

Driving Electric

Basics for local energy committees

VECAN WORKSHOP – DECEMBER 7, 2020



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



Dave Roberts

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

Why Go Electric?

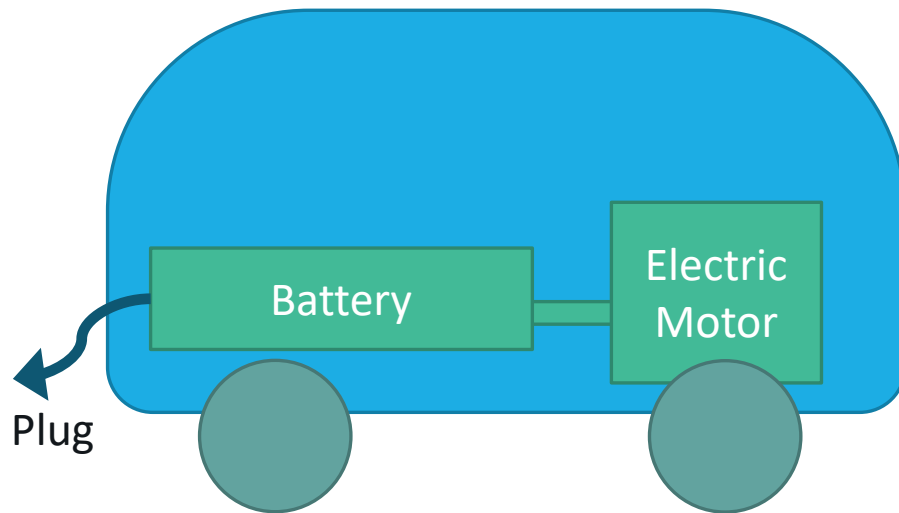
- Reduce emissions
- Great performance
- Quiet
- Convenient charging at home
- Savings

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



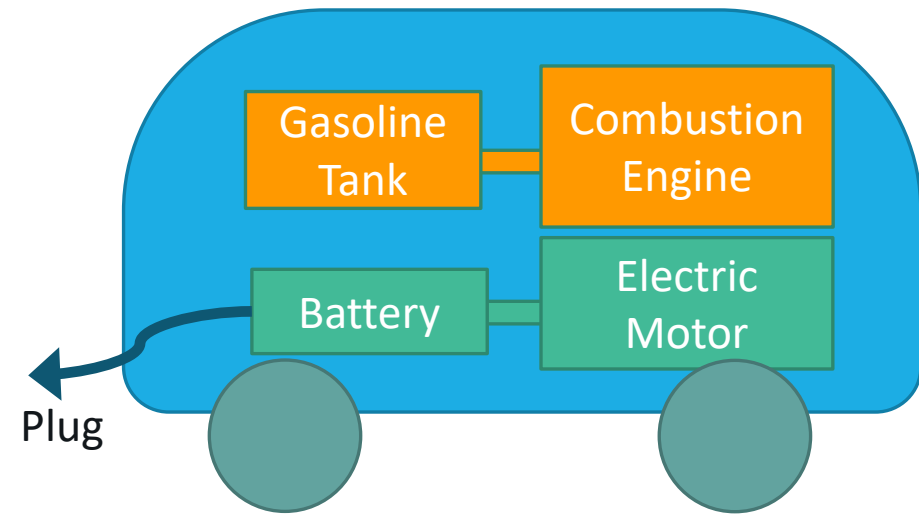
Types of Plug-in Vehicles

All Electric



70 – 300+ Mile Range on Battery

Plug-in Hybrid



15 – 80 Mile Range on Battery

+

300 or More Miles on Gasoline

Popular Models



Nissan LEAF
150-225 Miles
\$30-37k



Toyota Prius Prime
25 Miles
\$28k



Tesla Model 3
250-322 Miles
\$35-50k



Mitsubishi Outlander PHEV
22 Miles
\$36k



Chevrolet Bolt
260 Miles
\$37k



Subaru Crosstrek Hybrid
17 Miles
\$35k


Website EV Model Explorer

Plug-in Cars Available in Vermont

Vehicle Type: Electric Range[†]: All Wheel Drive: Base MSRP: Number of Seats: Vermont Incentive:

Filters for vehicle characteristics


Audi e-tron



All Electric (SUV)
Electric Range: 204 miles

+


Chevrolet Bolt



All Electric (Crossover)
Electric Range: 259 miles
Vermont Incentive Eligible

+


Hyundai Kona Electric



All Electric (Crossover)
Electric Range: 258 miles
Vermont Incentive Eligible

+

Hyundai Kona Electric




All Electric (Crossover)
Electric Range: 258 miles
Vermont Incentive Eligible

Total Range: 258 miles
Battery Size: 64
Seats: 5
Cargo: 19.2 ft³
Base MSRP: \$36,950
Federal Tax Credit Amount: \$7,500
Standard Monthly Lease: \$329
Lease Down Payment: \$3,899
Manufacturer Website

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Jaguar I-Pace



All Electric (SUV)
Electric Range: 234 miles

+


Kia Niro EV



All Electric (Crossover)
Electric Range: 239 miles
Vermont Incentive Eligible

+

Nissan Leaf Plus



All Electric (Hatchback)
Electric Range: 226 miles
Vermont Incentive Eligible

+

www.DriveElectricVT.com

Other Electric Options

Buses



Bicycles



CarShare

Lawncare
equipment



Motorcycles

EVs in Vermont Conditions

Cold weather reduces electric range 20-50%



Charging Equipment

Level 1 Charging

120V

5 miles range / hr



Level 2 Charging

240V

10-20 miles / hr



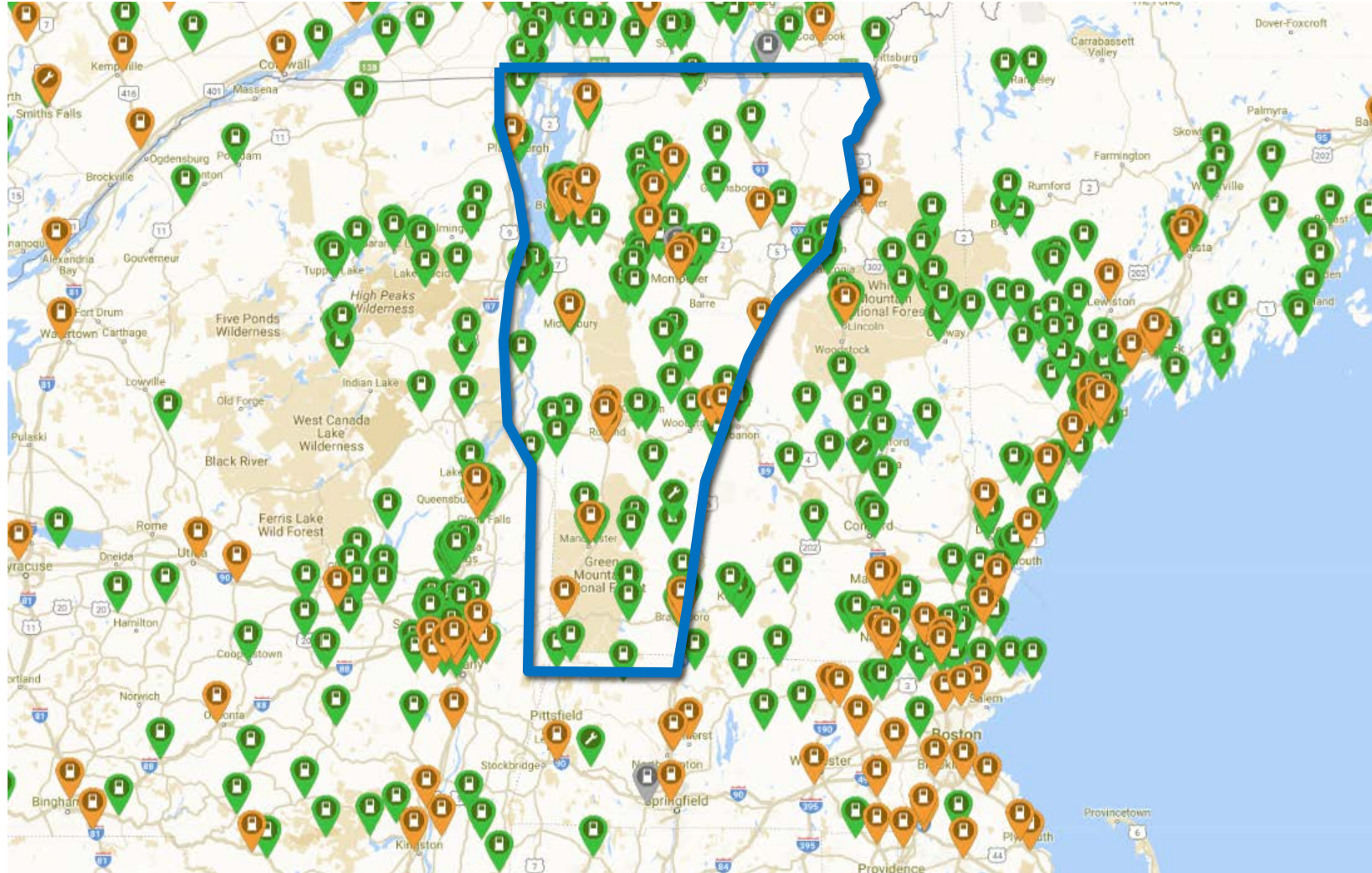
DC Fast Charging

480V

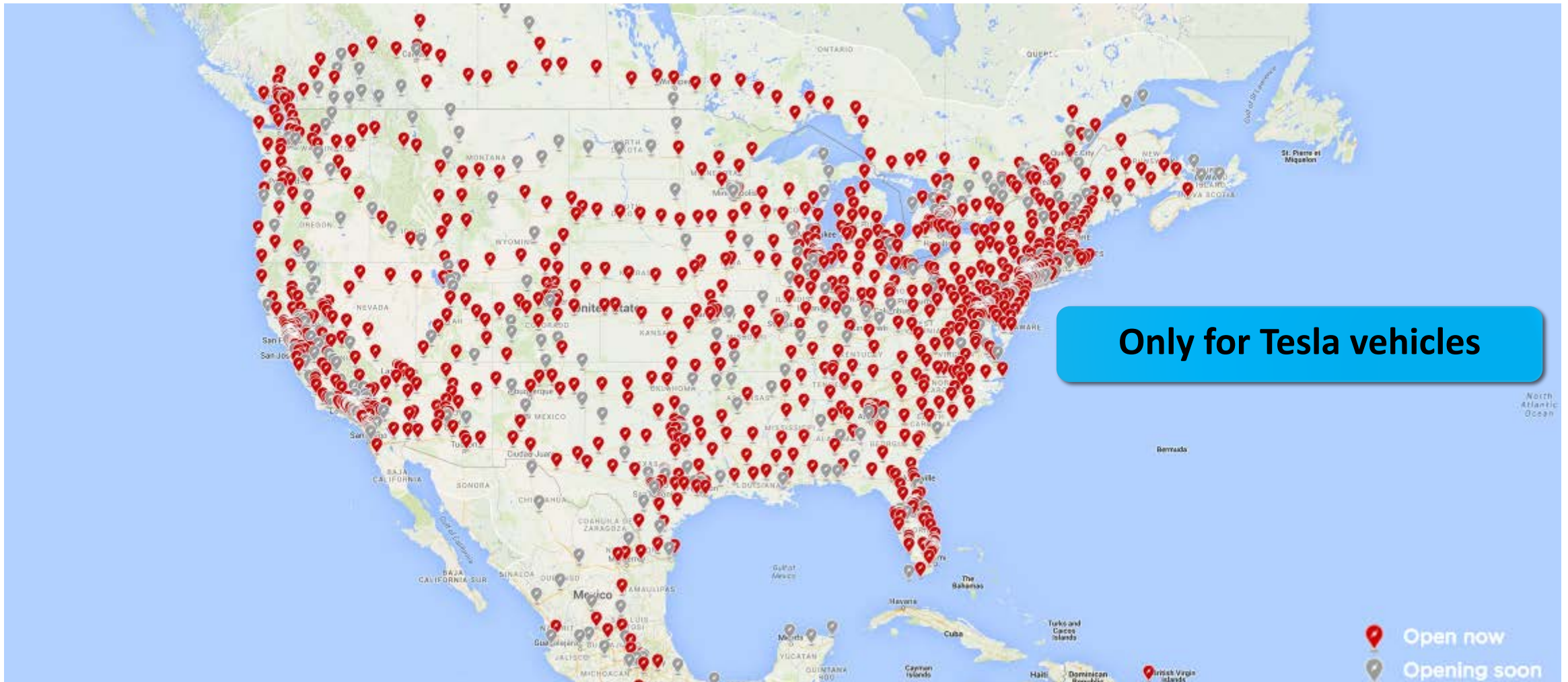
70+ miles / hr



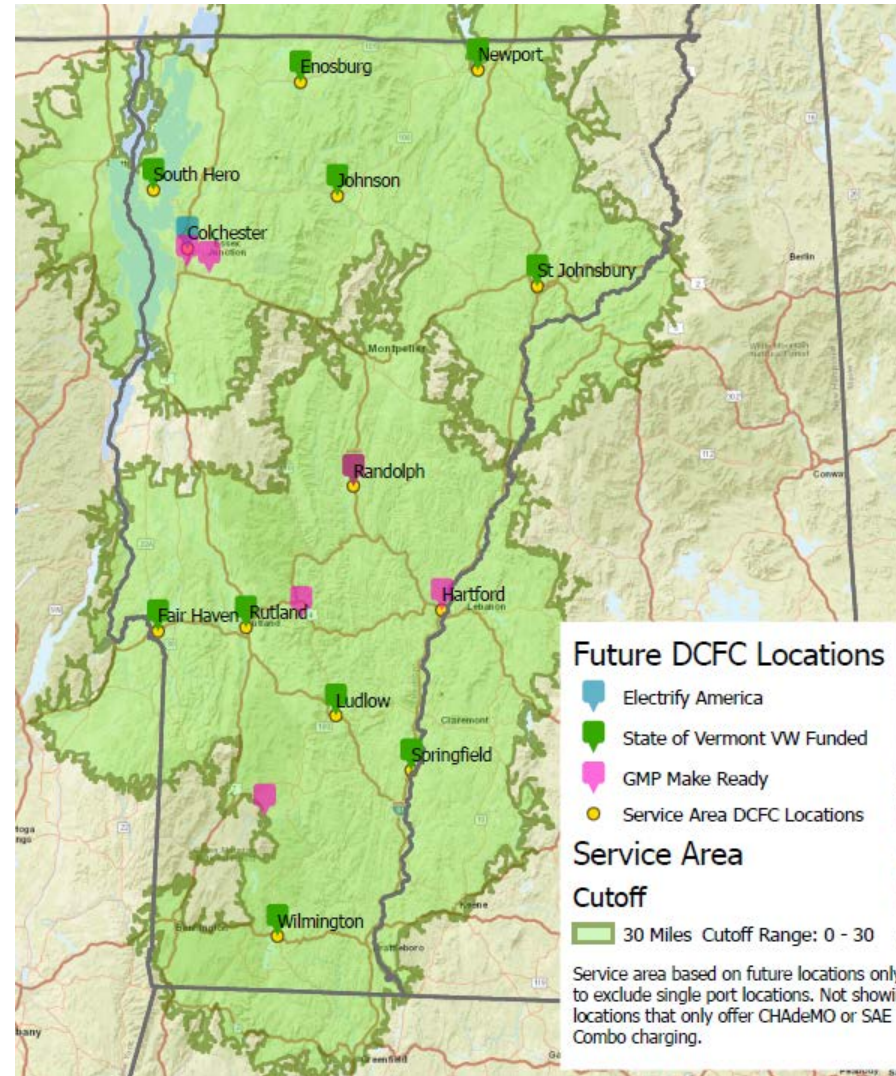
EV Public Charging Availability



Tesla Supercharging



Future Vermont Fast Charging Locations



Purchase Incentives

Federal Tax Credit

- Up to \$7,500, based on battery size
- Begins to sunset when manufacturer reaches 200,000 EV sales
- Claim on income taxes (unless leasing)
- Does not carry-over into future years

State of Vermont

- Up to \$4,000, depending on income and type of EV
- \$950,000 in funding added in November
- For new EVs with *starting* MSRP under \$40,000
- Distributed in partnership with electric utilities

Electric Utilities

- Up to \$2,500, depending on income and type of EV
- Many also offering incentives for home level 2 charging equipment

Combined Incentive Example

	Nissan LEAF 150 Mile Range		Nissan Sentra
	Standard Incentive	< \$50k Income Incentive	
Starting Price	\$31,600	\$31,600	\$19,310
Federal Tax Credit	-\$7,500	-\$7,500	--
State Incentive	-\$2,500	-\$4,000	--
OEM Discount	-\$6,000	-\$6,000	--
Utility Incentive	-\$1,500	-\$2,500	--
Price after Incentives	\$14,100	\$11,600	\$19,310

Planning & Permitting – VT ACCD Resource

EVSE-friendly Development Regulations for Municipalities

LOCAL ELECTRIC VEHICLE CHARGING STATION REGULATION

A Welcoming Approach to Electric Vehicle Plug-In Technology

Agency of Commerce | Department of Housing & Community Development

Community Planning and Revitalization Division

September 2018, Last Updated January 2019

Would it be difficult for your community to permit an electric vehicle charging station?

☐ YES

☐ NO

☐ NOT SURE

☐ MAYBE IN MUD SEASON

What if it's a fueling island?



What if it's only for fleet vehicles?



What if it's not publicly accessible?



What if it's in an existing parking space?



What if it's in the road's right-of-way?



What if it's inside a building?



What if it's a proposed parking lot?

Graphic Source: [New York State Siting and Design Guidelines, 2012](#)

What if it's ADA accessible?

Get charged up! You got this.

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VT Building Energy Code

Stretch code compliance required for Act 250

Commercial (Section C708.1)

- About 2% of parking EV ready
- Half ready to go on occupancy
- Level 1 and/or 2

Residential

- Multifamily with 10+ units
- 4% of parking
- Level 1 or 2 receptacles

Conclusion

- Home charging options are critical for most EV drivers
- Building new EV-ready housing offers massive savings compared to retrofitting charging
- Municipalities can help by:
 - Ensuring new developments take EV charging into consideration
 - Streamlining EV charging planning and permitting requirements
 - Considering EVs for fleet vehicles and supporting employee/public charging
 - Spreading the word

Thank you!



Contact

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