

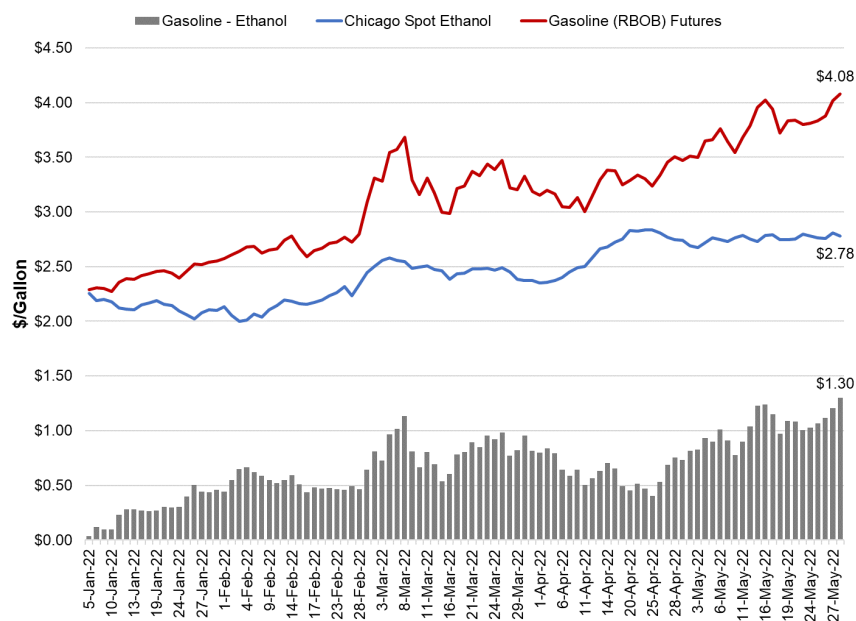
## THE TRUTH ABOUT THE RENEWABLE FUEL STANDARD AND GASOLINE PRICES

*June 2, 2022*

The use of ethanol toward the Renewable Fuel Standard (RFS) reduces the price of gasoline in two ways:

- **Direct Savings:** Ethanol is usually less expensive than petroleum-based gasoline. Recently, ethanol has been selling at a discount to gasoline of more than \$1/gal at the wholesale level (Figure 1). Additionally, a RFS compliance credit, known as a renewable identification number (RIN), is attached to each gallon of ethanol sold domestically; this is provided free of charge, helping to offset the cost of gasoline.
- **Energy Market Impact:** The use of ethanol reduces consumption of petroleum-based gasoline, thereby lowering demand for crude oil. [In a 2019 study](#), Dr. Philip Verleger determined that that by expanding fuel supplies, the RFS reduced the price of crude oil by \$6/barrel on average from 2015 to 2018. In turn, gasoline prices were reduced by an average of \$0.22/gal., the equivalent of \$250 annually for a typical household.

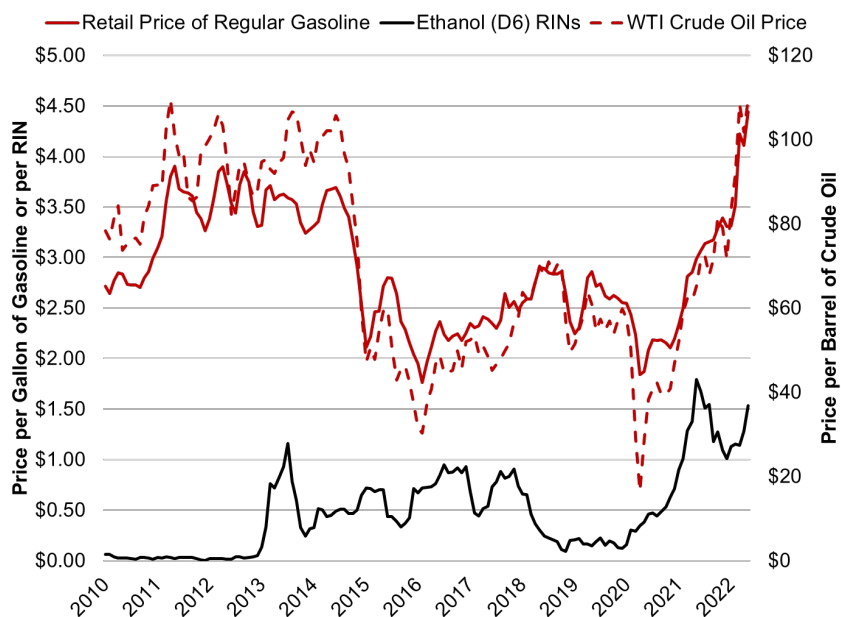
**Figure 1: Price of Ethanol Versus Gasoline**



Sources: U.S. Energy Information Administration (RBOB), OPIS (Ethanol)

Contrary to allegations by refiners, robust RFS requirements do not result in higher gasoline prices. As is evident in Figure 2, the cost of crude oil is the predominant driver of retail gasoline prices (with a correlation coefficient of 0.95), whereas the relationship between the prices of gasoline and RINs is weak.

**Figure 2: Prices of Retail Gasoline, Crude Oil and RINs**



Sources: U.S. Energy Information Administration (Gasoline and Oil), OPIS (RINs)

This lack of correlation is due to the functioning of the RIN system. Despite refiners' continual complaints about the cost of RINs, it has long been established by the EPA and academic researchers that refiners recover such costs via the *wholesale* price of gasoline. Importantly, however, the RIN cost is offset further downstream in the fuel supply chain, when ethanol is blended with gasoline and the RIN is separated from the physical gallon of biofuel. The EPA recently [concluded](#) that biofuel “blenders are passing through 100% of the RIN price as a discount to consumers in the price of blended fuel.” Thus, RINs do not have a significant impact on the *retail* price of gasoline paid by American consumers.

On the other hand, having RIN prices reflect real economic value encourages greater consumption of biofuels. In 2021 and the first quarter of 2022, the average ethanol content in the nation's gasoline pool (i.e., the blend rate) was 10.3%. This compares to the 10.1% average in 2018 and 2019, when the blend rate stopped rising after a large number of RFS exemptions were granted to small refineries, which reduced effective RFS obligations and undercut RIN prices. Thus, implementing RFS requirements in a manner consistent with the statute results in higher biofuel consumption, which in turn moderates RIN prices.