

FLEXFUEL

E85 ETHANOL

TRUCK



What is E85

Flex Fuel and E85 “E85” is thought by many to denote a vehicle fuel containing 85% ethanol and 15% gasoline. However, the ethanol portion of the blend must contain, by law, at least 2% denaturant (a hydrocarbon or hydrocarbons in the gasoline boiling range). Therefore, E85 actually contains 83% ethanol at most. Furthermore, in cold weather conditions, a greater percentage of gasoline is required in the blend to ensure reliable starting and driveability. In the coldest weather, as much as 49% gasoline is needed. In most U.S. climate zones, 30% gasoline is sufficient for much of the year. The latest ASTM specification, D5798-13a, specifies where and when the four different classes of fuel for FFVs should be used. Because of this variation in the ethanol percentage, many in research and industry have begun using the term “flex fuel” in lieu of “E85”



What is E85

Ethanol: A two carbon alcohol also known as ethyl alcohol. Ethanol used in motor vehicle fuel is rendered unfit to drink with the addition of 3 percent or less hydrocarbon denaturant. Ethanol is primarily produced commercially through fermentation of sugars derived from feedstocks such as corn, sugarcane, or sugar beets. Corn is currently the predominant ethanol feedstock in the United States. Ethanol can also be produced from cellulose using advanced techniques to convert the cellulose into fermentable sugars

Not only is E85 a more sustainable fuel option, but it's also high-performance. With an octane rating of 105, E85 offers more power and higher engine efficiency compared to traditional gasoline. And because it's produced domestically, it can also help reduce our dependence on foreign oil.



Flex Vehicles

E85 can only be used in flex fuel vehicles specifically designed to run on E85 or gasoline. CARB Specifications: In lieu of the E85 specifications in California Code of Regulations title 13, section 2292.4, CARB issued test program exemptions to fuel producers, which waive the minimum vapor pressure and ethanol and hydrocarbon content specifications, and specify instead the ASTM active standard for ethanol fuel blends along with a more stringent sulfur specification. Fueling: E85 dispensing devices have been approved for use by UL.

FFVs do receive certain regulatory credits under the CAFE program, which can help automakers meet their overall fuel economy targets. These credits are given to manufacturers for producing and selling FFVs that are capable of running on alternative fuels, like E85 ethanol. The credits can be used to offset any deficits in fuel economy for other vehicles in the manufacturer's fleet that may not meet the CAFE standards.



Flex Vehicles

Flex vehicles, also known as flexible fuel vehicles, are designed to run on a combination of gasoline and alternative fuels like ethanol, methanol, or a blend of these fuels. Here's a list of some flex vehicles available in the market:

1. Ford F-150
2. Chevrolet Silverado 1500
3. Dodge Ram 1500
4. GMC Sierra 1500
5. Toyota Camry
6. Honda Civic
7. Nissan Versa
8. Chevrolet Impala
9. Ford Fusion
10. Hyundai Accent
11. Chevrolet Equinox
12. Ford EcoSport
13. Jeep Compass
14. Hyundai Tucson
15. Kia Sportage
16. Toyota Highlander
17. Chevrolet Tahoe
18. Ford Expedition
19. GMC Yukon
20. Cadillac Escalade





What does a Retailer need to do to sell E85

Compliant Tank

Vapor Fill Bucket

Rinse and clean tanks and lines

E85 Tank Probe

E85 Sensors

Turbine will need to be replaced over time

Vapor Vent Stack

Dispenser, Yellow hose or nozzle, both

Signs

Labels - Brand

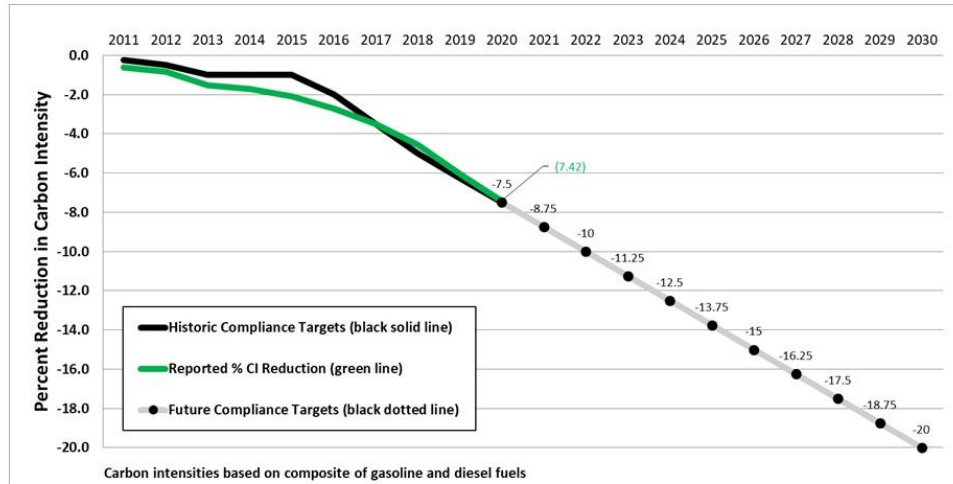
Permits: ust, fire,

Ensure covers prevent water from system

Regularly check for water

California State Carbon Reduction Chart

2011-2020 Performance of the Low Carbon Fuel Standard



Last Updated 08/30/21

This figure shows the percent reduction in the carbon intensity (CI) of California's transportation fuel pool. For 2020, LCFS credit generation met 7.42% of the 7.5% target reduction while drawing down the cumulative credit bank to meet full compliance. The LCFS target is to achieve a 20% reduction by 2030 by setting a declining annual target, or compliance standard. The compliance standard was frozen at 1% reduction from 2013-2015 due to legal challenges, contributing to a build-up of banked credits as regulated parties bringing new alternative fuels to market continued to over-comply with the standard. The program will continue post 2030 at a 20% stringency unless revised in a future rulemaking.

[Click to download the Excel spreadsheet of this graph.](#)

RIN Prices

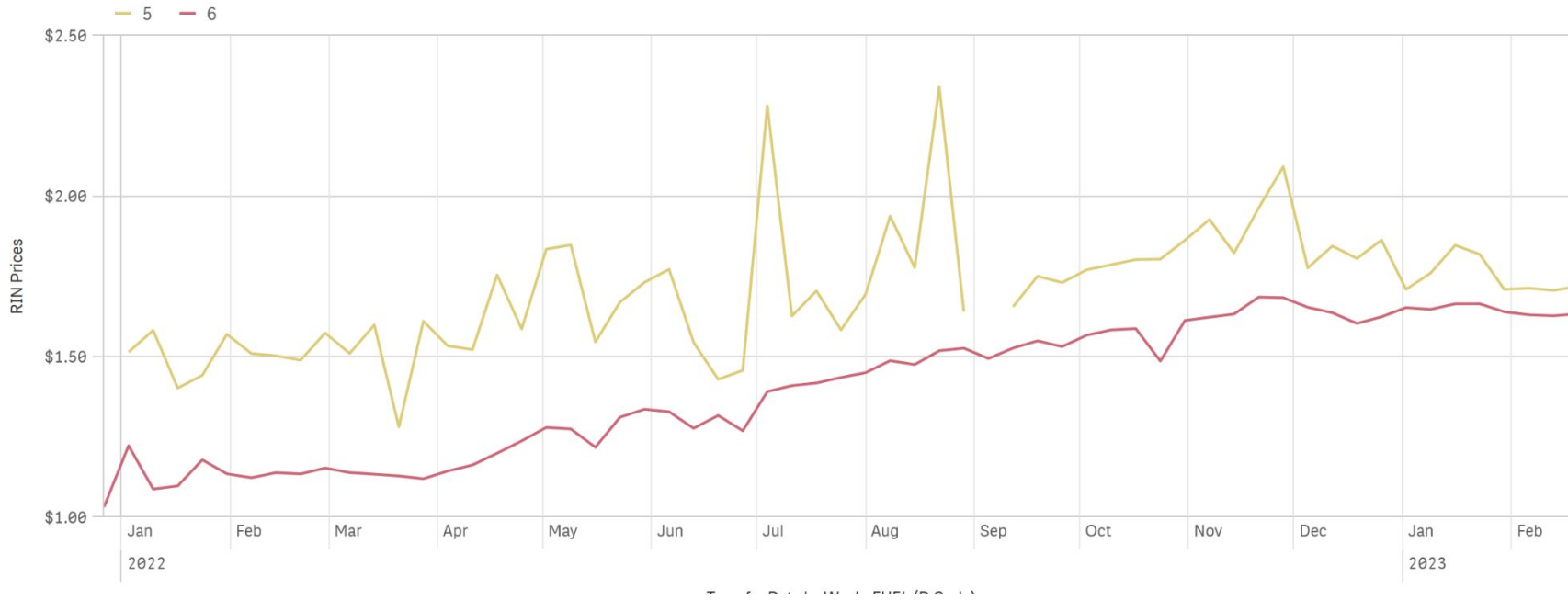
EPA Fuels Registration, Reporting, and Compliance Portal
Average of RIN Price by Transfer Date by Week and Fuel (D Code)
Fuel (D Code) — D5

MONTHLY Latest Refresh Data Date: 12/19/2022



Weekly D5 and D6 RINs prices

Weekly D3, D4, D5 and D6 RINs Prices



Washington State Carbon Reduction Chart

