

Electric Vehicles in Georgia

Plug-in electric vehicles (PEVs) are fun to drive, have little to zero tailpipe emissions and can be powered with clean, affordable, domestic electricity from the multiple Georgia electric cooperatives and Georgia Power. There are currently over 25,250 PEVs on Georgia roads today, with the market ready to expand.¹ The benefits listed below accrue to all Georgians, regardless if the driver is in the metro Atlanta area or the more rural areas of Georgia. 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. As these vehicles are a win-win for Georgia, it's no doubt that consumers want more of these vehicles today.

Benefits for every Georgian Driver

1. PEVs put money back in the pockets for Georgians. Maintenance for PEVs costs much less than for gasoline vehicles: PHEVs require fewer oil changes, while BEVs require none. BEVs also have 10 times fewer moving parts than gasoline vehicles; there's no engine, transmission, spark plugs, valves, fuel tank, tailpipe, distributor, starter, clutch, muffler, or catalytic converter, meaning fewer parts that can break and need to be replaced. PEVs are also cheaper to fuel than gas-powered vehicles. 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.² Electricity prices are also far more stable than gasoline prices, allowing drivers to avoid the risk of future price spikes. Over the life of the vehicle, the average driver can save more than \$3,500 if gas prices fall to a low of \$2.50 per gallon.³



Current public charging stations available to all Georgia drivers.

2. All Georgians have the ability to charge. PEVs can be charged on a standard 120V wall outlet, which is called Level 1 charging.⁴ Faster charging can be achieved at the home or workplace with Level 2 charging, which is 240V.⁵ The electric infrastructure for both Level 1 and 2 is already in place for all Georgians. The map above shows the public charging stations that are

¹ Vehicle count from the HIS / Polk registration data in Georgia from 2010 to October 2016.

² http://energy.gov/eere/eveverywhere/ev-everywhere-saving-fuel-and-vehicle-costs

³ The analysis was performed by Environment California in the report, "Drive Clean and Save: Electric Vehicles are a Good Deal for California Consumers and the Environment." However, similar incentives are already in place in dozens of other states across the country, and gas prices are similar in dozens of other states as well, suggesting a similar result in savings for other states. The report is available here: http://www.environmentcalifornia.org/sites/environment/files/reports/Drive%20Clean%20and%20Save%20June%202016.pdf

⁴ Level 1 is AC charging at 120V, the level of power that is supplied by a normal household outlet. This will supply 3 to 5 miles of range per hour to a typical electric vehicle, or 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 Georgian drivers.

⁵ Level 2 is AC charging at a power level similar to what is supplied by an outlet for an electric dryer, range or cooktop. This is typically 240V in household settings, but in commercial settings is more likely to be 208V.



currently available to all Georgia drivers as well.⁶ The orange icons are DC Fast charging stations, and the green icons represent public Level 2 charging stations. <u>It is possible to get nearly anywhere in the state with a PEV</u>, proving that these vehicles are not just for the metro areas in Georgia.

3. The PEV market is creating good Georgian jobs. The electricity used to power the vehicles supports good paying jobs at the multiple Georgia electric cooperatives and Georgia Power. In addition, automakers like General Motors and Mercedes-Benz Daimler have facilities that support EV operations. The General Motors Georgia IT Innovation Center is located in Roswell, Georgia and employs more than 600 Georgians. The Mercedes-Benz Daimler headquarters for the U.S. is located in Atlanta, and employs more than 556 Georgians.⁷ Daimler recently announced an \$11 billion investment into the PEV



A future PEV driver enjoys a Kia Soul PEV.

- sector in November 2016.⁸
 PEVs are significantly better for the local economy. PEVs are fueled from electricity from the local
- 4. 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.
- 5. **PEVs are convenient.** There's no trip to the gas station needed, and the battery can be charged overnight and be ready to go first thing in the morning.

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 https://electrek.co/2016/11/27/daimler-investment-electric-vehicles/



⁶ 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.

⁷ https://autoalliance.org/in-your-state/GA/