

## What Is Ethanol?



Ethanol, a clear, colorless liquid, is an alcohol-based alternative fuel produced by fermenting and distilling starch crops that have been converted into simple sugars. Ethanol can also be produced from "cellulosic biomass" such as trees and grasses and is called bioethanol. Ethanol is most commonly used as an additive to increase octane and improve the emissions quality of gasoline.

## What Is Ethanol Made From?



Ethanol can be produced not only from corn, barley, and wheat, but also from cellulose feedstocks such as corn stalks, rice straw, sugar cane bagasse, pulpwood, switchgrass, and municipal solid waste. Because of the variety of feedstocks that can be used, ethanol offers tremendous opportunities for new jobs and economic growth outside the traditional "grain belt."

Ethanol can be produced from any biological feedstocks that contain appreciable amounts of sugar or materials that can be converted into sugar such as starch or cellulose. Sugar beets and sugar cane are examples of feedstocks that contain sugar. Corn contains starch that can relatively easily be converted into sugar. A significant percentage of trees and grasses are made up of cellulose, which can also be converted to sugar, although with more difficulty than required to convert starch.

## What Vehicles Can Use It?



Most of today's commercially available vehicles can run on blends of E10, a blend of 10% ethanol and 90% gasoline, which is mandated in some areas of the country to act as a fuel oxygenate additive to improve air quality. In addition, many newer vehicles can use E85, which qualifies as an alternative fuel under the Energy Policy Act of 1992. Vehicles that can run on E85, gasoline, or any mixture of the two are called flexible fuel vehicles (FFVs). FFVs are widely available and include sedans, minivans, sport utility vehicles, and pickup trucks. More than 5 million FFVs have already been sold in the United States. Because of the abundance of ethanol-compatible vehicles, limited crude oil supplies and refining capacity, and rising concerns over air and water quality degradation, there is a good market outlook for ethanol as a fuel.

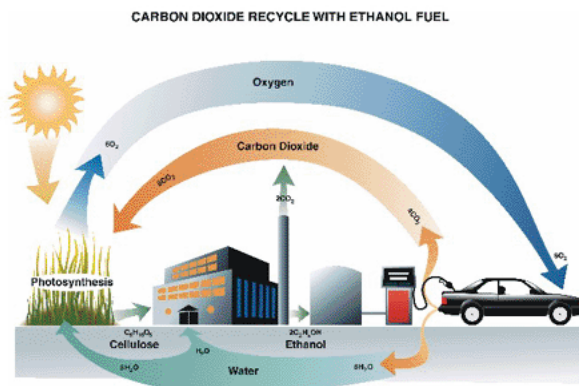


## Why Should We Use It?

Ethanol is domestically produced and reduces the use of imported petroleum. Ethanol production also supports U.S. farmers and creates jobs. The use of ethanol as a transportation fuel also reduces carbon monoxide emissions relative to gasoline.

All auto manufacturers approve the use of low-level ethanol blends (10% or less) in all types of vehicles and engines that run on gasoline. From a consumer perspective, there is no noticeable difference in vehicle performance when low-level ethanol blends are used. Because there is a difference in the energy content of ethanol and gasoline, there may be a reduction in vehicle fuel economy when using higher levels of ethanol.

The Clean Air Act Amendments of 1990 mandated the sale of oxygenated fuels in areas with unhealthy levels of carbon monoxide. Since that time, there has been strong demand for ethanol as an oxygenate blended with gasoline. In the United States each year, approximately 2 billion gallons are added to gasoline to increase octane and improve the exhaust emissions quality of gasoline.



## Where Can I Get It in Maryland?



Currently, most E85 fueling stations are located in the Midwest, but infrastructure is growing nationwide. The U.S. Department of Energy maintains a database of regional alternative refueling stations (including ethanol) at <http://www.eere.energy.gov/afdc/infrastructure/locator.html>. There are numerous government owned E85 stations in the Baltimore/Washington area to service the public fleets, however, most of them are not open to general public. Currently, public E85 refueling stations in the Baltimore/Washington area are:

### Montgomery County - Fleet Management Services

16640 Crabbs Branch Way  
Gaithersburg, MD 20885  
240-777-5730

### Chevron Services Center

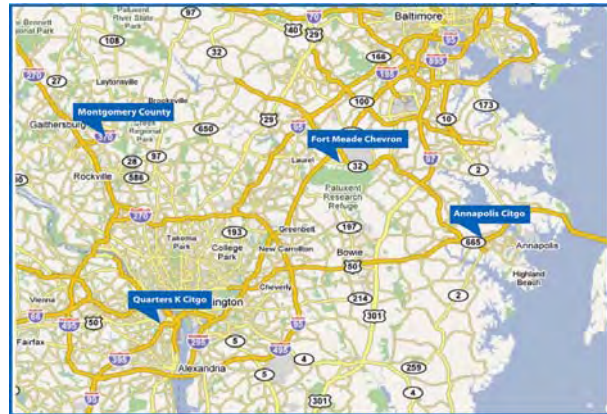
3240 Fort Meade Road  
Laurel, MD 20724  
410-880-4740

### Quarters K Citgo - Pentagon/Navy Exchange

801 S Joyce Street  
Arlington, VA, 22204

### Annapolis Citgo

2042 West Street  
Annapolis, MD 21401  
410-571-9676



## What is the State Doing for Ethanol Use?

Under the Maryland Renewable Fuels Promotion Act of 2005, ethanol producers may apply to the Renewable Fuels Incentive Board for ethanol production credits. To be eligible for the credits, the producer must first apply to the Board in order to receive certification as a producer. Currently available ethanol production credits are as follows: a) \$0.20 per gallon of ethanol produced from small grains, and b) \$0.05 per gallon of ethanol produced from other agricultural products. The Board may not certify ethanol production credits for more than a total of 15 million gallons per calendar year, of which at least 10 million gallons must be produced from small grains. (Reference Maryland Statutes, Agriculture Code 10-1501 through 10-1507)

Among other duties, the Incentives for Agriculture Task Force is responsible for reviewing and evaluating the overall State tax structure as it impacts agriculture and the feasibility of modifications or alternatives to the current structure that would enhance the profitability of farming. This includes recommendations regarding the creation of tax credits or exemptions applicable to the production of ethanol, biodiesel, or other bio-energy alternatives. (Reference House Bill 2, 2006 and Maryland Statutes, State Finance and Procurement Code 5-408)

## What is the Federal Government Doing for Ethanol Use?

Section 1344 of the Energy Policy Act of 2005 established the Volumetric Ethanol Excise Tax Credit (VEETC), which provides ethanol blenders/retailers with \$0.51 per pure gallon of ethanol blended or \$0.0051 per percentage point of ethanol blended (i.e., E10 is eligible for \$0.051/gal; E85 is eligible for \$0.4335/gal). The incentive is available until 2010. For more information, visit [www.irs.gov/publications/p378/ar01.html](http://www.irs.gov/publications/p378/ar01.html).

## Where Can I Find More?

For more general information on ethanol vehicles and E85, you can visit the National Ethanol Vehicle Coalition:

<http://www.e85fuel.com>

Or you can visit the U.S. Department of Energy:

<http://www.eere.energy.gov/afdc/altfuel/ethanol.html>

For more information on the Maryland Clean Cities Program and how you can help:

<http://www.energy.state.md.us/programs/transportation/cleancities/index.html>

