



The Revised EPA/NHTSA Fuel Economy Labels

Background: In May 2011, the U.S. Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA) revised the fuel economy label for new light-duty vehicles. Effective with Model Year (MY) 2013, these labels contain new fuel economy and emissions information to allow for enhanced comparisons between vehicles with both similar and different fuels and technologies.

Automakers must post this fuel economy information on vehicle Monroney labels prior to shipment, and dealers must maintain those Monroney labels on vehicles until they are delivered to customers. This Q and A is designed to help dealership sales staff assist consumers with understanding the revised labels.

Q: Does the new label information help consumers shop between vehicles?

A: In addition to the miles-per-gallon (MPG) numbers consumers have relied on for decades, the new labels for the first time:

- Compare the energy use and cost of gas/diesel vehicles vs. plug-ins.
- Compare a vehicle's estimated five-year fuel cost vs. the average vehicle.
- Rate vehicle smog and greenhouse gas (GHG) emissions.
- Estimate how much fuel or electricity it takes to drive 100 miles.
- Give information on plug-in driving range and charging time.
- Include a QR Code® for smart phone users to access additional comparative fuel economy information and other environmental and energy factors.

Also, a new interactive tool at www.fueleconomy.gov allows motorists to estimate, by zip code, the GHG emissions from charging and driving plug-in hybrid (PHEV) or all-electric (EV) vehicles. Motorists also can use the site to create custom fuel use and cost estimates by entering specific fuel prices and individual driving habits.

Q: Why did EPA and NHTSA revise the label?

A: The Energy Independence and Security Act of 2007 required DOT and EPA to revise the fuel economy label to allow comparisons for fuel economy, GHGs, and smog-forming emissions. Revised labels include numeric scales that allow consumers to easily see how particular vehicles compare to others, enabling more informed choices. For the first time, the new labels provide consumers with the specialized information on advanced technology vehicles and an ability to compare among all vehicle technology types.

Q: Where are the revised labels located?

A: Revised labels are required for light-duty vehicles starting with MY 2013 (optional for MY 2012). Most manufacturers place their fuel economy labels on pricing or "Monroney" labels that also have vehicle description, NHTSA safety ("Stars for Cars") ratings, and other information.



Q: What do the revised labels look like?

A: Sample new labels are found below. Click on them for details on label components.

Gasoline Vehicle Label

EPA DOT Fuel Economy and Environment Gasoline Vehicle

Fuel Economy Small SUVs range from 16 to 32 MPG. The best vehicle rates 99 MPGe.
26 MPG combined city/hwy
 22 city 32 highway
 3.8 gallons per 100 miles

You save \$1,850 in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost \$2,150

Fuel Economy & Greenhouse Gas Rating (tailpipe only) 7 (Best 10)
Smog Rating (tailpipe only) 6 (Best 10)

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 22 MPG and costs \$12,600 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$3.70 per gallon. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

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Smartphone QR Code

Plug-In Hybrid Electric Vehicle

EPA DOT Fuel Economy and Environment Plug-In Hybrid Vehicle Electricity-Gasoline

Fuel Economy Midsize cars range from 10 to 99 MPGe. The best vehicle rates 99 MPGe.
98 MPGe Electricity Charge Time: 4 hours (240V)
 34 kW-hrs per 100 miles
38 MPG Gasoline Only 2.6 gallons per 100 miles
 combined city/highway

You save \$8,100 in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost \$900

Fuel Economy & Greenhouse Gas Rating (tailpipe only) 10 (Best 10)
Smog Rating (tailpipe only) 8 (Best 10)

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 22 MPG and costs \$12,600 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$3.70 per gallon and \$0.12 per kW-hr. This is a dual fueled automobile. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

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Smartphone QR Code

Electric Vehicle Label

EPA DOT Fuel Economy and Environment Electric Vehicle

Fuel Economy Midsize cars range from 10 to 99 MPGe. The best vehicle rates 99 MPGe.
99 MPGe
 103 city 95 highway 34 kW-hrs per 100 miles

You save \$9,600 in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost \$600

Fuel Economy & Greenhouse Gas Rating (tailpipe only) 10 (Best 10)
Smog Rating (tailpipe only) 10 (Best 10)

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Smartphone QR Code

Q: When MY 2013 vehicles with the revised labels enter the market, dealers likely will have pre-MY 2013 vehicles displaying old labels. Can consumers compare side-by-side vehicles with the two different labels?

A: Yes and no. The revised labels contain new information, but retain the fuel economy numbers that have been used since MY 2008. Thus, consumers can directly compare the city, highway, or combined MPG numbers on MY 2013 vehicles with revised labels to MY 2012 or 2011 vehicles with old labels.

Both revised and old labels display annual fuel cost estimates based on assumptions of annual miles driven and fuel price (e.g., \$ per gallon of gasoline). These assumptions can vary by model year, so consumers may not be able to directly compare annual fuel cost estimates found on revised vs. old labels. However, consumers may go to www.fueleconomy.gov to make side-by-side vehicle comparisons of fuel economy, fuel costs, environmental impacts, etc. The website also allows consumers to personalize information based on specific driving habits and fuel prices.

Q: Can smart phones be used to get more information?

A: Revised labels include a QR Code® in the lower right corner. Smart phones with a scanner application can be used to scan these QR Codes® to access the tools and information found on www.fueleconomy.gov. Of course, the same information may also be accessed by any device that connects to the internet.



Q: Fuel prices in our area differ from the example used on a label. How can I help potential buyers get a better idea of what fuel costs may be for a certain vehicle?

A: As noted above, by using a scanner-equipped smart phone or other means of accessing www.fueleconomy.gov, you can assist shoppers with customizing fuel use and price assumptions. This can be a useful selling tool for shoppers focused on enhanced fuel economy performance.

Q: What is the 5-year fuel cost estimate comparison?

A: Assuming 15,000 miles/year and using Department of Energy fuel price projections, a total fuel cost number is compared to the average for all labeled vehicles in the model year, to show if the vehicle offers above or below average fuel economy.

Q: What does the gallons/100 miles number mean?

A: The MPG ratings used on fuel economy labels for several decades are well understood by consumers. But, they can be misleading when used to project fuel costs or to assess *fuel efficiency*. For example, a one mpg improvement for a low fuel economy vehicle can result in greater potential fuel use (and cost) reductions than the same improvement for a higher fuel economy vehicle, assuming both vehicles are driven the same. Example: assuming 15,000 miles/year, an 11 mpg vehicle will save about 136 gallons/year over a 10 mpg vehicle, while a 36 mpg vehicle will only save about 12 gallons/year vs. one getting 35 mpg. The gallons/100 miles number better compares the potential amount of fuel used between low mpg and high mpg vehicles.

Q: What do the 1-10 fuel economy and GHG scales mean, and how are individual vehicle ratings assigned?

A: Revised labels show vehicle ratings from 1 (worst) to 10 (best) for fuel economy and GHG emissions (*i.e.*, carbon dioxide (CO₂) tailpipe emissions/mile). Fuel economy and GHG emissions are directly related (*i.e.*, higher fuel economy = lower GHG emissions), so for most vehicles there will only be one combined fuel economy scale and rating. For vehicles where fuel economy performance and GHG emissions are dissimilar, the scale bar will display separate ratings. The fuel economy and CO₂ ranges associated with each rating will be revised annually as average rating values are expected to improve over time. Thus, a given make/model's ratings likely will drop unless its fuel economy increases (GHG emissions decrease). The following chart shows the combined rating scale for MY 2013 vehicles:

One-To-Ten Fuel Economy and GHG Scale for MY 2013 Vehicles

Rating	MPG	CO ₂ (g/mile)
10	40+	≤ 222
9	34-39	223-261
8	29-33	262-306
7	26-28	307-342
6	23-25	343-386
5	20-22	387-444
4	17-19	445-523
3	15-16	524-592
2	13-14	593-684
1	≤ 12	685+

Q: Why do EVs get a 10 (best) GHG emission rating given the CO₂ that may be emitted when electricity is produced?

A: GHG ratings reflect tailpipe CO₂ emissions only. EVs emit no tailpipe CO₂ emissions. “Up-stream” fuel consumed and GHGs emitted (*e.g.*, during manufacturing, distribution) are not taken into account for *any* fuel. A calculator at www.fueleconomy.gov offers up-stream fuel use and GHG emissions estimates for plug-ins keyed to recharging location.



Q: What does MPGe mean?

A: MPGe (miles per gallon gasoline equivalent) shows the energy consumption of non-gasoline vehicles in terms of miles travelled on an amount of fuel with the same energy content as a gallon of gas. For example, since a gallon of gas has the energy equivalent of 33.7 kilowatt-hours of electricity, an EV using 33.7 kilowatt-hours to drive 100 miles uses the energy equivalent of one gallon of gas or a 100 MPGe.

Q: What about other advanced technologies?

A: See new labels for compressed natural gas (CNG), E85 flexible fuel (FFVs), and hydrogen fuel cell vehicles (FCVs) at: www.epa.gov/carlabel/basicinformation.htm.

Q: Do the revised labels make changes to improve the accuracy of fuel economy estimates?

A: No, but starting with MY 2008, EPA changed how fuel economy estimates are calculated to reflect more accurately real-world driving. Fuel economy testing is standardized, so it is best if customers use the city, highway, or combined numbers to make vehicle-to-vehicle comparisons. Many real world factors can cause the actual fuel economy achieved by motorist to vary, sometimes significantly, from the label numbers. These factors include vehicle maintenance, vehicle loading, weather, terrain, driving style, etc. The more customers know about how such factors can impact their fuel economy, the better able they will be to improve performance. For more information on fuel economy performance, direct customers to www.fueleconomy.gov and <http://www.nada.org/green>.

