

A photograph of an electric vehicle charging station with two green charging cables plugged into it. The station is white and black, and the cables are bright green. In the background, another charging station is visible, and the scene is outdoors with a fence and some greenery.

## ELECTRIC VEHICLES OVERVIEW

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.

### ELECTRIC VEHICLE BASICS

An all-electric vehicle uses electricity as its primary fuel and a plug-in hybrid uses electricity along with a conventional engine to improve efficiency. There are numerous reasons why people choose to drive electric. The top include saving money on fuel and maintenance costs, the car's driving performance, being environmentally friendly and supporting local energy sources. Most major car manufacturers are currently offering electric models and many other manufacturers are in the planning phase to produce an EV during the next few years.

### CHARGING THE VEHICLES

EV owners have multiple options when it comes to charging their vehicle. Charging stations are often categorized into three levels: Level 1, Level 2 and DC Fast Charge. All vehicles come with an adapter to plug the car in at home to a standard 120-volt outlet, known as Level 1 charging. To locate a public charging station to use while running errands or traveling, there are multiple apps and websites that list station locations and provide details.

### RANGE ANXIETY

A top concern of potential EV drivers is something called "range anxiety," or the fear of running out of charge. While some of the early entrants to the EV market could travel only relatively short distances, that has quickly changed. Today, most new EVs can go more than 200 miles on a single charge and are able to cover the vast majority of daily commutes. In addition, most charging is done at home, so people often wake up with their car more than ready to go. Workplace and public charging stations also continue to be added across the country, which makes charging when out and about easier.

## OTHER ELECTRIC VEHICLES

Electric transportation is not limited to light-duty vehicles, and recently, more medium- and heavy-duty EVs have entered the market. Cities, schools, airports and other large organizations are specifically recognizing the benefits of electric fleet vehicles, including school and transit buses.

Beyond the light-, medium- and heavy-duty vehicles, related applications are going electric as well. In particular, battery-powered lawn and farm equipment is growing in popularity as technology improves and costs drop. Today, many models compete directly with gas-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 Vehicles to Grid Technologies
- A Quick Guide to EV Workplace Charging
- How Long Will an Electric Vehicle Battery Last
- Electric-Vehicle Ready Homes
- An Overview of Electric Vehicles and Charging Stations
- A Guide to Multifamily Plug-in Electric Vehicle Charging
- Range Anxiety and Fuel Comparison
- Electric Buses and Public Transportation
- Electric Lawn and Farm Equipment
- Electric Fleet Vehicles

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