

Electric Vehicles in North Carolina

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.^{1,2} 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 7,075 PEVs on North Carolina roads today, with the market ready to expand as new vehicle makes and models become available in North Carolina.³ As these vehicles are a win-win for North Carolina, it's no surprise that consumers want more of these vehicles today.

Policies in North Carolina 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 North Carolina. Unfortunately, North Carolina currently has no vehicle purchase incentive, licensing incentive, or specific PEV charging rates. Plug In America looks forward to working with North Carolina policymakers to implement supportive policies in the near future:

Charging Station Incentive: Duke Energy offers funding up to \$5,000 per charging port, \$20,000 per site, or \$50,000 per city for PEV charging as part of the PEV Charging Infrastructure Project.⁴

HOV Lane Access Policy: PEVs are eligible for the HOV lane.⁵



Charlotte, North Carolina National
Drive Electric Week 2016

Fun Facts for PEVs in North Carolina

- A 2016 study found that a \$2,500 PEV tax credit would increase North Carolina's real GDP each year between 2016 and 2031. The cumulative 5-year GDP boost would equal \$37 million and \$52 million for 16 years.⁶
- With a cleaner electricity grid and improved efficiency of electric vehicles, greenhouse gas emissions and air quality from charging an electric vehicle on the grid improved in 76% of the regions sampled from 2012 to 2015.⁷

¹ 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>

² 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

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

⁴ <https://news.duke-energy.com/releases/duke-energy-s-1-5-million-program-aims-to-increase-public-electric-vehicle-charging-in-n-c-by-30-percent>

⁵ <http://www.ncleg.net/gascritps/statutes/statutelookup.pl?statute=20-146.2>

⁶ http://secureenergy.org/wp-content/uploads/2016/05/NC_EV_Study_May16.pdf

⁷ <http://www.ucsusa.org/sites/default/files/attach/2015/11/Cleaner-Cars-from-Cradle-to-Grave-full-report.pdf>



- In 2016, the US sold over 159,000 EVs, which is a 38% increase over 2015.⁸

Benefits for Every Driver in North Carolina

The benefits of PEVs accrue to all residents in North Carolina, 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.⁹ Maintenance costs are also significantly reduced.
2. **All drivers in North Carolina have the ability to charge.** PEVs can be charged on a standard 120V wall outlet, also called Level 1 charging.¹⁰ Faster charging can be achieved at the home or workplace with Level 2 charging.¹¹ The map at the right shows the public charging stations that are currently available to all North Carolina drivers.¹² 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 North Carolina 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.¹³ 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 North Carolina 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

⁸ <http://www.fleetcarma.com/ev-sales-usa-2016-final/>

⁹ <http://energy.gov/eere/everywhere/ev-everywhere-saving-fuel-and-vehicle-costs>

¹⁰ 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 North Carolina drivers.

¹¹ Level 2 is AC charging at a power level similar to what is supplied by an outlet for an electric dryer, typically 240V.

¹² 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.

¹³ <http://www.lung.org/our-initiatives/healthy-air/sota/key-findings/>

