State of Rhode Island
Zero Emission Vehicle Action Plan
DRAFT

October 2015

EXECUTIVE SUMMARY

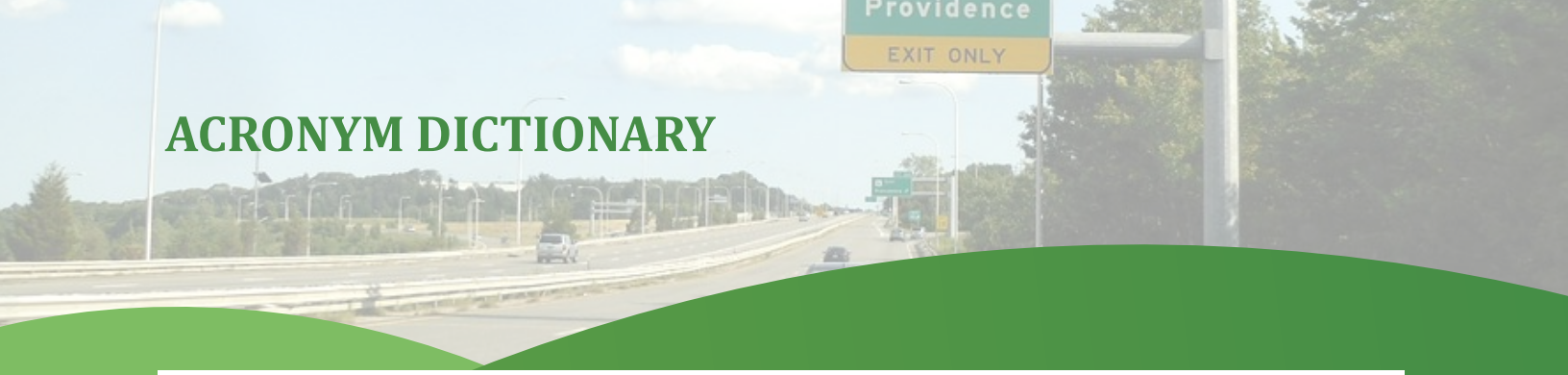
Transportation is the costliest energy sector in Rhode Island, accounting for nearly forty (40) percent of statewide energy expenditures, or $1.4 billion annually. Zero Emission Vehicles (ZEVs) are one of the most promising technologies to mitigate the effects of global warming and greenhouse gas (GHG) emissions. In Rhode Island, those who switch their conventional vehicle to a Plug-In Electric Vehicle (PEV) can reduce their GHG emissions by up to 73%.[1] According to the Acadia Center, vehicle electrification is one of the key pathways to cleaning up the transportation sector.[2]

In 2013, the governors of eight states signed a Memorandum of Understanding (MOU) with a goal to reduce greenhouse gas and smog-causing emissions and foster energy independence. Collectively, these states committed to have at least 3.3 million ZEVs operating on their roadways by 2025. In Rhode Island, that goal is roughly 43,000 vehicles. The MOU encourages states to undertake joint implementation of actions and programs, and to create individual state programs to address barriers in ZEV deployment and build a robust market. Accelerating the ZEV market is crucial if we are to meet the stringent climate and energy goals put into place here in Rhode Island. The ZEV MOU offers Rhode Island the ability to coordinate with other states both regionally and throughout the country in an ongoing collaborative forum to ensure that programs are implemented in an efficient and effective manner. The MOU also presents additional opportunities to create innovative solutions to improving health and environmental quality, increase energy savings within our transportation sector saving individuals and businesses money, while at the same time creating new jobs and boosting local economic development.

On behalf of the Rhode Island Zero Emissions Vehicle Working Group, we are proud to present the following Action Plan to all stakeholders and interested parties. This plan is customized for Rhode Island's unique sets of strengths and challenges. It represents the culmination of meetings with stakeholders from both the private and public sectors. We asked these invested parties to develop and take stewardship of the action items outlined within this plan. The plan is a collaborative effort to take steps towards electrification of Rhode Island's vehicle fleet.

Thank you for taking the time to learn more about Rhode Island's strategic plan to build a robust electrified vehicle market within our state and across our region!

[1] Department of Energy's Alternative Fuel Data Center: http://www.afdc.energy.gov/
[2] Acadia Center: http://acadiacenter.org/initiative/transportation/



ACRONYM DICTIONARY

ARRA	American Recovery and Reinvestment Act
BEV	Battery Electric Vehicle
CARB	California Air Resources Board
CCAT	Connecticut Center for Advanced Technology
CSE	Center for Sustainable Energy
DEM	Department of Environmental Management
DLT	Department of Labor and Training
DMV	Department of Motor Vehicles
DOE	Department of Energy
DOT	Department of Transportation
DPUC	Division of Public Utilities and Carriers
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
FCEV	Fuel-Cell Electric Vehicle
FHWA	Federal Highway Administration
GHG	Greenhouse Gas
LEV	Low Emission Vehicle
MOU	Memorandum of Understanding
NESCAUM	Northeast States for Coordinated Air Use Management
OER	Office of Energy Resources
OSCC	Ocean State Clean Cities
PEV	Plug-In Electric Vehicle
PHEV	Plug-In Hybrid Electric Vehicle
PUC	Public Utilities Commission
RGGI	Regional Greenhouse Gas Initiative
TCI	Transportation Climate Initiative
VEIC	Vermont Energy Investment Corporation
ZEV	Zero Emission Vehicle

INTRODUCTION AND BACKGROUND

As the second most densely populated state, Rhode Island is a natural leader in the U.S. for zero-emission vehicle deployment. Rhode Island leadership has engaged in many initiatives to foster ZEV market adaption, dedicating substantial time and financial resources towards this lower emission, energy efficient, and domestic resource for meeting transportation needs.

The governors of California, Connecticut, Maryland, Massachusetts, New York, Oregon, Rhode Island, and Vermont signed a Memorandum of Understanding on October 24, 2013. The ultimate goals stated in the MOU are reducing greenhouse gas and smog-causing emissions and fostering energy independence by transforming the transportation sector. The MOU encourages states to undertake joint implementation of actions and programs, and to create individual state programs to address barriers in ZEV deployment and build a robust market. Since the MOU signing, state regulators, the auto industry, infrastructure developers, and other stakeholders have shared information and best practices to help move this effort forward.

Accelerating the ZEV market is crucial if we are to meet the stringent climate and energy goals put into place here in Rhode Island. The ZEV MOU offers Rhode Island the ability to coordinate with other states, both regionally and throughout the country, in an ongoing collaborative forum to ensure that programs are implemented in an efficient and effective manner. The MOU also presents additional opportunities to create innovative solutions to improve health and environmental quality and increase energy savings within our transportation sector (saving individuals and businesses money), while at the same time creating new jobs and boosting local economic development.

ONGOING REGIONAL INITIATIVES

Transportation Climate Initiative

Rhode Island participates in the Transportation and Climate Initiative (TCI).[3] TCI is a regional collaboration of transportation, energy, and environment officials in Northeastern and Mid-Atlantic states. TCI seeks to stimulate sustainable economic development and improve the environment by supporting innovative technologies and smart planning, and through finding greater efficiencies within the transportation sector. One of the biggest initiatives of TCI has been the launching of the Northeast Electric Vehicle Network. Participating TCI jurisdictions continue to develop partnerships with the private sector, utilities, Clean Cities Coalitions and other public entities; identify and remove barriers to the expanded use of electric vehicles; and support regional, state, and local planning efforts to ensure that electric vehicle charging stations are placed in locations that maximize both local and regional travel. The Northeast Electric Vehicle Network was started through a nearly $1 million planning grant from the U.S. Department of Energy.

Northeast States for Coordinated Air Use Management

NESCAUM, a nonprofit association of state environmental agencies, serves as a facilitator for regional ZEV issues and provides technical and policy assistance to Rhode Island and member states. In September 2014, NESCAUM's ZEV Multi-State Task Force organized state staff into eight separate implementation teams with responsibility to execute the eleven high-level action items in the ZEV Multi-State Action Plan.[4] These eight multi-state implementation teams are focused on the following general topics that track the organization of the Action Plan: *Incentives; Dealers; Infrastructure Planning; Infrastructure Regulatory; Fleets; Hydrogen; Workplace Charging; and Outreach*. Rhode Island serves as the multi-state lead for the Fleets and Workplace Charging teams. As Rhode Island works through the implementation of activities associated with its own state action plan, NESCAUM and leaders from other states are contacted to collaborate with the goal of executing programs and policies in a coordinated manner.

[3]Transportation Climate Initiative: http://www.transportationandclimate.org/

[4]Northeast States for Coordinated Air Use Management: http://www.nescaum.org/topics/zero-emission-vehicles

ZEV MOU

Under the ZEV MOU, the signatory states committed to having 3.3 million ZEVs on our roads by 2025, along with infrastructure to support these vehicles. In collaboration with other MOU signatory states, Rhode Island has been working diligently to coordinate both existing and anticipated policies that seek to expand ZEVs throughout the region and our state. The MOU also recognizes that each signatory state can take steps within its own jurisdictions to raise consumer awareness and demand for ZEVs to support the objectives of the MOU. Therefore, this *Rhode Island Zero Emission Vehicle Action Plan* identifies state specific actions and strategies to grow the ZEV market in Rhode Island in a manner that is consistent with state climate and energy goals, ZEV program requirements, and the commitments in the MOU.

RI ZEV Working Group

Formed in 2014, the Rhode Island ZEV Working Group is a collaboration between the Office of Energy Resources (OER), the Department of Environmental Management (DEM), the Department of Transportation (DOT), and Ocean State Clean Cities (OSCC) to bring together state and quasi-state agencies, private and nonprofit companies, auto dealers, and utility providers to discuss the actions necessary to promote the responsible growth of the ZEV market in Rhode Island. The working group has been tasked with exploring issues critical to the efficient and effective deployment of ZEV solutions across the policy, regulatory, and business landscapes.

Mission:

The Rhode Island ZEV Working Group was established to:

- Further expand access to electric and fuel cell vehicle infrastructure in Rhode Island;
- Encourage the purchase and lease of electric and fuel cell vehicles;
- Reduce the up-front costs associated with electric and fuel cell vehicle purchases; and
- Identify strategies to remove barriers for electric and fuel cell vehicle deployment.

The ZEV Working Group is split into three subcommittees, with a Steering Committee overseeing the work and recommendations of the subcommittees. The three subcommittees have the following focus areas: Marketing & Outreach; State, Municipal, Consumer & Business Incentives; and Infrastructure, Planning & Regulatory Issues.

The ZEV Working Group brings together key public and private stakeholders to establish recommendations and guidelines to facilitate the growth of zero emission vehicles while maximizing, to the greatest extent possible, associated economic, energy, and environmental benefits .

Current Participants in the Working Group Include:
Rhode Island Office of Energy Resources
Rhode Island Department of Transportation
Rhode Island Department of Environmental Management
Drive Electric New England
Vermont Energy Investment Corporation
Rhode Island Statewide Planning
Acadia Center
Ocean State Clean Cities Coordination
Northeast States for Coordinated Air Use Management
National Grid
Connecticut Center for Advanced Technology
Rhode Island Public Utilities Commission
Town of North Smithfield
Conservation Law Foundation
Massachusetts Hydrogen Coalition
Rhode Island Public Transit Authority
New England Clean Energy Council
ChargePoint, Inc.
Rhode Island Department of Health
American Lung Association, Northeast
Rhode Island House of Representatives

Goals:

The goals of the Rhode Island ZEV Working Group are as follows:

- Create a Rhode Island ZEV implementation plan based on the multi-state ZEV action plan.
- Spur market growth through private, municipal, consumer and dealership incentives.
- Quantify necessary infrastructure and planning for the future.
- Expand consumer awareness.
- Research and address legal and statutory regulatory issues affecting electric vehicles.
- Determine metrics and mechanisms for implementation, evaluation, and monitor actions outlined in the mission.

RHODE ISLAND CLIMATE AND ENERGY GOALS

Transportation is the costliest energy sector in Rhode Island, accounting for nearly forty (40) percent of statewide energy expenditures. It is also a sector with major implications for long-term sustainability and remains heavily dependent on petroleum-based fuels. Annually, approximately $1.4 billion is spent on transportation-related energy costs, consuming 64 trillion BTUs of energy and releasing 4.5 million tons of CO2 into the atmosphere. The importance of reducing transportation-related energy costs and meeting our GHG emission reduction goal of 45% by 2035 are captured among various state efforts.

Rhode Island State Energy Plan (RISEP)

Rhode Island's State Energy Plan (RISEP) identifies maintenance of the state's commitment to the low emission vehicle (LEV) program, including the ZEV requirements, as a key strategy to reduce petroleum consumption in Rhode Island. Although the federal government sets nationwide vehicle emission standards, Section 177 of the Clean Air Act allows California to request a waiver to adopt stricter standards.[5] Other states may adopt California's standards, which are promulgated by the California Air Resources Board (CARB). Rhode Island is one of 15 "Section 177 States" that opt to apply vehicle emission standards set by California.[6] In Rhode Island, the standards are set through air pollution regulations promulgated by the Rhode Island Department of Environmental Management Office of Air Resources. As of July 2013, DEM had amended Air Pollution Control Regulation No. 37[7] to reflect the most recent CARB Low Emission Vehicle (LEV) III Standards. 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.

RI Executive Climate Change Coordinating Council (EC4)

Created by Governor Chafee in 2014, the RI EC4 has been tasked to take a lead role in developing a comprehensive approach to address the potential threats from climate change to the State's environment, economy, and people. The approach includes both adaptation to impacts that can no longer be avoided, as well as mitigation measures, including the reduction of greenhouse gas emissions.

There are a variety of opportunities to reduce greenhouse gas emissions associated with transportation. One of the key strategies is to increase the deployment of zero emission vehicles. Reducing GHG through advancing alternative fuels, specifically electricity as a transportation fuel, is the priority objective of the ZEV Initiative.

Among other duties, the Council is responsible to submit a plan to the Governor and the General Assembly no later than December 31, 2016 with strategies, programs and actions to achieve specific greenhouse gas reduction targets. The RIEC4 website[8] provides further detail on the specific duties of the Council, members, meeting schedule and materials, and reports and resources.

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[5] EPA State Adoption of California Standards: http://www.epa.gov/otaq/cafr.htm#state
[6] EPA Cross-Border Sales Policy: http://iaspub.epa.gov/otaqpub/display_file.jsp?docid=24724&flag=1
[7] RI DEM Air Pollution Control Regulation No. 37: http://www.dem.ri.gov/pubs/regs/regs/air/air37_13.pdf
[8] RI EC4 Website: http://www.planning.ri.gov/statewideplanning/climate/index.php

BENEFITS OF ZEV MOU

Current State of the ZEV Market

Ten states (the eight MOU states plus Maine and New Jersey), representing 28 percent of the automobile market in the United States, have embarked on an ambitious effort to revolutionize the transportation sector by requiring increasing sales of ZEVs under the auspices of the California LEV program. 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 automakers 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 battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), fuel cell electric vehicles (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. Rhode Island could see similar numbers if the state takes action now to build a robust market for these vehicles. Figure A 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 ZEV MOU states, figure B estimates the projected annual ZEV sales under the same regulatory compliance scenario.

Figure A

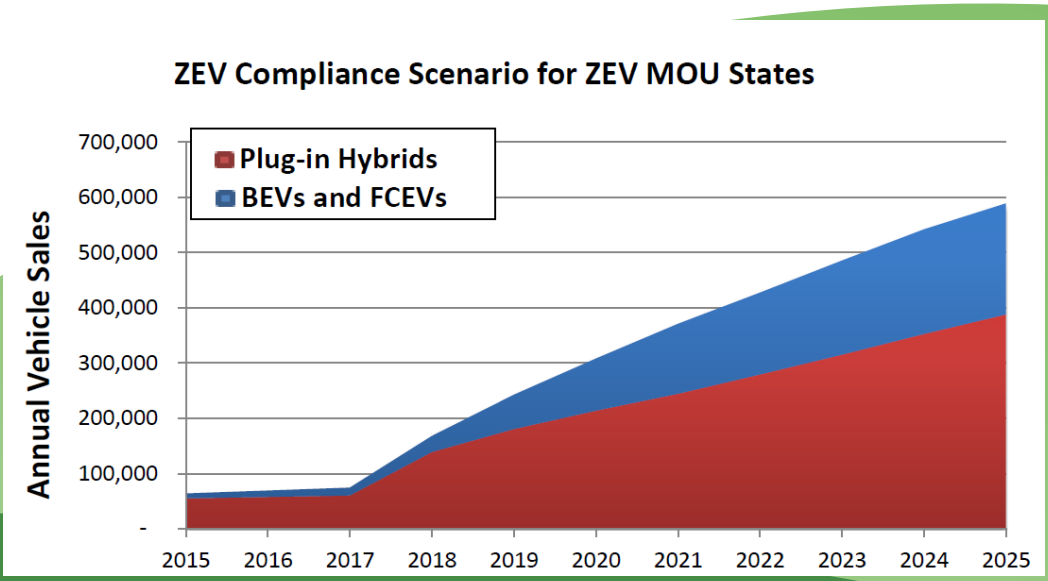
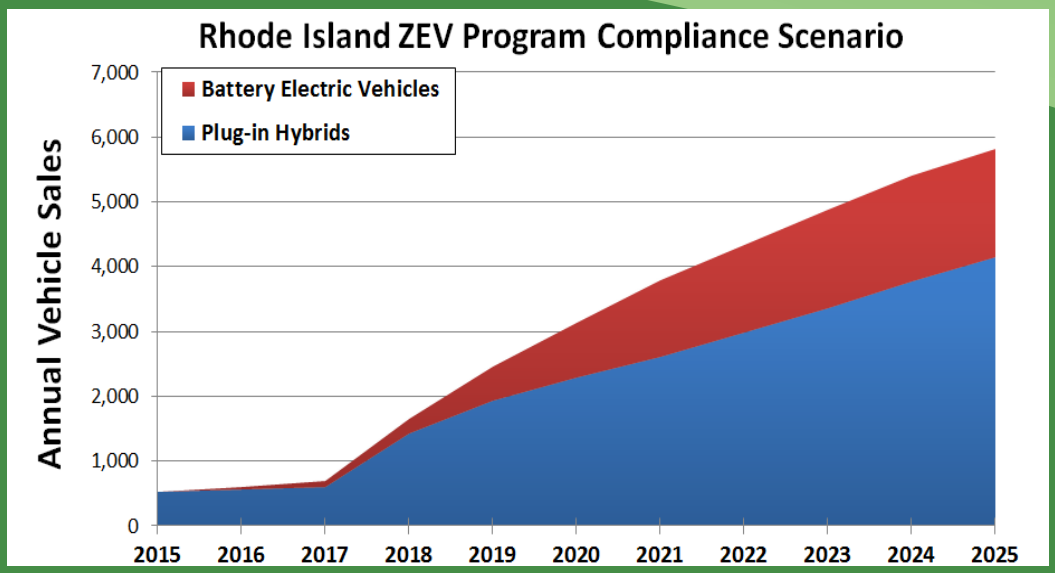


Figure B

*Note the 2017 spike in the graphs represents the expiration of the "travel provision" when new and stiffer ZEV-sales levels come into effect and CARB expands the ZEV requirements to more automakers[9].



[9] Green Car Reports: http://www.greencarreports.com/news/1098525_why-electric-cars-are-rare-outside-ca-arcane-travel-provision-rule

PEV Adoption Nationwide

Total cumulative PEV sales in the United States are now in excess of 380,000.[10] Even during a period of depressed gasoline prices, PEV sales continue to rise. As technologies continue to improve and lower-priced 200-mile electric vehicles reach the market, consumer demand is expected to become significantly more powerful.

Current RI Market

As of January 2015, 421 PEVs have been registered in Rhode Island. Of those, 88 are BEVs and 333 are PHEVs. Overall, 13 manufacturers with at least 16 models of PEVs are represented, giving Rhode Islanders a diverse selection of vehicles to choose from. With at least 6 more models slated to hit roadways within the next two years, the demand for ZEVs will continue to climb.

After installing 50 new EVSEs in 2013, the state has already begun to see the benefits of turning to alternative fuels. Since installation, these stations have offset over 36,000 kg of greenhouse gases (Figure E), going on to save motorists 11,000 gallons of gasoline. In all, Rhode Islanders have charged up over 13,000 times in less than two years, as detailed in Figure F below.

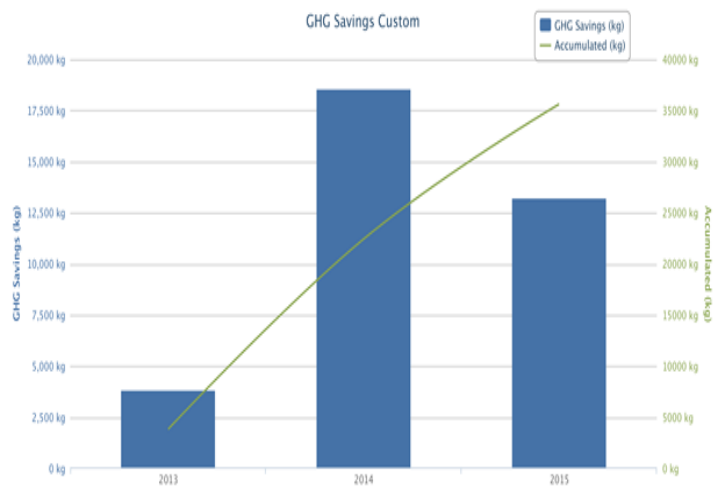


Figure E

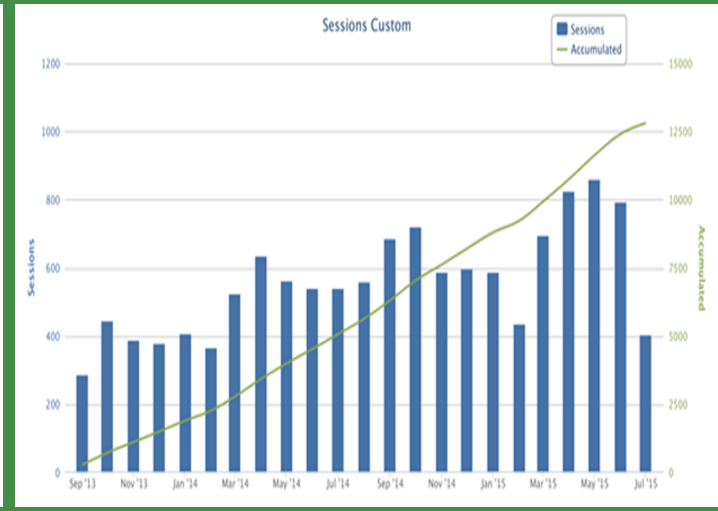


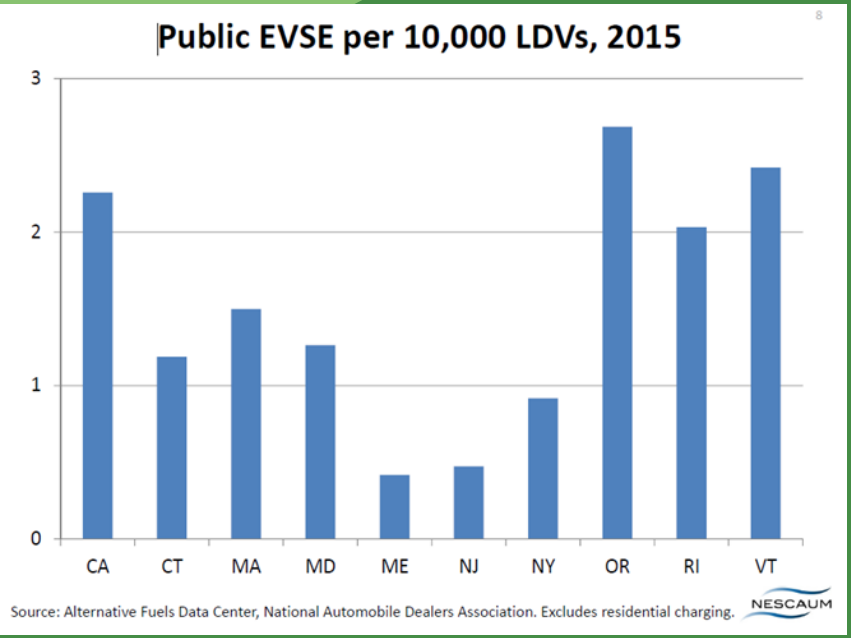
Figure F

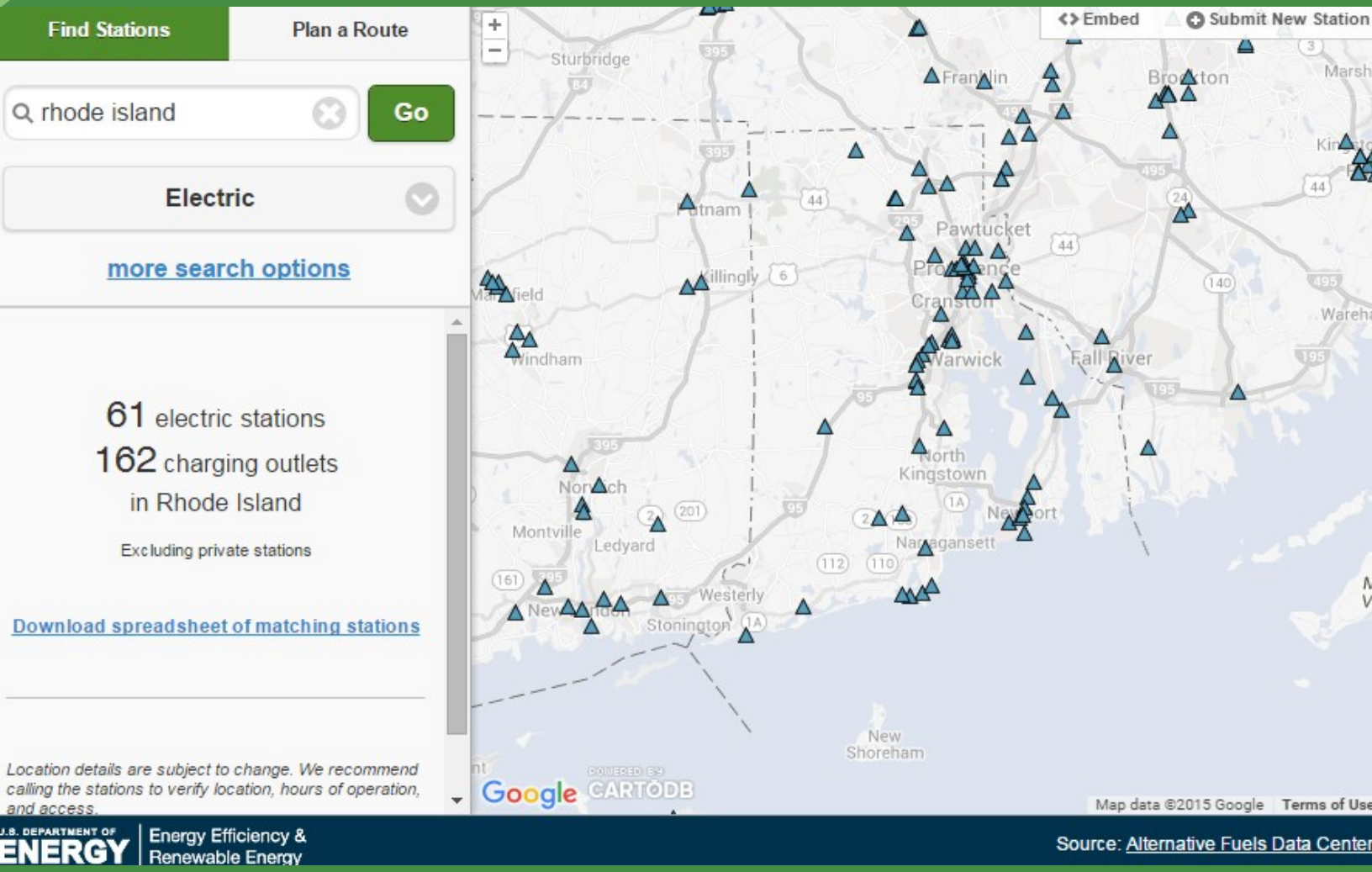
[10] PEV Collaborative: http://www.pevcollaborative.org/

Current Infrastructure in RI

As noted in the *2013 ZEV Multi-State Action Plan*, the widespread use of ZEVs relies on adequate fueling infrastructure for these vehicles, including the expansion of the charging infrastructure as the PEV market grows and FCEVs are commercially launched. Charging a plug-in electric vehicle is analogous to filling a conventional vehicle's fuel tank with gasoline. A gasoline-powered vehicle is attached to a pump that sends gasoline through a hose into the fuel tank. Similarly, a PEV is plugged into the electric grid so that electricity can flow through wires into the battery.

To date, there are 60 publicly accessible level II electric vehicle charging stations throughout Rhode Island. In 2013, the Office of Energy Resources awarded $781,225 in American Reinvestment and Recovery Act Funding (ARRA) to site and install a network of 50-Level II stations.[11] In addition, a number of workplaces and businesses are leading by example by installing charging equipment for the use of their employees and fleets.





U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Source: Alternative Fuels Data Center

[11] Press Release: Governor Chafee Celebrates Launch of Electric Vehicle Network in RI: http://www.ri.gov/press/view/19599

DC Fast Charging

Figure G shows the current DC Fast Charging Network (also known as Level III) in the Northeast. Level III stations provide a high-powered, quicker charge to a depleted battery, typically in 30 minutes (depending on the vehicle). These stations are strategically placed (usually about 40 miles apart) on high-volume local routes to provide drivers an option to quickly recharge. Rhode Island drivers, and those passing through the state, could benefit from the installation of a DC Fast Charging Station near the Route-95/Route-295 area.

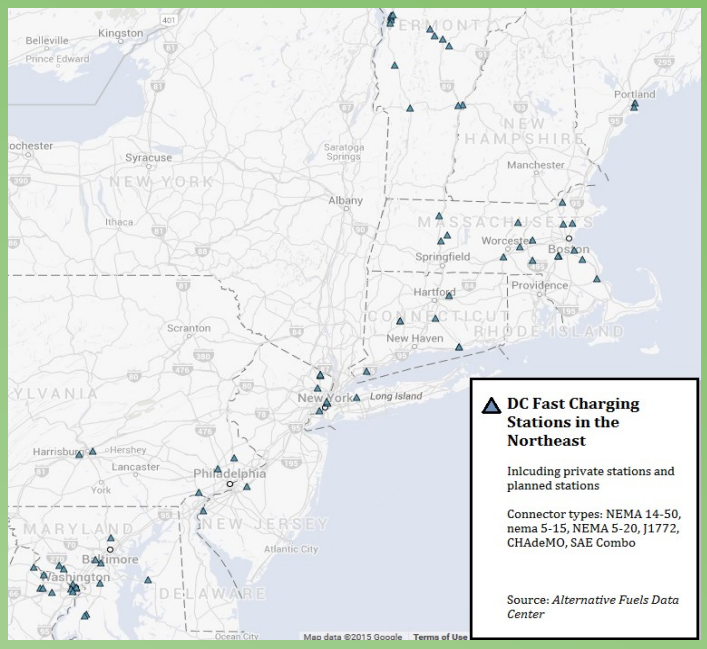


Figure G

Regional Greenhouse Gas Initiative Funding

OER's 2014 Regional Greenhouse Gas Initiative (RGGI) Allocation Plan provides $600,000 to help fund new public EVSEs at state, quasi, and local government agencies, as well as public universities. Applicants will be able to apply for grants to help cover the costs for equipment and installation of one or more Level II stations, with the prerequisite that they have or plan to undertake an efficiency or renewable energy project to at least offset the expected load of the station(s). Additionally, applicants that meet the required criteria will be eligible for funding to pay the cost differential between the purchase of a representative gasoline vehicle and a ZEV.[12]

A separate $125,000 grant is also available to private institutions and nonprofit entities for EVSE equipment and installation. Applicants are eligible to receive up to fifty (50) percent of equipment and installation costs, up to a ceiling of $7,500 per site. If an employer has multiple office locations within Rhode Island, they can apply for up to $37,500 in grant funds. Similar to the state and local governments program, eligible recipients must demonstrate a commitment to clean energy through planned or installed efficiency or renewable projects that at least offset the expected load of an EVSE. Entities must also employ at least ten (10) employees and must demonstrate how their company or organization is or will support workplace/workforce adoption of clean transportation initiatives.[13] This program provides no funding for vehicle cost differential.

In 2013 the state also initiated a "Lead by Example" program, which requires any new state fleet vehicle (to the extent practical) to be electric, hybrid, or compressed natural gas. To date, 16 PEVs and 56 non-plug in hybrid vehicles have been added.

[12] RI MPA 509: http://www.energy.ri.gov/documents/Transportation/MPA509%20EVSE%20Public.pdf

[13] RFP for the Install of Electric Vehicle Charging Stations at Private and Non-Profit Institutions: http://www.purchasing.ri.gov/RIVIP/StateAgencyBids/7549751.pdf

ZEV ACTION PLAN

The Rhode Island ZEV Working Group decided to build off of the eleven priority actions set forth in the Multi-State ZEV Action Plan.[14] To do this, the Working Group brought together stakeholders to identify, prioritize, and make the action items specific to Rhode Island during multiple meetings and phone calls.

The *Rhode Island ZEV Action Plan* lists state-specific actions and strategies to grow the ZEV market in Rhode Island, identifies state leads, and establishes timeframes for each action. It is intended to serve as a map that clearly communicates state government's efforts to advance ZEVs. It is also intended to serve as a "to-do" list for state agencies and working group members. The list of supporting roles identified for some of the action items listed below is not meant to be exhaustive. Many of these actions are and will be best addressed through new and existing collaborative partnerships.

Marketing & Outreach

A variety of ZEVs are now available to Rhode Island consumers. The state can help the auto industry take appropriate actions to expand consumer awareness of ZEVs and supporting infrastructure in order to build demand. The top action items identified below include several strategies to help expand consumer awareness and interest in ZEVs, including but not limited to programs to identify and highlight "ZEV champions", and expansion of the number of Rhode Island employers becoming DOE Workplace Charging Challenge partners.

	Marketing & Outreach	Leading Role	Supporting Role	Target Completion Date
1.5	Institute programs to identify and highlight "ZEV champions" among dealers, private fleets, workplaces, and local governments through Governor-recognition programs and other profile-raising approaches.	OSCC; OER	DEM	Spring 2016
5.4	Educate major employers about the need for and benefits of workplace charging infrastructure and ZEV's. by leveraging resources from the U.S. DOE Workplace Charging Challenge and other associated initiatives.	OSCC	Multi-State Task Force; OER	Fall 2015
7.6	Promote priority parking for ZEVs using consistent striping and signage.	FHWA; DOA	DOT; OER; Statewide Planning	Spring 2016

New Electric Vehicle License Plate now available to registered owners in RI.

[14] NESCAUM Multi-State ZEV Action Plan: http://www.nescaum.org/documents/multi-state-zev-action-plan.pdf/

State, Municipal, Business, & Consumer Incentives:

The past few years have seen a proliferation of new technologies. From battery electric and plug-in hybrid electric vehicles to hydrogen fuel cell vehicles that could enter the state's market in the near future, consumers have a broader choice than ever before. However, these advanced technology vehicles are more expensive for manufacturers to produce and consumers to buy than traditional vehicles.

ZEV sales nationwide have surpassed 380,000 but lag in Rhode Island, partly due to the lack of consumer incentives available in states with higher ZEV adoption numbers. The Incentives Subcommittee reviewed and identified successful programs implemented by other states within the region and nationwide. The program recommended for implementation in Rhode Island is outlined in Appendix A. In addition, the following three action items were identified to help propel the sales of ZEVs here in Rhode Island.

	Incentives	Leading Role	Supporting Role	Target Completion Date
2.4	Issue recommendations in the RI ZEV Action Plan to guide and inform state and local government policy on the implementation of an effective ZEV consumer incentive program.	Incentives Subcommittee	Multi-State Task Force; TCI; OER; DOA; DEM	Complete
2.7	Establish a ZEV consumer incentive program based off of the recommendations in the RI ZEV Action Plan.	OER	Multi-State Task Force; TCI; DOA; DEM	Spring 2016
6.7	Expand the eligibility and simplify the current prerequisites of state financial incentive programs for workplace and DC fast charging stations in the near term (Note: Ongoing, RGGI program).	OER	DOT; Governor's Office; VEIC	Summer 2016
3.13	Provide incentives for state, municipal, and public university ZEV and EVSE purchases.	OER	DEM; DOT	Spring 2016

Infrastructure, Planning, & Regulatory Issues

Rhode Island has made considerable progress deploying ZEV Infrastructure, but much more remains to be done to improve and simplify planning and regulatory issues. As more electric vehicles and charging infrastructure become available and fuel cell infrastructure is explored, the need to ensure a competitive market structure for these technologies will be more pronounced. In order to promote competition and drive the market, the state will need to keep barriers to a minimum.

	Infrastructure, Planning, & Regulatory	Leading Role	Supporting Role	Target Completion Date	
10.1	Promote necessary legislation, regulations, standards, or certifications to enable the commercial sale of electric vehicle charging and hydrogen as transportation fuel, including on a per-kilowatt-hour or on a per-kilogram basis, and ensure transparent pricing.	Steering Committee	DPUC; OER; EVSE Providers	Spring 2016/ Ongoing	**AREA 1**
10.2	Request that Public Utility Commissions (PUCs) open proceedings to: 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.	Steering Committee	DPUC; OER; EVSE Providers	Fall 2015	
6.5	Strive to ensure that all appropriate charging/ fueling installations receiving public funding be open to the public and accessible to all PEV/FCEV drivers.	OER	DOT; National Grid; EVSE Providers	Ongoing	**AREA 2**
9.1	Support the adoption and implementation of effective National Institute of Standards and Technology standards for EVSE measurement accuracy and price disclosure.	Steering Committee	Multi-State Task Force; EVSE Providers; DLT (Weights & Measures)	Spring 2016/ Ongoing	
9.2	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.	Steering Committee	Multi-State Task Force; PUC/DPUC; EVSE Providers; National Grid	Spring 2016	

	Infrastructure, Planning, & Regulatory	Leading Role	Supporting Role	Target Completion Date
9.3	Ensure that all public 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, identify the type of charging available, and determine charging costs.	Steering Committee	OER; OSCC; EVSE Providers	Ongoing
10.3	Determine the appropriate level of consumer protection and regulatory oversight for providers of charging facilities, including utilities and non-utilities.	Steering Committee	PUC; DPUC	Ongoing

8.7	Design utility demand charges and interconnect fees for PEV charging.	OER	PUC; DPUC; Acadia Center; National Grid	2016 & Ongoing	**AREA 3**
10.4	Evaluate residential and business electric utility rate structures or other mechanisms, consistent with statutory authority, that provide lower-cost electricity for off-peak charging (also in conjunction with H7726).	Steering Committee; PUC; DPUC	National Grid	2016 & Ongoing	
10.5	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.	Steering Committee	National Grid; PUC/DPUC; EVSE Providers	2016 & Ongoing	
10.6	Explore the role utilities, energy service companies, and 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.	Steering Committee	Acadia Center; National Grid; EVSE Providers; Drive Electric Cars New England; PUC	2016 & Ongoing	
10.7	Evaluate policies with respect to utility demand charges and interconnect fees for PEV charging.	Steering Committee	PUC; DPUC; Acadia Center; National Grid	2016 & Ongoing	

Appendix A:

Recommended Consumer Incentive Program

The RI ZEV Incentives Subcommittee reviewed consumer and infrastructure incentive programs in other states and analyzed their effectiveness and cost-efficiency. Successful ZEV incentive programs and policies do more than just meet ZEV targets, they lower reliance on fossil fuels, reduce climate-related emissions, and improve air quality and public health. After reviewing a variety of resources and evaluating the possibilities, a recommended program was identified. Our expectation is that the recommendation be considered for implementation by state and local government.

Currently, Rhode Island is trailing neighboring states in providing an easily accessible, high value incentive program. This is slowing ZEV adoption as seen in Table 1. As the ZEV markets expand, the State can help ZEVs become an attractive and affordable option to Rhode Islanders by implementing a consumer incentive program. Financial incentives continue to play a critical role in making the cost of ZEVs competitive with conventional vehicles during the early phases of their deployment, until economies of scale and technological advances lead to cost reductions and a self-sustaining market. It is crucial that the State take action to implement a consumer incentive program. If no action is taken, Rhode Island will continue to fall behind our neighboring states in ZEV adoption and will fail to meet ZEV target goals. Rhode Island consumers will have an unequal opportunity to purchase vehicles. Ultimately, a continued reliance on fossil fuels will make it more difficult to reduce climate-related emissions from the transportation sector.

of Registered PEVs as of January 1, 2015*

Table 1

STATE	EV	PHEV	TOTAL
MASSACHUSETTS	2,057	2,821	4,878
CONNECTICUT	832	1,653	2,485
VERMONT	261	650	911
NEW HAMPSHIRE	300	536	836
MAINE	178	570	748
RHODE ISLAND	***88***	***333***	***421***

***source, Polk Data**

The Subcommittee recommends that there be consideration of an approach similar to Connecticut's "Hydrogen and Electric Automobile Purchase Rebate" (CHEAPR) program. The CT program is modeled after "The Massachusetts Offers Rebates for Electric Vehicles" (MOR-EV) and California's "Clean Vehicle Rebate" programs. Financial incentive programs are more effective when rebates are granted closer to the time a consumer makes the decision to purchase a ZEV. That is why the CHEAPR program provides a point of sale cash rebate. Table 2 highlights rebates available to Connecticut residents, businesses and municipalities. Rebates up to $3,000 are available for the purchase or lease of an eligible vehicle. Rebates of $1,500 and $750 are provided for EVs that travel shorter distances on battery power. A powerful aspect of the CHEAPR program is the creation of an economic incentive to dealers. In addition to the point of sale rebate available to the consumer, licensed Connecticut dealerships can receive a rebate of up to $300 for the sale of every vehicle. Eligible vehicles must have an MSRP (Manufacturer Suggested Retail Price) that does not exceed $60,000 and be highway capable. These additional requirements apply:

Table 2

Rebate Amount	Required Battery Capacity	Eligible Vehicle Examples
$3,000	Greater than 18 kWh or any fuel cell electric vehicle	BMW i3 or i3 REx; Chevrolet Spark; Chevrolet Volt (2016MY); FIAT 500e; Ford Focus Electric; Kia Soul EV; Mercedes Benz B-Class Electric Drive; Nissan LEAF; Volkswagen e-Golf; Toyota Mirai; Hyundai Tuscon Fuel Cell
$1,500	7 to 18 kWh	Chevrolet Volt (2015MY); Ford C-MAX Energi; Ford Fusion Energi; Mitsubishi i-MiEV; Smart ED
$750	Less than 7 kWh	Toyota Prius Plug-In (2015MY)

Funds for the CHEAPR pilot program come from $1 million that was made available to Connecticut as a result of an agreement that allowed for the merger of Northeast Utilities and NSTAR. The MOR-EV program (1st round) was initially funded with $2 million in Regional Greenhouse Gas Initiative (RGGI) auction proceeds, which also financed an additional $2 million during the second round of funding. The CHEAPR and MOR-EV programs are administered by a third party contractor, the Center for Sustainable Energy® (CSE), in order to promote the production and use of zero and low emission vehicles. CSE has dedicated program staff available to answer consumers' questions, administer rebates, and track progress. CSE received $200,000 to administer the CHEAPR incentive program (with $1 million available to consumers).

The Incentives Subcommittee recommends that the Rhode Island program be multi-year to maximize effectiveness and stimulate consumer acceptance of ZEVs. As the ZEV market continues to grow, the State should continue to evaluate the incentive program to most effectively target incentives where they motivate consumer decisions. The Subcommittee also advises identification of a long term funding strategy for the program.

Summary of Current Funding Available:

The State is making progress to provide financial incentives to municipalities, state agencies, and private and nonprofit entities. Regional Greenhouse Gas Initiative (RGGI) auction proceeds of $725,000 from 2014 have been dedicated to support EVSE deployment and/or to pay the cost differential between the purchase of a representative gasoline vehicle and a ZEV. This funding is currently only available to municipalities, state agencies, and private and nonprofit entities, so broadening the program in the future to include ZEV purchases by private entities and eliminating renewable energy requirements is recommended.

Appendix B:

Action Items—Market & Outreach Subcommittee

	ACTION #1 Promote the availability and effective marketing of all ZEV models in our state	Leading Role	Supporting Role	Timeframe	Priority
1.1	Provide consumers and dealers with up-to-date information on ZEVs that are available in Rhode Island and links to state and automobile dealership websites.	DEM	NESCAUM; Multi-State Task Force; OER; OSCC; DMV	Short	High
1.2	Invite automobile 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, develop communication, and effective marketing for the full range of ZEVs in Rhode Island.	DEM	NESCAUM ; Multi-State Task Force; OSCC	Short	Mid
1.3	Collaborate with dealers to identify, evaluate, and implement creative financing approaches and other effective strategies to reduce vehicle purchase price and increase ZEV sales.	DEM; OSCC; OER	NESCAUM; Multi-State Task Force; CCAT; Steering Committee	Medium	Mid
1.4	Collaborate with automobile dealers, Clean Cities programs, targeted workplaces, 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.	OSCC	OER; DEM; EVSE Providers	Short	Mid
1.5	Institute programs to identify and highlight "ZEV champions" among dealers through Governor-recognition programs and other profile-raising approaches.	OSCC	OER; DEM	Spring 2016	High
1.7	Work with auto dealers to provide timely ZEV inventory.	DEM	OSCC; OER	Short	High
	ACTION #4 **Encourage private fleets to purchase, lease, or rent ZEV's**				
4.2	Coordinate with academics, nonprofit partners, and the U.S. DOE to help fleet managers develop the business case for integrating ZEVs into their fleets.	DEM; OSCC	NESCAUM; Multi-State Task Force	Short	High
4.3	Explore opportunities to promote ZEV car-share programs.	OER	American Lung Association; EVSE Providers	Medium	Mid

Action Items—Market & Outreach Subcommittee (continued)

	ACTION #5 Promote workplace charging	Leading Role	Supporting Role	Timeframe	Priority
5.1	Lead by example by promoting state agency workplace charging with a goal that, by 2020, all interested state agency employees with PEVs will have a place to charge them.	DOA	OER; DEM; Drive Electric Cars New England	Medium	High
5.2	Promote the installation of charging infrastructure and adoption of ZEV's for commuters at public transit hubs.	DOT	OER	Medium	Mid
5.3	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.	OSCC; OER	DEM; Drive Electric Cars New England; DOT; EVSE Providers	Short	High
5.4	Educate major employers about the need for and benefits of workplace charging infrastructure and ZEV's. by leveraging resources from the U.S. DOE Workplace Charging Challenge and other associated initiatives.	DEM; OSCC; OER	DOE; NESCAUM; Multi-State Task Force	Fall 2015	High
5.8	Develop ZEV infrastructure policy for major new developments and include PEV charging requirement criteria in state environmental project reviews.	OER	Statewide Planning; H2USA; Building Code Commission	Short	High
	ACTION #7 **Provide clear and accurate signage to direct ZEV users to charging and fueling stations and parking**				
7.1	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."	DOT	NESCAUM; Multi-State Task Force; DOA; FHWA; DEM	Medium	Mid
7.2	Develop and install uniform signage consistent with FHWA's Manual on Uniform Traffic Control Devices for use on state and local roadways to direct drivers to charging and hydrogen fueling stations.	DOT; DEM	NESCAUM; Multi-State Task Force; OER	Medium	High
7.4	Work with municipalities and the private sector to institute consistent regulatory signage programs that identify the availability of parking for ZEVs.	DOT	DOA	Medium	Mid
7.5	Develop uniform and effective regulatory signs to indicate PEV parking regardless of charging status or restrict parking to PEV charging only.	DOT	DOA	Medium	High
7.6	Promote priority parking for ZEVs using consistent striping and signage.	DOA; FHWA	DOT; OER; Statewide Planning	Spring 2016	High
7.7	Include EVSE indicators on official State of RI map.	DOT; Statewide Planning	OER; OSCC	Medium	Mid

Action Items—Market & Outreach Subcommittee (continued)

	ACTION #8 **Remove barriers to ZEV charging and fueling station installations**	**Leading Role**	**Supporting Role**	**Timeframe**	**Priority**
8.13	Hold regional planning workshops to educate local governments on ZEV issues.	OER; OSCC	H2USA	Medium	Mid
	ACTION #10 **Remove barriers to the retails sale of electricity and hydrogen transportation fuels and promote com-**				
10.1	Coordinate on PEV outreach efforts within each utility's service area.	National Grid; OER	DMV	Short	Mid
	ACTION #11 **Track and report progress toward meeting the goal of 3.3 million ZEVs on our roadways by 2025**				
11.1	Report annually on ZEV MOU state landing page: (by community) · The number of ZEVs registered in our states. · The number of public fueling stations in our states. · State fleet ZEV acquisitions.	DEM	NESCAUM; Multi-State Task Force; OER; OSCC; DMV	Short	High
11.3	Use annual reports to generate interest and educate the public and state legislatures about ZEVs.	DEM; OER; OSCC	NESCAUM; Multi-State Task Force; CCAT; Steering Committee	Medium	Mid

Action Items—Incentives Subcommittee

	ACTION #2 Provide consumer incentives to enhance the ZEV ownership experience	Leading Role	Supporting Role	Timeframe	Priority
2.1	Enable reciprocity for non-monetary ZEV incentives in Rhode Island.	DEM	NESCAUM; Multi-State Task Force; DOT; OER	Medium	Mid
2.2	Establish a common image or decal to identify qualifying vehicles (Note- Being done at Federal Level NHSA MY 2017).	DEM	NESCAUM; Multi-State Task Force; DOT; OER	Medium	Mid
2.3	Support the continuation of the federal tax credit for PEVs and FCEVs.	DEM	NESCAUM; Multi-State Task Force; Federal Delegation; OSCC	Medium	High
2.4	Issue recommendations in the RI ZEV Action Plan to guide and inform state and local government policy on the implementation of an effective ZEV consumer incentive program.	Incentives Subcommittee	NESCAUM; Multi-State Task Force; TCI; DEM; DOA	Complete	High
2.5	Develop recommendations to encourage the development of a viable secondary market for used ZEVs.	DEM	NESCAUM; Multi-State Task Force	Medium	High
2.7	Establish a ZEV consumer incentive program based off of the recommendations in the RI ZEV Action Plan.	OER	DOA; DEM	Spring 2016	High
2.8	Encourage to promote utility programs and rate structures that compensate owners of ZEVs for services provided (Note- EPRI study underway for Grid Interactive Vehicles).	OER	DPUC	Medium	Mid
2. 10	Preferential Parking: Work with municipalities and private companies to encourage preferential parking and reduced parking rates for ZEVs.	OSCC	Municipalities	Medium	Mid
2.11	Preferential Parking: Coordinate with local authorities to put ordinances in place to enforce compliance with PEV-restricted spaces.	Statewide Planning	Municipalities	Medium	Mid

Action Items—Incentives Subcommittee (continued)

	ACTION #3 Lead by example through increasing ZEV's in state, municipal, and other public fleets	Leading Role	Supporting Role	Timeframe	Priority
3.13	Provide incentives for state, municipal, and public university ZEV and EVSE purchases.	OER	DEM; DOT	Spring 2016	High
3.14	Assist fleet managers by: Providing information about the availability and applicability of ZEV vehicles.	OSCC	OER; DEM	Short	High
3.15	Assist fleet managers by: Developing near-term pilot projects to enhance understanding of ZEVs and infrastructure within state departments.	OER	OSCC; DEM; DOT	Short	High
3.16	Assist Fleet Managers by: Promoting training for fleet mechanics, infrastructure installers and maintenance personnel.	OSCC		Medium	Mid
	ACTION #6 **Promote ZEV infrastructure planning and investment by public and private entities**				
6.7	Expand the eligibility and simplify the current pre-requisites of state financial incentive programs for workplace and DC fast charging stations in the near term (Note: Ongoing, RGGI program).	OER	DOT; Governor's Office; VEIC	Summer 2015	High

Action Items—Incentives Subcommittee (continued)

	ACTION #3 Lead by example through increasing ZEV's in state, municipal, and other public fleets	Leading Role	Supporting Role	Timeframe	Priority
3.1	Establish a goal that a minimum of 25 percent of new light-duty state fleet purchases and leases for applicable uses, to the extent available, will be ZEVs by 2025.	DOA	OER	Short	High
3.3	Develop best practice policies "Handbook" to maximize the “electric miles” driven by government fleet vehicles.	OER	DEM	Long	High
3.4	Establish state fleet rules or procedures that enable and include the full range of ZEVs and Electric Vehicle Supply Equipment (EVSE) to compete for state purchase and rental car contracts.	DOA	OER	Medium	High
3.6	Use common data collection elements and protocols to collect and share information among states on ZEV fleet purchases and operational cost savings.	DEM	DOA	Medium	High
3.7	Assess feasibility and opportunities for pooled purchases with other government and private fleets to secure greater price discounts, stronger contract terms and con-	DEM	OSCC	Medium	High
3.8	Develop implementation plans for state fleet ZEV pur-chases, with metrics to measure success.	DOA	OER	Medium	Mid
3.11	Integrate ZEV-based car sharing into the state’s fleet management system.	DOA	OER	Medium	High
3.12	Direct state agencies responsible for vehicle fleet pur-chasing to consider cooperative contracts to aggregate demand when going out to bid on ZEVs and electric vehi-cle charging equipment.	DEM	NESCAUM; Multi-State Task Force	Medium	Mid

Action Items—Infrastructure, Planning, and Regulatory Subcommittee

	ACTION #6 Promote ZEV infrastructure planning and investment by public and private entities	Leading Role	Supporting Role	Timeframe	Priority
6.1	Research driver charging behavior to determine the need for non-residential charging, including the level of charging and importance of location.	DEM	NESCAUM; Multi-State Task Force	Long	Low
6.2	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.	DEM; OER	NESCAUM; Multi-State Task Force; DOT	Short	High
6.3	Coordinate with researchers to undertake multi-state mapping and modeling analyses to inform the design and implementation of efficient corridor charging networks.	DEM	NESCAUM; Multi-State Task Force; DOT	Long	Mid
6.4	Pursue resource partnerships to design and execute a hydrogen fuel cell vehicle infrastructure feasibility study for the MOU states outside of California.	CCAT; H2USA; DEM	NESCAUM; Multi-State Task Force; DOT	Long	Low
6.5	Strive to ensure that all appropriate charging/fueling installations receiving public funding be open to the public and accessible to all PEV/FCEV drivers.	OER	DOT; National Grid; EVSE Providers	Ongoing	High
6.6	Initiate a dialogue to address federal restrictions on electricity and hydrogen sales within certain limited access rights-of-way.	CCAT; DEM; H2USA; DOT	NESCAUM; Multi-State Task Force	Long	Low
6.8	Explore opportunities for coordinated fueling station equipment procurement across local, state, and federal agencies.	DOA	DEM; OER; DOT; Municipalities; OSCC	Medium	Mid
6.9	Collaborate with auto manufacturers to provide ownership trends data to utilities, EVSE providers, local and regional planning agencies, and other interested parties to inform effective charging network design.	OER	DMV; DOT; H2USA; National Grid	Medium	Mid
6.10	Promote and support efforts by utilities to improve understanding of ZEV charging demand patterns, needed system upgrades, and associated grid impacts.	OER	Acadia Center; National Grid; EVSE Providers	Medium	Mid

Action Items—Infrastructure, Planning, and Regulatory Subcommittee (continued)

	ACTION #6 **Promote ZEV infrastructure planning and investment by public and private entities**	**Leading Role**	**Supporting Role**	**Timeframe**	**Priority**
6.12	Create appropriate utility notification requirements for EV purchasers and EVSE installers to allow for proper planning and prevent problems with the distribution grid.	OER	Acadia Center; National Grid; EVSE Providers	Medium	Mid
	ACTION #8 **Remove barriers to ZEV charging and fueling station installations**				
8.1	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.	DEM	NESCAUM; Multi-State Task Force; OER; DOA; DOT	Medium	Mid
8.2	Establish consistent codes and standards for ZEV infrastructure through revisions to national and state building codes.	Steering Committee	NESCAUM; Multi-State Task Force; DEM; OER; DOT; Building Code Commission; EVSE Providers; State Fire Marshall	Medium	High
8.3	Promote the development of consistent policies, codes and standards to facilitate the deployment of charging stations: 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.	Steering Committee	DOA; OER; Building Code Commission; EVSE Providers; National Grid	Medium	Mid
8.4	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.	Steering Committee	NESCAUM; Multi-State Task Force; DOA; Building Code Commission	Medium	Mid
8.5	Develop a streamlined model permit and zoning process that local governments can adopt to ensure timely approval of DC fast charge installations.	Statewide Planning; Building Code Commission	NESCAUM; Multi-State Task Force	Medium	Low
8.7	Design utility demand charges and interconnect fees for PEV charging.	OER	DPUC; Acadia Center; National Grid	2016 & Ongoing	High

Action Items—Infrastructure, Planning, and Regulatory Subcommittee (continued)

	ACTION #8 Remove barriers to ZEV charging and fueling station installations	Leading Role	Supporting Role	Timeframe	Priority
8.8	Provide planning and siting assistance and resources to municipalities and other local planning entities.	Statewide Planning; OER	OSCC; League of Cities & Towns	Long	Mid
8.10	Develop policies that guide businesses and homeowner associations on how to approach requests for charging, along with provisions that ensure that these requests cannot be ignored.	Steering Committee	Building Code Commission	Medium	Mid
8.12	Require that a certain percentage of parking spaces have charging stations.	Statewide Planning; Building Code Commission	DOA	Medium	Mid
8.14	Eliminate unreasonable restrictions on charging at multi-family buildings and condos.	Steering Committee	Building Code Commission	Medium	Mid
	ACTION #9 **Promote access, compatibility, and interoperability of the plug-in electric vehicle charging network**				
9.1	Support the adoption and implementation of effective National Institute of Standards and Technology standards for EVSE measurement accuracy and price disclosure.	Steering Committee	NESCAUM; Multi-State Task Force; EVSE Providers; DLT (Weights & Measures)	Spring 2016	High
9.2	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.	Steering Committee	NESCAUM; Multi-State Task Force; DPUC; EVSE Providers; National Grid	Spring 2016	High

Action Items—Infrastructure, Planning, and Regulatory Subcommittee (continued)

	ACTION #9 Promote access, compatibility, and interoperability of the plug-in electric vehicle charging network	Leading Role	Supporting Role	Timeframe	Priority
9.3	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, identify the type of charging available, and determine charging costs.	Steering Committee	OER; OSCC; EVSE Providers	Ongoing	High
9.4	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.	Steering Committee	NESCAUM; Multi-State Task Force; DPUC; EVSE Providers; National Grid	Short	High
9.5	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 Engineers (SAE) charging ports.	Funding Organization	Steering Committee; EVSE Providers; OER; OSCC	Medium	Mid
9.6	Follow and support national and California efforts to develop hydrogen infrastructure codes and standards for station configuration, fuel quality, and dispensing accuracy.	Steering Committee; CCAT; H2USA	NESCAUM; Multi-State Task Force; Acadia Center DOE	Medium	Mid
9.7	Seek federal guidance on ensuring charging station compliance with the Americans with Disabilities Act.	DEM; Steering Committee	NESCAUM; Multi-State Task Force; EVSE Providers	Long	Low
	ACTION #10 **Remove barriers to the retail sale of electricity and hydrogen transportation fuels and promote competitive plug-in electric vehicle charging rates**				
10.1	Promote necessary legislation, regulations, standards, or certifications to enable the commercial sale of electric vehicle charging and hydrogen as transportation fuel, including on a per-kilowatt-hour or on a per-kilogram basis, and ensure transparent pricing.	Steering Committee	DPUC; EVSE Providers; OER	Spring 2016	High
10.2	Request that Public Utility Commissions (PUCs) open proceedings to: 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.	Steering Committee	DPUC; EVSE Providers; OER; EVSE Providers	Fall 2015	High

Action Items—Infrastructure, Planning, and Regulatory Subcommittee (continued)

	ACTION #10 Remove barriers to the retail sale of electricity and hydrogen transportation fuels and promote competitive plug-in electric vehicle charging rates	Leading Role	Supporting Role	Timeframe	Priority
10.3	Determine the appropriate level of consumer protection and regulatory oversight for providers of charging facilities, including utilities and non-utilities.	Steering Committee	DPUC	Ongoing	High
10.4	Evaluate residential and business electric utility rate structures or other mechanisms, consistent with statutory authority, that provide lower-cost electricity for off-peak charging (also in conjunction with H7726).	Steering Committee; DPUC	National Grid	2016 & Ongoing	High
10.5	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.	Steering Committee	EVSE Providers; National Grid; DPUC	2016 & Ongoing	High
10.6	Explore the role utilities, energy service companies, and 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.	Steering Committee	Acadia Center; National Grid; EVSE Providers; DENEW; DPUC	2016 & Ongoing	High
10.7	Evaluate policies with respect to utility demand charges and interconnect fees for PEV charging.	Steering Committee	Acadia Center; DPUC National Grid	2016 & Ongoing	High
10.8	Explore the use of hydrogen for grid support, especially with regard to storage of excess electricity produced by renewables.	Steering Committee	Acadia Center; CCAT; H2USA; DOE; DPUC; OER	Long	Low
10.9	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.	National Grid	DENEW; OER; OSCC	Medium	Mid
10.11	Coordinate with electricity providers and PUCs/PSCs to explore opportunities to explicitly identify PEV electricity usage on consumers' utility bills to highlight savings compared to the use of conventional fuels.	Steering Committee; DPUC	National Grid	Medium	Mid
10.12	Establish policies to reduce costs and simplify the process for homeowners to install meters to access PEV-specific rates.	Steering Committee	National Grid; DPUC	Medium	Mid
10.13	Coordinate with electricity providers, PUCs/PSCs, and state energy offices to explore opportunities to connect renewable energy generation with PEVs.	OER	National Grid; DPUC	Short	Mid

Action Items—Infrastructure, Planning, and Regulatory Subcommittee (continued)

	ACTION #10 **Remove barriers to the retail sale of electricity and hydrogen transportation fuels and promote competitive plug-in electric vehicle charging rates**	**Leading Role**	**Supporting Role**	**Timeframe**	**Priority**
10.14	(H7726) Explore the implications of allowing for the purchase of stored energy back from electric vehicle owners (vehicle-to-grid) and changes to rates and standards that would facilitate this.	Steering Committee	OER; Acadia Center; EVSE Providers	Short	Mid
10.15	(H7726) Develop procedures for accelerated utility review and service upgrades related to PEVs.	Steering Committee	OER; Acadia Center EVSE Providers	Long	Mid
10.16	(H7726) Address the issues related to the provision of electricity by non-utilities for delivery of PEV charging, and clarify whether companies that procure electricity at wholesale will be subject to the same set of regulations and requirements as any other entity wishing access to wholesale markets directly.	Steering Committee	OER; Acadia Center; EVSE Providers	Medium	Mid