

# Renewable Fuel Standard Implementation: Frequently Asked Consumer Questions

The U.S. Environmental Protection Agency has prepared this document to help answer some commonly asked questions about renewable fuels. EPA consulted with trade groups representing the oil, engine, automobile, and renewable fuels industries as well as the U.S. Department of Energy to prepare these responses.

## What are renewable fuels?

They are fuels produced from plant or animal products or wastes, rather than from fossil fuels. The best known renewable fuels today are ethanol and biodiesel.

Ethanol has been added to gasoline for more than a decade in Chicago and Milwaukee. For the last several years, ethanol has also been blended with gasoline in many metropolitan areas across the country. About half of the gasoline used today in the United States is blended with ethanol at levels of up to 10% by volume (this is called "E10"). Ethanol blends at higher volumes, such as 85% ("E85"), are available in some areas for use in specially designed "flexible-fuel vehicles." Biodiesel has been used most widely in Minnesota, and can now be found in many other states.

## Why is EPA requiring the use of renewable fuels?

Congress directed EPA in the Energy Policy Act of 2005 to design a program that requires the blending of renewable fuels into our nation's motor-vehicle fuel supply. This program is called the Renewable Fuel Standard.

The RFS program requires increasing the use of renewable fuels every year through 2012. For 2007, a minimum of 4% of fuel dispensed to U.S. motorists shall come from renewable sources (a floor of 4.7 billion gallons). By 2012, at least 7.5 billion gallons of renewable fuel must be blended into motor-vehicle fuel sold in America. After 2012, renewable fuel use is required to grow in volume as gasoline demand grows.

In 2006, American refiners, blenders, and importers used 5.4 billion gallons of renewable fuel—almost 25% more than was required for that year.

## **Will renewable fuel be more expensive than conventional fuel?**

No one can predict with certainty the price of fuel at the pump. Many factors affect the sales price including production costs, crude oil's price, taxes, inventory levels, and supply and demand. Geopolitical factors, weather, transportation, and economic events also can affect the sales price. Visit the Energy Information Administration for more information on fuel prices.

EPA estimates the cost to produce a gallon of ethanol-blended gasoline will rise between 0.5 and 1.1 cents. However, because ethanol receives a tax credit, EPA estimates consumers might actually see a net savings at the pump of 0.4 to 0.7 cents per gallon.

## **Are renewable fuels compatible with my car or truck? How about my lawnmower or boat?**

Manufacturers expect ethanol blends of up to 10% to be fully compatible with current and previously manufactured gasoline-powered vehicles and engines. However, certain components of older vehicles or engines that are operated in areas where ethanol is new might be affected. As part of a good maintenance program and to alleviate any potential complications, owners are encouraged to monitor their vehicles or engines for hose, seal, or gasket leaks.

Consult your owner's manual or servicing dealer for any special instructions. Manufacturers might offer specific recommendations for preparing lawnmowers, boats, and other products for storage during the off-season.

Owners of boats with older fiberglass tanks are urged to consult their servicing dealer before using ethanol blends.

Biodiesel's compatibility with vehicles and engines depends on the amount of biodiesel in the diesel fuel blend as well as the specific vehicle or engine. Most diesel-powered vehicles and engines are compatible with a level of up to 5% biodiesel, while some vehicles and engines are compatible with a higher percentage. Consumers should check their owner's manual or consult with the manufacturer for fuel recommendations and warranties.

## **How will renewable fuel affect the performance and fuel economy of my car, truck, lawnmower, or boat?**

Under typical operating conditions, there should be no noticeable impact on overall power or performance when using 10% ethanol blends. As discussed above, certain components of older engines that are operated in areas where ethanol is new might be affected, and a good maintenance program is recommended. Fuel economy will be reduced slightly with ethanol blends because ethanol has about two-thirds of the energy content of gasoline.

## **Will using renewable fuels void my vehicle or engine warranty?**

Consumers should check their owner's manual or consult with the manufacturer to identify which fuels are recommended or allowed, and then check the fuel pump label to ensure they are using fuel consistent with manufacturer recommendations. In general, most vehicle and engine manufacturers recommend or accept the use of ethanol in fuel blends at volumes of up to 10% for gasoline-powered vehicles and engines. Owners of flexible-fuel vehicles may use ethanol blends at volumes of up to 85%. Most manufacturers accept biodiesel blends at levels of up to 5% for use in diesel-powered vehicles and engines.

## **How will renewable fuel affect air quality?**

EPA estimates that the RFS program will cut petroleum use by up to 3.9 billion gallons and greenhouse-gas emissions by up to 13.1 million metric tons annually by 2012—the equivalent of eliminating the greenhouse-gas emissions of 2.3 million cars.

In areas that haven't previously used ethanol, small increases in ambient ozone formation might be expected. Carbon monoxide and benzene emissions will be reduced.

## **Will renewable fuel differ in smell or appearance?**

The addition of renewable fuel to gasoline or diesel fuel might affect the appearance or odor of the fuel, but it should not affect its quality or performance.

## **Are all refiners required to produce renewable fuel blends?**

Most refiners, blenders, and importers are required to use a minimum volume of renewable fuel each year beginning Sept. 1, 2007, and each year thereafter. Alternatively, they must buy credits from other companies that choose to use more than their required minimum volume. That minimum volume is determined as a percentage of the total volume of motor-vehicle fuel a company produces or imports, and will increase every year.

Small refiners are exempt through 2010. All gasoline producers in Alaska and U.S. territories are exempt indefinitely. Hawaii, previously granted an exemption, is opting into the program effective Jan. 1, 2008.

## **Where can I purchase renewable fuel blends?**

EPA does not require service stations or truck stops to sell renewable fuel blends. Therefore, it is possible that a particular renewable fuel blend won't be available in some areas. If you have questions about renewable fuel content or availability, ask your local retailer.

## **How will I know which pump is dispensing renewable fuel blends?**

EPA does not require service stations or truck stops to label the pumps that dispense renewable fuel blends. Some states, however, require that pumps dispensing renewable fuel blends be labeled.

## **May I continue to purchase fuel without a renewable component if I prefer to use it in my vehicle, lawnmower, or boat?**

EPA does not require consumers to purchase renewable fuel blends. Some states mandate the use of renewable fuels, so fuel without a renewable component might not be available in some areas.

## **How can I get more information?**

You can access documents on renewable fuels at [www.epa.gov/otaq/renewablefuels](http://www.epa.gov/otaq/renewablefuels)

For more information on the Renewable Fuel Standard, please contact Deborah Wood at [wood.deborah@epa.gov](mailto:wood.deborah@epa.gov), 202-343-9249, or:

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