

ADVANCED FUEL

BUYER'S GUIDE



2017



COMPRESSED
NATURAL GAS



PROPANE
AUTOGAS



BIODIESEL



ETHANOL



HYBRID



PLUG-IN HYBRID



ALL-ELECTRIC



Go Further

WHY ADVANCED FUEL IS IMPORTANT TO YOU AND FORD

Reduced carbon footprint.

For many businesses, operating a fleet is the single largest contributor to their carbon footprint.

When a business decides to reduce its carbon output, the fleet managers need to know how to identify which advanced fuel can make the biggest difference.

Reduced dependence on foreign oil.

Most of the world's oil reserves are concentrated in the Middle East. Since most advanced fuels are available in the U.S. from U.S. sources, switching to advanced fuels can limit how much money is transferred offshore to support our domestic energy demands.

Ford offers customers a complete selection of Advanced Fuel Commercial Vehicles



	Transit Connect Van/Wagon	Transit Van/Passenger Wagon	Transit Cutaway/Chassis Cab	E-450 Cutaway Chassis	E-450 Stripped Chassis
Fuel Type					
Ethanol (E85)	✓*	✓**	✓**	✓	✓
Biodiesel (B20)		✓	✓		
CNG	✓	✓	✓	✓	✓
Propane		✓	✓	✓	✓
GVWR (lbs.)	4,820 - 5,280	8,550 - 10,360	9,000 - 10,360	14,000 - 14,500	14,000 - 14,500
GCWR (lbs.)	5,840 - 6,320	10,600 - 13,500	12,000 - 13,500	18,000 - 22,000	18,000 - 22,000
Payload (lbs.)	1,130 - 1,610	2,610 - 4,650	4,420 - 6,020	8,610 - 9,090	9,230 - 9,690
Engine	2.5L DOHC I-4†	3.7L Ti-VCT V6† 3.5L EcoBoost® V6 3.2L I-5 Power Stroke® Diesel	3.7L Ti-VCT V6† 3.2L I-5 Power Stroke Diesel	6.8L Triton® V10† 6.2L V8 FFV	6.8L Triton V10† 6.2L V8 FFV
Transmission	6-Speed SelectShift® Automatic with Overdrive	6-Speed SelectShift Automatic with Overdrive	6-Speed SelectShift Automatic with Overdrive	TorqShift® 6-Speed Automatic with Overdrive	TorqShift 6-Speed Automatic with Overdrive

*Available in certain states only. See dealer for details.

**Government orders only.

†Available with CNG/Propane Gaseous Engine Prep Package.

Cost of ownership.

All fleet managers should consider the combination of acquisition costs, fuel prices and residual values to determine the total cost of ownership of the vehicles in their fleet. Although acquisition costs for advanced fuel vehicles may be higher, these costs are often offset by the lower costs of the advanced fuels. In addition, the lower volatility of advanced fuel prices reduces risk of future price shocks.

Changing the way the world moves.

We are using innovative thinking and advanced technology to solve tomorrow's biggest transportation challenges today. Since launching our Ford Smart Mobility plan early in 2015, we have made significant progress in connectivity, mobility, autonomous vehicles, customer experience and data analytics.



F-150 Pickup	F-250/350/450 Super Duty® Pickup	F-350/450/550 Super Duty Chassis Cab	F-650/F-750 Medium Duty Chassis Cab	F59 Commercial/ F53 RV Stripped Chassis
✓	✓	✓		
✓	✓	✓	✓	
✓	✓	✓	✓	✓
6,010 - 7,850	9,900 - 14,000	9,800 - 19,500	Gas: 22,000 - 33,000 Diesel: 20,500 - 37,000	16,000 - 22,000 (F59) 16,000 - 26,000 (F53)
9,400 - 17,100	19,500 - 41,800	19,500 - 40,000	37,000 - 50,000	23,000 - 26,000 (F59) ¹ 23,000 - 30,000 (F53)
1,570 - 3,270	2,240 - 7,630	2,620 - 12,730	12,593 - 27,402	10,050 - 15,610 (F59) ² 9,650 - 18,720 (F53)
3.5L Ti-VCT V6 FFV 2.7L V6 EcoBoost 3.5L V6 EcoBoost 5.0L V8 FFV†	6.2L V8 FFV† 6.7L Power Stroke V8 Diesel	6.2L V8 FFV† 6.8L Triton V10† 6.7L Power Stroke V8 Diesel	6.8L V10† 6.7L Power Stroke V8 Diesel	6.8L V10†
Electronic 6-Speed Automatic Transmission with Tow/Haul and Sport Mode (NA w/3.5L V6 EcoBoost; std w/3.5L V6 Ti-VCT, 2.7L V6 EcoBoost & 5.0L V8 engines) Electronic Ten-Speed Automatic Transmission with Tow/Haul and Sport Mode (standard on 3.5L EcoBoost Engine and 3.5L V6 EcoBoost High Output Engine)	TorqShift 6-Speed SelectShift Automatic with Tow/Haul Mode (NA F-250 with 6.2L Engine) TorqShift-G 6-speed with SelectShift® with Tow/Haul Mode (F-250 with 6.2L V8)	TorqShift 6-Speed SelectShift Automatic with Tow/Haul Mode	TorqShift Heavy Duty 6-Speed Automatic with Overdrive	TorqShift 6-Speed Automatic with Overdrive and Tow/Haul Mode

¹ F59 has a max GCWR of 29,700 lbs. with the Parcel Delivery Van Package available with the 208" WB/Parcel Delivery Pkg.

² F59 has a max payload of 15,750 lbs. with the Parcel Delivery Van Package available with the 178" WB/22,000 lbs. GVWR.

FORD PROVIDES COMPLETE CUSTOMER SUPPORT



Nationwide Dealer Network

Ford has a nationwide network of more than 3,000 dealers who provide sales, finance and service support. Ford is a well-established leader in commercial sales and has a long history of providing vehicles that are Built Ford Tough®.



Ford Credit Commercial Lending Services

Ford Credit Commercial Lending Services help meet the unique demands of your business. Our finance products can be tailored to respond to fleet needs such as advanced fuel upfits, high-mileage leases or flexible payment plans. We also offer Commercial Lines of Credit to help obtain vehicles quickly and easily.



Commercial Vehicle Center

The right place to find the right commercial vehicle. Ford Commercial Vehicle Center dealers are specially trained and equipped to sell, service and finance America's best-selling commercial vehicles for 32 straight years.**



Gaseous Engine Prep Package

CNG and Propane Autogas (LPG) are increasingly popular choices for cutting fuel costs and greenhouse gas emissions. Ford offers Gaseous Engine Prep packages across our entire commercial vehicle lineup. These packages include hardened valves and valve seats and other components to withstand the higher operating temperatures and lower lubricity of gaseous fuels.



Detailed Engineering Requirements

The Qualified Vehicle Modifier (QVM) Program is intended to help modifiers achieve greater levels of customer satisfaction and product acceptance through the manufacture of high-quality vehicles. This program assures vehicle modifiers have the capability and processes in place to maintain the integrity of the Ford systems while meeting federal and Ford Motor Company required standards.



Established Truck Equipment Upfitters

To get the equipment your business needs to get work done in an efficient, cost-effective manner, Ford has established Pool Accounts. These equipment specialists assist Ford Dealers to ensure you have the right truck for the right job every time.



Warranty-Parts-Service

Ford Dealers are equipped to provide any necessary service repairs. They stock Ford Authorized parts, and service technicians are factory-trained. Ford service departments are backed by computerized diagnostic equipment and have access to national hotline support.



Roadside Assistance 24 Hours-Seven Days

Ford provides roadside assistance 24 hours a day, seven days a week on all Ford commercial vehicles. By dialing 1-800-241-3673, Ford commercial advanced fuel vehicle customers also have access to flat tire change, locksmith service (if locked out) and towing.

**Based in IHS Markit CY1985-2016 US TIP Registrations excluding registrations to individuals. TIP Registrations prior to 2010 do not include all GVW 1 and 2 vehicles.

FORD ENGINEERING SUPPORT

Gaseous Fuel Qualified Vehicle Modifiers (QVM)

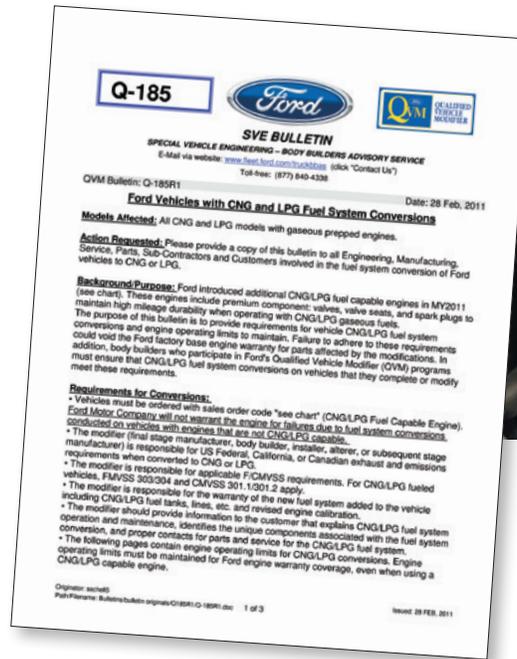


Ford has established a rigorous qualification program for advanced fuel vehicle modifiers. These guidelines are intended to provide guidance, modification recommendations and engine

operating specifications required to ensure customer satisfaction and reliability in line with Ford Motor Company standards.

On-site assessments at each QVM location assure conformance to a high standard of manufacturing, assembly, workmanship and customer service.

Modifiers that have demonstrated compliance with the Ford QVM guidelines and validation of the Q-185 engine operating parameters are listed on pages 6 and 7.



Engine dynamometer and calibration tests.

Bulletin For Gaseous Fuel Modification

Ford has released a Qualified Vehicle Modifier (QVM) Bulletin Q-185 that provides guidance on modifying Ford Gaseous Prep Engines. The bulletin is updated as required and contains the following information:

- Proper engine order codes required for CNG/Propane conversion
- Calibration requirements to maintain factory limited warranty on the base engine
- Modifier responsibilities for required government emission and safety (FMVSS) certification
- Modifier responsibilities for warranty of the new or modified fuel system components
- Modifier required information for the customer to explain CNG/Propane fuel system operation and maintenance, identify unique components associated with the CNG/Propane conversion, and provide contacts for parts and service of the CNG/Propane fuel system

QVM Bulletin #Q-185 can be found on Ford's Fleet website: www.fleet.ford.com/truckbbas, refer to Bulletins Tab.

BROAD PORTFOLIO OF GASEOUS FUEL SOLUTIONS

Gaseous Fuel QVM Developers

Ford recognizes four Gaseous Fuel QVM Developers. These companies develop and provide the engine calibration systems, dynamometer testing, compliance with federal safety standards, and adherence to Ford engineering specifications required for successful vehicle operation with gaseous fuels. They also hold the emissions certifications (either EPA or CARB) required for air quality assurance. The QVM Developers ensure that your gaseous fuel-capable vehicle is delivered to your dealership ready to operate.

Gaseous Fuel QVM Developer Contact Information

COMPANY	WEBSITE
Altech-Eco	altecheco.com
Landi Renzo®	landiusa.com
ROUSH® CleanTech	ROUSHcleantech.com
Westport/IMPCO®	westport.com

Gaseous Fuel QVM Developer Chart

Model	CNG		PROPANE	
	Dedicated	Bi-Fuel	Dedicated	Bi-Fuel
Transit Connect	A**	A	—	—
Transit	A**, W	A	—	W
E-450	L*, W*	—	R*	—
F-150	A, W	A, W	W	W
F-250–350	A, L*, W*	A, L	—	W
F-450–550	L*, W*	—	R*	—
F-650–750	L, W*	—	R*	—
F53, F59 Stripped Chassis	L, W*	—	R*	—

* CARB Certified.

** Only available in warm weather states. See Altech-Eco website for details.

A = Altech-Eco, L = Landi Renzo, R = ROUSH CleanTech, W = Westport

Electrification & Hydraulic Hybrid QVMs

Over the past five years, Ford has incorporated significant customer and QVM feedback to help improve the customer experience with advanced fuels. Recently, customer interest in electrification of commercial vehicles has encouraged us to develop a QVM solution for electric and other powertrains (eQVM). Our early-stage efforts include several companies including: XL Hybrids, Lightning Hybrids and Motiv along with other companies engaged to address these emergent advanced options.

QVM INSTALLERS

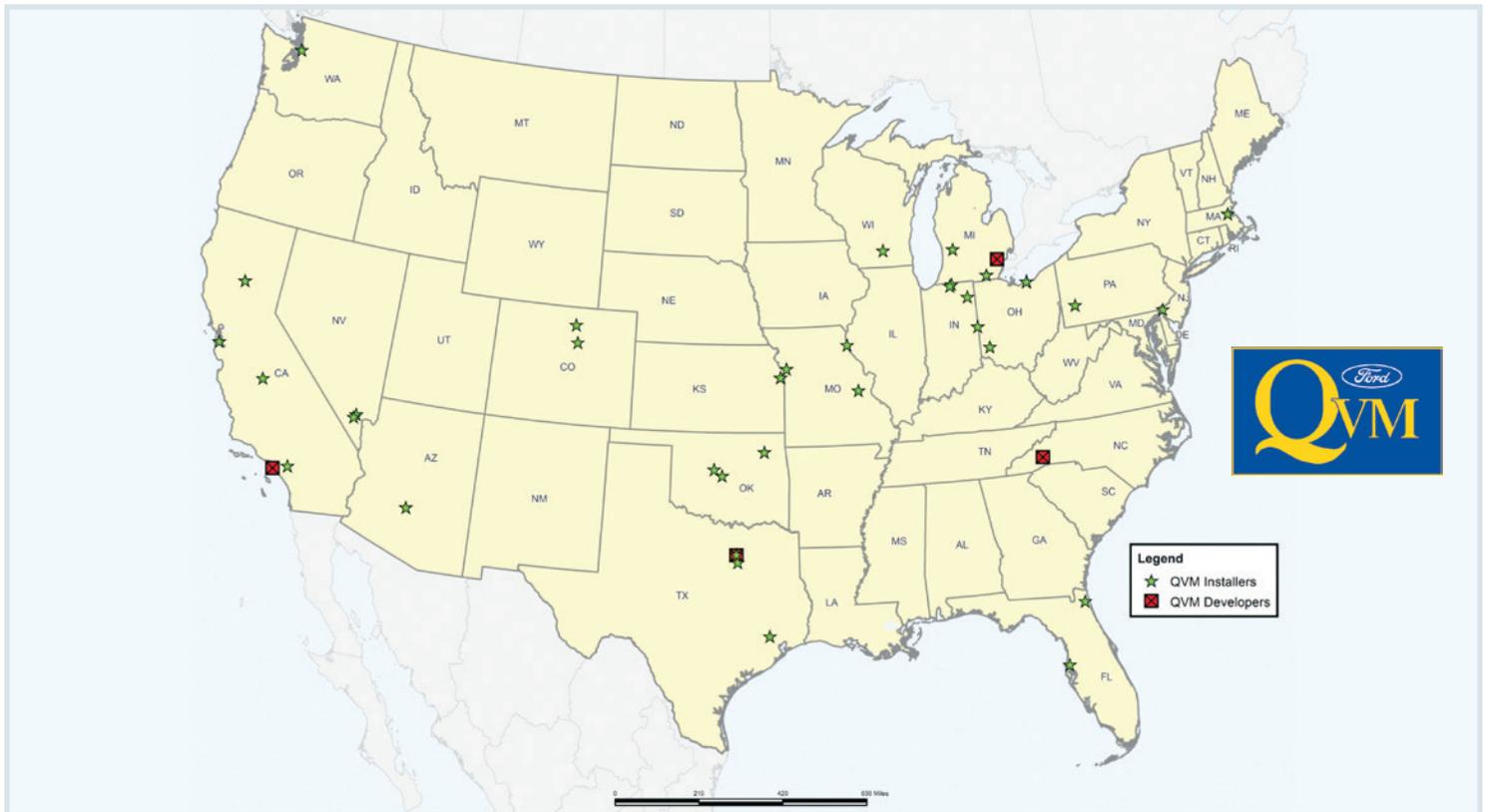
Managing Myriad Modification Options

The number of vehicle conversion options available for Ford vehicles is limited only by the ideas our customers present. Every vocation has its own set of challenges for which vehicle modifications have been developed. And every customer needs to get the right vehicle for the right job in the right place at the right time to get the job done. To help manage this process efficiently, Ford and our QVM Developers work with a network of QVM Installers.

Gaseous Fuel QVM Installers

Ford allows our QVM Developers to work with various body companies and accounts to satisfy the diverse needs of our collective customer base. These modifiers are required to follow

the specific installation guidelines for each QVM Developer to ensure emissions and safety compliance of every installed system. This process allows for a wider distribution of gaseous fuel vehicles to the complete range of Ford Commercial Vehicles. Ford's QVM Installers are held to the same rigorous assessment process used for our QVM Developers. Furthermore, each QVM Developer works with their Installers to ensure adherence to the unique characteristics of each developer's fuel system. The final result is a network of installation locations that maintain the warranty on the base Ford vehicle and enable Ford to assist QVM Developers with service and maintenance of these vehicles throughout their operation.



Benefits of the QVM Installer Network

- Designing solutions that incorporate the fuel system and body modifications simultaneously
- Efficiency in the modification process
 - One-stop-shop for fuel system and body installation
 - Ship-thru capability at many locations to help reduce freight costs
 - Locations around the country for vehicle modification, close to customer operations
- Multiple QVM Developer solutions through some QVM Installers

FORD IS EASY TO WORK WITH



The commercial vehicle market is comprised of many unique vocations and vehicle requirements. One size does not fit all. That's why Ford is collaborating with reliable and qualified modifiers to deliver completed advanced fuel vehicles. Most Ford commercial vehicles can be ordered with a CNG/Propane Gaseous Engine Prep Package. In fact, all 6.8L V10 engines in the all-new 2017 Super Duty® come with the Gaseous Engine Prep Package as standard equipment.

Although vehicles with Gaseous Prep Engines can be driven as delivered on gasoline, most vehicles are transported to Qualified Vehicle Modifiers (QVM) that install the CNG/Propane tanks and hardware.

Ford has released QVM Guidelines and Ford engineers work with QVMs to help ensure consistent, reliable performance and customer service.

Ford maintains the Engine and Powertrain Limited Warranty (5 years or 60,000 miles*) and the QVM is responsible for the fuel system component warranty.

Given the number of unique applications, this strategy provides the greatest flexibility to commercial customers from many vocations.

WARRANTY & SERVICE SUPPORT



Our dealers service what they sell. Similar to other commercial vehicles (ambulances, motorhomes, utility trucks, etc.), Ford maintains the warranty on the base vehicle and any modifications are warranted by the QVM. For gaseous fuel modifications, Ford stands behind the engine warranty (as described in the 5-year/60,000-mile Powertrain Limited Warranty*) when the modifications comply with QVM Bulletin Q-185.

The QVMs provide service training programs for dealership technicians. This training helps to ensure the dealership can accurately diagnose and safely repair modified vehicles. The QVMs also provide technical hotlines to assist in diagnosing component or driveability issues.

Engine calibration and emission certification and compliance are part of the QVM-supplied modifications to the vehicle. The Powertrain Control Module (PCM) is reflashed with the certified calibration by the QVM when the fuel system is modified. In the event service is needed on the PCM, the QVM will work with the dealer to provide a new or replacement calibration.



Contact information is provided at the time of delivery and can be found in the QVM's Supplemental Owner's Guide.

*See dealer for details.

THE RIGHT PLACE TO FIND THE RIGHT COMMERCIAL VEHICLE



COMMERCIAL
VEHICLE CENTER

Ford Commercial Vehicle Center

Advanced commercial vehicle expertise, in stock.

Dedicated service, customer commitment and advanced commercial vehicle expertise come standard with every Ford Commercial Vehicle Center dealer.

Participating Dealers offer a variety of hardworking Ford vehicles (in stock), with dedicated service, outstanding customer commitment and custom financing.

Bottom line? Program dealers help your business run smoothly — today and down the road. Find a highly qualified dealer near you at www.fordcommercialvehiclecenter.com.

Service Parts Warranty

A warranty with no commercial exceptions.

You can expect commercial expertise from your Ford Commercial Vehicle Center dealer. Motorcraft® and Ford Parts offer a two-year with unlimited mileage Service Parts Warranty, labor included. No commercial exceptions.*

Specialized Training

Certified in commercial vehicle service, and more.

Participating dealers' sales, finance, service and parts personnel are trained and certified to understand the unique requirements of commercial customers, the complexity of vehicle applications, and your lease and finance options.

Choosing The Right Vehicle

Finding the vehicle that meets your needs.

Ford Commercial Vehicle Center dealers guide you in buying the right vehicle to fit your needs. Personnel are trained and certified in commercial vehicles and their applications. They also use a proprietary diagnostic software, Commercial Vehicle Tools (CVT), to recommend the most appropriate vehicle specifications for your business, based on your unique requirements (payload, cargo space, upfits, etc.).

Commercial Lending

Finance programs designed with your business in mind.

Ford Credit Commercial Lending provides finance and lease options designed with your business in mind — including a wide

*Labor may have a limit. See your seller for a copy of the limited warranty. Motorcraft® is a registered trademark of Ford Motor Company.



range of finance and leasing solutions and unique fleet vehicle finance options, customized for your business and vehicle use. Ford Credit financing is available through your Ford Commercial Vehicle Center dealer.

Ford Fleet Care

Convenient service and parts billing options, just for commercial customers.

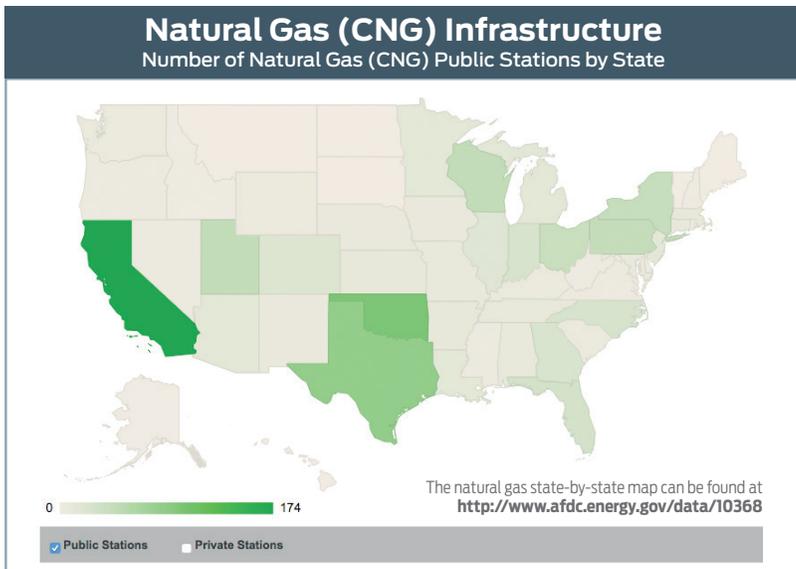
Ford Fleet Care provides convenient monthly consolidated bill for your service and wholesale parts invoices through Ford Fleet Care (FFC). Consolidated billing is available for both Ford and non-Ford vehicles and trailers at participating Ford and Lincoln Dealers. Enroll at www.fleetcare.ford.com.

Ford Protect Extended Service Plans

Ford Protect mitigates risk in commercial vehicle ownership by minimizing a variety of unexpected repair costs, from the engine to the electrical systems. Visit your local Ford Commercial Vehicle Center dealer to learn more.



CNG INFRASTRUCTURE



Commercial

Companies and fleet owners want an efficient, reliable and cost-effective system that enables them to refuel their vehicles without spending a fortune – Cubogas Pocket is one solution. This plug and fill station comes with one 50-hp skid-mounted compressor, air cooler, 47 GGE onboard storage, control panel and integrated double dispenser, all in one small unit easy to install and relocate. The Pocket can be used for both fast and slow fill applications: light-duty vehicles can be filled up in less than 8 minutes or slow-filled overnight. Equipped with a temperature compensation system and a lubrication-free compressor to avoid oil contamination, it refuels vehicles efficiently and safely. The Pocket's capacity can be increased with the installation of additional external storage. For more information, visit www.cubogas.com.



Public

The growth of public CNG refueling stations goes hand in hand with the increasing number of CNG vehicles available on the market (as of July 2016 there were almost 1,700 CNG stations in the U.S.). Federal and state incentives for the opening of advanced fuel stations and the attractive price difference between gasoline and natural gas provide a business case. Independence from oil and fewer emissions complete the equation.



Home

BRC FuelMaker offers a complete line of 240-volt home and vehicle refueling appliances (HRA-VRA), the only CSA-certified natural gas compressors for individuals and small fleets. Fast and easy to install, these compressors generally do not require any special permit or authorization. Home refueling has never been so easy: contact your local BRC FuelMaker dealer and ask him to install Phill® to refuel your car inside your garage or outside your house. Plug your vehicle in, push the start button and the compressor starts to refuel automatically. Phill® comes with an internal gas sensor, gas filter and dryer to ensure safe refueling in every condition. For bigger fleets you can get an FMQ compressor that can refuel 2+ vehicles at the same time. For more information, visit www.brcfuelmaker.com.

Resources

Current refueling stations can be found at one of the following Internet sites:

www.drivealternatives.com

Online database of CNG/Propane and Ethanol (E85) refueling stations.

www.cleanenergyfuels.com

One of the leading providers of natural gas fuel in North America.

www.cngnow.com

Provides a locator for CNG refueling stations, as well as a great source for CNG information.

Smartphone apps: Dozens of smartphone applications can locate CNG/Propane/E85/B20/Electric refueling stations.*

*Message and data rates may apply.

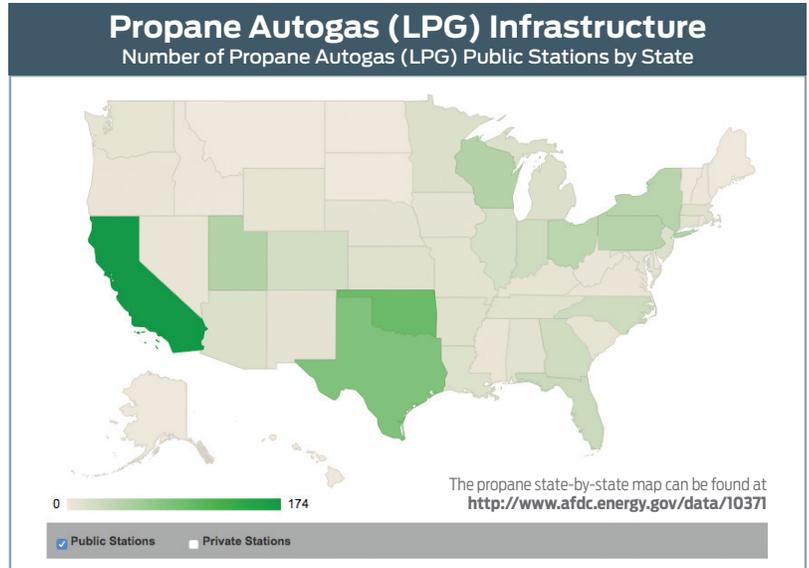
PROPANE AUTOGAS (LPG) INFRASTRUCTURE



Worldwide, more than 24 million vehicles (source: World LP Gas Association) are powered by propane autogas. In the U.S., there are more than 185,000 propane-autogas-powered vehicles on the road. This popularity has led to more technology development in OEM-supported vehicles powered by propane autogas, including light- and medium-duty trucks, vans and shuttles.

In addition to the thousands of propane autogas fueling stations found throughout the U.S., installation of on-site dispensing is easy and convenient for fleets across the country. Propane autogas provides an affordable infrastructure for on-site refueling compared with conventional and advanced fuels. There are two options for propane autogas refueling — skid-mount and permanent stations. With skid-mount, above-ground refueling stations typically come preassembled and are easy and inexpensive to have installed. Permanent stations feature underground propane storage tanks. Both have dispensers for ease of use, similar to conventional refueling.

There are many different federal and state tax incentives for installing new propane fueling structures and fueling with propane. For a list of propane companies that will install a skid-mount or permanent station, refer to the ROUSH® CleanTech website below.



Resources

www.afdc.energy.gov/afdc/locator/stations

With more than 21,825 fueling stations across the United States, propane is easily accessible. To find a location, visit the Department of Energy website.

www.propane.com/on-road-fleets/

The Propane Education & Research Council (PERC) promotes the safe, efficient use of propane as a preferred energy resource through research and development, training and safety programs.

www.roushcleantech.com/content/propane

Provides a locator for propane refueling stations, as well as a great source of propane information.

Smartphone apps: Dozens of smartphone applications can locate CNG/Propane/E85/B20/Electric refueling stations.*

*Message and data rates may apply.

ELECTRIC VEHICLE INFRASTRUCTURE



Charging Stations



Commercial

A number of companies offer commercial electric vehicle (EV) charging infrastructure. These commercial grade Level 2 (240V) systems can charge vehicles significantly faster than using an ordinary 110V outlet. The available Level 2 systems can charge a Focus Electric in about 5.5 hours, and the C-MAX Energi or Fusion Energi in about 2.5 hours*. Pictured is the GE WattStation™. With DC Fast Charge capability, the 2017 Focus Electric can charge from empty to a projected range of 75 miles based on EPA test protocols with a 30 minute DC Fast Charge**.

Plug your vehicle in and the charge port will illuminate to indicate the state of charge. The charging station will also show a charging icon to signal that the vehicle is in the process of charging. When charging is complete, users simply stow the cord, keeping it organized for the next user. GE WattStations are available in pedestal or wall-mount configurations. Wall-mount units can either be hardwired for permanent installations or plugged into an existing 240V outlet for simple removal of the unit. As an added benefit, it is possible for network stations to let users know if a vehicle is charging or how long it may have charged. This information can be used to determine EV miles driven as well as fuel and CO₂ saved.

*Charge times vary. See owner's manual for details.

**EPA-estimated. Actual range varies with conditions such as external elements, driving behaviors, vehicle maintenance and lithium-ion battery age.

Public

For fleet drivers to charge their all-electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) in public, charging stations are being deployed with consideration for daily commutes and typical driving habits.

Public charging stations make BEVs and PHEVs more convenient to charge. Although the majority of BEV and PHEV drivers will charge at home, public charging stations can increase the utility of EVs and increase EV miles traveled.

Generally, public charging stations use Level 2 (240V) service and are usually located where vehicle owners are likely to be for an extended time, such as shopping centers, city parking lots and garages, airports, hotels, government offices, and other businesses. Apps like MyFord Mobile*** can help you find them.

***MyFord Mobile subscription complimentary for five years from the vehicle sale date as recorded by the dealer. Subscription fees apply after five years. MyFord Mobile requires a compatible cellular network. Evolving technology and cellular networks may affect future availability and functionality. Message and data rates may apply.

Source: www.afdc.energy.gov/fuels/electricity_charging_public.html

Home

A 240V charging station is available for purchase with or without installation services from AeroVironment.™ If you decide to have the unit installed, an AeroVironment* affiliated electrician will perform an electrical audit and then install the 240V charging station. The electrician can handle everything, including securing the required permits. In many cases, installation could be performed in less than one day. If you like, you could arrange to have a licensed electrician install the AeroVironment charging station. It is branded by Ford Motor Company, and can be hardwired or plugged into a 240V outlet for non-permanent installation, easy removal or replacement. For more information, please call 1-888-219-6747, or visit evsolutions.com/ford.

*AeroVironment is a trademark of AeroVironment, Inc.



FORD PROVIDES ELECTRIFICATION CHOICES



Ford has an electrification strategy that involves three types of electrified vehicles – hybrid, plug-in hybrid and all-electric – to provide customers with fuel economy options and help reduce CO₂ emissions.

Among the highlights:

Focus Electric has an EPA-estimated rating of 118 city/96 hwy/ 107 combined MPGe.*

Fusion Hybrid Powered by a lithium-ion battery, the traction motor can allow Fusion Hybrid to operate in electric mode at speeds of up to 85 mph, with an EPA-estimated rating of 43 city/41 hwy/42 combined MPG.**

Fusion Energi plug-in hybrid has an EPA-estimated rating of 104 city/91 hwy/ 97 combined MPGe* with an EPA-estimated range of 610 miles.†

C-MAX Hybrid offers a class-exclusive⁵ available foot-activated, hands-free liftgate feature and has an EPA-estimated rating of 42 city/38 hwy/40 combined MPG.**

C-MAX Energi has an EPA-estimated rating of 104 city/87 hwy/ 95 combined MPGe.*

FOCUS ELECTRIC

Mechanical: 107-kW electric motor/33.5-kWh liquid-cooled lithium-ion battery

Horsepower/Torque Equivalent: 143 hp /184 lb.-ft.

Miles Per Gallon Equivalent (MPGe): EPA-estimated rating of 118 city/ 96 hwy/107 combined MPGe*

EPA-Estimated Range: 115 miles^{††}

Top Speed: 84 mph

Charge Time: approximately 5.5 hrs. (Optional/Available 240V)⁴

DC Fast Charge: capability with a projected range^{††} of over 75 miles based on EPA test protocols with a 30 minute DC fast charge.⁴

FUSION ENERGI

Engine: 2.0L Atkinson cycle I-4 hybrid engine

Horsepower/Torque: Gas: 141 hp/129 lb.-ft. Electric: 118 hp/88kW; Total combined power (sustain): 188 hp

Miles Per Gallon Equivalent (MPGe): EPA-estimated rating of 104 city/ 91 hwy/97 combined MPGe*

EPA-Estimated Range: 610 miles[†]

EPA-Estimated All-Electric Range: 21 miles[†]

Charge Time: approximately 2.5 hrs. (240V); approximately 7 hrs. (120V)⁴

C-MAX ENERGI

Engine: 2.0L Atkinson cycle I-4 hybrid engine

Horsepower/Torque: Gas: 141 hp/129 lb.-ft. Electric: 118 hp/88kW; Total combined power (sustain): 188 hp

Miles Per Gallon Equivalent (MPGe): EPA-estimated rating of 104 city/ 87 hwy/95 combined MPGe*

EPA-Estimated Range: 570 miles³

EPA-Estimated All-Electric Range: 20 miles³

Charge Time: approximately 2.5 hrs. (240V); approximately 7 hrs. (120V)⁴

2016 Numbers.



FUSION HYBRID

Engine: 2.0L Atkinson cycle I-4 hybrid engine

Horsepower/Torque: Gas: 141 hp/129 lb.-ft. Electric: 118 hp/88kW @ 6,000 rpm; Total combined horsepower (sustain): 188 hp

Miles Per Gallon EPA-estimated rating of 43 city/41 hwy /42 combined MPG**

EPA-estimated Range: 588 miles.¹

Battery Peak Power: 35 kW

C-MAX HYBRID

Engine: 2.0L Atkinson cycle I-4 hybrid engine

Horsepower/Torque: Gas: 141 hp/129 lb.-ft. Electric: 118 hp/88kW @ 6,000 rpm; Total combined horsepower (sustain): 188 hp

Miles Per Gallon EPA-estimated rating of 42 city/38 hwy /40 combined MPG**

EPA-estimated Range: 540 miles.²

Battery Peak Power: 35 kW

* Actual mileage will vary. MPGe is the EPA equivalent measure of gasoline fuel efficiency in electric mode operation.

**Actual mileage will vary.

† EPA-estimated rating of 43 city/41 hwy/ 42 combined mpg; 14-gallon tank, 21 miles electric. Range calculation based on fueleconomy.gov. Actual range varies with conditions such as external elements, driving behaviors, vehicle maintenance, and lithium-ion battery age.

††Actual range varies. Range calculation based on fueleconomy.gov. with conditions such as external elements, driving behaviors, vehicle maintenance and lithium-ion battery age.

1 EPA-estimated rating of 43 city/41 hwy/ 42 combined mpg; 14-gallon tank. Range calculation based on fueleconomy.gov. Actual mileage will vary.

2 EPA-estimated rating of 42 city/38 hwy/ 40 combined mpg; 13.5-gallon tank. Range calculation based on fuel economy.gov. Actual mileage will vary.

3 EPA-estimated rating of 41 city/38 hwy/ 39 combined mpg; 14-gallon tank, 20 miles electric. Range calculation based on fueleconomy.gov. Actual range varies with conditions such as external elements, driving behaviors, vehicle maintenance, and lithium-ion battery age.

4 Charge times vary. See owner's manual for details.

5 Class is Small Hybrid Vehicles based on Ford segmentation.

COST OF OWNERSHIP



The primary goal of most fleet managers is to achieve and maintain the lowest Total Cost of Ownership (TCO) for their fleet.

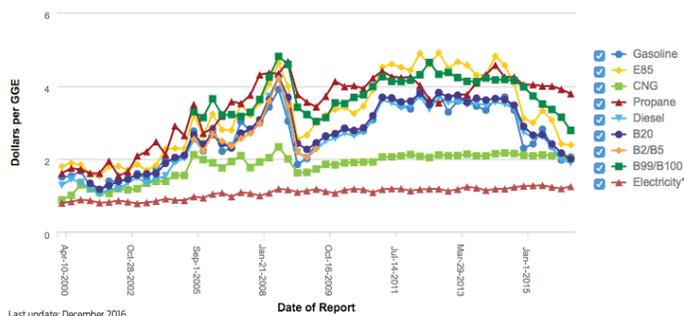
TCO calculations should include the acquisition cost of the vehicle, duty cycle, mileage traveled, fuel (or fuels) used, associated infrastructure, maintenance costs and the residual value of the vehicle, along with any other ancillary costs.

The calculations shown below are estimated and address only the cost components of selecting an advanced fuel compared to gasoline, assuming all other aspects are equal. Fuel prices for this brochure were extracted from afdc.energy.gov/fuels/prices.html.

Average Retail Fuel Prices Per Gasoline Gallon Equivalent (GGE): November 2011 – October 2016

FUEL	PRICE
Biodiesel (B20)	\$3.15
Biodiesel (B99-B100)	\$3.85
Electricity	\$1.22
Ethanol (E85)	\$3.81
Natural Gas (CNG)	\$2.10
Propane	\$3.97
Gasoline	\$3.05
Diesel	\$3.04

Average Retail Fuel Prices in the U.S.



Electricity costs are adjusted to account for electric motor efficiency. It takes 9.9 kWh for an electric motor to achieve 1 GGE in an internal combustion engine (33.7 kWh/3.4 efficiency).

When considering fuel prices, it is important to consider the time horizon to account for fuel price volatility over the time you operate a vehicle. The chart reflects a five-year average while the graph shows 15 years of prices. Energy density measured by gasoline gallon equivalent (GGE) should also be considered for an equitable comparison of different fuels. These relative measures allow for a more direct comparison of potential fuel expenses between different fuel alternatives.

Calculating the fuel cost payback for any advanced fuel is straightforward:

- A. Identify the base price of the vehicle you need assuming a gasoline engine
- B. Identify the price increase needed to equip for advanced fuel over the base vehicle:
 - Flex Fuel (E85) is generally available at little or no upcharge
 - Diesel can range from \$4,000 and up
 - CNG/Propane Autogas conversions can range from \$6,000 and up
- C. Identify the price of gasoline
- D. Identify the price of your advanced fuel per GGE
- E. Determine the estimated mpg based on your duty cycle (towing, hauling, etc.)
- F. Determine the number of miles traveled per year

Then, perform the following calculations:

1. $(F/E) * (C-D) =$ your expected annual fuel savings over using gasoline
2. Divide your upfit cost for advanced fuel (B) by your annual fuel savings to determine the time period needed to pay back the upfit
3. If the payback period is a shorter time than you plan on owning your vehicle, then you are on your way to achieving lower costs, reduced emissions and reduced dependence on foreign oil all at the same time

Example: A Ford Super Duty® customer driving 20,000 miles per year at 11 mpg. To consider a CNG conversion at \$6,000 (\$7,500 cost less \$1,500 government incentive) with gasoline priced at \$3.05 and CNG at \$2.10/GGE, the calculation is:

$$(20,000/11) * (\$3.05 - \$2.10) = \$1,727 \text{ savings per year}$$

$$\$6,000 / \$1,727 = 3.47 \text{ years to pay back the upfit cost}$$

Many advanced fuels have additional incentives available from states and the federal government. These incentives can significantly reduce the payback period.

Some general rules of thumb:

- The higher the annual miles driven, the more likely that advanced fuels will make economic sense.
- The lower the fuel efficiency (mpg), the more likely that advanced fuels will make economic sense.
- The more the price gap widens between an advanced fuel and gasoline, the shorter the payback period.

For a detailed analysis, Ford recommends that you work with a Commercial Account Manager at one of our Commercial Vehicle Center Dealers to address your specific needs.

ADVANCED FUEL INCENTIVES



Commercial Upfit Incentives

The Commercial Connection program was created to help businesses upfit their commercial vehicles by providing incentives and special offers. As part of this program, Ford offers incentives¹ for advanced fuel modifications such as CNG or Propane. These incentives are in addition to any potential national retail incentives and are dependent on the vehicle model series. All advanced fuel modifications must be completed by a gaseous fuel QVM (see pages 6 and 7).

Model	Transit Connect	Transit	E-Series	F-Series Super Duty® Pickup	F-Series Super Duty Chassis Cab	F-650/F-750
Incentive ²	\$350	\$1,000	\$1,000	\$500	\$1,000	\$1,500

¹ See dealer for qualifications and complete details. Program rules subject to change.

² Upfit minimum may be required dependent on vehicle. Not available on factory-installed options. Units receiving any form of CPA (56A), GPC, Long-Term Rental (56K) or other concessions are ineligible. Restrictions apply. See your dealer for qualifications, complete details and possible program extension. Offer correct at time of printing. Program rules subject to change. Claimed incentives cannot exceed actual price of upfit.

It is important for customers to consult with their Ford Commercial Vehicle Center dealer to obtain the most current incentive details. Go to fordtoughtruck.com for more details.

Government Incentives

The federal government offers various incentives to encourage the adoption of advanced fuels, such as a \$7,500 tax credit³ for the Focus Electric and a \$4,007 tax credit³ for the Fusion Energi and C-MAX Energi. Many state governments also offer interesting incentives for advanced fuel vehicles. The U.S. Department of Energy has established a website that allows you to search its database of federal and state laws and incentive programs related to advanced fuel vehicles.

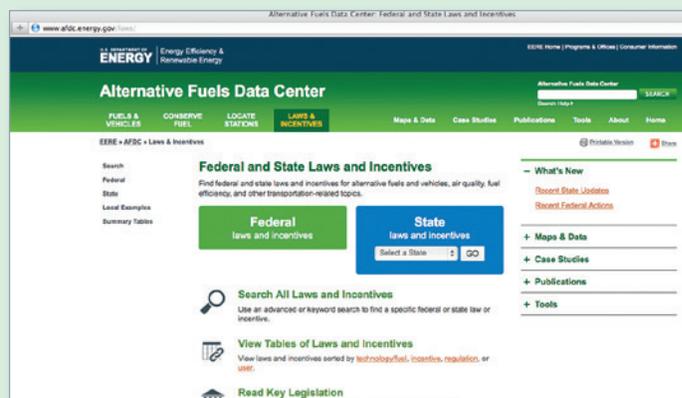
³ See www.afdc.energy.gov/laws/409. This information should not be construed as a promise of potential tax savings or reduced tax liability. Consult your tax advisor for the amount of credit you may be eligible for.

www.afdc.energy.gov/laws/

U.S. Department of Energy allows you to search its database of federal and state laws and incentive programs related to advanced fuel vehicles.

www.fueleconomy.gov

Information about federal and state tax incentives for purchasing advanced fuel vehicles.



Some examples of state incentives (check afdc.energy.gov/laws/ for details and redirection to state-specific websites):

State	Amount	How
Arkansas	up to \$4,500	Rebate
California	up to \$20,000	Rebate
Delaware	up to \$20,000	Rebate
Florida	up to \$25,000	Rebate
Illinois	up to \$4,000	Rebate
Nebraska	up to \$4,500	Rebate

ADVANCED FUEL FINANCING



Ford Credit Commercial Lending Services

Ford Credit provides flexible finance and leasing options so we can meet your changing business requirements. We'll work with you to help develop financially smart solutions.

Commercial Retail Financing – a traditional financing program offering flexible terms, no hidden fees and combined billing availability.

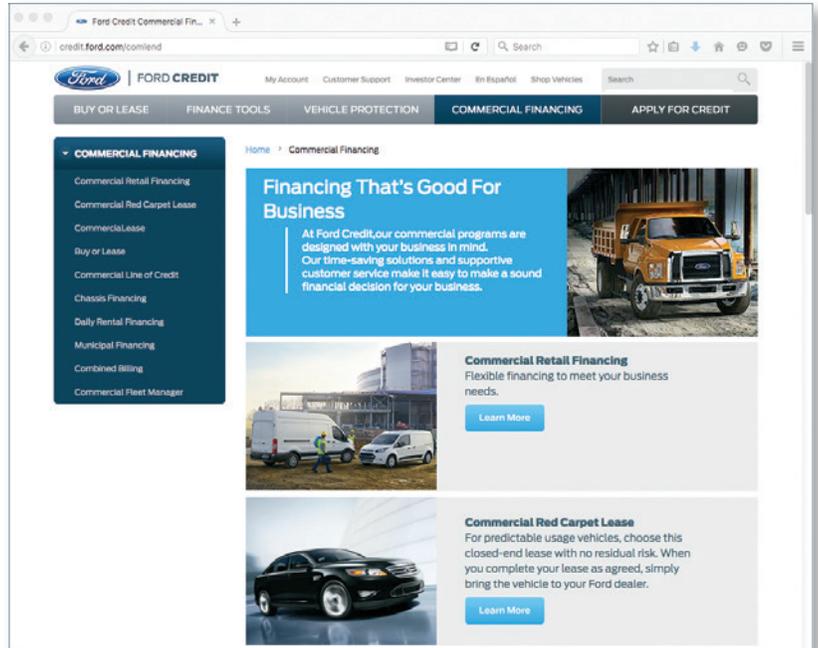
Commercial Red Carpet Lease (RCL) – for predictable-usage vehicles, choose this closed-end lease with no residual risk. When you complete your lease as agreed, simply bring the vehicle to your dealer. You are responsible for any excess mileage and wear and use charges.

Commercial Lease – an open-ended Terminal Rental Adjustment Clause (TRAC) lease program that allows flexibility to set the residual based upon business requirements.

Commercial Line of Credit (CLOC)¹ – available with Commercial Retail, Commercial RCL and Commercial Lease. With our CLOC program, you can apply for a credit line starting at \$250,000 and if you're approved, you can add vehicles to your fleet whenever you need to, for up to 12 months. No need to reapply every time you need a vehicle.

State and Local Government

Municipal Financing – a lending program that helps state, local and municipal governments make the most of their operating budgets by providing flexibility, affordability and convenience when acquiring vehicles for essential services.



Body Manufacturers and Upfitters

Chassis Financing – provides inventory financing for qualified body companies for the purchase of truck, van chassis, and limousine cars and trucks that will be converted or upfitted with a specialty body.

Find more information at <http://credit.ford.com/comlend>.

Ford Credit Advanced Fuel Financing Options

	CNG	PROPANE	ELECTRIC	PHEV	HEV
Commercial Retail Financing	■	■	■	■	■
Commercial Red Carpet Lease (RCL) Financing	Not Eligible	Not Eligible	■	■	■
Commercial Lease (TRAC) Financing	■	■	■	■	■
Municipal Financing	■	■	■	■	■
Chassis Financing	■	■	■	■	■

¹ Subject to initial approval, ongoing eligibility and periodic reviews. Not all customers will qualify. See your dealer for qualification details.

FORD TELEMATICS™ POWERED BY TELOGIS®



FORD TELEMATICS
Powered by Telogis

Ford Telematics provides a 360-degree view of your vehicles that can help you transform your business by potentially saving you money, help making your business more productive and fostering responsible driving habits. Just as important, it helps you deliver your sustainability promises to your customer.

How It Works

Integrated at the factory or installed at your dealership, Ford Telematics¹ captures and reports data based on a wealth of information – from current location, speed and fuel economy to airbag status, tire pressure and remaining oil life. Real-time audible alerts track driver behavior to foster responsible driving habits across the fleet. And your easy-to-use online account provides real-time views of your fleet on a map and lets you view dashboards, specify alerts and create reports.



Reduce carbon footprint
By limiting out-of-route miles,
unproductive idling and speeding.



Run an eco-conscious fleet
By using less fuel
(and improve your bottom line).



Meet emissions standards
Be aware of, and even reduce, harmful
emissions; diesel vehicle support provides
DEF quality and DEF level diagnostics.

NO ONE OFFERS DIAGNOSTICS THIS COMPLETE, A FORD TELEMATICS EXCLUSIVE



AIRBAG STATUS



TIRE
PRESSURE



DPF
STATUS



FUEL
CONSUMPTION



HARSH BRAKING/
ACCELERATION



SAFETY BELT



DEF QUALITY
/LEVEL



OIL LIFE

To learn more, request a free consultation about how Ford Telematics can help you transform your business.
Go to telogis.com/ford or call (888) 463-8945.

¹Ford licensed accessory.

ADDITIONAL ADVANCED FUEL INFORMATION



Flexible-Fuel Vehicles (FFV) are designed to operate the internal combustion engine for a range of gasoline and ethanol blends. FFVs are capable of burning any blend, ranging from 100% gasoline (E0) up to 85% ethanol/15% gasoline (E85). Fuel injection and spark timing are automatically adjusted according to the specific blend detected by electronic sensors. E85 is the most common flex fuel and many Ford engines are equipped to handle this fuel type.

Advantage – Ethanol/E85 is clean-burning and substantially reduces CO and CO₂ emissions. Compared to gasoline, E85 has a higher octane rating, provides the same or more horsepower and burns cooler. Corn and other cellulosic plant sources are readily available.

Consideration – E85 produces less energy by volume than gasoline. One gallon of gasoline is the equivalent of 1.56 gallons of E85 used to travel the same distance.

Nearly all ethanol producers add a corrosion inhibitor at a level sufficient to treat a gallon of E85.

Biodiesel is a renewable, clean-burning diesel replacement used in existing diesel engines. Made from an increasingly diverse mix of domestic resources such as recycled cooking oil, soybean oil, and animal fats, biodiesel is the first and only commercial-scale fuel produced across the U.S. to meet the EPA's definition as an Advanced Biofuel. According to the EPA, biodiesel reduces greenhouse gas emissions by 57 percent to 86 percent compared with petroleum diesel.

Biodiesel contains no petroleum, but can be blended with petroleum diesel, typically in blends of 5 to 20 percent (B5 to B20). All Ford diesels are capable of running on any blend of biodiesel up to and including B20.

Advantage – U.S. biodiesel on average provides an 80 percent reduction in carbon emissions compared to petroleum diesel. Biodiesel also has higher cetane than U.S. diesel fuel, while also offering superior lubricity and the highest BTU content of any advanced fuel. B20 (20 percent blend of biodiesel with diesel fuel) provides similar fuel economy, horsepower, torque and haulage rates as diesel fuel.

Consideration – Just like No. 2 diesel fuel, biodiesel can gel in very cold temperatures. Although pure biodiesel has a slightly higher cloud point than No. 2 diesel, blends of 20 percent biodiesel are usually managed with similar techniques as diesel fuel. Blends of 5 percent and below have virtually no impact on cold weather operability.

Compressed Natural Gas (CNG) is a fossil fuel substitute for gasoline or diesel. CNG is domestically sourced and reduces our dependence on foreign oil. Landfills and biologic waste also provide CNG through digesters and emission recapture turning waste into fuel. It is stored and distributed, in hard containers at a pressure of 2,900–3,600 psi. It is safer than other fuels in the event of a spill (natural gas is lighter than air, and disperses quickly when released). CNG is made by compressing natural gas, which is mainly composed of methane.

Advantage – CNG is an extremely clean-burning fuel and significantly reduces greenhouse gases such as CO, CO₂ and NO_x on a well-to-wheels basis compared to gasoline. CNG is typically less expensive than gasoline and the fuel price is also less volatile. CNG has an octane rating of 130 and has the potential to optimize the engine's thermodynamic efficiency by utilizing a higher compression ratio.

Consideration – CNG has slightly less energy than gasoline per unit volume. CNG at 3,600 psi occupies about 3.5 times the volume that gasoline does for the equivalent amount of energy and, therefore, requires a larger fuel tank to maintain the same range. Refueling time and infrastructure are also considerations.



Propane Autogas also known as **Liquefied Petroleum Gas (LPG)** is a mixture of hydrocarbon gases, most commonly propane and butane. A powerful odorant, ethyl mercaptan, is added so that leaks can be detected easily.

As opposed to relying on foreign oil sources, approximately 90% of the United States propane supply is produced domestically. 7% of the remaining supply is imported from Canada and Mexico.

Propane is nontoxic and cannot get into the water table if there is a leak in the storage container.

From an economic perspective, propane is an effective alternative to conventional transportation fuels when capital cost (vehicle and infrastructure), operation and maintenance are all taken into consideration.

Advantage – Power, acceleration, payload and cruise speed are unchanged compared to an equivalent vehicle fueled by gasoline. Propane has a high octane rating of 104, in between Compressed Natural Gas (CNG) at 130 and unleaded gasoline at 87.

Consideration – Propane Autogas has fewer BTUs than gasoline, which may result in a mpg loss compared to gasoline.

Hybrids and Plug-In Hybrids are vehicles that utilize both an internal combustion engine AND electric motors to propel the vehicle.

Hybrids (HEVs) are powered in part by gasoline and part by a battery-driven electric motor. They seamlessly switch between the gasoline engine, electric motor or a combination of both to offer efficiency and performance. The battery is automatically recharged by the gasoline engine and through regenerative braking. Hybrids do not plug in.

Plug-In Hybrids (PHEVs) are progressive hybrids that expand capability by providing the option of plugging in or not. To enhance the hybrid experience and maximize the battery capability, drivers can choose to plug into a standard 120V or available 240V outlet. By fully charging before driving, you may see potential fuel savings and reduce your carbon footprint. Ford PHEVs feature an electric vehicle (EV) mode button which allows the driver to choose electric-only mode (EV Now), saving plug-in power for later use (EV Later), or driving in normal hybrid operation (Auto EV). PHEVs offer the best of both worlds, giving the driver the opportunity to drive as if in an EV for short trips or in a hybrid for longer trips.

Advantage – Hybrids may reduce fuel consumption especially if the duty cycle of the vehicle involves urban driving with lots of stop and go. By substituting grid energy for gasoline, PHEVs can offer an additional potential improvement in fuel savings and emissions.

Consideration – The C-MAX Hybrid, C-MAX Energi, Fusion Hybrid, Fusion Energi and Focus Electric are not recommended for trailer towing.

Battery Electric Vehicles (BEVs) are powered completely by a rechargeable battery so you never need a drop of gasoline or an oil change. Key features are the electric motor, charge port and lithium-ion battery pack. Battery electric vehicles provide a CO₂-free driving experience. Drivers plug their vehicle in to fully charge the battery pack. While driving, regenerative braking also aids in charging the battery.

Advantage – Vehicles that run solely on electric power require no warm-up, run almost silently and have excellent performance. Electric vehicles can be recharged at night when generating plants are underutilized. Electric vehicles produce zero tailpipe emissions.

Consideration – Pure electric vehicles have limited range. For example, the 2017 Focus Electric has a EPA-estimated range of over 115 gas-free miles based on EPA test protocols with a full charge.* Charge time is also important to assess. Depending on voltage, charging overnight may be needed to fully recharge a depleted battery.

* Actual range varies with conditions such as external elements, driving behaviors, vehicle maintenance and lithium-ion battery age.

MAKING PEOPLE'S LIVES BETTER

THERE'S MORE TO SUSTAINABILITY THAN ADVANCED FUELS



Ford Sustainability Report Unveils Pilot Program in South Africa to Deliver Health Care, Education, Improve Lives

- Ford Motor Company introduced Ford Project Better World in its 17th annual Sustainability Report; pilot program in two African countries unites multiple organizations to deliver goods and services to underserved communities using enhanced mobility and connectivity innovations
- In South Africa, specially equipped Ford Rangers will deliver health education, medicine and nutrition for 20,000 children and 10,000 adults; through Riders for Health in Nigeria, donated funds and Ford Rangers will help train technicians to maintain vehicles to ensure medical professionals and supplies reach people in rural areas
- 2015-16 Sustainability Report highlights Ford's continued focus on the human impact of doing business – from developing future mobility solutions to investing an additional \$4.5 billion for the development of more electrified vehicles and technologies by 2020

Ford, Jose Cuervo Team Up to Make Car Parts from Agave

- Ford Motor Company and Jose Cuervo® are exploring the use of agave plants to develop a sustainable bioplastic material to incorporate in vehicles, giving the agave fiber byproduct a second chance at usefulness
- Researchers are testing the material's durability and heat resistance for potential use in vehicle interior and exterior components such as wiring harnesses and storage bins
- Success in developing the sustainable composite could reduce the weight of car parts, helping to improve fuel economy; the new material could alleviate the use of petrochemicals, decreasing the overall impact of vehicles on the environment



Preserving Mother Earth: Ford First Automaker to Use Captured CO₂ to Develop Foam and Plastic for Vehicles

- Ford is the first automaker to develop foams and plastics using captured carbon dioxide for its vehicle lineup; anticipated use includes seating and underhood applications
- Foams formulated with up to 50 percent CO₂-based polyols could reduce petroleum use by more than 600 million pounds annually
- Ford researchers foresee the new materials going into production vehicles within five years; future goals include developing other plastic materials using captured carbon to help reduce further the need for fossil fuel-based plastics



Commercial Vehicle Sales & Marketing
North American Fleet, Lease and Remarketing Operations
Ford Motor Company



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