

THE TRUTH ABOUT RINS

What are RINs?

A [RIN](#) (or Renewable Identification Number) is a 38-digit alphanumeric code assigned to a gallon of renewable fuel produced in, or imported into, the U.S. for the purpose of tracking compliance with the Renewable Fuel Standard (RFS). In the case of ethanol, the RIN remains “attached” to the renewable fuel until it is blended with gasoline. Blenders and refiners who purchase ethanol receive the associated RIN **free of charge**.

When the ethanol is blended with gasoline, the RIN is separated and becomes a tradeable compliance credit. Each year, obligated parties under the RFS (typically refiners/importers) turn RINs in to EPA to demonstrate compliance with their renewable volume obligations (RVOs).

If an obligated party blends *more* than its required volume of renewable fuel, it will have surplus RINs that may be sold to other parties or banked for compliance with a portion of the following year’s RVO requirement. Conversely, if an obligated party blends *less* than its required volume, it may purchase RINs from other parties to offset the shortfall, or it may carry a deficit forward to the next year.

Are merchant refiners required to buy RINs to comply with the RFS?

NO. While some merchant refiners argue they are “required” to purchase RINs from other refiners or blenders, the truth is they could have invested in renewable fuel blending infrastructure. This would have allowed them to blend required volumes of renewable fuel and capture RINs free of charge. Following passage of the expanded RFS in 2007, many refiners took steps to increase their renewable fuel blending capacity so they could capture RINs internally. Meanwhile, other refiners chose not to invest in blending capacity, choosing instead to buy RINs from parties who blended more than required.

Are RINs an unrecoverable “sunk cost” for refiners?

NO. It is well understood that refiners who buy RIN credits rather than blending ethanol recoup their RIN costs by slightly marking up the selling price of gasoline blendstock. Thus, RINs are not a “sunk cost” and do not negatively affect the financial performance of refining companies, both large and small.

- Oil industry firm **Turner, Mason & Company** agrees that RINs don’t affect refining margins, stating, “RFS compliance costs are substantially passed from refiners” to wholesale gasoline buyers.
- The **Environmental Protection Agency** [found](#) that RINs are not negatively affecting profit margins for oil refiners. According to EPA, “...obligated parties, including small entities, are generally recovering the cost of acquiring the credits necessary for compliance with the RFS standards through higher sales prices of the petroleum products they sell.”
- After conducting more analysis, **EPA** [concluded](#) “...refiners are generally able to recover the cost of RINs in the prices they receive for their refined products, and therefore high RIN prices do not cause significant harm to refiners.”

- Economists from **Iowa State University** [found](#) “...added refiner costs from complying with the RFS are passed on to blenders through higher gasoline prices. We show that high RIN prices...have no impact on profits of refiners, blenders, or integrated oil companies.”
- Refiner **Andeavor**, who merged with **Marathon** in 2018, [stated](#) “RIN costs are passed through at the bulk finished product sales points and provide refiners with coverage of their exposure to them.”
- Even the **American Petroleum Institute** [agrees](#): “RIN costs are largely recovered by refineries, large and small, through the increased value of gasoline and diesel fuel they supply to the market.”

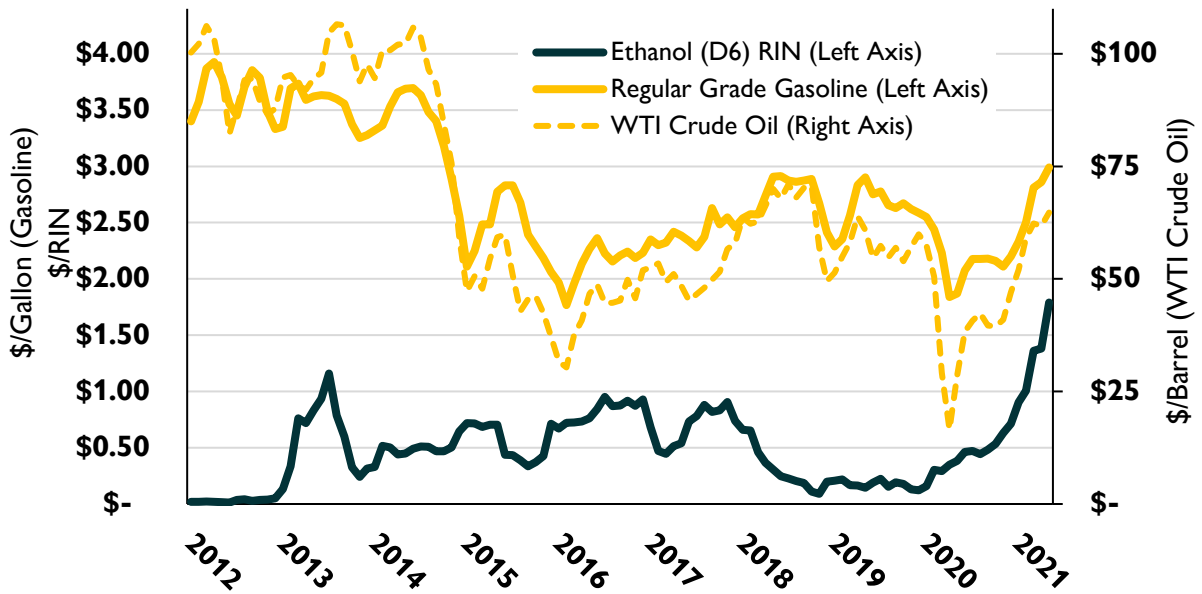
How do RINs impact wholesale fuel prices?

As noted above, RIN costs are passed through from refiners to wholesale purchasers, leading to slightly higher wholesale prices for gasoline blendstock. However, RINs have the opposite effect on renewable fuels, **lowering the cost of ethanol** for blenders. When ethanol is blended with gasoline to create a finished fuel, the RIN-enabled discount on ethanol fully offsets the RIN cost passed through on gasoline by refiners. For fuel blends that contain more than 10% ethanol (such as E15 or E85), the RIN enables a sufficiently larger discount that is typically shared with consumers in the form of lower retail prices.

Do RINs impact retail fuel prices at the pump?

NO. There is no evidence to support the notion that RINs push retail gas prices higher. In fact, RINs and retail E10 gas prices tend to be negatively correlated (coefficient = -0.3 since January 2013), with periods of high gas prices often occurring during periods of *low* RIN prices and vice versa. According to an **Iowa State** [study](#), “...the net effect on the [retail] price of E10 of high RIN prices is zero: higher gasoline prices are offset by lower ethanol blending costs and the price of E10 remains constant.”

Monthly Prices: U.S. Retail Gasoline, WTI Crude Oil, D6 RIN Credit



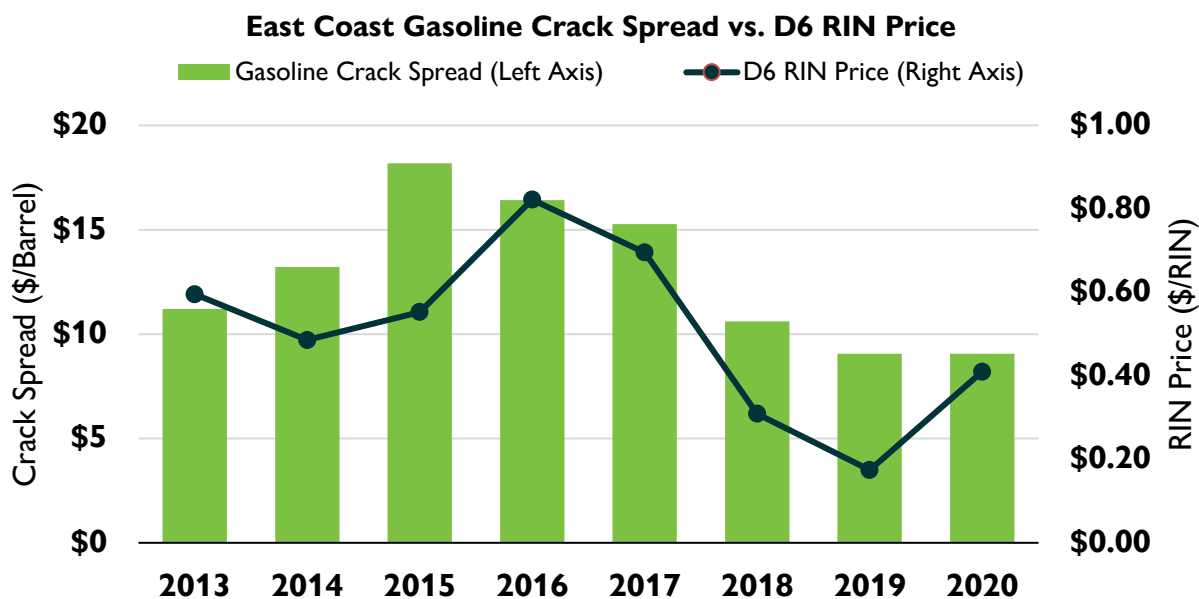
Source: OPIS and Energy Information Administration

How can there be no relationship between RINs and gas prices? EPA [explains](#) it this way: “When RIN prices rise, the market price of the petroleum blendstocks produced by refineries also rise to cover the increased RIN costs...**The effective price of renewable fuels, however, decreases as RIN prices increase.** When renewable fuels are blended into petroleum fuels these two price impacts generally offset one another...”

The primary driver of retail gasoline prices has always been crude oil prices—that has not changed in the RFS era. Between January 2013 and January 2021, retail gasoline prices are almost perfectly correlated with WTI crude oil prices (coefficient of 0.96).

How have refiner profit margins been affected by RINs?

Contrary to the rhetoric coming from some in the refining industry, there is **no statistical evidence to support the argument that higher RIN prices negatively affect refiner margins or earnings.** In fact, the gasoline “crack spread” (a surrogate for refining margins) for East Coast refineries shows a modest positive correlation with RIN prices in recent years, meaning *refining margins are highest when RIN prices are highest* (this supports the argument that RINs are embedded in the refinery crack spread).



Source: RFA analysis of EIA and OPIS data

- Analysts from **Wells Fargo Securities** released an [analysis](#) in 2017 that examined the potential impacts of RFS compliance costs on merchant refiners, finding that “Most independent refiners now enjoy a net benefit from RINs, based on our analysis.” The analysts also found that “RINs costs are being passed along” and “investors should not spend much time and effort” worrying about RINs.
- Refiners across the country have admitted that weaker refining margins in 2020 were [due to COVID-19](#) and the dramatic collapse in fuel demand resulting from travel restrictions—not the RFS.

Did the wave of small refiner exemptions impact RIN stocks and RIN prices?

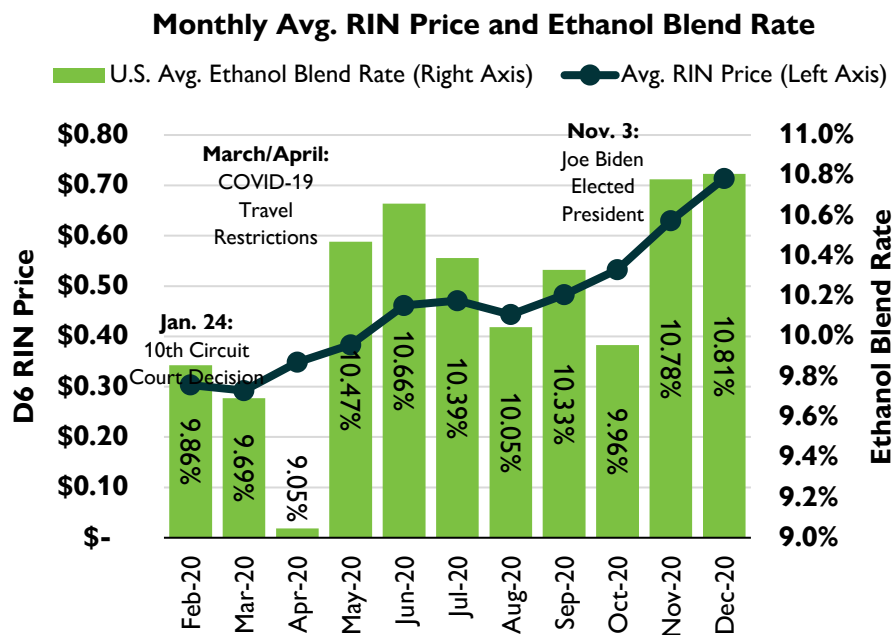
ABSOLUTELY. EPA's issuance of 86 small refinery compliance exemptions from 2016-2018 RFS requirements ballooned RIN stocks to more than 3.5 billion RINs. That is more than double the level of RIN stocks just a few years ago. Consequently, RIN prices plummeted from 95 cents in November 2017 to an average of just 18 cents from June 2018 to January 2020, decreasing the incentive for blenders and refiners to increase volumes of E15 and flex fuels like E85 to push past the so-called E10 "blend wall." For **two whole years** (from May 2018 to April 2020), record supplies of D6 RINs were available to refiners to purchase for an average of **just 20 cents**.

What has happened with RIN prices recently?

RIN prices began to rise in late January 2020 following a decision by the 10th Circuit Court in *Renewable Fuels Association et al. v. EPA* that overturned certain small refinery exemptions. RIN prices gained more strength in the fall of 2020, following agricultural and energy commodity markets higher. The election of President Biden also served as a positive signal to the RIN market, as he has stated strong support for the RFS and publicly condemned the Trump administration's illegal small refinery exemptions.

Are higher RIN values leading to increased domestic demand for ethanol?

YES. As expected, higher RIN values are providing a strong incentive for refiners and blenders to increase the use of ethanol and other renewable fuels. In fact, as RIN prices rose in November and December 2020, the average ethanol content in gasoline reached record levels around 10.8%. This is evidence that higher RIN values are enabling larger sales of E15 and flex fuels like E85 and **facilitating greater discounts** for consumers at the retail level.



Northwest Illinois
(May 11, 2021)



Adams, Nebraska
(March 4, 2021)

Source: OPIS and Energy Information Administration