

## U.S. Department of Energy - Energy Efficiency and Renewable Energy Alternative Fuels Data Center

### Electricity

Electricity can be used as a transportation fuel to power battery electric and fuel cell vehicles. When used to power electric vehicles or EVs, electricity is stored in an energy storage device such as a battery. EV batteries have a limited storage capacity and their electricity must be replenished by plugging the vehicle into an electrical source. The electricity for recharging the batteries can come from the existing power grid, or from distributed renewable sources such as solar or wind energy.



Fuel cell vehicles use electricity produced from an electrochemical reaction that takes place when hydrogen and oxygen are combined in the fuel cell "stack." The production of electricity using fuel cells takes place without combustion or pollution and leaves only two byproducts, heat and water.

For more information on battery electric vehicles, see the [electric vehicles](#) page; for more information on fuel cell vehicles, visit the [fuel cell vehicles](#) site. To find out more about electricity as a vehicle fuel, check out the following pages:

- [What Is Electricity?](#)
- [How Is Electricity Made?](#)
- [Electricity Market](#)
- [Electricity Benefits](#)
- [Electricity Research and Development](#)
- [Electricity Infrastructure Resources](#)
- [Electricity Incentives and Laws](#)
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