



Fill It Up – The Limitations of Filling the Strategic Petroleum Reserve

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Executive Summary

- President Trump has proposed purchasing oil to fill the Strategic Petroleum Reserve (SPR), which the government developed to counter crude oil supply shortages.
- COVID-19 has contributed to excess crude oil supplies that have driven prices to historically low levels.
- Because the SPR is already close to capacity, increasing the size of the SPR amounts to purchasing only six days of domestic production will remove minimal crude oil from the market, and will have limited price impact.

The Strategic Petroleum Reserve (SPR) has received an unusual amount of attention in recent weeks. Last week, the Department of Energy (DOE) intended to host a sale of the SPR's stock of crude oil, but it suspended that sale. On Friday, the president requested that the Secretary of Energy purchase rather than sell SPR stock in response to the impacts of the COVID-19 pandemic. What is the SPR, and what do sales and purchases mean for the United States and the market?

SPR in Context

The United States created the SPR following the 1973-74 oil embargo and resulting supply shortages in order to reduce the economic impacts of such disruptions in the future. The reserve is a federally owned physical stock of crude oil that is located in underground salt caverns at four sites in the southeastern United States. The facilities can hold up to 713.5 million barrels. The crude oil in stock is subject to purchases, sales, and exchanges, as well as drawdowns to counter low supply.

Sales are initiated by the president, managed by the DOE upon his request, and are authorized by the Energy Policy and Conservation Act. On three occasions in the past, most recently June 2011 to offset disruptions caused by unrest in Libya, the president directed sale of the stock. This month's sale would have marked the fourth occurrence of an SPR sale.^[1] The DOE intended to host a sale of crude oil in order to fund maintenance of the SPR facilities rather than avert market disruptions. So why suspend the sale?

The prices of crude oil futures declined due to reduced demand in the global market. On March 9, Brent crude oil, an indicator of international prices, fell below \$35/barrel, a daily decline of 24 percent and the second-largest daily price drop ever.[2] Initially, the market anticipated reduced demand in China, the first country hit by COVID-19 and the second largest consumer of crude oil in the world.[3] Meanwhile, as the virus spreads, travel is expected to decrease globally. As a result, the transportation sector's consumption of crude oil will not serve as the demand center for oil supply. And of course, the general expectation of lowered global economic growth deepens this sentiment.

The Organization of the Petroleum Exporting Countries (OPEC) and other oil producers intended to come to an agreement on how to best mitigate declining prices. Instead, discord arose between Saudi Arabia and Russia and both suggested that they would increase the amount they supply the market. This geopolitical discord, in combination with the realities of COVID-19's human impact, has resulted in little confidence that oversupply will be relieved, as evidenced by continually low futures prices. As a result, the DOE suspended the sale on March 10th to avoid selling at these historically low prices.[4]

SPR in Practice

Upon declaring the COVID-19 a national emergency on March 13th, President Trump requested that DOE Secretary Brouillette purchase domestic oil with the intention of removing some domestic supply from the market. As a result, the Secretary requested that an expedited process for the purchase of crude oil owned and produced in the United States be initiated.[5]

The president's request to purchase additional domestically produced or owned crude oil for the SPR is intended to directly address the issue of oversupply. By removing some domestically produced crude oil from the market, the administration hopes to increase prices, or at least improve confidence. So what's the problem?

This plan will have only a limited impact. The SPR currently holds approximately 635 million barrels of oil. And the DOE has said that the SPR is capable of holding an additional 77 million barrels. This volume is a relatively small amount considering domestic production recently rose to over 13 million barrels per day (bpd) and the Energy Information Administration (EIA) estimates that domestic production will average over 13 million bpd in 2020.[6] In other words, the DOE can purchase about six days of domestic production, or 1-2 percent of annual domestic production, and as a result only a negligible amount of the total amount of crude oil in the global market.

What will it cost for the U.S. government to purchase 77 million barrels of oil? The low price of crude oil could prove to be beneficial for the DOE as a buyer. With a price tag like \$38.19/barrel, the EIA's estimate for domestic crude prices in 2020, the federal government would spend nearly \$3 billion to top off the SPR. In the long term, it could prove to be advantageous to acquire oil at such low prices if the opportunity to sell at higher prices in the future presents itself. And with EIA's projected domestic prices growing to \$50 in 2021, perhaps such arbitrage may be possible.[7]

This purchase, however, is ultimately an infusion of cash for exploration and production companies. And while some companies are struggling to stay afloat at such low prices, they should not be supported at the expense of the American taxpayer. The SPR is intended to respond to supply shortages rather than supply gluts. As a net exporter of oil, the United States is less susceptible to shifting supply abroad than ever before. Therefore, while this purchase may prove slightly beneficial for government finances, the SPR's purchase has minimal impact on global prices, domestic economics, and runs against the reserve's intended purpose.

[1] <https://www.energy.gov/fe/services/petroleum-reserves/strategic-petroleum-reserve>

[2] <https://www.eia.gov/outlooks/steo/>

[3] <http://energyatlas.iea.org/#!/tellmap/-1920537974/1><http://energyatlas.iea.org/#!/tellmap/-1920537974/1>

[4] <https://www.energy.gov/articles/doe-statement-upcoming-spr-crude-oil-sale>

[5] <https://www.energy.gov/articles/doe-applauds-swift-action-president-trump-initiates-process-purchase-oil-strategic>

[6] <https://www.wsj.com/articles/oil-climbs-with-investors-awaiting-opec-signals-11583334364>

[7] <https://www.eia.gov/outlooks/steo/marketreview/crude.php>