

Victoria F. Sheehan Commissioner





William Cass, P.E. Assistant Commissioner

August 1, 2022

Joint Office of Energy and Transportation

#### **RE: State of New Hampshire Plan for Electric Vehicle Infrastructure Deployment**

The New Hampshire Department of Transportation (NHDOT) has prepared the State of New Hampshire Plan for Electric Vehicle Infrastructure Deployment (Plan) for your review and approval. The Plan was developed in accordance with the Bipartisan Infrastructure Law (BIL) enacted as the Infrastructure Investment and Jobs Act (IIJA), Public Law 117-58. This Plan outlines recommended actions and strategies that NHDOT will undertake to strategically deploy EV charging infrastructure along Alternative Fuel Corridors throughout New Hampshire.

New Hampshire's Plan was developed collaboratively by NHDOT and New Hampshire Department of Environmental Services (NHDES,) along with many other State, Regional, and Local stakeholders. A public hearing was also held to solicit public comment as the plan was being drafted. The final version of the plan submitted today will be posted for additional comment. Based on the feedback received the plan may be amended to incorporate additional recommendations.

NHDOT appreciates the opportunity to work with the Joint Office in developing this plan and guidance provided by the Joint Office staff. We look forward to continuing this partnership with you during the deployment phase of the program.

If you have questions, please call.

Sincerely,

Victoria F. Sheehan Commissioner

cc: William Cass, Assistant Commissioner Peter Stamnas, Director of Project Development David Rodrigue, Director of Operations Michael Mozer, NEVI Program Manager



New Hampshire

**Department of Transportation** 

STATE OF NEWHAMPSHIRE

PLAN FOR ELECTRIC VEHICLE INFRASTRUCTURE DEPLOYMENT

AUGUST 1<sup>ST</sup>, 2022

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# Introduction

The State of New Hampshire Plan for Electric Vehicle Infrastructure Deployment (Plan) has been developed in accordance with the National Electric Vehicle Infrastructure (NEVI) formula program requirements and serves as a framework to meet the charging infrastructure needs of increasing electrification within the state of New Hampshire. The number of electric vehicles (EV) registered within the state has consistently grown and comprehensive EV infrastructure will support travel throughout the state of New Hampshire as well as from other states. The NEVI program apportioned approximately \$17 million of funding allocated over the next five years (\$2,556,450 for FY 2022 \$3,678,794 FYs 2023, 2024, 2025, 2026)<sup>1</sup>. The funding will enable growth of EV infrastructure development throughout the state by serving as a resource for a comprehensive EV charging infrastructure network that is intended to equitably support the needs of the state.

New Hampshire intends to administer the NEVI funds to develop direct current fast charging (DCFC) stations along the state's Alternative Fuel Corridors (AFCs) beginning with the interstate routes I-93, I-95, and I-89. Followed by NH-9, NH-12, NH 101, NH 9/US 202 from I-89 to Keene, NH 11, US 4/NH 9, NH 16, US 302, and US 2 through a single RFP or series of RFPs. The RFP(s) will include general regions where charging stations must be located as well as relevant specifications to fulfill this Plan and meet NEVI requirements. The Proposer will be responsible for identifying final charging station locations, final design details, construction, maintenance, and operations of EV charging stations in accordance with the RFP(s). New Hampshire Department of Transportation (NHDOT) will oversee these RFP(s), perhaps with consultant assistance. NHDOT considers the Plan as a living document, and it will be reviewed annually for any necessary updates to reassess corridor priorities based on completed investments and stakeholder engagement. Reviews will include a gap analysis to assess implementation progress.

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

NHDOT intends to implement the Plan within the 5-year funding cycle of the NEVI program. Figure 1 highlights the major milestones and deliverables of the Plan. This schedule will be updated based on further identification of gaps and priorities for Plan implementation as needed.

#### FY 2022

NHDOT has established an EV Working Committee to oversee and participate in the development of the Plan. New Hampshire Department of Environmental Services (DES) previously submitted several rounds of AFCs with concurrence from NHDOT that are included in this Plan (refer to Figure 6). Once this Plan has been approved by the Federal

<sup>&</sup>lt;sup>1</sup> The National Electric Vehicle Infrastructure (NEVI) Formula Program Guidance (dot.gov)

Highway Administration (FHWA) anticipated to be September 30,2022, NHDOT will likely determine an in-house team and/or an engineering consultant partner that will support the designated EV Working Committee in overseeing the EV charging station deployment process.

#### FY 2023

The EV Working Committee and other stakeholders including utility companies will finalize the committee's goals, objectives, roles, and responsibilities. It is expected that US 3 from US 2 to the Canadian border will be included in the next round of AFC corridor nominations. The Final EV Working Committee will coordinate work on the interstate RFP(s) development and provide periodic updates to the Commissioner's office, Transportation Council, and the governor's office. Final RFP(s) will be distributed to the EV industry. Proposals will be received and evaluated and sent to Governor and Council for approval.

#### FY 2024

NHDOT will monitor design and implementation methodology. The EV Working Committee will update the Plan and finalize the EV charging station locations along the remaining AFCs. Construction of awarded locations from FY 2023 is expected to begin. Additional RFPs will be developed and distributed for the remaining locations. Proposals will be received and evaluated and sent to Governor and Council for approval.

#### FY 2025

NHDOT is anticipating construction to continue. Multiple EV stations are anticipated to be operational and ready for use.

#### FY 2026

All EV charging stations are anticipated to be ready for use by the end of FY 2026 and the EV Working Committee will update the Plan and conduct gap analysis to identify any discontinuity in the EV charging network accordingly.

#### FY 2027 and Beyond

Maintenance period expires five years from date the station opens. Contract is due for renewal.

#### **ONGOING**

Ongoing efforts throughout the 5-year period include quarterly EV Working Committee meetings and iterative public engagement. The EV Working Committee will update stakeholders and the public regularly on planning and implementation progress and provide opportunities for feedback. Potential funding opportunities and partnership opportunities will be continuously identified, including discretionary grants, and updated in the Plan during the annual review.



Figure 1. Anticipated Dates and Key Milestones

# **State Agency Coordination**

The Plan is being jointly developed by NHDOT and NHDES. As the lead agency, NHDOT has provided existing conditions analyses and funding input, identified key stakeholders, performed public outreach, and gathered input on local policies for charging infrastructure. DES, through their experience with previous EV Charging Infrastructure RFPs, provided information from these previous projects to be used in the development of this Plan.

Additional entities have also been engaged to support this work. These agencies met weekly from April 2022 through July 2022 to ensure goals were aligned and to oversee Plan development. Each state agency involved in development of this Plan is listed in this section. These agencies aided in the development of the Plan through active collaboration.

#### Department of Transportation (NHDOT)

Mission: New Hampshire DOT has a mission to provide transportation excellence to enhance the quality of life in New Hampshire. This excellence is fundamental to the state's goals of sustainable economic development and land use, protection and enrichment of the environment, and preservation of the state's unique character and quality of life.

#### Department of Environmental Services (DES)

Mission: New Hampshire Department of Environmental Services has a mission to help sustain a high quality of life for all citizens by protecting and restoring the environment and public health in New Hampshire.

DES was the lead agency on the recent "Volkswagen Environmental Mitigation Trust Direct Current Fast Charging Infrastructure" (VW Trust) EV charging RFP which called for respondents to identify DCFC stations located along identified high priority corridors. The Proposals are currently being evaluated, and implementation of the proposed sites is expected to occur at the end of 2022 or beginning of 2023. There is approximately \$4,500,000 allocated for the selected proposals in the form of a reimbursement program. As DES is finalizing this plan to spend VW Trust dollars on electric vehicle charging concurrent with Plan development, both DES and NHDOT have been working closely to ensure that infrastructure and locations are coordinated and appropriate for New Hampshire.

#### Department of Energy (DoE)

Mission: The Department of Energy was created by the NH legislature to promote and coordinate energy policies and programs in the state. It was established effective July 1, 2021.

#### Department of Business and Economic Affairs (DBEA)

Mission: The Department of Business and Economic Affairs is dedicated to enhancing the economic vitality of the State of New Hampshire and promoting the State as a destination for domestic and international visitors. The DBEA has resources for New Hampshire

businesses looking to grow and prosper, as well as for businesses beyond New Hampshire borders looking to expand or relocate.

# **Public Engagement**

The objective of Public Engagement is to capture stakeholder and public feedback supporting the development of a Plan that meets local needs and best supports New Hampshire in its efforts to advance local electric vehicle charging infrastructure. NHDOT's EV Working Committee engaged with internal and external stakeholders to develop two surveys, one for key stakeholders and the other for the public. Both surveys will be finalized and circulated this fall to provide further input on EV charging needs and preferred locations throughout the State.

There are three primary types of information that will be collected as part of the surveys, in conjunction with outreach activities, conducted as part of the Plan development process:

- Stakeholder Traits and Characteristics Relevant to Electrification This entails assessing characteristics such as concern for the environment or interest in electrification, as these have been shown to strongly correlate with the likelihood of EV adoption. Understanding a community's qualitative inclinations towards electrification can provide support and context for assessing future uptake of electric vehicles.
- Electrification Priorities Understanding electrification priorities is key to making infrastructure investment decisions that support community needs. This includes assessing locations where people are more likely to want to charge their vehicles (e.g., shopping centers, workplaces, etc.) or what they will need to see before they are comfortable adopting electric vehicles (e.g., charging network along main corridors, improved range of vehicles, etc.).
- Electrification Barriers Addressing electrification barriers is essential for mitigating risks for successful EV charging infrastructure deployment or usage early during plan development. Survey questions aim to understand barriers that communities may experience, such as a lack of access to charging, insufficient awareness or comfort with electric vehicles, or a lack of capital to purchase a vehicle that prevent them from accessing charging.

## **Stakeholders Involved in Plan Development**

NHDOT has been coordinating with various stakeholders throughout the development of the Plan. The first survey will be distributed to stakeholder organizations within New Hampshire including but not limited to the following:

- Metropolitan Planning Organizations and Regional Transportation Planning Organizations;
  - North Country, Upper Valley Lake Sunapee, Lakes Region, Central, Strafford, Southwest, Southern, Nashua, Rockingham.

- NH Department of Energy;
- NH Department of Environmental Services and Clean Cities Coalition;
- NH Department of Business and Economic Affairs;
- State Public Utility Commission;
- State public transportation agencies;
- Utilities (Eversource, Until, New Hampshire Electric Coop, and Liberty Utilities);
- EV industry organizations and EV advocacy groups, as applicable;
- Gas station owners and operators;
- Emergency management and public safety agencies;
- DNCR Department of Natural and Cultural Resources;
- Hillsborough Energy Commission;
- Lebanon Energy Advisory Subcommittee.

Organizations in **bold** denote Justice 40 coordination efforts.

The second survey will be distributed to the general public via NHDOT's NEVI website. The Remote Procedure Call (RPC) EV Working Committee will be leading the efforts of obtaining survey feedback and providing it to the State.

NHDOT has been coordinating with adjacent states and Quebec throughout Plan development through direct phone calls, monthly Joint Office office hours, AASHTO EV Working Group, and NASTO EV Working Group.

## **Public Outreach**

Public involvement and public participation are fundamental components of transportation planning and need to take place not only at the beginning of, but throughout the entire course of the process, to ensure adequate public participation and support successful outcomes.

Initial public input was obtained through the NH Transportation Council on April 22, 2022, and May 20, 2022. The New Hampshire transportation council was created under NH RSA 238-A:2 which states:

"There is hereby established the New Hampshire transportation council for the general purpose of defining, in partnership with the department of transportation and the New Hampshire general court, a 21st century, multimodal transportation network and evaluating new modes or technologies that would improve the efficiency and accessibility of any transportation source. The council shall be administratively attached, pursuant to RSA 21-G:10, to the department of transportation."

The first meeting discussed the need for electric vehicles/electric vehicle charging and introduced the NEVI Plan and its associated requirements. The second meeting was a Public Hearing, soliciting feedback on the Plan's vision and goals along with suggested EV charging locations throughout the State.

22 verbal comments were received during the May 20, 2022, Public Hearing. Written communication was accepted after the meeting through June 10, 2022, and a total of 107 written comments were subsequently received via email or hard copy. General comments focusing on the Plan included the following:

- Several comments related to the rural nature of New Hampshire and the need to ensure chargers are placed equitably, allowing for tourism, and addressing "range anxiety". Some comments indicated a preference for relaxing the requirement of maintaining chargers within a mile of the alternative fuel corridors and utilizing downtown destination charging instead.
- 2. Rural areas may lack the utility infrastructure and three-phase power to support a robust EV Charging program. Consideration should be given to seeking an exemption to the NEVI minimum of 4 chargers. Additionally, the use of solar or large capacity batteries should be considered in these areas to reduce or eliminate the demand charge and recharge at a lower cost point.
- Legislation in New Hampshire does not address demand charges. Demand charges and increased charging rates may make fast charging cost prohibitive in certain areas or not provide a return on investment in the early phases of the program. NHDOT should consider subsidizing the long-term operational costs of these chargers.
- 4. Locating DC Fast Chargers near multi-family/mixed use developments to support individuals that do not own their own home and cannot install Level 2 chargers at their residence. Priority should be given to locating fast chargers in Environmental Justice (EJ) communities, consistent with Justice 40 goals.
- 5. Some respondents were opposed to spending any public funding on EV infrastructure.

As a part of the required annual submittal, NHDOT will report on community engagement activities regarding type, date, communities represented, and number of attendees. The following communities will be targeted:

- General public
- Governmental entities
- Labor organizations
- Private sector/industry representatives
- Representatives of the transportation and freight logistics industries
- State public transportation agencies
- Urban, rural, and underserved or disadvantaged communities

Additionally, the annual reports will include public and community responses to the Plan.

## **Public Outreach Resources**

Several resources have been developed and/or identified for future development to support public outreach throughout the continued Plan development process. These resources are briefly described in this subsection.

Website: A website was developed to host past and future information related to the Plan.

EV Charging Infrastructure | Media Center | NH Department of Transportation

**Interactive Map:** An interactive map hosted on an ArcGIS platform will be developed that facilitates the viewing of AFCs and proposed charging stations. The interactive map will function as a feedback gathering tool where the public can provide their feedback by 'liking' a proposed location and making alternative suggestions by dropping 'pins.' This map will be incorporated into the public survey.

**Social Media:** NH will continue to engage the public as the Plan advances to keep the public informed on where chargers will be placed and construction scheduling. This information will be communicated through the NHDOT website and social media accounts.

**Email:** An email address <ev-infrastructure@dot.nh.gov> was created to collect public feedback and will be checked periodically by the EV Working Committee to maintain ongoing public outreach efforts.

## **Evaluation**



To evaluate the effectiveness of public engagement efforts, the following items will be considered. Survey feedback is anticipated in the 4<sup>th</sup> quarter of 2022.

Figure 2. Evaluation Criteria for Effectiveness of Public Engagement

# **Disadvantaged Communities Outreach Strategies**

# DOE Justice 40 Mapping

- Identify disadvantaged communities
- Design targeted outreach
- Utilize the Equity, Diversity, & Inclusion (ED&I) team within NHDOT as a partner for outreach
- Reach out to Department of Health and Human Services (DHHS) Refugee Program
- Utilize resources and expertise of the DES EJ group

## **Community Based Organizations**

- Identify community organizations that represent disadvantaged communities and nominate EV Working Committee partners
- Share online resources
- Ask targeted questions about benefits of EV charging infrastructure
- Develop surveys/interactive map in other languages Ex.: French, Spanish

## Update and Engage

• NHDOT will continuously monitor feedback from public engagement sessions and will update community engagement methods throughout the 5-year period

#### Figure 3. DAC Outreach Strategies Summary

# **Plan Vision and Goals**

The following goals were identified through collaboration with State agencies and external stakeholder. As a product of this inclusive process, the following Plan Vision and Goals have officially been adopted by New Hampshire:

## **Plan Vision:**

Strategically deploy an interconnected and equitable network of public electric vehicle charging infrastructure to encourage electric vehicle travel, maintain economic competitiveness, and stimulate public-private sector collaboration in the State of New Hampshire.

## **Plan Goals:**

- 1. Develop an interconnected and equitably located network of public EV charging infrastructure along New Hampshire's alternative fuel corridors that is accessible, eliminates range anxiety, allows for public awareness of charging locations, and supports EV adoption.
- 2. Grow the economies of underserved rural and urban communities through skills training and workforce development opportunities associated with implementation and management of public EV charging infrastructure.
- 3. Coordinate with electric utilities to integrate New Hampshire's public EV charging network within the local energy systems to enhance resilience and reliability.
- 4. Support local and State governmental agencies in the development of a public EV charging network that meets the needs of local government, agencies, end users, residents, and visitors.
- 5. Uphold safety and protect EV drivers through adherence to standards and cybersecurity protocols.
- 6. Encourage electric vehicle travel throughout New Hampshire for residents and visitors.
- 7. Increase familiarity and knowledge about EVs among communities through education, coordination, and outreach.
- 8. Promote a sustainable New Hampshire through transportation electrification.
- 9. Identify collaboration opportunities between public and private sectors for EV charging infrastructure implementation.
- 10. Develop standards and protocols that meet the State of New Hampshire's EV needs.

## New Hampshire's Five-year NEVI Action Plan and Goals:

In the first three years: Fully build out NEVI-compliant EV charging stations on the interstate system, connecting New Hampshire with its bordering states and Canada

In the following 2 years: Fully build out NEVI-compliant EV charging stations on additional AFCs, increase redundancy at stations (build out future proof options), and upgrade current stations to be NEVI-compliant

# Contracting

NHDOT is exploring options to encourage selective upgrades of existing chargers, where appropriate, along with both urban and rural deployment of new NEVI charging stations. New Hampshire's plan is to contract with private entities following the model already established by DES through the VW Trust Settlement. DES released an RFP in September of 2021 with Proposals due in January of 2022 which included design, construction, and maintenance of EV charging stations throughout the state. The process described in the RFP (New Hampshire VW Environmental Mitigation Trust Direct Current Fast Charging Infrastructure) includes identifying general locations and corridors for deployment of EV charging infrastructure and then letting the proposer decide specific sites along the corridors.

The RFP states "Sites proposed should serve travel on a specified corridor. If a site is not immediately adjacent to a named corridor, the proposal should specify the distance (by road, not direct line) from the corridor and describe why the proposed location is preferred. The plans are developed on a spec-based criteria (for example, 50-mile criteria).

There are two options for contract administration of the Plan:

- 1. Assign/Hire an NHDOT staff member for proposal support.
- 2. Hire an Owner's Representative for contract support.

The contracting administration mechanism will be determined once the Plan has been approved and EV Working Committee finalized.

NHDOT's approach will encourage deployment of Electric Vehicle Supply Equipment (EVSE) in rural and/or underserved communities which may not occur without this public funding. Additionally, NHDOT will work to encourage station development at sites that can serve highway traffic while also providing needed charging capacity for local EV drivers, such as at neighborhood commercial centers within 1 mile of the AFC. This approach can meet the NEVI program's minimum standards while providing economic development opportunities for local businesses and charging opportunities for local residents who reside in apartments or condominiums and are not able to install chargers where they live.

NHDOT will continue discussions with local utility representatives during development of the RFP(s). Verifying available utility capacity at a potential site along with utility upgrade costs will be key to Proposal development and review.

Another consideration for the Plan will be small businesses and DAC affected by the implementation of this plan. NHDOT will encourage small and DBE/MBE participation as part of the contracting services during the implementation stages.

It is important to ensure project cost transparency set by third parties. Therefore, after NH G&C approval, the following information regarding EV charging station selection/operation related to their price proposal will be made publicly available:

• Summary of procurement process

- Number of bids received
- Identification of the awardee
- Proposed contract with awardee
- Financial summary of contract payment

Equipment will have certifications that ensure reliability of operations. EVSE must be certified by an Occupational Safety and Health Administration Nationally Recognized Testing Laboratory, and all AC Level 2 EVSE must be ENERGY STAR certified.

Since the NEVI Formula Program shall be administered as if apportioned under the United States Code for Highway Infrastructure Programs, New Hampshire recognizes that it will be subject to implementing procurement pursuant to federal regulations for the procurement of construction and design. Additionally, any agreements for the operation and maintenance of an EV charging station are subject to the State procurement policies and procedures.

To ensure consistent operations of stations and chargers, EVSE must comply with the NEVI standards for at least the first five years after installation.

# **Existing and Future Conditions Analysis**

New Hampshire has varied terrain, climate, population density and transportation patterns as described in the following sections. The southern portion of New Hampshire is generally characterized as urban/suburban and includes the major cities of Manchester, Nashua, and Concord. Hillsborough and Rockingham counties in the south-central and southeastern portion of New Hampshire account for 53% of the State's population as of October 2020. The western and northern portions of the state, above Concord, are generally more rural with a decreased population density.

# State Geography, Terrain, Climate and Land Use Patterns

New Hampshire has a varied geography from its 18 miles of coastline in the southeast corner to the White Mountains in the northern portion of the State. New Hampshire can be broken down into three primary geological regions, each having unique challenges throughout the year.

The Coastal Lowlands are located in the southeastern section of the state where New Hampshire borders the Atlantic Ocean. This area extends approximately 20 miles into New Hampshire and consists of sandy beaches, rivers, and tidal

wetlands.

The Eastern New England Upland covers most of Southern New Hampshire outside of the Coastal Lowlands. This area consists of the Merrimack Valley, the Hills and Lakes Region, and the Connecticut River Valley.



Figure 4. New Hampshire Land Regions

The White Mountains Region is in the northern half of the state, north of the Eastern New England Upland area. The region consists of rugged mountains and narrow valleys. There are several mountains in this region that exceed 5,000 feet above sea level, including Mount Washington which is the highest point in New England at 6,288 feet above sea level.

Climate varies throughout the three regions, but is generally characterized by cold, snowy winters and mild summers with highly variable weather patterns. Weather in the southern

part of the state is controlled due to the proximity of the jet stream and the Atlantic Ocean, while the northern portion of the state is influenced by mountain ranges. Summers have average daytime highs in the 70°F (21.1°C) to 85°F (29.4°C) range at the peak of July and are warm and humid. Winters have average lows in the -4°F (-20°C) to 15°F (-9.4°C) range in January and are cold, icy and snowy. The northern wilderness regularly drops below 0°F (-17.8°C) during the winter.

New Hampshire averages an annual rainfall of 40" (1016mm) with significant variations in the White Mountains range and northern highlands. Rain is evenly distributed throughout the year. Snowfall is heavy during the winter and accumulates 60" (1524mm) to 100" (2540mm) statewide with a higher range in the mountains.

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

New Hampshire has 381 centerline miles of interstate highways representing the largest percentage of vehicle miles traveled within the state. 95% of New Hampshire's goods are transported along the highway system, via I-89, I-93, I-95, and the Everett Turnpike. The interstate network is a vital component of the transportation system allowing for the movement of people and goods throughout the state.

Tourism plays a vital role in New Hampshire's economy. New Hampshire saw a record number of tourists in 2021 representing a 43% increase above pre-pandemic levels. EV Infrastructure needs to account for the residents as well as visitors to the state.

#### **Public Transportation**

New Hampshire has limited public transportation, generally concentrated in urban or interstate portions of the state. 33 of 244 communities in New Hampshire have regular public transit service. Refer to Figure 5 for locations and services. In addition to the services noted in Figure 5, there are 25 publicly accessible Volunteer Driver Programs such as "The Caregivers" or "Meals on Wheels" serving 197 of the 244 New Hampshire communities.

New Hampshire's Regional Planning Commissions (RPCs) and Metropolitan Planning Organizations (MPOs), along with a recently completed online survey by NHDOT, indicate that the residents of New Hampshire would value additional public transit options. New Hampshire will review FHWA guidance on heavy-duty and freight vehicles to support public transit options for electric vehicles in the future.



Figure 5. Public Transit Services

#### Freight and Other Supply Chain Needs

The 2016 Average Annual Daily Traffic for New Hampshire shows that traffic volumes are highest along the Interstate system at the southern borders of the state, traveling into Massachusetts. The Interstates typically carry more traffic than other routes. Portions of the Everett Turnpike in Nashua, I-93 in Salem, and most of I-95 along the southeastern border carry more than 80,000 vehicles per day. From a freight perspective, the data supports the fact that highway is the dominant mode for freight transport and Massachusetts is the state's top trading partner.

## **AFC - Corridor Networks**

A map of NH's existing Alternate Fuel Corridors (AFCs) can be found in Figure 6. NHDES and NHDOT will discuss the current AFC and any additional proposed AFCs once the 7<sup>th</sup> Round of Alternative Fuel Corridor Designations is released in 2023. It is expected that US 3 from US 2 to the Canadian border will be included in the next round of AFC corridor nominations.

#### **Corridor Pending Corridors**

The following corridors are pending AFCs:

- i. NH 9/US 202 (Chesterfield to I-89 Hopkinton)
- ii. NH 101 (Route 9 Keene to I-95 Hampton)
- iii. NH 12 (Claremont to VT border)
- iv. I-89 (Statewide)
- v. NH 11 (Claremont to I-89 New London)
- vi. NH 9/US 4 (Route 16 Dover to I-393 Concord)
- vii. NH 16 (Statewide)
- viii. US 302 (Statewide)
- ix. US 2 (Statewide)

#### Corridor Ready Corridors

The following corridors are ready AFCs:

- i. I-93 (Statewide)
- ii. I-95 (Statewide)
- iii. Everett Turnpike (Nashua to Bedford)



Figure 6. New Hampshire Existing AFC's

Table 1 details the Existing EV Charging densities per each route. These total numbers detail the number of sites within 0.25 miles of the designated route. The counts include EV Level 1, EV Level 2 and DCFC chargers.

Route	Number of Existing EV Charging Stations
F.E. Everett Turnpike	4
I-89	1
I-93	13
NH 101	12
NH 16	18
US 302	4
NH 9/US 202	3
NH 9/US 4	1
Total	56

#### Table 1. Charging Density Breakdown by Route in NH

## **Existing Locations of Charging Infrastructure Along AFCs**

A table of existing charging locations along the AFCs is provided in Appendix A. The table is accurate as of April 2022.

Figure 7 presents a map of AFCs and existing public DCFC and level 2 Charging Locations.



Figure 7. AFC and existing public DCFC and Level 2 Charging Locations

# **Historical EV Adoption Rates**

In 2019, New Hampshire EV's accounted for 1.21% of the state's vehicle share; by June 2022, New Hampshire grew to more than 4,000 EVs registered.<sup>2,3</sup> This increase is due to New Hampshire's efforts of increasing charging infrastructure and providing incentives to lower the upfront costs of EVs and EVSE in 2019. The state lags slightly behind the national average adoption rate (2.11%) but is expected to continue to grow due to enhanced EV infrastructure, more EV models available, additional policies to drive adoption, and financial incentives.<sup>4</sup>

## **Known Risks and Challenges**

#### National Best Practices

#### Permitting:

All necessary permits will need to be obtained before an EV charging station will be determined operational. These include local, state, and federal permits required for installation and operation of the station.

#### Stakeholder Agreements:

Engaging the proper stakeholders within the State will be important in the success of the Plan. Determining and identifying stakeholders will be the first step in this, and scheduling meetings to gauge their level of involvement will be the next step. Ensuring stakeholders are heard and taking their concerns into consideration during the planning and implementation process will allow relationships to be built within the communities that these charging stations will serve.

#### Utility Involvement and Coordination:

All Proposers must consult with the electric utility company providing service for each proposed site, and submit a completed Electric Vehicle Preliminary Site Feasibility Assessment Information form for each site. Applicants must provide the utility a minimum of 10 weeks to complete the form. The Proposer will complete and submit this to the appropriate utility contact listed below and the utility will review this form and complete their Electric Vehicle Preliminary Site Feasibility Assessment Information form (Attachment B) and return it to the Proposer. It is incumbent upon the Proposer to be responsive to requests for information from the utility that are necessary to properly complete this form. Both forms shall be submitted with the final proposal. Proposers are advised to allow for adequate time

<sup>&</sup>lt;sup>2</sup> Alternative Fuels Data Center, 2022, https://afdc.energy.gov/

<sup>&</sup>lt;sup>3</sup> EV Adoption, EV Market Share by State, 2019, https://evadoption.com/ev-market-share/ev-market-share-state/

<sup>&</sup>lt;sup>4</sup> Evaluating Electric Vehicle Infrastructure in New Hampshire, July 2019

to coordinate with the utility to ensure the full completion of the Utility Assessment Form including estimates of full costs. Any proposal submitted without these forms will be rejected.

#### NH State Specific Risks and Challenges:

The location of Tesla charging stations was not considered in the development of the Plan and identifying locations for EV charging infrastructure, as they do not meet the requirements to use a CCS charger. However, a recent announcement by the White House that Tesla will open its charging network to non-Tesla vehicles creates some uncertainty with the proposed locations in NH. There are several potential NEVI sites that have Tesla stations in close proximity resulting in a potential reduced return on investment for the private sector.

The northern portion of New Hampshire is very rural and may not have enough electric vehicles to support a return on investment for the private sector at full NEVI buildout. New Hampshire proposes a phased-in development strategy for several stations north of US 302 to initially install two chargers, along with the appropriate make ready/site prep to accommodate 2 additional chargers, and install these additional chargers later when traffic volumes will support the investment.

New Hampshire is currently the 7<sup>th</sup> highest state for electricity costs at 22.97 cents/kWh while also being ranked 41<sup>st</sup> for total energy consumed per capita, and 43<sup>rd</sup> for energy production.<sup>5</sup> With the adoption of additional EV charging stations, a higher daily dependency on electricity will follow. This increased electrical demand could provide challenges in the long term as the electric infrastructure is more likely to need repairs, upgrades, and replacements. New Hampshire is sensitive to the increased electricity costs and note that ratepayers, regardless of whether they drive electric vehicles, may be impacted.

NHDOT understands that the ongoing equipment and labor shortages, as well as current inflation percentages and cost escalations have the potential to lengthen timelines and increase implementation costs from what was initially anticipated. Additionally, the Buy America Requirements may cause additional costs and longer time periods for infrastructure implementation.

As previously discussed, NHDES is adding EV charging stations using the VW Trust Funds. Until these charger locations and configurations are finalized, by NHDES and approved by NH's Governor & Council, exact spacing of NEVI approved stations cannot be finalized. If the proposed stations aren't NEVI compliant, NHDOT will consider upgrading the station to the minimum NEVI requirements.

Several DACs are located along the western border of New Hampshire north of US 2 (see Figure 9). NHDES previously submitted this corridor for inclusion as an AFC in the 3<sup>rd</sup> Round

<sup>&</sup>lt;sup>5</sup> United States Energy Information Administration New Hampshire Rankins, 2022, <u>https://www.eia.gov/state/rankings/?sid=NH#series/31</u>

of nominations and it was not properly identified. NHDOT/NHDES plan to nominate this corridor again under the 7<sup>th</sup> Round of the AFC designations. EV Charging Infrastructure Deployment

New Hampshire intends to administer the NEVI funds available for investment through an RFP or series of RFPs. The RFP(s) will indicate general regions (example Exit X to Exit Y on I-93) where EV charging stations must be located to meet maximum spacing requirements along with all the relevant specifications to fulfill this Plan and NEVI guidance. The Proposer will be responsible for identifying final charging station locations, final design details, construction, maintenance, and operations of EV charging stations. New Hampshire Department of Transportation will oversee these RFPs, with the potential for consultant assistance.

General regions for EV charging station deployments were identified by mapping the existing charging network in New Hampshire and neighboring states. Proposed regions were selected to fill gaps in the 50-mile network to meet NEVI requirements. Where possible, New Hampshire plans to upgrade existing EV stations to the necessary 600 kW of charging power to minimize the number of new sites. The figure and table below illustrate the existing and proposed network.



Figure 8. Proposed EV Charging Locations

State EV Charging Location Unique ID*	Route (note AFC)	Potential Locations	Anticipated EV Network (if known)	Utility Territories	Anticipated Station Ownership** (if known)	FY22 Funding Amount	FY23-FY26 Funding Amount (Optional)
	I-93	Concord	New Potential Site	TBD	Unknown at time of report	N/A	
	I-93	Hooksett Rest Area	Upgraded Potential Site***	TBD	Unknown at time of Report	N/A	
	I-93	Tilton	Upgraded Potential Site	TBD	Unknown at time of report	N/A	
	I-93	Lincoln	Upgraded Potential Site	TBD	Unknown at time of report	N/A	
	I-89	Hopkinton	New Potential Site	TBD	Unknown at time of report	N/A	
	US-3	Pittsburg	New Potential Site	TBD	Unknown at time of report	N/A	
	US-3	Colebrook	New Potential Site	TBD	Unknown at time of report	N/A	
	US-3	Lancaster	New Potential Site	TBD	Unknown at time of report	N/A	
	NH-9 (US-202)	Keene	New Potential Site	TBD	Unknown at time of report	N/A	
	NH-16	Errol	New Potential Site	TBD	Unknown at time of report	N/A	
	NH-16	Gorham Or Berlin	New Potential Site	TBD	Unknown at time of report	N/A	
	NH-16	Rochester	Upgraded Potential Site	TBD	Unknown at time of report	N/A	
	NH-16	Wakefield	New Potential Site	TBD	Unknown at time of report	N/A	
	NH-16	Conway	Upgraded Potential Site	TBD	Unknown at time of report	N/A	
	NH-11	Claremont	New Potential Site	TBD	Unknown at time of report	N/A	
	NH-101	Milford	New Potential Site	TBD	Unknown at time of report	N/A	

#### Table 2. Summary of Potential Charger Locations

State EV Charging Location Unique ID*	Route (note AFC)	Potential Locations	Anticipated EV Network (if known)	Utility Territories	Anticipated Station Ownership** (if known)	FY22 Funding Amount	FY23-FY26 Funding Amount (Optional)
	US-202 (NH-9)	Hillsboro	New Potential Site	TBD	Unknown at time of report	N/A	

\*Defined by the State – this should match the unique ID in the State's applicable GIS databases. It should be clear that the Unique IDs correspond to general locations for proposed installations rather than pinpoint geocoordinates.

\*\*Federal Government Owned (FG), Jointly Owned (J), Local/Municipal Government Owned (LG), Privately Owned (P), State/Provincial Government

\*\*\*Known risk. Subject to federal approval to use funding in a rest area

#### **Funding Sources**

Having diverse funding sources is instrumental in supporting the EV charging infrastructure buildout as well as encouraging EV adoption within the state of New Hampshire. Per NEVI guidance, the total Federal cost-share shall not exceed 80%. NHDOT expects most of the non-Federal funding to come from the private sector. Additionally, New Hampshire has several different funding sources to support these objectives. Funding available to support charging infrastructure is detailed in Table 3 The New Hampshire Electric Charging (NHEC) rebates outlined in Table 3 are only available to NHEC customers.

#### Table 3. New Hampshire EV Funding Opportunities

Name	Summary	Type of funding	Administrating Organization(s)	Amount:
Electric Vehicle Rebates	Rebate to purchase or lease an electric vehicle.	Rebate	New Hampshire Electric Co-op (NHFC)	\$1,000 for BEV; \$600 for PHEV
Electric Vehicle Charging Station Rebates	Incentive to install Level 2 charging stations at residential sites.	Rebate	New Hampshire Electric Co-op (NHEC)	\$300 per port
Commercial Electric Vehicle Charging Station Incentives	Incentive to install up to (2) Level 2 or higher power charging stations at commercial properties.	Rebate	New Hampshire Electric Co-op (NHEC)	Up to \$2,500 per port
New Hampshire's National Electric Vehicle Infrastructure (NEVI) Planning	Funding to deploy DCFC along AFC every 50-miles within 1-mile of the corridor. NEVI aims to strategically deploy chargers to establish an interconnected network.	Grant	FHWA through NHDOT	\$17,271,581

NHDOT plans to investigate additional funding sources that were provided in the 90-day NEVI Formula guidance.

NHDOT will include information about these potential funding sources in its public engagement and outreach events to increase awareness.

# **2022 Infrastructure Deployments/Upgrades**

There are no further deployments anticipated in 2022. The DES Volkswagen Funded EV Charging Station proposal is currently under the review process, but deployment of stations will not commence until 2023.

#### Upgrades of Corridor Pending Designations to Corridor Ready Designations

There are no current upgrade proposals for AFCs in New Hampshire.

#### Increases of Capacity/Redundancy along Existing AFC

The scope of the VW Trust EV RFP includes increasing capacity along some of the same AFCs identified within this Plan. Not all high priority corridors identified within the two plans overlap, but there will be some redundancy among the EV infrastructure deployment corridors and locations directly off the corridors. Additionally, since the VW Trust EV sites may not meet NEVI requirements, there will be added redundancy in some locations where the sites cannot be used to count towards a served area.

#### **Electric Vehicle Freight Considerations**

The U.S. Department of Transportation (USDOT) Infrastructure for Rebuilding America (INFRA) grant program provides federal financial assistance to eligible transportation infrastructures including **modal shift in freight movement.** Corridors identified as high priority freight corridors will also have considerable overlap with the identified AFCs. New Hampshire's statewide freight plan is also useful in evaluating this modal shift in freight movement. <sup>6</sup>

#### **Public Transportation Considerations**

USDOT's FTA administers the Public Transportation Innovation Program which provides financial assistance for research demonstration and deployment projects for low or zero emissions public transportation vehicles. Additionally, by 2040, all public transit agencies must transition to 100% zero-emission bus fleets in accordance with the FTA Zero-Emission Fleet Transition Plan. Table 4 outlines a breakdown of transit fleets transition to electric vehicles.

<sup>&</sup>lt;sup>6</sup> Freight Plan | Planning and Community Assistance | NH Department of Transportation

	Large Transit Agency	Small Transit Agency
January 1, 2023	25% of the total number of new bus purchases in each calendar year must be zero- emission buses	No Requirement
January 1, 2026	50% of the total number of new bus purchases in each calendar year must be zero- emission buses	25% of the total number of new bus purchases in each calendar year must be zero- emission buses
January 1, 2029	All new bus purchases must be zero-emission buses	All new bus purchases must be zero-emission buses

#### Table 4. Transit Fleet Electric Vehicle Transitions

## **FY23-26 Infrastructure Deployments**

#### **DES VW Proposal:**

The NH Department of Environmental Services is currently in the contract negotiation process for the Volkswagen Environmental Mitigation Trust EV charging plan. This RFP, the New Hampshire VW Environmental Mitigation Trust Direct Current Fast Charging Infrastructure RFP, released in September of 2021, was for applicants to install EVSE and provide the associated operations, maintenance, and management services that corresponded with these systems. The RFP includes specified high priority corridors, and the respondent is to identify the exact charging locations within these corridors. Approximately \$4,500,000 of funding was made available for this EV Infrastructure Deployment Plan through the VW Trust. All stations must be DCFC locations with a Level 2 charger. However, the equipment at the selected charging sites will not be compliant with NEVI requirements. Therefore, while these sites will be taken into consideration when planning for future sites, they may not be able to be counted as compliant NEVI charging stations. NEVI funding may be used to upgrade these stations as mentioned previously.

#### **Other Projects:**

High priority interstates throughout New Hampshire include I-93, I-89, and I-95. These corridors are high priority due to the traffic volumes they carry as well as their geographic locations in connecting regions of the state. These corridors will come first in the planning and implementation process of EV charging stations. After these corridors have been served, additional AFCs will be prioritized. Several short corridors have been identified to be addressed next as detailed in the AFCs section of this Plan.

# State, Regional, and Local Policy

#### National Policy and Best Practice:

A crucial consideration for EV charging station deployment is regional connection with bordering states and Canada. This will be required for seamless deployment of the EV charging network and will allow travelers with electric vehicles to move throughout the New England area. NHDOT recognizes that the current focus of the NEVI program is to fill gaps in rural, disadvantaged, and hard to reach locations in order to create a national network of EV charging stations. The overall national goal for EV charging is to provide convenient charging for all via this national network.

#### New Hampshire Specific Perspective:

In New Hampshire there are specific sustainable transportation policies and regulations already in place, as listed in the Table 5 below<sup>7</sup>.

Table 5 Summary of NH Laws/Regulations

Laws/Regulations	Summary
Fossil Fuel Use Reduction	Fossil fuels must be reduced across all state-owned facilities 40% by 2025 and 50% by 2030 in comparison to a 2005 baseline. Additionally, the state passenger vehicle fleet must reduce fossil fuel use by 30% by 2030 in comparison to a 2010 baseline.
2021 RPS Mandate	Calls for 21.6% of electricity sold to retail electric customers to be generated by renewable energy sources, with a goal of 25.2% by 2025
State Agency Electric Vehicle and EV Charging Station Procurement Executive Order	The state will pursue procuring and installing EV and plug-in hybrid along with EV charging stations for use by state agencies.
School District Emissions Reduction Policies	School districts are responsible for developing and implementing policy to minimize emissions from all school-related vehicles and fleets including buses, cars, delivery vehicles, etc. Policies must consider existing anti-idling and clean air zone regulations that the New Hampshire Department of Environmental Services established.
Idle Reduction Requirement	Diesel powered vehicle owners must limit the length of time their vehicle remains idle. Longer time limits are granted for colder outside temperatures but otherwise are either 5-15 minutes.
Public Utility Time-Of-Use (TOU) Rate Requirements	Public utilities must determine whether to implement electric vehicle time-of-use (TOU) rates for residential

<sup>&</sup>lt;sup>7</sup> https://afdc.energy.gov/laws/all?state=NH

Laws/Regulations	Summary
	and commercial customers based on opportunities for energy conservation and equitable rates for consumers. In April 2022, the State of New Hampshire Public Utilities Commission published the approved TOU rates for EV charging stations.8

In July 2022, the NH Department of Energy was created by the Governor and NH General Court in House Bill 2.<sup>9</sup> In July 2022, the department released the 2021 State Energy Strategy for the next 10 years. The strategy focuses around ten key goals:

1. Prioritize cost-effective energy policies.

2. Ensure a secure, reliable, and resilient energy system.

**3.** Adopt all-resource energy strategies and minimize government barriers to innovation.

4. Achieve cost-effective energy savings.

5. Achieve environmental protection that is cost-effective and enables economic growth.

6. Government intervention in energy markets should be limited, justifiable, and technology-neutral.

7. Support a robust, market-selection of cost-effective energy resources.

8. Generate in-state economic activity without reliance on permanent subsidization of energy.

9. Protect New Hampshire's interests in regional energy matters.

10. Ensure that appropriate energy infrastructure is able to be sited while incorporating input and guidance from stakeholders.

Following the 2018 Ten-Year State Energy Strategy there was more thought and development around EVs, also driven by rising prices of gasoline and federal tax incentives. The 2021 Ten-Year State Energy Strategy has potential to drive important policies and goals

<sup>&</sup>lt;sup>8</sup> https://www.puc.nh.gov/regulatory/Docketbk/2020/20-170/ORDERS/20-170\_2022-04-07\_ORDER-26604.PDF

<sup>&</sup>lt;sup>9</sup> New Hampshire General Court. "relative to state fees, funds, revenues, and expenditures." HB 2-FN-A-LOCAL, 2021.

around EV adoption and installation, especially considering the \$17M New Hampshire is set to receive over the next 5 years to build EV infrastructure<sup>10</sup>.

<sup>&</sup>lt;sup>10</sup> https://www.energy.nh.gov/sites/g/files/ehbemt551/files/2022-07/2022-state-energy-strategy.pdf

# Implementation

## **Strategies for EVSE Operations & Maintenance**

Contractors that are selected for implementation of the Plan will be required to manage all operations and maintenance considerations for installed EVSE. These requirements will be articulated in the RFP and responders will in part be evaluated on their approach and qualifications in meeting this requirement. In the implementation of operations and maintenance of charging stations, the following requirements will be considered and implemented:

Charging stations must have at least four operable charging ports which are DCFC ports. Each DCFC charging port's power will be able to reach at least 150 kW, and all charging stations will be able to operate at said power level simultaneously. DCFC ports will have to connect with Evs through a Combined Charging System (CCS) Type 1 connector, which is an industry standard charging port type. Charging ports must have a permanently attached Combined Charging System (CCS) Type 1 connector and must be able to charge any CCScompliant vehicle. Additionally, the AC Level 2 charging ports – chargers that use a 240-volt alternating current electrical circuit to provide electricity to Evs – must have a permanently attached J1772. Each AC level 2 charging port must reach 6 kW or higher, and all charging ports will be able to work at 6 kW simultaneously. Furthermore, stations will be accessible and operational 24 hours a day, 7 days a week with the exception of temporary halts in service for maintenance or repairs.

There will be three types of charging network connections and communications to consider: charger to charging network communication, charging network to charging network communication, and charging network to grid communication.

The following processes will be implemented for charger to charging-network communication:

- Chargers will communicate with a charging network through a secure communications method
- Chargers will be able to receive and implement secure, remote software updates and conduct real-time protocol translation, encryption and decryption, authentication, and authorization in their communications.
- Chargers will support remote charger monitoring, diagnostics, control, and smart charge management
- Chargers and charging networks will securely measure, communicate, store, and report energy and power dispensed, real-time charging-port status, real-time price to the customer, and historical charging-port uptime
- Chargers will use Open Charge Point Protocol (OCPP)

• Chargers will be designed to be able to securely switch charging network providers without having to change any hardware

For charging network to charging network communication, charging networks will be able to communicate with other charging networks to allow EV drivers to use a single credential for charging stations across various charging networks.

For charging network to grid communication, charging networks will be able to securely communicate with electric utilities, other energy providers, and/or local energy management systems.

In the event of an outage or concern regarding the physical infrastructure of the charging stations, customers will have the ability to report these issues. All reporting mechanisms will comply with ADA requirements and be multilingual in either French or Spanish, depending on the prominent need in each region, to ensure accessibility. Additionally, information regarding processes for reporting these issues will be made available at the stations.

Any workforce installing, maintaining, and operating EVSE will have appropriate licenses, certifications, and training to ensure that technicians are qualified for the handling of EVSE. Moreover, electricians installing, maintaining, and operating EVSE must meet at least one of the following requirements:

- Certification from the Electrical Vehicle Infrastructure Training Program (EVITP)
  - EVITP eligibility is determined by holding of a state license or certification; alternatively, a person can be considered eligible without a license or certification if the person has documented proof of at least 8,000 hours of hands-on electrical experience.
- Graduation from a Registered Apprenticeship Program for electricians that includes EVSE specific training and is developed as a part of a national guideline standard approved by the Department of Labor in consultation with the Department of Transportation

If there is an implementation site requiring more than one electrician, at least one of them must meet the above requirements.

# **Strategies for Identifying Electric Vehicle Charger Service Providers and Station Owners**

As discussed in the Contracting section of the Plan, NHDOT will utilize an RFP process with one or more EV service providers to develop and operate DCFC stations along selected AFCs. The RFP will include evaluation criteria, including cost, for proposers which will be used to determine the winning responders.

# **Strategies for EVSE Data Collection & Sharing**

NHDOT will follow Federal guidance and industry best practices regarding public charging data collection, privacy, and sharing. Data from the charging stations will be made available to the State of New Hampshire regularly. The recommended collection criteria for this data may include:

- Operational status of the equipment and information about each charging session
- Administrative read-only credentials
- Monthly and quarterly reporting

Charging stations will be required to provide updates to NHDOT on a quarterly and annual basis in order to track and ensure appropriate performance. The reports should be crafted according to the expectations outlined below:

- Quarterly submittals will include:
  - Information regarding each port's performance, based on information such as:
    - Charging station location identifier
    - Charging session start time, end time, and successful session completion (yes/no)
    - Energy (kWh) dispensed to EVs per session
    - Peak session power (kWh)
  - Performance of the station over the previous three months; performance will be accounted for based on the following information:
    - Charging station uptime (uptime is expected to be at least 97 percent on an annual basis). Uptime should be calculated according to the following equation:

• 
$$n \mu = \frac{8760 - (T_{outage} - T_{excluded})}{8760} * 100$$

- µ = port uptime percentage
- T<sub>outage</sub> = total hours of outage in previous year
- T<sub>excluded</sub> = total hours of outage in previous year for reasons outside the charging station operator's control, such as electric utility service interruptions, internet or cellular service provider interruptions, and outages caused by vehicles
- Cost of electricity to operate per charging station
- o Maintenance and repair cost per charging station

- Charging station real property acquisition cost, charging equipment acquisition and installation cost, distributed energy resource acquisition and installation cost, and grid connection and upgrade cost on the utility side of the electric meter
- Distributed energy resource installed capacity, in kW or kWh as appropriate, of asset by type (e.g., stationary battery, solar, etc.) per charging station
- Annual submittals will consider and include:
- The name, address, and type of private entity involved in the operation maintenance, and installation of EVSE
- Identification of and participation in any state or local business opportunity certification programs including but not limited to the following: programs for minority owned businesses, veteran-owned businesses, woman-owned businesses, and businesses owned by economically disadvantaged individuals
- Report that describes community engagement activities specifying type, date, number of attendees, communities represented, and how information on that engagement was reflected in this EV Infrastructure Deployment Plan

Information that station operators may collect, process, and retain must be strictly necessary for providing service or for fulfilling state-specified reporting requirements. For example, operators may collect information to complete charging transaction and information to provide location of charging stations to consumers. Additionally, operators must actively work to safeguard consumer data.

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

New Hampshire's EV charging stations will need frequent snow removal and management during winter months throughout the state. Snow removal and management will be addressed in the RFP and subsequent contracts. NHDOT may investigate the need for disincentives or withholding of funds if snow removal obligations are not met.

The State of New Hampshire has one nuclear power plant within its borders, Seabrook Station in Seabrook, NH. NHDOT will coordinate with New Hampshire Homeland Security and Emergency Management to discuss the evacuation routes from the Seabrook Station within New Hampshire and to Massachusetts and Maine. For New Hampshire residents, there are reception centers in Manchester, Dover, and Rochester.

New Hampshire's location along the coast with its northeast climate subjects the state to extreme weather and flood risks that will require resiliency planning to protect vulnerable

communities. Electric vehicles can serve as a key tool in preparing for and responding to emergency events caused by natural disasters and resulting disruptions to the grid.

According to the 2019 NH Costal Flood Risk Summary Part I: Science, flood risk stems from relative sea level rise correlated from the rate of ice mass loss from the Greenland and Antarctica ice sheets. This combined with extreme precipitation results in groundwater levels rising and freshwater flooding. In particular, New Hampshire's coastal communities are most at risk to sea level rise, whereas communities in Western New Hampshire and the White Mountains are prone to other weather emergencies. Using the *NH Coastal Viewer* tool developed by the New Hampshire Coastal Adaptation Workgroup, the following map shows the baseline mean higher high-water levels. This map indicates major highways running through the state and their intersections with sea level pathways, indicating high risk areas for flooding. Collaboration between the NHDOT and the New Hampshire Department of Environmental Services will be crucial for developing emergency evacuation routes throughout the state that consider high risk areas and ensures there are enough EV chargers placed along evacuation routes.



While there is currently no mention of EVs in public policy on disaster management, there are several creative ways EVs can fill gaps in disaster preparedness and response, granted required EVSE is installed<sup>11</sup>. Grid-tied EV charging sites coupled with battery energy storage (BESS) can provided benefits like charging flexibility and peak shaving during normal times. This setup would allow EVs to charge from the battery during a grid disruption. The onsite battery energy storage could also comprise of second life lithium-ion (EV) batteries that have been refurbished for stationary use, with anywhere between 70-80% battery capacity still available. This allows for a cost-effective sourcing solution for more resilient charging stations<sup>12</sup>. Another version of this setup is to have renewable energy powered off-grid EV charging stations coupled with battery energy storage. These systems do not rely on the grid and would operate the same way in an emergency. The battery is key in storing energy so that EVs can charge directly from the BESS at times when renewables are not producing electricity. During an outage, this would allow EVs to charge and be available for emergency evacuations.

More studies are also evaluating parking lots as distributed generation sources that could harness multiple EV batteries to support loads on the grid<sup>13</sup>. During an outage, using V2G technology, EVs can provide power to individual homes and clustered EVs could even be harnessed to restart substation transformers or serve critical facility loads<sup>14</sup>. EVs ability to black start generators after an outage are also valuable as they have faster response times than conventional black-start generators<sup>15</sup>. During service-restoration, EVs can support the grid in coming back online via frequency regulation.

The following requirements will be true of the EV charging stations installed:

- Able to withstand extreme weather conditions including temperature extremes, flooding, wind, ice, snow, heavy rain, and high winds, and is protected from malfunctions due to condensation
- Includes barriers or other mechanisms to prevent damage from snow removal equipment or vehicles

<sup>&</sup>lt;sup>11</sup> Hussain, A., &amp; Musilek, P. (2022, February 25). Resilience enhancement strategies for and through electric vehicles. Sustainable Cities and Society. Retrieved July 18, 2022, from https://www.sciencedirect.com/science/article/abs/pii/S2210670722001172

<sup>&</sup>lt;sup>12</sup> Debnath, U. K., Ahmad, I., & Habibi, D. (Nov. 2016). Gridable vehicles and second life batteries for generation side asset management in the Smart Grid. Int. J. Electr. Power Energy Syst., 82, 114–123.

<sup>&</sup>lt;sup>13</sup> Momen, H., Abessi, A., & Jadid, S. (Sep. 2020). Using EVs as distributed energy resources for critical load restoration in resilient power distribution systems. IET Gener. Transm. Distrib., 14(18), 3750–3761.

<sup>&</sup>lt;sup>14</sup> G. Razeghi, J. Lee, and S. Samuelsen, "Resiliency impacts of plug-in electric vehicles in a smart grid," Feb. 2021.

<sup>&</sup>lt;sup>15</sup> Zhong, X., Cruden, A., Infield, D., Holik, P., & Huang, S. (2009). Assessment of vehicle to grid power as power system support.

- If a proposed site is within a one percent annual chance floodplain the Applicant must provide justification for use of this location and describe how the site will be developed to protect the installed EVSE and ensure continued access and resiliency to rising waters.
- Proposed installation sites will be discussed between the Department of Transportation and the Department of Environmental Services to ensure charger availability along potential evacuation routes in high-risk areas with storage/renewables among other solutions discussed above for added resiliency

New Hampshire will develop Emergency Action Plans (EAPs) with National Guard and municipal emergency management to address long widespread outages in remote areas of the state where people will be dependent on charging stations.

# **Strategies to Promote Strong Labor, Safety, Training, and Installation Standards**

A primary goal of vendor selection for this Plan will be to maximize U.S.-made EVSE. Additionally, workforces will be drawn from local members of the communities served wherever possible. The development of these EV charging stations in communities throughout the state and the drawing of the workforce from these communities will lead to an increase in jobs available to New Hampshire residents.

The NEVI program presents an opportunity with respect to workforce development and can be leveraged to develop electrical and construction skills. NHDOT will require contracted firms to adhere to training and certification requirements outlined in the NEVI minimum standards guidance. NHDOT has also had internal discussions about using some NEVI and/or other Federal funding to directly support workforce development opportunities, such as apprenticeship programs or community college pathways that could support future EVSE deployment.

# **Civil Rights**

The deployment of Electric Vehicle charging stations will be created pursuant to all federal, state, local laws, regulations, and statutes to ensure compliance with the Americans with Disabilities Act (ADA) and Title VI of the Civil Rights Act of 1964 (Title VI).

NHDOT further assures every effort will be made to ensure nondiscrimination in all of its programs and activities, whether those programs and activities are federally funded or not. The following steps are integral to the deployment and plan:

# **Compliance with Title VI of the Civil Rights Act:**

- Title VI prohibits discrimination on the basis of race, color, or national origin in any program or activity that receives Federal funds or other Federal financial assistance.
- NHDOT has devised surveys and other public outreach resources as described in the Public Engagement section to educate the public regarding the availability of EV charging stations.
- NHDOT has also committed to conduct necessary public outreach events providing translation and interpretation services as needed to generate public feedback.

## **Compliance with American with Disabilities Act:**

- The Americans with Disabilities Act (ADA) of 1990 provides comprehensive civil rights protections to individuals with disabilities in the areas of employment, state and local government services, public accommodations, transportation, and telecommunications.
- NHDOT will ensure that the EV charging stations are designed and constructed in accordance with ADA standards related to accessible parking spaces.
- Public outreach events are and will continue be held in accordance with Section 504 of the Rehabilitation Act of 1973 (as amended) to generate public feedback from the disability community.

# **Compliance with Section 504 of the Rehabilitation Act:**

- Section 504 forbids organizations and employers from excluding or denying individuals with disabilities an equal opportunity to receive program benefits and services.
- NHDOT, and any Contractor, shall not discriminate on the basis of race, color, national origin, or sex, in the award and administration of this program.

AFC corridors have been determined using the aforementioned acts as guidelines in order to ensure that the infrastructure is available to all communities and people throughout the state and provide equitable access to disadvantaged areas.

All RFPs associated with NEVI program funding will require compliance with appropriate civil rights regulations and ADA Accessibility Standards.

More information on NHDOT's ADA or Civil Rights Programs can be found here:

https://www.nh.gov/dot/org/administration/ofc/index.htm

# **Equity Considerations**

When determining where EV charging stations should be located, there should be engagement with rural, underserved, and disadvantaged communities to ensure that diverse views are heard and considered and to ensure that the deployment, installation, operation, and use of EV charging infrastructure achieves equitable and fair distribution of benefits and services.

Achieving New Hampshire's long-term goals, as articulated in this Plan, requires the equitable deployment of electric vehicle infrastructure, and NEVI Formula Program funding is one opportunity to ensure these investments benefit disadvantaged communities. This funding will aid New Hampshire in creating safeguards to prevent or mitigate potential harms by equitably deploying infrastructure throughout the state.

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

NHDOT is committed to meeting the goals previously identified within this Plan. DACs have been identified by using the Justice40 Map Tool and completing an "EJ Population Analysis" at the County level since specific charging locations have not been finalized at this time. EV charging facilities will be placed in both rural and urban areas due to the significant number of AFCs identified within NH. NHDOT will be meeting with DACs and hosting public outreach opportunities within the identified communities during RFP development and prior to contracting and execution. The goals of these meetings are to determine concerns/priorities to these communities and work to address them during the RFP development process.

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

NHDOT plans to work with the DACs to identify goals and measurable benefits as described previously. Current and projected traffic volumes will be vital to determine the direct and indirect benefits to rural communities. Some of the potential benefits to increased electrification that will be communicated to the local communities are improved air quality, job creation, and increased grid investment.

As part of USDOT's work in implementing the Justice40 Initiative, USDOT developed an interim definition for disadvantaged communities ("DACs") that may be used under Justice40-covered grant programs. This definition is based on 22 indicators collected at the US Census tract level, and in order to help grant applicants determine whether the locations of their proposed sites were in a DAC, the Department created a mapping tool, which went live on January 28, 2022. The mapping tool can be found at the following link.

A screenshot from this mapping tool displaying the State of New Hampshire with highlighted DAC's can also be found in Figure 9.



Figure 9. New Hampshire DAC's

The Department subsequently conducted a data review and found that the mapping tool had data errors affecting approximately 11% of U.S. Census tracts. The NEVI Mapping tool was updated on May 17<sup>th</sup>, 2022, and is currently up-to-date.

At least 40% of the benefits from the new EV charging infrastructure throughout the state

The following benefits will be considered to determine their impact on disadvantaged communities:

- Reduce Transportation Emissions
- Create Job Opportunities
- Decrease Transportation Cost Burden
- Provide Disadvantaged Business Opportunities
- Provide Clean Transportation Access
- Create Opportunity for Community Partnership
- Increase Energy Resilience

Once the benefits are determined, NHDOT proposes to develop and accountability framework using the following steps.

- 1. Determine which benefits (listed above) are of the highest through community engagement.
- 2. Establish a baseline of our current state.
- 3. Design a NEVI program to maximize the delivery of these benefits.
- 4. Measure results as the program is implemented.
- 5. Validate the results within the communities
- 6. Adjust the program to further maximize the benefits.

As this is a 5 year roll out, this will be evolving framework which will need to be repeated and revised as necessary throughout the program.

# Benefits to DACs through this Plan

NHDOT expects several benefits from the deployment of DCFC throughout the State. One of the biggest benefits will be increased access to EV charging in rural areas along with reducing "range anxiety" of out-of-state travelers. Additional benefits may include increased investment in DAC and workforce development. Further benefits will be determined after discussions and feedback from DACs.

# Labor and Workforce Considerations

NHDOT has labor and equity personnel which will aid in ensuring the labor and workforce is continuously approaching training and the EV workforce from an equity and diversity perspective. Focuses will include training the workforce in high quality training programs like the Electric Vehicle Infrastructure Training Program (EVITP) and maximizing job creation for both trade jobs and skilled workers local to the communities being served. Additionally, encouraging a broader participation of women, Black, Latino, Asian American Pacific, Indigenous, and other underrepresented groups will be a focus. To ensure participation of younger members of the community and also allow people to grow their career and skills, apprenticeships will be encouraged to expand the skilled trades workers.

NHDOT will also consider investing NEVI funding to help meet workforce needs with a focus on such investments as serving underserved and Environmental Justice Populations. New Hampshire based companies and organizations that may be included in developing this workforce include:

- NH Tech Colleges;
- Department of Business and Economic Affairs Office of Workforce Opportunity;
- High school "trade" training programs;
- Community Action Programs.

# Cybersecurity

New Hampshire will consider cybersecurity needs of the electrical grid, station, vehicles, and customers using EV charging infrastructure. Software updates will be made regularly to ensure that neither the station nor vehicles are compromised by malicious code, or that a vehicle infects other stations during future charges.

In regard to the security of charging stations, both cybersecurity and physical security will be considered. More specifically, the State EV Deployment Plans should indicate strategies for preventing vulnerabilities relating to the grid, consumers, and charging infrastructure.

The following network requirements will need to be met at a minimum for cybersecurity:

- .
- The network must be configured to display real-time operational status on a smartphone application, either through a network-specific application or a third-party aggregator.
- Applicants must describe how network security concerns will be addressed and managed.

For payment security for customers, the following information must be made available to the customer:

- Prior to each charging session:
  - the unit of sale (e.g., kWh, time);
  - pricing per unit;
  - any additional fees that may be assessed (e.g., fees associated with parking, dwell time surcharges); and
  - the maximum power level of the station (when not sharing power) in kilowatts or equivalent units.
- At the close of the charging session:
  - The date and time of the session;
  - The total price of the session; and
  - The total energy provided in the session.
- Additional Payment requirements:
  - Each charging station must support multiple point of sale methods and at least two forms of payment must be available to users, for example, Near Field Communication Credit Cards (tap) and a toll-free call option to initiate and pay for a session. Customers without tap credit or debit cards must be able to initiate a

charging session and payment via credit or debit card over the phone. A subscription card only available to network members does not count as one of the required payment options.

- The Applicant must adhere to and demonstrate compliance with applicable Payment Card Industry Compliance standards.
- Payment options should be secure, equitable, and accessible. Stations must accept contactless payment, all major debit and credit cards, and Plug and Charge payment capabilities using the ISO 15118 standard incorporated by reference. Payment should not require membership, and payment type should not affect in any manner the power flow to vehicles. Additionally, payment methods should be accessible to everyone and meet ADA requirements.

# **Program Evaluation**

The following metrics will be used to determine program success throughout the EV Infrastructure Plan lifetime. NHDOT will determine criteria to continually evaluate and report the State's progress on its buildout of the AFCs. Schedule tracking will be used to determine if milestones are being met on time and to focus on critical path items throughout the duration of the infrastructure.

NHDOT will work closely with the private sector to ensure that the new charging locations are available online and that the data is being reported to best inform the State on future decisions.

NHDOT will monitor the work being done and will require regular status reports for all NEVI funded projects. Using the data and feedback received, NHDOT will revive the Plan annually making necessary updates to best reflect the current goals and best practices. NHDOT will continuously collaborate with Stakeholder Agencies via the EV Working Committee to make informed decisions.

Performance Indicator	Unit	Frequency
Monthly, Annual Reporting	Stakeholder feedback; P3 opportunities; EV dashboard feedback	Monthly
EV Charging Infrastructure Deployment Schedule Monitoring deployed vs proposed per RFP(s) responses	Time	Monthly
Reduced harmful emissions in DACs	Average kWh/mi compared to average grams/mi emissions of conventional vehicles	Annual
EV Charging station utilization rates	Amount of charging capacity per Federal dollar	Quarterly
Operating Costs per EV charging station	Total cost of electricity that the charging station operator must pay to operate on a charging station and maintenance and repair costs per charging station	Quarterly
Equity Goals Monitoring	Disadvantaged community participation; outreach efforts success	Annual

Table 6. Program Evaluation Performance Indicators and Units of Measurement

Performance Indicator	Unit	Frequency
Private Industry Response	Partnership opportunities from private industries; funding opportunities generated from private partners	Annual
Public response	Number of survey responses; likes; social media statistics	Annual
EV Infrastructure Coverage on Interstates	EV Readiness determination of Interstates	Annual until FY2024

# **Discretionary Exceptions (if any)**

At this time, New Hampshire is not requesting exceptions from the requirement of EV charging infrastructure being installed every 50 miles along or one mile from the designated Alternate Fuel Corridors.

# **Appendix A: Supporting Materials (As Applicable)**

The following table was developed using the following sources in April of 2022: NHGRANIT, NHDOT. Federal Highway Administration.

Table 7. Existing EV Charging Data as of April 28, 2022

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
3332		780 N	Eversource Energy	1	Non-
	EV Level 2	Commercial St	Park		Networked
4271	EV Level 2, EV DC Fast	175 Manchester St	Concord Nissan	2	Non- Networked
4272	EV Level 2	175 Manchester St	Concord Nissan	1	Non- Networked
4273	EV Level 2	280 Amherst St	Peter's Nissan - Nashua	1	Non- Networked
4274	EV Level 2	120 Spaulding Turnpike	Port City Nissan	1	Non- Networked
4275	EV Level 2	120 Spaulding Turnpike	Port City Nissan	1	Non- Networked
4276	EV Level 2, EV DC Fast	93 S Broadway	Patriot Nissan	2	Non- Networked
4277	EV Level 2	93 S Broadway	Patriot Nissan	1	Non- Networked
4278	EV Level 2	285 Route 108	Somersworth Nissan	1	Non- Networked
4279	EV Level 2	285 Route 108	Somersworth Nissan	1	Non- Networked
4280	EV Level 2, EV DC Fast	544 Monadnock Hwy	Nissan of Keene	2	Non- Networked
4281	EV Level 2	544 Monadnock Hwy	Nissan of Keene	1	Non- Networked
4282	EV Level 2	40 E Main St	Autoserv Nissan - Tilton	1	Non- Networked

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
4283	EV Level 2	40 E Main St	Autoserv Nissan - Tilton	1	Non- Networked
4317	EV Level 2	70 Keller St	Team Nissan	1	Non- Networked
4318	EV Level 2	70 Keller St	Team Nissan	1	Non- Networked
6085	EV Level 2	485 Main St	Berlin City Nissan	1	Non- Networked
6086	EV Level 2	45 Portsmouth Ave	Autofair Nissan	1	Non- Networked
6848	EV Level 2	1 Mount Washington Auto Rd	Mount Washington Auto Road	2	Non- Networked
6849	EV Level 2	265 Main St	Top Notch Inn	1	Non- Networked
7311	EV Level 2	151 Portsmouth Ave	McFarland Ford	2	Non- Networked
7654	EV Level 2	2251 White Mountain Hwy	Red Jacket Inn	1	Non- Networked
7655	EV Level 2	80 Main St	Woodstock Inn	1	Non- Networked
7656	EV Level 2	231 Main St	Common Man Inn	1	Non- Networked
7657	EV Level 2	664 US Route 3	Indian Head Resort	1	Non- Networked
7658	EV Level 2	342 US Route 302	Bernerhof Inn	2	Non- Networked
7659	EV Level 2	281 Daniel Webster Hwy	Church Landing at Mill Falls	1	Non- Networked
7904	EV Level 2	324 Commercial St	DEKA Research and Development Corp	1	Non- Networked
8100	EV Level 2	15 Buttrick Rd	LIBERTY GS 15 BUTTRICK RD	2	ChargePoin t Network
8324	EV Level 2	7 Commercial Dr	ReVision Energy	3	Non- Networked

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
8426		95	Lovering Volvo	1	Non-
		Manchester	0		Networked
	EV Level 2	St			
8427	EV Level 2	361 NH-16	Appalachian Mountain Club - Pinkham Notch Visitor Center	2	Non- Networked
8496	EV Level 2	1 Redhook Way	Cisco Brewery	1	Non- Networked
8534	EV Level 2	Route 302	Appalachian Mountain Club - Highland Center at Crawford Notch	1	Non- Networked
8585	EV Level 1, EV Level 2	40 Avon St	Antioch University New England	2	Non- Networked
8686	EV Level 2	19 Elm St	Elm Street Parking Garage	3	Non- Networked
8827	EV Level 2	1 Oracle Dr	Oracle	2	Non- Networked
9150	EV Level 2	594 New Hampshire 3A	Grappone Toyota	2	Non- Networked
9151	EV Level 1	310 Mount Washington Hotel Rd	Omni - Mount Washington Resort	2	Non- Networked
9586	EV Level 2	1190 Route 12A	Plainfield Country Convenience Store	1	Non- Networked
9840	EV Level 2	530 New Hampshire 3A	Grappone Ford	2	Non- Networked
9841	EV Level 2	119 Monadnock Hwy	Monadnock Ford	2	Non- Networked
9842	EV Level 2	33 Nashua Rd	Ford of Londonderry	1	Non- Networked
10591	EV Level 2	2779 White Mountain Hwy	Mount Washington Observatory - Weather Discovery Center	2	Non- Networked
10614		2 Digital Dr	Fidelity	2	Non-
	EV Level 2				Networked

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
10801	EV Level 2	1 Carter Notch Rd	The Wentworth Inn	1	Non- Networked
10807	EV Level 2	1 Spartan Way	Fidelity	2	Non- Networked
10866	EV Level 2	49 Madbury Rd	Durham Public Library	1	Non- Networked
10870	EV Level 2	55 Lake St	North Point Property Management	1	Non- Networked
11143	EV Level 2	51 Evans Dr	Team Nissan North	1	Non- Networked
11623	EV Level 2	12 Olde Bedford Way	STATION 1 BVI 1	2	ChargePoin t Network
11680	EV Level 2	34 Hanover St	PORTSMOUTH HANOVER GARAGE	2	ChargePoin t Network
11757	EV Level 2	224 S River Rd	IHOP	1	Non- Networked
11758	EV Level 2	375 6th St	JD Howard Dental	1	Non- Networked
12738	EV Level 2	32 Maple St	Highland Lake Inn	1	Non- Networked
13497	EV Level 2	267 South Rd	The Farm at Eastman's Corner	2	Non- Networked
14912	EV Level 2	7 Junkins Ave	PORTSMOUTH CITY HALL LOWER	2	ChargePoin t Network
15293	EV Level 2	774 Shem Valley Rd	Appalachian Mountain Club - Cardigan Lodge	1	Non- Networked
15397	EV Level 2	1 Airport Rd	Manchester-Boston Regional Airport	4	Non- Networked
15398	EV Level 2	100 Ten Rod Rd	Myhre Equine Clinic	2	Non- Networked
15399	EV Level 2	1 Medical Center Dr	Dartmouth Hitchcock Medical Center	4	Non- Networked
15400	EV Level 2	752 NH Route 104	Route 104 Diner	1	Non- Networked
15432	EV Level 2	67 Pleasant View Rd	Rosewood Country Inn	1	Non- Networked
15908	EV DC Fast	Hooksett Travel Plaza	Hooksett Travel Plaza - Tesla Supercharger	a 10	Tesla

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
		Northbound I-93			
15909	EV DC Fast	Hooksett Travel Plaza Southboun d I-93	Hooksett Travel Plaza - Tesla Supercharger	12	Tesla
15910	EV DC Fast	22 South Mountain	Riverwalk at Loon Mountain - Tesla Supercharger	6	Tesla
15911	EV DC Fast	700 Lafayette Road	Seabrook Commons - Tesla Supercharger	8	Tesla
15912	EV DC Fast	285 N. Plainfield Road	Valley Square Shopping Center - Tesla Supercharger	8	Tesla
16301	EV Level 2	64 Trooper Leslie G Lord Memorial Hwy	LaPerle's IGA	2	Non- Networked
16340	EV Level 2	1245 Bald Hill Rd	Tin Mountain Conservation Center	1	Non- Networked
16757	EV Level 2	100 Foundry Pl	PORTSMOUTH FOUNDRY 3	1	ChargePoin t Network
16818	EV Level 2	110 Brewery Ln	The Frank Jones 1884 House	2	Non- Networked
18756	EV Level 2	32 Maple St	Highland Lake Inn - Tesla Destination	1	Tesla Destination
18757	EV Level 2	2 Olde Bedford Way	Bedford Village Inn - Tesla Destination	1	Tesla Destination
18758	EV Level 2	67 Pleasant View Rd	Rosewood Country Inn - Tesla Destination	2	Tesla Destination
18759	EV Level 2	20 Cross Rd	Chesterfield Inn, a Select Registry Property - Tesla Destination	2	Tesla Destination
18760	EV Level 2	96 Pleasant St	The Centennial Inn - Tesla Destination	3	Tesla Destination

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
18761		2251 White	Red Jacket Mountain	2	Tesla
		Mountain	View Resort - Tesla		Destination
10700	EV Level 2	Hwy	Destination		
18762	EV Level 2	14 Manning St	Derry Municipal Lot - Tesla Destination	4	Tesla Destination
18763	EV Level 2	200 Sterling Wy	The Garrison Hotel - Tesla Destination	3	Tesla Destination
18764	EV Level 2	45 Orchard St	Orchard Street Parking Garage - Tesla Destination	4	Tesla Destination
18765	EV Level 2	6 Front St	Inn by the Bandstand, a Select Registry Property - Tesla Destination	2	Tesla Destination
18766	EV Level 2	90 Front St	The Exeter Inn - Tesla Destination	3	Tesla Destination
18767	EV Level 2	33 Main St	The Hancock Inn, a Select Registry Property - Tesla Destination	2	Tesla Destination
18768	EV Level 2	2 Morey Rd	The Notchland Inn - Tesla Destination	2	Tesla Destination
18769	EV Level 2	33 The Oaks St	Colby Hill Inn, a Select Registry Property - Tesla Destination	2	Tesla Destination
18770	EV Level 2	31 Manor Dr	Manor On Golden Pond, a Select Registry Property - Tesla Destination	2	Tesla Destination
18771	EV Level 2	1 Carter Notch Rd	The Wentworth Inn - Tesla Destination	1	Tesla Destination
18772	EV Level 2	179 Carter Notch Rd	Eagle Mountain House - Tesla Destination	2	Tesla Destination
18773	EV Level 2	60 Loon Mountain Rd	Loon Mountain - Tesla Destination	3	Tesla Destination
18774	EV Level 2	853 Pleasant St	Inn at Pleasant Lake Tesla Destination	- 2	Tesla Destination

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
18775		239	Cranmore Mountain	2	Tesla
	EV Level 2	Skimobile Rd	Resort - Tesla Destination		Destination
18776	EV Level 2	80 Kearsarge Rd	Cranmore Inn Bed and Breakfast - Tesla Destination	2	Tesla Destination
18777	EV Level 2	23 Portwalk Place	Portwalk Parking Garage - Tesla Destination	2	Tesla Destination
18778	EV Level 2	505 1 Bypass	The Port Inn, an Ascend Hotel Collection Member - Tesla Destination	3	Tesla Destination
18779	EV Level 2	116 Route 117	Sugar Hill Inn, a Select Registry Property - Tesla Destination	2	Tesla Destination
18780	EV Level 2	195 Laconia Rd	Hampton Inn & Suites TIlton - Tesla Destination	2	Tesla Destination
18781	EV Level 2	90 N Main St	The Wolfeboro Inn - Tesla Destination	3	Tesla Destination
20233	EV Level 2	2 Contra Way	Fidelity	1	Non- Networked
20755	EV Level 2	979 NH Route 16	The Glen House	2	Non- Networked
21247	EV Level 2	150 Dow St	Millyard Office	2	Non- Networked
21428	EV Level 2	1 Market St	The Lyme Inn - Tesla Destination	1	Tesla Destination
22110	EV Level 2, EV DC Fast	385 Route 108	Hilltop Chevrolet	2	Non- Networked
22450	EV DC Fast	115 John E Devine Dr	MANCHESTERHD DCFAST HOG	1	ChargePoin t Network
22825	EV Level 2	177 Lafayette Rd	Hampton Ford- Hyundai	2	Non- Networked
23406	EV Level 2	75 South Commercial St	*SNHU* STATION 1	2	ChargePoin t Network

State EV Charging Location Unique	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
23465		14 Flm St	Elm Street Parking	2	Non-
20400	EV Level 2		Garage	2	Networked
24428	EV Level 2	27 Buttrick Rd	LIBERTY GS 27 BUTTRICK RD	2	ChargePoin t Network
24675	EV Level 2	65 Granite St	CNH GARAGE STATION 2	2	ChargePoin t Network
25101	EV Level 2	1 Mount Washington Auto Rd	Mt. Washington Auto Road - Tesla Destination	3	Tesla Destination
25625	EV DC Fast	290 North Main Street	Hannaford Supermarket - Tesla Supercharger	8	Tesla
25871	EV Level 2	7 Lebanon St	H-PKG FACILITY HANOVER GAR. 2	2	ChargePoin t Network
26561	EV Level 2	279 R-16	Ragged Mountain Equipment	2	Non- Networked
26564	EV Level 2	1675 White Mountain Hwy	Settlers Green Outlets	2	Non- Networked
31250	EV Level 2	5 Granite St	Stone Church Music Club	1	Non- Networked
32351	EV DC Fast	158 Main Street	Dunkin' - Tesla Supercharger	8	Tesla
32387	EV Level 2	15 Kit St	Filtrine Manufacturing Company	1	Non- Networked
32781	EV DC Fast	4 Mall Rd	KLEMMS MOBIL KLEMMSFAMILYV	1	ChargePoin t Network
32981	EV DC Fast	700 Lafayette Rd Unit #1	Walmart 1762 - Seabrook, NH	4	Electrify America
32985	EV Level 2	147 Piscataqua Rd	Emery Farm Market & Cafe	2	Non- Networked
33664	EV Level 2	406 S Main St	Tru by Hilton - Concord	2	EV Connect
34234	EV Level 2	107 Northeaster n Blvd	Skillsoft - Tesla Destination	1	Tesla Destination
34535	EV Level 2	402 S Broadway	ROCKINGHAM CPF25 GW01	2	ChargePoin t Network

State EV Charging Locatior Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
34863		33	Windsor Hills	2	Blink
		Chippewa	Condominium		Network
	EV Level 2	Way			
37357		100	PORTSMOUTH	1	ChargePoin
	EV Level 2	Foundry Pl	FOUNDRY 1		t Network
37358		100	PORTSMOUTH	1	ChargePoin
	EV Level 2	Foundry PI	FOUNDRY 2		t Network
38082		75 South	SNHU STATION 3	2	ChargePoin
		Commercial			t Network
	EV Level 2	St			
38083		75 South	SNHU STATION 2	2	ChargePoin
		Commercial			t Network
	EV Level 2	St			
38223		65 Granite	CNH GARAGE	2	ChargePoin
	EV Level 2	St	STATION 1		t Network
38421		7 Lebanon	H-PKG FACILITY	2	ChargePoin
	EV Level 2	St	HANOVER GAR. 1		t Network
43845		402 S	ROCKINGHAM SHOP	1	ChargePoin
	EV Level 2	Broadway	01		t Network
44949		17	SEACOAST1 DCFAST	1	ChargePoin
		Lafayette	HOG		t Network
101-0	EV DC Fast	Rd			
46173		1 Success	FCI Berlin	2	Non-
	EV Level 1	Loop Rd			Networked
46665		65 Laconia	Dunkin' - Tesla	8	lesla
10000	EV DC Fast	Road	Supercharger		
46909		26 Thayers	THAYERS LANE	2	ChargePoin
47704	EV Level 2	LN	THAYERS LANE	0	
47701		Pettee	PETTEE BROOK	2	ChargePoin
40740	EV Level 2	Brook Lane	PETTEE BROOK		t Network
48748		1500 South	Simon Mall of New	4	Electrify
		Willow	Hampshire		America
40074	EV DC Fast	Street		0	ChargeDairs
400/4		00 S Broadway	STATION 1	2	t Notwork
10000	EV Level 2	22 Nachus		1	Non
49098	EV/ Louis LO	SS Nashua Pd	Ford of Londonderry	1	Notworked
40057	EV Level 2	1600		2	ChargeDain
49907		TOOO		2	
	EV Level 2	Ave			LINGLWUIK

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
50216		955	ALLEGRO STATION 1	2	ChargePoin
	EV Level 2	Perimeter Rd			t Network
50489	EV Level 2	58 Portsmouth Ave	Audi Stratham	2	Blink Network
50943	EV Level 2	3 Gilbert Drive	Gilbert Crossing	2	SemaCharg e Network
51419	EV Level 2	2533 N River Rd	SNHU - CETA III SNHU CETA3	1	ChargePoin t Network
51523	EV DC Fast	285 PLAINFIELD RD	Walmart 2138 (West Lebanon, NH)	4	Electrify America
51733	EV Level 2	Gilbo Avenue	Commercial Street Lot	2	SemaCharg e Network
51927	EV Level 2	8 Digital Drive	Tara Heights	2	SemaCharg e Network
52666	EV Level 2	800 Central Street	Corsa	2	SemaCharg e Network
53903	EV Level 2, EV DC Fast	121 S River Rd	Whole Foods Market	2	eVgo Network
54278	EV Level 2, EV DC Fast	310 Daniel Webster Hwy	Pheasant Lane Mall	3	eVgo Network
54288	EV Level 2, EV DC Fast	99 Rockingha m Park Blvd	Mall at Rockingham Park	3	eVgo Network
54842	EV Level 2	33 Green St	REVISION ENERGY STATION 2	2	ChargePoin t Network
54843	EV Level 2	33 Green St	REVISION ENERGY STATION 1	2	ChargePoin t Network
55212	EV DC Fast	310 Daniel Webster Hwy	Simon Pheasant Lane Mall (Nashua, NH)	4	Electrify America
56157	EV Level 2	10 Tara Blvd	100 Innovative Way	2	SemaCharg e Network
56158	EV Level 2	10 Tara Boulevard	10 Tara Blvd	2	SemaCharg e Network
56379	EV Level 2	1439 White Mountain Hwy	Home2Suites	2	EV Connect

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
56522	EV Level 2	370 NH- 108	SOMERSWORHHYUN D INSIDE STATION	1	ChargePoin t Network
56557	EV DC Fast	99 Rockingha m Park Blvd	Simon Mall at Rockingham Park (Salem, NH)	4	Electrify America
56771	EV DC Fast	32 Mountain Valley Blvd	Mountain Valley Mall - Tesla Supercharger	8	Tesla
57309	EV Level 2	370 NH- 108	SOMERSWORTHHYU ND OUTSIDE STATION	1	ChargePoin t Network
57992	EV Level 2	4 Summer Ct	DC TRAN SVCS THOMPSON LOT #1	2	ChargePoin t Network
57993	EV Level 2	36 College Hill	DC TRAN SVCS DANA LOT #1	2	ChargePoin t Network
58296	EV Level 2	440 Winchester St	Fairfield Kia	2	Non- Networked
58297	EV Level 2	480 Main St	Best Western Plus - Landmark Inn	1	Non- Networked
58298	EV Level 2	43 Bethlehem Rd	Littleton Food Co-op	2	Non- Networked
58299	EV Level 2	650 Meadow St	Crosstown Motors	1	Non- Networked
58300	EV Level 2	851 Meadow St	Littleton Chevrolet Buick	2	Non- Networked
58301	EV Level 2	170 Auto Center Rd	Tulley BMW of Manchester	1	Non- Networked
58302	EV DC Fast	1300 S Porter St	Quirk Kia Mancheste	r 1	Non- Networked
58303	EV DC Fast	1250 S Willow St	Quirk Chevrolet	1	Non- Networked
58304	EV Level 2	40 Lake Ave	Residence Inn by Marriott	2	Non- Networked
58305	EV Level 2	30 Hammond Rd	Contemporary Chrysler Dodge Jeep Ram Fiat	1	Non- Networked
58306	EV Level 2	180 Daniel Webster Hwy	Lovering Volvo Cars	1	Non- Networked

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
58307	EV Level 2	147 Daniel Webster Hwy	Tulley BMW of Nashua	2	Non- Networked
58308	EV Level 2	Chargers Rd	Colby-Sawyer College	1	Non- Networked
58309	EV Level 2	1380 New Hampshire 103	Mountain Edge Resort and Spa	1	Non- Networked
58310	EV Level 2	129 NH- 175	Plymouth State University	2	Non- Networked
58311	EV Level 2	299 Vaughan St	AC Hotel Portsmouth Downtown	4	Non- Networked
58312	EV Level 2	10 Alice Peck Day Dr	10APDDRIVESSU APD 1	1	ChargePoin t Network
58794	EV DC Fast	11 Merchants Rd	Merchants Way - Tesla Supercharger	12	Tesla

\*Defined by the State - this should match the unique ID in the State's applicable GIS databases."

# List of Acronyms

AFC	Alternative Fuel Corridor
DAC	Disadvantaged Community
DBEA	Department of Business and Economic Affairs
DCFC	Direct Current Fast Charger
DES	Department of Environmental Services
DHHS	Department of Health and Human Services
DNCR	Department of Natural and Cultural Resources
DoE	Department of Energy
EAP	Emergency Action Plan
ED&I	Equity, Diversity, and Inclusion
EJ	Equity and Justice
EV	Electric Vehicle
EVITP	Electric Vehicle Infrastructure Training Program
EVSE	Electric Vehicle Supply Equipment
FY	Fiscal Year
G&C	New Hampshire Governor and Council
MPO	Metropolitan Planning Organization
NEVI	National Electric Vehicle Infrastructure
NH	New Hampshire
NHDOT	New Hampshire Department of Transportation
NHEC	New Hampshire Electric Charging
OCPP	Open Charge Point Protocol
PUC	Public Utility Commission
RFP	Request for Proposal
RPC	Remote Procedure Call
VW Trust	Volkswagen Environmental Mitigation Trust