

BACKGROUND

Higher blends of biofuels like E15 – a fuel blend made with 15% ethanol – have saved American drivers up to nearly \$1 per gallon at the pump, all while reducing emissions and supporting economic growth across rural America. In fact, the popularity of higher bioethanol blends is rising faster than ever, and American drivers have driven more than 75 billion miles using E15.

Unfortunately, due to outdated regulations, fuel retailers need a special waiver in order to be able to sell E15 in the summer. As it has in the past, the U.S. Environmental Protection Agency (EPA) granted an emergency waiver allowing fuel retailers to sell E15 without seasonal vapor pressure restrictions during the 2023 summer driving season.

Read on to learn more about the economic and environmental benefits of E15, and to see why lawmakers and the Biden administration should find a nationwide solution that allows E15 to be sold year-round.

QUESTIONS

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Q: Why is E15 restricted during the summer?

A: E15 is restricted because of outdated fuel vapor pressure regulations on evaporative emissions that were crafted more than 20 years before EPA approved the use of E15. These regulations do not reflect the current fuel marketplace – or the emissions improvements that E15 provides. EPA recognizes these improvements and attempted to update these regulations to reflect the reality of E15's evaporative emissions benefits, but the agency's rule was overturned in 2021 after a successful lawsuit by the oil industry.

Fuel evaporates more quickly during the warmer months. Summertime regulations, therefore, are intended to reduce fuel volatility – a measure of how easily a fuel can evaporate – and as a result, reduce certain emissions that could contribute to the formation of smog.

Historically, EPA has extended a special summertime vapor pressure "waiver" to E10, allowing it to meet a slightly higher vapor pressure standard, in recognition of the environmental benefits offered by ethanol blends. Over time, E10 became the standard fuel in the United States, available to consumers year-round.



GRAPH SOURCE: "A Model for Estimating Vapor Pressures of Commingled Ethanol Fuels", October 29-November 1, 2007; General Motors Research and Development Center - Dr. Sam R. Reddy

Fuel blends containing more than 10 percent ethanol,

such as E15, have a lower vapor pressure than E10. They reduce overall evaporative emissions as the concentration of ethanol increases.

Given this profile, E15 should easily qualify for the same regulatory treatment as E10. However, when the vapor pressure regulations were first written 30 years ago, biofuels blending beyond E10 had yet to be approved by EPA and introduced into the marketplace. As a result, EPA regulations limited the summertime fuel vapor waiver only to E10.

More recent efforts by EPA to update the rules to reflect the air quality benefits of E15 were overturned as a result of oil industry litigation, and E15 is now subject to a more stringent summertime vapor pressure standard than regular E10 gasoline – despite being a cleaner fuel with lower evaporative emissions.

This makes no sense. That's why a permanent fix to create parity between E10 and E15 summertime standards is so important. We can't let outdated regulations stand in the way of a clean energy future and a lower-cost, lower-emission fuel.

Q: Can anyone use E15 in their car?

A: The U.S. Environmental Protection Agency has approved E15 fuel for all light-duty vehicles model year 2001 and newer. That's more than 96 percent of the vehicles on the road today or more than 245 million cars and trucks, accounting for 98 percent of all vehicle miles traveled.



Q: Will the emergency waiver lower the cost of gas?

A: Yes. Last summer, when the Biden administration issued an emergency waiver, E15 saved drivers up to nearly a dollar per gallon at the pump in some areas, with savings averaging to \$0.16 per gallon across the country. This year's emergency waiver will allow E15 to keep contributing to lower prices for American consumers.

Currently, E15 is available at more than 3,000 gas stations across 31 states. And just about anyone can use it because E15 is approved for all light-duty cars and trucks model year 2001 or newer. That's more than 96 percent of light duty vehicles <u>currently on the road</u> – more than 245 million cars and trucks, which account for 98 percent of all vehicle miles traveled.

All in all, research conducted by Growth Energy showed that a nationwide transition to E15 would save consumers \$20.6 billion in annual fuel costs, put an additional \$36.3 billion of income into the pockets of American households, support an additional 188,000 jobs, and generate \$66.3 billion for the U.S. GDP.



Q: Does E15 increase the emission of greenhouse gases?

A: No, biofuels like ethanol significantly reduce GHGs today and will play a key role in decarbonizing the transportation sector into the future. Moving to E15 nationwide would reduce CO2 emissions by another 17.62 million tons – the equivalent of taking 3.85 million cars off the road.

At the same time, biofuel producers work hand in hand with U.S. farmers to promote sustainable practices across the agriculture sector while meeting a growing demand for renewable products.





Q: Does E15 contribute to an increase in smog?

A: No. E15 actually reduces the emission of smog-forming pollutants more than E10. This question was settled a decade ago when Department of Energy (DOE)/National Renewable Energy Laboratory tested 86 cars on E15 and E20 blends, and found that these fuels either produced no change or lowered smog-forming emissions.

Increased ethanol content means less pollution and healthier communities. A study by the University of California Riverside found that ethanol blends reduce toxic emissions, including lowering ozone forming potential and significant reductions of harmful particulates that contribute to smog. Clean-burning biofuels also help lower other tailpipe emissions – including carbon monoxide and toxic chemicals – resulting in cleaner air and a healthier environment.

At the same time, ethanol reduces greenhouse gas emissions (GHG) by 46 percent compared to regular gasoline, making biofuels a key to achieving the nation's climate goals. As a result, nationwide adoption of E15 could cut GHG emissions by 17.62 million tons per year, which is the equivalent of removing approximately 3.85 million vehicles from the road.

That's why a permanent fix is so important. We can't let outdated regulations stand in the way of a clean-energy future.

E15 Boasts Lower Ozone Forming Potential



University of California, Riverside

Q: Will the emergency waiver raise the cost of food?

A: No. Prices at the grocery store are driven predominantly by factors like transportation, processing, packaging, and marketing – not the value of farm commodities. In fact, one of the biggest determinants of food cost is crude oil, the prices of which are set by global markets and which strongly impact the prices of other goods. Continued innovation in America's agriculture sector and improved farming methods have also increased efficiency and yield for corn crops. Less inputs are required to produce corn now, and the amount of corn being harvested from the same amount of acreage has skyrocketed – reflecting cutting-edge innovations on the farm. Furthermore, ethanol production doesn't only result in fuel; it also generates a nutrient-rich animal feed. That, in itself, has a positive effect on the food supply, food prices, and land use.



SOURCE: USDA Crop Production Historical Track Records, 2019

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The animal feed generated from ethanol production includes protein, mineral, vitamins, and fiber, and is used by dairy, beef, swine, and poultry producers, among others.

Finally, the corn used to produce ethanol isn't the same corn you find at the grocery store. The corn used to make ethanol is not intended for human consumption and is distinct from the sweet corn found on grocery shelves.





SOURCE: USDA 2019

SOURCE: USDA Crop Production Historical Track Records, 2019

Q: Will the use of summertime E15 increase land use acreage devoted to agriculture?

A: No. Compared to the 1930s, farmers today grow five times as much corn using 20 percent less acreage. America's agriculture sector continues to improve farming methods to increase efficiencies and yield, lowering the amount of energy needed to produce a bushel of corn. Corn acres have not grown since 2007, the first year the Renewable Fuel Standard was implemented, yet yields continue to increase.

Q: Is E15 less energy dense than E10?

A: Ethanol is the best available source of octane. It is the cleanest, most affordable high-octane fuel on the market. It provides a superior octane boost without the carcinogens associated with other fuel additives. As a result, E15 increases performance, while any change in fuel economy between E10 and E15 is negligible.

The U.S. Department of Energy (DOE) agrees, noting that its research "showed no statistically significant loss of vehicle performance (emissions, fuel economy, and maintenance issues) attributable to the use of E15 fuel compared to straight gasoline."