

How green are electric vehicles?

It is thought plug-in hybrids and other electric vehicles are more environmental friendly and produce less pollution. Examining other aspects of electric vehicles besides tailpipe emissions may show they are not so green. In order to determine how environmentally friendly electric vehicles are a life cycle analysis approach must be used.

Electricity: Electric vehicles will require more electricity generation

- Majority of electricity in the United States from coal and natural gas
- Coal and natural gas power plants emit numerous pollutants
- Power plants have much better pollution controls compared to gas engines

Gasoline: Electric vehicles reduce gasoline demand

- Large oil supply in politically unstable regions
- Oil must be shipped long distances
- Refining process energy intensive

Batteries: Electric vehicles will require a large amount of batteries

- Current batteries use rare and toxic metals
- Proper disposal will be a big issue
- Material supply relies on foreign markets.

Conclusion: Given the current energy infrastructure and plug-in hybrid manufacturing techniques, the environmental benefits are debatable. In the future an electrify grid that is less dependent on fossil fuels and better manufacturing techniques could result in a large positive environmental impact.