U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Clean Cities

2016 Vehicle Buyer's Guide

Biodiesel
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Clean Cities
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2016 Vehicle Buyer's Guide

As the number of new alternative fuels and advanced technology vehicles continues to grow, drivers and fleets are finding it's easier than ever to cut petroleum use, minimize emissions, and save on fuel costs. This guide features a comprehensive list of light-duty vehicles offered by major original equipment manufacturers (OEMs) in model year 2016.

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Introduction

Chevrolet Colorado Biodiesel. *Photo from General Motors*

For decades, petroleum has dominated the transportation fuel arena in America. Still, there are signs that oil dependency in the U.S. transportation market may gradually be changing. In 2014, the share of alternative, non-petroleum fuels used in transportation more than doubled to reach 8.5%—its highest level since 1954.*

Although conventional fuel prices are at their lowest point since 2008, auto manufacturers and industry continue to innovate. Driven by increasingly stringent emissions and Corporate Average Fuel Economy (CAFE) standards, as well as consumer demand, vehicles powered solely by alternative fuels like electricity, and advanced technologies like plug-in hybrid and hybrid electric vehicles (PHEVs, HEVs), have seen an increasing presence in the marketplace.

Highly anticipated models from manufacturers such as Chevrolet, Ford, and BMW, among others, continue to reflect consumer excitement. Hydrogen fuel cell vehicles (FCEVs) are also creating interest, as new offerings from Honda and Toyota join the Hyundai FCEV in limited markets.

Mitsubishi i-MIEV. *Photo provided by Mitsubishi Motors North America, Inc.*

While the near-term benefits of lower-cost gasoline and diesel are appealing, it's key to take a long-term view when making an important investment, such as in buying

* *"Nonpetroleum share of transportation energy at highest level since 1954," U.S. Energy Information Administration, May 15, 2015,* www.eia.gov/todayinenergy/detail.cfm?id=21272.

a vehicle. Events such as natural disasters and shifting political climates can impact the supply and demand for petroleum—as well as price—dramatically. Because alternative fuels such as natural gas, propane, electricity, hydrogen, and biofuels diversify the fuel supply, they can mitigate some pricing and supply fluctuations.

Ford C-Max Energi PHEV. *Photo from Ford Motor Company*

Alternative fuel and advanced technology vehicle sales are expected to increase and a greener future is well within grasp. Mounting consumer acceptance, the increasing availability of vehicle models from OEMs, and expanding fueling infrastructure, have all played a major role in the development of this market. State and federal incentives, consumer desire for more fuel-efficient, cleaner forms of transportation, and interest in lower operational costs are also helping to drive this growth.

Whether selecting biodiesel, electricity, ethanol, hydrogen, natural gas, or propane to power your next vehicle, there are plenty of options to choose from. To learn more about which alternative fuel or technology would best fit your needs, contact your local Clean Cities coordinator (*cleancities.energy.gov/coalitions/contacts/*).

About This Guide

The 2016 Vehicle Buyer's Guide features a wide-ranging list of model year (MY) 2016 light-duty alternative fuel and advanced technology vehicle options. The guide includes vehicle-specific information about manufacturer, fuel economy, vehicle specifications, energy impact, and emissions ratings, allowing you to compare similar vehicles to make an informed buying decision. Because of the limited availability of some models, comprehensive pricing information is not included here. You can find manufacturer suggested retail prices and compare vehicles directly available from manufacturers at *www.fueleconomy.gov*.

While this guide provides a snapshot of the vehicles available, the Alternative Fuels Data Center (AFDC) hosts an online database (*afdc.energy.gov/vehicles/search*) that is regularly updated and may contain more vehicles and data than were available at the time this guide was printed.

NOTE: *This guide contains light-duty vehicles with a Gross Vehicle Weight Rating (GVWR) below 8,500 lbs and medium-duty passenger vehicles with a GVWR below 10,000 lbs. For any vehicles with a GVWR above 10,000 lbs, refer to the Clean Cities Guide to Alternative Fuel and Advanced Medium- and Heavy-Duty Vehicles (afdc.energy.gov/uploads/publication/medium_heavy_duty_guide.pdf).*

Fuel Economy

By choosing the most fuel-efficient vehicle in a particular class, it is possible to save significantly on fuel costs each year. This can add up to thousands of dollars over a vehicle's lifetime. It is important to understand how the fuel economy of an alternative fuel vehicle compares with a gasoline vehicle in order to make a wise decision.

GMC Savana CNG. *Photo from General Motors*

For many vehicles listed in this guide, three fuel economy estimates are given: (1) 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, (2) 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, and (3) a "combined" estimate that represents a combination of city driving (55%) and highway driving (45%).

Fuel economy estimates for all vehicles are based on manufacturers' laboratory tests using U.S. Environmental Protection Agency (EPA) standardized methods to allow for fair comparisons. Plug-in hybrid electric vehicles (PHEVs) have estimates for both (1) gasoline only or (2) charge-depleting operation, which may be electric only or a combination of electric and gasoline use. Their fuel economy estimates are expressed in miles per gallon (mpg) and miles per gallon of gasoline equivalent (MPGe), representing the number of miles a vehicle can travel using a quantity of fuel with the same energy content as a gallon of gasoline. Ethanol flex-fuel vehicles (FFVs), which can use gasoline and E85—a blend containing 51% – 83% ethanol, depending on geography and season—have estimates for both fuels.

For some vehicle models, EPA data were not available at the time of this guide's publication. In addition, new models are introduced by manufacturers on an ongoing basis throughout the model year. For updated information on vehicle offerings and answers to frequently asked questions about fuel economy estimates, visit *www.fueleconomy.gov*.

Your vehicle's actual fuel economy is likely to vary from the EPA estimates presented in this guide. See the sidebar on page 38 for more information on factors that affect fuel economy. The EPA estimates presented here are useful for comparing vehicles even though they may not accurately predict the mpg you will achieve. FuelEconomy.gov's My MPG feature (*fueleconomy.gov/mpg/MPG.do*) can help you calculate and track your personal fuel economy, compare it with EPA test ratings, and share it with other users. To find out what you can do to improve the fuel economy of your vehicle, explore the pages in the "Gas Mileage Tips" section on FuelEconomy.gov (*fueleconomy.gov/feg/drive.shtml*).

Energy Impact Scores

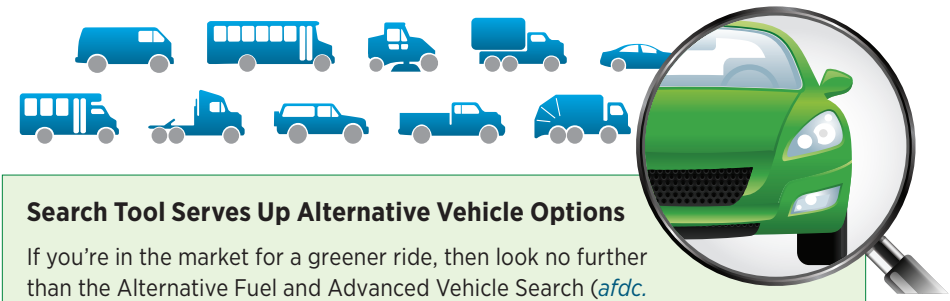
Energy Impact Scores allow buyers to compare vehicles' annual estimated petroleum consumption. These scores represent the number of barrels of petroleum a vehicle will likely consume each year—one barrel equals 42 gallons. The scores are based on 15,000 annual miles of driving, 45% highway and 55% city.

Smog Scores

Smog Scores, determined by EPA, reflect vehicle tailpipe emissions that contribute to local and regional air quality problems and related health issues. Scores are based on U.S. vehicle emission standards for criteria pollutants, including carbon monoxide, formaldehyde, nitrogen oxides, non-methane organic gas, and particulate matter. Scores range from 1 to 10, where 10 is best. Because all-electric vehicles and plug-in hybrid electric vehicles produce little to no tailpipe emissions when operating in all-electric mode, Smog Scores are not listed. Instead, the vehicles' estimated all-electric driving range is given to provide more relevant information.

Greenhouse Gas Emissions Scores

Greenhouse Gas (GHG) Scores, which are also determined by EPA, reflect tailpipe emissions of carbon dioxide and other GHGs, which contribute to climate change. Scores range from 1 to 10, where 10 is best. The GHG Scores in this guide do not reflect emissions related to the production or distribution of fuels or vehicles.



Search Tool Serves Up Alternative Vehicle Options

If you're in the market for a greener ride, then look no further than the Alternative Fuel and Advanced Vehicle Search (*afdc.energy.gov/vehicles/search*), where searching alternative fuel vehicle (AFV) and hybrid options is made simple. The tool draws from a database of available light-, medium-, and heavy-duty AFVs, as well as engines and hybrid systems. The results are displayed in a simple at-a-glance format with basic vehicle information and pictures, and can be filtered as desired by Fuel/Technology, Class/Type, and Manufacturer.

Other features of the tool include a "download" option, which allows you to generate a spreadsheet file containing a list of results produced from a filtered search.

Ram ProMaster. *Photo from Chrysler Group LLC*

Biodiesel is a renewable option for diesel vehicles

Biodiesel is an easy-to-implement, renewable, and economically viable alternative to conventional diesel. It can be produced from new and used vegetable oils, animal fats, and recycled restaurant grease. When used in place of diesel, biodiesel can significantly reduce life cycle carbon emissions. Note, however, that straight vegetable oil is not biodiesel and is not legal to use as a motor fuel.

Pure biodiesel (B100) must be produced to established specifications (ASTM D6751) to ensure proper performance at any blend level. It can then be blended and used in different concentrations ranging from B2 (2% biodiesel, 98% diesel fuel) to B100. B20 (20% biodiesel, 80% diesel fuel) is the most commonly labeled biodiesel blend in the United States, and has been shown to perform well in cold weather and in older engines. Engines operating on B20 have similar fuel consumption, horsepower, and torque to conventional diesel.

Nissan Titan Diesel. *© 2013 and 2014 Nissan. Nissan, Nissan model names and the Nissan logo are registered trademarks of Nissan.*

Nearly 14 million diesel vehicles on the road in the United States today are capable of using some blend of biodiesel. Currently, all major OEMs support the use of at least B5 under their warranties, while many OEMs have approved the use of B20 or higher blends in at least some of their vehicles. Before using B20 in any new vehicle, consult the manufacturer's warranty. The table below lists vehicles approved by their manufacturers for B20 use.

Biodiesel is available in all 50 states. As of December 2015, there were close to 250 publicly accessible fueling stations across the country offering biodiesel blends of B20 or above.

To find biodiesel stations in your area, see the Alternative Fueling Station Locator at *afdc.energy.gov/stations*.

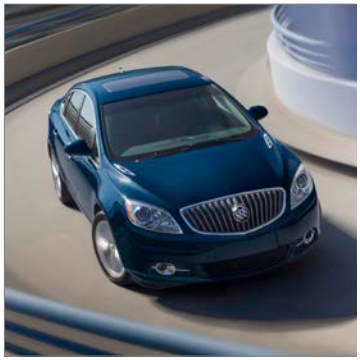
Chevrolet Express. *Photo from General Motors*

Biodiesel Vehicle Model	Vehicle Type	Engine Size	Starting MSRP
Chevrolet Colorado 2WD/4WD	Pickup	2.8L I4	$20,100
Chevrolet Express Prisoner Transport	Van	6.0L V8	-
Chevrolet Express 2500	Van	6.6L V8	-
Chevrolet Silverado 2500 HD 2WD/4WD	Pickup	6.6L V8	$32,955
Ford Super Duty F-250	Pickup	6.7L V8	$32,385
GMC Savana 2500	Van	6.6L V8	-
GMC Sierra 2500 HD 2WD/4WD	Pickup	6.6L V8	-
Jeep Grand Cherokee 2WD/FWD	SUV	3.0L V6	$29,995
Nissan Titan 2WD/4WD	Pickup	5.0L V8	-
Ram 1500 2WD/4WD	Pickup	3.0L V6	-
Ram 2500 HD	Pickup	6.7L I6	-
Ram Promaster 1500/2500	Van	3.0L V6	$27,475

This guide contains light-duty vehicles with a Gross Vehicle Weight Rating (GVWR) below 8,500 lbs and medium-duty passenger vehicles with a GVWR below 10,000 lbs. For any vehicles with a GVWR above 10,000 lbs, refer to the Clean Cities Guide to Alternative Fuel and Advanced Medium- and Heavy-Duty Vehicles *(afdc.energy.gov/uploads/publication/medium_heavy_duty_guide.pdf).*

Ethanol Flex-Fuel Vehicles

Audi Q5. *Photo courtesy of Audi*



Buick Verano. *Photo from General Motors*

Flex-fuel vehicles can operate on gasoline or E85

FFVs are able to run on gasoline, E85, or any combination of the two. E85 is a blend of gasoline and ethanol, with the ethanol content ranging between 51% and 83%, depending on geographical location and season.* A gallon of ethanol contains less energy than a gallon of gasoline; therefore, an FFV running on E85 can have lower fuel economy compared to a conventional vehicle depending on the season and blend level.

E15 and Intermediate Ethanol Blends

The EPA has approved the use of ethanol-gasoline blends up to E15 in all MY 2001 and newer vehicles. Fuel containing more than 15% ethanol is only approved for use in FFVs. This includes various intermediate blends now available from stations with ethanol blender pumps. Using blends higher than E15 in non-FFVs may result in maintenance, safety, or performance problems.

Blends of E15 and above are not approved for use in any gasoline engine that is MY 2000 or older, including motorcycles; vehicles with heavy-duty engines; off-road vehicles, such as boats and snowmobiles; or off-road equipment, such as lawnmowers and chainsaws. For more information, visit *afdc.energy.gov/fuels/ethanol_e15.html*.

Jeep Renegade. *Photo from Chrysler Group LLC*

FFVs have one fueling system, which is made up of ethanol-compatible components and a powertrain controller calibrated to accommodate the higher oxygen content of E85. Because FFVs are so similar to gasoline vehicles, many drivers are unaware that they are driving or fueling one. An FFV is often distinguished by an emblem on the back of the vehicle, and many FFVs have yellow fuel caps.

E85 is available at more than 2,700 publicly accessible stations. See page 38 for information about finding E85 stations near you.

* *The E85 fuel economy estimates presented in this section are based on tests with blends containing 79%–83% ethanol.*

Selling an Older Vehicle?

If you plan to sell a vehicle, use FuelEconomy.gov's used car label tool to advertise your vehicle's fuel economy. The tool is easy to use—just enter some basic information and then print a label for the vehicle's window or download a graphic to use in your advertisement. The label provides EPA estimates for the vehicle when it was new. Actual results will vary for many reasons, including current driving conditions and how the car was previously driven and maintained. Aftermarket modifications to the vehicle can also affect fuel economy, especially those that change the vehicle's weight, aerodynamics, or wheel/tire size (see page 35).

This information is provided as a sample only and should not be construed as an actual used car label. *Source: fueleconomy.gov/feg/UsedCarLabel.jsp*

Flex-Fuel Vehicle Model	Engine Size	Energy Impact Score* (barrels petroleum/year) On Gasoline / On E85	Smog Score**	GHG Score** Gasoline/ E85	Fuel Economy (mpg) Gasoline Combined/ City/Hwy	Fuel Economy (mpg) E85 Combined/ City/Hwy	Starting MSRP
Audi A4 Quattro	2.0 I4	13.2 / 4.2	5	6/6	25/21/30	18/15/22	$37,000
Audi A5 Quattro	2.0 I4	13.2 / 4.2	5	6/6	25/21/30	18/15/22	$40,500
Audi A5 Cabriolet Quattro	2.0 I4	13.7 / 4.4	5	5/6	24/21/29	17/15/21	$39,600
Audi Allroad Quattro	2.0 I4	13.7 / 4.4	5	5/6	24/21/28	17/15/21	$42,700
Audi Q5 AWD	2.0 I4	14.3 / 4.7	5	5/5	23/20/28	16/14/19	$40,900
Buick LaCrosse FWD/AWD	3.6L V6	15.7 / 4.7	6	5/5	21/18/28	16/14/20	-
Buick Verano	2.4L I4	-	-	-	-	-	$23,480
Chevrolet Caprice Police Patrol Vehicle	3.6L V6	-	-	-	-	-	-
Chevrolet Caprice Police Patrol Vehicle	6.0L V8	-	-	-	-	-	-
Chevrolet Equinox FWD/AWD	2.4L I4	12.7 / 4.2	6	6/6	26/22/32	18/15/22	$22,600

** Assuming 15,000 miles driven per year. ** 10 = Best.*

Table continued on next page

Flex-Fuel Vehicle Model	Engine Size	Energy Impact Score* (barrels petroleum/year) *On Gasoline* *On E85*	Smog Score**	GHG Score** *Gasoline/ E85*	Fuel Economy (mpg) Gasoline *Combined/ City/Hwy*	Fuel Economy (mpg) E85 *Combined/ City/Hwy*	Starting MSRP
Chevrolet Equinox FWD/AWD	3.6L V6	-	-	-	-	-	$28,200
Chevrolet Express Cargo Paratransit	6.0L V8	-	-	-	-	-	-
Chevrolet Express Prisoner Transport	6.0L V8	-	-	-	-	-	-
Chevrolet Express 2500	6.0L V8	-	-	-	-	-	$31,590
Chevrolet Impala	3.6L V6	15.0 4.7	6	5/5	22/19/29	16/14/20	$27,095
Chevrolet Impala Limited Police	3.6L V6	-	-	-	-	-	-
Chevrolet Silverado 1500 2WD/4WD	5.3L V8	17.3 5.3	-	4/4	19/16/23	14/12/17	$34,675
Chevrolet Silverado 1500 2WD/4WD	4.3L V6	16.5 5.3	-	4/4	20/18/24	14/12/16	$26,655
Chevrolet Silverado 1500 Special Services 2WD/4WD	5.3L V8	-	-	-	-	-	-
Chevrolet Silverado 2500HD 2WD/4WD	6.0L V8	-	-	-	-	-	$32,955

** Assuming 15,000 miles driven per year. ** 10 = Best.*

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Flex-Fuel Vehicle Model	Engine Size	Energy Impact Score* (barrels petroleum/year) On Gasoline / On E85	Smog Score**	GHG Score** *Gasoline/ E85*	Fuel Economy (mpg) Gasoline *Combined/ City/Hwy*	Fuel Economy (mpg) E85 *Combined/ City/Hwy*	Starting MSRP
Chevrolet Suburban 2WD/4WD	5.3L V8	18.3 / 5.8	5	4/4	18/16/23	13/11/17	$49,700
Chevrolet Tahoe Police 2WD/4WD	5.3L V8	-	-	-	-	-	-
Chevrolet Tahoe 2WD/4WD	5.3L V8	18.3 / 5.3	5	4/4	18/16/23	14/11/17	$47,000
Chrysler 200	2.4L I4	11.8 / 3.6	6	7/7	28/23/36	21/17/28	$21,995
Chrysler 200 FWD/AWD	3.6L V6	15.0 / 4.4	6	5/5	23/19/29	17/14/23	$21,995
Chrysler 300 RWD/AWD	3.6L V6	14.3 / 4.4	6	5/5	23/19/31	17/14/23	$31,895
Chrysler Dart	2.0L I4	12.2 / 3.7	6	6/7	27/24/34	20/18/25	-
Chrysler Town & Country	3.6L V6	16.5 / 5.3	6	4/5	20/17/25	14/12/18	$29,995
Dodge Charger Police Pursuit	3.6L V6	-	-	-	-	-	-
Dodge Charger RWD/AWD	3.6L V6	14.3 / 4.4	6	5/5	23/19/31	17/14/23	$27,995

** Assuming 15,000 miles driven per year. ** 10 = Best.*

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Flex-Fuel Vehicle Model	Engine Size	Energy Impact Score* (barrels petroleum/year) *On Gasoline* *On E85*	Smog Score**	GHG Score** *Gasoline/ E85*	Fuel Economy (mpg) Gasoline *Combined/ City/Hwy*	Fuel Economy (mpg) E85 *Combined/ City/Hwy*	Starting MSRP
Dodge Durango Police Special Service Vehicle	3.6L V6	-	-	-	-	-	-
Dodge Grand Caravan	3.6L V6	16.5 / 5.3	6	4/5	20/17/25	14/12/18	$21,995
Dodge Journey FWD	3.6L V6	17.3 / 5.3	6	4/5	19/17/25	14/12/18	$20,995
Ford Police Interceptor	3.5L V6	-	-	-	-	-	-
Ford Police Interceptor	3.7L V6	-	-	-	-	-	-
Ford Police Interceptor Utility	3.7L V6	-	-	-	-	-	-
Ford Explorer 2WD/AWD	3.5L V6	16.5 / 5.0	5	4/5	20/17/24	15/13/18	$30,700
Ford F-150	3.5L V6	16.5 / 5.0	-	4/5	20/18/25	15/13/18	$26,315
Ford F-150	5.0L V8	18.3 / 5.8	-	5/5	18/15/25	13/11/16	$26,315
Ford Focus	2.0L I4	10.6 / 3.3	-	7/8	31/27/40	23/20/29	$17,225

** Assuming 15,000 miles driven per year. ** 10 = Best.*

Table continued on next page

Flex-Fuel Vehicle Model	Engine Size	Energy Impact Score* (barrels petroleum/year) *On Gasoline* *On E85*	Smog Score**	GHG Score** *Gasoline/ E85*	Fuel Economy (mpg) Gasoline *Combined/ City/Hwy*	Fuel Economy (mpg) E85 *Combined/ City/Hwy*	Starting MSRP
Ford Super Duty F-250	6.2L V8	-	-	-	-	-	$32,385
Ford Transit 250	3.7L V6	-	-	-	-	-	$30,960
Ford Transit Connect	2.5L I4	14.3 / 4.4	5	5/5	23/20/28	17/15/20	$22,675
Ford Transit 150/250	3.7L V6	20.6 / 6.8	-	5/5	16/14/18	11/10/13	$30,960
GMC Savana 2500	6.0L V8	-	-	-	-	-	-
GMC Savana Cargo Paratransit	6.0L V8	-	-	-	-	-	-
GMC Sierra 1500 2WD/4WD	4.3L V6	17.3 / 5.3	-	4/4	19/16/23	14/12/17	$27,275
GMC Sierra 1500 2WD/4WD	5.3L V8	16.5 / 5.3	-	4/4	20/18/24	14/12/16	$40,752
GMC Sierra 2500 2WD/4WD	6.0L V8	-	-	-	-	-	-
GMC Terrain Denali FWD/AWD	2.4L I4	-	-	-	-	-	$33,975

** Assuming 15,000 miles driven per year. ** 10 = Best.*

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Flex-Fuel Vehicle Model	Engine Size	Energy Impact Score* (barrels petroleum/year) *On Gasoline* / *On E85*	Smog Score**	GHG Score** *Gasoline/ E85*	Fuel Economy (mpg) Gasoline *Combined/ City/Hwy*	Fuel Economy (mpg) E85 *Combined/ City/Hwy*	Starting MSRP
GMC Terrain FWD/AWD	2.4L I4	12.7 / 4.2	6	6/6	26/22/32	18/15/22	$23,975
GMC Yukon 1500 2WD/4WD	5.3L V8	18.3 / 5.8	5	4/4	18/16/23	13/11/17	$48,165
GMC Yukon XL 1500 2WD/4WD	5.3L V8	18.3 / 5.8	5	4/4	18/16/23	13/11/17	$50,865
Jeep Cherokee 2WD/FWD	2.4L I4	13.2 / 4.2	6	6/6	25/22/31	18/15/23	$23,395
Jeep Renegade 2WD/FWD	2.4L I4	13.2 / 3.9	6	6/7	25/22/31	19/17/24	$17,995
Mercedes-Benz CLA 250 4Matic	2.0L I4	12.2 / 3.7	-	6/7	27/24/33	20/18/24	-
Mercedes-Benz E350	3.5L V6	14.3 / 4.7	5	5/5	23/20/29	16/14/20	$53,100
Mercedes-Benz E350 4Matic	3.5L V6	14.3 / 4.4	5	5/6	23/20/28	17/15/21	$55,600
Mercedes-Benz GLA 250 4Matic	2.0L I4	12.2 / 3.9	-	6/6	27/24/32	19/17/24	-
Mercedes-Benz GLE350 4Matic	3.5L V6	17.3 / 5.0	5	4/5	19/17/22	15/13/17	-

** Assuming 15,000 miles driven per year. ** 10 = Best.*

Table continued on next page

Flex-Fuel Vehicle Model	Engine Size	Energy Impact Score* (barrels petroleum/year) On Gasoline / On E85	Smog Score**	GHG Score** Gasoline/ E85	Fuel Economy (mpg) Gasoline Combined/ City/Hwy	Fuel Economy (mpg) E85 Combined/ City/Hwy	Starting MSRP
Nissan Armada 2WD/4WD	5.6L V8	-	-	-	-	-	-
Nissan Titan 2WD/4WD	5.6L V8	-	-	-	-	-	-
Ram 1500 2WD/4WD	3.6L V6		6	4/4	20/17/25	14/12/17	$26,045
Toyota Sequoia 4WD	5.7L V8		5	2/2	14/13/17	10/9/13	$44,965
Toyota Tundra 2WD/4WD	5.7L V8		5	2/3	15/13/18	11/9/13	$31,690

** Assuming 15,000 miles driven per year. ** 10 = Best.*

This guide contains light-duty vehicles with a Gross Vehicle Weight Rating (GVWR) below 8,500 lbs and medium-duty passenger vehicles with a GVWR below 10,000 lbs. For any vehicles with a GVWR above 10,000 lbs, refer to the Clean Cities Guide to Alternative Fuel and Advanced Medium- and Heavy-Duty Vehicles (afdc.energy.gov/uploads/publication/medium_heavy_duty_guide.pdf).

Hybrid Electric Vehicles

Kia Optima. *Photo courtesy of Kia Motors America*

Hybrid technologies can boost fuel economy

HEVs are powered by an ICE and an electric motor that uses energy stored in a battery. HEVs run on gasoline, and cannot be plugged in like EVs or PHEVs. Instead, the battery is charged primarily through regenerative braking, which allows the battery to capture energy normally lost when braking. The extra power provided by the electric motor allows for a smaller engine, resulting in better fuel economy without sacrificing performance. As a result, HEVs are often 25% to 40% more fuel efficient than comparable conventional vehicles, some achieving fuel economy ratings above 40 mpg. The increased fuel economy results in lower levels of air pollutants and greenhouse gas emissions.

Hybrid models include "full" and "mild" configurations

This guide lists only "full" hybrids—those that can run on battery power alone during stops and at low speeds. With this configuration, at higher speeds the electric motor can also assist the gasoline engine by providing additional power. "Mild" hybrids, also known as stop-start vehicles, lack this intermittent electric-only driving capability but do save fuel by assisting the engine and shutting it down when the vehicle stops.

Toyota RAV 4. *Photo from Toyota Motor Sales, U.S.A., Inc.*

Ford Fusion. *Photo from Ford Motor Company*

Hybrid Electric Vehicle Model	Engine Size	Energy Impact Score* (barrels petroleum/year)	Smog Score**	GHG Score**	Fuel Economy (mpg) *Combined/City/Hwy*	Starting MSRP
Acura RLX Hybrid	3.5L V6	11.0	7	7	30/28/32	$59,950
Audi Q5 Hybrid AWD	2.0 I4	12.7	5	6	26/24/30	$52,500
BMW ActiveHybrid 5	3.0L I6	12.7	5	6	26/23/30	$63,095
Chevrolet Malibu	1.8L I4	-	-	-	-	$21,625
Ford C-MAX Hybrid	2.0L I4	8.2	-	9	40/42/37	$24,170
Ford Fusion Hybrid	2.0L I4	7.8	7	9	42/44/41	$25,675
Honda CRZ	1.5L I4	8.9	9	9	37/36/39	$19,995
Hyunda Sonata	2.4L I4	8.0	5	9	41/39/43	$26,000
Infiniti Q50 Hybrid FWD/AWD	3.5L V6	-	-	-	-	-
Infiniti Q50S Hybrid FWD/AWD	3.5L V6	-	-	-	-	-
Infiniti Q70 Hybrid	3.5L V6	-	-	-	-	-

** Assuming 15,000 miles driven per year. ** 10 = Best.*

Table continued on next page

Hybrid Electric Vehicle Model	Engine Size	Energy Impact Score* (barrels petroleum/year)	Smog Score**	GHG Score**	Fuel Economy (mpg) *Combined/City/Hwy*	Starting MSRP
Infiniti QX60 Hybrid	2.5L I4	-	-	-	-	-
Kia Optima	2.4L I4	8.7	-	9	38/36/40	-
Lexus CT 200h	1.8L I4	7.8	7	9	42/43/40	$31,250
Lexus ES 300h	2.5L I4	8.2	7	9	40/40/39	$40,920
Lexus GS 450h	3.5L V6	10.6	7	8	31/29/34	-
Lexus GS 450h F Sport	3.5L V6	-	-	-	-	-
Lexus LS 600h L	5.0L V8	-	-	-	20/19/23	$120,440
Lexus NX 300h FWD/AWD	2.5L I4	10.0	7	8	33/35/31	$39,720
Lexus RX 450h FWD/AWD	3.5L V6	-	-	-	-	-
Lincoln MKZ Hybrid	2.0L I4	8.2	7	9	40/41/39	$35,190
Subaru XV Crosstrek Hybrid	2.0L H4	10.6	7	7	31/30/34	$26,395

** Assuming 15,000 miles driven per year. ** 10 = Best.*

Table continued on next page

Hybrid Electric Vehicle Model	Engine Size	Energy Impact Score* (barrels petroleum/year)	Smog Score**	GHG Score**	Fuel Economy (mpg) *Combined/City/Hwy*	Starting MSRP
Toyota Avalon	2.5L I4	-	-	-	-	-
Toyota Camry	2.5L I4	8.0 	7	9	41/43/39	$26,790
Toyota Highlander	3.5L V6	-	-	-	-	-
Toyota Prius	1.8L I4	-	-	-	-	-
Toyota Prius c	1.5L I4	-	-	-	-	-
Toyota Prius v	1.8L I4	7.8 	7	9	42/44/40	$26,675
Toyota RAV 4	2.5L I4	-	-	-	-	-
Volkswagen Jetta Hybrid	1.4L I4	7.5 	7	9	44/42/48	$31,120

** Assuming 15,000 miles driven per year. ** 10 = Best.*

This guide contains light-duty vehicles with a Gross Vehicle Weight Rating (GVWR) below 8,500 lbs and medium-duty passenger vehicles with a GVWR below 10,000 lbs. For any vehicles with a GVWR above 10,000 lbs, refer to the Clean Cities Guide to Alternative Fuel and Advanced Medium- and Heavy-Duty Vehicles (afdc.energy.gov/uploads/publication/medium_heavy_duty_guide.pdf).

Thinking of Going Electric?

Below are the types of electric-drive vehicles at a glance:

HEVs: HEVs are powered by an internal combustion engine (ICE) and by an electric motor that uses energy stored in a battery. The battery is charged by the ICE and through regenerative braking, which recaptures some of the energy that is normally lost when braking. The vehicle cannot be plugged in to charge. The extra power provided by the electric motor allows for a smaller engine, resulting in better fuel economy without sacrificing performance.

Acura RLX. *Photo from American Honda*

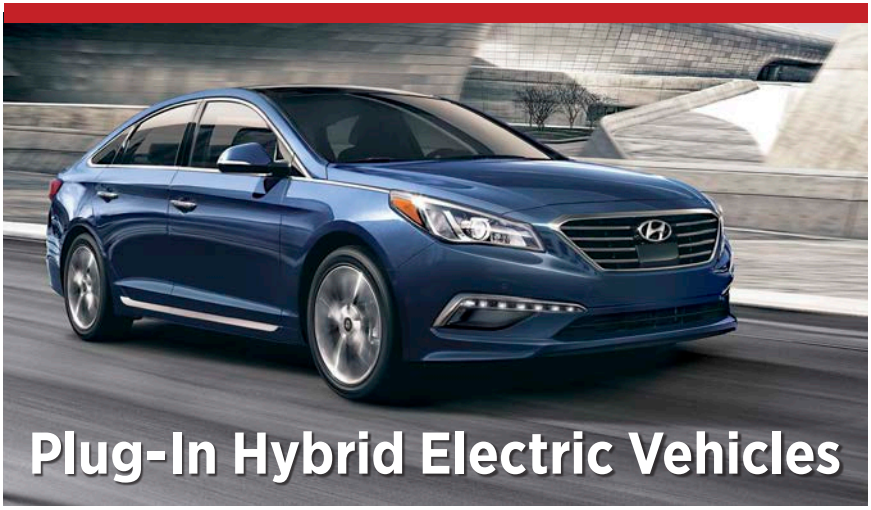
PHEVs: PHEVs are powered by an ICE and by an electric motor that uses energy stored in a battery (larger than the battery in an HEV). The battery can be charged by plugging in to an electric power source, through regenerative braking, and by the ICE. The larger battery allows a PHEV to travel on battery power alone.

Porsche Cayenne S e-Hybrid. *Photo courtesy of Porsche*

Unlike all-electric vehicles (EVs), PHEVs don't have to be plugged in before driving. They can be fueled solely with gasoline, like a conventional HEV. However, they will not achieve maximum fuel economy or take full advantage of their all-electric capabilities without plugging in. Some PHEVs are considered "extended-range electric vehicles" because the ICE only charges the battery and does not directly propel the vehicle.

EVs: EVs run on electricity alone. They are powered by an electric motor that uses energy stored in a battery (larger than the batteries in an HEV or PHEV). EV batteries are charged by plugging the vehicle in to an electric power source and (to a lesser degree) through regenerative braking.

Ford Focus. *Photo from Ford Motor Company*



Plug-In Hybrid Electric Vehicles

Hyundai Sonata. *Photo courtesy of Hyundai Motor America*

Plug-in hybrid electric vehicles provide flexibility in fueling and charging

PHEVs use a battery to power an electric motor and use another fuel, such as gasoline, to power an ICE. This configuration takes advantage of electricity's economic and emissions benefits, while providing the security of an ICE in terms of range and refueling. PHEV batteries can be charged by "plugging in" to an electric charging station or simple electrical wall outlet on a dedicated circuit. They can also be charged by the ICE or through regenerative braking.

Powering the vehicle with electricity some or all of the time can significantly reduce operating costs, petroleum use, and tailpipe emissions. Even when running on gasoline, PHEVs, like HEVs, consume less fuel and produce lower emissions than comparable conventional vehicles. However, unlike HEVs, some PHEVs can travel a significant distance on battery power alone. This is known as the vehicle's "all-electric range" and is generally 20–40 miles, depending on the model. Although most EVs will be charged at home or at the workplace, a growing network of more than 12,000 public charging

Chevrolet Volt. *Photo from General Motors*

stations is also available nationwide. (See page 38 for information about finding stations in your area.)

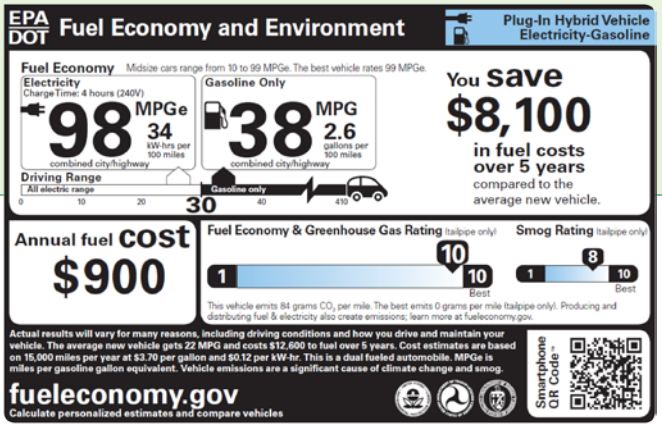
PHEV prices tend to be higher than those of similar conventional and hybrid electric vehicles although some of the higher initial cost may be recovered through fuel savings, a federal tax credit, or state incentives.

BMW xDrive40e. *Photo from BMW*

Plug-In Vehicles and EPA Labels

EPA labels display EV fuel economy estimates in kilowatt-hours per 100 miles and in MPGe. MPGe represents the number of miles a vehicle can travel using a quantity of fuel with the same energy content as a gallon of gasoline (33 kilowatt-hours). For PHEVs, EPA labels display separate fuel economy estimates for electric-only and gasoline-only modes. Estimates for gasoline-only operation are expressed in mpg and in gallons per 100 miles. All of this information allows consumers to compare efficiency across different types of vehicles and fuels. For more information, visit *fueleconomy.gov/label*.

EPA plug-in vehicle labels also contain information about GHG emissions and air pollution. EVs have favorable smog scores and GHG scores as compared to conventional vehicles. However, this information reflects tailpipe emissions only, and it does not account for well-to-wheels emissions, which are all emissions associated with the production, processing, and distribution of electricity (or gasoline, or any other fuel that powers the vehicle). For information on comparing well-to-wheels emissions of conventional and plug-in vehicles, visit *afdc.energy.gov/vehicles/electric_emissions.php*.



This information is provided as a sample only and should not be construed as an actual new car label. *Source: fueleconomy.gov/feg/UsedCarLabel.jsp*

Plug-In Hybrid Electric Vehicle Model	Gasoline Engine/ Electric Motor	Energy Impact Score* (barrels petroleum/ year)	All-Electric Range *(miles)*	GHG Score**	Fuel Economy		Starting MSRP
					Gasoline Only *(mpg) Combined/City/Hwy*	Electric + Gasoline *(mpge) Combined City-Hwy*	
Audi A3 Sportback e-tron	1.4L I4/75 kW	-	-	-	-	-	$37,900
BMW i3 REX	0.6L I2/125kW	1.6	72	10	39/41/37	117	$42,400
BMW i8 Plug-in Hybrid	1.5L I3/96kW	7.4	14	10	28/28/29	76	$136,500
BMW X5 xDrive40e Plug-in Hybrid	2.0L I4/83 kW	9.2	14	8.0	22/21/24	56	$62,100
Cadillac ELR	1.4L I4/111 kW	3.5	40	10	32/31/33	85	$65,000
Chevrolet Volt	1.4L I4/111 kW	2.0	53	10	43/42/42	106	$33,170
Ford C-MAX Energi	2.0L I4/68 kW	4.9	20	10	38/40/36	88	$31,770
Ford Fusion Energi	2.0L I4/68 kW	4.9	20	10	38/40/36	88	$33,900
Hyundai Sonata Plug-in Hybrid	2.4L I4/50 kW	3.8	-	10	40/38/41	99	-
McLaren P1	3.8L V8/132 kW	10.8	-	4	17/16/20	18	-

** Assuming 15,000 miles driven per year. ** 10 = Best.*

Table continued on next page

Plug-In Hybrid Electric Vehicle Model	Gasoline Engine/ Electric Motor	Energy Impact Score* (barrels petroleum/ year)	All-Electric Range *(miles)*	GHG Score**	Fuel Economy		Starting MSRP
					Gasoline Only *(mpg) Combined/City/Hwy*	Electric + Gasoline *(mpge) Combined City-Hwy*	
Mercedes-Benz C350e Plug-in Hybrid	2.0L I4/60 kW	-	18 (est.)	-	-	-	-
Mercedes-Benz S550e Plug-in Hybrid	3.0L V6/85 kW	8.2	14	9	26/24/30	58	$95,650
Porsche 918 Spyder	4.6L V8/95 kW front/115 kW rear	10.4	12	8	22/20/24	67	$845,000
Porsche Cayenne S e-Hybrid	3.0L V6/70 kW	9.5	14	9	22/21/24	47	$77,200
Porsche Panamera S e-Hybrid	3.0L V6/70 kW	8.0	15	8	25/23/29	51	$96,100
Toyota Prius Plug-in	1.8L I4/38 kW	-	-	-	-	-	-
Volvo XC90 T8 Plug-in Hybrid	2.0L I4/65 kW	-	20 (est.)	-	-	-	$68,100

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All-Electric Vehicles

Nissan Leaf. *© 2013 and 2014 Nissan. Nissan, Nissan model names and the Nissan logo are registered trademarks of Nissan.*

All-electric vehicles can yield significant emissions benefits

EVs are powered by an electric motor (or motors) using a battery, which is charged by "plugging in." Electric motors provide quiet operation and require less maintenance than traditional ICEs. EVs produce no tailpipe emissions, although the power plant producing the electricity may emit them (this varies geographically). Recharging can take 20 minutes to more than 20 hours, depending on several factors, such as the type of charging equipment used; the type of battery, its capacity, and how depleted it is; and the capacity of the vehicle's internal charger.

Fiat 500e. *Photo from Chrysler Group LLC*

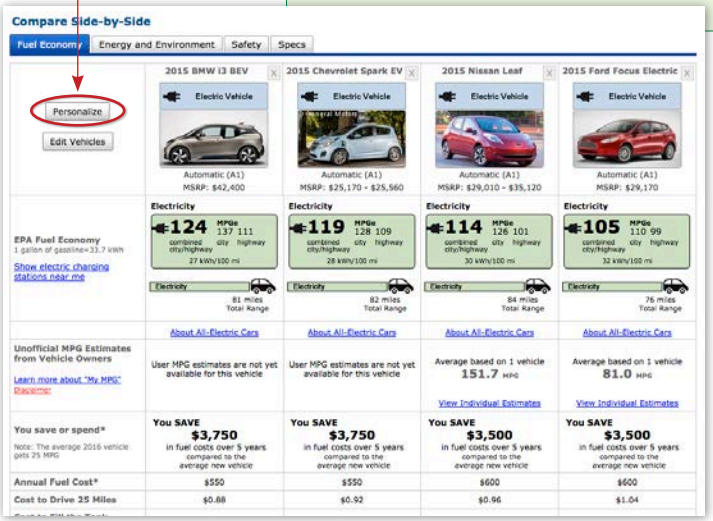
EVs are extremely efficient, usually earning fuel-economy ratings above 100 MPGe. However, their efficiency can be more sensitive to driving style, driving conditions, and accessory use than conventional vehicles. Their prices also tend to be higher than those of similar conventional and HEVs because of the cost of their batteries. However, researchers are working to improve battery technologies and reduce the associated costs. Buyers may recover some of the higher initial cost through fuel savings, a federal tax credit, or state incentives. See page 29 to find out how to calculate EV fuel savings, and page 38 for information about finding incentives.

The popularity of EVs is expected to grow. Most major vehicle manufacturers now offer a fully electric vehicle for sale or lease. However, some models are only available in

Compare Fuel Costs Before You Buy

The Find and Compare Cars tool at *fueleconomy.gov* features an annual fuel cost calculator that allows you to enter 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.

Click "Personalize" to enter the fuel cost calculator



Electric-Drive Vehicle Terms

Regenerative Braking: Regenerative braking allows HEVs, PHEVs, and EVs to capture energy normally lost during braking by using the electric motor as a generator and storing that captured energy in the battery.

All-Electric Range: The distance an electric-drive vehicle can drive on battery power alone without recharging.

select markets, such as California and other states that have zero-emission mandates in place. In December 2015, there were more than 388,000 registered plug-in vehicles on the road, 201,000 of which were EVs. A growing network of more than 12,000 publicly available charging stations supports these vehicles, although most EVs will be charged at home or at the workplace. The number of DC fast charging stations—stations that can add 50 to 70 miles of range to the battery in roughly 20 minutes—is also rising, allowing for shorter charging times and increasing vehicle utility. See page 38 for information about finding stations in your area, and visit the AFDC at *afdc.energy.gov/fuels/electricity_infrastructure.html* to learn more about EV charging.

Electric Vehicle Model	Electric Motor/ Battery Size	Energy Impact Score* (barrels petroleum/ year)	Driving Range *(miles)*	GHG Score**	Fuel Economy (mpge) *Combined/City/Hwy*	Starting MSRP
BMW i3	125 kW/21 kWh	0.2	81	10	124/137/111	$42,400
Chevrolet Spark	104 kW/20 kWh	0.2	82	10	119/128/108	-
Fiat 500e	83kW/24 kWh	0.2	87	10	116/122/108	-
Ford Focus	107 kW/23 kWh	0.2	76	10	105/110/99	$29,170
Kia Soul	50 kW/16.4 kWh	0.2	93	10	105/120/92	$31,950
Mercedes-Benz B250e	132 kW/28 kWh	0.2	87	10	84/85/82	-
Mitsubishi i-MiEV	49 kW/16 kWh	0.2	62	10	112/126/99	$22,995
Nissan Leaf	80 kW/24 kWh	0.2	84	10	114/126/101	-
smart fortwo	55 kW/17.6 kWh	0.2	68	10	107/122/93	-
Tesla Model S	285 kW/70 kWh	0.2	265	10	89/88/90	-

** Assuming 15,000 miles driven per year. ** 10 = Best.*

Table continued on next page

Electric Vehicle Model	Electric Motor/ Battery Size	Energy Impact Score* (barrels petroleum/ year)	Driving Range *(miles)*	GHG Score**	Fuel Economy (mpge) *Combined/City/Hwy*	Starting MSRP
Tesla Model S AWD	350 kW front/ 285 kW rear/90 kWh	0.2	270	10	100/95/106	-
Tesla Model X AWD 90D	193 kW front/ 193 kW rear/90 kWh	0.2	257	10	92/90/94	-
Volkswagen e-Golf	85 kW/24.2 kWh	0.2	83	10	116/126/105	$28,995

** Assuming 15,000 miles driven per year. ** 10 = Best.*

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Tesla Model S electric vehicle.
Photo from Tesla Motors

Hydrogen Fuel Cell Vehicles

Honda FCV. *Photo from American Honda*

Hydrogen fuel cell vehicles meet driving range and refueling expectations while producing no tailpipe emissions

An FCEV uses hydrogen as a fuel. In an FCEV, a fuel cell combines hydrogen gas with air to produce electricity, which drives an electric motor to make the car run. Similar to today's gasoline vehicles, FCEVs can have a driving range of more than 300 miles on one tank of fuel and can refuel in less than five minutes. Hydrogen fuel can be sourced from diverse domestic energy sources like natural gas, wind, and solar.

FCEVs are similar to all-electric vehicles because they run on electricity without producing emissions or using combustion engines. Compared to conventional gasoline vehicles, FCEVs can reduce life cycle carbon dioxide and criteria air pollutants up to 50% if the hydrogen is produced by natural gas, or up to 90% if the hydrogen is produced by renewables such as wind and solar. These benefits, combined with quiet operation, low maintenance needs, and high reliability, can make FCEVs an appealing choice.

Hyundai Tucson. *Photo courtesy of Hyundai Motor America*

Many manufacturers have begun actively developing and producing FCEVs, although they are currently only available in select markets such as California. Toyota has officially started selling its hydrogen fuel cell vehicle (the Mirai), while Hyundai is leasing its fuel cell SUV (the Tucson FCV). Honda announced it will begin selling a commercial FCEV sedan (the Clarity Fuel Cell) in the spring of 2016 as well. Manufacturers such as General Motors, Mercedes/Daimler, Nissan, Ford, and BMW also have plans to follow suit—all committing to putting FCEVs on the road in the near future.

Fueling infrastructure is an important factor

Efforts are under way to build hydrogen fueling infrastructure to make FCEVs practical for widespread use. Currently, California is leading the nation by establishing publicly accessible hydrogen fueling stations. In the next few years, it is projected there will be more than 50 public stations available nationwide. Visit the AFDC's Alternative Fueling Station Locator (*afdc.energy.gov/locator/stations/*) to find publicly accessible hydrogen fueling stations.

See page 38 for more information on finding fueling stations.

Toyota Mirai. *Photo from Toyota Motor Sales, U.S.A., Inc.*

Fuel Cell Electric Vehicle Model	PEM Fuel Cell	Energy Impact Score* (barrels petroleum/yr)	Smog Score**	GHG Score**	Fuel Economy (mi/kg) *Combined/City/Hwy*	Starting MSRP
Honda FCV	100 kW	-	10	-	59/58/60	-
Hyundai Tucson	100 kW	-	10	10	50/49/51	-
Toyota Mirai	100 kW	-	-	-	66/66/66	-

** Assuming 15,000 miles driven per year. ** 10 = Best.*

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Propane Vehicles

Ford Transit available with LPG prep package. *Photo from Ford Motor Company*

Propane is used in vehicles worldwide

Also known as liquefied petroleum gas (LPG), propane is the third most commonly used motor fuel in the world (behind gasoline and diesel fuel). Nearly all of the propane consumed in the United States is produced in North America. Propane's price can be lower and more stable than that of gasoline, especially when a fleet enters a purchase agreement with a fuel provider. State incentives may further improve the return on investment. Propane vehicles are similar to their gasoline counterparts with regard to power, acceleration, and cruising speed. There are two types of light-duty propane vehicles: Dedicated vehicles are designed to run only on propane, while bi-fuel vehicles have two separate fueling systems that enable them to run on either propane or gasoline. The driving range of dedicated vehicles is comparable to that of gasoline vehicles, whereas bi-fuel vehicles have a much longer driving range compared to gasoline vehicles because of their secondary fuel system and fuel supply.

Ford F150 available with LPG prep package. *Photo from Ford Motor Company*

Fueling infrastructure is an important factor

It's important that you know where propane fueling is available before purchasing a propane vehicle. As of December 2015, propane is available at more than 1,530 stations throughout the country. See page 38 for information on finding propane fueling stations in your area.

Ford Transit Chassis Cab available with LPG prep package.
Photo from Ford Motor Company

Propane Vehicle Model	Vehicle Type	Engine Size	Starting MSRP
Ford F-150*	Pickup	5.0L V8	$26,315
Ford Super Duty F-250*	Pickup	6.2L V8	$32,385
Ford Transit 150/250*	Van/Wagon	3.7L V6	$30,960
Ford Transit 250*	Cassis Cab	3.7L V6	$30,960
Ford Transit Connect*	Van/Wagon	2.5L I4	$22,675

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** Ford offers a "prep package" for this vehicle. An approved qualified vehicle modifier (QVM) can convert the vehicle to run on propane for delivery through select Ford dealerships, without impacting OEM warranties or service agreements.*

Converting Vehicles to Run on Alternative Fuels

An increasing number of alternative and advanced vehicles are available from major manufacturers, but some conventional vehicles can be converted to run on CNG, propane, or other alternative fuels.

All conversions must meet emissions and safety standards instituted by the EPA, the National Highway Traffic Safety Administration, and relevant state agencies. Major OEMs and their approved operating system suppliers provide systems for new vehicles that are factory equipped to operate on alternative vehicles. Conversions should be performed by an authorized technician associated with a manufacturer that holds all relevant emissions-related certifications and permissions. Find out more about vehicle conversions at *afdc.energy.gov/vehicles/conversions.html*.

Compressed Natural Gas Vehicles

GMC Sierra 2500 HD. *Photo from Chrysler Group LLC*

Compressed natural gas vehicles offer low fuel costs, among other benefits

CNG is a clean-burning, abundant, and domestically produced source of energy. Traditionally used for cooking and heating our homes, CNG as a vehicle fuel has grown along with the availability of vehicles and new fueling infrastructure. Natural gas vehicles (NGVs) get about the same fuel economy as comparable conventional vehicles on a gasoline gallon equivalent (GGE) basis, and natural gas prices are typically lower than gasoline and diesel prices. The resulting fuel cost savings can help offset the purchase price of a CNG vehicle, and state incentives may provide additional financial assistance (see page 38). NGVs are also similar to their gasoline counterparts with regard to power, acceleration, and cruising speed.

There are two types of light-duty NGVs: Dedicated vehicles are designed to run only on CNG, while bi-fuel vehicles have two separate fueling systems that enable them to run on either CNG or gasoline. Because of CNG's lower energy density, the driving range of dedicated vehicles is typically shorter than that of gasoline vehicles. However, bi-fuel vehicles have a much longer driving range compared to gasoline vehicles because of their secondary fuel system and fuel supply.

While there are a few light-duty vehicle offerings available, NGVs are more common in the medium- to heavy-duty vehicle market.

Fuel from Waste?

Renewable natural gas (RNG), or biomethane, is produced from decaying organic materials, such as waste from landfills, wastewater, and livestock. After impurities are removed, the biogas produced from these operations is ready for use in vehicles or distribution through the existing pipeline system. Because it is produced from

non-fossil-fuel sources, RNG produces far fewer GHG emissions and uses less fossil fuel than conventional natural gas.

Chevy Impala. *Photo from General Motors*

Fueling infrastructure is an important factor

When considering the purchase of a NGV, it's important to determine whether CNG fueling infrastructure is available in locations that are convenient to you. As of December 2015, there were more than 890 publicly accessible CNG fueling stations across the country.

See page 38 for more information on finding fueling stations.

Natural Gas Vehicle Model	Vehicle Type	Engine Size	Starting MSRP
Chevrolet Impala	Sedan	3.6L V6	-
Chevrolet Silverado 2500 HD	Pickup	6.0L V8	$32,955
GMC Sierra 2500 HD	Pickup	6.0L V8	-
Ram 2500	Pickup	5.7L V8	-
Chevrolet Express Prisoner Transport	Van	6.7L V8	-
Chevrolet Express 2500	Van	6.0L V8	-
GMC Savana 2500	Van	6.0L V8	-
Ford F-150*	Pickup	5.0L V8	$26,315
Ford Super Duty F-250*	Pickup	6.2L V8	$32,385
Ford Transit 150/250*	Van/Wagon	3.7L V6	$30,960
Ford Transit 250*	Cassis Cab	3.7L V6	$30,960
Ford Transit Connect*	Van/Wagon	2.5L I4	$22,675

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** Ford offers a "prep package" for this vehicle. An approved qualified vehicle modifier (QVM) can convert the vehicle to run on propane for delivery through select Ford dealerships, without impacting OEM warranties or service agreements.*

State-Specific Fuel and Vehicle Data at Your Fingertips

Quickly get the scoop about alternative fuels and advanced vehicles in your state by visiting the new State Information pages (*afdc.energy.gov/states/*) on the AFDC. Simply select a state and you will be presented with information about laws and incentives, fueling stations, vehicles, fuel prices, and more—all in one easily accessible place.

The pages also allow you to quickly identify alternative transportation projects happening around the state, locate your nearest Clean Cities coalition, and find other reliable resources. For more information, contact your local Clean Cities coordinator (*cleancities.energy.gov/coalitions/contacts/*).

Improve the Fuel Economy of Your Vehicle

Ensure that your efforts to improve fuel economy are well-informed with information and tools available at *FuelEconomy.gov*. There you can compare conventional and alternative fuel vehicles using the Find a Car tool. You can also get extensive information for vehicles of current and past model years on fuel economy ratings, emissions, energy impacts, annual fuel costs, and more.

Driving behaviors significantly impact fuel economy. Follow these tips to begin getting the most out of your vehicle now:

- **Don't drive aggressively:** Speeding and rapid acceleration and braking lowers gas mileage.
- **Observe the speed limit:** Fuel economy generally decreases at speeds above 50 mph.
- **Remove rooftop boxes and racks when not in use:** Increased drag lowers fuel economy.
- **Remove excess weight:** Don't keep unnecessary items in your vehicle.
- **Avoid excessive idling:** Turn off the engine when parked.
- **Use cruise control on the highway:** Keeping a constant speed saves gas, in most cases.
- **Keep the vehicle's engine tuned and tires properly inflated.**
- **Use overdrive gears:** When the car's engine speed goes down, so does the amount of gasoline used.

For more information, visit FuelEconomy.gov's "Driving More Efficiently" page (*fueleconomy.gov/feg/driveHabits.shtml*).

U.S. Department of Energy

Clean Cities advances the nation's economic, environmental, and energy security by supporting local actions to cut petroleum use in transportation. A national network of nearly 100 Clean Cities coalitions brings together stakeholders in the public and private sectors to deploy alternative and renewable fuels, idle-reduction measures, fuel economy improvements, and advanced transportation technologies.

For more information, visit:

- *cleancities.energy.gov*
- *fueleconomy.gov*
- *afdc.energy.gov*

Chevrolet Silverado. *Photo from General Motors*

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