



American Council for an Energy-Efficient Economy
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NEW EPA FUEL ECONOMY ESTIMATES FOR CARS AND LIGHT TRUCKS

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Changes to Consumer Fuel Economy Labels

In response to complaints that the fuel economy values on new vehicle labels were too high, the U.S. Environmental Protection Agency (EPA) has adopted new methods to estimate fuel economy for cars and light trucks, starting with the 2008 model year. These new estimates, which should better reflect “real world” driving conditions, are part of a regulation that will bring into effect three important changes:

- More accurate mile per gallon (MPG) estimates. EPA will now include previously omitted factors such as high speeds, quicker acceleration, air conditioning use and cold temperature driving in their estimation of fuel economy.
- Fuel economy labels for heavier vehicles (up to 10,000 pounds), beginning with 2011 model cars
- Changes in the overall design of the fuel economy labels displayed on new vehicles. The new label will show a “combined” fuel economy, in addition to city and highway values, enabling consumers to compare fuel economy between vehicles more easily.

These changes will serve to improve consumer information but will have no direct impact on average fuel economy. Manufacturers’ Corporate Average Fuel Economy (CAFE) levels depend on “unadjusted” test results, which are much higher than new label values.

How will Fuel Economy Estimates be Affected?

Fuel economy estimates will generally be lower under the new method. This is because the estimation methods take into account factors that were previously omitted in fuel economy estimates (see below). However, the impact of these changes will vary for each vehicle, as different vehicles are differently sensitive to each of the factors mentioned above. Nevertheless, on average, EPA expects the following changes in fuel economy estimates.

- **City MPG estimates** will fall by 12% on average, with some vehicles seeing as much as a 30% drop in fuel economy
- **Highway MPG estimates** will fall by 8% on average and by as much as 25% for some vehicles
- **For higher fuel economy vehicles such as hybrid vehicles**, city MPG estimates will fall by 20-30%, while highway MPG estimates generally will be 10-25% lower. The high efficiency of these vehicles under part-load conditions means that adding air conditioning and aggressive driving loads will reduce the fuel economy of these vehicles more than the fuel economy of less efficient vehicles.¹

¹ Kliesch, James. “Fuel Economy: Why These Numbers Really Matter.” www.motherearthnews.com/Green-Transportation/2007-08-01/Fuel-Economy-new-math.aspx.

- **Combined MPG estimates** will fall by an average of 6%. Under the new 5-cycle methodology, the combined fuel economy figure is based on a weighting of 43%/57% city/highway respectively compared to the previous 55%/45% city/highway weighting.

New Methodology – 5 Cycle Testing

In order to determine average city and highway fuel economy estimates, EPA previously used tests carried out under standard conditions of 75 degrees Fahrenheit and only included maximum acceleration rates and driving speeds significantly lower than attained by actual drivers.

The new methodology uses a 5-Cycle testing procedure that supplements the basic city and highway fuel economy tests with vehicle-specific data from tests designed to address fuel consumption associated with aggressive driving, air-conditioner use and cold temperature driving. Below is a brief table that outlines the test conditions of the individual tests that are used to determine average fuel economy.

Test	Driving	Ambient Temperature	Engine Condition at Start	Accessories
FTP	Low speed	75°F	Cold and hot	None
HFET	Mid-speed	75°F	Hot	None
US06	Aggressive; low and high speed	75°F	Hot	None
SC03	Low speed	95°F	Hot	A/C on
Cold FTP	Low speed	20°F	Cold and hot	None

Fig. 1 Key Features of the Five Current Emission and Fuel Economy Tests²

For consumers, the change in EPA’s methodology means that fuel economy estimates from 2008 onwards cannot be compared directly to label fuel estimates from previous years.

² Final Technical Support Document, Fuel Economy Labeling of Motor Vehicle Revisions to Improve Calculation of Fuel Economy Estimates, U.S Environmental Protection Agency <http://www.epa.gov>