



ELECTRIC VEHICLES BASICS



As your Touchstone Energy® cooperative, we want to be your source for energy and information. Since electric vehicles (EVs) are becoming more mainstream, we put together a variety of fact sheets and information to help answer questions you might have.

Contact us for more information about EVs.

Electric transportation is here to stay. With more and more electric vehicles (EVs) of all shapes and sizes hitting the U.S., people are recognizing their benefits and taking advantage of all they have to offer. Nearly all auto manufacturers currently sell or plan to sell electric models. Once in an EV, owners will experience fuel and maintenance savings, increased driving performance, and enjoy environmental and energy security benefits.

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A battery electric vehicle uses electricity as its sole fuel, and a plug-in hybrid electric vehicle uses electricity along with a conventional engine for backup. Both fall under the “EV” umbrella.

CHARGING

EV owners have multiple options when it comes to charging their vehicle. Charging is often categorized into three levels: Level 1, Level 2 and DC Fast Charge. Most vehicles come with an adapter to plug the car in at home to a standard 120-volt outlet, known as Level 1 charging. Level 2 charging requires a 240-volt outlet, can be added at home and is found at many public destinations. DC Fast Charging offers the fastest charge, with stations often located along popular travel corridors. Most charging needs can be met at home, but many apps and websites exist to help locate public charging stations for when you’re running errands or traveling.

DRIVING RANGE

While some of the early entrants to the EV market could travel only relatively short distances, that has quickly changed. Today, almost all new EVs can go more than 200 miles on a single charge and are able to cover the vast majority of daily commutes. As driving ranges and charging speeds increase, road-tripping in an EV is also becoming easier and easier.

ELECTRIFYING OTHER VEHICLE TYPES

Electric transportation is not limited to light-duty vehicles. Recently, more medium- and heavy-duty EVs have arrived. Cities, schools, airports and other organizations are specifically recognizing the benefits of electric fleet vehicles, including pickup trucks, vans, and school and transit buses.

Beyond the light-, medium- and heavy-duty vehicles, related applications are going electric as well. Battery-powered lawn and farm equipment is growing in popularity as technology improves and costs drop. Today, many models compete directly with gas- and diesel-powered versions and have benefits that make them highly attractive.

To learn more, see the additional fact sheets about electric transportation.

- Overview of Electric Vehicles
- Is an Electric Vehicle Right for You?
- Nuts and Bolts of Plug-in Hybrid Electric Vehicles
- Nuts and Bolts of Battery Electric Vehicles
- The Electric Vehicle Evolution
- Possibilities of Bidirectional Electric Vehicle Charging
- Plugging in at Work - A Quick Guide to Electric Vehicle Workplace Charging
- How Long Will an Electric Vehicle Battery Last?
- Electric Vehicle-Ready Homes
- Electric Vehicles and Charging Stations
- A Quick Guide to Multifamily Electric Vehicle Charging
- Range Anxiety and Fuel Comparison
- Electric Buses and Public Transportation
- Electric Lawn and Farm Equipment
- Electric Fleet Vehicles

This article was provided by Advanced Energy, a nonprofit energy consulting firm. For more information, visit www.advancedenergy.org.

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