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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. EPA compiles the fuel economy data, and DOE publishes them in print and on the Web. For additional print copies please send your request to NREL, 1617 Cole Blvd., MS1633, Golden, CO 80401.


Fuel Economy Estimates

Each vehicle in this guide has two fuel economy estimates.

City represents urban driving, in which a vehicle is started in the morning (after being parked all night) and driven in stop-and-go rush hour traffic.

Highway represents a mixture of rural and interstate highway driving in warmed-up vehicles, typical of longer trips in free-flowing traffic.

Compare this vehicle to others by using the FREE FUELECONOMY GUIDE available in the dealer showroom.

CITY MPG 24		HIGHWAY MPG 31
Actual Mileage will vary with options, driving conditions, driving habits and vehicle's condition. Results reported to EPA indicate that the majority of vehicles with these estimates will achieve between 20 and 28 mpg in the city	2005 GREEN CAR 2WD, 4 CYL, 2.0 LITER, MULTIPOINT FUEL INJECTION, 4-SPEED AUTO TRANS, CATALYST.	For Comparison Shopping All vehicles classified as COMPACT CARS have been issued mileage ratings ranging from 13 to 48 mpg city and 19 to 51 mpg highway.
and between 26 and 36 mpg on the highway.	Estimated Annual Fuel Cost: \$999	

See www.fueleconomy.gov

EPA miles-per-gallon (MPG) estimates are based on lab testing and are adjusted to reflect real-world driving conditions for an average U.S. motorist. Vehicles are tested in the same manner to allow fair comparisons. For answers to frequently asked questions about fuel economy estimates, visit www.fueleconomy.gov/feg/info.shtml.

Why Your Fuel Economy Can Vary

A vehicle's fuel economy is not a constant or fixed number; it varies among vehicles of the same make and model, and it will vary over time for an individual vehicle. Many factors affect a vehicle's fuel economy:

When, where, and how the vehicle is driven: Frequent acceleration and braking necessary in stop-and-go traffic and on hilly terrain hurt fuel economy, and aggressive driving (hard accelerating and braking) reduces it even more. Cold weather can reduce MPG since your engine doesn't run efficiently until it is warmed up, and driving with a heavy load or with the air conditioner running can also reduce MPG.

Vehicle maintenance: A poorly tuned engine burns more fuel, so fuel economy will suffer if your engine is not in tune. Keeping tires at the correct pressure and changing the air filter on a regular basis can improve fuel economy. Also, new energy-saving motor oils can improve MPG.

Inherent variations in vehicles: Small variations in the way vehicles are manufactured and assembled can cause MPG variations among vehicles of the same make and model. Usually, differences are small, but a few drivers may see a noticeable deviation from the EPA estimates.

Refer to www.fueleconomy.gov for more detailed explanations and fuel economy tips.

Annual Fuel Cost Estimates

This guide provides annual fuel cost estimates 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 \$1.80/gallon for regular unleaded gasoline and \$1.95/gallon for premium. Cost-per-gallon assumptions for vehicles that use other fuel types are discussed at the beginning of those vehicle sections.

UNDERSTANDING THE GUIDE LISTINGS

We hope you'll find the *Fuel Economy Guide* easy to use! Within each section of the guide, vehicles are first organized by class (see the table on page 2 for a listing of vehicle classes). Within each class, vehicles are listed alphabetically by manufacturer and model—vehicle models with different characteristics, including transmission type or engine size, are listed as different vehicles. Additional characteristics about the vehicle, such as valve or fuel system, may also be needed to distinguish between similar vehicles. This information is listed in the “Notes” column. Interior volume information is located in the index at the back of the Guide.

The diagram below explains the contents of a typical listing. The vehicle make and model are listed in the first column. Additional information on transmission type (e.g., automatic or manual) and the number of gears is listed in the second column, and information on the engine size (in liters) and the number of cylinders is listed in the third. This information is usually needed to correctly identify a specific configuration within a model type.

Column 4 shows EPA MPG estimates for city and highway driving. The most fuel-efficient automatic and manual vehicles per class are listed in green boldface type and highlighted by a gray bar. The most efficient vehicle in each class is marked with an arrow →. Alternative fuel vehicles are highlighted by a green bar, and those that can use two kinds of fuel, such as flexible fuel vehicles, have an entry for each fuel type. Annual estimated fuel cost is listed in column 5 (see the inside front cover for an explanation of how this is estimated). The final column (“Notes”) contains additional information on engine and fuel system type, applicable taxes, and other useful information.

Vehicles with a “P” in the “Notes” column require premium-grade gasoline. Because premium is the most expensive grade of gasoline, these vehicles may have a higher annual fuel cost even though they have a slightly better fuel economy than other vehicles. A legend for all of the abbreviations is provided at the bottom of alternating pages.

Additional information on interior passenger and cargo volumes is included in the Index beginning on page 20.

SAMPLE VEHICLE LISTING
(Not Actual Data)

	Trans Type / Speeds	Eng Size / Cylinders	MPG City / Hwy	Annual Fuel Cost	Notes / Abbreviations
VOLVO					
V50 AWD	M-6	2.5/5	19/27	\$1,331	P T
V50 FWD	A-S5	2.5/5	19/26	\$1,331	P T
	M-5	2.4/5	22/29	\$1,220	P
	A-S5	2.4/5	22/30	\$1,170	P
	M-6	2.5/5	22/31	\$1,170	P T
	A-S5	2.5/5	21/30	\$1,220	P T
MIDSIZE STATION WAGONS					
FORD					
Focus Station Wagon	A-4	2.0/4	26/32	\$964	
	M-5	2.0/4	26/35	\$932	
Taurus Wagon (2-Valve)	A-4	3.0/6	19/25	\$1,285	
Taurus Wagon (4-Valve)	A-4	3.0/6	19/27	\$1,228	
Taurus Wagon FFV	A-4	3.0/6	14/19	\$1,547	E85
	A-4	3.0/6	19/26	\$1,285	Gas
MERCURY					
Sable Wagon (2-Valve)	A-4	3.0/6	19/25	\$1,285	
Sable Wagon (4-Valve)	A-4	3.0/6	19/27	\$1,228	
Sable Wagon FFV	A-4	3.0/6	14/19	\$1,547	E85
	A-4	3.0/6	19/26	\$1,285	Gas

Manufacturer → VOLVO

Model → V50 AWD

The most fuel-efficient automatic and manual vehicles per class are listed in green boldface type and highlighted by a gray bar. The most efficient vehicle in each class is marked with an arrow →.

Alternative fuel vehicles are highlighted by a green bar, and those that can use two kinds of fuel, such as flexible fuel vehicles, have an entry for each fuel type.

Trans Type / Speeds

Eng Size / Cylinders

MPG City / Hwy

Annual Fuel Cost

Notes / Abbreviations

Additional information to help further identify the vehicle (e.g., engine and fuel system info) along with other useful information about taxes, required fuel grade, etc.

Example:
P = Premium Gasoline
T = Turbocharger

Vehicle Class → MIDSIZE STATION WAGONS

Flexible-fuel vehicles (FFVs) can run on gasoline or E85 (a mixture of 85% ethanol & 15% gasoline).

Transmission information: type (A=automatic, A-S=automatic transmission-select shift, M=manual, etc.) followed by number of gears or speeds

Engine size (in liters) followed by number of cylinders

Example: 3.0 liter, 6-cylinder engine

EPA city & highway MPG estimates

Example: 19 mpg city 26 mpg highway

Estimated annual fuel cost assuming 15,000 miles of travel a year (55% city and 45% highway) and an average fuel price

The legend for all abbreviations used in the tables is provided at the bottom of alternating pages.

WHY SOME VEHICLES ARE NOT LISTED

- ◆ Vans, pickup trucks, and sport utility vehicles (SUVs) weighing more than 8,500 pounds gross vehicle weight (vehicle weight plus carrying capacity) are classified as heavy-duty vehicles. Fuel economy regulations do not apply to these vehicles, so they are not tested and fuel economy labels are not posted on their windows.
- ◆ Some vehicles' fuel economy information is not available in time to be included in the guide. However, you can usually find this information at www.fueleconomy.gov, which is updated regularly.
- ◆ The availability of some vehicles is restricted.

VEHICLE CLASSES USED IN THIS GUIDE

CARS (based on interior passenger and cargo volume)		TRUCKS (based on body style and load-bearing capacity)	
TWO-SEATER CARS		PICKUP TRUCKS	Gross Vehicle Weight Rating
SEDANS	Passenger and Cargo Volume	Small	Under 4,500 pounds
Minicompact	Under 85 cubic feet	Standard	4,500 to 8,500 pounds
Subcompact	85 to 99 cubic feet	VANS	Under 8,500 pounds
Compact	100 to 109 cubic feet	Passenger	
Midsize	110 to 119 cubic feet	Cargo	
Large	120 or more cubic feet	MINIVANS	Under 8,500 pounds
STATION WAGONS		SPORT UTILITY VEHICLES	Under 8,500 pounds
Small	Under 130 cubic feet	SPECIAL PURPOSE VEHICLES	Under 8,500 pounds
Midsize	130 to 159 cubic feet		
Large	160 or more cubic feet		

TAX INCENTIVES AND DISINCENTIVES

Tax Credits and Deductions

If you purchase a qualifying electric or "clean-fuel" vehicle in 2004-2005, you may be eligible for federal income tax incentives, such as tax credits and deductions. Clean fuel vehicles include qualified gasoline-electric hybrids, compressed natural gas (CNG) vehicles, liquefied propane gas (LPG) vehicles, and others powered by alternative fuels. Vehicles must go through an IRS qualification process before they are eligible for the hybrid deduction. Visit www.fueleconomy.gov for more detailed information on current incentives and the most up-to-date news on tax incentives under consideration.

Gas Guzzler Tax

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

WWW.FUELECONOMY.GOV

Learn more and do more on-line at www.fueleconomy.gov!

- ◆ Download and print additional copies of the *Fuel Economy Guide*.
- ◆ Search for specific vehicles by class, manufacturer, and MPG and compare up to three vehicles at a time, side-by-side.
- ◆ View MPG, emissions, and safety information for used vehicles dating back to 1985.
- ◆ Learn about tax incentives for hybrid-electric, electric, and other alternative fuel vehicles.
- ◆ Read tips for improving the fuel economy of your current vehicle.
- ◆ Calculate your annual fuel cost.
- ◆ Learn what makes a gallon of gasoline cost what it does (e.g., refining, transportation, taxes, etc.).
- ◆ Learn about advanced technologies such as hybrid-electric and fuel cell vehicles.
- ◆ Find out how fuel economy ratings are determined.

WHY CONSIDER FUEL ECONOMY?

Save Money

You could save \$300-\$500 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 fuel cost information (described on the inside front cover). The fuel economy web site, www.fueleconomy.gov, features an annual fuel cost calculator, which allows you to insert your local gasoline prices and consider your driving preference to achieve the most accurate fuel cost information for your vehicle.

Strengthen National Energy Security

Buying a more fuel-efficient vehicle can help strengthen our national energy security by reducing our dependence on foreign oil. Half of the oil used to produce the gasoline you put in your tank is imported. The United States uses about 20 million barrels of oil per day, two-thirds of which is used for transportation. Petroleum imports cost us about \$2 billion a week—that's money that could be used to fuel our own economy.

Protect the Environment

Burning fossil fuels such as gasoline or diesel adds greenhouse gases, including carbon dioxide, to the earth's atmosphere. Greenhouse gases trap heat and thus warm the earth because they prevent a significant proportion of infrared radiation from escaping into space.

Vehicles with lower fuel economy burn more fuel, creating more carbon dioxide. Every gallon of gasoline your vehicle burns puts 20 pounds of carbon dioxide into the atmosphere. You can reduce your contribution to global warming by choosing a vehicle with higher fuel economy.

By choosing a vehicle that achieves 25 miles per gallon rather than 20 miles per gallon, you can prevent the release of about 15 tons of greenhouse gas pollution over the lifetime of your vehicle.

TIPS FOR IMPROVING FUEL ECONOMY

Keep Your Car in Shape

- ◆ Fixing a car that is noticeably out of tune can improve gas mileage by about 4%—repairing a faulty oxygen sensor can improve fuel economy by as much as 40%!
- ◆ Replacing a clogged air filter can improve gas mileage by as much as 10% (and protect your engine).
- ◆ Keeping your tires inflated to the recommended pressure and using the recommended grade of motor oil can save as much as 3–5¢/gallon. The manufacturer's recommended tire pressure can be found on the tire information placard and/or vehicle certification label located on the vehicle door edge, doorpost, or glove-box door, or inside the trunk lid.

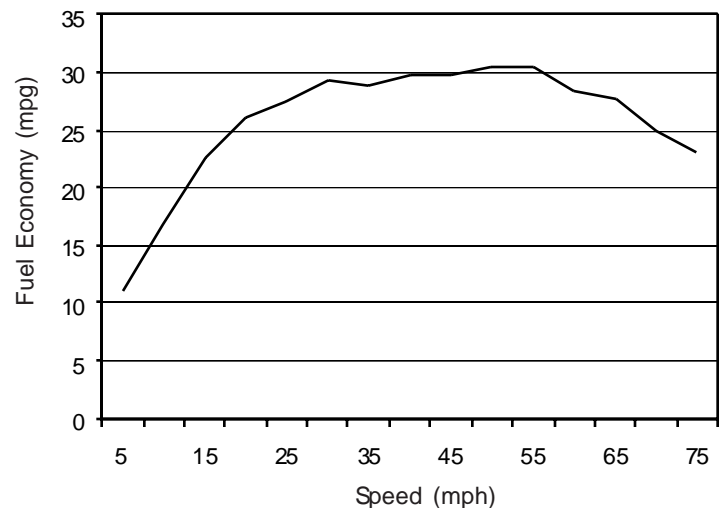
Plan and Combine Trips

- ◆ A warmed-up engine is more fuel efficient than a cold one. Many short trips taken from a cold start can use twice as much fuel as one multipurpose trip covering the same distance when the engine is warmed up and efficient. Trip planning not only saves fuel, but also reduces wear and tear on your car.

For more tips and for more information about gasoline pricing, visit www.fueleconomy.gov.

Drive More Efficiently

- ◆ Aggressive driving (speeding and rapid acceleration and braking) can lower your gas mileage by as much as 33% at highway speeds and 5% around town (costing you as much as 49¢/gallon!).
- ◆ Observe the speed limit—each 5 miles per hour (mph) you drive over 60 mph is like paying an additional 10¢/gallon.
- ◆ Avoid idling—idling gets 0 miles per gallon.



MODEL YEAR 2005 FUEL ECONOMY LEADERS

Listed below are vehicles with the highest fuel economy in the most popular classes, including vehicles with both automatic and manual transmissions. Please note that many vehicle models come in a range of engine sizes and trim lines, resulting in different fuel economy values.

	Transmission Type	MPG City/Hwy		Transmission Type	MPG City/Hwy
TWO-SEATER CARS			MIDSIZE STATION WAGONS		
Honda Insight (hybrid)	manual	61/66	Volkswagen Passat Wagon (diesel)	automatic	27/38
	automatic	57/56	Ford Focus Station Wagon	manual	26/35
MINICOMPACT CARS			CARGO VANS		
Mini Cooper	manual	28/36	Chevrolet Astro 2WD	automatic	16/22
	automatic	26/34	GMC Safari 2WD	automatic	16/22
SUBCOMPACT CARS			MINIVANS		
Volkswagen New Beetle (diesel)	manual	38/46	Honda Odyssey 2WD	automatic	20/28
	automatic	36/42			
COMPACT CARS			PASSENGER VANS		
Honda Civic Hybrid	automatic	48/47	Chevrolet Astro 2WD	automatic	16/21
	manual	46/51	GMC Safari 2WD	automatic	16/21
MIDSIZE CARS			SUV		
Toyota Prius (hybrid)	automatic	60/51	Ford Escape HEV 2WD	automatic	36/31
Hyundai Elantra	manual	27/34	Toyota Rav4 2WD	manual	24/30
LARGE CARS			STANDARD PICKUP TRUCKS		
Toyota Avalon	automatic	22/31	Ford Ranger Pickup 2WD	manual	24/29
				automatic	22/26
SMALL STATION WAGONS			Mazda B2300 2WD		
Volkswagen Jetta Wagon (diesel)	manual	36/43		manual	24/29
	automatic	32/43		automatic	22/26

FUEL ECONOMY & ANNUAL FUEL COST RANGES FOR VEHICLE CLASSES

The graph below provides the fuel economy and annual fuel cost ranges for the vehicles in each vehicle class so that 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. You can visit www.fueleconomy.gov to calculate annual fuel cost for a specific vehicle based on your own driving conditions and per-gallon fuel costs.

