

OPEC+ Production Cut Expected To Drive Up Gasoline Prices, but Higher Ethanol Blends Can Help

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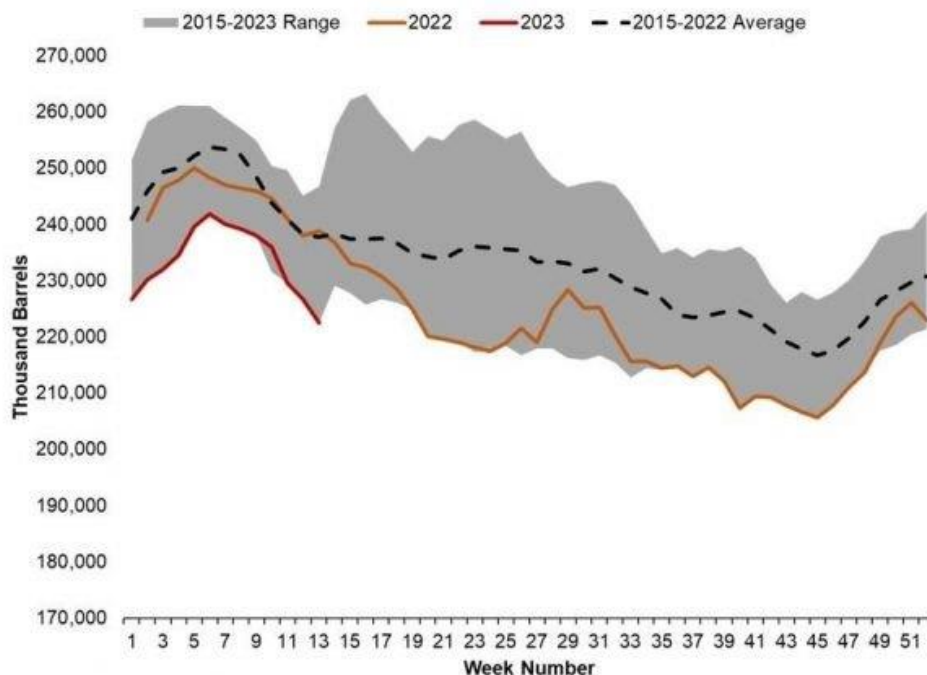
By Scott Richman, Chief Economist

On Sunday, members of OPEC+, a consortium of the Organization of the Petroleum Exporting Countries and allied nations, announced further reductions in oil output through the end of the year totaling more than 1 million barrels per day (bpd). Additionally, Russia, which is part of the group, indicated that it would extend its previously announced 500,000 bpd production cut through yearend. In response, oil futures prices surged more than 6% on Monday, and well-known energy market analysts expect prices to continue to rise as global supplies tighten in the coming months.

Bad Timing

The OPEC+ announcement could hardly have come at a worse time. According to the Energy Information Administration (EIA), total U.S. inventories of crude oil and petroleum products are 6% below this time last year and are at a 19-year low seasonally. The Strategic Petroleum Reserve is at its lowest level in 40 years, rendering it difficult to use to balance supplies as was done last year in the aftermath of the Russian invasion of Ukraine. Gasoline inventories are 7% below year-ago levels and are at a 9-year low seasonally (Exhibit 1). And, the summer driving season—a time when gasoline demand and prices are at their highest—is just around the corner.

Exhibit 1: Weekly Ending Stocks of Total Gasoline



Source: U.S. Energy Information Administration

What the Analysts Are Saying

According to [The Hill](#), Andrew Lipow “thinks that in the coming weeks, gasoline prices, which stood at about \$3.50 per gallon on Monday, will rise between 12 and 16 cents per gallon.” Similarly, Tom Kloza of Oil Price Information Service “predicted an ‘immediate increase’ of 10 to 12 cents per gallon, and added that the cuts also have the potential to contribute to further increases later in the year.”

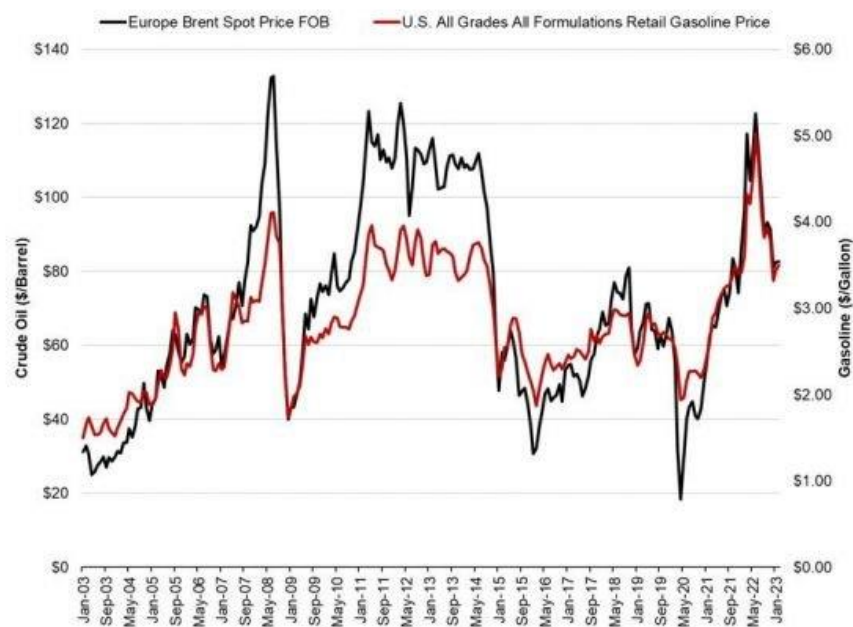
[Bloomberg](#) quoted Francisco Blanch of Bank of America as saying, “Any unexpected 1 million barrel per day change in supply or demand conditions over the course of a year can impact prices between \$20 and \$25 per barrel.” That would imply crude oil prices rising to around \$100 per barrel (bbl).

[Reuters](#) indicated that “Rystad Energy said it believed the cuts will add to tightness in the oil market and lift prices above \$100 a barrel for the rest of year, possibly taking Brent as high as \$110 this summer.” It also noted that UBS expects prices of Brent crude oil, the international benchmark, to hit \$100/bbl by June and that Goldman Sachs raised its December forecast for Brent crude to \$95/bbl. Other analysts are also calling for prices to gravitate toward \$100/bbl during the second half of the year.

Implications for Retail Gasoline Prices

To determine how these oil price forecasts would translate to U.S. retail prices of gasoline, RFA conducted a straightforward regression analysis. This was based on the tight relationship between oil prices—particularly Brent—and gasoline prices (Exhibit 2).

Exhibit 2: Brent Crude Oil Prices and U.S. Gasoline Prices



Source: U.S. Energy Information Administration

Two approaches were used for the analysis. First, retail gasoline prices were regressed against Brent crude oil spot prices using monthly data for the past 20 years. The gasoline price that was utilized is the all-grades, all-formulations price reported by the EIA. The correlation coefficient between the two data series is 0.94 (1.00 would indicate perfect positive correlation). The R-squared statistic for the regression is 0.88, which in practical terms implies that 88% of the variation in the retail gasoline price is “explained” by changes in the crude oil price.

The statistics would be marginally higher by including monthly “dummy” variables as explanatory variables or by using the regular unleaded price instead of the all-grades, all-formulations price. However, dummy variables were not used since implications of the OPEC+ cut for gasoline prices were not assessed on a monthly/seasonal basis. It is also worth noting that retail gasoline prices include an additional margin beyond wholesale prices, which can affect the tightness of the relationship to crude oil.

The second approach that was used was to regress the *change* in the retail gasoline price against the *change* in Brent crude spot prices. This was done since fuel prices often exhibit a trend over periods of time.

The results from the two approaches are similar. If the price of Brent crude were to rise to \$95/bbl as a result of the OPEC+ production cut, the average retail gasoline price would be predicted to increase by \$0.34-0.38 per gallon (gal) compared to the price shortly before the announcement. If it were to rise to \$100/bbl, the gasoline price would be expected to increase by \$0.44-0.50/gal.

EIA reports gasoline prices weekly rather than daily. However, AAA [reported](#) that the national average price for regular gasoline was \$3.48/gal late last week. This is consistent with the \$3.50/gal average price of regular gasoline reported by EIA for the week ended April 3. For both that week and the year to date, the differential between the all-grades, all-formulations price and the price of regular has averaged \$0.11/gal. This implies that the all-grades, all-formulations price late last week would have been approximately \$3.59/gal.

If Brent crude oil rises to \$100/bbl due to the OPEC+ production cuts, as many analysts are predicting, the U.S. average retail gasoline price would be expected to increase to more than \$4.00/gal. If the production cuts were to last for a year, that would equate to an additional cost to U.S. consumers of \$64 billion, or nearly \$500 per household.

Ethanol Is Helping Hold Down Prices and Can Help More

According to a recent [study](#) conducted by energy economists from the University of California-Berkeley and the Czech Republic, the use of ethanol reduced the price paid by U.S. drivers for gasoline by an average of \$0.77/gal between 2019 and 2022. That was based on ethanol being blended into gasoline predominantly at a 10% rate (E10).

Sales of a higher 15% ethanol blend (E15) have become increasingly popular over the last several years and hit [1 billion gallons](#) for the first time in 2022. An RFA [analysis](#) found that the availability of additional E15 volumes saved American consumers approximately \$60 million last summer, when it was \$0.20-0.30/gallon less expensive than regular gasoline (E10). However, summertime

sales would have been far smaller had the Biden administration not granted a series of waivers for E15 from an obsolete fuel requirement.

Whereas many retailers had previously found it difficult or impossible to offer E15 during the summer months in conventional gasoline areas, in 2019 the Environmental Protection Agency issued a regulation allowing E15 to be sold year-round.^[1] Then, in 2021 the D.C. Circuit Court of Appeals vacated the regulation, ruling in favor of oil refiners. The restriction would have returned last year, but the EPA invoked its authority to issue emergency waivers when “extreme and unusual fuel or fuel additive supply circumstances exist,” as was the case following the Russian invasion of Ukraine.

If the administration does not take action within the next month, E15 sales will drop precipitously in most of the country this summer, as was the pattern in conventional gasoline areas prior to 2019. Yet, the issuance of waivers is at least as justified by market conditions now as it was last year, since inventories of gasoline (and petroleum overall) are even lower, as discussed above. Allowing E15 to continue to be sold in conventional gasoline areas this summer—just as it has the last four years—would benefit American consumers and the environment and strengthen energy security.

^[1] EPA limits the volatility of gasoline during the “high ozone season” every summer (Jun. 1-Sep. 15). Prior to EPA’s 2019 rule change, the practical volatility limit for E10 sold in conventional gasoline areas was 10 pounds per square inch (psi) Reid vapor pressure (RVP), but E15 was held to a 9-psi limit. EPA’s 2019 rule effectively extended the volatility limit for E15 to 10 psi, creating regulatory parity for E15 and E10.