



Electric Vehicles (EVs)

The transportation sector is responsible for approximately 40% of Massachusetts' greenhouse gas (GHG) emissions¹. Identifying and employing strategies to electrify our transportation sector is a critical step to reducing our dependence on fossil fuels and achieving 100 percent renewable energy.

By encouraging the transition to electric vehicles (EVs), local governments can improve local air quality, decrease respiratory ailments such as asthma, boost the local economy by reducing fuel costs, and set a positive example for residents to follow.

According to Union of Concerned Scientists, transitioning to EVs can help cut projected U.S. oil use in half over the next 20 years.² Additionally, as we continue to integrate more renewable energy into our electric grid, EVs will get cleaner in lockstep with this greener grid.

How can municipalities encourage the transition to EVs?

Lead By Example

Electrify the Municipal Fleet

One of the most powerful motivators to anyone making a change is seeing someone else do it first. Many municipalities are already adding battery-electric and plug-in hybrid electric vehicles to their fleets, simultaneously leading their citizens while enjoying the benefits of reduced maintenance and lower fuel costs.

The Department of Environmental Protection, through [MassEVIP³](#), will provide incentive funding for municipalities to offset the initial costs of purchasing battery-electric or plug-in hybrid electric vehicles. Over the lifetime of the vehicle, a municipality stands to save thousands of dollars in fuel costs by operating EVs in place of petroleum vehicles, while also cutting pollution and increasing air quality for its residents.

Battery-Electric Zero Emission Buses (ZEBs) - School Buses and Public Transit

Diesel, hybrid-diesel, and CNG buses, although initially cheaper, present large operating and maintenance costs. Each battery-electric bus can cost hundreds of thousands of dollars less per year to fuel than diesel and CNG buses, as well as being easier to maintain. ZEBs also produce no tailpipe pollution, whereas diesel exhaust contains more than forty toxic air contaminants that in some cases can cause and/or worsen diseases such as asthma and cancer.⁴

Municipalities can work to electrify school district bus fleets, municipal transit fleets, and encourage regional transit authorities (RTAs) to do the same. Battery-electric school buses are already being operated in four Massachusetts school districts through the DOER's [Vehicle-to-Grid Electric School Bus](#) pilot program. Riders of the Worcester RTA currently enjoy quietly efficient ZEBs traveling their routes, and other RTAs across the state are considering ZEBs as well.

Federal funding is available through the Federal Transportation Authority in various forms, such as the Congestion Mitigation and Air Quality (CMAQ) program, and the Low or No Emission (Lo-No) Vehicle Program. Visit <https://www.transit.dot.gov/grants> to learn more.

Reduce Barriers

Install Public Charging Stations

EV battery ranges continue to increase each model year, with many models becoming comparable in range to petroleum vehicles; "range anxiety" is being supplanted by "range confidence." However a lack of clearly visible and accessible charging stations can still be a deterrent. Municipalities can help by installing charging stations in city or town centers, retail areas, malls and other locations conducive to visitors, as charging can take anywhere from 30 minutes to two hours.

Municipalities can also encourage local business leaders to install charging stations so employees can easily and conveniently charge during the workday. Employers can see charging stations as an additional strategy to attract and retain quality employees, while businesses such as restaurants and shopping centers can attract patrons to charge during their visit.

[MassEVIP](#) will provide incentive funding for municipalities and private employers to offset the cost of installing Level 2 dual-head charging stations - the most common for public charging.

Educate Citizens

Just as very few people would buy a vehicle before test-driving it, similarly people are much more likely to consider buying an EV after being given the chance to drive one. Municipal programs can play an important role in giving citizens the experience of driving electric while also providing the chance to educate on the economic, environmental, and social benefits of EVs.

Municipal programs such as [Braintree Drives Electric](#) do just that. The state has done similarly by providing educational material and guides, and hosting "EV Ride & Drive" events across the state through the [MassDriveClean](#) program. These programs have been shown to be effective in increasing EV adoption. Since the launch of Braintree Drives Electric, the city has seen an increase of 650% in EV adoption.

¹<http://www.mass.gov/eea/air-water-climate-change/climate-change/massachusetts-global-warming-solutions-act/ma-ghg-emission-trends/>

²<http://www.ucsusa.org/sites/default/files/attach/2015/11/Cleaner-Cars-from-Cradle-to-Grave-full-report.pdf>

³<http://www.mass.gov/eea/docs/dep/air/community/massevipfs.pdf>

⁴https://www.sierraclub.org/sites/www.sierraclub.org/files/uploads-wysiwig/1099%20Zero%20Emission%20Bus%20Factsheet%2005_x1a.pdf