/05/16/a-quarter-of-all-ev-chargers-dont-work-half-of-car-trips-are-less-than-3-miles/

Without it, consumers will hesitate to make the transition. Moreover, an idle charger in a desolate parking lot will do nothing to alleviate range anxiety. In fact, it will have the opposite effect. Consumers should expect to be both comfortable and safe during their charging experience. The sooner a marketplace exists to provide this positive experience, the sooner more consumers will be comfortable buying EVs.

Included below is a high-level overview of CAP's perspective on EV charging policies that would encourage private investment in Rhode Island. We encourage you to consider these issues as you develop the Plan. Doing so will position Rhode Island to create a competitive and consumer-centric approach to building a robust EV charging network across the state. We appreciate your consideration of this matter and look forward to working with you.

I. General Considerations for Building an EV Charging Network

A. Efficient Expansion

With over 120,000 established fueling locations across the nation, existing fuel retailers can replicate today's petroleum refueling experience for EV drivers. Additionally, retailers more broadly are positioned to meet the demand from their customers for EV charging. Retailers are best equipped to own and operate EV charging stations, utilizing their nationwide network of convenient locations to provide the refueling experience that consumers expect. These locations provide a safe location for a myriad of secondary services and amenities, such as food, beverages, and restrooms. This is an important consideration for the Plan because the IIJA prioritizes such amenities when determining the location of EV refueling sites financed with NEVI funding.[2]

B. Leveraging Stakeholder Core Competencies

Building out an EV fast charging network and upgrading the national electric grid to accommodate this new technology is a daunting task that will require collaboration among utilities and retailers as well as many other stakeholders. In this sense, each stakeholder group should focus on core strengths, with electric utilities preparing the grid for the coming fuel transition and retailers providing the refueling customer experience that drivers expect. The Plan should support this partnership structure as it is the most efficient, cost-effective, and timely method to serve consumers.

C. Ensuring Customer Fairness and Equity

Regulated electric utilities are increasingly seeking to underwrite their investments in owning and operating Direct Current Fast Chargers ("DCFC") by raising their customer's monthly electricity bills. Allowing power companies to charge all of their customers more money to own and operate chargers, regardless of whether the customer drives an EV, operates like a regressive tax – particularly to those living in lower-income and fixed-income communities. In some states, the costs of both the physical infrastructure and the electricity used to refuel EVs are added into the rate base upon which the utility collects a guaranteed rate of return and essentially operates as a state-sanctioned, utility-distributed subsidy for EV drivers. This could unfairly discriminate against lower-income and fixed-income communities who are both more sensitive to price fluctuations in their utility bills and are rarely EV drivers.

[2] Infrastructure Investment and Jobs Act, Section 11401, November 15, 2021 *available at*. https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf

There are more equitable and effective ways of growing the EV fast charging network. Regulated utilities should not be placing the burden of providing fuel to EV drivers on the backs of hard-working, low- and middle-income individuals, many of whom do not own a vehicle, much less an EV. Fuel retailers are willing to foot the bill if a competitive EV charging market exists. Accordingly, we must ensure that all communities – regardless of location or socioeconomic status – are included in the development of an EV fast charging network, just as there are refueling stations in every community regardless of geography or income.

D. Ratepayer Subsidization of Charging Stations

In addition to hurting customer fairness and equity, ratepayer subsidization of fast charging stations also has negative free market implications. Ratepayer subsidized investment is not subject to market risk, which gives utilities an advantage over any private company seeking to enter the market. This is important for free market considerations but also for the NEVI funds. While the funds cover a bulk of the costs associated with the installation, ownership, and operation of chargers, it requires matching funds as well. We believe that the private market is willing and able to put capital at risk to invest in EV fast charging stations; however, the overwhelming anti-competitive prospect of contending with a regulated electric utility that can pass the costs of EV chargers on to its customers – such as public electric utilities – make the financial realities difficult to rationalize for businesses. To that end, by creating a pro-business, pro-private investment Plan for the NEVI funds, Rhode Island ensures that electric utility customers are not on the hook for any additional costs associated with EV charging. **Simply put, citizens should not be paying for services that the private sector is willing to cover.** To do otherwise would place an unnecessary burden on those least able to afford it.

E. Competitive, Level Playing Field for Funding and Regulations

As stated above, retailers and other private businesses are prepared to provide EV charging services to EV drivers. However, without the appropriate policy signals, businesses cannot compete with regulated power companies. To create a nationwide fast charging network, all EV charging providers must be able to compete on an even playing field. Moreover, utilities should not be able to bill their retail competitors that sell electricity to EV drivers more than they charge themselves – including through costly "demand charges." There must be a viable pathway to profitability and the ability to compete on price for any fuel alternative to gain meaningful market share—meaning more drivers of EVs on American roads than those driving cars with internal combustion engines. This will allow competition to drive down prices and increase the quality of services provided to customers.

F. Allow Charging Station Owners to Resell Electricity

Some states continue to classify businesses that resell electricity for the purpose of charging EVs as electric utilities. This archaic classification effectively precludes any entity other than utilities from owning and operating EV charging stations. Fortunately, Rhode Island has passed legislation that allows EV charging station operators to sell electricity for the purpose of recharging the battery of an electric vehicle without being regulated as a "public utility." This is known as the ability to "charge for charging" and it is essential to incentivize private investment in EV charging technology. Rhode Island should seek to build on this progress as the Department develops the Plan.

G. Transparent, Uniform Pricing

Today, consumers refuel at approximately 120,000 retail fueling locations across the country. The retail fuels market is the most transparent and competitive commodity market in the United States. Consumers can easily see fuel prices and decide where to refuel based on the posted price without having to leave their vehicles. This dynamic leads to price competition. EV drivers should have access to the same competitive, stable and convenient prices that drivers of gas-powered vehicles have enjoyed for decades. The rate charged must be consistent and predictable throughout Rhode Island in order for EV charging stations to provide rates that are competitive with conventional fuels. Any pricing mechanisms considered by policymakers must ensure that rates are fair, predictable, transparent and amenable to private investment into EV charging infrastructure.

H. Demand Charges

EV fast chargers have unique power needs, with high power capacity needed for charging but relatively low amounts of energy consumed per charge.[3] This high demand over short periods of time subjects EV fast chargers to costly fees known as "demand charges." These fees were created with manufacturing and industrial customers in mind as the infrastructure required to supply these firms with such high levels of electricity ultimately required additional back-end investments by the electric utility. Unfortunately, EV fast charging stations are also being saddled with these additional costs. The major difference is that while a factory can recover these costs due to its high utilization rates and demand-side controls (i.e., being able to control when energy is being used), publicly available DCFC stations cannot recover such costs in an economically feasible way, particularly in the current nascent stage of the EV market when there are relatively low utilization rates of public electric vehicle fast chargers.

To further compound the issue, station operators are not aware of what the additional costs will be until the end of the billing cycle – meaning it is impossible for the station operator to appropriately pass along any costs associated with that charge to the end-user as is done in nearly every other wholesale-to-retail transaction.[4] In fact, the Rocky Mountain Institute determined that for some stations, demand charges can make up as much as 90 percent of the total cost of public fast charging. This hinders the expansion of an EV fast charging network and limits competition when utilities do not impose the same costs on their own EV charging services provided directly to the public.

Policymakers must create a rate/tariff structure that strikes an even balance between the customer, the retailer, and the utility without undercutting DCFC economics.

Additionally, demand charges add an extra layer of financial inequity for consumers living in rental homes, apartments, or in any situation that prohibits them from being able to connect a charger to their place of residence. Most states – either through legislation or regulatory action – require utilities to offer

[3] NASEO, *Demand Charges & Electric Vehicle Fast-Charging,* October 2021. https://www.naseo.org/data/sites/1/documents/publications/Demand%20Charges%20and%20EV%20Charging%20-%20Final.pdf

[4] Clean Energy Group, *An Introduction to Demand* Charges, August 2017. https://www.cleanegroup.org/wp-content/uploads/Demand-Charge-Fact-Sheet.pdf

affordable residential charging rates for residential customers via either a flat residential fee (which does not contain a demand charge) or a time-of-use tariff which incentivizes the user to charge during off-peak hours, such as overnight. This results in significantly lower recharging costs for drivers charging at home. Meanwhile, those communities which do not have at-home charging options must pay the more expensive demand charge rate at a public charger.[5]

Per the IIJA, Congress has tasked states and utilities to find ways to mitigate the negative economic externalities created by demand charges.[6] States and utilities must consider the establishment of new rates that:

1) Promote affordable and equitable EV charging options;
2) Facilitate deployment of faster charging technology that improves the customer experience;
3) Accelerate third-party investment in EV charging infrastructure; and
4) Appropriately recover marginal costs.

CAP encourages Rhode Island to implement an alternative rate structure in its guidance on EV charging infrastructure deployment.

It is important to note that CAP understands the financial realities that utilities face in order to upgrade host-site infrastructure to accommodate charging hardware – particularly DCFC infrastructure. However, regressive demand charges that were never created with EV charging in mind are not a sustainable solution to address this issue. Several states have already looked at alternatives to demand charges for EV charging.[7] Additionally, some states have created temporary "holidays" from demand charge fees while others have completely carved EV charging out of demand charges.[8] We believe that the elimination of demand charges would alleviate the economic restrictions that are holding back private investment and would allow fuel retailers to invest in EV fast chargers with the reassurance that they will be able to earn a return over time.

To mitigate these high up-front costs that have prevented private entities from entering the market while simultaneously ensuring that utilities are "made whole" for the necessary – and costly – back-end infrastructure improvements DCFC infrastructure requires, CAP continues to support "Make-Ready" models that allow the utility to recover costs associated with grid upgrades up to the point of installing, owning, operating, and maintaining the actual charger itself. CAP believes any state program applying for funds should concentrate on this "Make-Ready" model.

II. Specific Considerations for Building an EV Fast Charging Network

[5] According to Rocky Mountain Institute research, this can make up as much as 90 percent of the total cost of public charging – an additional tariff that only public chargers must pay. *See* RMI's *EVgo Fleet and Tariff Analysis (2019)* https://rmi.org/wp-content/uploads/2017/04/eLab_EVgo_Fleet_and_Tariff_Analysis_2017.pdf

[6] Infrastructure Investment and Jobs Act, Section 40431, November 15, 2021. https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf

[7] Jeff St. John, *Getting the Rates Right for a Public EV Charging Build-Out,* Green Tech Media, February 16, 2021. https://www.greentechmedia.com/articles/read/getting-the-rates-right-for-a-public-electric-vehicle-charging-buildout

[8] Rocky Mountain Institute, *ACEEE National Convening on Utilities and Electric Vehicles*, November 14, 2018. https://www.aceee.org/sites/default/files/pdf/conferences/ev/nelder.pdf

CAP offers the following specific considerations:

- **The distance between publicly available EV charging infrastructure:**

As the private refueling market currently operates, CAP believes retailers are best suited to identify and fill gaps in the market – particularly along high-travel corridors, such as highways and Interstates. Rhode Island therefore should not set distance requirements beyond what is already required by the NEVI program guidelines. Many charging stations will naturally gravitate toward major travel routes (just as traditional gasoline refueling stations have) and there may be a need for large groupings of chargers along the I-95 corridor. However, more remote locations may have different requirements. Rhode Island should create an equal playing field for all applicants to compete on, regardless of their location, and provide flexibility for an EV charging marketplace to develop.

- **The need for publicly available EV charging infrastructure in rural corridors and underserved or disadvantaged communities:**

Retailers, including gas stations and grocery stores, can be found in every community across the country. CAP members are frequently the economic engine for small, disadvantaged, and rural communities. In many instances, these businesses are the largest employers and largest taxpayers in their communities and the only location where local residents can buy groceries. If policymakers send the necessary signals to these businesses, they will invest in EV charging infrastructure to meet the demand of their customers as they do with any other legal product their customers wish to purchase. Businesses are acutely aware of customer demand and have spent decades researching trends to determine the optimum locations to serve clients. As a result, retailers and other businesses are sited in convenient locations to provide their customers with the products they need. CAP believes EV charging will benefit from similar analyses by the private sector. CAP, therefore, encourages Rhode Island to allow the private sector to do what they do best – determine the most convenient, affordable, and effective way to compete for and serve customers.

- **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:**

Public policy should encourage private investments by those who can successfully install, own, operate and maintain a robust and accessible fast charging network. With millions of Americans visiting refueling locations every day, retailers are poised to rapidly replicate the current fueling experience – both in terms of location convenience and the provision of secondary services such as food and beverages, restrooms, and security – for EV refueling. In particular, refueling stations are already located in prime locations for travelers to stop—and they offer many of the secondary amenities to which customers have become accustomed.[9] Entities willing to risk private capital have a much greater incentive to maintain facilities and attract consumers to utilize their services versus other entities (such as government entities or regulated businesses with guaranteed rates of return) who simply do not have to recover costs from customers to ensure a return on investment. Surrounding EV chargers with secondary services will make the chargers more appealing for consumers to use, particularly as it may take up to one hour to recharge an EV completely with a DCFC charger compared to the two to three minutes it takes to refuel with liquid

[9] IIJA prioritizes alternative fueling corridor grant recipients that partner with private businesses offering amenities such as food and restrooms.

fuel.[10] Consumer comfort will ensure a positive experience for customers and lead to higher use of EV chargers. Additionally, a competitive marketplace for recharging spurs competition and hedges against the risk of stranded assets.

Notably, the IIJA did not incorporate provisions that would allow governments to unfairly compete with the private sector by installing EV charging stations at interstate rest areas. This assurance protects the investments private businesses have made (or are considering making) in EV charging infrastructure along interstates. Interstate rest areas do not provide the secondary amenities and security retailers provide to customers, which will inevitably mean those chargers would not be utilized and would risk becoming a stranded asset. In fact, many publicly available chargers not offered by businesses, such as convenience or grocery stores, are in isolated, poorly-lit locations. Given the lengthy timeframe to recharge an EV completely using DCFC chargers, it is imperative that public safety be at the forefront of public policy decisions. To this end, retailers offer a safe place to recharge along with secondary services customers can utilize during the charging period.

- **Fostering enhanced, coordinated, public-private or private investment in EV charging infrastructure:**

Government incentives should leverage businesses that are willing to utilize their own capital to invest in EV charging. Public policy should avoid a system that gives an unfair economic advantage to a particular industry or entity. Government should not be in the business of picking winners and losers – particularly in a burgeoning market in which private industry is eager to invest.

To electrify the transportation industry, stakeholders need to focus on their core competencies. As stated previously, the most efficient, cost-effective path to a nationwide network of EV charging stations is for retailers and power companies to work in partnership, with each focused on their specific areas of expertise. Public policy that incentivizes this partnership structure will encourage consumers to adopt EVs more quickly and meet climate change goals. CAP supports policies allowing utilities to receive funding to strengthen the grid and power infrastructure. We believe, however, that retailers and other private businesses that compete on price and services are in a better position to own and operate charging stations.

* * *

Thank you for your consideration of CAP's comments. We look forward to working with you on this important issue.

Sincerely,

Jay Smith
Executive Director
Charge Ahead Partnership

[10] U.S. Department of Transportation, *Electric Vehicle Charging Speeds*, February 2, 2022. https://www.transportation.gov/rural/ev/toolkit/ev-basics/charging-speeds

Appendix C. Full List of EV Charging Stations (DCFC, Level 2) as of June 8, 2022[45]

Station ID	Street Address	City	Type	No. of Connectors	EV Network
49706	845 Taunton Ave	East Providence	DC Fast, Level 2	2	Non-Networked
49708	295 E Main Rd	Middletown	DC Fast, Level 2	2	Non-Networked
42016	1041 Eddie Dowling Hwy	North Smithfield	DC Fast, Level 2	2	Non-Networked
49711	885 Quaker Ln	West Warwick	DC Fast, Level 2	2	Non-Networked
165289	283 County Rd	Barrington	DC Fast	1	ChargePoint Network
181041	283 County Rd	Barrington	DC Fast	1	ChargePoint Network
72476	151 Sockanosset Cross Rd	Cranston	DC Fast	1	ChargePoint Network
198359	2611 S County Trl	East Greenwich	DC Fast	1	EVgo Network
204944	435 Nooseneck Hill Rd	Exeter	DC Fast	1	ChargePoint Network
165561	0 NOOSENECK-HILL	Hopkinton	DC Fast	1	ChargePoint Network
165635	0 Nooseneck Hill Rd.	Hopkinton	DC Fast	1	ChargePoint Network
189580	94 George Waterman Rd	Johnston	DC Fast	1	ChargePoint Network
189581	94 George Waterman Rd	Johnston	DC Fast	1	ChargePoint Network
197848	100 Twin River Road	Lincoln	DC Fast	1	ChargePoint Network
197895	100 Twin River Road	Lincoln	DC Fast	1	ChargePoint Network
195726	9 Commerce Dr	Middletown	DC Fast	1	ChargePoint Network
192734	1001 Roosevelt Ave	Pawtucket	DC Fast	1	ChargePoint Network
192735	1001 Roosevelt Ave	Pawtucket	DC Fast	1	ChargePoint Network
217373	1001 Roosevelt Ave	Pawtucket	DC Fast	1	ChargePoint Network
198373	220 India St	Providence	DC Fast	1	EVgo Network
202687	333 Smith St.	Providence	DC Fast	1	ChargePoint Network
85922	1515 Bald Hill Rd	Warwick	DC Fast	1	ChargePoint Network
165228	35 Albany Rd	Warwick	DC Fast	1	ChargePoint Network
165560	Rt117 park and ride	Warwick	DC Fast	1	ChargePoint Network
172279	1515 Bald Hill Rd	Warwick	DC Fast	1	ChargePoint Network
181115	Rt 117 Park&Ride	Warwick	DC Fast	1	ChargePoint Network
167864	51 Silver Spring Street	Providence	DC Fast	4	Electrify America
115510	41 Mary St	Newport	Level 2	1	Tesla Destination
42888	1350 Post Rd	Warwick	Level 2	1	Non-Networked
104757	360 Lincoln Ave	Warwick	Level 2	1	ChargePoint Network
173565	360 Lincoln Ave	Warwick	Level 2	1	ChargePoint Network
173566	360 Lincoln Ave	Warwick	Level 2	1	ChargePoint Network
173567	360 Lincoln Ave	Warwick	Level 2	1	ChargePoint Network
173568	360 Lincoln Ave	Warwick	Level 2	1	ChargePoint Network
173569	360 Lincoln Ave	Warwick	Level 2	1	ChargePoint Network
220713	132 Atlantic Ave	Westerly	Level 2	1	Tesla Destination
166900	90 County Rd	Barrington	Level 2	2	ChargePoint Network

[45] https://afdc.energy.gov/stations#/analyze?region=US-RI&country=US

Station ID	Street Address	City	Type	No. of Connectors	EV Network
181298	90 County Rd	Barrington	Level 2	2	ChargePoint Network
87570	1 Ferry Rd	Bristol	Level 2	2	ChargePoint Network
103499	480 Metacom Ave	Bristol	Level 2	2	ChargePoint Network
166237	1 Colt Dr	Bristol	Level 2	2	ChargePoint Network
53460	84 Inman Rd	Burrillville	Level 2	2	ChargePoint Network
104396	75 Eastern Ave	Burrillville	Level 2	2	ChargePoint Network
104506	240 Harrisville Main St	Burrillville	Level 2	2	ChargePoint Network
173518	75 Eastern Ave	Burrillville	Level 2	2	ChargePoint Network
173534	240 Harrisville Main St	Burrillville	Level 2	2	ChargePoint Network
98858	75 Burlingame State Park Rd	Charlestown	Level 2	2	ChargePoint Network
196247	900 Tiogue Ave	Coventry	Level 2	2	Volta
219763	2405 Nooseneck Hill Rd	Coventry	Level 2	2	ChargePoint Network
98879	93 Midway Rd	Cranston	Level 2	2	ChargePoint Network
144509	1341 Elmwood Ave	Cranston	Level 2	2	ChargePoint Network
155493	50 Independence Way	Cranston	Level 2	2	ChargePoint Network
165084	14 W Rd	Cranston	Level 2	2	ChargePoint Network
173254	93 Midway Rd	Cranston	Level 2	2	ChargePoint Network
175561	50 Independence Way	Cranston	Level 2	2	ChargePoint Network
180973	14 W Rd	Cranston	Level 2	2	ChargePoint Network
196214	315 Harborside Blvd	Cranston	Level 2	2	ChargePoint Network
196215	315 Harborside Blvd	Cranston	Level 2	2	ChargePoint Network
205023	30 Martin St	Cumberland	Level 2	2	ChargePoint Network
205211	30 Martin St	Cumberland	Level 2	2	ChargePoint Network
205716	30 Martin St	Cumberland	Level 2	2	ChargePoint Network
205954	30 Martin St	Cumberland	Level 2	2	ChargePoint Network
149138	111 Peirce St	East Greenwich	Level 2	2	ChargePoint Network
174678	111 Peirce St	East Greenwich	Level 2	2	ChargePoint Network
52591	50 Highland Ave	East Providence	Level 2	2	ChargePoint Network
52816	430 Newport Ave	East Providence	Level 2	2	ChargePoint Network
53042	1011 Veterans Memorial Pkwy	East Providence	Level 2	2	ChargePoint Network
122762	159 Squantum Rd	East Providence	Level 2	2	ChargePoint Network
122763	89 Squantum Rd	East Providence	Level 2	2	ChargePoint Network
191379	20 Newman Ave	East Providence	Level 2	2	ChargePoint Network
191380	27 Newman Ave	East Providence	Level 2	2	ChargePoint Network
207438	2000 Pawtucket Ave. East Providence High School	East Providence	Level 2	2	ChargePoint Network
207439	2000 Pawtucket Ave. East Providence High School	East Providence	Level 2	2	ChargePoint Network
213958	3 Dexter Rd	East Providence	Level 2	2	ChargePoint Network
213959	3 Dexter Rd	East Providence	Level 2	2	ChargePoint Network
99318	151 Pulaski Rd	Glocester	Level 2	2	ChargePoint Network

Station ID	Street Address	City	Type	No. of Connectors	EV Network
181116	0 NOOSENECK-HILL	Hopkinton	Level 2	2	ChargePoint Network
181117	0 NOOSENECK-HILL	Hopkinton	Level 2	2	ChargePoint Network
181118	0 NOOSENECK-HILL	Hopkinton	Level 2	2	ChargePoint Network
143193	10 Memorial Avenue	Johnston	Level 2	2	ChargePoint Network
143200	345 Cherry Hill Rd	Johnston	Level 2	2	ChargePoint Network
147550	1301 Atwood Ave	Johnston	Level 2	2	ChargePoint Network
174186	10 Memorial Avenue	Johnston	Level 2	2	ChargePoint Network
174188	345 Cherry Hill Rd	Johnston	Level 2	2	ChargePoint Network
174653	1301 Atwood Ave	Johnston	Level 2	2	ChargePoint Network
174654	1301 Atwood Ave	Johnston	Level 2	2	ChargePoint Network
174655	1301 Atwood Ave	Johnston	Level 2	2	ChargePoint Network
174656	1301 Atwood Ave	Johnston	Level 2	2	ChargePoint Network
201018	5 East Alumni Ave.	Kingston	Level 2	2	ChargePoint Network
196561	35 Campus Ave.	Kingstown	Level 2	2	ChargePoint Network
196562	36 West Alumni Ave	Kingstown	Level 2	2	ChargePoint Network
196563	36 West Alumni Ave	Kingstown	Level 2	2	ChargePoint Network
52818	622 George Washington Hwy	Lincoln	Level 2	2	ChargePoint Network
117186	3 I-295	Lincoln	Level 2	2	ChargePoint Network
197891	100 Twin River Road	Lincoln	Level 2	2	ChargePoint Network
197892	100 Twin River Road	Lincoln	Level 2	2	ChargePoint Network
197893	100 Twin River Road	Lincoln	Level 2	2	ChargePoint Network
197894	100 Twin River Road	Lincoln	Level 2	2	ChargePoint Network
98853	17 Elizabeth Ln	Middletown	Level 2	2	ChargePoint Network
146793	700 W Main Rd	Middletown	Level 2	2	ChargePoint Network
147221	350 E Main Rd	Middletown	Level 2	2	ChargePoint Network
174533	700 W Main Rd	Middletown	Level 2	2	ChargePoint Network
174574	350 E Main Rd	Middletown	Level 2	2	ChargePoint Network
206769	93 Miantonomi Ave	Middletown	Level 2	2	ChargePoint Network
206770	93 Miantonomi Ave	Middletown	Level 2	2	ChargePoint Network
52819	870 Ocean Rd	Narragansett	Level 2	2	ChargePoint Network
98825	Salty Acres Dr	Narragansett	Level 2	2	ChargePoint Network
98852	254 Great Island Rd	Narragansett	Level 2	2	ChargePoint Network
218079	91 Point Judith Rd	Narragansett	Level 2	2	Volta
98854	85 Fort Adams Dr	Newport	Level 2	2	ChargePoint Network
98856	13 Powel Ave	Newport	Level 2	2	ChargePoint Network
98857	59 Brown and Howard Wharf	Newport	Level 2	2	ChargePoint Network
156082	151 Admiral Kalbfus Rd.	Newport	Level 2	2	ChargePoint Network
156103	151 Admiral Kalbfus	Newport	Level 2	2	ChargePoint Network
163612	1 W Marlborough Street	Newport	Level 2	2	ChargePoint Network
175639	151 Admiral Kalbfus Rd.	Newport	Level 2	2	ChargePoint Network

Station ID	Street Address	City	Type	No. of Connectors	EV Network
180659	1 W Marlborough Street	Newport	Level 2	2	ChargePoint Network
180660	1 W Marlborough Street	Newport	Level 2	2	ChargePoint Network
207284	31 America's Cup Ave	Newport	Level 2	2	Non-Networked
207285	25 America's Cup Ave	Newport	Level 2	2	Non-Networked
98876	20 Gate Rd	North Kingstown	Level 2	2	ChargePoint Network
52820	600 6th Street	North Providence	Level 2	2	ChargePoint Network
206616	1128 Mineral Spring Ave	North Providence	Level 2	2	Volta
86208	I-95	Pawtucket	Level 2	2	ChargePoint Network
183135	39 Central Ave	Pawtucket	Level 2	2	ChargePoint Network
183136	188 Front St	Pawtucket	Level 2	2	ChargePoint Network
189755	766 Broadway	Pawtucket	Level 2	2	ChargePoint Network
189756	766 Broadway	Pawtucket	Level 2	2	ChargePoint Network
189788	1005 Main St	Pawtucket	Level 2	2	ChargePoint Network
194546	368 Cottage St	Pawtucket	Level 2	2	Volta
52595	154 Anthony Rd	Portsmouth	Level 2	2	ChargePoint Network
169177	1 Little Harbor Landing	Portsmouth	Level 2	2	Tesla Destination
52596	51 Washington St	Providence	Level 2	2	ChargePoint Network
52597	1 Capitol Hl	Providence	Level 2	2	ChargePoint Network
62333	299-331 Silver Spring St	Providence	Level 2	2	ChargePoint Network
72465	285 Edith St	Providence	Level 2	2	ChargePoint Network
85915	115-199 Park St	Providence	Level 2	2	ChargePoint Network
98877	470 Harris Ave	Providence	Level 2	2	ChargePoint Network
98880	151 Spruce St	Providence	Level 2	2	ChargePoint Network
99314	60 Dudley St	Providence	Level 2	2	ChargePoint Network
99315	101 Blackstone St	Providence	Level 2	2	ChargePoint Network
99319	175 Summit Ave	Providence	Level 2	2	ChargePoint Network
99346	32 Exchange Terrace	Providence	Level 2	2	ChargePoint Network
104482	44 Hospital Street	Providence	Level 2	2	ChargePoint Network
122819	330 Eddy St	Providence	Level 2	2	ChargePoint Network
143879	50 Park Ln	Providence	Level 2	2	ChargePoint Network
145220	301 Iron Horse Way	Providence	Level 2	2	ChargePoint Network
145454	279 Dexter St	Providence	Level 2	2	ChargePoint Network
146889	Roger Williams Zoo	Providence	Level 2	2	ChargePoint Network
146890	Roger Williams Park Zoo 1000 Elmwood Avenue	Providence	Level 2	2	ChargePoint Network
149555	222 Richmond St	Providence	Level 2	2	ChargePoint Network
149619	86 Valley St	Providence	Level 2	2	ChargePoint Network
149624	166 Valley St	Providence	Level 2	2	ChargePoint Network
153310	600 Mount Pleasant Ave	Providence	Level 2	2	ChargePoint Network
153311	600 Mt. Pleasant Ave	Providence	Level 2	2	ChargePoint Network
154243	58 Thayer St	Providence	Level 2	2	ChargePoint Network

Station ID	Street Address	City	Type	No. of Connectors	EV Network
154244	200 Dyer St	Providence	Level 2	2	ChargePoint Network
154245	1986 Lloyd Ave	Providence	Level 2	2	ChargePoint Network
154303	123 Waterman St	Providence	Level 2	2	ChargePoint Network
154415	5 Edith St	Providence	Level 2	2	ChargePoint Network
155292	347 W Fountain St	Providence	Level 2	2	ChargePoint Network
167382	45 Pleasant Valley Pkwy	Providence	Level 2	2	Blink Network
167384	280 Broad St	Providence	Level 2	2	Blink Network
167549	60 Hartford Ave	Providence	Level 2	2	Blink Network
171221	180 Friendship St	Providence	Level 2	2	ChargePoint Network
171529	1 Capitol Hl	Providence	Level 2	2	ChargePoint Network
172280	115-199 Park St	Providence	Level 2	2	ChargePoint Network
174365	50 Park Ln	Providence	Level 2	2	ChargePoint Network
174432	301 Iron Horse Way	Providence	Level 2	2	ChargePoint Network
174465	279 Dexter St	Providence	Level 2	2	ChargePoint Network
174466	279 Dexter St	Providence	Level 2	2	ChargePoint Network
174722	86 Valley St	Providence	Level 2	2	ChargePoint Network
174723	86 Valley St	Providence	Level 2	2	ChargePoint Network
174724	166 Valley St	Providence	Level 2	2	ChargePoint Network
174725	166 Valley St	Providence	Level 2	2	ChargePoint Network
175108	600 Mount Pleasant Ave	Providence	Level 2	2	ChargePoint Network
175109	600 Mt Pleasant Ave	Providence	Level 2	2	ChargePoint Network
175110	600 Mt. Pleasant Ave.	Providence	Level 2	2	ChargePoint Network
175301	58 Thayer St	Providence	Level 2	2	ChargePoint Network
175302	200 Dyer St	Providence	Level 2	2	ChargePoint Network
175303	1986 Lloyd Ave	Providence	Level 2	2	ChargePoint Network
175356	5 Edith St	Providence	Level 2	2	ChargePoint Network
175357	5 Edith St	Providence	Level 2	2	ChargePoint Network
175509	347 W Fountain St	Providence	Level 2	2	ChargePoint Network
175510	347 W Fountain St	Providence	Level 2	2	ChargePoint Network
183198	705 Elmwood Ave	Providence	Level 2	2	ChargePoint Network
186548	600 Mt Pleasant Ave	Providence	Level 2	2	ChargePoint Network
186567	600 Mt Pleasant Ave	Providence	Level 2	2	ChargePoint Network
196212	180 Pine St	Providence	Level 2	2	ChargePoint Network
196213	185 Pine St	Providence	Level 2	2	ChargePoint Network
196216	125 Harborside Blvd	Providence	Level 2	2	ChargePoint Network
196217	125 Harborside Blvd	Providence	Level 2	2	ChargePoint Network
196218	100 Harborside Blvd	Providence	Level 2	2	ChargePoint Network
203362	150 Union St	Providence	Level 2	2	ChargePoint Network
203363	150 Union St	Providence	Level 2	2	ChargePoint Network
205936	110 Westminster St Parking Lot	Providence	Level 2	2	ChargePoint Network

Station ID	Street Address	City	Type	No. of Connectors	EV Network
205937	110 Westminster St Parking Lot	Providence	Level 2	2	ChargePoint Network
205951	50 Kennedy Plaza Parking Garage	Providence	Level 2	2	ChargePoint Network
205952	50 Kennedy Plaza Parking Garage	Providence	Level 2	2	ChargePoint Network
219764	1560 Westminster St	Providence	Level 2	2	ChargePoint Network
53055	371 Putnam Pike	Smithfield	Level 2	2	ChargePoint Network
98507	57 John Mowry Rd	Smithfield	Level 2	2	ChargePoint Network
52598	950 Succotash Rd	South Kingstown	Level 2	2	ChargePoint Network
102935	315 Main St	South Kingstown	Level 2	2	ChargePoint Network
173433	315 Main St	South Kingstown	Level 2	2	ChargePoint Network
154076	79 Aquidneck Dr	Tiverton	Level 2	2	ChargePoint Network
175250	79 Aquidneck Dr	Tiverton	Level 2	2	ChargePoint Network
217442	700 Metacom Ave	Warren	Level 2	2	ChargePoint Network
217443	700 Metacom Ave	Warren	Level 2	2	ChargePoint Network
217444	700 Metacom Ave	Warren	Level 2	2	ChargePoint Network
217445	700 Metacom Ave	Warren	Level 2	2	ChargePoint Network
52599	1276 Bald Hill Rd	Warwick	Level 2	2	ChargePoint Network
52824	T.F. Green Airport Connector Rd	Warwick	Level 2	2	ChargePoint Network
53466	315 Greenwich Ave	Warwick	Level 2	2	ChargePoint Network
98862	1759 Post Rd	Warwick	Level 2	2	ChargePoint Network
99402	700 Jefferson Blvd	Warwick	Level 2	2	ChargePoint Network
100335	403 East Ave	Warwick	Level 2	2	ChargePoint Network
104219	89 Jefferson Blvd	Warwick	Level 2	2	ChargePoint Network
147152	708 Greenwich Ave	Warwick	Level 2	2	ChargePoint Network
154435	560 Jefferson Blvd	Warwick	Level 2	2	ChargePoint Network
155185	334 Knight St	Warwick	Level 2	2	ChargePoint Network
166691	Rt 117 Park&Ride	Warwick	Level 2	2	ChargePoint Network
173474	89 Jefferson Blvd	Warwick	Level 2	2	ChargePoint Network
173475	89 Jefferson Blvd	Warwick	Level 2	2	ChargePoint Network
173476	89 Jefferson Blvd	Warwick	Level 2	2	ChargePoint Network
175369	560 Jefferson Blvd	Warwick	Level 2	2	ChargePoint Network
175487	334 Knight St	Warwick	Level 2	2	ChargePoint Network
181208	Rt 117 Park&Ride	Warwick	Level 2	2	ChargePoint Network
181209	Rt 117 Park&Ride	Warwick	Level 2	2	ChargePoint Network
194016	300 Jefferson Blvd	Warwick	Level 2	2	ChargePoint Network
194017	300 Jefferson Blvd	Warwick	Level 2	2	ChargePoint Network
194018	300 Jefferson Blvd	Warwick	Level 2	2	ChargePoint Network
194019	300 Jefferson Blvd	Warwick	Level 2	2	ChargePoint Network
194105	3027 W Shore Rd After City Park	Warwick	Level 2	2	ChargePoint Network

Station ID	Street Address	City	Type	No. of Connectors	EV Network
194106	3027 W Shore Rd After City Park	Warwick	Level 2	2	ChargePoint Network
194107	3027 W Shore After City Park	Warwick	Level 2	2	ChargePoint Network
197556	1557 Bald Hill Rd	Warwick	Level 2	2	ChargePoint Network
98855	52 Barnett Ln	West Greenwich	Level 2	2	ChargePoint Network
71571	525 Quaker Ln	West Warwick	Level 2	2	ChargePoint Network
165177	50 Dogwood Dr	West Warwick	Level 2	2	ChargePoint Network
180987	50 Dogwood Dr	West Warwick	Level 2	2	ChargePoint Network
98824	418 Atlantic Ave	Westerly	Level 2	2	ChargePoint Network
153232	2467 Diamond Hill Rd	Woonsocket	Level 2	2	ChargePoint Network
158469	115 Cass Ave	Woonsocket	Level 2	2	ChargePoint Network
175083	2467 Diamond Hill Rd	Woonsocket	Level 2	2	ChargePoint Network
175763	115 Cass Ave	Woonsocket	Level 2	2	ChargePoint Network
175764	115 Cass Ave	Woonsocket	Level 2	2	ChargePoint Network
115509	1 Goat Island	Newport	Level 2	3	Tesla Destination
168813	1 Goat Island	Newport	Level 2	3	Tesla Destination
115512	1 Bluff Ave	Watch Hill	Level 2	3	Tesla Destination
115513	25 Spray Rock Rd	Westerly	Level 2	3	Tesla Destination
153929	141 County Rd	Barrington	Level 2	4	SemaCharge Network
148144	302 Central Avenue	Johnston	Level 2	4	SemaCharge Network
195510	270 Central Avenue	Johnston	Level 2	4	SemaCharge Network
158615	109 Pleasant View Ave	Smithfield	Level 2	4	EV Connect
42423	1111 Taunton Ave	East Providence	Level 2	6	Non-Networked
151843	1 Providence Pl	Providence	Level 2	8	Volta
167922	1 Providence Pl	Providence	Level 2	8	Volta
115511	2000 Post Rd	Warwick	Level 2	12	Tesla Destination
98891	1960 Post Rd	Warwick	Level 2	16	Non-Networked
47804	1051 Ten Rod Rd	North Kingstown	Level 2, Level 1	30	Non-Networked
207761	1776 Post Rd	Warwick	Tesla	7	Tesla
102400	1000 Division Street	East Greenwich	Tesla	8	Tesla

Appendix D. Funding Sources

Potential Funding Opportunities for Alternative Fuel Infrastructure in Rhode Island

Funding Type	Available Amount (FY 2022) Rhode Island	Available Amount (FY 2023) Rhode Island	Available Amount (FY 2024) Rhode Island	Available Amount (FY 2025) Rhode Island	Available Amount (FY 2026) Rhode Island	Funding Years	Funding / Lead Agency	Match Requirements	Eligibility Requirements (EV)						Website and Deadlines
Federal - Formula															
Surface Transportation Block Grant (STBG Funds)	$77.1M	$78.7M	$80.2M	$81.9M	$83.5M	FY 2022 - 2026	US DOT - Federal Highway Administration	Not Applicable	Y	Y	Y		Y	Y	N/A
National Electric Vehicle Infrastructure Formula Program (NEVI Formula)	$3.4M	$4.7M ***	$4.7M ***	$4.7M ***	$4.7M ***	FY 2022 - 2026; $22.3M over 5 years	US DOT - Federal Highway Administration	Not Applicable	Y	Y	Y			Y	https://policy.transportation.org/wp-content/uploads/sites/59/2021/09/2021-09-15-AASHTO-Comprehensive-Analysis-of-IIJA-FINAL.pdf; https://www.dot.ri.gov/projects/EVCharging/index.php
Carbon Reduction Formula Program	$6.9M	$7.0M	$7.2M	$7.3M	$7.4M	FY 2022 - 2026	US DOT - Federal Highway Administration	Not Applicable	Y	Y	Y	Y	Y	Y	N/A
Congestion Mitigation and Air Quality Improvement Program	$11.4M	$11.6M	$11.8M	$12.1M	$12.3M	FY 2022 - 2026	US DOT - Federal Highway Administration	Not Applicable	Y	Y	Y		Y	Y	N/A
National Highway Performance Program	$158.5M	$161.7M	$164.9M	$168.2M	$171.6M	FY 2022 - 2026	US DOT - Federal Highway Administration	Not Applicable	Y	Y	Y				N/A
National Highway Freight Program	$7.6M	$7.7M	$7.9M	$8.1M	$8.2M	FY 2022 - 2026	US DOT - Federal Highway Administration	Not Applicable	Y			Y		Y	N/A
Metropolitan Planning Program	$2.5M	$2.5M	$2.6M	$2.6M	$2.7M	FY 2022 - 2026	US DOT - Federal Highway Administration	Not Applicable						Y	N/A
Federal - Discretionary	**Available Amount (FY 2022) - Nationally**	**Available Amount (FY 2023) - Nationally**	**Available Amount (FY 2024) - Nationally**	**Available Amount (FY 2025) - Nationally**	**Available Amount (FY 2026) - Nationally**	**Funding Years**	**Funding/ Lead Agency**	**Match Requirements**							**Website and Deadlines**
Rebuilding American Infrastructure with Sustainability and Equity (RAISE)	$1.5B	$1.5B	$1.5B	$1.5B	$1.5B	FY 2022 - 2026	US DOT - Federal Highway Administration	Local share: 20%	Y				Y	Y	Closed for FY22
Infrastructure for Rebuilding America (INFRA)	$1B	$1.1B	$1.2B	$1.3B	$1.4B	FY 2022 - 2026	US DOT - Federal Highway Administration	Local share: 20%	Y					Y	Closed for FY22
Charging & Fueling Infrastructure program	$300M	$400M	$500M	$600M	$700M	FY 2022 - 2026	US DOT - Federal Highway Administration	Local share: 20%	Y	Y	Y	Y	Y	Y	TBD
Low-No Emissions Program (Transit)	$1.12B	$1.123B	$1.125B	$1.127B	$1.128B	FY 2022 - 2026	US DOT - Federal Transit Administration	Local share: Bus (15%), Bus related facilities (10%)		Y			Y		TBD
Advanced Transportation and Technologies and Innovative Mobility Deployment	$60M					FY 2022 - 2026; $900M in total	US DOT - Federal Highway Administration			Y			Y		TBD
Rural Surface Transportation Grant Program	$300M					FY 2022 - 2026; $1B in total	US DOT - Federal Highway Administration	Local share: 20%	Y	Y	Y		Y	Y	Closed for FY22
Alternative Fuel Corridor Grant Program	$2.5B Total					FY 2022 - 2026	US DOT - Federal Highway Administration								https://afdc.energy.gov/laws/11675; https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/nominations/2022_request_for_nominations_r6.pdf;

State	Available Amount (FY 2022)	Available Amount (FY 2023)	Available Amount (FY 2024)	Available Amount (FY 2025)	Available Amount (FY 2026)	Funding Years	Funding/ Lead Agency	Match Requirements	Objectives	Website and Deadlines
Clean Diesel Grant - Reimbursement grants to reduce emissions from heavy-duty diesel vehicles. Qualified vehicle improvements include vehicle replacements, engine repowers, conversions to alternative vehicle fuels, idle reduction technologies, and other fuel-efficient technologies.		Not Available	Not Available	Not Available	Not Available	Yearly	Rhode Island Department of Environmental Management, through Rhode Island State Clean Diesel (DERA) Fund		Eligible: vehicles must be registered with the Rhode Island Department of Motor Vehicles, and 50% of the vehicle miles travelled or hours of operation must be in Rhode Island for at least five years following receiving the grant.	http://www.dem.ri.gov/programs/air/documents/dera-rfp.pdf
Electric Vehicle Emissions Inspection Exemption - Vehicles powered exclusively by electricity are exempt from state emissions control inspections.		Not Available	Not Available	Not Available	Not Available	Yearly	Rhode Island Division of Motor Vehicle			
Natural Gas Vehicle (NGV) Weight Exemption - A vehicle primarily powered by natural gas may exceed the state's gross vehicle weight limits by a weight equal to the difference between the weight of the vehicle with the natural gas tank and fueling system and the weight of a comparable vehicle with a diesel tank and fueling system.		Not Available	Not Available	Not Available	Not Available	Yearly				
Biodiesel Tax Exemption -Biodiesel is exempt from the $0.34 per gallon state motor fuel tax. Biodiesel may be blended with other fuel for use in motor vehicles, but only the biodiesel portion of the blended fuel is exempt		Not Available	Not Available	Not Available	Not Available	Yearly				

Laws & Regulations	Available Amount	Available Amount	Available Amount	Available Amount (FY 2025)	Available Amount (FY 2026)	Funding Years	Funding/ Lead Agency	Match Requirements	Objectives	Website and Deadlines
Electric Vehicle (EV) Infrastructure Development Support -Rhode Island Department of Transportation, the Division of Motor Vehicles and the Office of Energy Resources - developed a statewide public electric vehicle (EV) charging station plan in December 2021.	Not Available	Not Available	Not Available	Not Available	Not Available				Objectives: (i) Invest in incentive programs for EVs and EV charging stations; (ii) Increase equity considerations in EV and EV charging station programs; (iii) Increase electrification of transit and school busses and other medium- and heavy-duty vehicles; (iv) Conduct an analysis on how transportation electrification will impact transportation revenue; (v) Support the decarbonization of electricity; (v) Develop a clean transportation dashboard to track electrification progress.	https://energy.ri.gov/sites/g/files/xkgbur741/files/2022-02/electrifying-transportation-guide-dec-2021.pdf
Electric Transit Bus Pilot and Replacement Program - Funded by Rhode Island's portion of the Volkswagen Environmental Mitigation Trust, the goal is to evaluate and replace retired diesel buses with electric buses, through the Rhode Island Public Transit Authority (RIPTA) Zero Emissions Vehicle Program.	$10M	Not Available	Not Available	Not Available	Not Available		Rhode Island Department of Environmental Management (funded by Rhode Island's portion of the Volkswagen Environmental Mitigation Trust)		About $10 million to replace older diesel buses that are being retired with new, all-electric, zero-emission vehicles	https://www.ripta.com/electric-bus/; http://www.dem.ri.gov/programs/air/documents/vwmitplanf.pdf
Zero Emission Vehicle (ZEV) Deployment Support - Rhode Island joined California, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, and Vermont in signing a memorandum of understanding (MOU) to support the deployment of ZEVs through involvement in a ZEV Program Implementation Task Force (Task Force).	Not Available	Not Available	Not Available	Not Available	Not Available				(i) Raising consumer awareness and interest in electric vehicle technology; (ii) Building out a reliable and convenient residential, workplace and public charging/fueling infrastructure network; (iii) Expanding public and private sector fleet adoption; (iv) Supporting dealership efforts to increase ZEV sales.	https://www.nescaum.org/documents/zev-mou-10-governors-signed-20191120.pdf/
Medium- and Heavy-Duty Zero Emission Vehicle (ZEV) Deployment Support - Rhode Island joined California, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, and Vermont in signing a memorandum of understanding (MOU) to support the deployment of medium- and heavy-duty ZEVs through involvement in a Multi-State ZEV Task Force (Task Force).	Not Available	Not Available	Not Available	Not Available	Not Available				The goal is to ensure that 100 percent of all new truck and bus sales are zero-emission vehicles (ZEVs) by 2050, with an interim target of at least 30 percent by 2030.	https://www.nescaum.org/documents/medium-and-heavy-duty-zero-emission-vehicles-action-plan-development-process/
Private	**Available Amount (FY 2022)**	**Available Amount (FY 2023)**	**Available Amount (FY 2024)**	**Available Amount (FY 2025)**	**Available Amount (FY 2026)**	**Funding Years**	**Funding/ Lead Agency**	**Match Requirements**	**Objectives**	**Website and Deadlines**
Fleet Advisory Services – National Grid - National Grid offers advisory services to support the electrification of up to 12 Rhode Island-based fleets.	Not Available	Not Available	Not Available	Not Available	Not Available				Eligible fleets include light-duty corporate, medium- and heavy-duty government, public transit, and municipal school bus fleets	https://www.nationalgridus.com/RI-Business/Energy-Saving-Programs/Electric-Vehicle-Charging-Station-Program
Electric Vehicle (EV) Charging Station Incentive – National Grid - National Grid offers commercial customers rebates of up to 100% of installation costs for select Level 2 or direct current fast charging (DCFC) stations at workplaces, businesses, multi-unit dwellings, universities, and medical campuses.	Not Available	Not Available	Not Available	Not Available	Not Available					https://www.nationalgridus.com/RI-Business/Energy-Saving-Programs/Electric-Vehicle-Charging-Station-Program
Electric Vehicle (EV) Infrastructure Support – Rhode Island utilities joined the National Electric Highway Coalition (NEHC), committing to create a network of direct current fast charging (DCFC) stations connecting major highway systems from the Atlantic Coast to the Pacific of the United States.	Not Available	Not Available	Not Available	Not Available	Not Available					https://www.nescaum.org/documents/medium-and-heavy-duty-zero-emission-vehicles-action-plan-development-process/; https://www.eei.org/issues-and-policy/national-electric-highway-coalition

Note:
Formula: Based on IIJA Bill
Discretionary: Based on IIJA Bill, Future years TBD
FY 2022 - Discretionary
Source: US DOT - NEVI Formula Program Guidance (2022)
Legends


Construction and installation of EV charging infrastructure to support operational resiliency, national energy security, environmental, and community goals for freight transportation


Conversion and installation of EV charging infrastructure including parking facilities and utilities


Workforce development and training related to EV infrastructure


EV acquisition and engine conversions - trucks and cars


Installation of EV charging infrastructure as part of transit capital projects eligible under chapter 53 of title 49, United States code


Planning for EV charging infrastructure and related projects