


Fuel Economy Labels in EPA and DOT Final Rulemaking “Revisions and Additions to Motor Vehicle Fuel Economy Label”


This document replicates in color the label designs that are published in the Final Rulemaking “Revisions and Additions to Motor Vehicle Fuel Economy Label.” The use of color is integral to the label, and because the Federal Register is not published in color, EPA is making the color versions available via this document, which is available both in the public docket and directly from the EPA website at <http://epa.gov/otaq/carlabel/basicinformation.htm>. For ease of use, the figure numbers correspond to those appearing in the Final Rulemaking.

Please note that these labels are examples and do not represent real automobiles. The sample labels are intended to illustrate the elements on the label that would be associated with each vehicle technology/fuel type. They are not meant to represent the actual values that any particular vehicle type could achieve.


Gasoline Label
 (Figure IV-1. In Federal Register Notice)



Fuel Economy and Environment


Gasoline Vehicle

Fuel Economy



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**

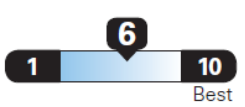
\$2,150

Fuel Economy & Greenhouse Gas Rating (tailpipe only)



Best

Smog Rating (tailpipe only)






Best

This vehicle emits 347 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fueleconomy.gov.


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. MPG is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

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Flexible Fuel Vehicle: Gasoline-Ethanol (E85) Without Driving Range
 (Figure IV-2. in Federal Register Notice)




Fuel Economy and Environment

E85

Flexible-Fuel Vehicle
Gasoline-Ethanol (E85)



Fuel Economy



24

MPG

Large cars range from 14 to 28 mpg. The best vehicle rates 99 MPGe. Values are based on gasoline and do not reflect performance and ratings based on E85.

21

city

29

highway

4.2

gallons per 100 miles

You save

\$1,100

in fuel costs over 5 years

compared to the average new vehicle.

Annual fuel cost

\$2,300

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

1

7

10

Best

Smog Rating (tailpipe only)

1

6

10

Best

This vehicle emits 371 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fuel economy.gov.

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. 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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Flexible Fuel Vehicle: Gasoline-Ethanol (E85) with Optional Driving Range
 (Figure IV-3. in Federal Register Notice)

Fuel Economy and Environment

E85

Flexible-Fuel Vehicle
Gasoline-Ethanol (E85)

Fuel Economy

24

MPG

Large cars range from 14 to 28 mpg. The best vehicle rates 99 MPGe. Values are based on gasoline and do not reflect performance and ratings based on E85.

21
city

29
highway

4.2
gallons per 100 miles

Driving Range

Gasoline: 390 miles

Ethanol (E85): 270 miles

You save

\$1,100

in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost

\$2,300

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

7

1

10

Best

This vehicle emits 371 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fuelconomy.gov.

Smog Rating (tailpipe only)

6

1

10

Best


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. 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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Diesel Vehicle
 (Figure IV-4. in Federal Register Notice)



Fuel Economy and Environment


Diesel Vehicle

Fuel Economy



35

MPG

Compact cars range from 14 to 41 MPG.
 The best vehicle rates 99 MPGe.

30

city

45

highway

2.9 gallons per 100 miles

You save
\$4,350
in fuel costs over 5 years
 compared to the average new vehicle.

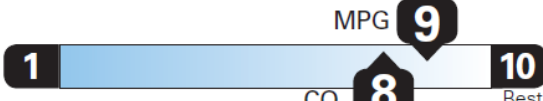
Annual fuel cost

\$1,650

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

MPG

9




CO₂

8

This vehicle emits 292 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fueleconomy.gov.

Smog Rating (tailpipe only)




6




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 \$3.90 per gallon. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

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Compressed Natural Gas Vehicle
 (Figure IV-5. in Federal Register Notice)




Fuel Economy and Environment



**Compressed
Natural Gas Vehicle**

Fuel Economy



29

combined city/hwy

MPGe

Small station wagons range from 19 to 34 MPG. The best vehicle rates 99 MPGe.

25

city

35

highway

3.4

equivalent gallons per 100 miles

Driving Range
 When fully fueled, vehicle can travel about...

0


35

70

105

140

175



You save

\$7,350

in fuel costs over 5 years
 compared to the average new vehicle.

Annual fuel COST

\$1,050

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

MPG

8

1

10

CO₂

10

Best

This vehicle emits 220 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fuel economy.gov.

Smog Rating (tailpipe only)

1

1




10

8


Best

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 \$2.05 per gasoline gallon equivalent. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

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Plug-In Hybrid Vehicle: Electricity Gasoline (Series PHEV)
 (Figure IV-6. in Federal Register Notice)

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.

Electricity
Charge Time: 4 hours (240V)

98 MPGe
34 kW-hrs per 100 miles
combined city/highway

Gasoline Only

38 MPG
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.

Driving Range

0 10 20 **30** 40 410

Annual fuel cost

\$900

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

1 **10** Best

Smog Rating (tailpipe only)

1 **8** 10 Best

This vehicle emits 84 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel & electricity also create emissions; learn more at fueleconomy.gov.

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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Plug-In Hybrid Vehicle: Electricity Gasoline (Blended PHEV)
 (Figure IV-7. in Federal Register Notice)

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.

Electricity + Gasoline
Charge Time: 4 hours (240V)

65

MPGe

combined city/highway

1.0 gallons
per 100
miles

17 kW-hrs
per 100
miles

Gasoline Only

41

MPG

combined city/highway

2.4 gallons per
100 miles

You save

\$7,350

**in fuel costs
over 5 years**
compared to the
average new vehicle.

Driving Range

Electricity + Gasoline

All Electric Range = 0 miles

Gasoline only

Annual fuel COST

\$1,050

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

Best

This vehicle emits 131 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel & electricity also create emissions; learn more at fueleconomy.gov.


Smog Rating (tailpipe only)

Best


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Electric Vehicle
 (Figure IV-8. in Federal Register Notice)



Fuel Economy and Environment


Electric Vehicle

Fuel Economy



99

MPGe

Midsize cars range from 10 to 99 MPGe.
The best vehicle rates 99 MPGe.

103

city

95

highway

34

kW-hrs per
100 miles

Driving Range

When fully charged, vehicle can travel about...

0


20

40

60

80

99



miles

Charge Time: 8 hours (240V)

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)

1

10

10

Best

This vehicle emits 0 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Does not include emissions from generating electricity; learn more at fuel economy.gov.

Smog Rating (tailpipe only)

1

10




10

Best


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 \$0.12 per kW-hr. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

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Hydrogen Fuel Cell Vehicle
 (Figure IV-9. in Federal Register Notice)



Fuel Economy and Environment

H₂

Hydrogen Fuel Cell Vehicle

Fuel Economy

H₂
56
MPGe

Midsize station wagons range from 19 to 56 MPGe. The best vehicle rates 99 MPGe.

53

city

61

highway

1.8

kg H₂ per 100 miles

Driving Range
 When fully fueled, vehicle can travel about...

0


40

80

120

160

210



210

miles

You save

\$5,350

in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost

\$1,450

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

1

10

10

Best

Smog Rating (tailpipe only)

1

10

10

Best

This vehicle emits 0 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fuel-economy.gov.

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 \$5.55 per kilogram of hydrogen. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

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Gasoline Vehicle with Gas Guzzler Tax
 (Figure IV-10. in Federal Register Notice)




Fuel Economy and Environment



Gasoline Vehicle

Fuel Economy



11

combined city/hwy

MPG

Two seaters range from 10 to 37 MPG. The best vehicle rates 99 MPGe.

9

city

15

highway

9.1

gallons per 100 miles

\$7,700

gas guzzler tax

You spend

\$14,400

more in fuel costs over 5 years
 compared to the average new vehicle.

Annual fuel cost

\$5,400

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

1

10

Best

This vehicle emits 810 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fueleconomy.gov.

Smog Rating (tailpipe only)

5

10

Best

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 \$3.95 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



EPA Fuel Economy Estimates

These estimates reflect new EPA methods beginning with 2008 models.

** Old Version of the Label **

CITY MPG

18

Expected range
for most drivers
15 to 21 MPG

HIGHWAY MPG

25

Expected range
for most drivers
21 to 29 MPG

**Estimated
Annual Fuel Cost**

\$2,039

based on 15,000 miles
at \$2.80 per gallon

Combined Fuel Economy

This Vehicle

21

10  31

All SUVs

**Your actual
mileage will vary**
depending on how you
drive and maintain
your vehicle.



See the **FREE Fuel Economy Guide** at dealers or www.fueleconomy.gov



Information on New Vehicle Fuel Economy and Environment Labels

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[4. You Save/Spend More over 5 Years Compared to Average Vehicle](#)

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[12. \[www.fueleconomy.gov\]\(http://www.fueleconomy.gov\)](#)

1. Vehicle Technology & Fuel

The upper right corner of the label displays text and a related icon to identify it as a vehicle that is powered by gasoline.

You will see different text and icons on the labels for other vehicles:

- Diesel Vehicle
- Compressed Natural Gas Vehicle
- Hydrogen Fuel Cell Vehicle
- Flexible-Fuel Vehicle: Gasoline-Ethanol (E85)
- Plug-In Hybrid Vehicle: Electricity-Gasoline
- Electric Vehicle

Note that hybrid gasoline-electric vehicles that do not have plug-in capability are identified as gasoline vehicles since they only use gasoline.

2. Fuel Economy

For gasoline vehicles, the label shows City, Highway, and Combined MPG (miles per gallon) values. The Combined MPG value is the most prominent for the purpose of quick and easy comparison across vehicles. Some form of the miles per gallon metric has been on vehicle labels since 1977. Combined fuel economy is a weighted average of City and Highway MPG values that is calculated by weighting the City value by 55% and the Highway value by 45%.

3. Comparing Fuel Economy to Other Vehicles

This text indicates the category of the vehicle (e.g., Small SUV, Station Wagon, Pickup Truck, etc.) and the best and worst fuel economy within that category for the given model year. There are nine car categories, six truck categories, and a "special purpose vehicle" category. These categories are used only for labeling and consumer information purposes and do not serve any other regulatory purpose. For each model year, EPA publishes lists identifying the best and worst fuel economy performers in each category available at <http://www.epa.gov/fueleconomy/data.htm>.

- [Fuel Economy Leaders](#)
- [Lowest Models Overall](#)
- [Highest Models within Class](#)
- [Lowest Models within Class](#)

This text also tells you the best combined fuel economy among all new vehicles.

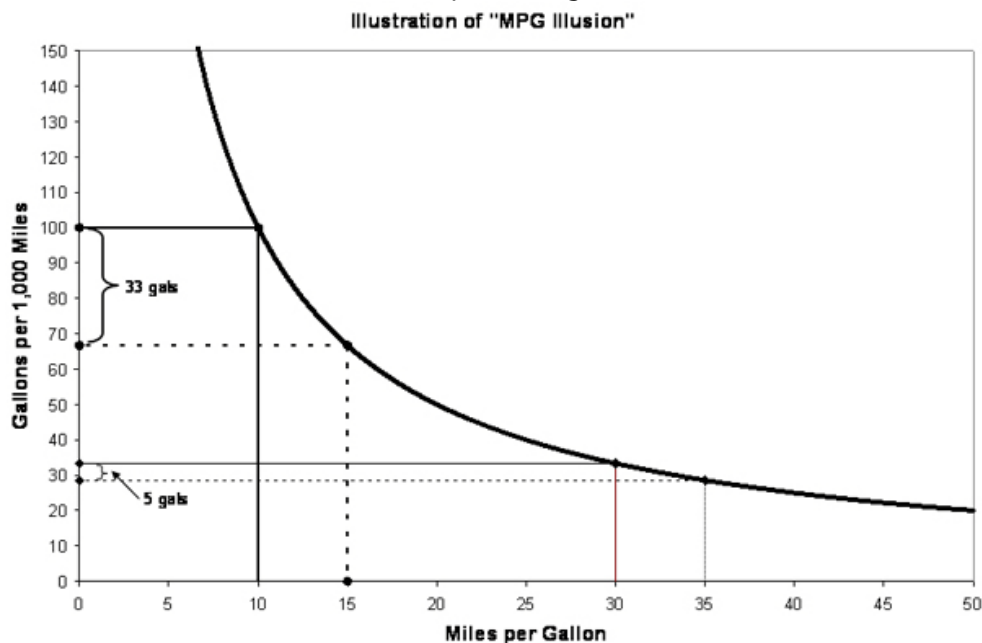
Note: for those vehicles that do not use liquid fuels--such as electric vehicles, plug-in hybrid electric vehicles operating on electricity, and compressed natural gas vehicles-- the labels display miles per gallon of gasoline-equivalent (MPGe). Think of this as being similar to MPG, but instead of presenting miles per gallon of the vehicle's fuel type, it represents the number of miles the vehicle can go using a quantity of fuel with the same energy content as a gallon of gasoline. This allows a reasonable comparison between vehicles using different fuels. For example, you can use MPGe to compare a compressed natural gas (CNG) vehicle with a gasoline vehicle; even though CNG is not dispensed or burned in actual gallons.

4. You Save/Spend More over 5 Years Compared to Average Vehicle

The label shows the estimated fuel cost over a five-year period for the vehicle compared to the average new vehicle. If the vehicle would save the consumer money compared to the average vehicle, the label would state, "You save \$x,xxx in fuel costs over 5 years compared to the average new vehicle." If the vehicle would be more expensive to operate than the average vehicle, the label would state, "You spend \$x,xxx more in fuel costs over 5 years compared to the average new vehicle." These estimates are based on driving 15,000 miles per year, for five years, and the projected fuel price for the year (\$3.70 per gallon of gasoline in this example). For more information on the source of projected fuel prices see "10. Details in Fine Print".

5. Fuel Consumption Rate

While a miles per gallon (MPG) estimate is a required feature that has appeared on the fuel economy label for several decades, this metric can be potentially misleading when consumers compare fuel economy improvements, particularly when they use it in place of fuel costs. The following chart shows the non-linear relationship between gallons used over a given distance and miles per gallon. The fuel savings, in gallons, for a vehicle that gets 10 MPG versus a vehicle that gets 15 MPG is about 33 gallons (assuming 1000 miles). On the other hand, the fuel savings in gallons, for the same 5 MPG fuel economy jump, for a 30 MPG versus a 35 MPG vehicle is only about 5 gallons.



This “MPG illusion” demonstrates why it may be more meaningful to express fuel efficiency in terms of consumption (e.g., gallons per mile or per 100 miles) rather than in terms of economy (miles per gallon). A fuel consumption metric allows for more accurate energy usage comparisons among vehicles. The revised label includes both fuel economy and consumption information for all vehicle types.

6. Estimated Annual Fuel Cost

The annual fuel cost is based on two assumptions: an annual mileage of 15,000 miles and a projected gasoline price. For more information on the source of projected fuel prices see “10. Details in Fine Print”.

7. Fuel Economy and Greenhouse Gas Rating

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 the vehicle’s tailpipe emits each mile), as shown below. Consumers may note that higher fuel economy is associated with a better GHG emissions profile. There are two ratings that apply to each vehicle – one for fuel economy and one for greenhouse gas emissions – but gasoline vehicles will display only one rating. This is because carbon dioxide 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.

For more information on this rating system, see www.epa.gov/carlabel/regulations.htm.

Rating	MPG	CO2(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+

8. CO2 Emissions Information

This text provides three key pieces of information:

Combined city/highway CO2 tailpipe emissions

The labeled vehicle’s CO2 tailpipe emissions are based on tested tailpipe CO2 emission rates. The rate of CO2 emissions is displayed in grams per mile.

Vehicle with lowest CO2 emissions

The label identifies the lowest tailpipe CO2 emissions of available vehicles. If there are electric or fuel cell vehicles on the market, which by definition have zero tailpipe emissions, this value will be zero grams per mile.

Learn more about emissions from the production of fuels at www.fueleconomy.gov

Driving your vehicle can yield both greenhouse gas (GHG) emissions from your vehicle's tailpipe and GHG emissions related to the production of the fuel used to power your vehicle. For example, activities

associated with fuel production such as feedstock extraction, feedstock transport to a processing plant, and conversion of feedstock to motor fuel, as well as distribution of the motor fuel, can all produce GHG emissions.

The Fuel Economy and Environment Label provides a Greenhouse Gas Rating, from 1 (worst) to 10 (best), based on your vehicle's tailpipe carbon dioxide emissions only, and this rating does not reflect any GHG emissions associated with fuel production.

You can estimate the total GHG emissions that would be associated with driving an electric vehicle or plug-in hybrid electric vehicle, including GHG emissions from the production of electricity used to power the vehicle, with a new calculator tool at www.fueleconomy.gov/label/

9. Smog Rating

This is a rating for vehicle tailpipe emissions of those pollutants that cause smog and other local air pollution. This information, listed as "Smog" on the labels, will be displayed using a slider bar with a scale of 1 (worst) to 10 (best). The scale is based on the U.S. vehicle emissions standards, which incorporate specific thresholds for nitrogen oxide, non-methane organic gas, carbon monoxide, particulate matter, and formaldehyde. For those vehicles that run on electricity, the tailpipe emissions are zero.

10. Details in Fine Print

This part of the label has a reminder that your fuel economy and emissions may be different due to a number of factors, such as how you drive and maintain your vehicle, how much you use air conditioning and other accessories, the weather, road conditions, how much the vehicle is loaded, and other factors. EPA periodically evaluates ways to improve our fuel economy estimates so they better reflect real-world driving. For more information on how your fuel economy can vary, or tips to improve your fuel economy, please see [Gas Mileage Tips](#).

This part of the label also details the assumptions that are used to determine the estimated annual fuel cost and the value used to compare 5-year costs to the average vehicle. EPA assumes annual mileage of 15,000 miles. The price of gasoline listed on new vehicle labels is based on projections from the U.S. Energy Information Administration for the applicable model year. It will typically be updated annually in coordination with the Department of Energy. Since EPA won't publish the fuel prices for 2013 model year labeling until 2012, the sample labels include an example price that is intended for illustrative purposes only.

11. QR Code®

When you are looking for a new vehicle at a dealership, you will be able to scan the QR Code®¹ ([footnote](#)) on the new label using your smartphone, provided you have downloaded a scanner app. The QR Code® will link you to helpful tools and additional information about the vehicle. The same tools and information are available to everyone on www.fueleconomy.gov.

12. www.fueleconomy.gov

The label directs you to a website where you can compare vehicles and enter personalized information (e.g., local gas prices and individual driving habits) to get best possible cost and energy-use estimates.

(footnote:) ¹ QR Code is registered trademark of DENSO WAVE INCORPORATED.