

## Electric Vehicles in Massachusetts

Plug-in electric vehicles (PEVs) are fun to drive and provide significant benefits to the American economy not just through the domestic manufacturing of the vehicles, but also through additional jobs in the electric power industry for the energy to operate them.<sup>1,2</sup> The increased use of domestic electricity in the transportation sector promotes national security by reducing our dependence on imported oil. These vehicles keep the U.S. competitive with China and the Europe Union, which are both moving aggressively towards full deployment of the vehicles and nationwide charging systems.

There are currently over 8,769 PEVs on Massachusetts roads today, with the market ready to expand as new vehicle makes and models become available in Massachusetts.<sup>3</sup> As these vehicles are a win-win for Massachusetts, it's no surprise that consumers want more of these vehicles today.



Reading, Massachusetts National Drive Electric Week 2016

### Policies in Massachusetts for PEVs

Policy support at the federal, state and local levels is needed as the PEV market continues to develop and grow. Below is the most current list of PEV policies in MA:

**Vehicle Purchase Incentive:** The Massachusetts Offers Rebates for Electric Vehicles (MOR-EV) program offers rebates up to \$2,500 for the purchase or lease of PEVs. The vehicle must be registered in MA.

**Charging Station Incentive:** The Massachusetts EV Incentive Program (MassEVIP) provides grants to businesses with 15 or more employees for the installation of Level 1 or Level 2 EV charging stations. The program will provide 50% of the funding (up to \$25,000) for the hardware costs.<sup>4</sup>

**Utility Charging Rates for PEVs:** Utilities Eversource and National Grid are leading the way in the northeast with the first ever proposed EV programs before the MA Department of Public Utilities.

### Fun Facts for PEVs in Massachusetts

- Governor Baker signed electric vehicle bill (SB 2505) into law which increases access to public charging stations and allows municipalities and private businesses to reserve parking spaces specifically for ZEVs.<sup>5</sup>
- Massachusetts is a signatory of ZEV Memorandum of Understanding (MOU) which pledges that participating states collectively will have 3.3 million ZEV and supporting infrastructure by 2025, with Massachusetts committing to 300,000 vehicles.<sup>6</sup>
- The net present value of projected PEV societal benefits would equal \$536 million per year by 2050 under ZEV MOU penetration scenarios and \$2.4 billion per year with an 80% reduction by 2050 penetration scenario.<sup>8</sup>

<sup>1</sup> Currently, the U.S. manufactures PEVs and other advanced technology vehicles and components in at least 20 states, creating thousands of new, good jobs. Furthermore, the auto industry has distribution centers, sales offices and operational facilities in all 50 states; the PEV industry is a part of the same distribution, sales and operational network and is difficult to separate from the main auto industry. More at: <http://sierraclub.typepad.com/compass/2012/06/fuel-economy-jobs.html>

<sup>2</sup> PEVs include battery-electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs). The BEVs are charged by electricity from the local grid, while PHEVs drive on electricity from the local grid first, then on gasoline for longer trips

<sup>3</sup> <https://autoalliance.org/in-your-state/MA/>

<sup>4</sup> <http://www.mass.gov/eea/agencies/massdep/air/grants/workplace-charging.html>

<sup>5</sup> <http://www.mass.gov/governor/press-office/press-releases/fy2017/gov-baker-signs-electric-vehicle-promotion-legislation.html>

<sup>6</sup> [http://mjbradley.com/sites/default/files/MA\\_PEV\\_CB\\_Analysis\\_FINAL\\_17nov16.pdf](http://mjbradley.com/sites/default/files/MA_PEV_CB_Analysis_FINAL_17nov16.pdf)



- Massachusetts adopted the California vehicle fuel economy standards, one part of which includes a “Zero Emissions Vehicle Mandate.” This mandate requires automakers to sell or purchase credits for a certain number of PEVs in Massachusetts. The MA market will begin to see a significant increase in PEV makes and models available in the state starting in 2018.<sup>7</sup>

## Benefits for Every Driver in Massachusetts

The benefits of PEVs accrue to all residents in Massachusetts, regardless if the driver is in an urban or metro area. Top benefits include:

1. **PEVs put money back in the pockets of consumers.** On average, fueling a car with electricity is roughly the same as gas at \$1 per gallon, thanks to a PEV’s performance efficiency and the lower cost of electricity.<sup>8</sup> Maintenance costs are also significantly reduced.
2. **All drivers in Massachusetts have the ability to charge.** PEVs can be charged on a standard 120V wall outlet, also called Level 1 charging.<sup>9</sup> Faster charging can be achieved at the home or workplace with Level 2 charging.<sup>10</sup> The map at the right shows the public charging stations that are currently available to all Massachusetts drivers.<sup>11</sup> The orange icons are DC Fast charging stations, and the green icons represent public Level 2 charging stations. It is possible to get nearly anywhere in the state with a PEV, proving that these vehicles can work for all Massachusetts drivers.
3. **PEVs are significantly better for the local economy.** PEVs are fueled from electricity from the local grid, which is cheaper for all consumers. Money not spent on gas or on maintenance can be invested back into the local economy.
4. **PEVs improve air quality and reduce health care costs.** Poor air quality is still a problem for many U.S. states.<sup>12</sup> PEVs produce far fewer tailpipe emissions than a standard gasoline-powered vehicle, therefore significantly reducing dangerous air pollution. With more PEVs on the roads, public and private health care costs can be greatly reduced.



Current public charging stations available to all Massachusetts drivers.

## About Plug In America

Plug In America is the nation’s leading independent consumer voice for accelerating the use of plug-in electric vehicles in the United States to consumers, policymakers, auto manufacturers and others. Formed as a non-profit in 2008, Plug In America provides practical, objective information collected from our coalition of plug-in vehicle drivers, through public outreach and education, policy work and a range of technical advisory services. Our expertise represents the world’s deepest pool of experience of driving and living with plug-in vehicles. The organization conceived National Drive Electric Week and has advanced workplace charging by pioneering ride-and-drive events at such leading corporations as Google, Mattel and Paramount Pictures. We drive electric. You can too.

[www.pluginamerica.org](http://www.pluginamerica.org)

<sup>7</sup> <http://www.cleancarscampaign.org/>

<sup>8</sup> <http://energy.gov/eere/ev-everywhere/ev-everywhere-saving-fuel-and-vehicle-costs>

<sup>9</sup> Level 1 is AC charging at 120V, the level of power that is supplied by a normal household outlet. This will supply up to 40 miles of range for an 8-hour connection during a typical work day. That’s enough to replenish the charge for the majority of Massachusetts drivers.

<sup>10</sup> Level 2 is AC charging at a power level similar to what is supplied by an outlet for an electric dryer, typically 240V.

<sup>11</sup> Zooming in further shows even more charging stations available. PlugShare is one platform that tracks charging station locations, prices and types of charging at each location. Drivers can download the PlugShare app to a mobile phone for free.

<sup>12</sup> <http://www.lung.org/our-initiatives/healthy-air/sota/key-findings/>

