



## Electric Vehicles (EVs) and Plug-in Hybrid Electric Vehicles (PHEVs) are...

### Cheaper

- You can receive up to \$7,500 in federal tax credits and up to \$3,000 in Maryland state tax credits for the purchase of a qualified EV or PHEV!
- EVs and PHEVs can achieve the equivalent of over 100 miles per gallon, saving the average driver \$500 per year in gas costs!
- EVs and PHEVs have fewer moving parts and fluids to change, reducing maintenance costs.

### Cleaner

- EVs produce no tailpipe emissions, and PHEVs produce fewer emissions than conventional vehicles.
- Because electricity is a domestic energy source, using it in vehicles means less reliance on dirtier, sometimes imported, fuels.

### Convenient

- It's likely there are charging stations near you: There are 14,000 public stations, offering 35,000 charging outlets, in the U.S.
- Home charging equipment can be installed for as little as \$500 – and a rebate for charging equipment from the State of Maryland of up to \$700 is available!
- The industry saw a 36% increase in stations between July 2015 and July 2016!
- Eliminate trips to the gas station! With an EV or PHEV, you can enjoy the convenience of charging at home, work, or while you shop or dine.

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## Electric-Drive Vehicles: Benefits and Charging Basics

### What are the different types of electric-drive vehicles?

- **Hybrid Electric Vehicles (HEVs)** are powered by traditional gasoline or diesel internal combustion engines (ICEs) and by electric motors that use energy stored in a battery. The electric motor charges the battery, which provides extra power during starts and acceleration, allowing for a smaller engine, and resulting in better fuel economy without sacrificing performance.
- **Plug-in Hybrid Electric Vehicles (PHEVs)** are similar to HEVs but have a larger battery that allows the vehicle to travel on electricity alone. The battery can be charged by plugging into an electric power source, through regenerative braking, and by the ICE. Unlike all-electric vehicles, PHEVs don't have to be plugged in before driving. They can be fueled solely with gasoline, like a conventional HEV.
- **(All-) Electric Vehicles (EVs)** run on electricity alone. They are powered by an electric motor that uses energy stored in a battery which is larger than the batteries in an HEV or PHEV. EV batteries are charged by plugging the vehicle into an electric power source and, to a lesser degree, through regenerative braking.

### Why consider an electric vehicle?

- Electric vehicles cost less to operate, so the higher initial vehicle cost can be offset over the lifetime of the vehicle. That's because electric drive-trains are very efficient and electricity is cheaper than gasoline or diesel fuel.
- Electrical systems require minimal scheduled maintenance since there are fewer moving parts and fluids to change.
- You can charge your electric vehicle at home, at work, or while you shop or dine.
- All-electric vehicles produce no tailpipe emissions.

### How long does it take to charge an electric vehicle?

- "Level 1" charging units add 2-5 miles of range per hour of charging.
- "Level 2" charging units add 10-20 miles of range per hour of charging.
- "DC Fast Charge" units can fully charge a depleted battery in as few as 20 minutes.

### How far can I go on a charge?

- Electric vehicles can typically go 70-100 miles on a single charge, and a few models can go up to nearly 300 miles.
- Several factors affect actual range including driving conditions, driving habits, and use of climate controls.

### Where can I charge an electric vehicle?

- Most electric vehicles come with a 110-volt "Level 1" cord-set that can be plugged in to a typical household outlet. Homes can often be fitted with a 220-volt "Level 2" charging unit.
- More workplaces are installing charging units or making 110-volt outlets available to employees and visitors.
- There are now over 35,000 public charging outlets across the country, including a growing number of "DC Fast Charge" units. To locate stations, you can use the Alternative Fueling Station Locator ([afdc.energy.gov/stations](http://afdc.energy.gov/stations)) or download the smartphone app.

For more information, check out [marylandev.org](http://marylandev.org)!

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## Electric Vehicle Incentives

There are many state and federal incentives available for the purchase of plug-in electric vehicles and electric vehicle supply equipment. See how much you can save by going electric with the exciting incentives listed below:

### Federal

- A **tax credit of up to \$7,500** is available for the purchase of a new qualified plug-in electric vehicle.

To find out what's available in your area, see the Alternative Fuels Data Center (AFDC) Laws & Incentives database

<http://www.afdc.energy.gov/laws>.

### Maryland

- Maryland offers a **tax credit of up to \$3,000** for purchasers of qualified plug-in electric vehicles, on or after July 1, 2017.
- Maryland offers a **rebate of up to \$700** for individuals and a **rebate of up to \$4,000** for businesses for the costs of acquiring and installing qualified Electric Vehicle Supply Equipment, effective July 1, 2017.
- The **Maryland PEV High Occupancy Vehicle (HOV) Lane Exemption** allows qualifying plug-in electric vehicles to use the HOV lanes regardless of the number of passengers.

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