

## Price: EV vs. Gas-Power

Since much of our oil is imported, your gas money goes pretty far - overseas, that is. Electricity is produced within the US, rarely imported, improving balance of trade and jobs in our local economies.

Gas-Power	vs.	EV Power
	Miles/ Gallon	¢/Mile (\$3.63/gal <sup>7</sup> )
Full size SUV	13	28¢
Mid-Size SUV	20	18¢
Mid-Size Sedan	25	15¢
Compact Sedan	32	11¢
Conventional Hybrid	45	8¢
<b>2013 Rav4-EV</b> (miles for \$3.63 <sup>7</sup> )	<b>83<sup>8</sup></b>	<b>4¢</b> (\$0.10/ kWh <sup>9</sup> )
<b>Nissan LEAF</b> (miles for \$3.63 <sup>7</sup> )	<b>125<sup>10</sup></b>	<b>3¢</b> (\$0.10/ kWh <sup>9</sup> )

Most EVs are charged using low-cost, surplus electricity available at night. For overnight charge of \$2.40, a Nissan Leaf can travel 80 miles at ~**3¢/mile**<sup>9,10</sup>!

At \$3.63/gallon<sup>7</sup> for gas, the EV fuel savings are dramatic. The Nissan LEAF is 73% cheaper than a compact sedan and 80% cheaper than a mid-sized sedan. The Rav4 EV fuel consumption is 78% cheaper than a mid-sized SUV.

Even using the more expensive (daytime) rate for electricity<sup>11</sup>, the LEAF fuel cost per mile (\$0.03½/mile) beats *all* gas-powered vehicles by a wide margin.



## About the Electric Auto Association

The Electric Auto Association (EAA) is a non-profit educational organization founded in 1967 to promote the advancement and widespread adoption of Electric Vehicles.

The EAA's mission is to act as a public source of information about developments in electric vehicle technology, to encourage experimentation in the building of electric vehicles, and to organize public exhibits and events of electric vehicles to educate the public on the progress and benefits of electric vehicle technology.

## References

1. [www.pluginamerica.org/vehicles](http://www.pluginamerica.org/vehicles)
2. [www.cia.gov/library/publications/the-world-factbook/rankorder/2174rank.html](http://www.cia.gov/library/publications/the-world-factbook/rankorder/2174rank.html)
3. [www.rand.org/blog/2013/03/prices-will-still-be-dictated-by-world-markets-and.html](http://www.rand.org/blog/2013/03/prices-will-still-be-dictated-by-world-markets-and.html)
4. [www.low-cost-gas.org/world-gas-prices.html](http://www.low-cost-gas.org/world-gas-prices.html)
5. [www.eia.gov/forecasts/steo/realprices/](http://www.eia.gov/forecasts/steo/realprices/)
6. [www.icta.org/global-warming-and-the-environment/global-warming-air-pollution/publications/\(select Real Price of gasoline\)](http://www.icta.org/global-warming-and-the-environment/global-warming-air-pollution/publications/(select+Real+Price+of+gasoline))
7. American Auto Ass. 2012 Average US Price Gas
8. [www.fueleconomy.gov](http://www.fueleconomy.gov) Rav4-EV 0.44 kWh/mile
9. New EV electricity ToU rates from PG&E (CA), effective June 2013. Most EVs charge overnight, using the off-peak ~\$0.10/kWh rate.
10. EPA DOT Fuel Economy and Environment window sticker for 2013 Nissan LEAF: 29 kWh/100 miles.
11. Average US daytime electrical rate is \$0.12 per kWh.

© 2004-2013

Electric Auto Association

Rev: 20130424-1

# High Gas Prices Got You Down?



*Is there an alternative to gasoline?*



Electric Auto Association  
ElectricAuto.org

## What choices do I have?

Avoid the cost and headache of rising gas prices by driving an electric vehicle (EV). EVs refuel at home. You simply plug it in, and charge using the low-cost, surplus electricity available while you sleep. Kits and companies are also available to convert gas-powered cars into EVs.

Another choice is a plug-in hybrid (PHEV), sometimes called an "Extended Range" EV. A PHEV is like a conventional hybrid but with larger batteries and a plug to charge the batteries from a low cost standard household circuit. Most



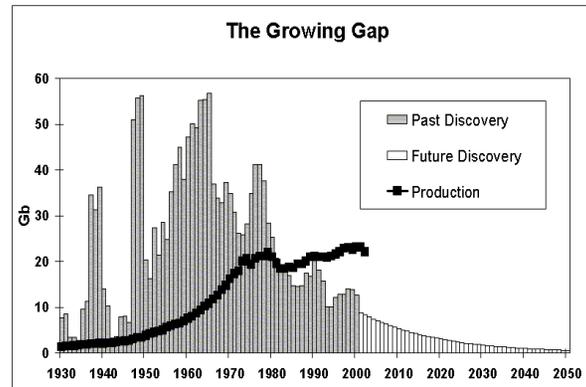
PHEVs rely on the battery until it's empty then automatically switch to gas.

PHEVs are typically recharged every night enabling you to go days, weeks or months without using gas, but the gas is there if extra distance is required. PHEVs vary widely on the miles they can travel on battery power only.

See the "Plug-In Vehicle Tracker" at Plug In America<sup>1</sup> for more information about the variety of plug-in vehicles. Tell car dealers "**No-plug, No-deal**" when it's time to purchase your next car.

## Gasoline is a finite resource

Global demand for oil is increasing, primarily driven by growth in developing countries. Because the global market determines oil prices<sup>3</sup>, worldwide demand is keeping gasoline prices high here.



In 2012 U.S. oil production increased a record 14%, U.S. oil imports fell and U.S. demand for gasoline decreased to the lowest level since 2001. Yet prices rose to a record \$3.63 average.

Meanwhile, national oil companies and unstable regions of the world now control most of the world's oil supply, and spare capacity is shrinking. These issues make it more likely that any market disruption will cause oil prices to skyrocket.



## Real price of gasoline

In the US, 2012 marked the highest gas price (adjusted for inflation).

Gasoline Price History <sup>4</sup>		
Year	\$/gal (U.S. average)	\$/gal (2012 dollars)
1976	\$0.59	\$2.40
1990	\$1.13	\$1.98
2005	\$2.27	\$2.67
<b>2012</b>	<b>\$3.63</b>	<b>\$3.63</b>

It's estimated that if US government subsidies were removed, the price for gasoline in the US would be between \$5.60 and \$15.14 per gallon<sup>5</sup>. Future price increases are inevitable since the demand is rapidly outpacing the world supply.

In contrast to the price of gasoline, the price for electricity has not *drastically* changed in the past 18 years<sup>6</sup>. The U.S. average cost is about \$0.12/kWh.

