

Benefits/Advantages



Plug-in electric vehicles can help increase energy security, improve fuel economy, lower fuel costs and reduce emissions. PHEVs and EVs can reduce users' fuel costs dramatically because of the low cost of electricity relative to gasoline fuel prices. EVs and PHEVs have the benefit of flexible fueling: they can be charged anywhere there is a recharging station.



Electricity



Basics

Electricity can be used to power all-electric vehicles (EVs) and plug-in hybrid electric vehicles (PHEV). Electricity is considered an alternative fuel under the Energy Policy Act of 1992. Electricity can be produced from a variety of energy sources including; oil, coal, nuclear energy, water, natural gas, wind turbines and solar panels. Plug-in vehicles draw power from the electrical grid and store it in onboard rechargeable batteries. This stored power is used to power electric motors. All-electric vehicles produce no tailpipe emissions.



Disadvantages

An EV has a range of 60 to 200-miles depending on the make/model. Advancements in batteries for electric vehicles continue to improve and although the batteries are designed for extended life they will wear out eventually. The National Renewable Energy Laboratory indicates that today's batteries may last 12 to 15 years in moderate climates'



Vehicles

Many major automakers are manufacturing electric vehicles - both EVs and PHEVs.