
Trump Strings Along Farmers and Refiners With Waivers

Compromise proposals in RFS dispute.

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Data Sources for This Publication

U.S. Energy Information Administration

CME Group

U.S. Census

To discover more about the data sources used, [click here](#).

Unlikely to Satisfy

A long-running feud between refiners, who perceive Renewable Fuel Standard rules as stealing gasoline market share and imposing costs on refiners that don't blend, and renewable fuels advocates led by the powerful congressional farm lobby, who benefit from corn ethanol mandates, has come to a head in the Trump administration, which encompasses supporters from both sides. Our analysis indicates that compromise proposals to please both sides—by issuing an Environmental Protection Agency, or EPA, waiver to broaden ethanol use in gasoline year-round at the same time as issuing obligation waivers to small refineries—are unlikely to satisfy either side or resolve the dispute long-term.

RFS and RINs

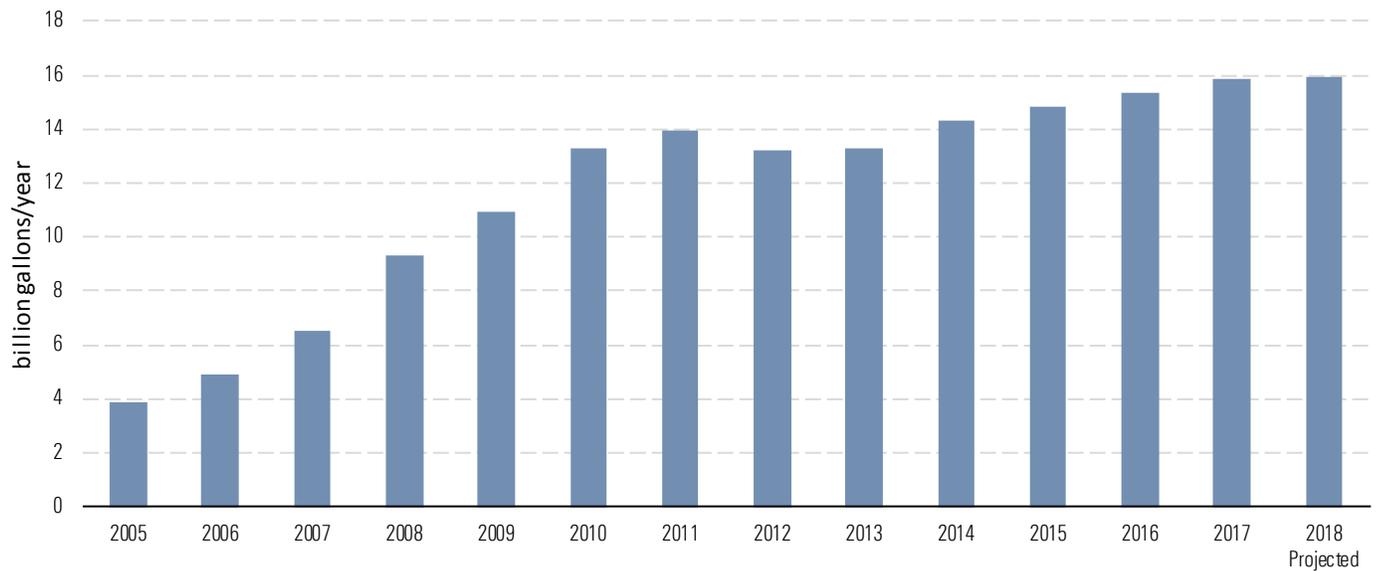
The 2007 Energy Independence and Security Act, or EISA, included a mandate for the Renewable Fuel Standard established by Congress in 2005. Under the Renewable Fuel Standard, or RFS, refiners are required to blend specific annual volumetric target quantities of renewable fuels into transport fuels to reduce U.S. dependence on fossil fuels. Each year, the EPA, which administers the RFS, estimates gasoline and diesel consumption and sets percentage targets for renewable fuels during the next year. The EPA sets targets for four types of renewable fuel to be blended with gasoline and diesel. In the interests of simplicity, this analysis sticks to the largest volume of renewables, ethanol made from corn and blended with gasoline. The implied 2018 EPA target is for refiners and importers to blend 15 billion gallons of corn ethanol into domestic gasoline, or 10.27% of estimated sales of 9.35 million barrels/day. Compliance with RFS targets is achieved by surrendering Renewable Identification Numbers allocated at the point of blending (see our September 2016 note "[Corn Crush and RINs – Tighter Margins For Producing and Blending Ethanol](#)"). Refiners that don't blend their own fuel must purchase RINs from blenders or middlemen to meet their RFS obligation. The EPA can provide obligation waivers to small refiners with plants that have less than 75 thousand barrels/day, or mb/d, of capacity.

Fuel Ethanol Supply/Demand

Most ethanol used for fuel blending in the U.S. is a mix of 98% pure alcohol produced by fermenting sugar in grain crops like corn and 2% denaturant—usually natural gasoline—added to make anyone who drinks it vomit. Fuel ethanol production capacity is about 16 billion gallons/year according to the Energy Information Administration, and demand is tied closely to RFS regulations, which nearly quadrupled output to 15.85 billion gallons/year between 2005 and 2017 (Exhibit 1). Exports have grown in recent years, doubling since 2012 to 1.3 billion gallons/year in 2017, according to U.S. Customs, with Brazil being the largest buyer that year, but the domestic market remains the critical driver, with growth tied directly to RFS targets. These targets became controversial in recent years when they approached

and then exceeded 10% of total gasoline sales. Since most gas stations only cater for a 10% ethanol blend known as E10, higher targets run into a “blend wall” that is hard to exceed and pushes up RIN prices. As a result, the ethanol lobby is keen to remove the blend wall constraint by encouraging ethanol blends higher than E10.

Exhibit 1 U.S. Fuel Ethanol Production



Source: EIA, Morningstar

RVP Waivers

Alleviating the blend wall should be as simple as raising the ethanol percentage from E10 to E11 or higher, but a mixture of logistics, state regulations, and vehicle limitations has so far constrained the use of higher-percentage blends in gasoline. A 15% blend known as E15 and a higher-percentage blend known as E85 that has between 51% and 83% ethanol are marketed in some states. In 2012 the EPA approved E15 for all cars and trucks made since 2001, but it was still only available at 1,640 out of a total of over 150,000 gas stations in the U.S. during 2017, according to the agency. More gas stations offer E85, but that blend can only be used by certified flex-fuel vehicles. Existing limitations on E15 sales are a mixture of environmental rules dictating gasoline blends, regulations concerning pump equipment, and concerns about possible engine damage and vehicle warranties. One major federal constraint is imposed by an EPA concession under the RFS that permits E10 blends to be sold with a 1% higher Reid vapor pressure, or RVP, level than conventional gasoline during the summer (June 1–Sept. 15). This concession is unavailable for E15, meaning it can't be sold in most areas during the summer unless gas stations market the blend as E85 flex-fuel.

In hopes of boosting ethanol sales and breaching the blend wall, the ethanol lobby has proposed that EPA extend the E10 RVP waiver to E15, making it easier to market the blend year-round. Based on

President Trump's comments, this idea is being seriously considered by the EPA. Such a move would in theory increase ethanol sales by extending the blend wall to 15%. However, the impact will be limited in the short term and is likely to be fiercely resisted by refiners that own gas stations. Based on typical sales of 1,000 gallons/day, the existing 1,640 E15 gas stations sell about 600 million gallons a year, which translates to 90 million gallons of ethanol, or 0.6% of the current 15-billion-gallon target. Even doubling the number of E15 gas stations would only increase demand by a fraction. In this sense, the waiver is more symbolic than profitable to the ethanol lobby because it breaches the E10 blend wall, opening the door to future expansion of RFS targets.

RIN Waivers

On the other side of the debate, the initial hopes of the refining lobby to do away with the RFS altogether during 2017 ran afoul of the congressional farm lobby, which represents districts that primarily supported Trump in 2016. In an effort to placate angry refiners, many of whom are also Trump supporters, the EPA has exercised its prerogative under the RFS to help out smaller plants under 75 mb/d capacity by waiving their RIN obligations. According to Petroleum Argus, at least 25 waivers have been granted to small refineries in 2018, far more than during previous years. Looking at the latest EIA list of refineries (as of January 2017), we find 46 plants with atmospheric crude capacity of 75 thousand barrels per calendar day or less. Not all of these, produce gasoline but after taking out asphalt and lubricants plants, we estimate the total refining capacity of the 25 smallest is 741 mb/d. Assuming that they yield a conservative 40% gasoline from every barrel of crude processed, that works out to about 300 mb/d of gasoline, which represents an RIN obligation to blend 30 mb/d, or 0.46 billion gallons of ethanol a year, which is 3% of the 15-billion-gallon target. The waiver doesn't affect the ethanol target but does reduce refiner obligations to purchase the equivalent volume of RINs, reducing demand and prices. Also, if this waiver estimate were accurate, it would tip the blend wall slightly below 10% again. Additional waivers from EPA are also possible for larger refineries, such as that granted earlier this year to help the 310 mb/d Philadelphia Energy Services refinery in Philadelphia, Pennsylvania, emerge from bankruptcy (although that waiver was retrospective). Given that the farm lobby will not countenance repealing the RFS, these RIN waivers go a long way to address refiners' concerns and keep a lid on RIN prices.

Blenders

In between the ethanol and refiner lobbies are downstream gasoline blenders that have no refiner RIN obligation but generate RINs at no cost when they blend fuels. They can then turn around and sell their RINs at whatever price the market will bear, to refiners and importers that need them. These independent blenders are often maligned for making windfall profits from RIN sales, although it should be remembered that their ranks include many refiner/marketers. Their interest in ethanol is greater than just RIN sales. If ethanol prices are lower than finished gasoline, they can profit by adding as much ethanol as regulations allow. And over the past 15 months, that equation has been true. Exhibit 2 shows the premium of unleaded gasoline over ethanol in Chicago, Illinois, using CME Group prices. The data indicates the daily average 2017 premium was \$0.09/gallon, increasing this year to an average \$0.38/gallon between Jan. 2 and April 16, 2018.

Exhibit 2 Unleaded Gasoline Premium Over Ethanol in Chicago

Source: CME Group, Morningstar

Apart from being a renewable fuel, ethanol is also an important source of octane (see our January note “[Refiners’ Slow Response to the Octane Challenge](#)”). That makes ethanol an even more lucrative blending component of premium gasoline, as well as a replacement for more expensive refinery-produced octane enhancers such as alkylate and reformate. Premiums for alkylate and reformate over ethanol at the Gulf Coast averaged \$0.56 and \$0.75/gallon, respectively, on average between Jan. 1 and April 13, 2018. Blenders can pocket that premium by using ethanol instead of those more expensive octane enhancers.

Thus, although blenders are often refiners as well, it should be noted that (at current prices) they stand to profit handsomely from any expansion of ethanol blends to E15, even if they lose money through the devaluation of RINs.

Balancing Act

The two competing proposals to placate ethanol producers and refiners offer something to both sides but will likely fail to satisfy either in the long term. The E15 RVP waiver really doesn't harm refiners in the short term, as the E15 market is so small, but it does start a process of crossing the blend wall that ethanol producers want to encourage. On the other hand, refinery RIN waivers will likely cause the blend wall to retreat under 10% and hurt ethanol producers by weakening the RFS mandates their industry depends on. Independent blenders stand to gain from any ethanol expansion. We expect something like these compromise proposals to keep both sides of this feud happy for now, but the issue could be back in the spotlight after the November midterm elections. ■■■

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