



Eastern Border Transportation Coalition

Charging Forward – Electric Vehicles at the Border

November 16, 2022

WEBINAR





Natural Resources
Canada

Ressources naturelles
Canada

Charging Forward on Electric Vehicles

Eastern Border Transportation Coalition

November 16, 2022

Dr. Thierry Spiess, Senior Policy Advisor and Program Manager

Canada

Canada's ZEV Commitment

100% of all light-duty vehicle sales to be ZEVs by 2035



Incentives



Infrastructure



Government Leadership



**Research, Development and
Demonstration**



Awareness and Training



**Industrial and Supply
Chain Transition**



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NRCan's Investment in EV Infrastructure

EV and Alternative Fuel Infrastructure Deployment Initiative \$96.4M (2016 – 2022)

- Focus on public fast-chargers along the National Highway System
- Target is 1,000 DCFCs

ZEV Infrastructure Program - \$680M over 8 years (2019 – 2027)

- To support the deployment of infrastructure where Canadians live, work and play, including public places
- Target is 33,500 EV chargers

...With new accelerated ZEV targets we are now sharing a target of an additional 50,000 EV chargers with the Canada Infrastructure Bank!

Results to date

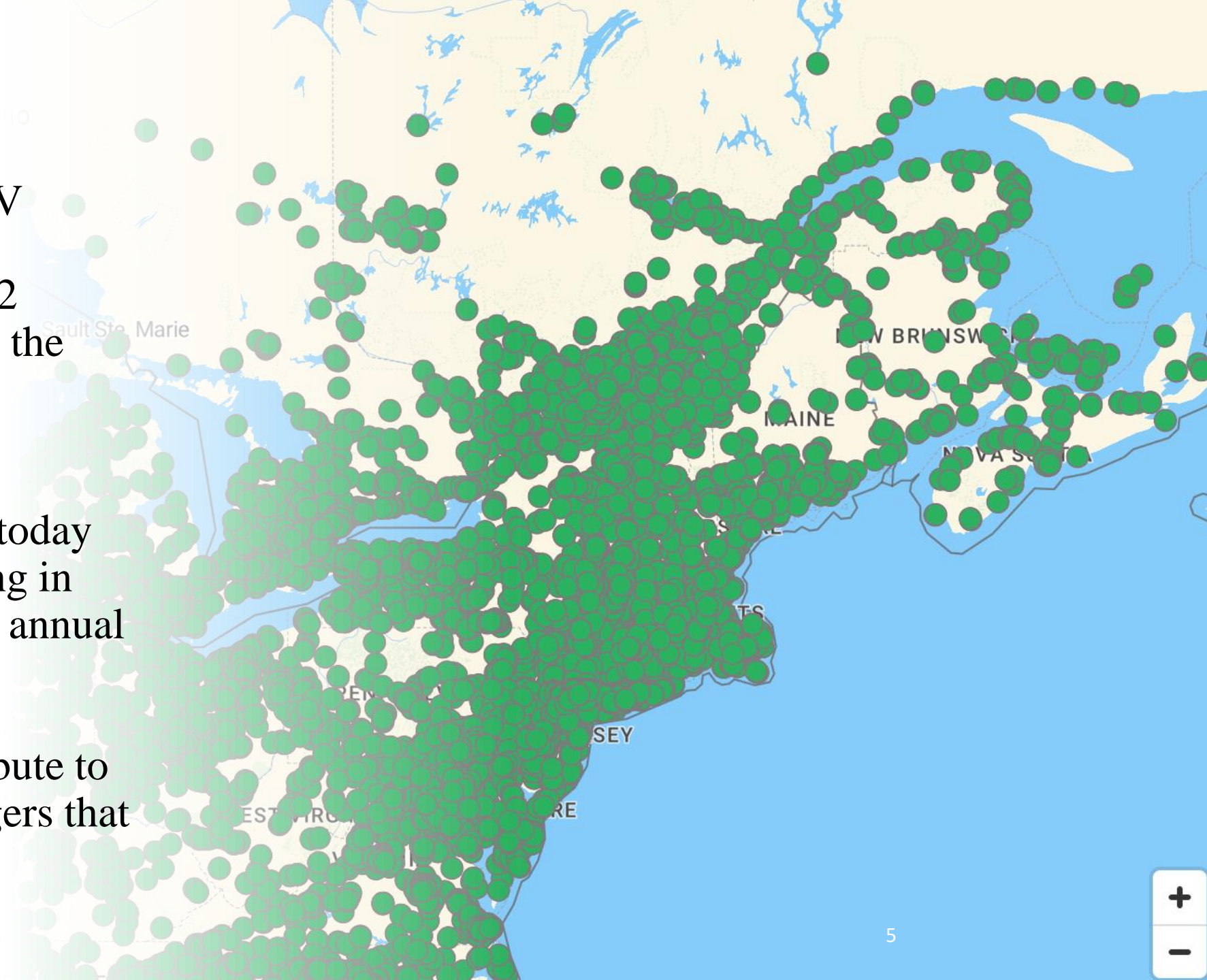
Program's target of 34,500 EV chargers:

576 projects selected in 12 jurisdictions will result in the installation of **34,916** EV chargers

Approximately 2,500 EV chargers are in operation today

Roughly \$402M remaining in program funds with more annual RFPs

ZEVIP funds will also contribute to the target of 50,000 EV chargers that NRCan shares with the CIB



Next steps for ZEVIP

- Support projects in underserved areas
- Assess the public charging needs
- Collaborating with the CIB to launch a portal for infra projects
- Align with P/T programs
 - The federal government and their agency are not an eligible recipient. They can offer the land as the contribution and have the proponent be an eligible recipient (e.g. EV manufacturer).
 - For ports it is slightly different, the Maritime Act allows them to be eligible for infrastructure projects.



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The wordmark for Canada, with a small red maple leaf above the 'a'.

Zero Emission Vehicle Awareness Initiative (ZEVAI)

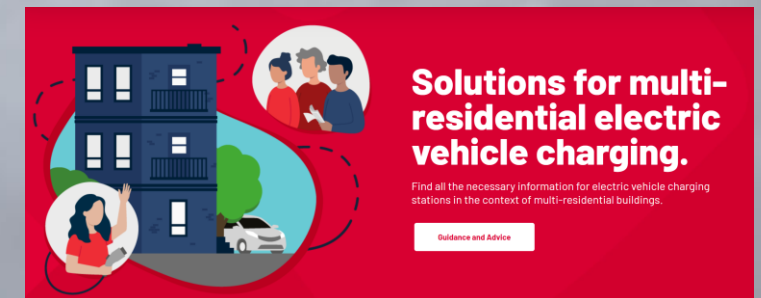


Regional Breakdown of Successful Applicants



ZEVAI examples:

- Eastern Charlotte Waterways Inc.
- New Brunswick Power Corporation
- New Brunswick Lung Association
- Mohawk Council of Akwesasne



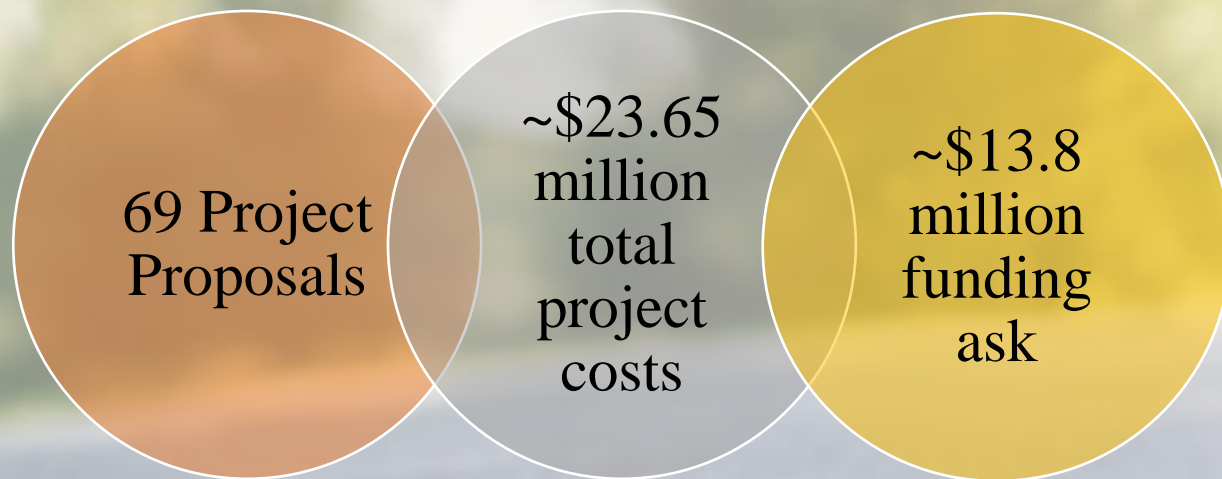
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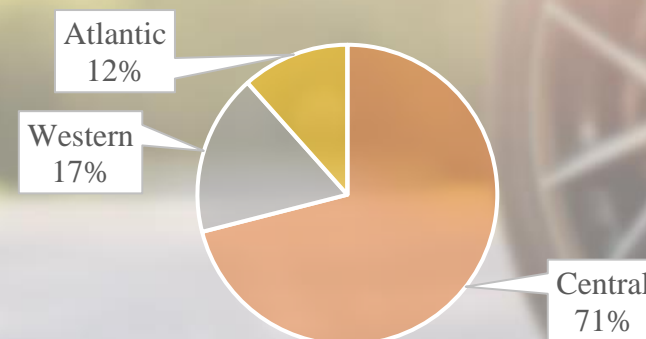
Canada

ZEVAI 2022 and what more to come...

ZEVAI LDV Call for Proposals —Preliminary Results from 2022



Regional Breakdown of CFP Applicants



Notional funding allocations for this call for proposals = \$6 million/2 years



With addition of **dedicated medium- and heavy-duty (MHDV) stream**, 2022 expected to far exceed 2021 number of applications

- MHDV RFI closed September 12, 2022 to inform CFP later in 2022
- 49 RFI submissions described projects that align with planned NRCan MHDV awareness funding
- Estimated total project costs of \$35 million

Dedicated Stream for Indigenous-led projects

- Launching soon - open intake and added supports for project definition and funding application



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U.S. General Services Administration

The background of the slide is a photograph of an electric vehicle (EV) charging station. A green charging cable is plugged into the charging port of a white EV. The charging station is green and white, with a digital display and buttons. The background is a clear blue sky with some clouds. A semi-transparent green banner is overlaid across the middle of the image, containing the title and authors.

Advancing Fleet Electrification

Neil Gilligan, Chris LaRocque and Lisa Wheatley

Introductions

GSA PBS/FAS Team:

- PBS Center for Electric Vehicle Infrastructure (CEVI)
 - Neil Gilligan, Program Manager
 - Chris LaRocque, Program Coordinator
- FAS ZEV Team
 - Lisa Wheatley, Program Analyst



U.S. Federal Fleet Electrification Initiative

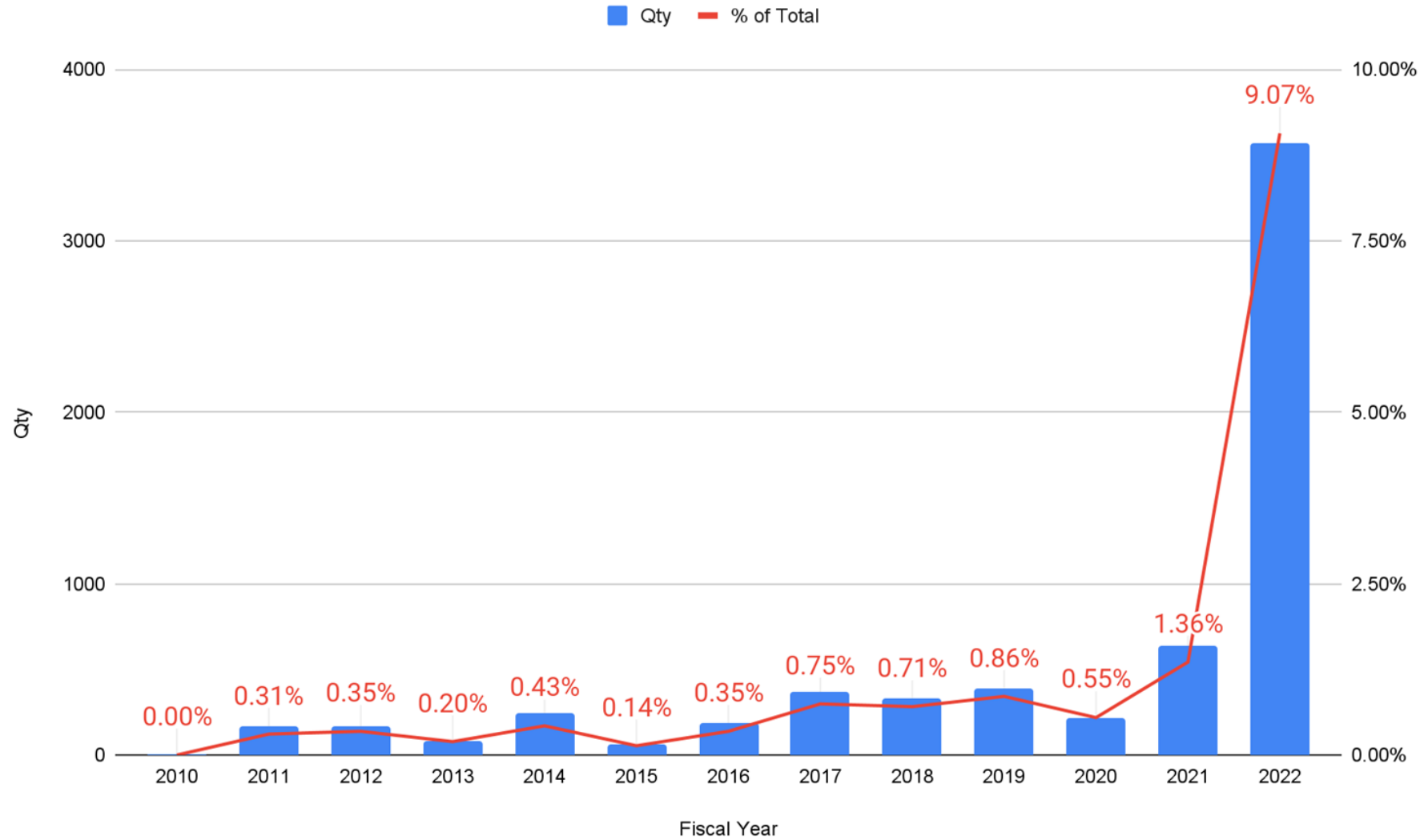
Advancing EV Market

- Fixing America's Surface Transportation (FAST) Act of 2015; the Energy Policy Acts (EPA) of 1992, 2005, and 2007, EO 13990 Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis
- EO 14057 (100% acquisition of light-duty GOV ZEVs by 2027 / all GOV ZEV by 2035)
- Infrastructure Bill - \$7.5B for ZEV Charging across U.S. (NEVI Program)
- Domestic battery and vehicle production and station manufacturing

Leading by Example

- ZEV Acquisitions including annual intermediate targets as part of broader federal climate plan
- New infrastructure solutions & building out infrastructure in Federal Facilities
- Pushing for open standards, strong cybersecurity and repeatable processes
- Supporting agency partners & strengthening stakeholder partnerships

Federal Fleet Electric Vehicle Orders



GSA's Role in U.S. Federal Fleet Electrification

Vehicle Provider / Acquisition of Equipment

- Mandatory source for federal vehicle purchasing
- Best-in-class for fleet leasing
- Pursuing new electric vehicle offerings
- Assisting with vehicle and infrastructure planning
- Awarded EV Charging Station Blanket Purchase Agreements



Facility Management / Design & Construction / Real Property

- Facilitating federal tenant infrastructure requests in GSA managed space
- Developing strategy for GSA-owned buildings to be electric vehicle ready
- Providing design, construction and installation governmentwide (GSA controlled AND non-GSA controlled space)

EVSE IDIQ Map



Zone A

Connecticut • Delaware • Maine • Maryland • Massachusetts • New Hampshire • New Jersey • New York • Pennsylvania • Rhode Island • Vermont • Virginia • Washington D.C. • West Virginia

Zone B

Alabama • Arkansas • Florida • Georgia • Kentucky • Louisiana • Mississippi • New Mexico • North Carolina • Oklahoma • Puerto Rico • South Carolina • Tennessee • Texas

Zone C

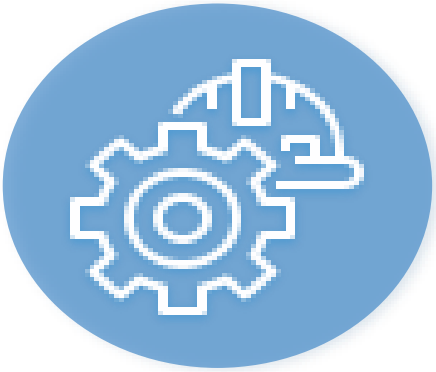
Illinois • Indiana • Iowa • Kansas • Michigan • Minnesota • Missouri • Nebraska • Ohio • Wisconsin

Zone D

Alaska • Arizona • California • Colorado • Hawaii • Idaho • Montana • Nevada • North Dakota • Oregon • South Dakota • Utah • Washington • Wyoming

Ordering Path Options

gsa.gov/ElectrifyTheFleet



GSA/PBS Awards & Manages

For buildings in or not in GSA's Building Portfolio:

Agency submits requirements & funding



GSA/PBS Provides Contract Support

Agency submits requirements



Self-Service Contracting, Design & Construction

Agency requests Delegation of Procurement authority from GSA

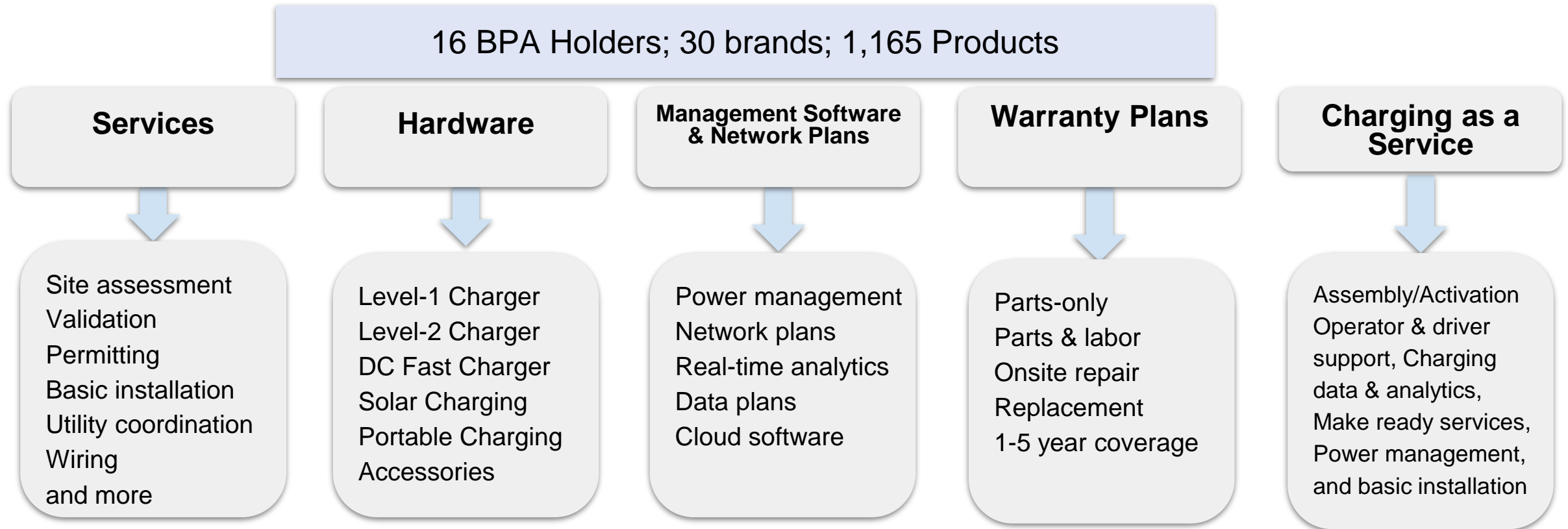


Self-Service for EVSE BPAs

Agency views offerings on gsa.gov/evse & orders from BPA Holder

For buildings not in GSA's Building Portfolio:

Governmentwide BPAs: Streamline Infrastructure Ordering



Who can access:

- Federal agencies
- Contractors with PBS' IDIQs
- Cities & States for emergency/disaster prep.(Stafford Act (42 U.S.C. 5121-5207)); Public Health Emergencies (42 USC § 247d); IT, law enforcement LE and security solutions in support of everyday missions (40 U.S.C § 502 (c))

Site Assessments

FY22 Awarded:

- AE to evaluate existing electrical infrastructure to determine capacity for EVSE.
- 235 facility locations
- All GSA regions included

Questions

Points of Contact:

- Neil Gilligan (PBS): neil.gilligan@gsa.gov
- Chris LaRocque (PBS): chris.larocque@gsa.gov
- Lisa Wheatley (FAS): lisa.wheatley@gsa.gov

Resources:

- gsa.gov/ElectrifytheFleet
 - EVSE Acquisition Resources
- [Department of Energy, Federal Energy Management Program Resources](#)



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Énergie NB Power

RÉSEAU
branch  **charge**
NETWORK



NB Power's
smart public
charging network
for electric vehicles
in New Brunswick

November 16, 2022

The electrification of transportation is a **triple** win!



For every EV adopted...



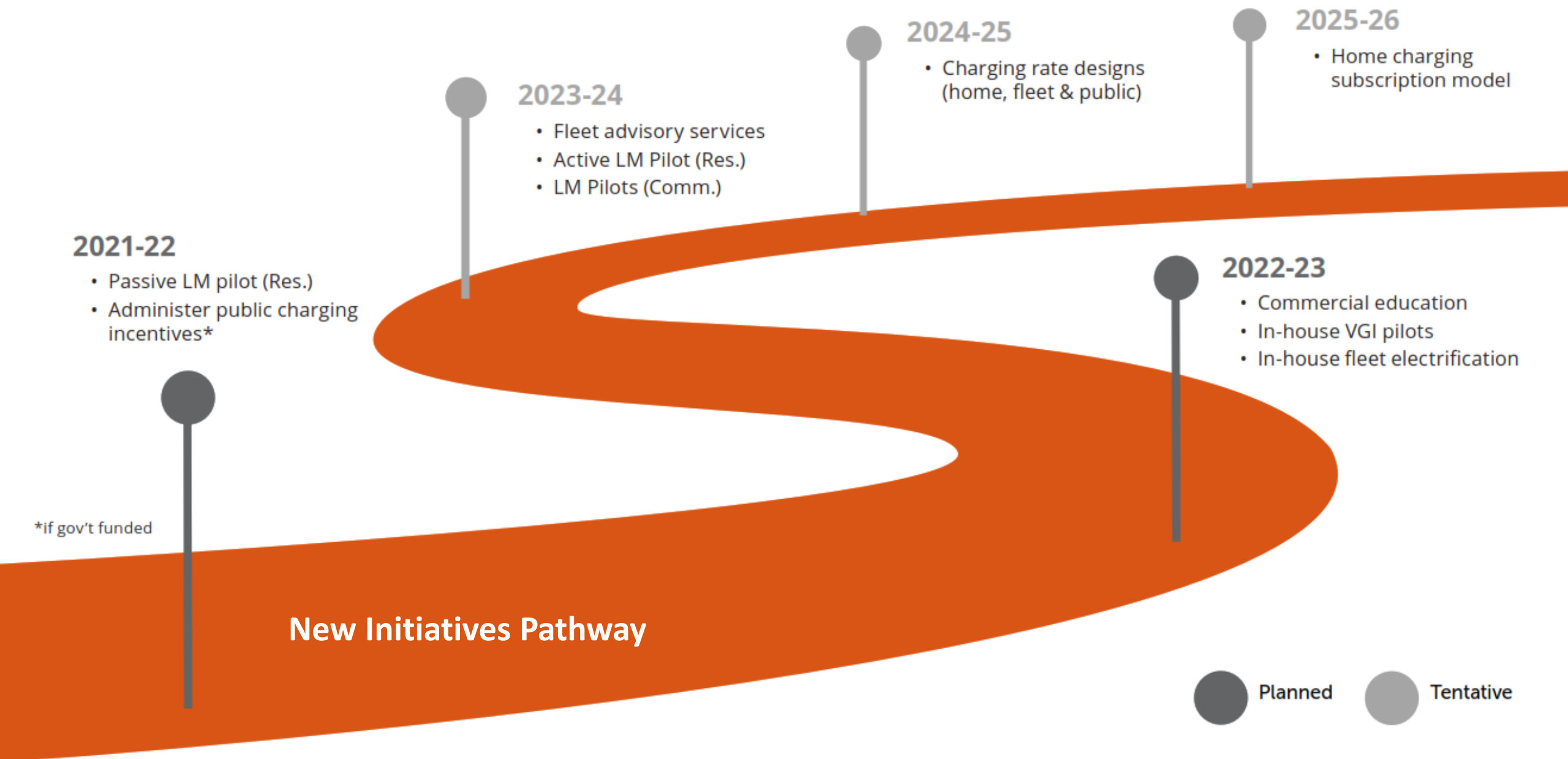
Up to **2,200 kg**
CO₂ reduced
annually



\$740 lifetime
ratepayer
benefit



Up to **\$2,000**
annual fuel &
maintenance
savings



Énergie NB Power





The eCharge Network

- Launched in 2017
- First fully-connected province
- Website and mobile app for public charging stations
- 26 fast-charging sites
- 67 level 2 charging sites
- Consistent pricing



Value for our Customers

- Generate increased traffic and revenue for the business
- Demonstrate sustainability to customers and employees
- Technology tested for life in NB
- Smart and simple network
- Hardware, software, and management platform from one vendor
- 24/7 technical support



Contribution to Growth

- NB Power branding at customer-owned public charging stations
- Unlocking additional value streams from EVs as Distributed Energy Resources (DERs)
- Supporting the transition to electrification of transportation in New Brunswick



Current Initiatives

- Plug-In NB
- Third Party Funding Initiative
- Fleet/Workplace Charging project
- Smart Rewards Program
- NRCan application
- Commercial Market Intelligence
- Project Plan for the Beneficial Electrification of Transportation Roadmap



Key Challenges

- Define our role in developing public charging infrastructure (industry research indicates it is a utility role)
- Limited financial and employee resources to be the driver of beneficial electrification in New Brunswick





Thank you



the power of possibility
débordant d'énergie



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Planning for Electric Vehicle Charging Infrastructure at the Border

EASTERN BORDER TRANSPORTATION COUNCIL

NOVEMBER 16, 2022

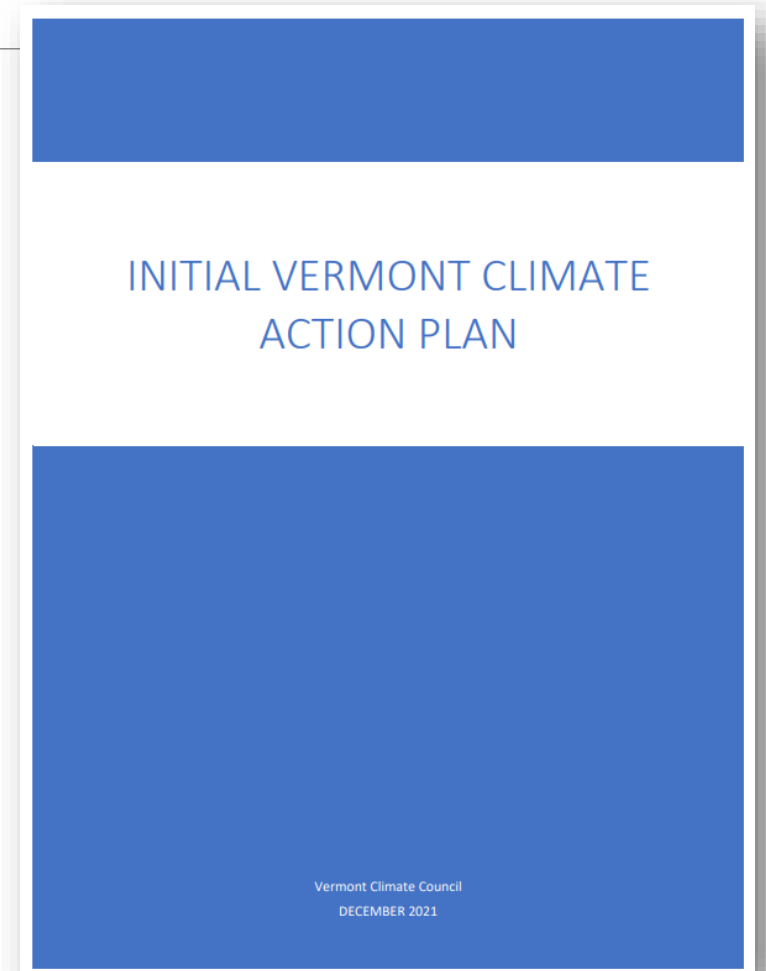
PATRICK MURPHY, SUSTAINABILITY + INNOVATIONS PROJECT MANAGER, VT AGENCY OF TRANSPORTATION

Climate Action Plan

Initial plan finalized in December 2021

EV Adoption scenarios :

- **27,000** PEVs by **2025** (17% of sales)
- **126,000** PEVs by **2030** (68% of sales)
- Reduce GHG emissions below 2005 GHG emissions in Vermont by no less than 26% below 2005 GHG emission levels by January 1, 2025;
- by no less than 40% below 1990 GHG emission levels by January 1, 2030;
- and no less than 80% below 1990 GHG emission levels by January 1, 2050.



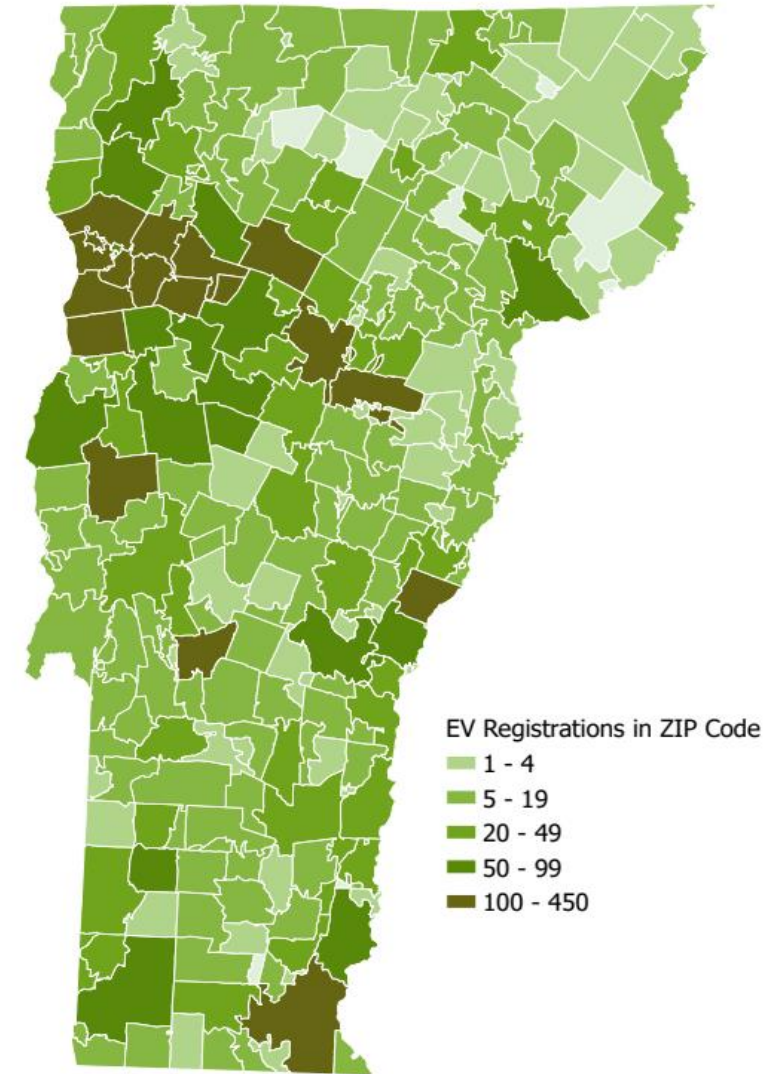
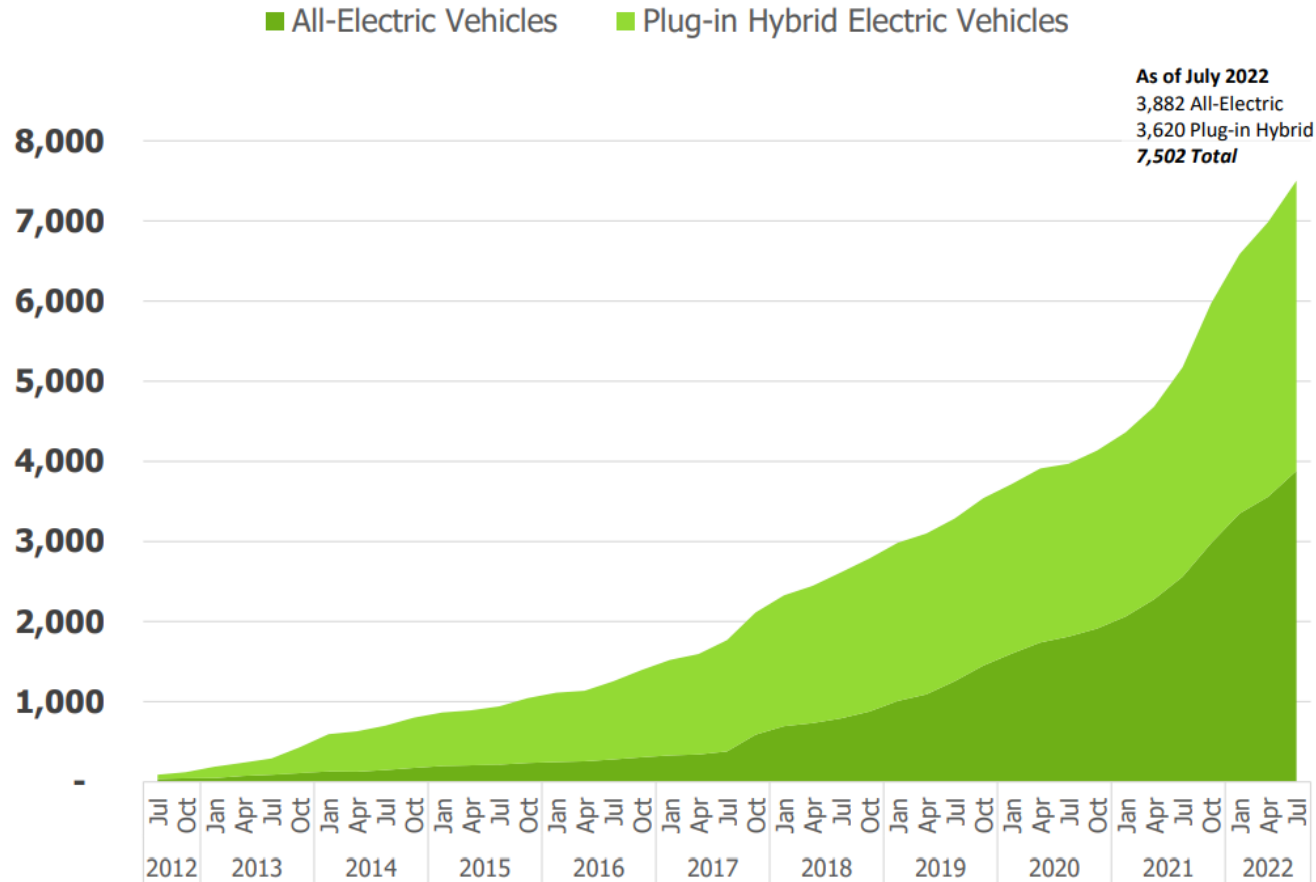
CAP – Pathway 1 – Light Duty Electrification Strategies

- 1) **Technology Forcing ZEV Regulation (100% by 2035)**
- 2) **EV Purchase Incentives**
 - a) New & used EVs and electric bicycles, designed for equity
 - b) Expand to fleets
 - c) Continue MileageSmart and Replace Your Ride
 - d) Vehicle Efficiency Purchase and Use Tax Adjustment
- 3) **EV Charging Investment**
 - a) Continue support for DCFC and Level 2
 - b) Public, workplace and multifamily priorities
 - c) Direct the PUC to consider EV charging rates
- 4) **Transportation Climate Initiative (TCI)**
- 5) **EV and VMT reduction Outreach and Education**

Electrify **27,000**
light duty
vehicles by 2025

126,000 by 2030

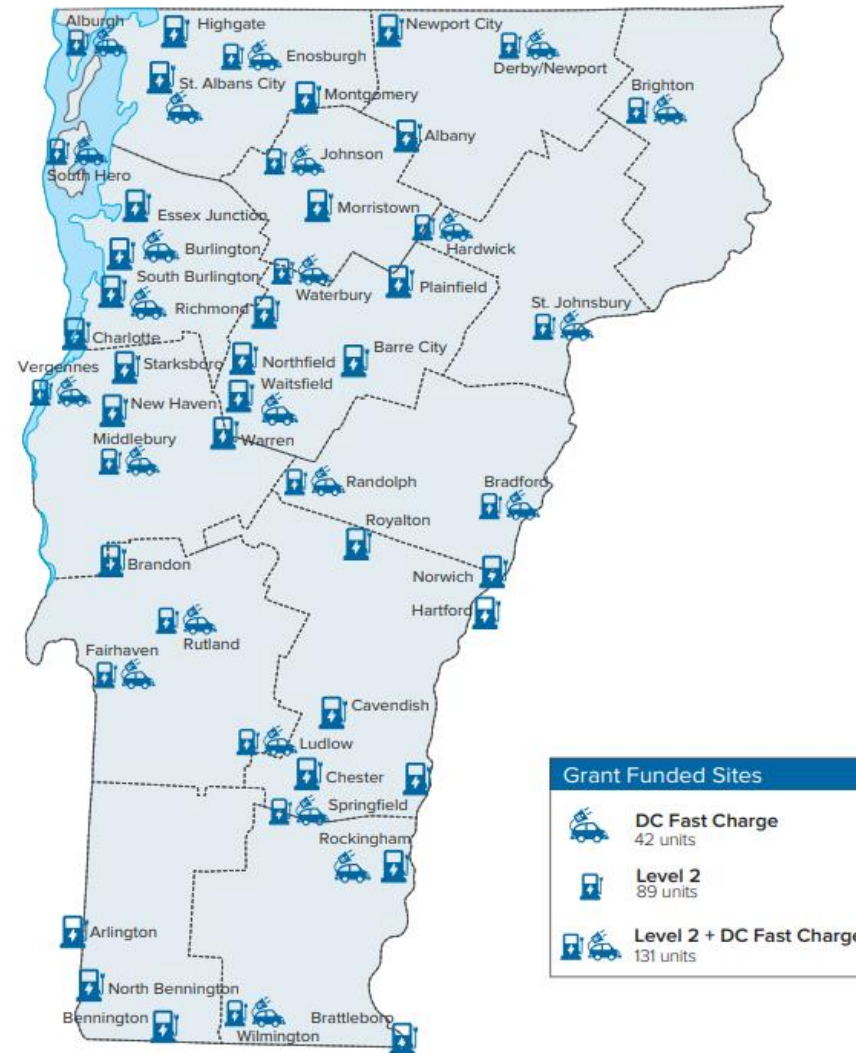
EV Adoption in Vermont



Funding Timeline

- 2014: DHCD and Dept of Environmental Conservation launch Electric Vehicle Supply Equipment (EVSE) Program with \$200k
- 2017: Volkswagen 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

Public EVSE Investments in Vermont



Department of Housing and Community Development: [Interactive map](#)

State-funded Community Charging

\$10M



PROGRAM	MULTIUNIT RESIDENTIAL	WORKPLACES	COMMUNITY ATTRACTIONS
ELIGIBILITY	3 or more units priority for <20	Priority for employers with <100 employees	public parking
EQUIPMENT	Level 1, Level 2	Level 1, Level 2	Level 1, Level 2, DCFC
TOTAL FUNDS	\$3M	\$2M	\$2M

Timeline

February – July 2022: Guidance announced in February, Notice of Proposed Rulemaking in June; Outreach and plan development

July 2022: Vermont submitted [EV Charging Plan](#) to FHWA

August 2022: Proposed phaseout of existing waiver for EVSE from Buy America provisions of IIJA

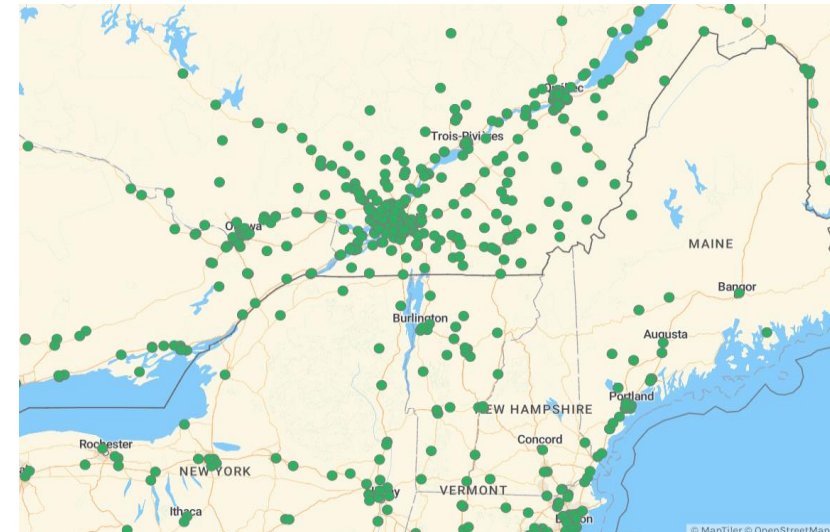
September 2022: FHWA approval of plan

Winter- Spring 2023: Public Engagement Plan

Updated Plan Due Annually

National Electric Vehicle Infrastructure (NEVI) Formula Program

- Priority given to EVSE along the interstates for corridor nominations, and investments to be made there first. (When fully “built out” as certified by FHWA, State may move onto other locations)
- New minimum requirements: 4 CCS ports of 150 kW each (600 kW total per site)
- 50 mile distance from the next charging location, but now only 1 mile from interstate exit or state highway intersection (prior radius was 5 miles)



Vermont EVSE Budget

\$16.25 million in FY23:

\$6.25 million for fast charging
along highway corridors

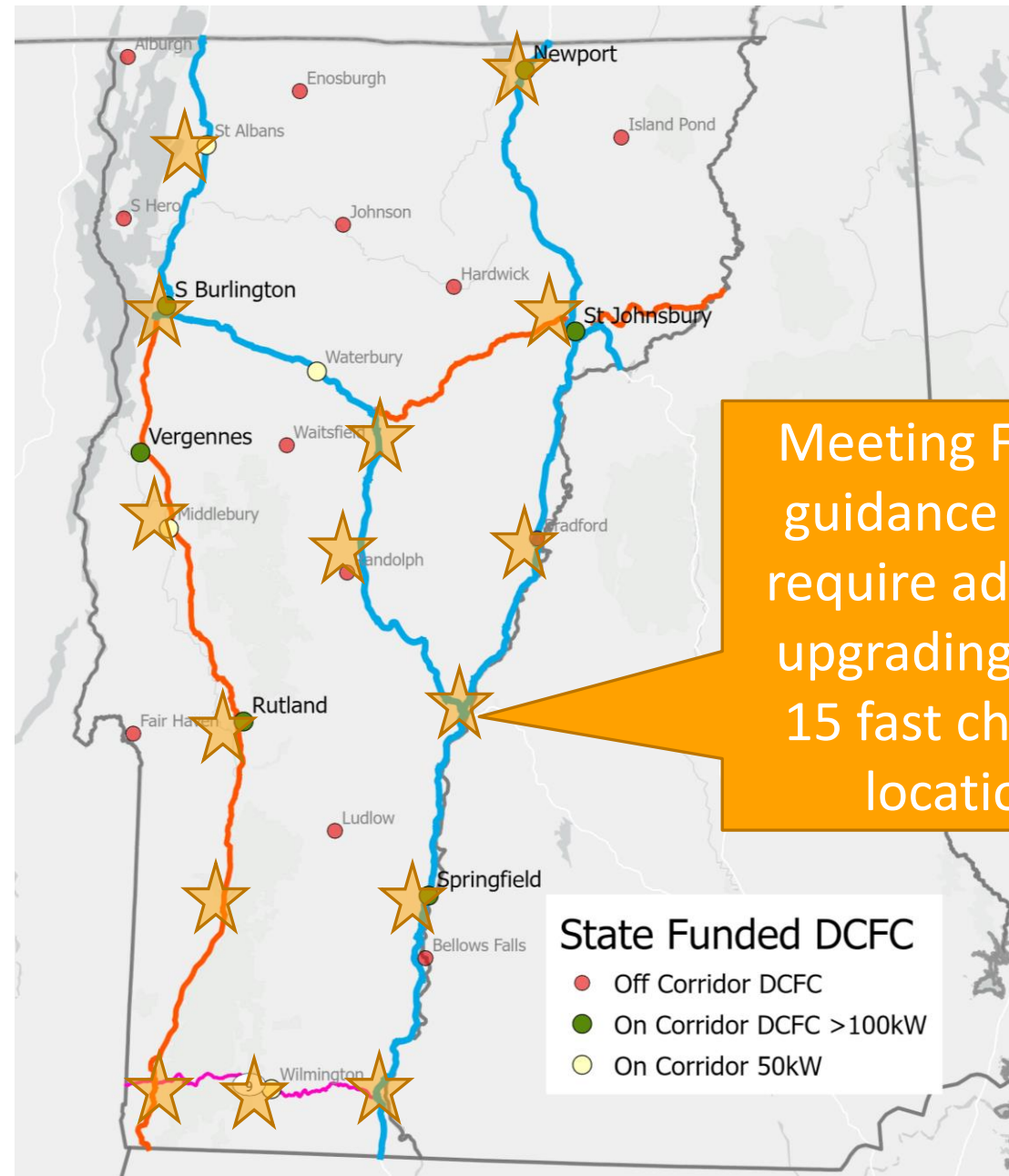
\$10 million for community charging

\$21 million in National Electric
Vehicle Infrastructure Funds over 5
years

\$32 million in Carbon Reduction
Program over 5 years

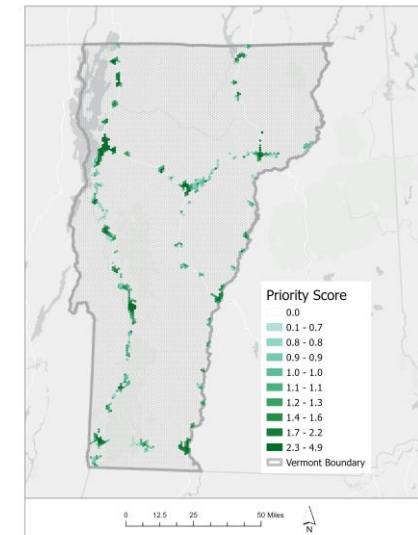
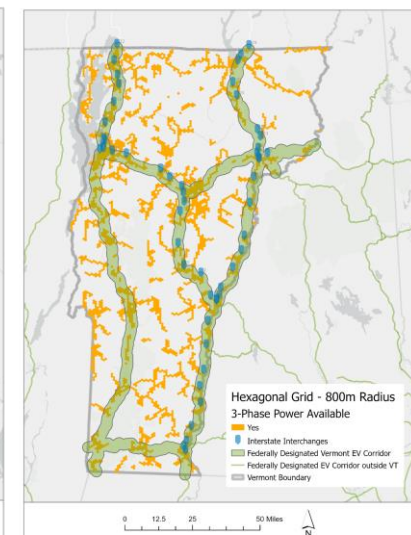
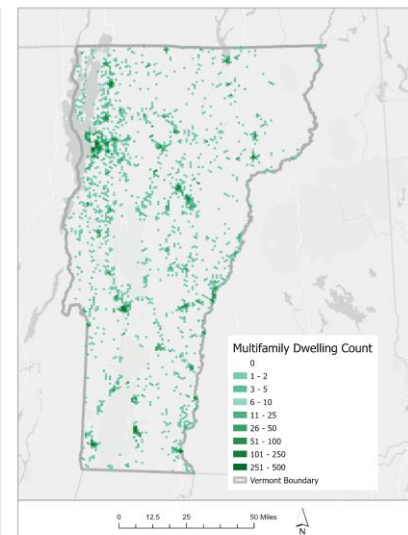
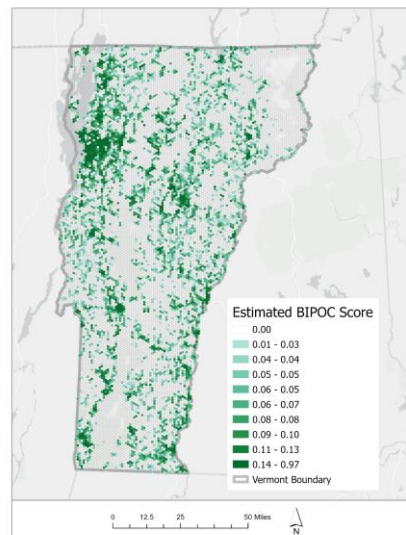
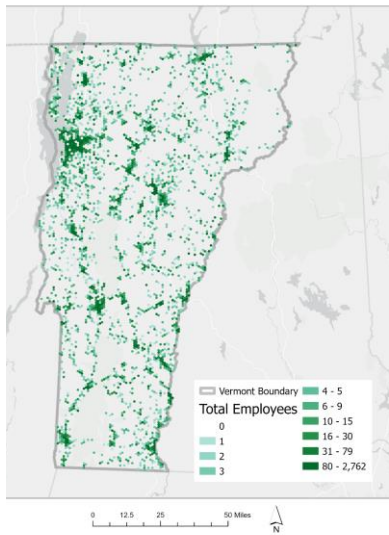
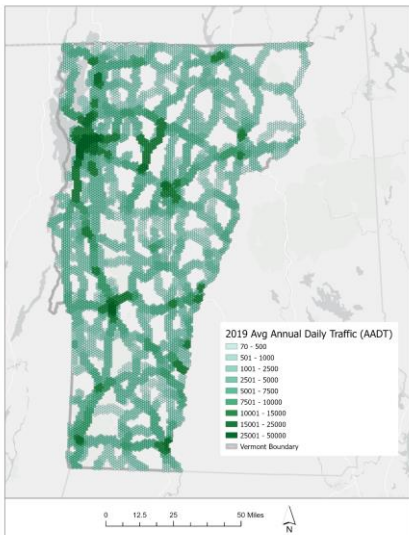
TBD Competitive Grants through
Bipartisan Infrastructure Law

Inflation Reduction Act continues
charging tax credits



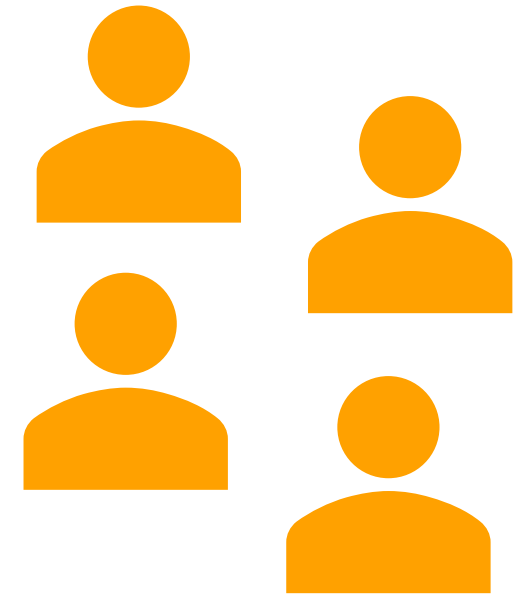
Prioritization Mapping

- Factors are mapped into hexagonal grid cells that are about ½ mile radius
- Quantities are normalized to allow combinations across different types of priorities
- Final priority score for initial NEVI plan is limited to eligible areas along federally designated EV corridors
- Future plans will likely expand on this as additional federal and State guidance develops



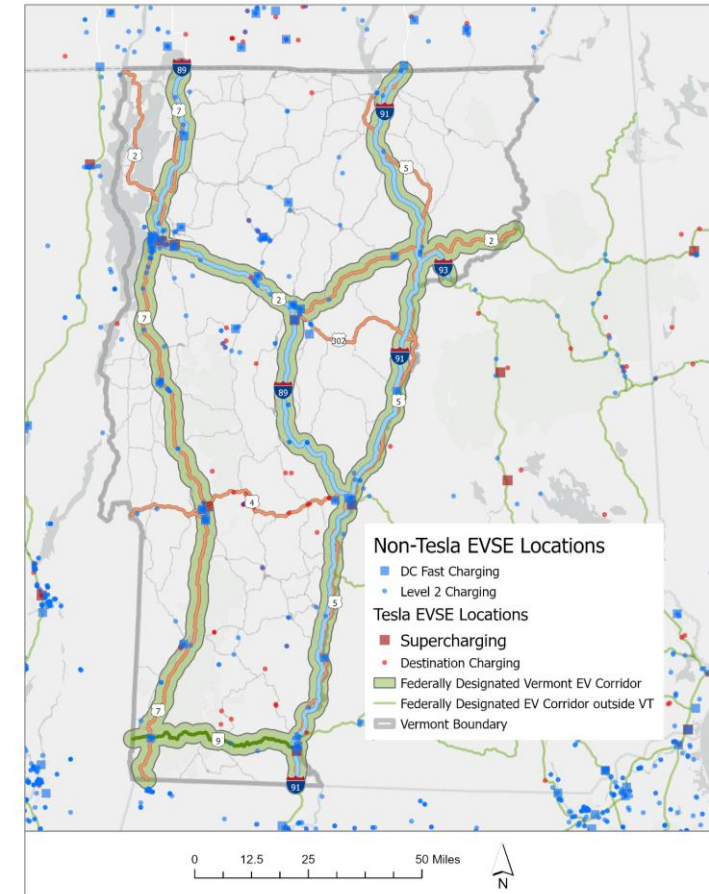
Next Steps

- Survey interest of property owners in participating in NEVI and other funding programs for public EVSE
- Contract to upgrade 5-6 existing and planned locations to meet NEVI requirements
- Once final rules and Buy America provisions are known, issue RFPs for further buildout of Alternative Fuel Corridors (end of 2022, early 2023)
- Conduct Public Engagement in 2023 for NEVI and Carbon Reduction Programs
- Continue to evaluate and re-develop statewide plans
- Reconnect with Ministry of Transport after government strategy is announced



Cross-Border Collaboration

- Continue to work with staff at the Québec Ministry of Transport on prioritizing areas of mutual interest along US I-89 and I-91 Interstate Corridors (CA Rt. 133 and Rt. 55)
- Implement State of Vermont plans to fill in corridor and community charging gaps
- Begin to jointly plan for freight electrification as called for in [VT Freight Plan \(2022\)](#) and explore incentives and investment for Medium- and Heavy-Duty Vehicles
- Coordinate on recreational charging infrastructure with Canadian-based companies like Taiga



Contact

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[Climate Change | Agency of Transportation
\(vermont.gov\)](#)

[National Electric Vehicle Infrastructure Program |
Agency of Transportation \(vermont.gov\)](#)



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QUESTIONS





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THANK YOU TO OUR SPEAKERS

