U.S. Energy Information Administration

Today in Energy

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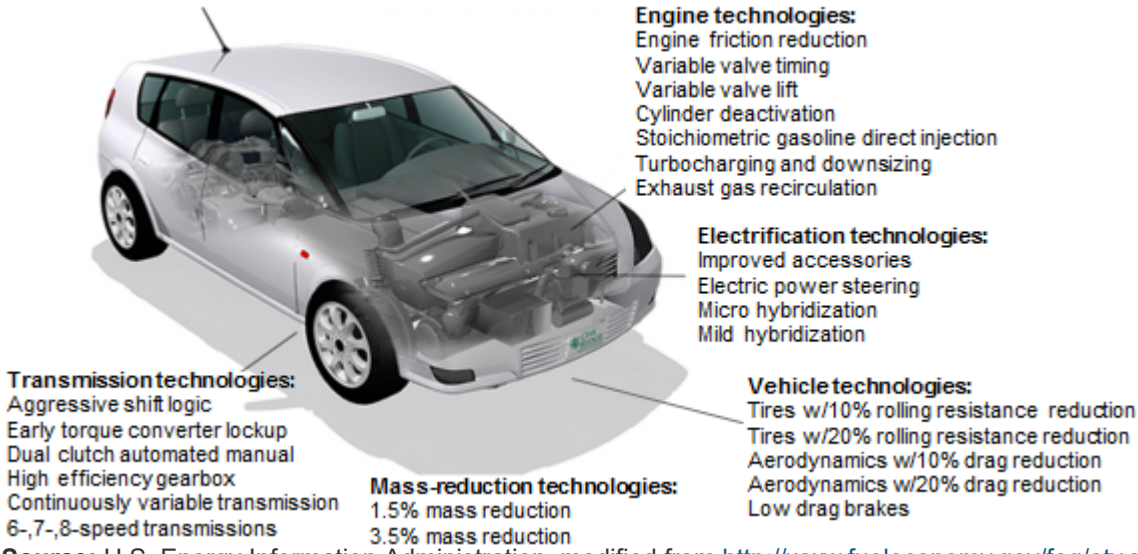
Significant fuel economy improvement options exist for light-duty gasoline vehicles



Source: U.S. Energy Information Administration, modified from http://www.fueleconomy.gov/feg/atv.shtml

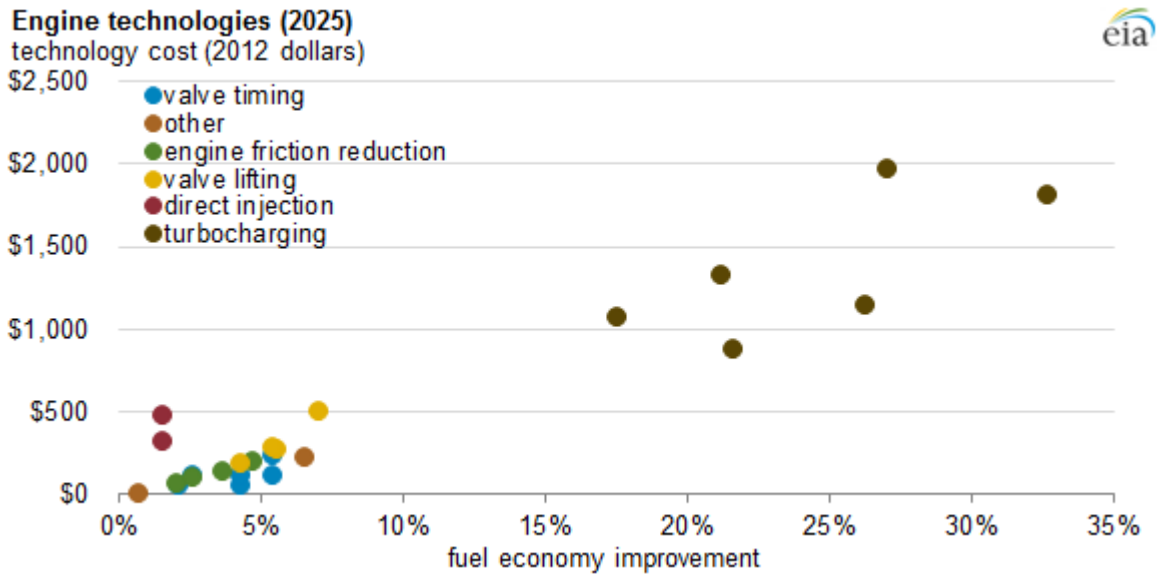
Although light-duty vehicle types such as diesel, full-hybrid, plug-in hybrid, and plug-in electric have garnered significant attention in recent years as ways to reduce petroleum consumption and lower consumer fuel costs, standard gasoline vehicles, including those that use micro and mild hybridization, are projected to retain nearly 80% of new sales in 2025 and 78% in 2040 in EIA's *Annual Energy Outlook 2014* Reference case.

Several fuel-efficient technologies that can deliver significant reductions in fuel consumption are currently or will soon be available for standard gasoline vehicles. These technologies can enable manufacturers to meet future greenhouse gas emissions and Corporate Average Fuel Economy (CAFE) standards, at a relatively modest cost. These technologies include:

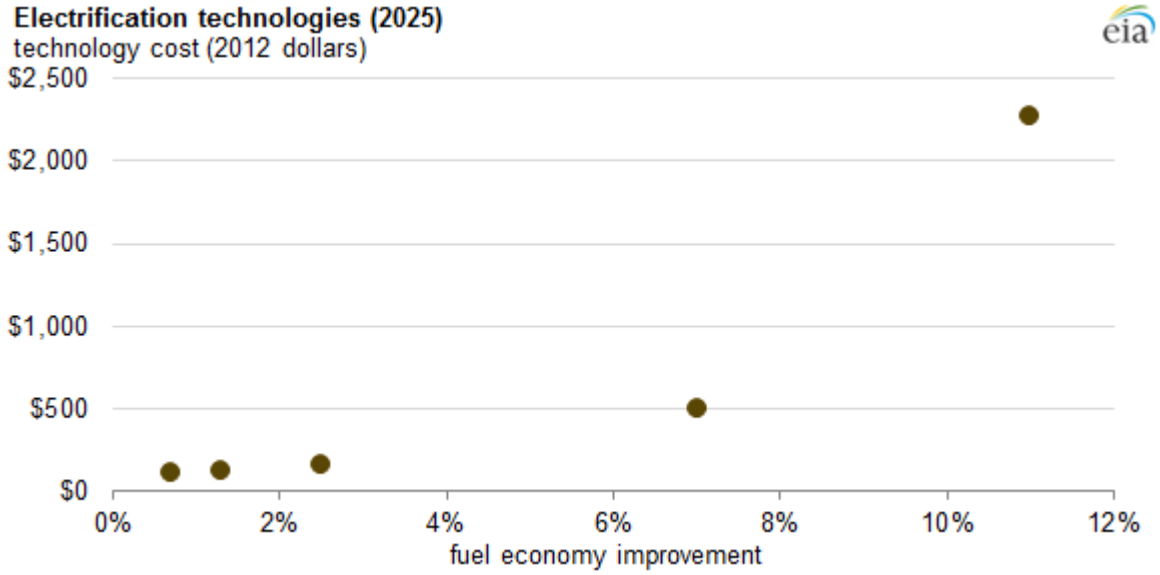
- Engine technologies such as variable valve timing and lift, cylinder deactivation, turbocharging, and downsizing
- Electrification technologies such as electric power steering, and micro or mild hybridization (turning off the engine when the car is stopped)
- Vehicle technologies such as fuel-efficient tires and aerodynamics
- Weight-reduction technologies
- Transmission technologies such as aggressive shift logic (controlling on automatic transmission to maximize fuel efficiency) or 8-speed transmission

The addition of these fuel-efficient technologies to standard gasoline vehicles substantially increases fuel economy. For example, in the midsize passenger car category, the largest share of sales among light-duty vehicles, standard gasoline vehicle compliance fuel economy increases from around 35 miles per gallon (mpg) today to 53 mpg by 2025, an increase of about 50%, while the vehicle price rises from about $25,000 (2012$) today to about $27,000, an increase of less than 10%.

Given the long time frame taken in setting greenhouse gas and CAFE standards through model year 2025, EPA and the National Highway Traffic Safety Administration plan to conduct a comprehensive mid-term evaluation by no later than April 2018. The agencies plan to assess fuel efficient vehicle technologies with up-to-date information as part of this mid-term evaluation.



Source: U.S. Energy Information Administration, *Annual Energy Outlook 2014*
Note: Data for the technology assumptions graphed above.



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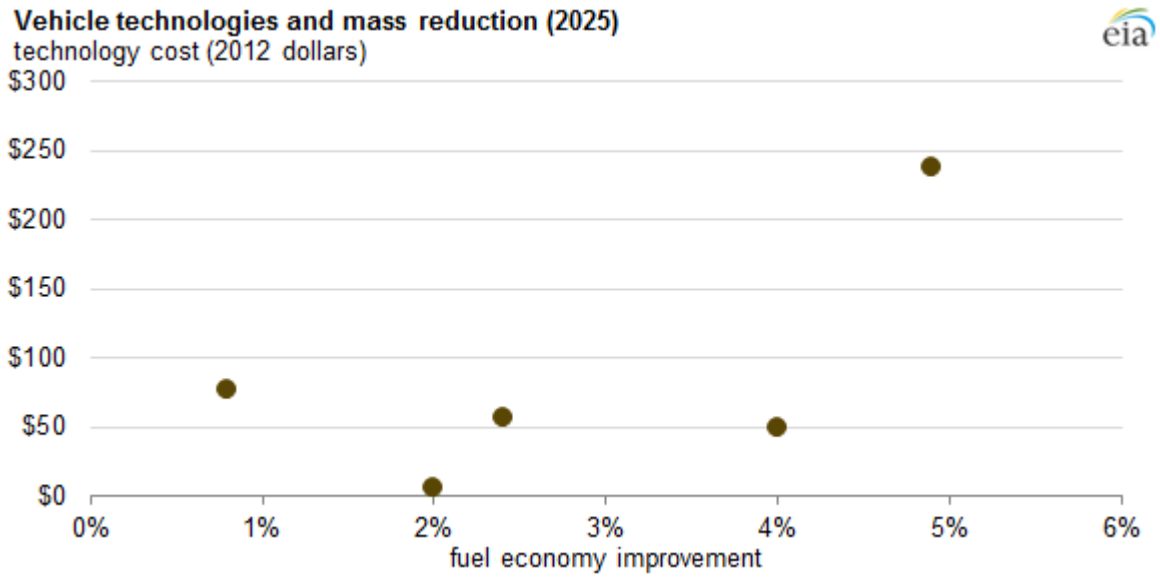

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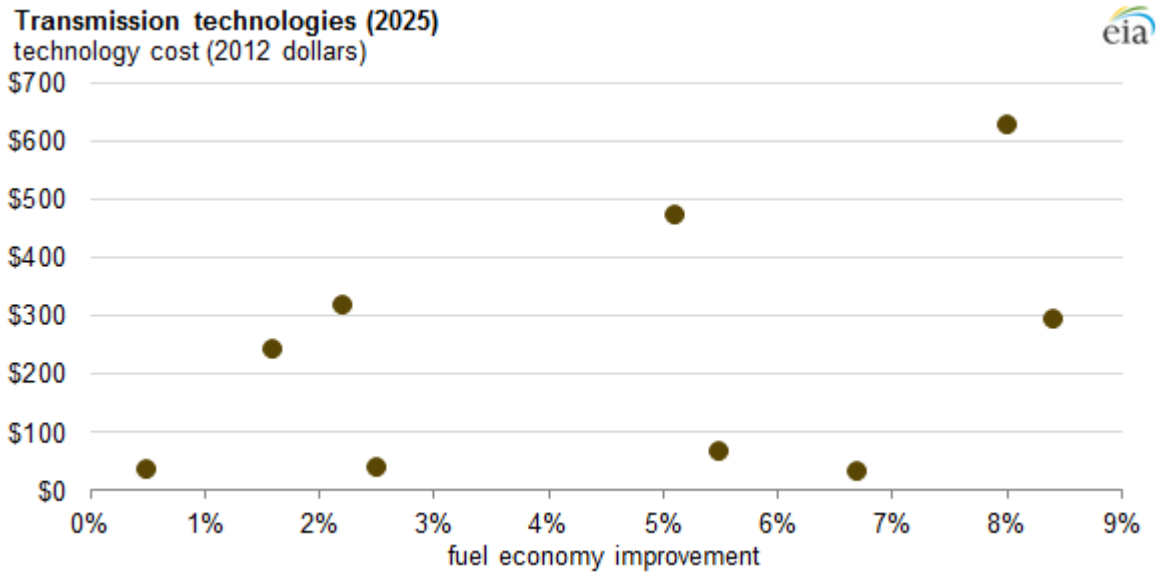

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