

## Small Refinery Exemptions Reduced 2018 Ethanol Consumption and Blend Rate

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Ethanol consumption in the U.S. declined in 2018 as a result of the Environmental Protection Agency’s (EPA) unprecedented issuance of small refinery exemptions from Renewable Fuel Standard (RFS) blending obligations. Year-over-year domestic ethanol usage declined for the first time since the mid-1990s, and the average content of ethanol in gasoline – referred to as the blend rate – fell for the first time since comparable statistics became available in 2009.

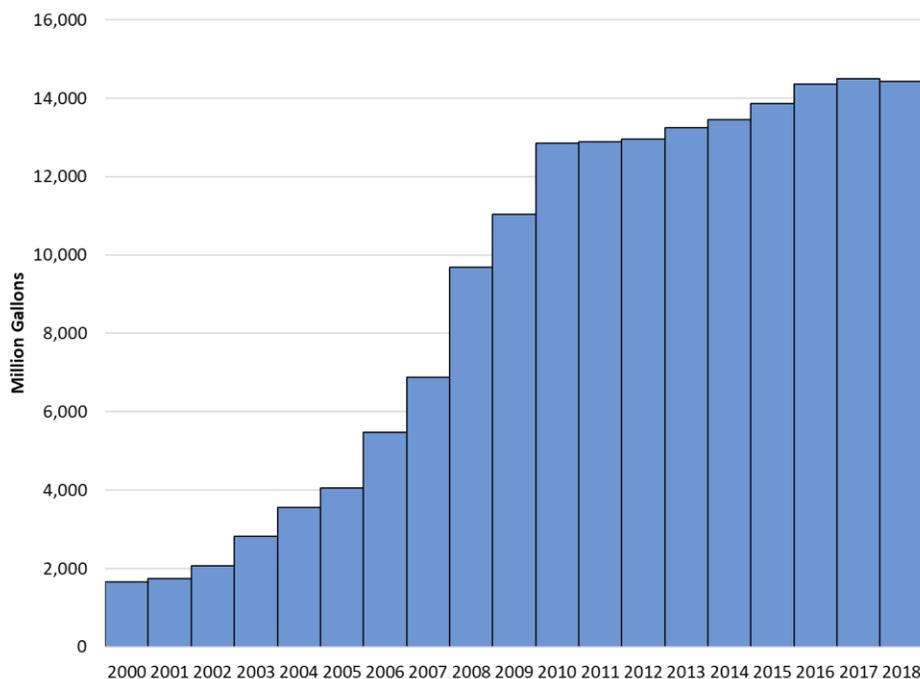
### **Background**

Under former Administrator Scott Pruitt, the EPA granted 19 RFS exemptions retroactively for the 2016 compliance year and an additional 29 for 2017. This far exceeded the 7-8 granted in each of the three previous years.

### **Demand Destruction**

U.S. ethanol consumption declined to 14.38 billion gallons in 2018 from 14.49 billion gallons in 2017. Usage had risen steadily over the past two decades, through changing market conditions and events such as the financial crisis.

**Figure 1: U.S. Domestic Ethanol Consumption**



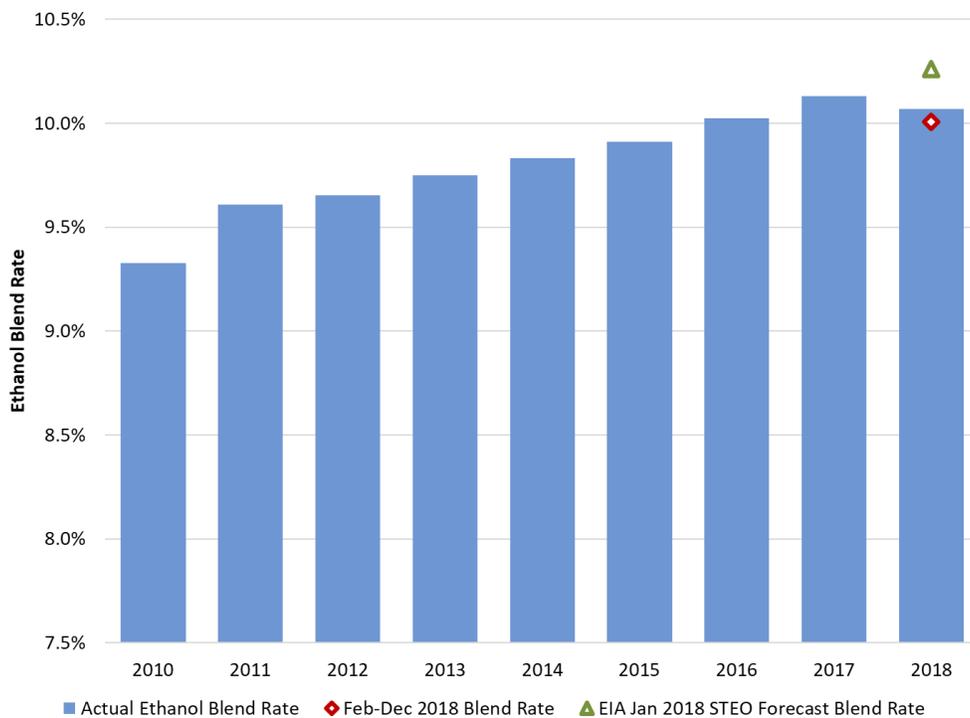
Source: RFA based on EIA and Census Bureau data

Additionally, it is helpful to look at the ethanol blend rate, since underlying gasoline consumption changes from year to year. The blend rate fell to 10.07% in 2018 from a record 10.13% in 2017.

Looking at 2018 in more detail, it can be seen that the blend rate slumped starting in February, as rumors and press reports regarding the exemptions made their way into the market. The blend rate fell a full percentage point in February to 9.8%, ticked down to 9.7% in March and dropped further to a five-year low of 9.5% in April. From February to December, the blend rate averaged just 10.01%.

Moreover, this was far below expectations at the start of the year. In its *Short-Term Energy Outlook* published in January, the U.S. Energy Information Administration’s (EIA) forecasts of ethanol and gasoline consumption implied a blend rate of 10.26% for 2018, representing a continuation of the incremental growth seen in the blend rate over the past decade.

**Figure 2. U.S. Ethanol Blend Rate**



Source: RFA based on EIA data

Based on the EIA’s forecast blend rate, 14.66 billion gallons of ethanol would have been used in 2018, or 276 million gallons more than actually occurred. The situation would have been worse if ethanol prices had not fallen to steep discounts to gasoline prices in most of 2018 in order to incentivize continued usage.

Notably, some of the refineries to which exemptions were issued are part of large oil companies. Reuters has reported that this included units owned by ExxonMobil and Chevron. The ethanol industry did not fare as well. The economics resulting from the exemptions took a toll on the industry, and in recent months roughly 600 million gallons of capacity has gone offline, as several facilities have been idled and two have closed permanently.