

Drive Electric Vermont Update

VERMONT HOUSE TRANSPORTATION COMMITTEE
FEBRUARY 9, 2022

Drive
Electric
Vermont

About Drive Electric Vermont

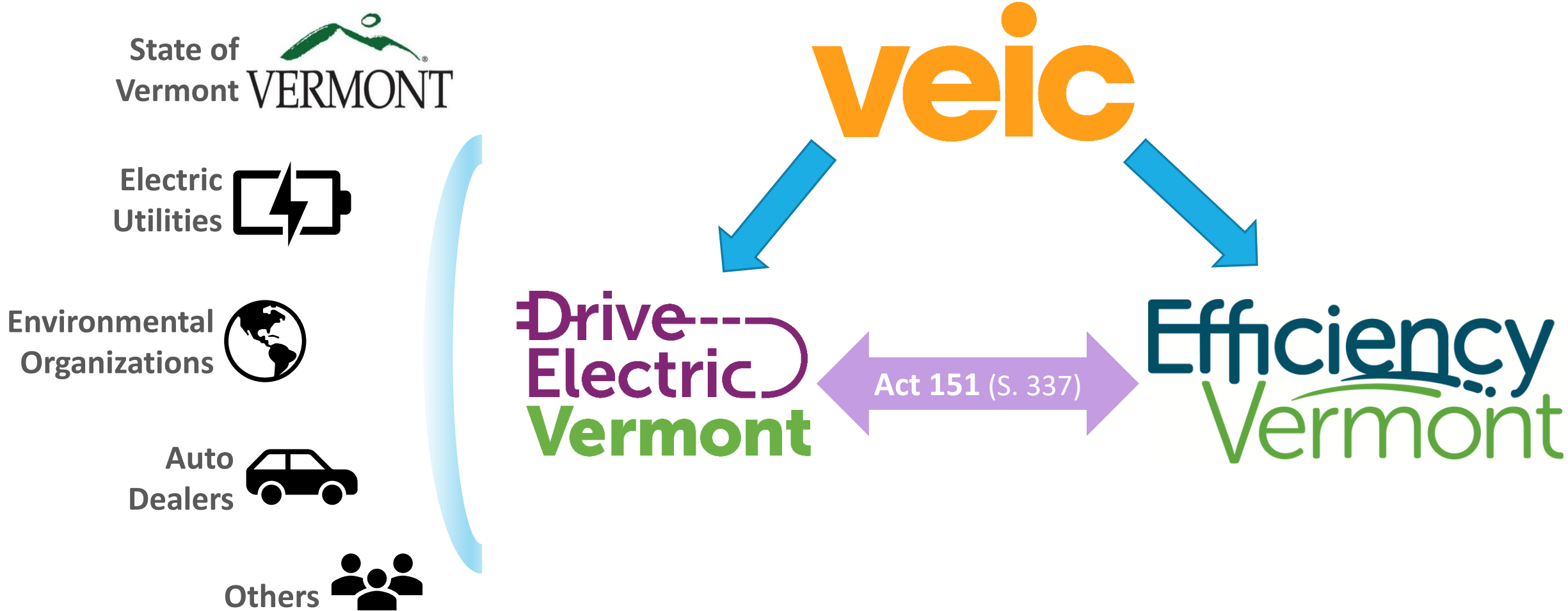
- Drive Electric Vermont is a public-private partnership established in 2012 by VEIC and the State of Vermont
- Working to advance transportation electrification through:
 - Stakeholder coordination
 - Policy engagement
 - Consumer education & outreach
 - Infrastructure development

The logo for Drive Electric Vermont features the word "Drive" in a purple, sans-serif font with a stylized plug icon on the left. Below it, "Electric" is written in the same purple font. The word "Vermont" is written in a bold, green, sans-serif font. A purple line starts from the end of "Drive", goes right, then curves down and left to form a partial circle around the right side of "Electric".

Drive
Electric
Vermont

<https://www.driveelectricvt.com/>

Drive Electric Vermont Connections



Why Go Electric?

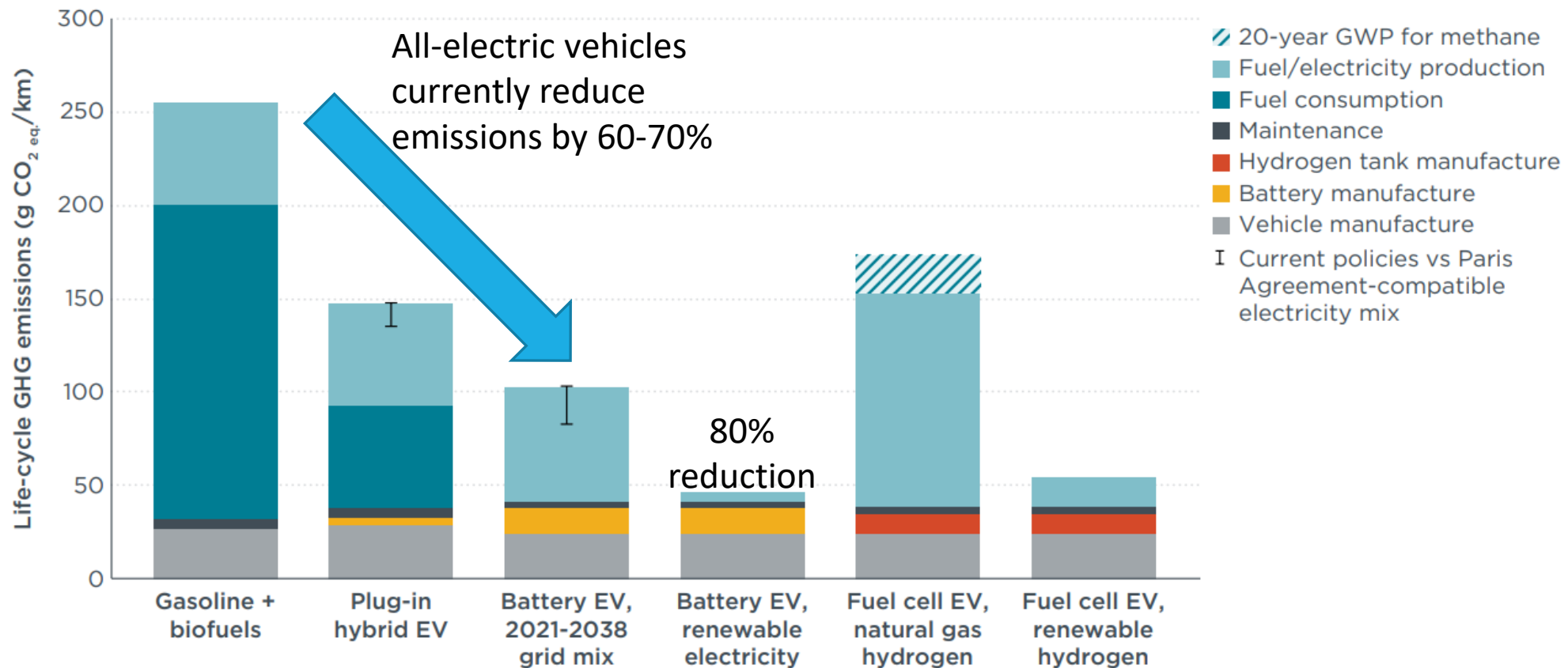
- Reduce emissions
- Great performance
- Quiet
- Convenient charging at home
- Savings

**It's time for
a better drive.**



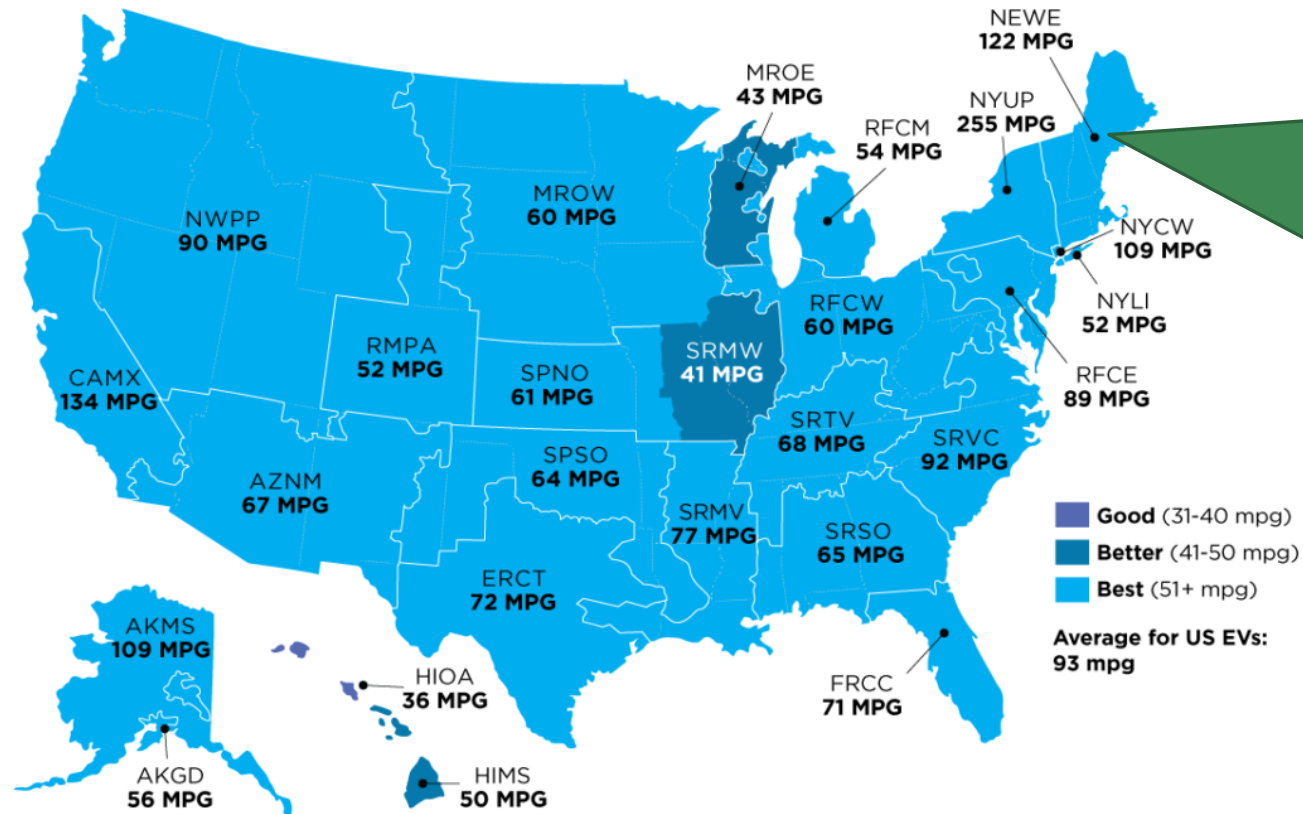
EV Emission Reductions

ICCT: 2021 Life-cycle GHG emissions of passenger cars registered in the United States



EV Emission Reductions

Union of Concerned Scientists – 2019 EV GHG Emissions as Gasoline MPG Equivalent



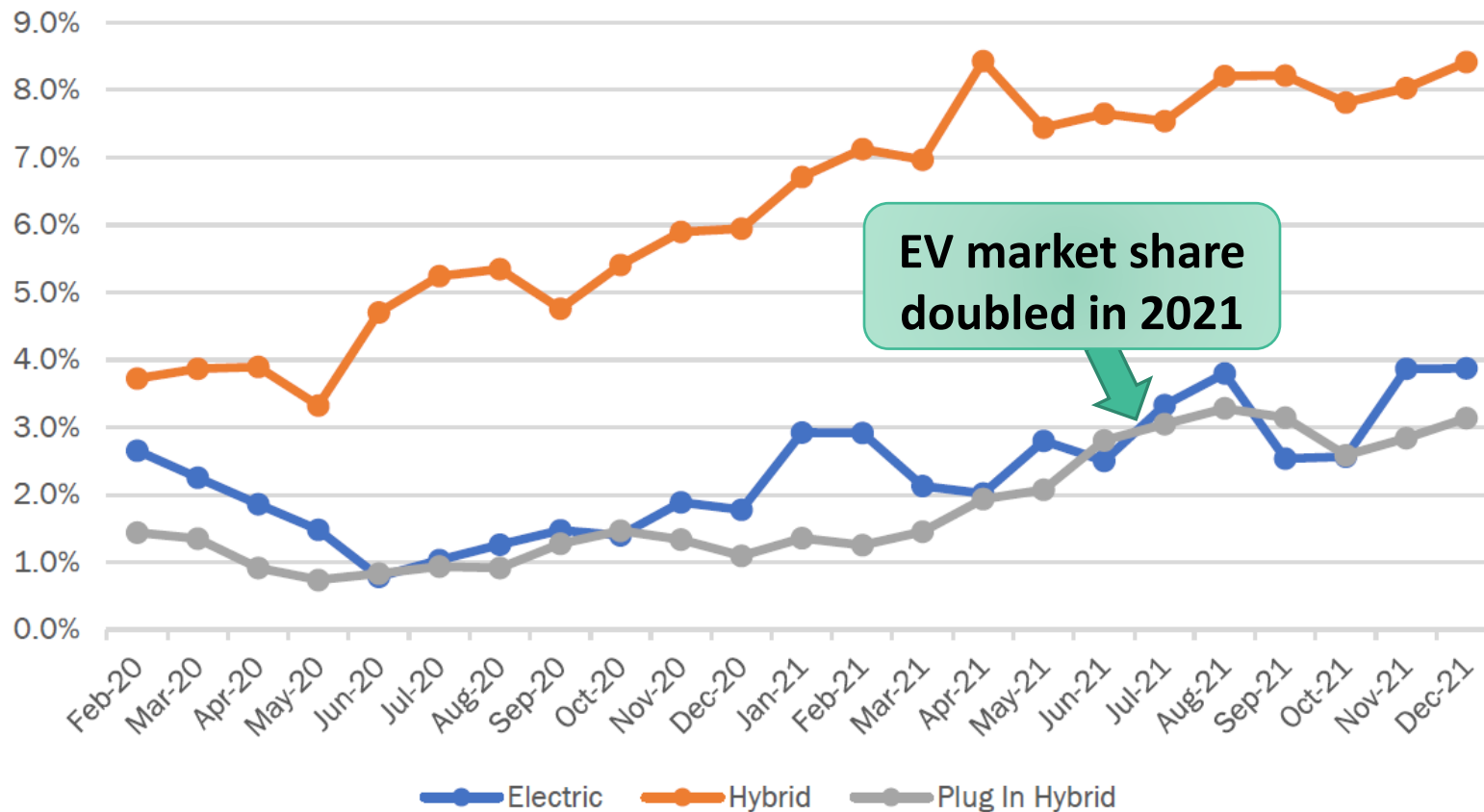
New England regional grid EV charging is equivalent to a **122 MPG** gasoline vehicle

based on 2019 reported electricity generation emissions

© Union of Concerned Scientists

Vermont EV Market Share

**Estimated Monthly Alternative Powertrain Market Share
(includes hybrid and electric vehicles)**



**Annual Share by Engine Type
(2020 and 2021)**

	2020	2021	
Hybrid	4.7%	7.7%	↑
Electric	1.6%	2.9%	↑
Plug In Hybrid	1.2%	2.5%	↑

Source:
VT VADA Sales Report, Dec 2021

Top-Selling EV Models in Vermont

	Model	2021 Added Registrations
1	Toyota RAV4 Prime	389
2	Tesla Model Y	245
3	Nissan Leaf	236
4	Toyota Prius Prime	226
5	Chevrolet Bolt EV	214
6	Tesla Model 3	145
7	Jeep Wrangler Unlimited	102
8	Ford Mustang Mach-e	99
9	Volkswagen ID.4	87
10	Hyundai Kona	79

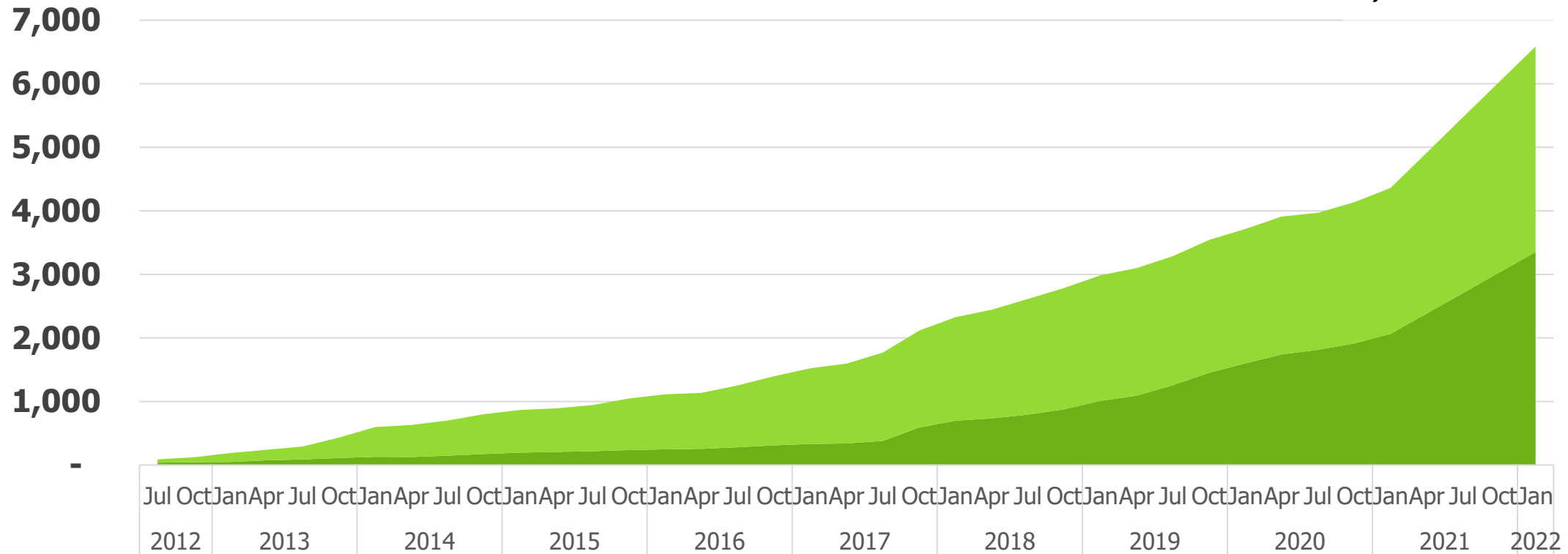


All-Wheel Drive Available

Vermont EV Registrations

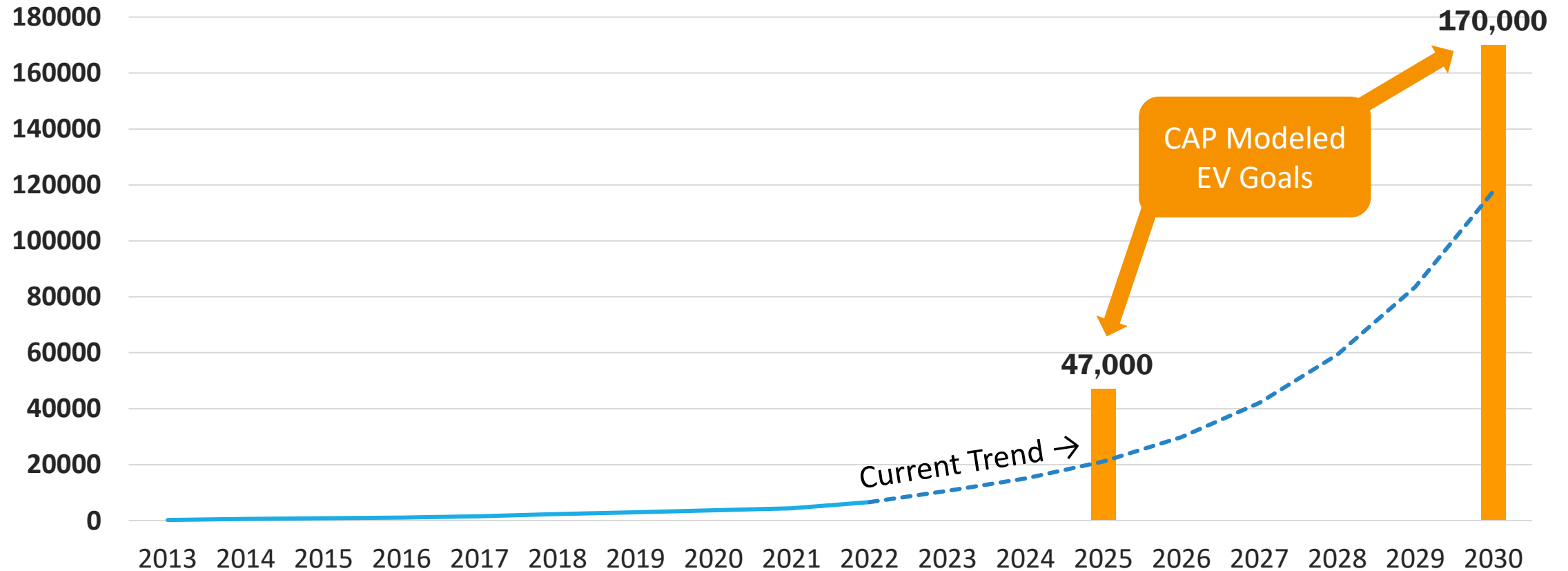
- Plug-in Hybrid Electric Vehicles
- All-Electric Vehicles

As of January 2022
3,350 All-Electric
3,225 Plug-in Hybrid
6,585 Total

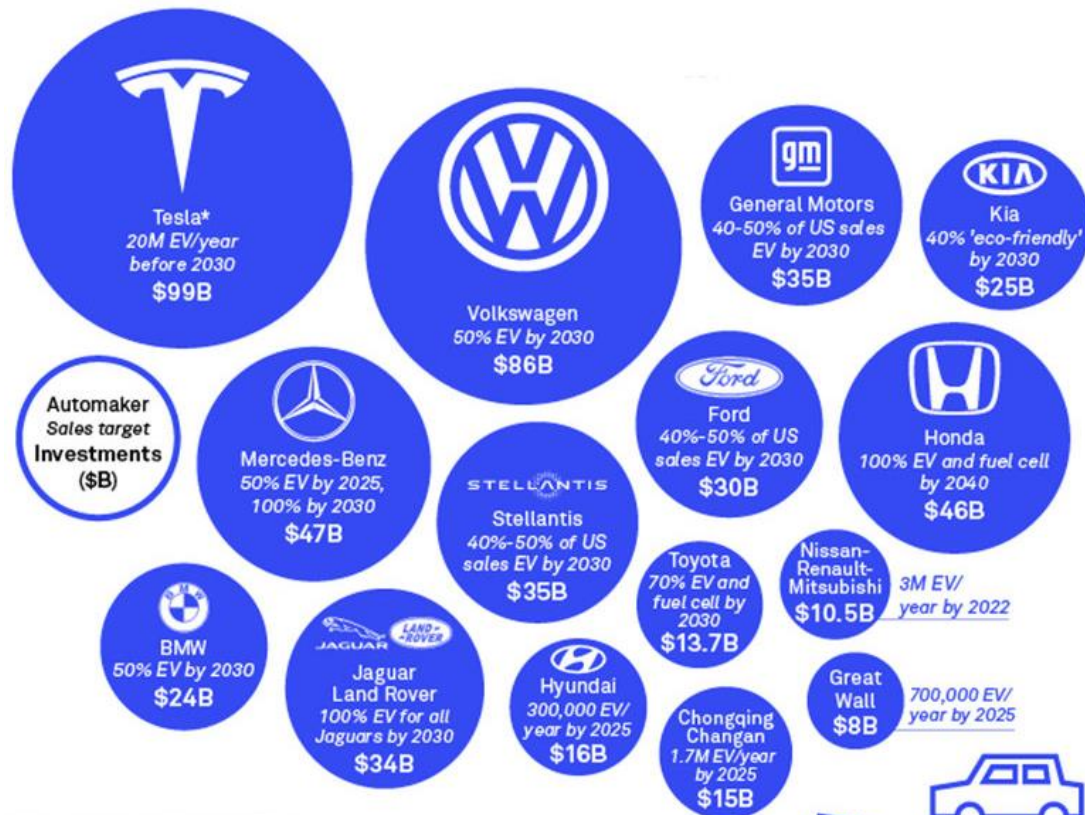


Source:
VT DMV / VT DEC
2022

Vermont Climate Action Plan EV Goals



Automaker Production Ramps Up



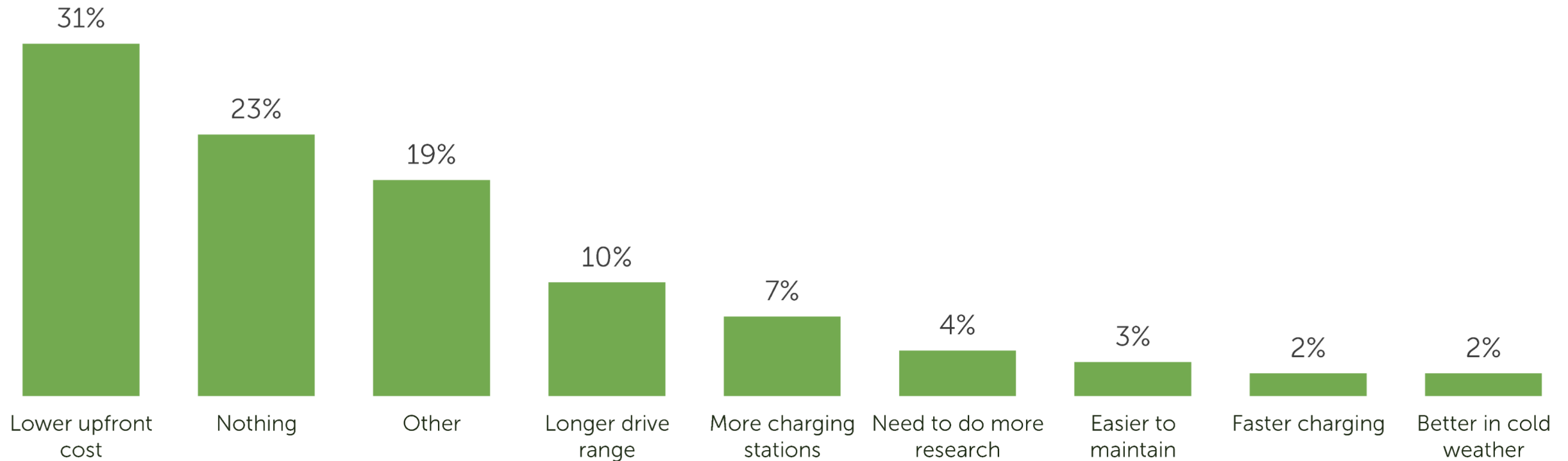
Global automaker investments in next-gen vehicles totaled over **\$500 billion** as of Sept 2021

+ Toyota announced \$35 Billion in Dec 2021

Data compiled as of Sept. 17, 2021.
 Includes historic, announced investments in all forms of hybrid and pure electric and autonomous vehicles, and related technologies, as far out as 2030. Totals do not necessarily reflect all electric vehicle investments for each company. Currencies converted to U.S. dollars.
 * Includes S&P Global Market Intelligence consensus estimates of expected capital expenditures through 2030.
 Credit: Cat Weeks
 Sources: S&P Global Market Intelligence; International Council on Clean Transportation; company announcements

Source: SNL.com

What would make a VTer more likely to buy an EV?



Source:
Efficiency Vermont

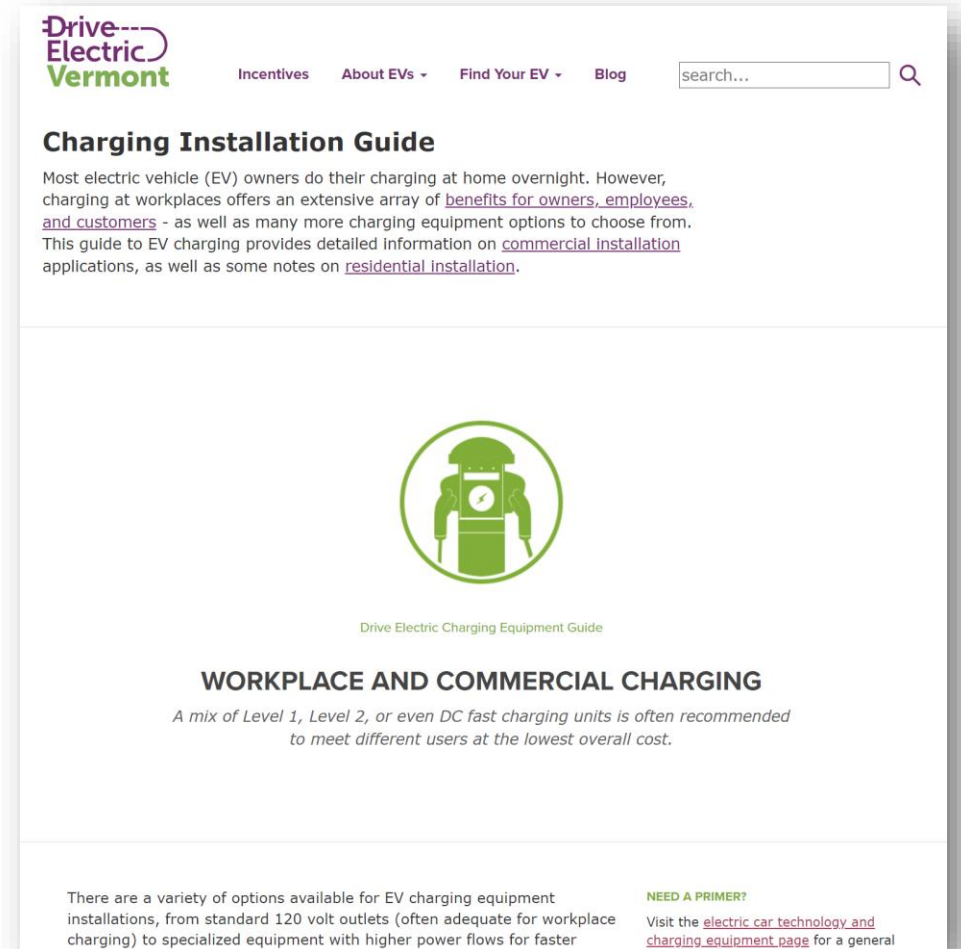
EV Charging Needs

- 80-90% of charging occurs at home
- Workplace charging used when available and supports adoption
- Public charging needed to support those who can't charge at home, longer distance travelers
- 2025 EV adoption goal could require
 - 900 more public level 2 ports
 - 310 more public DC fast charging ports

About \$24 million in public charging investment needed

EVSE Planning and Policy Support

- Complete State EV charging plan and refine as needed
- Create and update resources to educate businesses and homeowners on EV charging development
- State building energy code support
 - Most cost-effective time to install charging is as part of a larger construction project




The screenshot shows the 'Drive Electric Vermont' website. The header includes the logo, navigation links for 'Incentives', 'About EVs', 'Find Your EV', and 'Blog', and a search bar. The main content area is titled 'Charging Installation Guide' and contains introductory text about EV charging at workplaces. Below the text is a green circular icon of a charging station. The page also features a section for 'WORKPLACE AND COMMERCIAL CHARGING' with a recommendation on charging unit mix. At the bottom, there is a 'NEED A PRIMER?' section with a link to a general charging equipment page.

Drive Electric Vermont

Incentives About EVs Find Your EV Blog search...

Charging Installation Guide

Most electric vehicle (EV) owners do their charging at home overnight. However, charging at workplaces offers an extensive array of [benefits for owners, employees, and customers](#) - as well as many more charging equipment options to choose from. This guide to EV charging provides detailed information on [commercial installation](#) applications, as well as some notes on [residential installation](#).



Drive Electric Charging Equipment Guide

WORKPLACE AND COMMERCIAL CHARGING

A mix of Level 1, Level 2, or even DC fast charging units is often recommended to meet different users at the lowest overall cost.

There are a variety of options available for EV charging equipment installations, from standard 120 volt outlets (often adequate for workplace charging) to specialized equipment with higher power flows for faster

NEED A PRIMER?
Visit the [electric car technology and charging equipment page](#) for a general

EVSE Technical Assistance

- Businesses and municipalities
 - Provide direct support
 - Coordinate with electric utilities
- Multifamily charging
 - Supporting State of Vermont pilot
 - Equity requirements
- Support federal funding opportunities
 - Forthcoming competitive grant programs



Outreach and Education

- Most consumers aware of EV technology, but aren't sure about a purchase
 - 20% ready to purchase for next vehicle
 - **60% uncertain**
 - 20% not interested
- Firsthand experience increases consideration
 - Just riding in an EV resulted in 3X increased interest
- Resources and tactics
 - DEV website
 - Incentive tools
 - Customer support
 - Marketing campaigns (Efficiency Vermont)
 - Equity-focused research and program development
 - Events

About 1/3 of EV
"non-considerers" cite
lack of information as
a barrier

EV Dealer Support

Efficiency Vermont has launched new EV dealer program enabled by Act 151 and PUC approval

Act 151 is a 3-year pilot program, passed in 2020, that allows energy efficiency utilities to work in transportation for the first time

EEN participating dealers receive

- EV investment cost sharing
- Training
- Marketing and promotional support
- Other tools to support EV sales



Vermont's EV Future

- Making good progress, but need to accelerate to meet goals
- Building on successful programs that have worked in Vermont
- Comprehensive strategy covers
 - Policy support
 - Supply chain development
 - Utility initiatives
 - Marketing, including incentive offerings
 - Community based partnerships
 - Infrastructure development
 - Public
 - Multifamily
 - Fleet electrification, including larger vehicles



Subaru Solterra EV coming in 2022

Thank you



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