

The Promising Future of Electric Cars

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Demand for electric cars (EVs) in the U.K and China have 'gone through the roof' in the last year -- sales increased 290% in China in the last 10 months, and the U.K. saw sales increase 80% in the first half of 2015.

The US has probably the toughest market for EVs because **1)** we have a massive infrastructure of gasoline fueling stations and **2)** we drive much farther than most everyone else in the world

Yet over their lifetime, battery electric vehicles produce far less global warming pollution than their gasoline counterparts -- and they're getting cleaner. Two-thirds of all Americans now live in areas where driving an EV produces fewer climate emissions than almost all comparable gasoline and gasoline hybrid cars -- a fact attributable to more efficient EVs and an increasingly clean electricity grid.

Even looking at the life cycle of an EV it was found that battery electric cars generate half the emissions of the average comparable gasoline car, even when pollution from battery manufacturing is accounted for, according to a study by the Union of Concerned Scientists.

Battery electric cars make up for their higher manufacturing emissions within eighteen months of driving -- shorter range models can offset the extra emissions within 6 months -- and continue to outperform gasoline cars until the end of their lives.

At the Paris Climate talks (COP21), leaders from 13 jurisdictions across North American and Europe -- including California -- announced commitments that all new passenger vehicles will use zero emission vehicle (ZEV) technologies no later than 2050.

In addition, the California Air Resources Board wants 100% of new vehicles sold in the year 2030 to be zero-emissions models.

Here are 10 reasons they give for owning an EV:

1. Wake up every morning with a recharged battery. No waiting in gas lines.
2. Fueling an electric vehicles is only the equivalent price of \$0.80 per gallon
3. No breathing of health endangering gas fumes, or spilling of gas on your clothes and hands.
4. Electricity prices are much more stable than gasoline prices and not subject to supply risks.
5. They are more fun to drive! EV's generally have better acceleration and higher performance than their gas counterparts, plus they generally have a lower center of gravity for cornering and holding the road that gas cars can't match.

6. They are quiet. Better to enjoy the music or conversation.
7. Rapid Fast Charging points becoming more and more common when you need an electron boost.
8. Maintenance costs are lower than their gasoline-powered counterparts.
9. Prices are becoming more comparable to gasoline-powered cars with models starting below \$19,000 after incentives. High quality used EVs can be found under \$10,000.
10. Many EVs get access to the HOV lanes.

EV drivers are also quick to point out how the community benefits from EVs:

- Cleaner air . Cars are still a top contributor to our air quality problem. Twice as many children die from vehicle emissions as car accidents)
- According to the U.S. Energy Information Administration, over 80% of the cost of a gallon of gas immediately leaves the local economy.
- Money saved switching to EVs and spent on the other goods and services that households need is 16 times more effective in creating jobs.
- Fewer oil trains delivering oil through Sacramento to the refineries.
- Save Water - refining each gallon of gasoline uses 12 gallons of water

Sierra Club California says, “The switch to plug-in electric vehicles is a powerful way to cut oil use and reduce dangerous smog and climate pollution. This is why many states are creating programs to accelerate the electric vehicle market, such as rebates, sales tax exemptions, carpool lane access, zero-emission transit buses, utility programs, and public charging stations. Our state can and should do more to support the market for clean vehicles.”

NRDC and the Electric Power Research Institute (EPRI) found that widespread adoption of EVs beyond light-duty vehicles could reduce GHG emissions by 550 million metric tons annually in 2050. That’s the equivalent of removing close to 40% of today’s gasoline-powered passenger cars from the road.

One caveat from the New York Times: “The number of automobiles on the world’s roads is on expected to double — to more than two billion — by the year 2030, most of them burning carbon-emitting gasoline or diesel fuels because in industrializing parts of the globe, where car use is rapidly expanding, especially in China and India, governments are hard pressed any time soon to assemble the ubiquitous electricity grid required for recharging electric vehicles, and currently energy comes from coal.”