

E15 FUEL IN LOUISIANA

by

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In March, RaceTrac made Louisiana the 29th state to offer an alternative at the pumps, with the addition of E15 pumps in Baton Rouge. This newer grade of fuel has been on the market since 2012, and has slowly been making its way into gas stations across the United States. The Environmental Protection Agency (EPA) approved this brand of gasoline for use in passenger cars and light trucks newer than 2001 in 2011. Although E15 has been approved by the EPA, some organizations still have concerns over the potential damage done to engines, and an overall lack of acceptance from the public.

What Is E15

The “E” in E15 stands for ethanol. The “15” in E15 stands for the percentage of ethanol content blended into the gasoline that is put in the car, which, for E15, is 15 percent. The ethanol used for E15 gasoline is produced from corn via fermentation and distillation, and then blended with normal gasoline to the percentage of ethanol in the gasoline. The average consumer might not realize, but most of the gasoline sold in the United State right now has some ethanol component in it, usually not more than 10%. There are places that also sell ethanol-free gasoline, or basic, unblended gasoline. This unblended gasoline is marked clearly, and is marketed more towards engines with carburetors, which have been thought to develop problems when running gasoline blended with ethanol.

According to the Renewable Fuels Association, ethanol production has increased from 848 million gallons in 1990, to 14.8 billion gallons in 2015, a 17-fold increase in production in 25 years.¹ One reason behind this increase is the Renewable Fuel Standards, a federal program which deems that fuel sold in the United States contains a minimum amount of renewable fuel in the gasoline. The first standard, called the Energy Policy Act of 2005, started the requirement of blending renewable fuels into gasoline. The Environmental Protection Agency (EPA) oversees the program. The ultimate goal of this act, expanded in 2007 with the Energy Independence and Security Act of 2007, is to have 36 billion gallons of renewable fuel blended into the normal transportation fuel in order to help reduce the levels of Green House Gasses (GHGs) in the atmosphere.² E15 is becoming a more plentiful option for drivers around the country. Cars, light trucks, and flex-fuel vehicles made after 2001 are all approved to use E15 fuel or more than 80% of all vehicles currently on the road. Prices of E15 tend to be a little less expensive, averaging \$0.02-\$0.05 less than regular unleaded gasoline.³ American drivers have driven over 750 million miles on E15, according to Growth Energy.⁴

Pros and Cons

But E15 is not without controversy. E15 has 33.3% less energy potential than unblended gasoline, thus, is not as efficient as gasoline energy-wise. In other words, you have to use more ethanol to go the same distance as you would for gasoline – for every 100 miles you use in energy with gasoline, you would

¹ <http://www.houstonchronicle.com/business/article/Gas-stations-challenge-oil-industry-orthodoxy-on-9218266.php>

² <http://www.afdc.energy.gov/laws/RFS.html>

³ <http://exchange.sigma.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=04af086b-1ee4-d1e4-53ae-59b4a662ab97&forceDialog=0>

⁴ <http://www.biofuelsdigest.com/bdigest/2017/03/19/louisiana-becomes-29th-state-to-adopt-e15-ethanol/>

only have enough energy to go 67.7 miles with ethanol blended E15. Also, some warranties from automobile manufacturers do not cover E15 damage that might occur. One should check the vehicle owner's manuals or warranty statements before making a decision to try E15 fuel.⁵

Coupled with controversy are the positive ramifications to moving towards more ethanol-blended gasoline. Researchers at the University of Illinois have found that just changing from E10 to E15 saves 1.25 grams of carbon dioxide per megajoule, and that ethanol emissions are 34% less than regular gasoline⁶ (one gallon has the energy equivalent of .76 of 1 percent of a megajoule). With approximately 143.37 billion gallons of gasoline consumed in 2016⁷, about 1.09 billion megajoules were consumed and, using the consumption in 2016, a switch from E10 to E15 would save 1.36 million kilograms of carbon from being expended. With the reduction of hydrocarbons expended, the ethanol blended gasoline can help alleviate some of the air pollution problems within the United States. In addition, E15 has been claimed to keep engines cleaner by helping to dissolve foreign bodies.⁸

While E15 is not without its drawbacks, more and more states have started to, if not adopt E15 whole heartedly, at least offer it to the consumer. With the higher octane (usually 88 – regular gasoline is 87), E15 can save the consumer a few cents per gallon, while releasing fewer pollutants. While E15 comes with a higher octane than regular gasoline, before you decide to use it in a vehicle, it would be best to check in the owner's manual to ensure that your vehicle is E15 approved. There are more stations offering the E15 option, it is up to the consumer to make the decision if E15 is right for their vehicle.

⁵ <http://exchange.sigma.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=04af086b-1ee4-d1e4-53ae-59b4a662ab97&forceDialog=0>

⁶ <http://www.eesi.org/articles/view/research-finds-widespread-use-of-e15-would-reduce-co2-emissions>

⁷ <https://www.eia.gov/tools/faqs/faq.php?id=23&t=10>

⁸ <http://www.ethanolretailer.com/e15-resource-center/e15-performance>