

February 1, 2023

Vermont Transportation Electrification

VEIC Updates for the Vermont House
Transportation Committee

Peter Walke and Dave Roberts

Transportation Emission
Sources

Policies and Programs

Drive Electric Vermont

EVT Act 151 Programs

Future Considerations

Agenda

About VEIC

VEIC is on a mission to generate the energy solutions the world needs.

- Winooski-based nonprofit working with organizations across the energy landscape to create immediate and lasting change
- VEIC operates the Efficiency Vermont energy efficiency utility under an order of appointment with the Vermont Public Utility Commission

Transportation Emission Sources and EV Trends

Policies and Programs

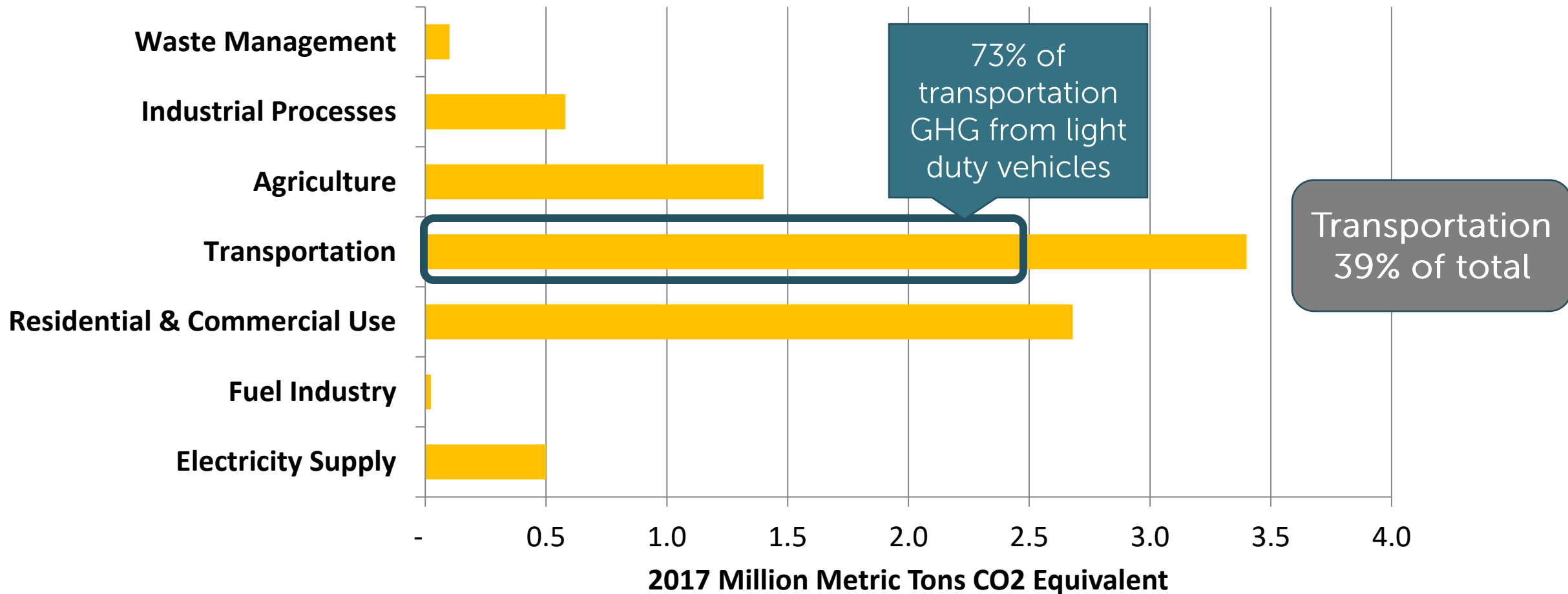
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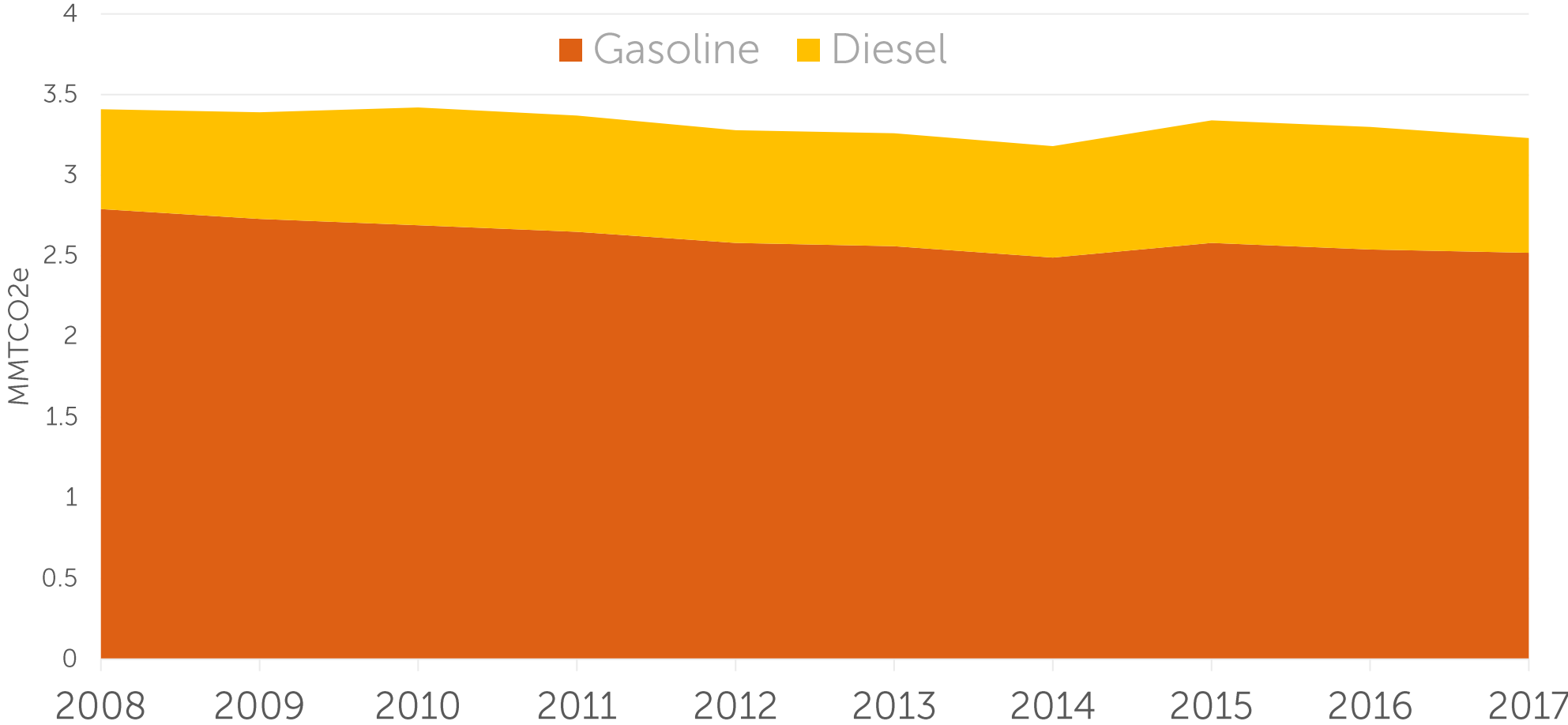
Vermont Transportation GHG Sources and Progress

Vermont Greenhouse Gas Emissions

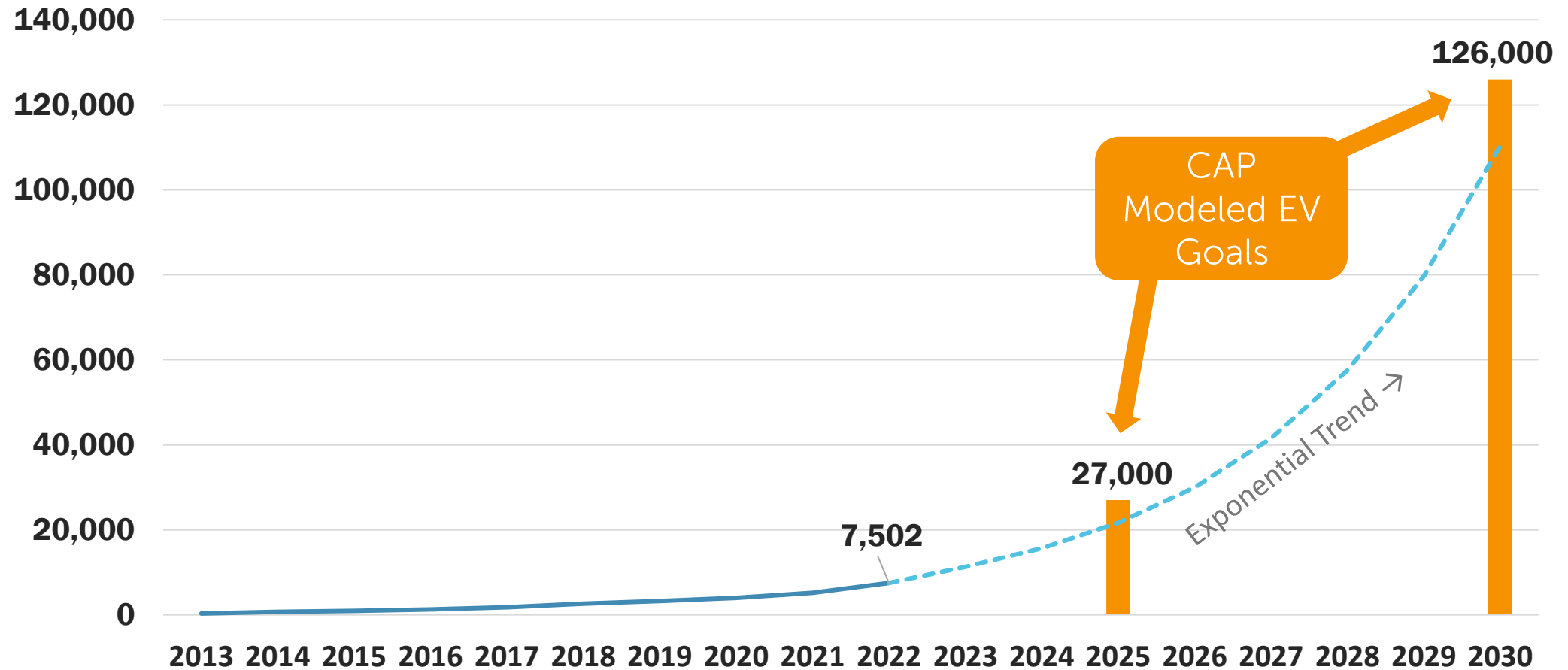


Transportation Emission Trends

Vermont Gasoline & Diesel Emissions – 2008 - 2017



How many vehicles does Vermont need to electrify?



Transportation Emission
Sources and EV Trends

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Vermont Vehicle Electrification: Policies and Programs

Vermont Transportation Electrification Programs

An Evolving Framework of Support

Light Duty EV Incentives

- State of Vermont (personal use vehicles)
- MileageSmart
- Replace Your Ride
- Electric utilities (Tier III)
- Federal EV tax credit
- Automaker incentives

Medium & Heavy Duty EV Incentives

- Federal Low/No Emission bus grants
- VW Environmental Mitigation Funds
- Electric utilities (Tier III)
- EPA Clean School Bus program
- Federal Commercial Clean Vehicle Tax Credit

E-bikes and motorcycle

- State of Vermont (funded depleted)
- Replace Your Ride
- Electric utilities (Tier III)
- Local Motion / VBike / Vital Communities programs

EV Charging

- VW Environmental Mitigation Funds
- Federal sources (NEVI, ARPA, Carbon Reduction funding)
- State funds (via ACCD)
- Electric utilities (Tier III)
- Act 151 (at dealers)

Supply Chain Development

- Act 151

Consumer Awareness and Education

- Act 151
- Drive Electric Vermont
- Auto manufacturers
- Auto dealers

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**Drive Electric
Vermont:
Trusted
Information
for Vermont
consumers**

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
 - Charging infrastructure development
 - Business & municipal fleet electrification

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 extends from the end of "Drive" and "Electric", curving around the right side of "Vermont".

Drive
Electric
Vermont

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

DEV 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 through Act 151)
 - Equity-focused research and program development
 - In-person and virtual events

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

DEV Technical Assistance

- Consumers
 - Incentive advice and support
 - EV charging information
- Businesses and municipalities
 - EV charging support
 - Fleet vehicle transitions
 - Coordination with electric utilities
- Multifamily charging
 - Supporting State of Vermont pilot
- Federal funding opportunities
 - Assisted VTrans in developing NEVI plan and fast charging plan for designated highway corridors
 - Additional State EV charging planning activities anticipated in 2023 to potentially support grant applications to new federal programs



Electrification of Transit Vehicles

- VEIC provides consultative services to VTrans' Public Transit Section to support implementation of the VTrans Zero-Emission Transit Plan
- Technical assistance provided to VTrans and VT transit providers includes:
 - Grant writing
 - Planning for EV chargers & support for installation
 - Equipment procurement support
 - Vendor engagement
 - Managed charging strategies
 - Coordination with VT utilities
 - Evaluation of vehicle performance



Photo credit: VTrans

Transportation Emission
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Energy Efficiency Modernization Act

Energy Efficiency Modernization Act (Act 151 of 2020)



Act 151 Transportation Support

2020 legislation enabled Efficiency Vermont transportation pilot

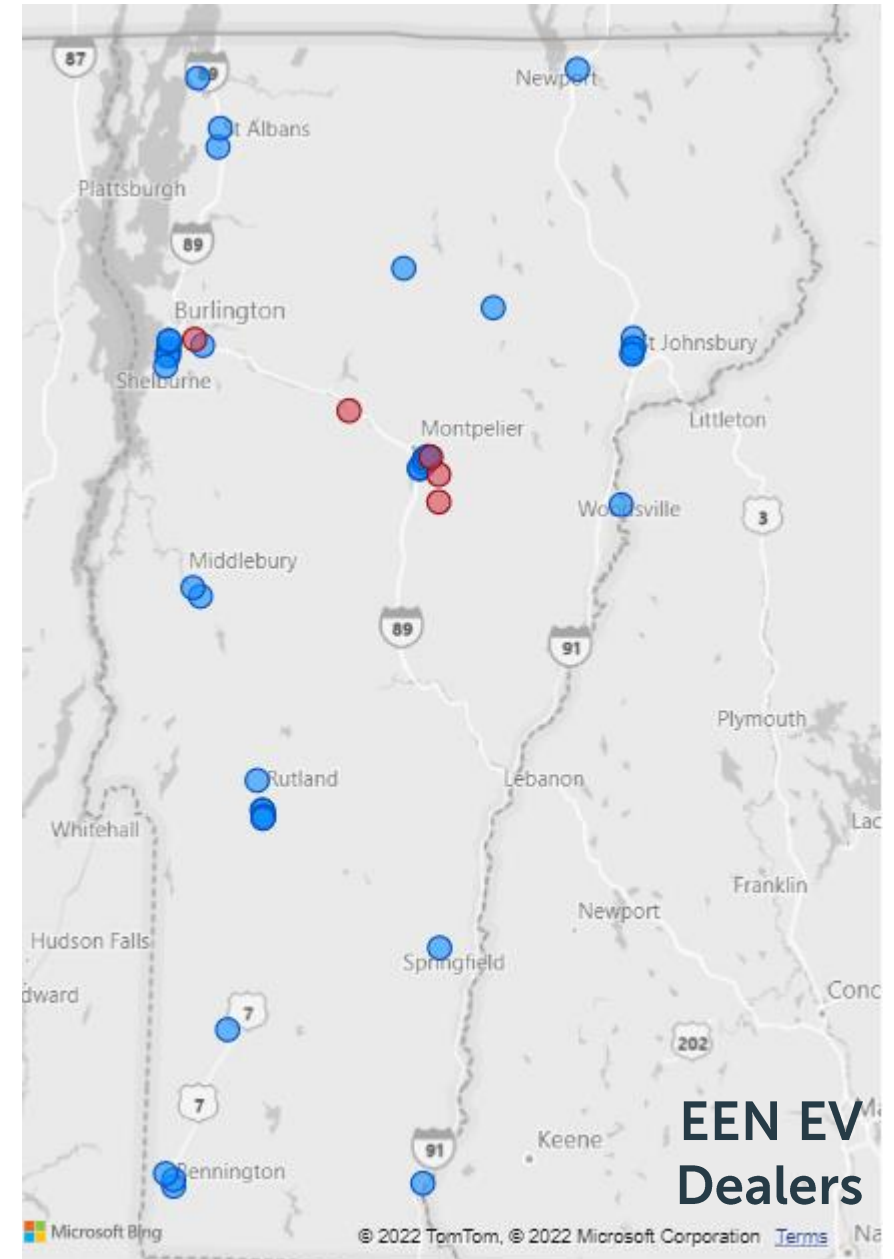
- Allows Efficiency Vermont and Burlington Electric Department to implement programs, measures, and services that **reduce GHG emissions** in the **thermal energy or transportation sectors**, or both
 - Up to **\$2 million** per year
 - Must have nexus with **electricity** usage
 - Must be **additive/complementary** to existing efforts
 - Pilot **2021-2023**
- Efficiency Vermont Act 151 program focus: **transportation electrification**
 - **EV supply chain development**
 - **EV consumer awareness and education**
- Plan approved by VT Public Utilities Commission and pilot launched in 2021



EV Dealer Program

Support the adoption of plug-in EVs across Vermont by creating a network of new and used car dealers committed to promoting EVs

- Pilot program launched in fall 2021 and will run through end of 2023, in conjunction with statewide EV education campaign
- 50 participating dealers representing 12 counties
 - 45 new car dealerships (NCD)
 - 5 used car dealerships (UCD)
- Program benefits include funding for EV infrastructure, dealer/salesperson incentives, training and education, marketing and promotional support



Program Participation To Date

- **50** EEN EV Dealers
- **94** sales staff trained
 - 41 EEN EV Dealers represented
 - 18 EV Sales Training sessions offered (in-person and virtual)
- **34** dealers have accessed program incentives
- **26** EV readiness (infrastructure) projects supported
 - 19 charging station projects
 - 6 EV service tools & equipment projects
 - 1 OEM EV certification project
- **477** EVs supported



DCFC at an EEN EV Dealership

EV Campaign

Statewide, multi-channel ad campaign in partnership with Drive Electric Vermont

Key Activities

- Ads tailored to every step of an EV consumer's journey, from awareness to consideration and decision-making
- Blogs, web resources
- [EV comparison tool](#) – compare fuel efficiency, available incentives, and total cost of ownership
- [Research](#) on Vermonters' car-shopping behaviors and preferences

Web Engagement

- Users: 164% increase since start of campaign
- Sessions: 165% increase
- Pageviews: 183% increase



Drive Electric Vermont

Campaign Tactics

- Video ad series (3)
- BTV installation
- Bus wraps in Chittenden County, White River Jct., and Middlebury
- Ads in various channels: broadcast, streaming, digital display, social media, Front Porch Forum
- Seven Days partnership
- Point of sale materials at EEN EV Dealerships

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**What's next to
drive progress**

Future Considerations / Next Steps

1

Vehicle market is changing rapidly. Pandemic slowed down EV supply, but showed buyers are ready

2

The ANR-promulgated Advanced Clean Cars II and Advanced Clean Truck rules will change the mid- and long-term outlook for the market, but consumers/dealers/service operations will still need support

3

The Energy Efficiency Modernization Act sunsets at the end of 2023. This work will need to continue.

Questions?



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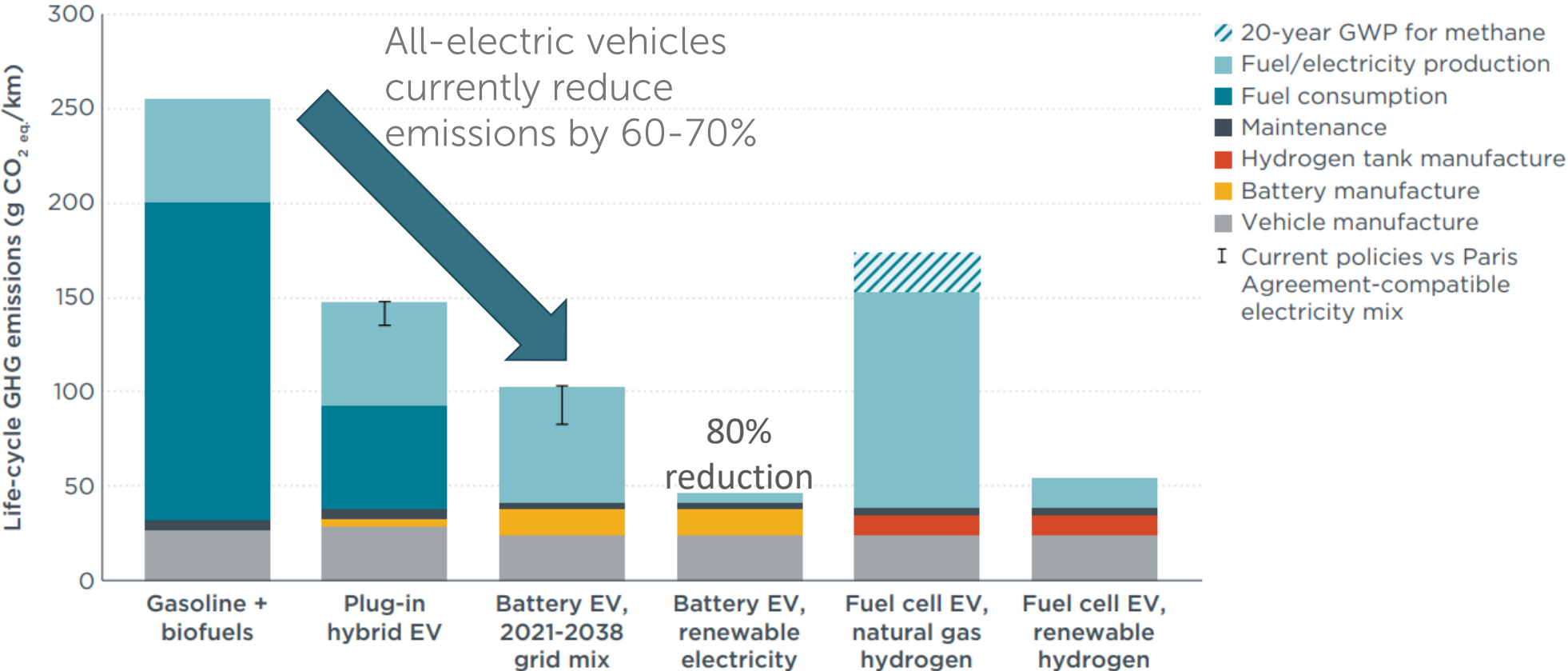
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EV Emission Reductions

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



https://theicct.org/wp-content/uploads/2021/12/Global-LCA-passenger-cars-jul2021_0.pdf