

New Energy 101 Video: Electric Vehicles

Energy Savers Blog

Electric vehicles, sometimes called EVs, can give drivers like you a convenient way to get around, while saving you money on fuel, reducing emissions, and supporting the nation's energy security. Learn about the advantages of electric vehicles, see EVs in action, and find out how they work by checking out DOE's new [Electric Vehicle 101 video](#) [1].

The basic principles behind this technology are this: the EV's battery transfers energy to an electric motor, the motor turns a drive train, which then turns the wheels. Up to 80% of the energy in the battery is transferred directly to power the car, making it a highly efficient mode of transportation. With all-electric vehicles, you never have to fuel up at the gas pump—instead, you just recharge the batteries at home or at charging stations on your route.

Compared to conventional vehicles, the driving range of an all-electric EV – typically about 100 miles per charge – may seem limited. However, when you consider the average American commutes fewer than [40 miles roundtrip](#) [2], it becomes clear that EVs are a reliable and comfortable way to regularly get from point A to point B, while reducing energy waste and contributing to a sustainable environment. For longer trips, you can simply recharge the battery along your way. Use the [Alternative Fueling Station Locator](#) [3] to find a charging station near you.

For drivers looking for an energy-saving car with longer range, an “extended-range” electric vehicle makes longer trips easier by switching to a gasoline-fueled engine to power the car's electric motor when the battery is low. Visit the [Vehicle Cost Calculator](#) [4] on DOE's [Alternative Fuels and Advanced Vehicles Data Center](#) [5] to make side-by-side comparisons of a broad array of EVs, hybrids and conventional vehicles on the road today.

The cost of today's EVs is coming down relative to similar-sized conventional and hybrid vehicles, and long-term savings can be realized through [fuel savings](#) [6] and by taking advantage of a [federal tax credit](#) [7] and [state](#) [8] and [local incentives](#) [9].

[View more Energy 101 videos](#) [10].

Visit the Department of Energy's [Office of Energy Efficiency and Renewable Energy](#) [11] website to learn more about [alternative fuel vehicles](#) [12].

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Links:

- [1] <http://www.youtube.com/watch?v=M69GBL0IDzI&list=UU7EGgnYFEIOaAa47ZBpninw&index=3&feature=plcp>
- [2] http://www.eere.energy.gov/vehiclesandfuels/facts/2010_fotw612.html
- [3] <http://www.afdc.energy.gov/afdc/locator/stations/>
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