Benefits of Recent Improvements in Vehicle Fuel Economy on Overall Fuel Consumption and Emissions

Michael Sivak and Brandon Schoettle


For the past several years, we have calculated (on a monthly basis) the average, sales-weighted fuel economy of all light-duty vehicles (cars, pickup trucks, vans, and SUVs) sold in the U.S. The results indicate that, from October 2007 to September 2012, the average fuel economy has improved by 18%, from 20.1 mpg to 23.8 mpg. This brief note quantifies the consequences of this improvement on overall fuel consumption and vehicle emissions.

Because of their improved fuel economy, the vehicles sold since October 2007 saved a cumulative total of about 6.1 billion gallons of fuel—equivalent to the current total consumption of all vehicles in the U.S. for about 13 days. This reduction in the amount of fuel translates to a reduction of about 120 billion pounds of carbon-dioxide emissions.

In terms of the current savings, for the most recent month—September 2012—the savings amount to 293 million gallons of fuel, or about 5.7 billion pounds of carbon dioxide. These savings are equivalent to about 2.9% of the average monthly consumption of fuel and of carbon-dioxide emissions from all light-duty vehicles on the road.