

VERMONT ZERO EMISSION VEHICLE ACTION PLAN

September 2014

Vermont Climate Cabinet



VERMONT ZEV ACTION PLAN

INTRODUCTION

On October 24, 2013, Governor Peter Shumlin signed a Zero Emission Vehicle (ZEV) Memorandum of Understanding (MOU) with the governors of California, Connecticut, Maryland, Massachusetts, New York, Oregon, and Rhode Island to coordinate actions to ensure the successful implementation of our state ZEV programs. Pursuant to a directive in the MOU, a multi-state ZEV Program Implementation Task Force (hereinafter "Task Force") prepared a "Multi-State ZEV Action Plan." While the Multi-State ZEV Action Plan is designed to guide inter-state coordination and inform state-specific action to accomplish the goals of the ZEV MOU; it is not intended to provide a uniform pathway for all states to follow. Therefore, the purpose of this *Vermont ZEV Action Plan* is to identify strategies and actions that best address Vermont's own needs and advantage our unique opportunities to achieve the commitments made by Governor Shumlin in the ZEV MOU.

Under the MOU, the signatory states committed to having 3.3 million ZEVs on our roads by 2025 and infrastructure to support these vehicles. ZEVs include pure battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), and hydrogen fuel cell electric vehicles (FCEVs). As discussed more below, accelerating the ZEV market is critical to Vermont achieving its renewable energy and greenhouse gas reduction goals. The MOU also promotes collaboration by identifying joint cooperative actions the signatory states will undertake to build a robust market for ZEVs. The multi-state Task Force created by the ZEV MOU will serve as an ongoing forum for coordination and collaboration to ensure effective and efficient implementation of our state ZEV programs. As we have seen through other multi-state initiatives, such as the Regional Greenhouse Gas Initiative, collaborating with other states makes our programs more effective.

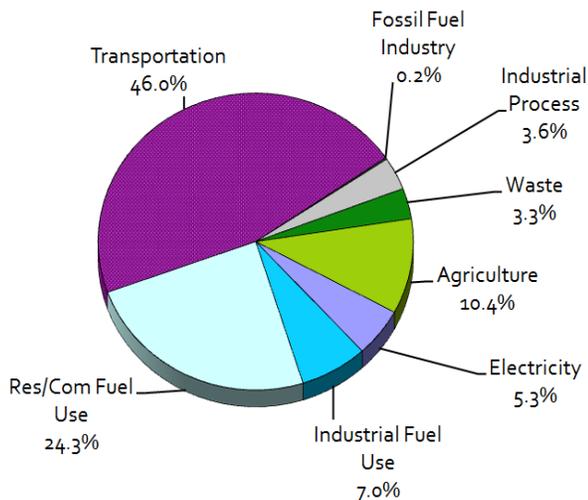
The MOU also recognizes that each signatory state can take steps within its own jurisdiction to raise consumer awareness and demand for ZEVs to support the objectives of the MOU. Therefore, this *Vermont ZEV Action Plan* identifies state-specific actions and strategies to grow the ZEV market in Vermont in a manner that is consistent with state climate and renewable energy goals, ZEV program requirements, and the commitments in the MOU. This plan is the product of an interagency working group that includes representatives from Vermont's Agency of Commerce & Community Development, Agency of Transportation, Department of Buildings & General Services, Department of Environmental Conservation, Department of Motor Vehicles, Natural Resources Board, Public Service Department, and Drive Electric Vermont. This plan builds upon the significant work already undertaken in Vermont and by the multi-state Task Force and takes into consideration comments received during a 30-day public comment period. To take into account the rapidly evolving ZEV market, this plan may be adjusted over time.

VERMONT'S CLIMATE AND RENEWABLE ENERGY GOALS

Over the past several years, Vermont has recognized the urgent need to address climate change and eliminate the state's dependency on fossil fuels. In 2006, Vermont established aggressive greenhouse gas reduction goals, set forth in 10 V.S.A. § 578(a), that include a 50 percent reduction of greenhouse gas emissions from 1990 levels by 2028 and, if practicable using reasonable efforts, a 75 percent reduction by 2050. In 2011, Vermont's Comprehensive Energy Plan established an ambitious goal to obtain 90 percent of total energy from renewable sources by 2050.

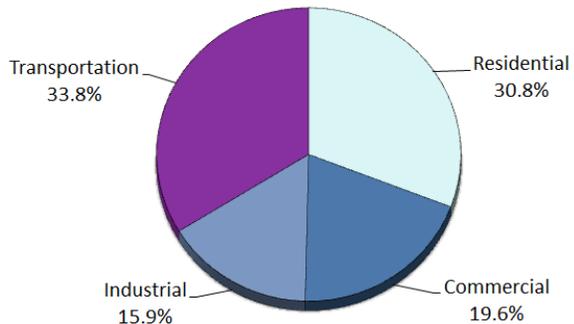
Due to the state's rural character and small industrial base, the transportation sector accounts for the highest share of both greenhouse gas emissions and energy use in Vermont. As depicted in the figures below, transportation accounts for nearly half (46%) of Vermont's greenhouse gas emissions and more than one-third (34%) of Vermont's energy consumption. Undoubtedly then, transforming Vermont's transportation sector away from fossil fuels is crucial to attaining Vermont's greenhouse gas reduction and renewable energy goals.

Figure 1: Vermont Gross GHG Emissions By Sector (2011)



Source: ANR, VT GHG Emissions Inventory Update

Figure 2: Vermont Energy Consumption by End- Use Sector (2011)



Source: Energy Information Administration, State Energy Data System

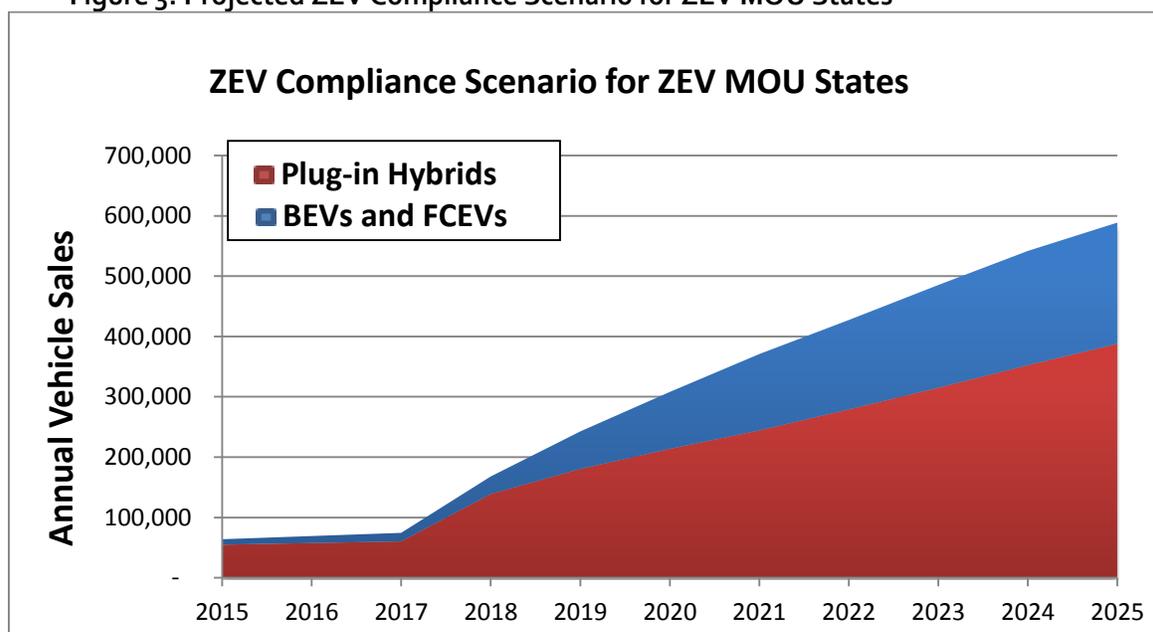
To achieve significant reductions of greenhouse gas emissions and fossil fuel consumption from Vermont's transportation sector, a large-scale transformation to alternatively fueled vehicles that reduce petroleum usage and related emissions by using advanced technologies and fuels (e.g., BEVs, PHEVs, and FCEVs) will be necessary. Indeed, Vermont's 2011 Comprehensive Energy Plan identified vehicle electrification as a primary pathway to enable the state to meet its renewable energy goal and set an objective to have 25 percent of vehicles registered in the state powered by renewable sources by 2030. The actions and strategies set forth herein will advance this transformation and are critical to achieving Vermont's greenhouse gas reduction and renewable energy goals.

ZEV PROGRAM REQUIREMENTS AND BENEFITS

Vermont's 2011 Comprehensive Energy Plan identifies maintaining the state's commitment to the low emission vehicle (LEV) program, including the ZEV component, as a key strategy to reduce petroleum consumption in Vermont. Vermont's LEV program, authorized under section 177 of the Clean Air Act, has been a centerpiece of Vermont's air quality efforts since 1996. The ZEV program, which is a technology-forcing component of the LEV program, has been a major contributor to the successful commercialization of hybrid-electric vehicles and ultra-low-emission technologies. To date, ten states have adopted the ZEV Program (California, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island and Vermont).

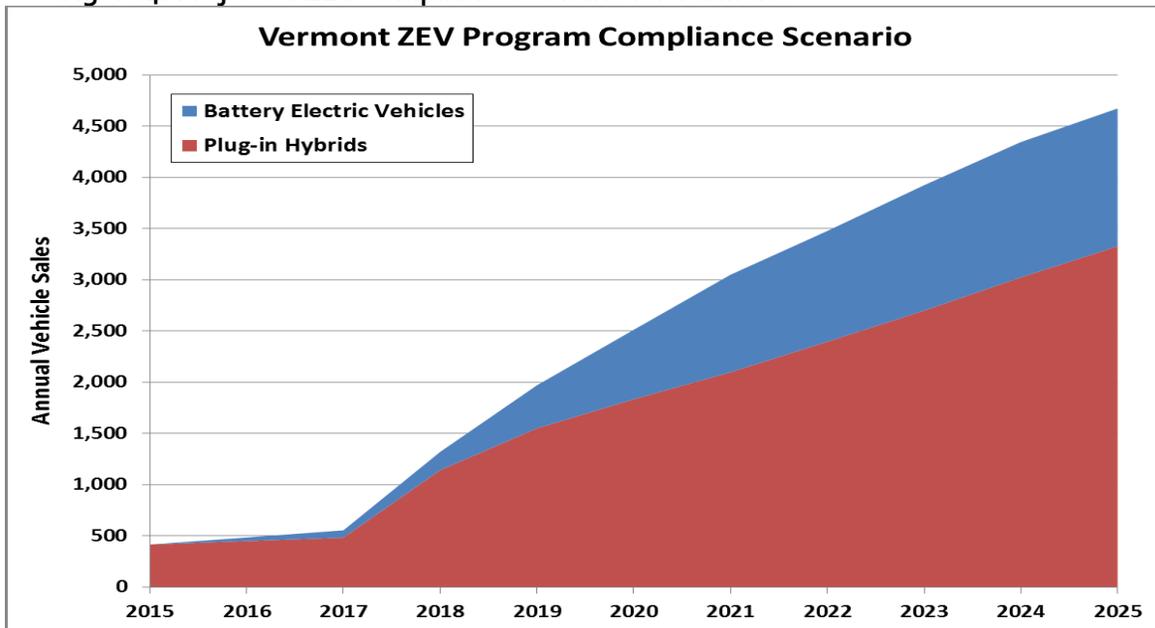
The ZEV program requires increasing sales of ZEVs over the next decade. The annual sales requirements in state programs are modest at the outset, but increase over time, anticipating that consumer demand will expand as consumers become more familiar with a growing range of continually improving ZEV products. The ZEV program provides manufacturers substantial flexibility through mechanisms such as credit banking and trading, alternative compliance options, cross-state credit pooling, and by allowing manufacturers to develop their preferred compliance strategy using BEVs, PHEVs, FCEVs, or some combination. The California Air Resources Board estimates that by 2025, about 15 percent of new vehicles sold in California will be required to be ZEVs. Vermont could see similar numbers if the state takes action now to build a robust market for these vehicles. Figure 3 estimates annual ZEV sales in the eight ZEV MOU states based on one possible regulatory compliance scenario. Assuming the ZEV sales are allocated proportionally among the ZEV MOU states, Figure 4 estimates the annual ZEV sales under the same regulatory compliance scenario.

Figure 3: Projected ZEV Compliance Scenario for ZEV MOU States



Source: Northeast States for Coordinated Air Use Management, 2014

Figure 4: Projected ZEV Compliance Scenario for Vermont



Source: Northeast States for Coordinated Air Use Management, 2014

The market demand created by these state programs can further lower ZEV costs through economies of scale and help expand the range of product lines available to consumers. Accelerating the ZEV market will help states protect public health and the environment by reducing transportation-related air pollution and greenhouse gas (GHGs) emissions, enhancing energy diversity, saving consumers money, and promoting economic growth.

ZEVs operating in the electric mode have no direct emissions. The overall air quality and GHG benefits of ZEVs compared to conventional gasoline and diesel vehicles are a function of the source of the electricity or hydrogen they use as fuel. Vermont has very clean sources of electricity, which means even when you take into account the emissions associated with the fuel used to power the vehicles, electric vehicles outperform even the best gasoline hybrids. Moreover, when powered by renewable resources such as solar power, the total emissions of a battery powered electric vehicle is nearly zero. Thus, Vermont's efforts to increase renewable energy sources of electricity will further increase the environmental and public health benefits of electric vehicles over time.

In 2012, the annual cost of gasoline for the average family in the U.S. was \$2,850. For the first time, gasoline costs exceeded the cost of owning a vehicle (including loan payments, maintenance, repairs and insurance). On average, electricity costs about one-third as much as gasoline or diesel on a per mile basis. That gap is expected to widen over time with oil prices projected to rise as global demand increases, while electricity prices are expected to remain relatively stable. Expanding choices in vehicle technology and fuels can help lower the cost of transportation for individuals and businesses, as ZEVs already have a lower cost of ownership than comparable conventional vehicles for many households.

ZEVs will enhance energy security, diversity and reliability by reducing our dependence on petroleum products for transportation fuel. Gasoline and diesel currently account for about 95 percent of transportation fuel for cars and trucks in the U.S. Nearly 99 percent of passenger

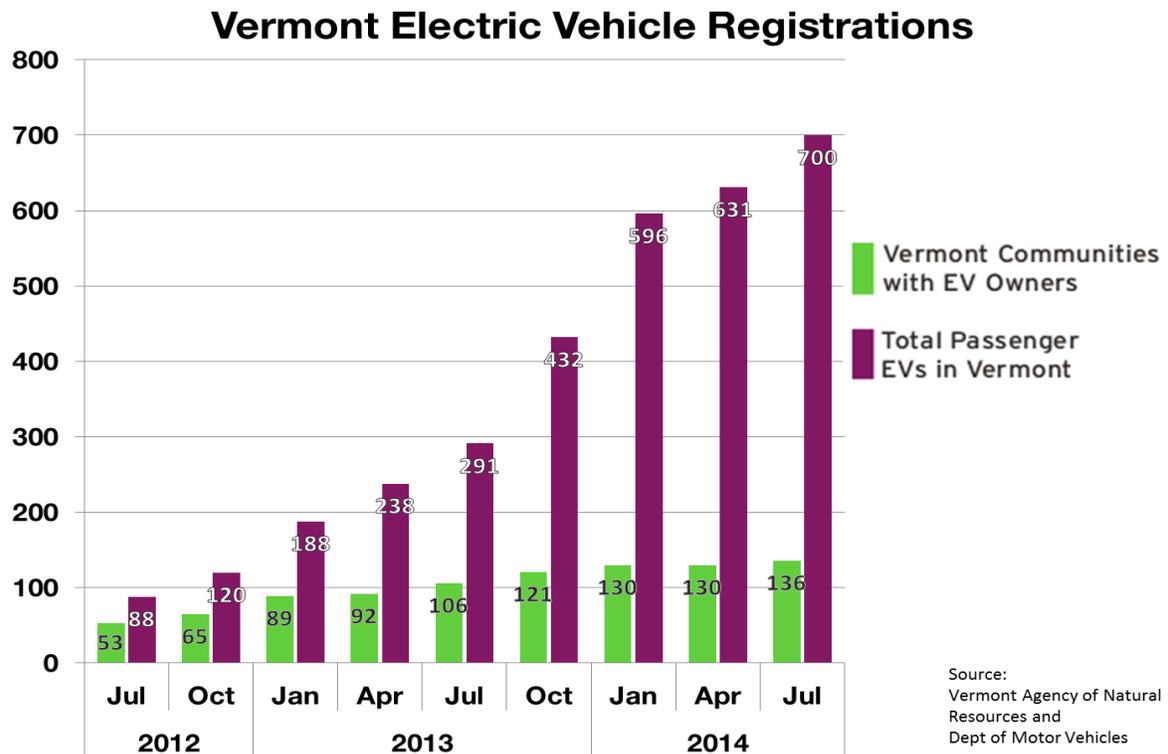
cars are fueled by gasoline and/or a gasoline and ethanol blend. ZEV programs will help reduce vulnerability to price swings in the international petroleum market by diversifying the transportation fuel supply and providing consumer choice. The heavy reliance on imported petroleum for transportation fuel results in an outflow of billions of dollars from our states. Investing that money, instead, in our states economies will have a positive multiplier effect on jobs, personal income and gross state product.

CURRENT STATE OF VERMONT'S ZEV MARKET

Twenty-two plug-in electric vehicle (PEV) models from nine manufacturers are expected to be available for sale or lease in 2014. Thirteen models run entirely on batteries and nine are plug-in hybrid electric vehicles that can run on gasoline as well as the battery. Several of these models have won awards for safety, performance and customer satisfaction over the past couple of years. Three hydrogen fuel cell electric vehicles have been announced for sale or lease in California beginning in model year 2015. The number and type of models available will continue to increase as car companies develop a portfolio of ZEV technologies to match their full product lines, which will further enhance consumer choice and market growth.

While not all of these models are currently offered for sale in Vermont, there are 9 different models of PEVs registered in Vermont. Over the past two years, Vermont has experienced substantial growth in the number of electric vehicles in Vermont. From July 2012 through March 2014, the number of plug-in passenger car registrations went from 88 to 626. Moreover, the number of Vermont communities with EVs has more than doubled from 53 to 130.

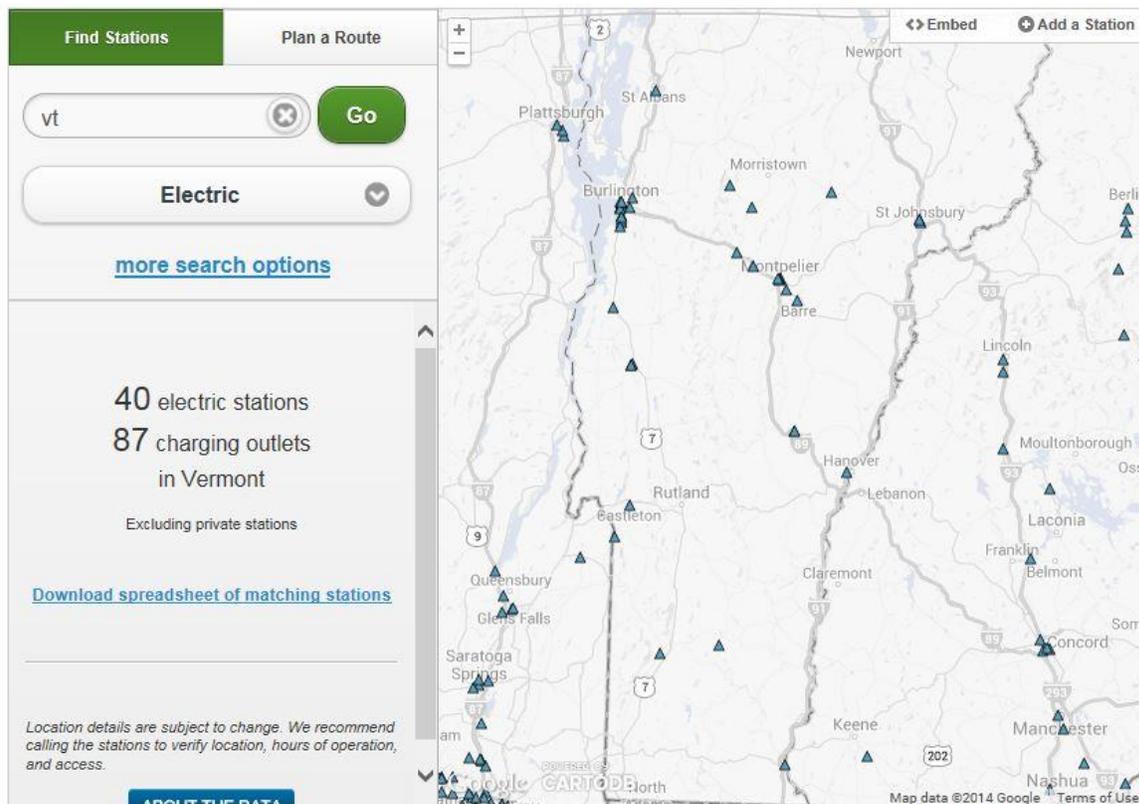
Figure 5: Tracking EVs in Vermont



Consistent with the growing number of electric vehicles in the state, the number of public electric vehicle charging stations is also increasing. There are currently 27 public EV charging stations in Vermont, and another 15 that are planned. In addition, a number of workplaces and businesses are leading by example by installing charging equipment for the use of their employees and guests.

Figure 6: Public Electric Vehicle Charging Stations in Vermont
Electric Vehicle Charging Station Locations

Find electric vehicle charging stations near an address or ZIP code or along a route in the United States. For more alternative fueling stations, use the [Alternative Fueling Station Locator](#).



Source: U.S. DOE Alternative Fuels Data Center, August 1, 2014

ZEV ACTIONS & STRATEGIES

Building off the eleven priority actions set forth in the Multi-State ZEV Action Plan, the *Vermont ZEV Action Plan* lists state-specific actions and strategies to grow the ZEV market in Vermont, identifies state leads for each action, and establishes timeframes for each action. This plan is intended to enhance coordination on Vermont’s efforts to advance ZEVs and to serve as a “to-do” list. A number of these actions are already underway and require an ongoing commitment. The list of supporting roles identified for some of the actions listed below is not meant to be exhaustive. Many of these actions will best be addressed through new and existing collaborative partnerships with private, public, nonprofit, and academic organizations.

The following abbreviations are used to denote lead and supporting roles for the actions and strategies listed on the following pages:

AAFM	Agency of Agriculture, Food & Markets
ACCD	Agency of Commerce & Community Development
ANR	Agency of Natural Resources
BGS	Department of Buildings & General Services
DEC	Department of Environmental Conservation
DMV	Department of Motor Vehicles
DEV	Drive Electric Vermont
NRB	Natural Resources Board
PSD	Public Service Department
Task Force	Multi-State ZEV Program Implementation Task Force
VTCCC	Vermont Clean Cities Coalition
VEIC	Vermont Energy Investment Corporation
VTrans	Vermont Agency of Transportation

Action #1	Leading Role	Supporting Role	Timeframe
Promote the availability and effective marketing of all plug-in electric vehicle models in our states and support these efforts			
Work with automobile manufacturers and dealers to ensure that all plug-in electric vehicle models are available for sale and aggressively market in all MOU states: (1) Create a MOU state web-based "ZEV landing page" to provide consumers and dealers with up-to-date information on ZEVs that are available in each state and links to state and auto manufacturer websites; and (2) Invite auto dealers and dealer associations to join the MOU states and automobile manufacturers in our on-going "New Collaboration for ZEV Success" initiative to encourage dealer education, consumer awareness and effective marketing for the full range of ZEVs.	Task Force	DEV / DMV / DEC	2014 - ongoing
Collaborate with automakers and dealers to identify, evaluate, and implement creative financing approaches and other effective strategies to reduce vehicle purchase price and increase ZEV sales.	Task Force	DEC	2014
Collaborate with automobile manufacturers, dealers, Clean Cities programs, and other interested stakeholders to incorporate ZEV outreach and education events for consumers in conjunction with auto shows, Earth Day celebrations, and National Plug-In Day.	DEV	PSD / DEC	2012 - ongoing
Identify and highlight "ZEV champions" among dealers through Governor-recognition programs and other profile-raising approaches.	ANR		2014 - ongoing
Conduct ZEV outreach events, such as demo days.	VEIC		2012 - ongoing
Convene and coordinate Drive Electric Vermont stakeholder and working group meetings.	VEIC		2012 - ongoing
Maintain and enhance online presence for ZEV stakeholders in Vermont.	VEIC		2013 - ongoing



Action #2	Leading Role	Supporting Role	Timeframe
Provide consumer incentives to enhance the ZEV ownership experience			
Support and enable reciprocity for non-monetary ZEV incentives across MOU states and establish a common image or decal to identify qualifying vehicles.	Task Force	DMV	2015
Evaluate opportunities to increase the effectiveness of state-provided purchase incentives by converting them to “point-of-purchase” rebates to provide a stronger incentive at the time of sale and to qualify more consumers for the full value of this sales incentive.	Task Force	DEC	2014-2015
Support the continuation of the federal tax credit for PEVs and FCEVs.	Task Force	DMV	2015-ongoing
Conduct a collective study to evaluate the effectiveness of various local, state, and national ZEV incentives to inform state and local government policy.	Task Force		2014-ongoing
Provide key local jurisdictions with models for partnering with businesses to develop ZEV-ready plans that include consumer incentives.	VEIC		2014-2015
Foster the development of a viable secondary market for used ZEVs to ensure the owners can achieve a fair trade-in value and make these vehicles available to used car buyers.	Task Force		2015-ongoing
Purchase Incentives			
Explore whether to propose state rebates, sales tax credits or other programs such as excise tax exemptions as incentives for ZEV buyers in the near-term.	VTrans / DMV / DEC / PSD		2014
Consider alternative models such as electric utility tariffs that compensate owners of electric vehicles for services provided.	PSD	VEIC	2015
Preferential Parking			
Integrate policies that encourage ZEV parking provisions and EVSE installations within municipal planning manuals and smart growth designation programs.	ACCD		2014-ongoing
Incorporate preferred parking for all applicable new construction projects and include in BGS Construction Guidelines.	BGS		2014-ongoing

Action #3 Lead by example through increasing ZEVs in state, municipal, and other public fleets	Leading Role	Supporting Role	Timeframe
Establish goals to ensure that a minimum of 25 percent of new light-duty state fleet purchases and leases, for applicable uses, will be ZEVs by 2025.	BGS / VTrans		2014 (2%-2.5% per year)
Encourage other fleets to adopt similar goals.	Go Vermont	DEV / VTCCC	2015-ongoing
Develop best practice policies to maximize the “electric-miles” driven by government fleet vehicles.	BGS		2014
Include ZEVs and electric vehicle supply equipment (EVSE) on state purchase and rental car contracts.	BGS Purchasing & Contracts	VTrans	2014-ongoing
Establish a multi-state ZEV Fleets Users Forum to organize communication with ZEV manufacturers on fleets’ needs, serve as an information and best-practices clearinghouse, and provide a venue for coordinating research and data collection.	Task Force	BGS Fleet Services	2015
Use common data collection elements and protocols to collect and share information on ZEV fleet purchases and operational cost savings through the ZEV web landing page.	Task Force	BGS Fleet Services	2014-ongoing
Assess feasibility and opportunities for pooled purchases with other government and private fleets to secure greater price discounts, stronger contract terms and conditions, and improved maintenance and service agreements.	BGS Purchasing & Contracts		2015
Develop implementation plans for state fleet ZEV purchases, with metric to measure success.	BGS / VTrans		2014
Investigate leasing of ZEVs for state fleets to maximize the potential savings from the federal tax incentive.	ANR		2014
Investigate opportunities to integrate ZEV-based car sharing into the state’s fleet management system to supplement the state’s ZEV inventory.	BGS Fleet		2013-ongoing
To coordinate efforts to get the best price, direct state agencies responsible for vehicle fleet purchasing to consider cooperative contracts to aggregate demand when going out to bid on ZEVs and electric vehicle charging equipment.	BGS Purchasing & Contracting		2014-ongoing
Provide incentives for designated downtown areas to purchase and install EVSE, and consider continuing and/or expanding program if funding is available.	ACCD	DEV / DEC	2013-2014
Include EVSE installations in the state municipal park and ride programs.	VTrans	DEV / DEC	2014-ongoing

Action #3	Leading Role	Supporting Role	Timeframe
Lead by example through increasing ZEVs in state, municipal, and other public fleets	DEV	VTCCC	2015-ongoing
Assist fleet managers by: <ol style="list-style-type: none"> 1. Providing information about the availability and applicability of ZEV vehicles. 2. Developing near-term pilot projects to enhance understanding of PEVs and charging infrastructure within state departments. 			



Action #4 Encourage private fleets to purchase, lease, or rent ZEVs	Leading Role	Supporting Role	Timeframe
Implement high profile public-private programs, such as Governors' events and recognition programs, to promote and encourage ZEVs in private fleets and workplace charging programs.	DEV	ANR / VTTrans	2014 - ongoing
Coordinate with academics, non-profit partners, and the U.S. DOE to help fleet managers develop the business case for integrating ZEVs into their fleets.	Task Force	VTCCC	2014-2015



Action #5	Leading Role	Supporting Role	Timeframe
Promote workplace charging			
Lead by example by promoting state agency workplace charging and ensuring that by 2020, all interested state agency employees with PEVs will have a place to charge them.	BGS	HR	2016 - ongoing
Promote the installation of charging infrastructure for commuters at public transit hubs, including park and rides.	VTrans		2014 - ongoing
Implement high profile public-private programs, such as Governors' events, to promote and encourage the deployment of workplace charging, particularly at large companies, universities and hospitals.	DEV	Go Vermont	2015 - ongoing
Coordinate with the U.S. DOE Workplace Charging Challenge initiative to educate employers about the need for and benefits of workplace charging infrastructure.	VTCCC	PSD / DEV / Go Vermont	2015 - ongoing
Develop and circulate surveys and educational materials to help employers gauge employee interest, determine the appropriate charging systems, estimate capital and operating costs, and understand installation requirements.	Task Force	DEV / Go Vermont	2014-2015
Encourage automobile manufacturers, dealers and charging companies to engage with large employers to promote workplace charging.	DEC	DEV / Go Vermont	2014 - ongoing
Revise state building energy codes for major new developments to include PEV charging or PEV charging wiring requirements and include such requirements in development permits as applicable.	DEC / VTrans / PSD	VEIC / NRB	2015 - ongoing



Action #6 Promote ZEV infrastructure planning and investment by public and private entities	Leading Role	Supporting Role	Timeframe
Research driver charging behavior to determine the need for non-residential charging, including the level of charging and importance of location	Task Force		2015-ongoing
Collaborate in the coordinated deployment of DC fast chargers along key inter-state corridors to facilitate long-range PEV travel along priority roadways, such as the I-95 Northeast Corridor and the I-5 West Coast Highway and major corridors through Vermont.	Task Force	PSD	2014-ongoing
Coordinate with researchers to undertake multi-state mapping and modeling analyses to inform the design and implementation of efficient corridor charging networks.	Task Force	DEV	2014-2015
Pursue resource partnerships to design and execute a hydrogen fuel cell vehicle infrastructure feasibility study for the MOU states outside of California.	Task Force		2014-2016
Strive to ensure that all appropriate charging/fueling installations receiving public funding be open to the public and accessible to all PEV/FCEV drivers.	Climate Cabinet*		2014
Initiate a dialogue to address federal restrictions on electricity and hydrogen sales within certain limited access right-of ways.	Task Force	VTrans	2014
Continue and promote low interest State Infrastructure Bank loans for public charging stations.	VEDA	DEC	2013 - ongoing
Explore opportunities for coordinated charging/fueling station equipment procurement across local, state and federal agencies.	BGS Purchasing	DEV / BGS Purchasing	2014
Collaborate with auto manufacturers to provide ownership trends data to utilities, EVSE providers, local and regional planning agencies and other interested parties through the ZEV landing page to inform effective charging network design.	DEC	DEV	2013-ongoing
Promote and support efforts by utilities to improve understanding of ZEV charging demand patterns, needed system upgrades, and associated grid impacts.	PSD		2014-ongoing
Work with other stakeholders to conduct outreach to commercial facility operators and retailers to highlight the business case for convenient access to PEV parking and EVSE.	DEV		2013 - ongoing
Promote EVSE as eligible for receiving awards from the Downtown Transportation Fund.	ACCD		2014-ongoing

* Climate Cabinet Staff will draft for the Climate Cabinet’s review and approval a guidance document on a number of standard requirements that should be included in state grants for publicly funded chargers.

Action #7 Provide clear and accurate signage to direct ZEV users to charging and fueling stations and parking	Leading Role	Supporting Role	Timeframe
Coordinate with the Federal Highway Administration (FHWA) to ensure sufficient and up-to-date coverage of uniform signage on federal highways using the "Alternative Electric Vehicle Charging Symbol Sign."	VTrans		2014
Develop and install uniform signage consistent with FHWA's Manual on Uniform Traffic Control Devices for use on state and local roadways, as needed, to direct drivers to charging and hydrogen fueling stations.	VTrans		2016
Support the adoption of national standards for highway signs indicating hydrogen fueling stations.	VTrans		ongoing
Provide guidance to municipalities and the private sector to institute consistent signage for ZEV parking and PEV charging.	VTrans		2015
Implement uniform signage policies in development permits where applicable.	NRB		2015-ongoing



Action #8 Remove barriers to PEV charging and fueling station installations	Leading Role	Supporting Role	Timeframe
Coordinate with nonprofit groups developing model codes and standards to promote consistency in the development of state and local government requirements related to the installation of PEV charging infrastructure.	Task Force	VEIC / PSD	2014-2015
Establish consistent codes and standards for ZEV infrastructure through revisions to national and state building codes.	Task Force	VEIC/DPS Fire Safety Division	2015-2018
Consider amendments to state building or electrical codes to ensure that new buildings are ZEV-ready, including criteria such as pre-wiring and electric panel capacity requirements.	PSD	VEIC / NRB	2014-2015
Develop model local government requirements to incorporate EVSE into new multi-family dwellings and non-residential buildings, and model ordinances requiring them to dedicate a portion of their parking spaces to PEV charging.	ACCD	VEIC	2014-2015
Develop a streamlined model permit and zoning process that local governments can adopt to ensure timely approval of DC fast charge installations.	ACCD	VEIC	2014-2015
Develop siting and cost allocation criteria for public charging and responsibility for outreach.	Task Force	PSD	2014-2015
Design utility demand charges and interconnect fees for PEV charging.	PSD	VEIC	2014-2015
Provide planning and siting assistance and resources to municipalities and other local planning entities.	ACCD	DEV	2014 - ongoing
Develop Governor-recognition programs for local government ZEV champions.	ACCD	DEV	2014
Investigate use of energy codes to require availability of parking with electric vehicle charging in new development under Act 250.	PSD	NRB	2014 - 2015
Hold workshops to educate regional planners on EVSE issues.	VTrans	DEV / VTCCC	2014 - ongoing



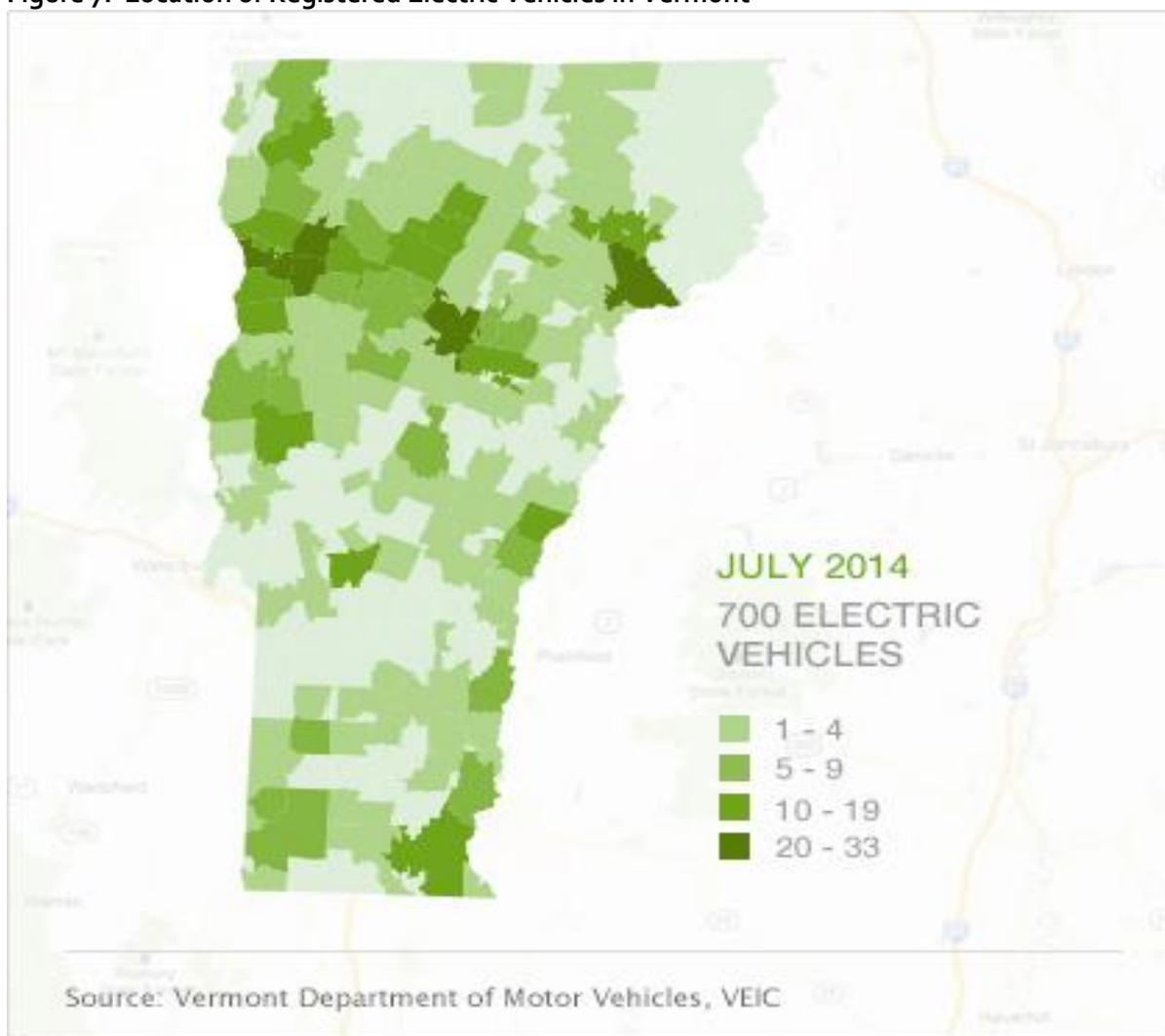
Action #9 Promote access, compatibility, and interoperability of the plug-in electric vehicle charging network	Leading Role	Supporting Role	Timeframe
Support the adoption and implementation of effective National Institute of Standards and Technology standards for EVSE interoperability.	Task Force		2014 - ongoing
Work with EVSE providers to ensure that PEV drivers have the information and freedom to use any public charging station by allowing common forms of payment, not requiring subscription or membership status, encouraging use of open-source protocols, and making fees transparent to customers.	Task Force	PSD	2014 - ongoing
Ensure that all ZEV charging/fueling installations are registered with the National Renewable Energy Lab's Alternative Fuels Data Center database to provide a simple means for PEV drivers to locate available charging stations and determine charging costs.	Climate Cabinet*	PSD	2014 - ongoing
Require all publicly funded chargers that are accessible to the public and networked to apply the Open Charge Point Protocol communication standard that allows charging stations and central systems from different vendors to communicate.	Climate Cabinet*	PSD	2014 - ongoing
Encourage dual-compatibility for all new public DC fast charge stations to ensure that all PEVs can utilize any public charging station, whether equipped with CHAdeMO or Society of Automotive (SAE) charging ports.	Climate Cabinet*	DEV / PSD	2014 - ongoing
Follow and support national and California efforts to develop hydrogen infrastructure codes and standards for station configuration, fuel quality and dispensing accuracy.	Task Force		2014 - ongoing
Seek federal guidance on ensuring charging station compliance with the Americans with Disabilities Act.	Task Force		2014-2015
Monitor the development of interoperability and business models to evaluate the need for state regulatory action in the absence of an effective federal approach or industry standard.	Task Force		2014 - ongoing

* Climate Cabinet Staff will draft for the Climate Cabinet's review and approval a guidance document on a number of standard requirements that should be included in state grants for publicly funded chargers.

Action #10 Remove barriers to the retail sale of electricity and hydrogen as transportation fuels and promote competitive plug-in electric vehicle charging rates	Leading Role	Supporting Role	Timeframe
Promote necessary legislation, regulations, standards or certifications to enable the commercial sale of electricity and hydrogen, including on a per-kilowatt-hour or on a per-kilogram basis and ensure transparent pricing.	PSD		2014
Request that Public Service Board (PSB) open one or more proceedings, or incorporate in relevant proceedings, to: <ol style="list-style-type: none"> 1. Ensure electric vehicle service providers or others that operate charging facilities for the sole purpose of providing electricity as a transportation fuel are not defined as a “public utility” and therefore are not subject to regulation as such an entity. 2. Determine the appropriate level of consumer protection and regulatory oversight for providers of charging facilities, including utilities and non-utilities. 3. Evaluate residential and business electric utility rate structures or other mechanisms, consistent with statutory authority, that provide lower-cost electricity for off-peak charging. 4. Encourage utilities to evaluate and revise, as necessary and consistent with statutory authority, appropriate rate structures based on PEV charging data, customer enrollment, and other customer feedback to promote off-peak charging and maximize consumer savings and grid reliability. 5. Explore the role utilities, energy service companies, or other public or private entities can play in the deployment of ZEV fueling infrastructure, particularly with respect to fast-charging to facilitate long distance travel and charging for those without dedicated home charging. 6. Evaluate policies with respect to utility demand charges and interconnect fees for PEV charging. 	PSD	2: AAFM (weights and measures); Attorney General (consumer protection); 5: VTrans, ACCD	2014-2015
Work with utilities to promote targeted outreach to homeowners and fleets with PEVs, to ensure they are aware of existing electric rate options and the potential cost savings.	PSD	VEIC	2014
Coordinate on PEV outreach efforts within each utility’s service area.	DEV		2014 - ongoing
Coordinate with electricity providers and PSB to explore opportunities to connect renewable energy generation with PEVs.	PSD	CEDF	2014

Action #11 Track and report progress toward meeting the goal of 3.3 million ZEVs on our roadways by 2025	Leading Role	Supporting Role	Timeframe
Track the following: <ol style="list-style-type: none"> 1. The number of ZEVs registered in Vermont. 2. The number of public charging/fueling stations in Vermont. 3. State fleet ZEV acquisitions. 	DEC	DMV / BGS	2012-ongoing
Track communities where ZEVs are registered in each state.	DEC	DEV / DMV	2012-ongoing
Use data about ZEV deployment to generate interest and educate the public and state legislatures about ZEVs.	DEV		2012 - ongoing

Figure 7: Location of Registered Electric Vehicles in Vermont



CONCLUSION

Successful implementation of the strategies and actions identified above will require coordination across state government and, in some cases, additional resources or legislation. Moreover, fulfilling the commitments herein will also involve collaborating and building partnerships with a host of stakeholders, including municipalities, regional planning commissions, other states, the federal government, the private sector, the non-profit community, and academia. Together, by accelerating the market for ZEVs, we can have a healthier and more prosperous state by reducing motor vehicle pollution, combatting climate change, encouraging economic growth, and saving Vermonters money.