Questions and Answers

Understanding the New Fuel Economy and Environment Labels

What new information do these labels provide that will benefit me as a new car shopper?

The new labels will for the first time provide:

- New ways to compare energy use and cost between new-technology cars that use electricity and conventional cars that are gasoline-powered.
- Useful estimates on how much consumers will save or spend on fuel over the next five years compared to the average new vehicle.
- Easy-to-read ratings of how a model compares to all others for smog emissions and emissions of pollution that contribute to climate change.
- An estimate of how much fuel or electricity it takes to drive 100 miles.
- Information on the driving range and charging time of an electric vehicle.
- A QR Code® that will allow users of smartphones to access online information about how various models compare on fuel economy and other environmental and energy factors.

In addition, a new interactive tool at www.fueleconomy.gov will allow drivers to enter their zip code and estimate the greenhouse gas emissions from charging and driving a plug-in hybrid or all-electric car where they live. The site also enables drivers of all types of vehicles to enter personalized information like local gas prices along with individual driving habits to get the best possible cost and energy-use estimates.

How do the labels make it possible to compare energy costs between a gas vehicle and costs for plug-in hybrid and electric vehicles?

For both conventional gasoline and advanced technology vehicles, the fuel economy and environment labels will include information on the annual cost to power the vehicle with gasoline (or electricity). In fact, such information is required by law to appear on the label.

EPA United States Environmental Protection Agency

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Also, for both types of vehicles, the label shows how much less or more it would cost to fuel that particular vehicle over the next five years compared to the average new vehicle. This information highlights the importance of considering the cost to fuel the vehicle, not just the vehicle up-front costs, when purchasing a vehicle.

Why are EPA and NHTSA revising the label?

Three main reasons:

- We are committed to empowering consumers to make informed choices. When the new fuel economy and environment labels start to appear in showrooms and online over the next year, shoppers will have more information than ever at their fingertips to help save money on fuel and cut down on harmful pollution.
- With the growing numbers of advanced technology cars, especially electric vehicles (EVs) and plug-in hybrid electric vehicles (PHEVs), the current labels are becoming outdated. We are improving the labels to provide consumers with the specialized information they need about advanced technology vehicles from the new labels as well as information to compare among all vehicle technology types.
- The Energy Independence and Security Act of 2007 required DOT and EPA to include additional information on the label, including ratings to allow comparisons specifically among fuel economy, greenhouse gas (GHG) emissions and smog-forming pollutants. Thus, the new labels will include numeric scales that enable consumers to easily see how a particular vehicle compares to all others.

Where and when will I find the new label?

Consumers will see the new labels in showrooms early next year, when 2013 models begin arriving. Automakers may also voluntarily adopt the new labels earlier for model year 2012 vehicles. Most manufacturers place the fuel economy and environment label within a larger label (known as the "Monroney" label) that contains the Manufacturer's Suggested Retail Price of the vehicle, NHTSA safety ratings, and other information.

I noticed a barcode on the label. Is that for use by smartphone? And what if I don't own one?

For consumers' convenience, the new labels include a QR Code® in the lower right corner. Consumers who are looking for a vehicle at a dealership will be able to scan the QR Code® from any fuel economy and environment label using their smartphone, provided they have downloaded a scanner app.

The QR Code® will provide a link to helpful tools and information about that particular vehicle. The same tools and information will be available to everyone on www.fueleconomy.gov.

The cost of gasoline where I live is different than what is used on the label. How can I get more personalized information that reflects my real costs?

Consumers will soon be able to use their smartphone at the dealership or go to the website www.fueleconomy.gov to estimate fuel costs based on their individual driving habits and the current price of gasoline and electricity where they live.

What does the 5-year fuel cost savings estimate mean?

It shows how much less or more it would cost to fuel this vehicle over the next five years compared to the average vehicle. This is based on the assumption of 15,000 miles traveled per year and DOE projections of fuel prices in that model year.

What is gallons/100 miles? Why are EPA and NHTSA adding gallons/100 miles to the labels?

Miles per gallon (mpg) is required by law for fuel economy labels. It has appeared on the label for several decades, and it is well understood by consumers. However, assessing fuel efficiency this way can be potentially misleading to consumers, particularly when it is used as a proxy for fuel costs, as it often is. A one mile per gallon improvement at low mpg levels provides a much greater reduction in fuel consumption (and therefore savings on fuel costs) than a one mpg improvement at high mpg levels. For instance, for a vehicle driven 15,000 miles per year, choosing an 11 mpg vehicle over a 10 mpg vehicle saves about 136 gallons per year, while the savings for choosing a 36 mpg vehicle over one that gets 35 mpg saves about 12 gallons per year.

The gallons/100 miles numbers, however, relate directly to the amount of fuel used and are therefore more useful for consumers in comparing both low mpg and high mpg vehicles.

What does the 1-10 fuel economy and GHG rating mean? How will EPA and NHTSA determine which number to assign to each vehicle?

The new label assigns each vehicle a rating from 1 (worst) to 10 (best) for fuel economy and greenhouse gas emissions (i.e., how much carbon dioxide its tailpipe emits each mile), as shown below. Consumers may note that higher fuel economy is associated with a better GHG emissions profile.

In effect there are two ratings that apply to each vehicle – one for fuel economy and one for greenhouse gas emissions – but in practice most vehicles will display only one rating. This is because carbon dioxide (CO_2) emissions are directly related to the amount of fuel consumed. This relationship varies from fuel to fuel, but both rating systems are based on gasoline vehicles, meaning that gasoline vehicles get the same rating for fuel economy and for greenhouse gas emissions. In cases where the fuel economy performance and greenhouse gas emissions do not yield the same rating, the rating bar will display two pointers.

One-to-ten fuel economy and GHG Rating

Rating	MPG	CO_2(g/mile)
10	38+	0-236
9	31-37	237-290
8	27-30	291-334
7	23-26	335-394
6	22	395-412
5	19-21	413-479
4	17-18	480-538
3	15-16	539-612
2	13-14	613-710
1	0-12	711+

The fuel economy and CO_2 ranges associated with each rating will be determined annually. Because of NHTSA's Corporate Average Fuel Economy standards and EPA's GHG emissions standards, the average values are expected to improve in the years ahead. Unless a vehicle model increases its fuel economy and reduces its rate of CO_2 emissions, its ratings could gradually drop.

I heard that electric vehicles impact the environment just as much as gasoline vehicles because of the pollution emitted during electricity production If that's true, why do the new labels give them a 10 (best) rating for GHG emissions?

Electric vehicles (EVs) get a "10" because the GHG emissions ratings on the label are based on tailpipe CO_2 levels, and EVs emit zero tailpipe CO_2 emissions. The label is based on tailpipe CO_2 emissions because, like other consumer labels, it is based on the product that the consumer is comparing and buying, not the overall vehicle-fuel system. Neither the automaker nor the consumer has any control over fuel production.

Most forms of electricity generation do emit significant amounts of CO_2 at the powerplant. However, even accounting for these "upstream" emissions, in most regions of the country, EVs are responsible for lower GHG levels than almost all comparable gasoline vehicles.

Interested consumers can find information about upstream GHG emissions on www.fueleconomy.gov. The site includes a calculator tool that consumers can use to estimate GHG emissions associated with an EV or PHEV, including emissions from the production and distribution of the electricity used to charge the vehicle where they live.

What is MPGe?

MPGe, or miles per gallon gasoline equivalent, conveys the energy consumption of a non-gasoline vehicle in terms of how many miles the vehicle could go on an amount of fuel that has the equivalent energy content as a gallon of gasoline. For example, a gallon of gasoline has

the energy equivalent of 33.7 kilowatt-hours of electricity. An electric vehicle that uses 33.7 kilowatt-hours to drive 100 miles will use the energy equivalent of one gallon of gasoline and, therefore, would have an MPGe of 100 miles per gallon of gasoline equivalent.

Do you have labels for other types of advanced technology cars besides electric vehicles and plug-in hybrid electric vehicles?

Yes. We also developed labels for:

- compressed natural gas (CNG) vehicles,
- E85 flexible fuel vehicles (FFVs), and
- hydrogen fuel cell vehicles (FCVs).

Click here to view the labels for these vehicles.

Does this regulation make any changes to the recent joint EPA/NHTSA program that set the first ever vehicle GHG emissions and CAFE standards?

No. However, if you wish to learn about the GHG emissions and CAFE fuel economy standards, click here.

Did the regulation make changes to how EPA derives the mpg estimates?

Yes, this rule also finalizes test procedures for new advanced technology vehicles such as electric vehicles and plug-in hybrid electric vehicles.

How did you decide upon this format for the label among the options that you were considering.

In developing the final label, we took into account what the law requires, findings from our extensive consumer research, implementation issues, and comments from a wide variety of stakeholders. More than 50 organizations, including auto manufacturers and dealers, state and local governments, environmental groups, consumer organizations, and other non-governmental organizations provided detailed comments. Over 6,000 private citizens also submitted comments. Comments were about evenly split in support of concepts like a letter grade or other forms of simple ratings. To be responsive to both sets of commenters, the labels contain new features such as rating systems in the form of a one-to-ten scale and an estimate of relative fuel cost savings over five years, as well as prominent displays of more traditional elements such as mpg.