

Extension of autoroute 35 to the U.S. border – Phases III and IV

ETBC Webinar

November 15, 2023

Extension of autoroute 35 — Location

Extension of autoroute 35

- From Saint-Jean-sur-Richelieu to the U.S. border
- Divided in four phases
- Phases I and II opened to traffic in 2014

Phases III and IV

- Located in the Estrie region
- **Phase III:** from Saint-Sébastien to north of Saint-Armand
- **Phase IV:** from north of Saint-Armand to the U.S. border



Extension of autoroute 35 — Context

Need

- Complete an essential freeway link of nearly 500 km between Montréal and Boston

Objectives

- Strengthen **trade and tourist exchanges** between Québec and New England
- Improve **road safety** on route 133
- Improve the **quality of life** of people who live along route 133



Phase III — Underway

Scope

- Freeway with **2 lanes in each direction** (8.9 km)
- Bridge over a river
- Overpass
- Interchange
- Roundabout



Construction of a freeway with 2 lanes in each direction (8.9 km)



Overpass (route 202) in Pike River — Open since 2021

Phase III — Underway



Construction of a roundabout in Saint-Armand — Partially open since summer 2023



Construction of the chemin Champlain interchange in Saint-Armand — Partially open since fall 2023

Phase III — Underway

Schedule

- Work began in 2020
- End date to be confirmed due to delays in the procurement of steel beams for the bridge spanning rivière aux Brochets



Bridge nearly 400 m in length on autoroute 35 over rivière aux Brochets in Pike River

Phase IV — In the planning stage

Scope

- **Repair of existing route 133**
- Redevelopment of the avenue Montgomery intersection

Schedule

- Completion of the preliminary design study: 2024
- Development of plans and specifications, beginning of work and commissioning: **dates to be confirmed**



Intersection of route 133 and avenue Montgomery in Saint-Armand



Questions

Electric Vehicle Infrastructure in Vermont

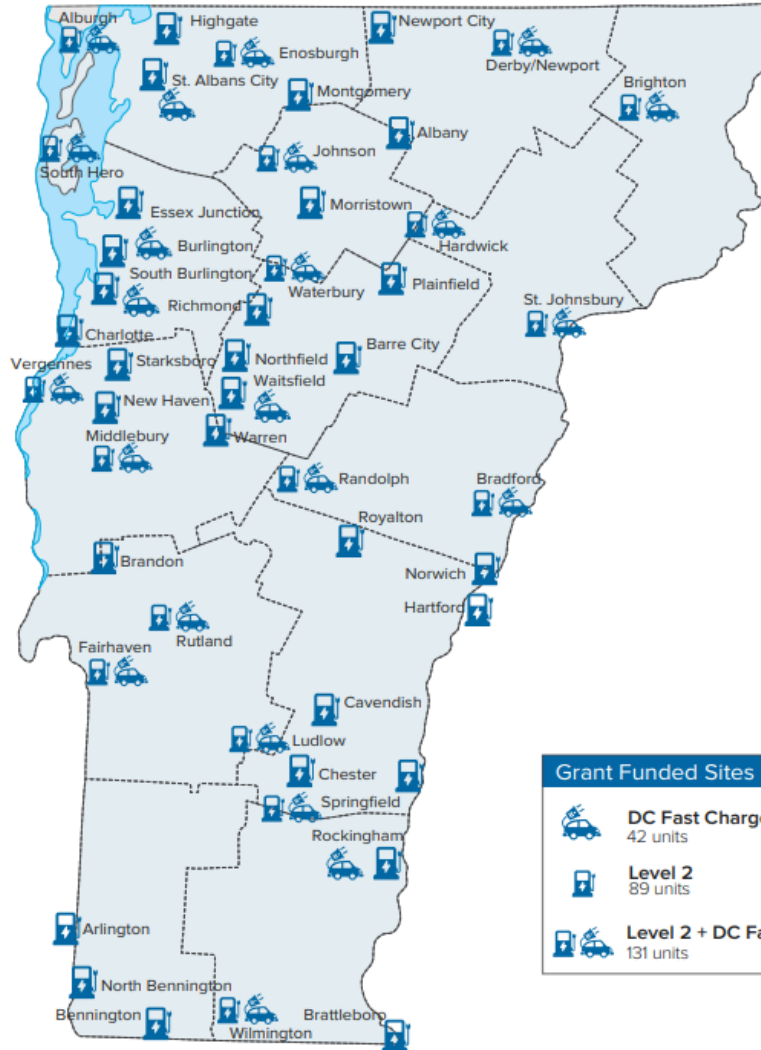
EASTERN BORDER TRANSPORTATION COALITION, NOVEMBER 15, 2023

PATRICK MURPHY, SUSTAINABILITY + INNOVATIONS PROJECT MANAGER, VT AGENCY OF TRANSPORTATION

Funding Timeline

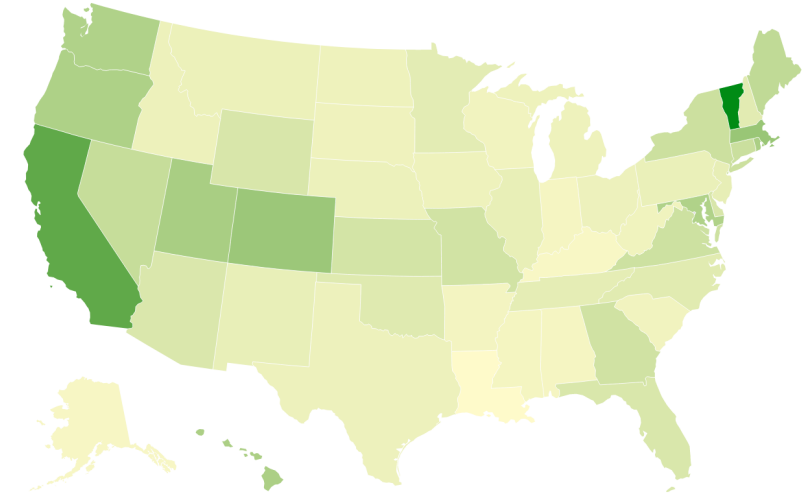
- 2014: VT launches Electric Vehicle Supply Equipment (EVSE) Program with \$200k
- 2017: VW Settlement, \$2.8 million
- 2019: ~ \$1 million for 75 Level 2 + 5 DC Fast Chargers
- 2020: \$1.7 million to Blink for 11 locations
- 2021: \$750k in capital funds to Norwich Technologies for 6 locations
- 2022: \$1 million to residential charging for multiunit housing
- 2023: \$10 million in state funds for community charging
- \$21.2 million in NEVI formula funds through 2026 + \$2 million in ARPA funds
- Charging Fueling Infrastructure Grants/Competitive Gap-filling Grants

Public EVSE Investments in Vermont



Alternative Fueling Station Density Across the U.S.

EV Chargers Per 100,000 Residents
8.3 139.7



Ranking based upon EV charger density per capita; a rank of 1 is the best, most-dense.
Source: CoPilot • Created with Datawrapper

Grant Funded Sites	
	DC Fast Charge 42 units
	Level 2 89 units
	Level 2 + DC Fast Charge 131 units

Vermont has highest number of public chargers per capita in U.S.

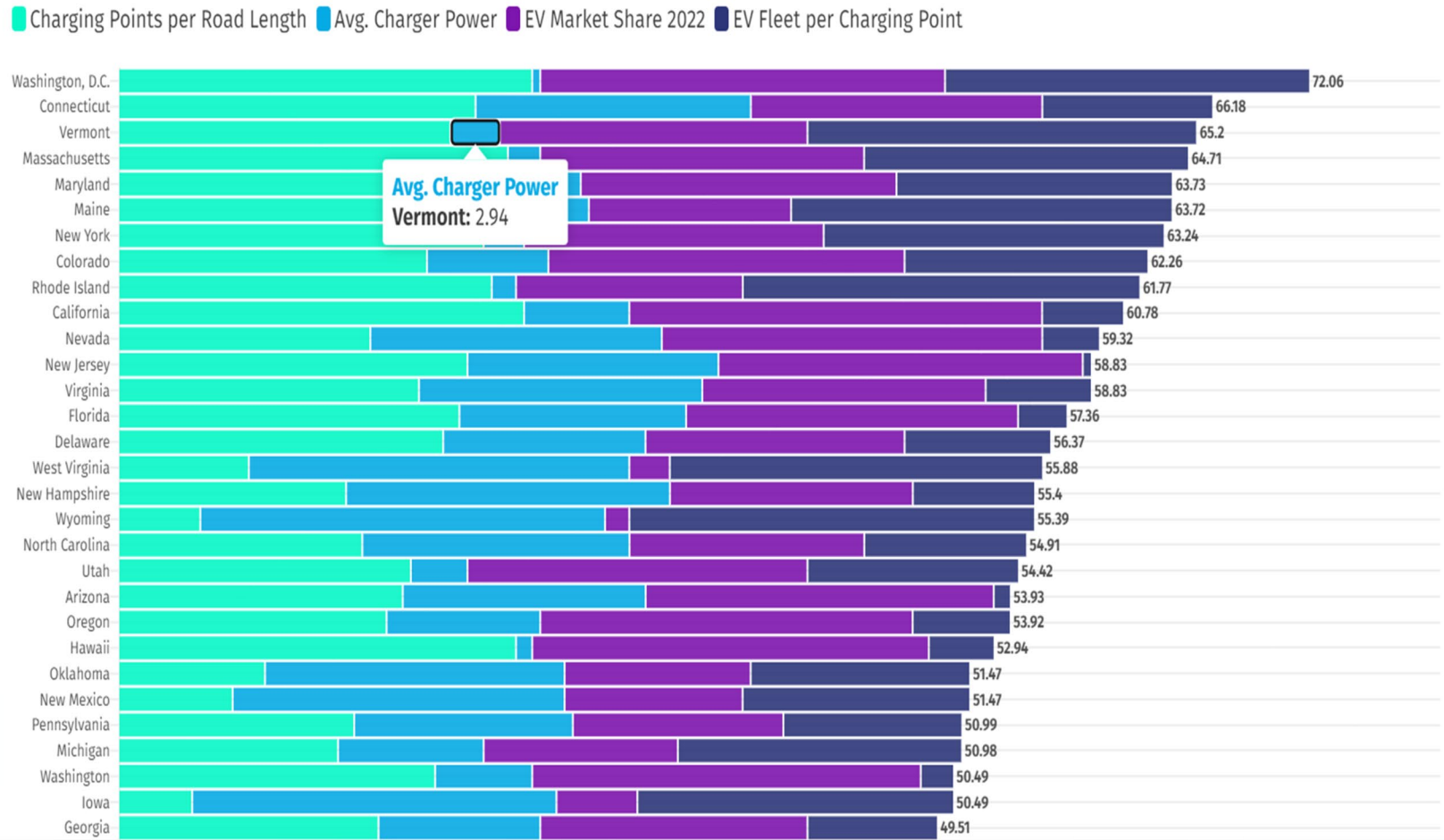
139.7 charging ports per 100,000 people

Increasing EV Charging Standards

- Minimum of four (4) ports in each location; up to eight (8) in proposed Chargehubs
- Minimum capacity to supply 150kW per port simultaneously ; many will be 175-180kW up to 350kW in Chargehubs
- Maximum 50-mile distance between fast charging locations; State goal aims for no more than 25 miles
- Minimum of 97% uptime requirements, simpler payment methods, more accessible and convenient

EV Index Ranking United States

EV market and charging infrastructure maturity on multiple dimensions since 2020 – presented by HERE Technologies and SBD Automotive.



Vermont ranks #3 overall in EV charging ecosystem behind DC and CT, but received low marks for higher powered charging: [EV Index | HERE](#)

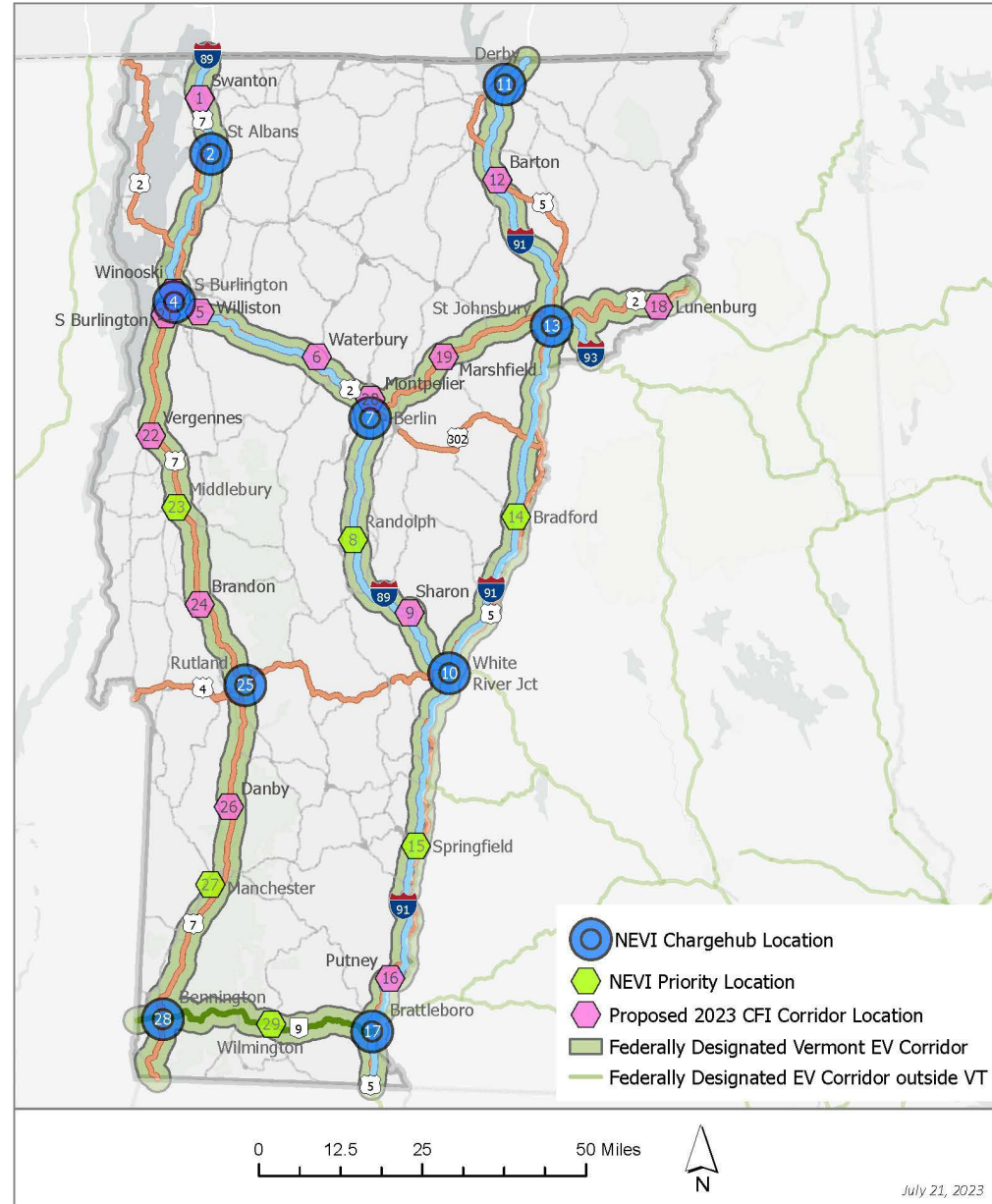
National Electric Vehicle Infrastructure (NEVI) Program

Priorities:

1. Equity and access; Broad geographic coverage
2. Greater redundancy for mainstream adoption
3. Preparation for EV freight—Chargehubs to include up to 8 ports, with 350kW stations and pull-through parking configurations

1st NEVI-funded site to be completed before end of 2023

Vermont NEVI Priority Areas

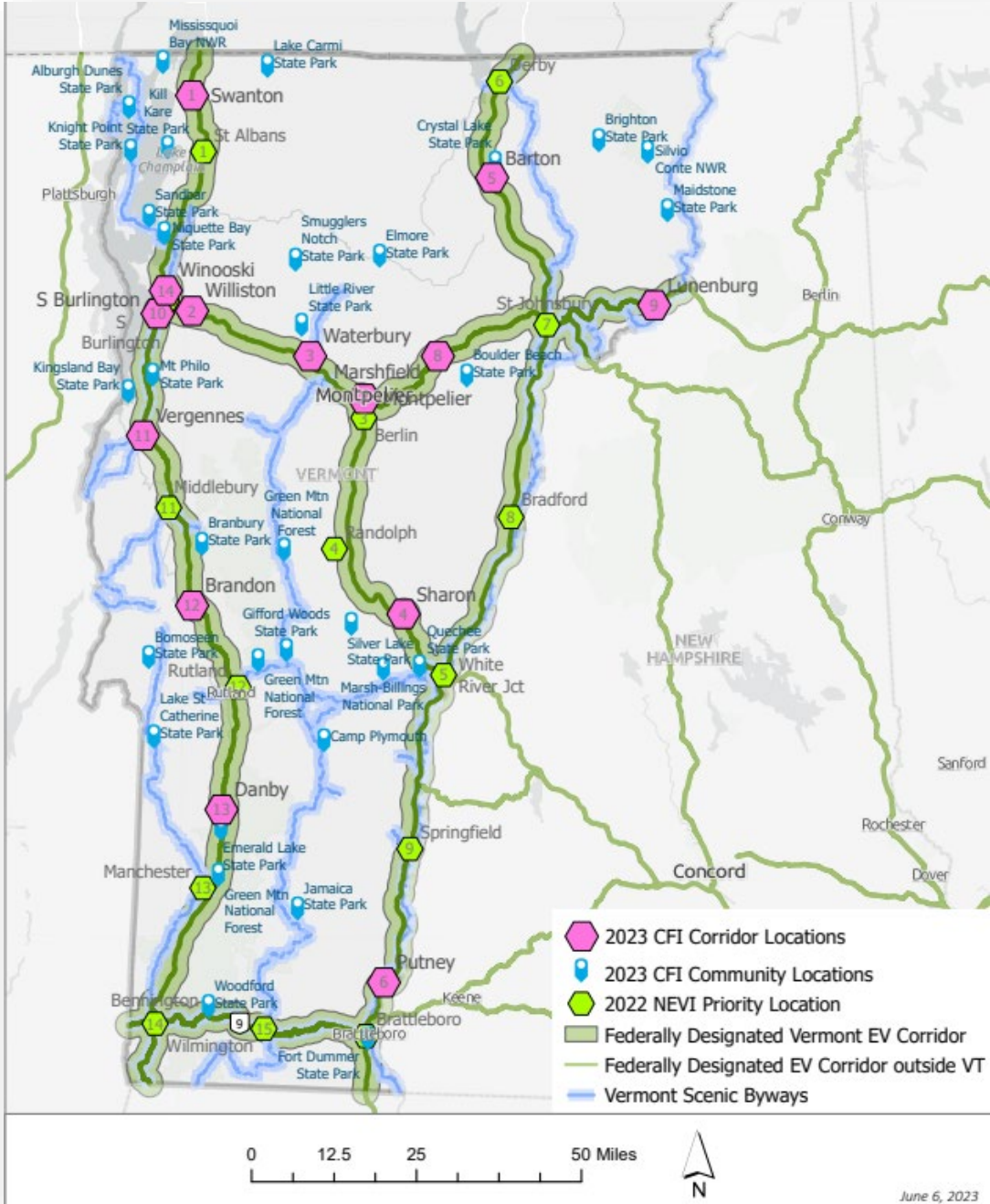


Charging and Fueling Infrastructure Grant

Competitive Federal Grant:

- 1. Support tourism and outdoor recreation economy
- 2. Fill in network gaps not covered by Alt Fuel Corridors
- 3. Resiliency in more remote/rural areas

\$22.4 million request for 14 Fast charging locations and 32 public lands with Level 2 charging = **Total of 184 new charging ports**





Bolton Valley Ski Resort (above) – CarShare Vermont (below)

Electrify Your Fleet Incentive Program

Open to all businesses, nonprofit organizations and municipalities in the State of Vermont

From \$2,500 to \$5,000 off the cost of a new electric vehicle (Battery Electric trucks or cars, Plug-in hybrids, electric motorcycles, e-bikes, or electric snowmobiles)

Grantee to demonstrate how lease(s) or purchase(s) will reduce greenhouse gas emissions from fleet

Forty percent (40%) of funds available on a first-come, first-served basis to applicants who are from, or who primarily serve, historically underserved communities

For more info: [Electrify Your Fleet Program | Agency of Transportation \(vermont.gov\)](https://www.vermont.gov/transportation/electrify-your-fleet)

Medium + Heavy-Duty Electric Fleets

Vermont's Climate Action Plan



- Adoption of Advance Clean Trucks
- Electrification of Public Transit Fleet (Low and No Emissions Grants)
- School Bus Electrification (EPA Grant Programs)
- Implementation of a MHD Vehicle Incentive Program (Beyond Diesel Emissions Reduction Act Program)
- Support Electrification of Auxiliary Systems

State of Vermont

Electric Vehicle Infrastructure Deployment Plan – 2023 (FFY2024) Update



Vermont Agency of Transportation
August 1, 2023

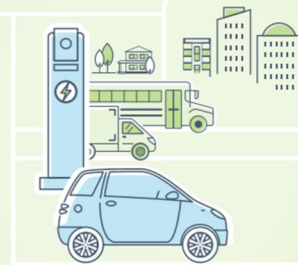


Plan for a
Green
Economy



2023-2030 QUÉBEC'S ELECTRIC VEHICLE CHARGING STRATEGY

On the road to an electric future



2030 Vision

By 2030, Québec will have one of the most reliable charging infrastructures in North America. The network will be structured, easy to use and meet the needs of all users throughout the territory, thereby helping to achieve transportation electrification objectives in an integrated manner, with a long-term perspective.

Votre
gouvernement



On the road to an electric future

The targets adopted by the Québec government are ambitious. It is important to exercise unifying leadership to provide charging solutions that take into account all the needs of electric vehicle drivers (EV drivers). The Strategy aims to deploy adequate charging infrastructure to keep pace with the accelerated use of electric vehicles throughout Québec. To achieve this, the Québec government is adopting a rolling plan that counts on the active participation of Québec companies in this booming sector, municipalities and Hydro-Québec.

Targets adapted to Québec's context

- ▶ By 2030, 35% of parking spaces in multiple dwelling buildings will be adapted to allow the installation of charging stations, constituting 600,000 parking spaces.
- ▶ By 2030, Québec will have a total of 6,700 public fast-charging stations and 110,000 Level 2 public charging stations.

Major investments for Québec's green economy

- ▶ \$514M will be invested over the 2023-2028 period to implement the Strategy's measures.
- ▶ The measures will be financed by the Electrification and Climate Change Fund (ECCF).

Québec

Cross-Border Coordination: Vermont & Quebec

VT – Canada Border Crossings



Modernization of Land Ports of Entry

- More than \$150 million towards Highgate Springs Land Port of Entry, busiest port in the State and among the busiest in New England (nearly 580,000 crossings annually)
- Another \$50 million to Alburgh Springs, Beebe Plain, Norton and Richford



VT – Canada Border Crossings

EV Charging Considerations

- Prepare for the future and dig once— design facilities for less carbon-intensive materials and more energy-efficiency, but for growing EV adoption, too
- What are the electrical infrastructure, battery storage, spatial/parking needs to support both vehicle electrification and national security?
- How can both jurisdictions support development of charging infrastructure along key corridors (e.g. I-89 and Autoroute 35) and smart communication to reduce congestion at LPOEs?

Contact

Patrick Ó. Murphy

Sustainability & Innovations Project Manager
Policy, Planning & Intermodal Development Division
Vermont Agency of Transportation

802.595.6738

Patrick.Murphy@vermont.gov



**Department of
Transportation**



National Electric Vehicle Infrastructure (NEVI) Formula Program Update: November 2023

New York State is Committed to Fighting Climate Change

- **The Climate Leadership and Community Protection Act (CLCPA) (2019)**
 - Among the most ambitious climate laws in the nation
 - Goal to reduce economy-wide greenhouse gas emissions 40% by 2030 and no less than 85% by 2050
- **Zero-emission Requirements for the Sale of New Vehicles (2022)**
 - 100% of in-state sales of new passenger cars/trucks to be zero-emissions by 2035
- **Commercial Tariff for Electric Vehicle Charging (2023)**
 - Alternatives to traditional demand-based rate structures to reduce the utility bills for commercial electric vehicle charging

NYS Electric Vehicles and EV Charging Programs

Electric vehicle deployment will play a key role in meeting the dramatic CLCPA carbon reduction goals

- **Public Service Commission Make-Ready Program & EV Tariffs**
 - Make-Ready Program: \$701M in ratepayer-funded incentives
- **New York Power Authority EVolve NY**
 - \$250M investment in Direct Current Fast Chargers (DCFC), fleet charging statewide, EV outreach
- **National Electric Vehicle Infrastructure (NEVI) Program**
 - \$175M in federal funds for DC fast chargers along major highways
- **NYSERDA Charge Ready & DC Fast Charger Program (Light-duty vehicles (LDVs))**
 - \$17M in rebates for Level 2 charging stations at public, workplace, multi-family building locations invested to date
 - \$16M in grants for DCFC in upstate regions, funded by VW Settlement
- **DEC Municipal Zero-emission Vehicle (ZEV) grants**
 - Up to 80% of costs for EV charging & hydrogen fueling stations installed by municipal governments
- **State and federal tax credits**
 - 50%, up to \$5,000 state tax credit
 - 30%, up to \$100,000 federal tax credit



National Electric Vehicle Infrastructure (NEVI) Formula Funding Program

- \$175 million anticipated over the 5 year period of the Bipartisan Infrastructure Law (through September 30, 2026).
- States are required to submit EV Infrastructure Deployment Plans (NEVI Plans) annually in August.
- New York State's 2023 NEVI Plan Update was submitted on August 1, 2023, and approved in late September 2023.



New York State NEVI Goals

- Build **light duty EV charging infrastructure** that will support the acceleration of near-term zero emission vehicle adoption to meet the State's ambitious ZEV adoption goals
- Enable **full zero emission vehicle transition** in the longer term
- Support medium and heavy-duty vehicles & bus electrification by constructing **medium and heavy-duty EV charging stations**.
 - MHD EV currently being explore along the New York State Thruway I-87 corridor from NYC to Albany.



New York State Agency Partnership

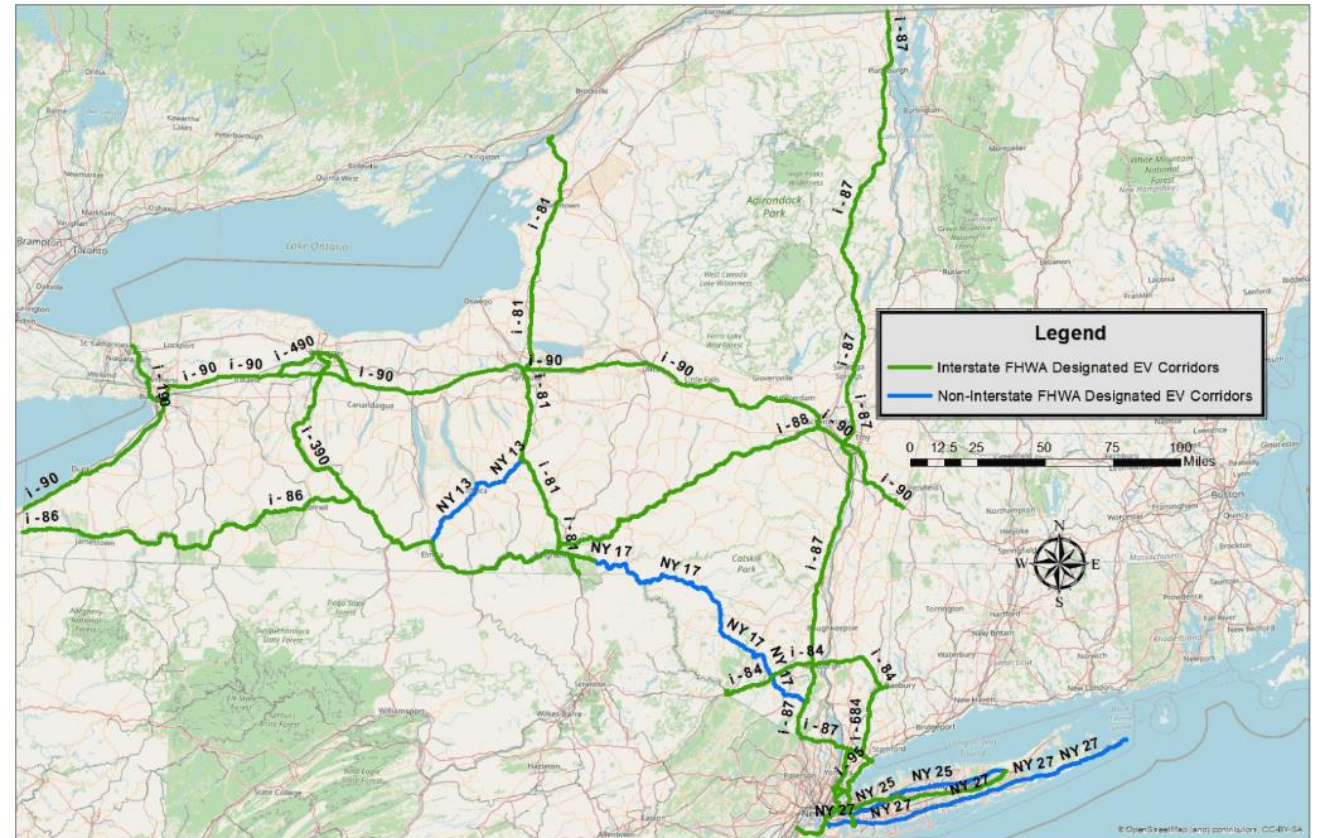
Coordinated partnership between New York State agencies

- New York State Department of Transportation (NYSDOT) (lead)
- New York State Energy Research and Development Authority (NYSERDA)
- New York State Thruway Authority (NYSTA)
- New York Power Authority (NYPA)
- New York State Department of Public Service (DPS)
- New York State Department of Environmental Conservation (NYSDEC)
- Long Island Power Authority (LIPA)



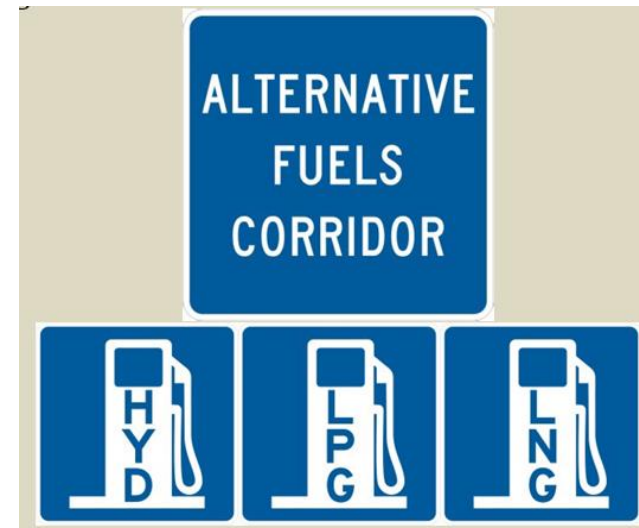
New York State's Designated Alternative Fuel Corridors

- NEVI funding is restricted to **FHWA designated EV Alternative Fuel Corridors** with preference to interstate corridors.
- NY will capitalize on the extent of the State's **existing EV charging station infrastructure** that meets the NEVI geographic and capacity standards along the designated EV AFCs and fill remaining gaps.
- Funding may be used "off" designated EV Corridors only after these corridors are "fully built out."



FHWA Designated Alternative Fuels Corridors (AFC)

- The FHWA Alternative Fuel Corridors (AFC) designations began in 2016.
- The AFC Program was initially focused on public awareness of the availability of alternative fuels.
 - Fuels covered by the program are:
 - Electricity
 - Hydrogen
 - Compressed Natural Gas (CNG)
 - Propane
 - Liquid Natural Gas



NEVI Alternative Fuel Corridor “Build Out”

1. Charging opportunities **at least every 50 miles** along designated EV Alternate Fuel Corridors and **no more than one travel mile off** the designated EV corridor
2. Charging infrastructure must have **at least four 150 kW** direct current (DC) fast chargers with combined charging system (CCS) ports capable of **simultaneously charging four EVs**
3. Charging infrastructure must have a minimum station power capability **at or above 600kW**



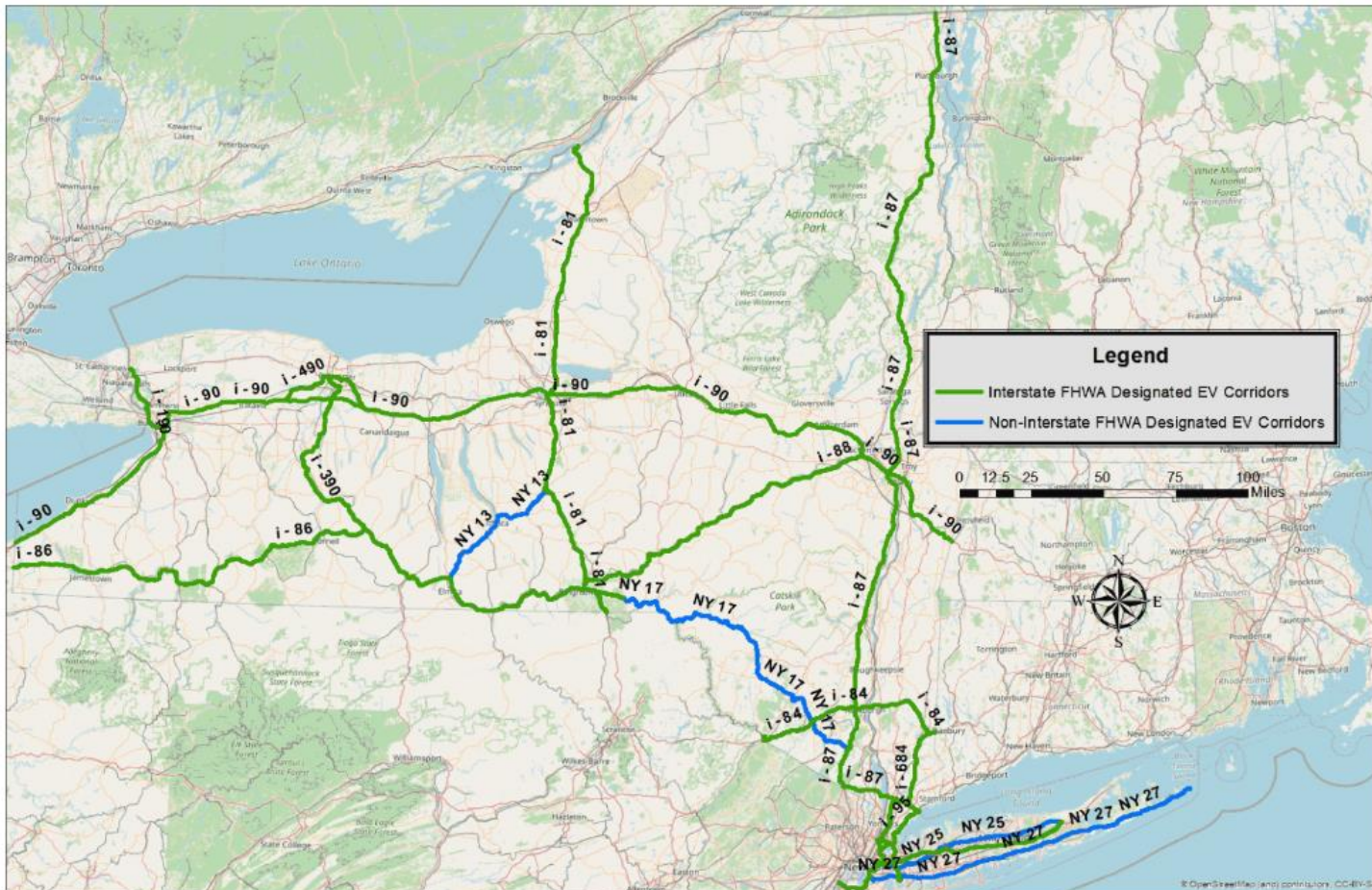
Must “build out” designated corridors to be eligible for federal NEVI funding off designated EV corridors.

NYSDOT/NYPA NEVI Partnership

- ➔ New York State Department of Transportation (NYSDOT) and New York Power Authority (NYPA) executed a **NEVI Memorandum of Agreement**
 - NYPA agrees to build, operate and maintain **NEVI compliant EV Charging Stations** through host agreements to fill the roughly two dozen gaps along the **designated Alternative Fuel Corridors**
 - NYSDOT agrees to **reimburse NYPA** for NEVI eligible **software plus operation and maintenance costs** per station **for up to 5 years**



What Sets New York Apart



NEVI funded project scope for AFC buildout is limited to:

- Acquisition and installation of **NEVI compliant software**
 - Provides network connectivity of EV chargers
 - Supports required submission of data and information on publicly available EV chargers
- The **operation and maintenance** of the NEVI compliant DCFC charging stations for up to 5 years

Advantages of NY's Approach to Build Out the Designated AFC

- ✓ **Reduces risk** of federal aid ineligibility
 - U.S. Code Title 23 compliance is complicated; New York's unique approach takes design, right of way and construction activities out of the project scope of NEVI funded projects, thus avoiding the complex requirements
- ✓ **Expedites delivery** of the NEVI compliant EV Charging sites
 - Uses existing/familiar project development processes, contractors and supply chains while meeting NEVI requirements
- ✓ **Optimizes** use of NEVI funds and timeline for designated Alternative Fuel Corridors (AFC) build out



NYSDOT is working with its state partner agencies to develop additional approaches to use NEVI funds for projects beyond AFC buildout