



# How to Compare Cost Per Mile of Electric and Gasoline-Powered Vehicles

By Henry Randolph, eHow Contributor

[http://www.ehow.com/how\\_7223912\\_compare-mile-electric-gasoline\\_powered-vehicles.html#ixzz1qtUEEeqh](http://www.ehow.com/how_7223912_compare-mile-electric-gasoline_powered-vehicles.html#ixzz1qtUEEeqh)

You can calculate whether electric cars are cheaper to fuel than gas-powered cars.

As all-electric plug-in cars evolve into viable alternatives to gasoline-powered cars, comparing their respective energy costs will become an important part of car-buying decisions. The energy cost for an electric vehicle depends on the cost of electricity per kilowatt-hour (kwh) and how many miles per kwh the car's battery will produce. For a gasoline-powered car, energy cost is a function of the per-gallon price of gasoline and how many miles per gallon the car gets. Convert these differing measures to costs per mile, and you have the numbers you need for calculating which car will be cheaper to fuel up.

## Instructions

Find out how many cents per kilowatt-hour (kwh) you will have to pay your local utility for charging an electric car. Most utilities offer special, low electric rates for charging electric vehicles. These can vary by time of use, by day and by season.

Get the vehicle's energy efficiency in miles per kwh from the manufacturer's or dealer website.

Divide cents per kwh by miles per kwh to obtain energy cost in cents per mile. For example, say your electric utility's vehicle charging rate is 6 cents/kwh. The electric car gets 3 miles per kwh. Your energy cost is 2 cents per mile.

Get the current price of a gallon of gas for your area from local gas stations.

Find out the car's miles per gallon (mpg) rating from the car's manufacturer, dealer or Fueleconomy.gov.

Divide the current gas price per gallon by mpg to obtain fuel cost in cents per mile. For example, say the current gas price is \$3 per gallon. The car you are comparing to the electric vehicle averages 30 mpg in city and highway driving. The gas-powered car's fuel cost per mile is 10 cents.

## Compare the Two

Subtract the electric car's cost per mile from the gas-powered car's cost per mile.

Multiply the result by the estimated number of miles you expect to drive in a year.

Use the previous example to demonstrate the projected annual cost savings from driving the more energy-efficient vehicle. Subtract the electric car's 2 cents per mile energy cost from the gas-powered car's 10 cents per mile. Multiply the difference, 8 cents, by 15,000, here the estimated annual miles driven, to get the total annual cost. Divide the result, 120,000 in this case, by 100 to get \$1,200, the annual energy cost saving.