## Model Year 2013

## Fuel Economy <br> Guide



# www.fueleconomy.gov 

fueleconomy.gov/m for your mobile device
U.S. Department of Energy

Office of Energy Efficiency and Renewable Energy
U.S. Environmental Protection Agency

SEPA
UPDATED: January 22, 2014


## contents

- Using the Fuel Economy Guide / i
- Getting to Know the New Fuel Economy and Environment Labels / 1
- Understanding the Guide Listings / 2
- Why Some Vehicles Are Not Listed / 2
- Vehicle Classes Used in This Guide / 3
- Tax Incentives and Disincentives / 3
- Why Consider Fuel Economy / 3
- Fueling Options / 4
- Fuel Economy and Annual Fuel Cost

Ranges for Vehicle Classes / 4

- Model Year 2013 Fuel Economy Leaders / 5
- 2013 Model Year Vehicles / 6
- Diesel Vehicles / 26
- Electric Vehicles / 27
- Plug-in Hybrid Electric Vehicles / 29
- Hybrid Electric Vehicles / 28
- Compressed Natural Gas Vehicles / 31
- Fuel Cell Vehicles / 31
- Ethanol Flexible Fuel Vehicles / 32
- Index / 37


## USING THE FUEL ECONOMY GUIDE

The U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE) produce the Fuel Economy Guide to help car buyers choose the most fuel-efficient vehicle that meets their needs. The Guide is published in print and on the Web at www.fueleconomy.gov. For additional print copies, please call DOE's Clean Cities Technical Response Service at 1-800-254-6735 or mail your request to: NREL - Fuel Economy Guide, 15013 Denver West Parkway, Golden, CO 80401-3305.

## Fuel Economy Estimates

Most vehicles in this Guide (other than plug-in hybrids) have three fuel economy estimates:

- A "city" estimate that represents urban driving, in which a vehicle is started in the morning (after being parked all night) and driven in stop-and-go traffic
- A "highway" estimate that represents a mixture of rural and interstate highway driving in a warmed-up vehicle, typical of longer trips in free-flowing traffic
- A "combined" estimate that represents a combination of city driving ( $55 \%$ ) and highway driving (45\%)

Estimates for all vehicles are based on laboratory testing under standardized conditions to allow for fair comparisons.

Flexible-fuel vehicles (FFVs), which can use gasoline and E85, have estimates for both fuels. Plug-in hybrid electric vehicles (PHEVs) have estimates for (1) electriconly or blended electric and gasoline operation and (2) gasoline-only operation and are discussed in more detail on page 26. For answers to frequently asked questions about fuel economy estimates, visit www.fueleconomy.gov.

## Annual Fuel Cost Estimates

This Guide provides annual fuel cost estimates, rounded to the nearest $\$ 50$, for each vehicle.. The estimates are based on the assumptions that you travel 15,000 miles per year (55\% under city driving conditions and $45 \%$ under highway conditions) and that fuel costs
\$3.30/gallon for regular unleaded gasoline and $\$ 3.66 /$ gallon for premium. Cost-pergallon assumptions for vehicles that use other fuel types are discussed at the beginning of those vehicle sections. The fuel costs were determined in advance to allow time for printing fuel economy labels and the Guide, and may not reflect current fuel prices.

Visit www.fueleconomy.gov to personalize fuel costs based on current fuel prices and your driving habits.

## Your Fuel Economy Will Vary

Even though EPA recently improved its methods for estimating fuel economy, your vehicle's fuel economy will almost certainly vary from EPA's estimate. Fuel economy is not a fixed number; it varies significantly based on where you drive, how you drive, and other factors. Thus, it is impossible for one set of estimates to predict fuel economy precisely for all drivers in all environments. For example, the following factors can lower your vehicle's fuel economy:

- Aggressive driving (hard acceleration and braking)
- Excessive idling, accelerating, and braking in stop-and-go traffic
- Cold weather (engines are more efficient when warmed up)
- Driving with a heavy load or with the air conditioner running
- Improperly tuned engine or underinflated tires
- Use of remote starters

In addition, small variations in vehicle manufacturing can cause fuel economy variations in the same make and model, and some vehicles don't attain maximum fuel economy until they are "broken in" (around 3,000-5,000 miles).

So, please remember that the EPA ratings are a useful tool for comparing vehicles when car buying, but they may not accurately predict the fuel economy you will get. This is also true for annual fuel cost estimates. For more information on fuel economy ratings and factors that affect fuel economy, visit www.fueleconomy.gov.

## GETTING TO KNOW THE NEW FUEL ECONOMY AND ENVIRONMENT LABEL

EPA recently redesigned the Fuel Economy and Environment labels that must be affixed to new vehicles starting with the 2013 model year-some manufacturers also adopted the new label for model year 2012 vehicles. The example below shows a sample label for a gasoline vehicle. Slightly different designs are used for flexible-fuel vehicles, electric vehicles, and plug-in hybrids. For more in-depth descriptions of label information for all vehicle types, visit www.fueleconomy.gov.


## New Label Features

## Fuel Consumption Rate

This shows fuel use in gallons per 100 miles (kilowatt-hours per 100 miles for vehicles using electricity).

## Fuel Economy \& Greenhouse Gas Ratings

Vehicles are assigned a rating from 1 (worst) to 10 (best) for fuel economy and greenhouse gas (GHG) emissions. The GHG rating that appears on the labels (window stickers) will be the same as the fuel economy rating for gasoline operation. Vehicles using other fuels are rated seperately based on their fuel economy and carbon dioxide (CO2) emissions and thus may have different GHG and fuel economy ratings on their labels. For flexible fuel vehicles, GHG ratings for ethanol (E85) as well as gasoline operation will be listed at www.fueleconomy.gov.

The GHG rating does not account for emissions generated "upstream" of the vehicle (e.g., electricity production). Visit www.fueleconomy.gov for more about upstream emissions.

Below the rating scale, the label also provides an estimate for the amount of $\mathrm{CO}_{2}$ per mile emitted by that specific vehicle along with an estimate of the $\mathrm{CO}_{2}$ emissions for the best vehicle in that model year.

## Smog Rating

Vehicles are assigned a rating from 1 (worst) to 10 (best) for tailpipe emissions of pollutants that cause smog and other local air pollution. For those vehicles that run on electricity, the tailpipe emissions are zero.

## 5-Year Fuel Cost Savings

This measure shows how much more or less it will cost to fuel the vehicle over 5
years (rounded to the nearest \$50) compared to an "average" new vehicle of the same model year. For the 2013 model year, EPA estimates that the average new vehicle will get 23 mpg .

## Smartphone QR Code

You can use a smartphone equipped with a scanner "app" to scan this code and access additional information about the vehicle on www.fueleconomy.gov On www.fueleconomy.gov, you can also personalize your fuel economy, emissions, and cost estimates based on your local fuel prices and driving habits.

## Information for Electric Plug-in Vehicles

The new label also includes information on charge time and driving range for plugin hybrids and electric vehicles.

## UNDERSTANDING THE GUIDE LISTINGS

We hope you'll find the Fuel Economy Guide easy to use! Fuel economy and annual fuel cost data are organized by vehicle class (see page 3 for a list of classes). Within each class, vehicles are listed alphabetically by manufacturer and model.

Vehicle models with different features, such as engine size or transmission type, are listed as different vehicles. Engine and transmission attributes are shown in the first column under the model name.

Additional attributes needed to distinguish among vehicles (e.g., fuel type, suggested fuel grade) are listed in the "Notes" column. A legend for abbreviations is provided on page 6.

A "P" in the "Notes" column indicates that the manufacturer recommends that the vehicle be fueled with premium-grade gasoline, and a "PR" indicates that the manufacturer requires premium. The higher price of premium fuel is reflected in the annual fuel cost for these vehicles.

The most fuel-efficient vehicles in each class and alternative fuel vehicles are indicated with special markings (see diagram below). Vehicles that can use more than one kind of fuel have an entry for each fuel type.

Interior passenger and cargo volumes are located in the index at the back of the Guide.

## WHY SOME VEHICLES ARE NOT LISTED

Light-duty fuel economy regulations do not apply to

- Sport utility vehicles (SUVs) and passenger vans with a gross vehicle weight rating (GVWR) of more than 10,000 pounds-GVWR is the vehicle weight plus carrying capacity
- Other vehicles with a GVWR of 8,500 pounds or more or a curb weight over 6,000 pounds

Therefore, manufacturers do not have to estimate their fuel economy, and fuel economy labels are not posted on their windows..

Also, fuel economy information on some vehicles is not available in time to be printed in the Guide. However, you can find more up-to-date information at www.fueleconomy.gov.

\(\left.\begin{array}{lc|lc}\hline \& CARS \& \& <br>
Passenger and Cargo <br>

CLASS \& \& \& TRUCKS\end{array}\right]\)| Gross Vehicle |
| :---: |

## TAX INCENTIVES AND DISINCENTIVES

## Federal Tax Credits

You may be eligible for a federal income tax credit of up to $\$ 7,500$ if you purchase a qualifying electric or plug-in hybrid vehicle in 2012-13.

Visit www.fueleconomy.gov for more information on qualifying models, credit amounts, and phase-out dates.

## Gas Guzzler Tax

The Energy Tax Act of 1978 requires auto companies to pay a "gas guzzler" tax on the sale of cars with exceptionally low fuel economy. Such vehicles are identified in the Guide by the word "Tax" in the "Notes" column. In the dealer showroom, the words "Gas Guzzler" and the tax amount are listed on the vehicle's fuel economy label. The tax does not apply to light trucks.

## WHY CONSIDER FUEL ECONOMY?

## Save Money

You could save as much as $\$ 1,700$ in fuel costs each year by choosing the most fuel-efficient vehicle in a particular class. This can add up to thousands of dollars over a vehicle's lifetime. Fuel-efficient models come in all shapes and sizes, so you need not sacrifice utility or size.

Each vehicle listing in the Fuel Economy Guide provides an estimated annual fuel cost (see page i). The online guide at www.fueleconomy.gov features an annual fuel cost calculator that allows you
to insert your local gasoline prices and typical driving conditions (percentage of city and highway driving) to obtain the most accurate fuel cost information for your vehicle.

## Reduce Oil Dependence Costs

Buying a more fuel-efficient vehicle can help reduce our dependence on petroleum. About $45 \%$ of the oil used to produce the gasoline you put in your tank is imported. The United States uses about 19 million barrels of oil per day, two thirds of which is used for transportation. Oil dependence cost the U.S. economy around $\$ 500$ billion in 2011 alone.

## Reduce Climate Change

Climate change is widely viewed as the most significant long-term threat to the global environment, and human-made emissions of greenhouse gases (GHGs) are very likely the cause of most of the observed global warming over the last 50 years.
Burning fossil fuels such as gasoline and diesel releases carbon dioxide $\left(\mathrm{CO}_{2}\right)$ and other GHGs into the atmosphere, contributing to global climate change. $\mathrm{CO}_{2}$ is the most important human-made GHG, and highway vehicles account for roughly a quarter ( 1.6 billion tons) of U.S. $\mathrm{CO}_{2}$ emissions each year.
Every gallon of gasoline your vehicle burns puts about 20 pounds of $\mathrm{CO}_{2}$ into the atmosphere; the average vehicle emits around 5 to 8 tons of $\mathrm{CO}_{2}$ each year. Unlike other forms of vehicle pollution, $\mathrm{CO}_{2}$ emissions cannot be reduced by pollution control technologies. They can only be reduced by burning less fuel or by burning fuel that contains less carbon.

One of the most important things you can do to reduce your contribution to climate change is to buy a vehicle with better fuel economy. Switching from a vehicle that gets 20 mpg to one that gets 25 mpg can reduce $\mathrm{CO}_{2}$ emissions by 10 tons over a vehicle's lifetime, more than a year's worth of use.

## Annual CO2 Emissions by Vehicle MPG



You can also reduce your contribution to climate change by

- Getting the best fuel economy out of your car
- Using a low-carbon fuel, such as compressed natural gas (CNG) or electricity from a renewable resource such as wind or hydropower
- Walking, biking, or taking public transit more often


## FUELING OPTIONS

## Ethanol Blends - E85 \& E10

Ethanol is a domestically produced, renewable fuel made primarily from starch-based crops such as corn. It may also be made from "cellulosic biomass," such as crop residues and wood, but this is not yet done on a large scale. The use of ethanol as a vehicle fuel can reduce
greenhouse gas emissions and U.S. dependence on petroleum.
E10 is a blend of $10 \%$ ethanol and $90 \%$ gasoline and is legal for use in any gasoline-powered vehicle. More than $95 \%$ of U.S. gasoline contains up to $10 \%$ ethanol to boost octane, meet air quality requirements, or satisfy the Renewable Fuel Standard.
E85 is a high-level ethanol-gasoline blend containing $51 \%$ to $83 \%$ ethanol, depending on the season and geographic location. Drivers can use E85 in flexible fuel vehicles (FFVs), which are specially designed to run on gasoline, E85, or any mixture of the two. FFVs are offered by several vehicle manufacturers. To determine whether your vehicle is an FFV, check the inside of your car's fuel filler door for an identification sticker or consult your owner's manual. More than two thousand filling stations in the United States currently sell E85. Visit afdc.energy.gov/afdc/locator/stations to find stations near you.
There is no noticeable difference in
vehicle performance when low-level ethanol blends are used. However, FFVs operating on E85 usually experience a $25-30 \%$ drop in fuel economy due to ethanol's lower energy content relative to gasoline.

## Biodiesel

Biodiesel is a domestically produced renewable fuel manufactured from vegetable oils or animal fats for use in diesel vehicles. Using biodiesel in place of petroleum diesel reduces greenhouse gas emissions and contributes to national energy security.

Biodiesel can be blended with petroleum diesel at any percentage. The most common biodiesel blend is B20, which contains $20 \%$ biodiesel and $80 \%$ petroleum diesel. B5 (5\% biodiesel and $95 \%$ petroleum diesel) is another common blend. All vehicle manufacturers have approved biodiesel blends up to and including B5 for use in all diesel engines. However, using higher-level biodiesel blends may affect vehicle warranties.

Check your owner's manual or with your vehicle manufacturer to determine the right blend for your vehicle.

Purchase commercial-grade biodiesel from a reputable dealer. Never refuel with recycled grease or vegetable oil that has not been converted to biodiesel. It will damage your engine.
More than 250 stations currently dispense B20. Visit
afdc.energy.gov/afdc/locator/stations to find service stations selling biodiesel near you.

## Premium- vs. Regular-Grade Gasoline

Regular unleaded is the recommended gasoline for most cars. Using a higheroctane gasoline than recommended by the owner's manual does not improve performance or fuel efficiency; it only costs more money. Check your owner's manual to determine the lowest grade of fuel you can use.

## FUEL ECONOMY AND ANNUAL FUEL COST RANGES FOR VEHICLE CLASSES

The graph below provides the fuel economy and annual fuel cost ranges for the vehicles in each class so you can see where a given vehicle's fuel economy and cost fall within its class. Combined city and highway MPG estimates are used; these assume you will drive $55 \%$ in the city and $45 \%$ on the highway. Annual fuel costs assume you travel 15,000 miles each year and fuel costs $\$ 3.30 / \mathrm{gallon}$ for regular unleaded gasoline and $\$ 3.66 /$ gallon for premium, $\$ 3.87$ for diesel, and $\$ .12 / \mathrm{kWh}$ for electricity. Visit www.fueleconomy.gov to calculate annual fuel cost for a specific vehicle based on your own driving conditions and fuel prices.


Fuel economy estimates on this chart do not include vehicles operating on compressed natural gas (CNG), electricity, or E85.

* Represents electric vehicles and plug-in hybrids. Fuel economy values for these vehicles are in miles per gallon gasoline equivalent (MPGe).


## MODEL YEAR 2013 FUEL ECONOMY LEADERS

Listed below are vehicles with the highest fuel economy in the most popular classes. For each vehicle class we list the most fuel efficient conventional vehicle, and the most efficient plug-in hybrid (PHEV) or electric (EV). Rankings are based on combined city and highway fuel economy estimates which assume $55 \%$ city driving and $45 \%$ highway driving. Please note that many vehicle models come in a range of engine sizes and trim lines, resulting in different fuel economy values. If there is only one vehicle in the class, we do not list a fuel economy leader.

|  | Trans Type/ Speeds | Eng Size / Cylinders | MPG Combined |  | Trans Type/ Speeds | Eng Size / Cylinders | MPG Combined |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TWO-SEATER CARS |  |  |  | SMALL PICKUP TRUCKS |  |  |  |
| SMART <br> fortwo electric drive convertible | A-1 | NA | 107* | TOYOTA <br> Tacoma 2WD | M-5 | 2.7L/4 | 23 |
| fortwo electric drive coupe | A-1 | NA | 107* | STANDAP | JP TRU | KS |  |
| HONDA CR-Z | AV-S7 | 1.5L/4 | 37 | CHEVROLET <br> Silverado 15 Hybrid 2WD | AV | 6.0L/8 | 21 |
| MINICOMPACT CARS |  |  |  | Silverado 15 Hybrid 4WD | AV | 6.0L/8 | 21 |
| SCION iQ EV | AV | NA | 121* | GMC <br> Sierra 15 Hybrid 2WD | AV | 6.0L/8 | 21 |
| iQ | AV | 1.3L/4 | 37 | Sierra 15 Hybrid 4WD | AV | 6.0L/8 | 21 |
| SUBCOMPACT CARS |  |  |  | RAM |  | 3.61/6 |  |
| MITSUBISHI i-MiEV | A-1 | NA | 112* | VANS, CARGO |  |  |  |
| CHEVROLET <br> Spark | M-5 | 1.2L/4 | 34 | CHEVROLET <br> Express 1500 2WD Cargo | A-4 | 4.3L/6 | 17 |
| COMPACT CARS |  |  |  | GMC |  |  |  |
| FORD <br> Focus Electric | A-1 | NA | 105* | VANS, PASSENGER |  |  |  |
| TOYOTA <br> Prius c | AV | 1.5L/4 | 50 | CHEVROLET <br> Express 1500 2WD Passenger | A-4 | 5.3L/8 | 14ұ |
| MIDSIZE CARS |  |  |  | Express 1500 AWD Passenger | A-4 | 5.3L/8 | 14ұ |
| NISSAN <br> Leaf | A-1 | NA | 115* | FORD <br> E150 Wagon FFV | A-4 | 4.6L/8 | 14† |
| TOYOTA Prius | AV | 1.8L/4 | 50 | GMC <br> Savana 1500 2WD (Passenger) | A-4 | 5.3L/8 | 14 $\ddagger$ |
| LARGE CARS |  |  |  | Savana 1500 AWD (Passenger) | A-4 | 5.3L/8 | 14 $\ddagger$ |
| TESLA |  |  |  | MINIVANS |  |  |  |
| Model S ( 60 kW -hr battery pack) | A-1 | NA | 95* | MAZDA |  |  |  |
| FORD <br> C-MAX Hybrid FWD | AV | 2.0L/4 | 43 |  | M-6 A-S5 | $2.5 \mathrm{~L} / 4$ $2.5 \mathrm{~L} / 4$ | $\begin{aligned} & 24 \\ & 24 \\ & \hline \end{aligned}$ |
| SMALL STATION WAGONS |  |  |  | SMALL SPORT UTILITY VEHICLES |  |  |  |
| HONDA <br> Fit EV | A-1 | NA | 118* | LEXUS <br> RX 450h | AV-S6 | 3.5L/6 | 30 |
| AUDI <br> A3 (diesel) | AM-S6 | 2.0L/4 | 34 | TOYOTA RAV4 EV | AV | NA | 76* |
| VOLKSWAGEN |  |  |  | STANDARD SPORT UTILITY VEHICLES |  |  |  |
| Jetta SportWagen (diesel) | M-6 | 2.0L/4 | 34 | TOYOTA <br> Highlander Hybrid 4WD | AV | 3.5L/6 | 28 |
| MIDSIZE STATION WAGONS |  |  |  |  |  |  |  |
| TOYOTA <br> Prius v | AV | 1.8L/4 | 42 |  |  |  |  |

[^0]
## 2013 MODEL YEAR VEHICLES

This section contains the fuel economy values for 2013 model year vehicles. Additional information for alternative fuel vehicles can be found on pages $26-36$. Alternative fuel vehicles are highlighted with a blue bar, and those that can use two kinds of fuel, such as flexible fuel vehicles, have an entry for each fuel type. The most fuel-efficient vehicles in each class are listed in blue boldface type and marked with a blue pointer ( - ).











## Thank You for previewing this eBook

You can read the full version of this eBook in different formats:
> HTML (Free /Available to everyone)
$>$ PDF / TXT (Available to V.I.P. members. Free Standard members can access up to 5 PDF/TXT eBooks per month each month)
> Epub \& Mobipocket (Exclusive to V.I.P. members)
To download this full book, simply select the format you desire below


[^0]:    * This is an electric vehicle. Since electricity is not measured in gallons, a conversion factor is used to translate the fuel economy into miles per gallon of gasoline equivalent (MPGe).
    $\dagger$ This vehicle is a plug-in hybrid, which runs on both gasoline and electricity. Since electricity is not measured in gallons, a conversion factor is used to translate the fuel economy when running on electricity into miles per gallon of gasoline equivalent (MPGe). The Combined MPGe estimate includes both city and highway driving and gasoline and electric energy use.
    $\ddagger$ When operated on gasoline

