

Cost of an Electric Car vs. Gasoline powered car.

Assumption: An electric car makes a trip of 600 miles on existing Interstate highways

It travels at an average of 60 MPH so the trip takes 10 hours.

It requires an average of 30 HP to travel at this speed (REF: <http://mb-soft.com/public2/car.html>).

Assume 75% efficiency of the Electric Motor & driveline.

1 HP = 746 Watts

$746 / .75 =$ approximately 1,000 Watts or 1 KW

30 HP then = 30 KW hours

6 hours travel time x 30 KWH = 180 KWH of power consumed.

We usually pay , at THIS time, around 0.10 per KWH in our homes.

Total energy cost would be $\$0.10 \times 180 = \18 for "fuel" for this trip.

In a contemporary energy efficient car we could expect perhaps 30 MPG at highway speeds.

So, 600 miles / 30 mpg = 20 gallons of Gasoline used.

At an average price of \$3.00 per gallon (lower than most are paying) this trip would cost \$60

The Electric Car would consume about 1/3 of the MONEY a gas powered car would.

We should add in the extra cost of LABOR to recharge and/or exchange the car's battery.

This could be as high as \$10, which would raise the cost to \$28 - still less than 1/2 the cost of gas.