

ETHANOMICS 101: HOW ETHANOL EASES FUEL PRICE PRESSURES

March 2022

Increased Ethanol Use Will Help Ease The Price Of Gasoline

- Ethanol costs significantly less than gasoline. As of March 8, 2022, the price of gasoline was \$3.68/gal (April RBOB futures), while the ethanol spot price was \$2.55/gal. That is, ethanol is currently trading at a \$1.13 per gallon discount to gasoline.

- Additionally, each gallon of ethanol comes with a free RIN, a credit used for compliance toward the federal Renewable Fuel Standard, which was worth \$0.98 on Tuesday. This further improves ethanol blending economics.

- The price differential and RIN value are carrying through to retail stations, as can be seen in significantly lower prices for 15% ethanol blends (E15) and especially E85 versus regular unleaded at the pump across the country.

- A second way that ethanol helps lower gasoline prices is by reducing the consumption of petroleum-based gasoline, which translates to lower demand for crude oil. In a 2019 study, energy economist Dr. Philip K. Verleger, Jr. determined that the use of ethanol reduced the price of crude oil by \$6/barrel, which, in turn, cut gasoline prices by an average of \$0.22/gal.

- Moreover, ethanol's effect on lowering fuel prices is greatest during periods when crude oil inventories are tight and demand is outstripping supply.



US Ethanol Can Fully Offset Russian Gasoline-Equivalent Import Volumes

- Russia accounted for 7% of combined U.S. imports of crude oil and products over the last three years. If the unused capacity in the U.S. ethanol industry were brought online, the additional production could fully replace the amount of gasoline we have been getting via Russian petroleum imports.

- Based on the composition of imports, the gasoline-equivalent volume of Russian imports has averaged roughly 115,000 bpd, or 1.7 billion gallons per year (bgg).

- U.S. ethanol production capacity is 17.7 bgg. Over the last month, ethanol production has averaged 15.6 bgg on an annualized basis. The unused capacity of 2.1 bgg can fully offset the 1.7 bgg of gasoline-equivalent imports from Russia that are now banned.

- Additionally, ethanol stocks currently stand at 1.1 billion gallons, equivalent to nearly 30 days' usage, which significantly exceeds the amount considered adequate. These stocks can be utilized while ethanol production ramps up toward full capacity.

Replacing Russian Petroleum with US Ethanol Will Provide Additional Environmental & Economic Benefits

- In addition to reducing prices at the pump, ethanol has broader societal benefits: cutting greenhouse gas emissions by roughly half compared to gasoline, improving air quality and strengthening the economy of Rural America [According to the Department of Energy's Argonne National Laboratory, typical corn ethanol provides a 44 percent GHG savings compared to gasoline.]

(Lee, U., Kwon, H., Wu, M. and Wang, M. (2021), Retrospective analysis of the U.S. corn ethanol industry for 2005– 2019: implications for greenhouse gas emission reductions.