HOW PLUG-IN VEHICLES WORK

While today's cars are much cleaner, burning gasoline still creates harmful tailpipe emissions that contribute to climate change and smog.

How are electric vehicles different? Electric vehicles produce no tailpipe emissions even with the use of electricity.

Total emissions associated with driving EVs are still typically less than those for gasoline cars, particularly if the electricity is generated from renewable energy sources like wind.

Electric vehicles have a battery instead of a fuel tank, and they have an electric motor, instead of an internal combustion engine.

The motor uses electricity from the battery to power the wheels. The motor can also charge the battery by recapturing energy that would otherwise be lost during breaking.

The number of miles and EV will travel before the battery needs to be recharged, can be found on the fuel economy and environment label or at fuel economy.gov.

To recharge the battery, just plug the car into a household outlet. Most EVs can be charged with the standard 120-volt outlet, but a 240-volt outlet like the one your dryer or electric stove uses, will charge the vehicle more quickly.

Check the window sticker for the charge time of the vehicle. You may also be able to plug in at work or at a public fast charging station.

Plug in hybrid electric vehicles for PHEVs, have a battery and an electric motor. They also have a gasoline tank and an internal combustion engine. Some PHEVs operate exclusively or almost exclusively on electricity until the battery is nearly empty.

Then, gasoline is burned in the engine to generate additional electricity for the electric motor or to power the wheels. The fuel economy labels show the vehicle's driving range using only electricity and the total number of miles that can travel if you start with a full battery and a full tank of gasoline.

Blended mode, PHEVs use both gasoline and electricity to power the vehicle while the battery is charged. When the battery is nearly empty the internal combustion engine uses gasoline to power the wheels alone. Some blended mode PHEVs can travel a short distance using only electricity. You can recharge PHEVs at home or at a public charging station. Since PHEVs typically have smaller battery systems and EVs, they recharge more quickly. Since a PHEV can run exclusively on gasoline, you can still drive it, even if you rarely or never recharge the battery. However, it costs less per mile to run on electricity. That means the more you recharge, the more money you'll save. Plus, you'll also reduce harmful tailpipe emissions.

Very high speed or aggressive driving, cold temperatures and frequent use of the heater or air conditioner, may lower how far you can travel on electricity. Remember to consider your typical driving conditions and driving style when deciding what type of vehicle is right for you.

Learn more at epa.gov/greenvehicles and fueleconomy.gov.