

What are the advantages and disadvantages of increasing the electric car fleet? (www.quora.com)



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Answered Wed

Advantages:

- Far more efficient use of fuel (even if electricity primarily comes from fossil fuels)
- Conservation of finite fossil fuel resources
- Conservation of finite raw materials that go into internal combustion engines (at the slight expense of unique materials that go into electric drivetrains, however these are far fewer and far more recyclable)
- Reduction in greenhouse gas emissions and other pollutants, and even if electricity is predominantly generated from fossil fuel sources, at least shifts harmful pollutants away from city centers
- Less noise (particularly for garbage trucks and busses)
- Increase in the economic efficiency of electric utilities (because they can now sell some of the excess generating capacity they have overnight)
- Eventually with vehicle to grid (V2G) technology, providing grid balancing capability to enable greater adoption of renewable energy sources
- Less expensive vehicles! Once we get over the hump of bringing battery costs down, EVs will actually be less expensive than internal combustion vehicles
- Less money spent on maintenance (EVs have far simpler drivetrains)
- Less money spent on “fuel”
- Less dependence on foreign oil which means huge oil consuming countries can interfere less in parts of the world that are oil producing
- Less need to drill for oil in an environmentally irresponsible manner that results in disasters such as Deepwater Horizon
- Reduced demand for oil should keep prices relatively low for applications that actually need it

Disadvantages:

- There is a learning curve for most people who have been used to fueling at gas stations their whole lives to learn what their true range needs are and get used to starting each day with a full “tank”
- If the EV adoption rate rises faster than the charging infrastructure, that will lead to contention at charging stations. They both need to grow in parallel and the proper incentives need to be put in place to discourage drivers from overstaying their time
- The auto mechanic profession will take a hit (correction) as there will be less need for mechanics with EVs. The need won't be eliminated, since there are still plenty of components even on an EV, but things like oil changes will be far less needed
- Auto dealers will have to rethink their business model as there will be far less income generated by their service department
- We will have to be honest with ourselves and rethink how we pay for highways. The gas tax won't work (and it really hasn't for a long time anyway). In my opinion

we need to get over the fear of reporting our odometer readings each year and pay the highway tax based on miles driven and class of vehicle