

## Clean/Electric Vehicle Incentives

**Policy Summary:** Massachusetts signed a Memorandum of Understanding (MOU) with seven states on October 24, 2013, to coordinate their efforts for adoption of zero emission vehicles (ZEVs). The eight states have committed to having at least 3.3 million ZEVs in operation by 2025. Massachusetts' portion of the MOU target is approximately 300,000 vehicles. In May 2014, the eight states released a "Multi-State ZEV Action Plan" indicating 11 key actions needed to advance the adoption of ZEVs. In June 2014, a formal Zero Emission Vehicle Commission was created in Massachusetts by Section 205, Chapter 165 of the Acts of 2014. The Commission will make recommendations to the Administration on an action plan and report findings including draft legislation to the Massachusetts Legislature. Massachusetts has initiated several programs to provide charging infrastructure, incentives and education. For example, a program was established in June 2014 that offers rebates to consumers to shift their vehicle purchases to more fuel-efficient (or lower GHG) models, currently plug-in electric- and hydrogen-fueled vehicles. Massachusetts has a clean vehicle grant program for medium and heavy-duty alternative fuel vehicles. Funding has also been made available for municipalities, public and private colleges and universities, and state agencies to purchase plug-in electric vehicles and install charging stations for workplace charging. Massachusetts has focused on the development of publically available charging infrastructure throughout the Commonwealth, and coordinated with neighboring states for major travel corridors with funding for fast charging systems. To complement the infrastructure development, Massachusetts developed a hands-on Mass Drive Clean test drive program at employer locations and public events throughout the Commonwealth. New complementary policies are necessary to achieve our GHG reduction and MOU goals including: planning for the future to facilitate at-home vehicle charging; non-financial consumer incentives; and increasing consumer awareness of ZEVs via outreach and education with dealers and NGOs as well as highway sign logos that identify charging infrastructure.

	Savings from full policy implementation	% of 1990 level
Economy-wide GHG reductions in 2020	0.1 MMTCO <sub>2</sub> e	0.1%

**Clean Energy Economy Impacts:** Large reductions in fuel and maintenance costs for consumers, and less spending on imported fuel, keep more money in the Massachusetts economy and thereby create jobs. The ZEV and alternative fuel infrastructure deployment create employment opportunities for various sectors of the economy from electricians to construction workers.

**Rationale:** Transportation accounted for 42 percent of total GHG emissions in Massachusetts in 2012, with light-duty vehicles (cars, SUVs, minivans, pickups) emitting approximately 26 percent of total emissions. To achieve the GWSA's 2050 limit, electrification of the transportation sector is necessary, and this policy supports that long term goal.

**Design Issues:** Under the current design of the consumer rebate program, rebates are issued based on the battery size for new vehicles. A complementary future incentive should take the

growing fleet of older ZEVs into account by possibly allowing used ZEVs to be eligible for the incentive.

**GHG Impact:** Based on projections of meeting the MOU target in 2025, a reduction of 0.1 MMTCO<sub>2</sub>e are expected in 2020.

**Other Benefits:** Reduced fuel usage will reduce emissions of other air pollutants that cause human health damage.

**Costs:** Incentive programs have been funded through federal Congestion Mitigation and Air Quality improvement program funds, Regional Greenhouse Gas Initiative (RGGI) auction proceeds, an Inspection and Maintenance program vehicle trust account, and supplemental environmental program (SEP) funding sources.

**Equity Issues:** Lower-income households tend to buy used cars. A pilot program is being devised to provide incentives to lower-income households in addition to existing consumer rebates for new or used ZEVs. Virtually all drivers whose vehicle choice is modified by the incentive mechanism will see substantial savings in gasoline costs over time.

**Experience in Other States:** California has successfully implemented a rebate program for zero emission vehicles that has fostered rapid adoption by consumers. Many states across the U.S. have placed a wide range of policies in place, from HOV lane access, rebate programs and tax incentives for ZEVs, to rebate programs and tax incentives for infrastructure.

**Legal Authority:** Massachusetts has been implementing grant programs using existing state authorities.

**Implementation Issues:** All rebate and incentive programs need to be altered and keep pace as alternative fueled vehicles and associated infrastructure markets change. A concerted effort needs to be made to ensure universal access to all alternative fuel infrastructure. Reducing the cost to retrofit buildings to enable at-home charging would require building and electric code changes.

**Uncertainty:** The degree of consumer response after incentives and rebates is being evaluated.