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INSIGHT

Strategic Petroleum Reserve: Inventory Outlook and Policy Considerations

April 11, 2025

In his January 2025 inaugural address, President Trump indicated that his administration intends to fill the U.S. Strategic Petroleum Reserve (SPR) to capacity. A February 2025 U.S. Department of Energy (DOE) Secretarial Order includes "Refill the Strategic Petroleum Reserve" as a department-level priority. The SPR Petroleum Account, which is used to purchase oil for the reserve, received approximately $17 billion from emergency oil sales in response to market conditions related to Russia invading Ukraine in 2022. However, oil purchases, other expenses, and congressional rescissions depleted emergency sale proceeds from the account. Filling the SPR to its approximately 714 million barrel (Mbbl) physical capacity could require congressional action in the form of appropriations and adjusting congressionally mandated SPR sales.

At the end of calendar year 2024, SPR inventory consisted of approximately 394 Mbbl of crude oil in underground storage caverns located in Texas and Louisiana. Accounting for additional crude oil *deliveries* from contracted purchases and scheduled exchange returns, along with *releases* required by mandated sales, SPR inventory is projected at approximately 335 Mbbl by the end of 2031 (see **Figure 1**). At this projected level, DOE would need to acquire approximately 379 Mbbl to fill the SPR.

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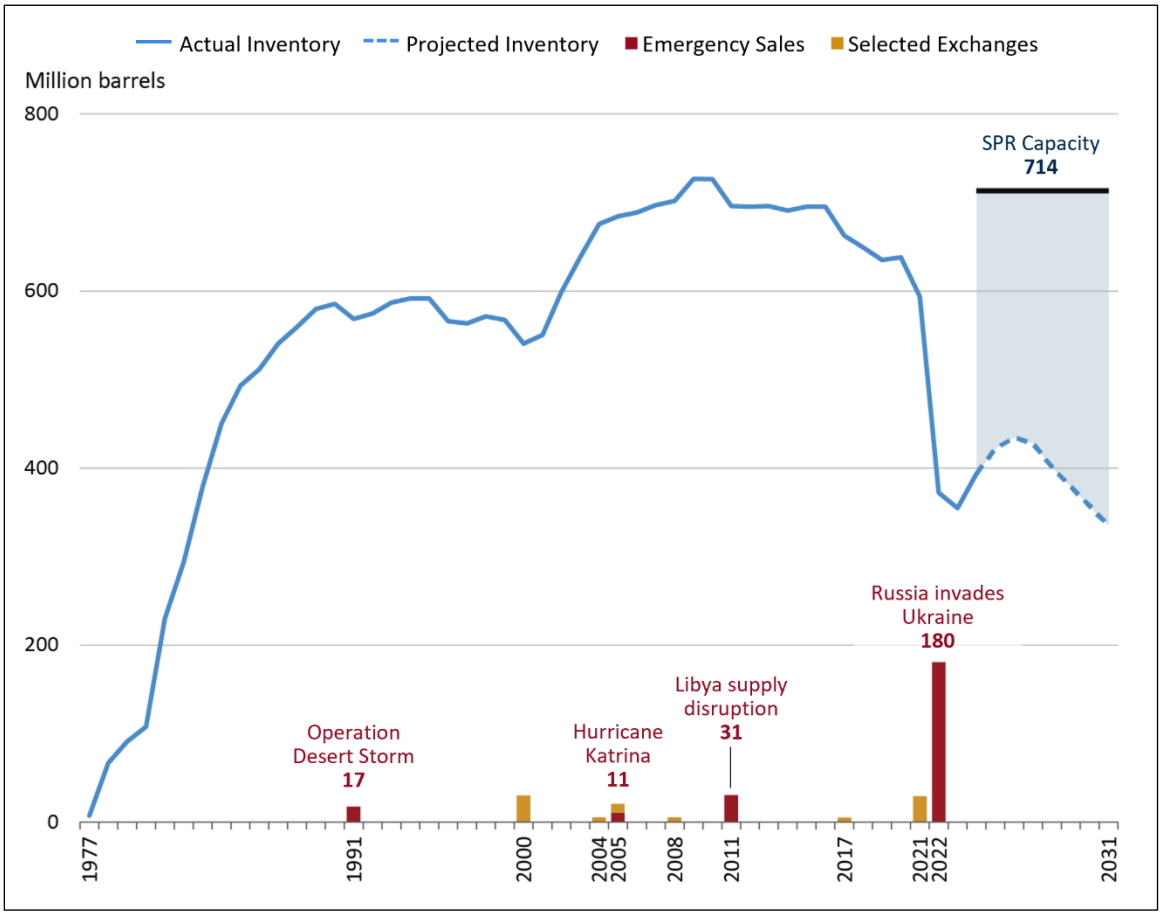
IN12542

Figure 1. Strategic Petroleum Reserve Inventory, Emergency Sales, and Selected Exchanges



Source: CRS analysis using data from the U.S. Energy Information Administration and the U.S. Department of Energy.

Notes: Projection curve subject to modification. Inventory measured at the end of each calendar year. SPR capacity, which varies over time, is lower than peak inventory due to cavern decommissioning and other adjustments. Selected exchanges include exchange releases larger than 5 million barrels. Numbers are rounded.

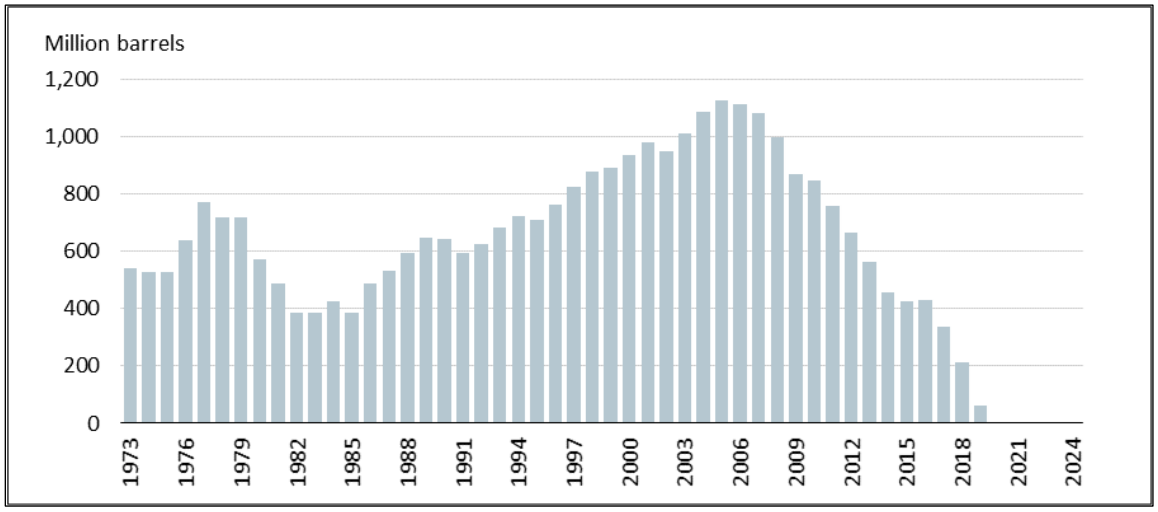
Background

In the wake of a politically motivated, multicountry oil embargo that contributed to high fuel prices, perceived shortages of energy commodities, and U.S. energy security concerns, Congress created the SPR in 1975 (42 U.S.C. §6231 et seq.). Congressional intent for the SPR includes two statutory energy policy objectives: (1) reduce the impact of petroleum supply disruptions, and (2) carry out U.S. obligations under the International Energy Program (IEP)—a multilateral agreement administered by the International Energy Agency. Congressional findings state that the SPR is both a national security and an energy security asset. For additional SPR background and information about emergency sales, exchanges, and congressionally directed sales, see CRS Insight IN11916, *Strategic Petroleum Reserve Oil Releases: October 2021 Through October 2022*, by Phillip Brown.

Due to the uncertain nature, size, and duration of potential oil supply disruptions, determining an optimal SPR inventory level is a challenge that Congress has grappled with for decades. Sizing studies in the 1970s recommended SPR inventory levels ranging from 250 Mbbl to more than 1,000 Mbbl. Congress enacted legislation authorizing "storage of up to 1 billion barrels." Government Accountability Office (2006) and DOE (2016) reports include additional analysis about SPR inventory levels.

The IEP requires that participating countries maintain emergency reserves equal to 90 days of net petroleum imports during the preceding calendar year. A net oil exporter in 2024, the United States is currently not subject to the emergency reserve requirement (see **Figure 2**). Considering historical SPR releases along with the U.S. net export position, current SPR inventory could arguably be viewed as adequate. However, higher inventory levels can enable maximum SPR drawdown rates and could provide additional flexibility in response to future oil supply disruptions. In light of the United States now being a net petroleum exporting country, Congress could consider directing studies and reports that evaluate the SPR's national security and energy security benefits.

Figure 2. U.S. Emergency Reserves Needed for 90 Days of Net Petroleum Imports



Source: CRS analysis using data from the U.S. Energy Information Administration (Imports and Exports).

Note: Includes crude oil and petroleum products.

In 2005, following a period of rising net petroleum imports, Congress directed DOE to expand the SPR to its 1-billion-barrel authorized capacity and acquire petroleum in amounts needed to fill an expanded reserve. Net oil imports started declining in 2006, resulting from higher petroleum product exports, higher U.S. crude oil production, and lower crude oil imports. Following site evaluations and environmental impact studies, along with lower reserves needed to cover 90 days of net oil imports (see **Figure 2**), Congress rescinded appropriations for SPR expansion and DOE canceled expansion activities in 2011.

Congressionally Directed Sales

As net oil imports continued declining—with additional contributions from higher crude oil exports following repeal of a statutory export prohibition—Congress passed several laws directing DOE to sell SPR crude oil. While some sales paid for a $1.4 billion SPR modernization program, most of these sales were mandated by Congress as a spending offset for other legislative priorities. Since 2015, Congress enacted eight laws that would have mandated the sale of 358.6 million barrels of crude oil during fiscal year (FY) 2017 through FY2031. Effectively, completing all congressionally directed (modernization and mandated) sales would have resulted in SPR inventory of approximately 315 Mbbl. To date, DOE has sold 119 Mbbl and Congress has canceled 140 Mbbl of previously mandated sales. Thus, DOE must sell 99.6 Mbbl by the end of FY2031. Congress could consider either canceling the remaining mandated sales or shifting those sales out to further years. Spending effects, if any, associated with these actions would be determined by the Congressional Budget Office.

Crude Oil Acquisitions

Most SPR crude oil was acquired by either direct purchases or royalty-in-kind transfers. Congress repealed royalty-in-kind acquisition authority in 2013. For direct purchases, Congress could appropriate funds to the SPR Petroleum Account. Considering the unpredictable and sometimes volatile nature of oil prices, Congress could also evaluate the merits of including certain conditions for any enacted appropriations. For example, conditions might include a not-to-exceed price per barrel for direct purchases, a directive to acquire crude oil volumes at prescribed monthly amounts over a multiyear period, or a directive to accelerate purchases, to the extent possible, should crude oil prices fall below a certain level. Secretary of Energy Chris Wright reportedly intends to seek $20 billion to refill the SPR.

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