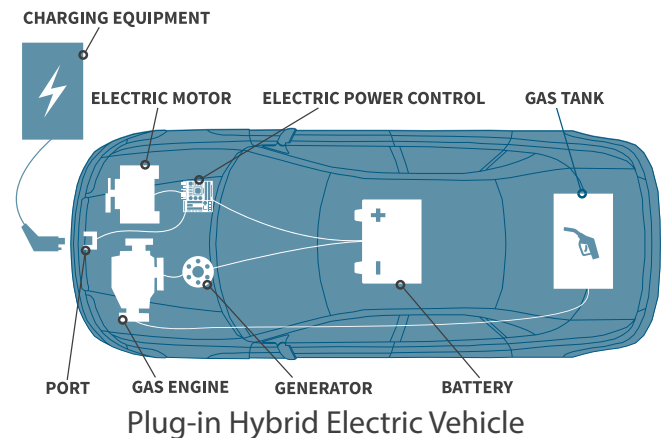
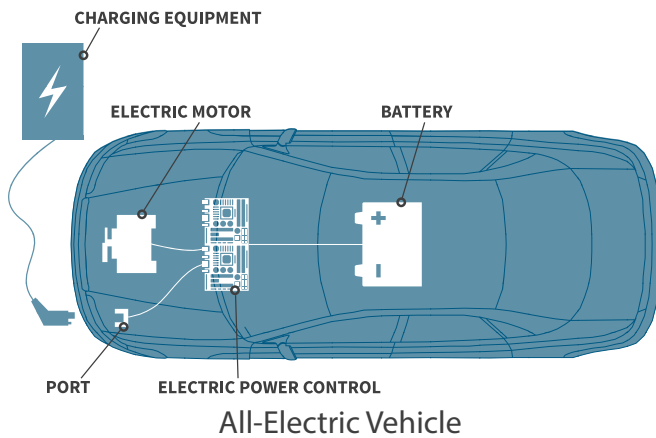


ELECTRIC VEHICLES

Vehicle and Charging Station Basics



Electric vehicles are fueled by electricity from the power grid. Drivers either plug their cars into an outlet or a charging station to charge the battery. There are two types of electric vehicles: all-electric, which are powered solely by electric energy stored in the battery, and plug-in hybrid, which are powered by a combination of battery power and a gasoline engine that is typically used as backup.



Electric Vehicle Charging Station Levels

Charging stations can be classified into three levels. Every electric vehicle comes with a Level 1 station charging cord; however, Level 2 and DC Fast Charge stations must be purchased and installed by an electrician.

Level 1 Station
VOLTAGE 120V 1-Phase AC
AMPS 12-16 Amps
CHARGING LOADS 1.4 - 1.9 kW
CHARGE TIME 3-5 miles per hour

Level 2 Station
VOLTAGE 208-240 1-Phase AC
AMPS <80 Amps (Typ. 30 Amps)
CHARGING LOADS 2.5 - 19.2 kW (Typ. 7 kW)
CHARGE TIME 10-20 miles per hour

DC Fast Charge
VOLTAGE 208-480V 3-Phase AC
AMPS <200 Amps (Typ. 60 Amps)
CHARGING LOADS <150 kW (Typ. 50 kW)
CHARGE TIME 80% charge in <30 mins

Frequently Asked Questions

Why drive electric?

- Save money on gasoline and maintenance costs
- Enjoy great vehicle performance with a smooth, quiet ride and quick acceleration
- Be environmentally friendly by reducing vehicle emissions
- Support energy independence by purchasing domestically produced electricity

Miles per Year	Miles per Day	Gasoline Cost per Year	Electricity Cost per Year	Annual Savings
10,000	27	\$917	\$333	\$584
12,000	33	\$1,100	\$400	\$700
15,000	41	\$1,375	\$500	\$875
20,000	55	\$1,833	\$667	\$1,166
25,000	68	\$2,292	\$833	\$1,459

*Assumptions: Cost per gallon gasoline: \$2.75; Cost per kWh: \$.10; Gas vehicle gets 30 MPG

Who makes electric vehicles?

Most major car manufacturers offer electric vehicle models, including Audi, BMW, Cadillac, Chevrolet, Fiat, Ford, Honda, Hyundai, Kia, Mitsubishi, Mercedes, Nissan, Porsche, Smart, Tesla, Toyota, Volvo and Volkswagen.

How far can I drive?

Most all-electric vehicles have a range of over 130 miles per charge; however, affordable 200-mile-range cars are quickly entering the market. Plug-in hybrid electric vehicles get between 15 and 50 miles of all-electric range and then switch over to a hybrid gasoline engine.



Are electric vehicles and charging stations safe?

Electric vehicles are some of the safest cars on the road according to National Highway Traffic Safety Administration (NHTSA) tests. Although driving any vehicle brings some risk, electric vehicles meet and often exceed the same strict safety standards as other cars on the road. The NHTSA has also found that electric vehicles do not present a greater risk of post-crash fire than gasoline-powered vehicles. Charging the vehicle is also safe, and each station and connector is required to have controls so that electricity will not flow until it is plugged into a vehicle with a safe connection. Connectors likewise have safeguards to protect you in inclement weather.

Are electric vehicles truly environmentally friendly?

Electric vehicles, compared to conventional vehicles, help improve local air quality because they have no tailpipe emissions when operating in all-electric mode. This is true even when accounting for power plant emissions associated with charging because the electric grid is getting cleaner every year with new technologies and the addition of renewable energy.

