



Testimony

Before the Subcommittee on Energy,
Committee on Energy and Commerce,
House of Representatives

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STRATEGIC PETROLEUM RESERVE

Observations on the Emergency Stockpile

Accessible Version

Statement of Statement of Frank Rusco, Director,
Natural Resources and Environment

GAO Highlights

Highlights of [GAO-18-675T](#), a testimony before the Subcommittee on Energy, Committee on Energy and Commerce, House of Representatives

Why GAO Did This Study

Over 4 decades ago, Congress authorized the SPR—the world's largest government-owned stockpile of emergency crude oil—to reduce the impact of disruptions in supplies of petroleum products. Since 2015, Congress has also mandated sales of SPR oil to fund the modernization of SPR facilities and other national priorities. DOE manages the SPR, whose storage and related infrastructure is aging, and has plans to modernize its facilities. As a member of the International Energy Agency, the United States is obligated to maintain reserves equivalent to at least 90 days of the previous year's net imports (imports minus exports). As of March 2018, the SPR held about 665 million barrels of crude oil, about 138 days of net imports.

This testimony highlights GAO's May 2018 report on the SPR, including the extent to which (1) DOE has identified the optimal size of the SPR, and (2) DOE's plans for modernizing the SPR take into account the effects of congressionally mandated crude oil sales. GAO reviewed DOE's documents and studies and interviewed agency officials.

What GAO Recommends

GAO made four recommendations, including that DOE (1) supplement the 2016 review by conducting an additional analysis, (2) ensure it periodically reexamines the SPR, and (3) consider a full range of options for handling potentially excess assets. DOE partially agreed with the first recommendation and agreed with the other two recommendations.

View [GAO-18-675T](#). For more information, contact Frank Rusco at (202) 512-3841 or ruscof@gao.gov.

July 24, 2018

STRATEGIC PETROLEUM RESERVE

Observations on the Emergency Stockpile

What GAO Found

The Department of Energy (DOE) has not identified the optimal size of the Strategic Petroleum Reserve (SPR). In 2016, DOE completed a long-term strategic review of the SPR after its last comprehensive examination was conducted in 2005. The 2016 review examined the benefits of several SPR sizes, but it did not identify an optimal size and was limited in several ways. In particular, in the review, DOE did not fully consider recent and expected future changes in market conditions, such as the implications of projected fluctuations in net imports or the role of the private sector in responding to supply disruptions. These changes have contributed to SPR and private reserves reaching historically high levels on a net imports basis. These changes are expected to continue to evolve, and according to government projections, the United States will become a net exporter in the late 2020s before again becoming a net importer between 2040 and 2050. GAO has found that agencies should reexamine their programs if conditions change. GAO recommended that DOE supplement its 2016 review by conducting an additional analysis, and take actions to ensure the agency periodically conducts a strategic review of the SPR. DOE generally agreed with these recommendations.

DOE has taken steps to account for congressionally mandated sales of SPR crude oil in its \$1.4 billion modernization plans for SPR's infrastructure and facilities. However, DOE's current plans, developed in 2016, are based on information largely developed prior to recent congressionally mandated sales of an additional 117 million barrels of oil. According to DOE officials, the agency began a study in March 2018 to assess the effects of these sales on the SPR's modernization. However, GAO reported that this study was not examining a full range of options for handling any excess SPR assets that may be created by currently mandated sales or any additional sales that may be mandated in the future, inconsistent with an agency order on real property asset management that calls for identifying excess assets. For example, according to officials, DOE does not currently have the authority to lease unused storage capacity to the private sector, and DOE was not planning to examine this option. If authorized, leasing unused SPR storage capacity could generate revenues that could help offset the costs of modernization. GAO recommended that DOE should consider a full range of options for handling potentially excess assets and, if needed, request congressional authority for the disposition of these assets. DOE agreed with this recommendation.

Chairman Upton, Ranking Member Rush, and Members of the Subcommittee:

I am pleased to be here today to discuss our recent report on the Department of Energy's (DOE) Strategic Petroleum Reserve (SPR).¹ More than 4 decades ago, Congress authorized the creation of the SPR—currently the world's largest government-owned stockpile of emergency crude oil—to reduce the impact of disruptions in supplies of petroleum products.² DOE manages the SPR. As of March 2018, the SPR held 665.5 million barrels of crude oil, worth about \$42 billion.³ In the decades since its creation, the structure of the SPR generally has not changed—it has always held crude oil in salt caverns along the Gulf Coast—though markets for crude oil and petroleum products—products such as gasoline and diesel that are refined from crude oil for final consumption—have changed in important ways.

Throughout most of the SPR's history, domestic crude oil production was generally in decline, while consumption of petroleum products was generally increasing, causing the United States to rely increasingly on imported crude oil and petroleum products. However, the SPR now operates in a context of increasing U.S. crude oil production (the United States is now one of the world's largest crude oil producers), relatively stable consumption, and shrinking net crude oil and petroleum product imports. Moreover, whereas the Arab oil embargo of 1973 to 1974 led to shortages and long lines at gas pumps around the country, prices now change to accommodate supply and demand, so that physical crude oil shortages are less of a concern than they were in the 1970s when the SPR was created.

¹GAO, *Strategic Petroleum Reserve: DOE Needs to Strengthen Its Approach to Planning the Future of the Emergency Stockpile*, [GAO-18-477](#) (Washington, D.C.: May 30, 2018).

²Energy Policy and Conservation Act, Pub. L. No. 94-163, §§ 151(b), 154(a), 89 Stat. 871, 881-882 (1975) (codified as amended at 42 U.S.C. §§ 6231(b), 6234(a)).

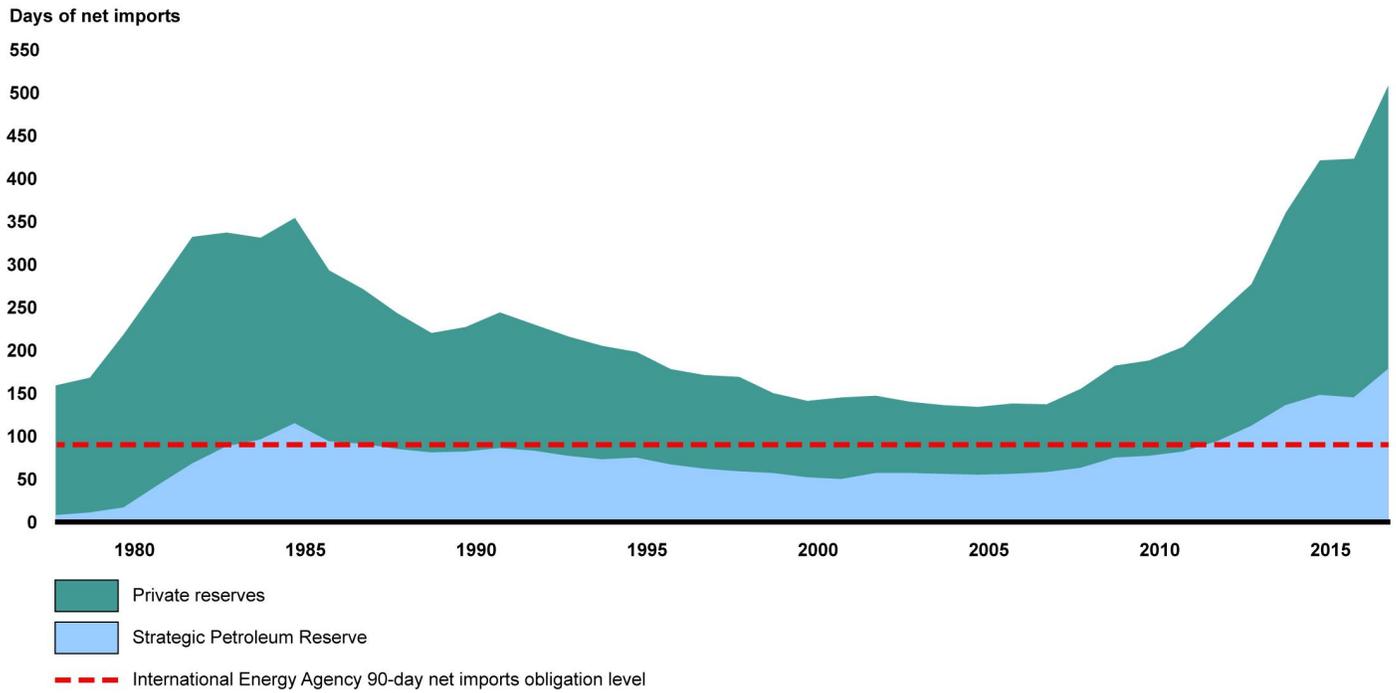
³This calculation is based on average market oil prices as of March 2018 of about \$63 per barrel, the price of West Texas Intermediate, which is a domestic oil used as a benchmark for pricing.

The SPR also helps the United States meet its obligations as a member of the International Energy Agency (IEA)—an international energy forum of 30 member countries established in 1974 to help members respond collectively to major energy supply disruptions.⁴ To become a member of the IEA, a country must have, among other things, crude oil or petroleum product reserves equivalent to 90 days of the previous year's net imports, and measures in place to ensure that it is able to contribute its share of a collective action initiated in response to a significant global oil supply disruption. As of March 2018, according to IEA data, the SPR held the equivalent of 138 days of net imports. The IEA counts both public and private reserves toward meeting the 90-day reserve obligation, although the United States has recently met this obligation solely through publicly owned reserves in the SPR, as shown in figure 1.⁵

⁴The 30 member countries are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Republic of Korea, Luxembourg, Mexico, The Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States.

⁵Public reserves are owned by the government or an independent organization set up by the government, known as an agency. Private reserves, also called industry reserves, are oil or petroleum products held by industry for commercial and operational purposes as well as oil or petroleum products held by industry to meet minimum national reserve requirements.

Figure 1: U.S. Holdings in the Strategic Petroleum Reserve and Private Reserves, 1977-2017



Source: GAO analysis of U.S. Energy Information Administration data. | GAO-18-675T

Note: This figure represents holdings in the Strategic Petroleum Reserve in terms of days of net imports rather than volume of crude oil held in the reserve.

Data Table for Figure 1: U.S. Holdings in the Strategic Petroleum Reserve and Private Reserves, 1977-2017

Year	Strategic Petroleum Reserve	Private reserves	SPR + Private reserves (total days)
1977	1	152	153
1978	8	151	160
1979	11	157	168
1980	17	202	219
1981	43	232	275
1982	68	264	333
1983	88	249	337
1984	96	235	330
1985	115	239	354
1986	94	199	293
1987	91	180	272
1988	85	158	242

Year	Strategic Petroleum Reserve	Private reserves	SPR + Private reserves (total days)
1989	81	139	220
1990	82	145	226
1991	86	158	244
1992	83	147	229
1993	77	139	216
1994	73	132	205
1995	75	123	198
1996	67	111	177
1997	62	109	170
1998	59	110	169
1999	57	93	151
2000	52	89	141
2001	50	95	146
2002	57	90	147
2003	57	83	140
2004	56	80	136
2005	55	79	134
2006	56	82	137
2007	58	79	137
2008	63	92	155
2009	75	107	182
2010	77	111	188
2011	82	122	204
2012	94	147	241
2013	112	165	277
2014	136	224	360
2015	148	273	421
2016	145	278	423
2017	178	330	508

Since 2015, six laws mandated sales of crude oil from the SPR to fund the modernization of SPR facilities and other national priorities.⁶ Total planned sales are projected to reduce the amount of crude oil held in the SPR from 665.5 million barrels in March 2018 to 405 million barrels by the end of fiscal year 2027.⁷ These sales have an estimated value of almost \$16 billion, according to Congressional Budget Office documents. Of the total estimated value, sales of up to \$2 billion were specifically authorized for the SPR's modernization program. The SPR's infrastructure of facilities, pipelines, pumps, and other equipment is aging and much of it needs replacement, according to DOE documents. Since 2014, DOE has developed plans for modernizing the SPR to address these needs, among other things.

My testimony today discusses findings from our May 2018 report on the SPR and focuses on (1) how the United States and other IEA members meet their IEA obligations, (2) the extent to which DOE has identified the optimal size and the potential need for additional petroleum product reserves for the SPR, and (3) the extent to which DOE's plans for modernizing the SPR take into account the effects of current and potential future congressionally mandated oil sales.

⁶Specifically, the Bipartisan Budget Act of 2015 provided for the drawdown and sale of a total of 58 million barrels of crude oil from fiscal years 2018 through 2025 and authorized the sale of up to \$2 billion worth of oil, with the proceeds to be deposited in an Energy Security and Infrastructure Modernization Fund, the purpose of which is to provide for the construction, maintenance, repair, and replacement of SPR facilities. Pub. L. No. 114-74, §§ 403, 404, 129 Stat. 584, 589 (2015). The Fixing America's Surface Transportation Act provided for the drawdown and sale of a total of 66 million barrels of crude oil from fiscal years 2023 through 2025. Pub. L. No. 114-94, § 32204, 129 Stat. 1311, 1740 (2015). The 21st Century Cures Act provided for the drawdown and sale of a total of 25 million barrels from fiscal years 2017 through 2019. Pub. L. No. 114-255, § 5010, 130 Stat. 1033, 1197 (2015). The Tax Cuts and Jobs Act provided for the drawdown and sale of 7 million barrels of crude oil from fiscal years 2026 through 2027. Pub. L. No. 115-97, § 20003 (2017). The Bipartisan Budget Act of 2018 provided for the drawdown and sale of a total of 100 million barrels of crude oil from fiscal years 2022 through 2027. Pub. L. No. 115-123, § 30204 (2018). The Consolidated Appropriations Act of 2018 provided for the drawdown and sale of 10 million barrels of crude oil from fiscal years 2020 through 2021. Pub. L. No. 115-141, Div. O, § 501 (2018). The mandated drawdowns are not to be conducted if they would limit the authority to sell petroleum products for emergency protection in the full authorized quantity. See 42 U.S.C. § 6241(h).

⁷According to the U.S. Energy Information Administration, volumes of oil sold under the Bipartisan Budget Act of 2015, worth up to the \$2 billion authorized for an SPR modernization program are estimated. The estimated volume of oil is derived from oil sold in fiscal years 2017 and 2018 and forthcoming sales in fiscal years 2019 and 2020, according to DOE.

To conduct this work, we reviewed documents, reports, and studies that we identified through DOE officials, recommendations from experts and stakeholders, and sources referenced in DOE publications as well as our prior work on the SPR. We also interviewed DOE officials and representatives of energy consulting groups and a state agency, among others. Our May 2018 report includes a detailed discussion of the objectives, scope, and methodology used to conduct this work. We conducted the work on which this testimony is based in accordance with generally accepted government auditing standards. Those standards require that we plan and perform audits to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions. We believe that the evidence obtained provided a reasonable basis for our findings and conclusions based on our audit objectives.

Unlike the United States, Most IEA Members Rely on Private Reserves to Meet Reserve Obligations and Hold Significant Proportions of Their Reserves as Petroleum Products

As we found in our May 2018 report,⁸ in terms of how they meet their IEA 90-day reserve obligations, most other IEA members differ from the United States in two basic ways. First, as of December 2017, most other IEA members rely at least in part on private rather than public reserves to meet their obligations. As of December 2017, 18 of the 25 IEA members that met their 90-day reserve obligation and had a formal process for holding and releasing reserves relied entirely or in part on private reserves to meet their obligations.⁹ Specifically, based on IEA data as of December 2017, these 18 countries met their 90-day reserve obligations through private reserves and either had no public reserves or had public reserves of less than 90 days. Unlike the 18 countries that rely at least in part on private reserves, as of December 2017, the United States and 6

⁸[GAO-18-477](#).

⁹Of the 29 IEA member nations as of December 2017, 25 members had two common attributes: (1) as net importers, they had a 90-day reserve obligation and met that obligation, and (2) they had formal processes for holding and releasing these reserves. According to IEA documents, as of December 2017, 3 member countries were net exporters and so did not have a 90-day obligation. In addition, according to IEA officials, Australia did not hold the equivalent of 90 days of net imports in December 2017. Mexico joined the IEA in early 2018 and was not a member nation as of December 2017.

other IEA members met the 90-day reserve obligation exclusively through public reserves. The second way other IEA members differ from the United States is that most hold at least a third of their reserves as petroleum products, according to a 2014 IEA report.¹⁰ Holding petroleum products can be advantageous during certain disruptions because such reserves can be directly distributed to consumers, whereas crude oil must first be refined and turned into products, adding response time. In contrast, more than 99 percent of the SPR (665.5 million barrels as of March 2018) is held as crude oil. Because of the large U.S. refining sector, crude oil from the SPR can be domestically refined into petroleum products to meet demand.

DOE Has Not Identified the Optimal Size for the SPR or the Potential Need for Regional Product Reserves

As we found in our May 2018 report,¹¹ DOE has not identified the optimal size or the potential need for additional petroleum product reserves for the SPR. In 2016, DOE completed a long-term strategic review of the SPR after its last comprehensive examination had been conducted in 2005.¹² The 2016 review examined the expected benefits of several SPR sizes, but it did not identify an optimal size and was limited in several ways. In particular, in the review, DOE did not fully consider recent and expected future changes in market conditions, such as the implications of projected fluctuations in net imports or the role of the private sector in responding to supply disruptions. Recent changes have contributed to SPR and private reserves reaching historically high levels on a net imports basis. These changes are expected to continue to evolve—according to government projections, the United States will become a net

¹⁰International Energy Agency, *Energy Supply Security, Emergency Response of IEA Countries* (Paris, France: 2014).

¹¹[GAO-18-477](#).

¹²U.S. Department of Energy, *Long-Term Strategic Review of the U.S. Strategic Petroleum Reserve: Report to Congress*, (Washington, D.C.: August 2016). The Bipartisan Budget Act of 2015 directed the Secretary of Energy to develop and submit to Congress a proposed action plan that, among other things, identifies the configuration and performance capabilities of the SPR and recommends an action plan to achieve the optimal capacity, location, and composition of petroleum products in the SPR. Pub. L. No. 114-74, § 402, 129 Stat. 584, 589 (2015).

exporter in the late 2020s before again becoming a net importer between 2040 and 2050. In February 2005, we found that agencies should reexamine their programs if conditions change.¹³ Without addressing the limitations of its 2016 review and periodically performing reexaminations in the future, DOE cannot be assured that the SPR will be sized appropriately into the future. In May 2018, we recommended that DOE (1) supplement its 2016 review by conducting an additional analysis that takes into account, among other things, the costs and benefits of a wide range of different SPR sizes and (2) take actions to ensure that it periodically conducts and provides to Congress a strategic review of the SPR. DOE partially agreed with the first recommendation and stated that it will conduct an additional analysis to assess the purpose, goals, and objectives of the SPR, taking into account private sector response, oil market projections, and any other relevant factors, that will lead to an evaluation of possible optimal sizes of the SPR in the future. DOE agreed with the second recommendation.

DOE has also not fully identified whether additional regional petroleum product reserves should be part of the SPR. The Quadrennial Energy Review of 2015 recommended that DOE analyze the need for additional or expanded regional product reserves by undertaking updated cost-benefit analyses for all of the regions of the United States that have been identified as vulnerable to fuel supply disruptions.¹⁴ In response, DOE studied the costs and benefits of regional petroleum product reserves in the West Coast and Southeast Coast, though it did not finalize or publicly release these studies. Nevertheless, the draft studies concluded that a product reserve in the Southeast would provide significant net economic benefits to the region and the United States, particularly in the event of a major hurricane, while further analyses are needed to determine the

¹³GAO, *21st Century Challenges: Reexamining the Base of the Federal Government*, [GAO-05-325SP](#) (Washington, D.C.: Feb. 1, 2005).

¹⁴U.S. Department of Energy, *Quadrennial Energy Review: Energy Transmission, Storage, and Distribution Infrastructure*, April 2015. A 2014 Presidential memorandum created a Quadrennial Energy Review Task Force, co-chaired by the Directors of the Domestic Policy Council and the Office of Science and Technology Policy, with support from the Secretary of Energy. The Quadrennial Energy Review Report, to be submitted to the President every 4 years, is to, among other things, provide an integrated view of, and recommendations for, federal energy policy in the context of economic, environmental, occupational, security, and health and safety priorities, with attention in the first report given to the challenges facing the nation's energy infrastructures. The first report was issued in April 2015.

potential benefits of a reserve on the West Coast.¹⁵ According to DOE officials, the agency has no plans to conduct additional studies. Without completing studies on the costs and benefits of regional petroleum product reserves, DOE cannot ensure that it and Congress have the information they need to make decisions about whether additional regional product reserves are needed. In our May 2018 report, we recommended that DOE conduct or complete such studies. DOE disagreed with this recommendation, though we continue to believe that conducting these analyses will provide Congress with needed information.

DOE Has Taken Steps to Update Its Modernization Plans but Is Hindered by Uncertainty Regarding the SPR's Long-term Size

As we found in our May 2018 report,¹⁶ DOE has taken steps to account for the effects of congressionally mandated oil sales in its plans for modernizing the SPR, though DOE's current plans, developed in 2016, are based on information largely developed prior to recent congressionally mandated sales of an additional 117 million barrels of oil. According to DOE documents, the SPR modernization program is focused on a life extension project to modernize aging infrastructure to ensure that the SPR will be able to meet its mission requirements for the next several decades. The project's scope of work has undergone several revisions since its inception in response to changing conditions and requirements, according to the agency.¹⁷ DOE has estimated that the SPR's modernization will cost up to \$1.4 billion, and according to officials, the agency had spent \$22 million as of the end of February 2018. According to DOE officials, in March 2018, DOE commenced a study—the SPR post-sale configuration study targeted for completion in October

¹⁵While this finding of the draft 2015 studies is pre-decisional and was not approved by DOE, we report it here because DOE has relied on related findings from the draft 2015 studies in its response to [GAO-18-477](#).

¹⁶[GAO-18-477](#).

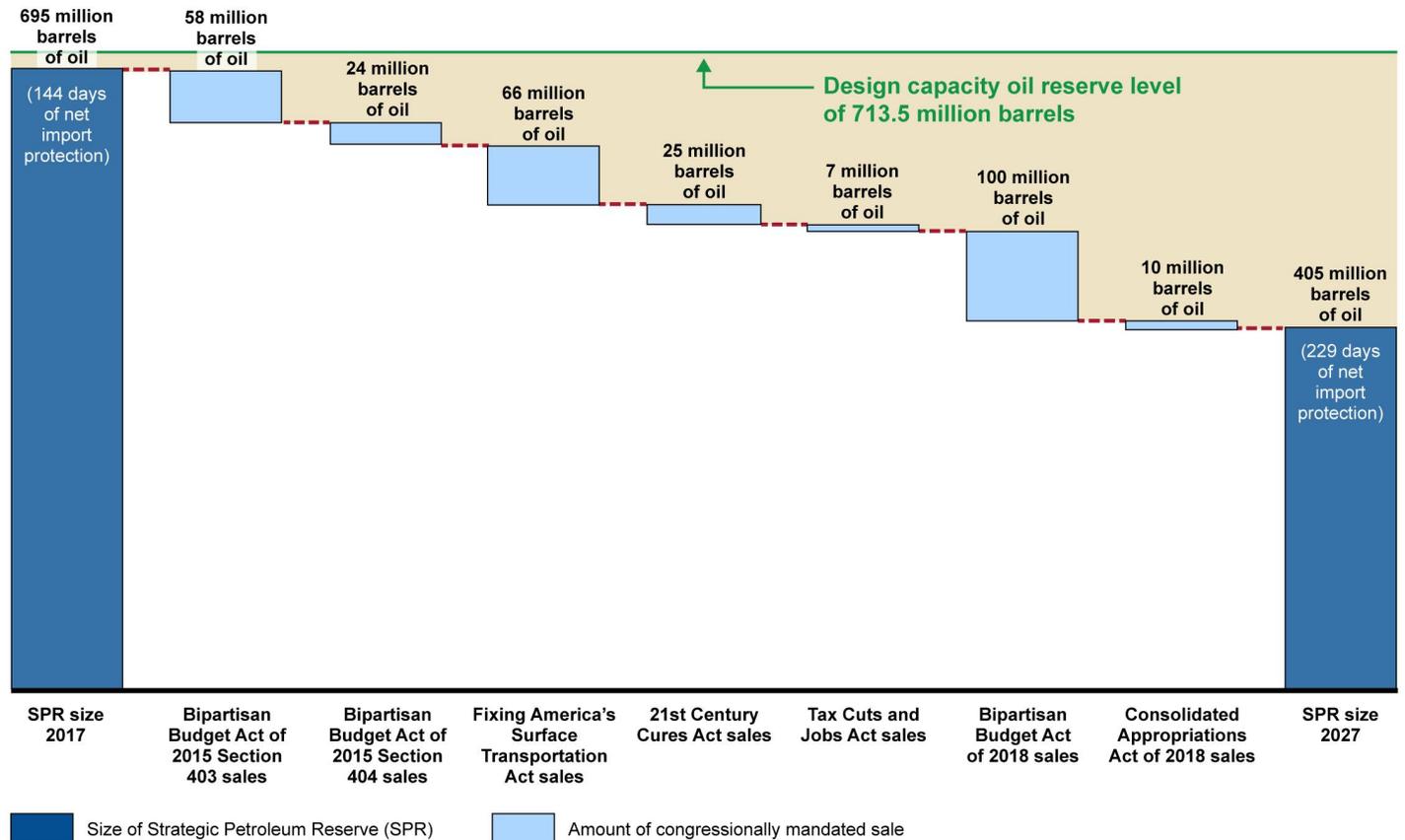
¹⁷Since 2016, DOE conducted additional supplemental analysis of alternatives to update its modernization plans, which resulted in additions and deletions of tasks from the project's original scope of work, according to the agency.

2018—to examine potential future reserve configurations and to account for the effects of congressionally mandated sales on the reserve and its modernization. Information from the study will inform DOE’s updates to the SPR’s modernization plans, according to DOE officials.

Although the SPR had a design capacity to hold 713.5 million barrels of oil, in January 2017, the SPR held 695 million barrels. As shown in figure 2, congressionally mandated sales will cause excess storage capacity to grow to 308 million barrels or more by the end of fiscal year 2027—meaning that about 43 percent of the SPR’s total design capacity to store oil would be unused.¹⁸

¹⁸According to DOE officials, as part of contingency planning, spare capacity is required in the event that oil must be removed from a cavern and the cavern is rendered unsuitable for oil storage. Moreover, natural creep on storage caverns reduces the amount of storage capacity across the SPR, with the reserve losing about 1.2 million barrels per year across the SPR to natural cavern creep, and another 1 million barrels per year are lost due to depressurizing caverns, according to DOE officials.

Figure 2: Oil Inventory Held in the Strategic Petroleum Reserve in 2017 and Projected Oil Inventory in 2027 Compared to the Reserve's Design Capacity in 2017



Sources: GAO analysis of U.S. Department of Energy and U.S. Energy Information Administration data. | GAO-18-675T

Note: Volumes of oil to be sold under section 404 of the Bipartisan Budget Act of 2015 (sales to fund SPR modernization) are U.S. Department of Energy estimates.

Data Table for Figure 2: Oil Inventory Held in the Strategic Petroleum Reserve in 2017 and Projected Oil Inventory in 2027 Compared to the Reserve's Design Capacity in 2017

Data used in Figure 2

- SPR Size 2017 – 695 million barrels of oil (144 days of net import protection)
- Bipartisan Budget Act of 2015 Section 403 sales – 58 million barrels of oil
- Bipartisan Budget Act of 2015 Section 404 sales – 24 million barrels of oil
- Fixing America's Surface Transportation Act sales – 66 million barrels of oil
- 21st Century Cures Act sales – 25 million barrels of oil
- Tax Cuts and Jobs Act sales – 7 million barrels of oil
- Bipartisan Budget Act of 2018 sales – 100 million barrels of oil

Data used in Figure 2

Consolidated Appropriations Act of 2018 sales – 10 million barrels of oil

SPR Size 2027 – 405 million barrels of oil (229 days of net import protection)

Design capacity oil reserve level of 713.5 million barrels

In its ongoing SPR post-sale configuration study, DOE plans to explore some options to use potentially excess SPR assets, such as spare storage capacity. In withdrawing oil to meet congressionally mandated oil sales currently in place (290 million barrels through fiscal year 2027), DOE could close at least one SPR site based on our analysis of projected excess storage capacity. For example, if DOE were to close the smallest SPR site, Bayou Choctaw in Louisiana, the agency could also explore selling the connected pipeline and marine terminal, which are currently being leased to a private company. DOE could also consider leasing excess storage capacity to other countries so that they could store oil at the SPR.¹⁹ DOE had not entered into any such leases with other countries and had not considered such leases as of May 2018 because, according to DOE, the SPR has historically lacked capacity to store additional oil. DOE had not proposed any of these options or explored the revenue the agency could generate by selling or leasing these assets. However, according to DOE officials, the agency will examine the feasibility of such options in the ongoing SPR post-sale configuration study.

In the course of our work, we also identified other options for handling potentially excess SPR assets that DOE was not planning on examining as of May 2018, largely because DOE did not have the authority to pursue them, according to agency officials. First, DOE could explore leasing storage capacity to private industry. U.S. oil production has generally increased over the last decade. As a result, the private sector may want to lease excess SPR capacity, which may be cheaper than above-ground storage, according to a representative of a private company we interviewed. Fees for doing so could help defray SPR storage or maintenance costs. However, agency officials told us that the Energy Policy and Conservation Act gave DOE authority to lease underutilized storage to other countries but not to the private sector. Second, if Congress determines that the SPR holds oil in excess of that needed domestically, DOE could explore selling contingent contracts for

¹⁹The Energy Policy and Conservation Act provides that the Secretary of Energy, by lease or otherwise, may store in underutilized SPR facilities petroleum product owned by a foreign government or its representative. 42 U.S.C. § 6247a(a).

the excess oil rather than selling the oil outright.²⁰ Australian and New Zealand officials told us that such contracts would help their countries meet their IEA 90-day reserve obligations.

Australian officials told us that they have discussed this option with DOE. Currently the United States and Australia have agreed, through an arrangement, to allow Australia to contract for petroleum stocks located in the United States and controlled by commercial entities. While the arrangement does not cover government-owned oil in the SPR, if it did, based on our analysis, DOE could generate up to approximately \$15 million if Australia purchased the maximum allowable amount of oil specified in an arrangement through contracts for excess SPR oil in 2018.²¹ However, although the Energy Policy and Conservation Act allows DOE to lease underutilized storage to other countries, DOE lacks the authority to sell contracts for the oil and does not plan to seek this authority, according to DOE officials. DOE officials told us that they did not plan to examine these options.

According to DOE's real property asset management order, the agency is to identify real property assets that are no longer needed to meet the program's mission needs and that may be candidates for reuse or disposal.²² Once identified, the agency is to undertake certain actions, including determining whether to dispose of these assets by sale or lease. As part of its SPR post-sale configuration study, DOE plans to determine whether it is appropriate to close SPR facilities, and the relative benefit of any closures would be informed by potential lease revenues from maintaining sites so they could be leased, according to agency officials. However, as mentioned previously, we identified other options for handling potentially excess SPR assets that DOE was not planning to examine in its study. Although DOE does not currently have the authority to implement these options, according to officials, examining their potential use, including possible revenue enhancement, could inform

²⁰Under such contingent contracts, also called tickets, a seller agrees to deliver to the buyer an amount of oil or petroleum products if a specified event occurs, such as an IEA collective action, in return for an agreed-upon fee.

²¹The estimated amount is based on average monthly projected ticket prices in 2018 for crude oil and an arrangement between the United States and Australia that outlines the maximum amount of oil that Australia can purchase in the form of tickets from commercial entities located in the United States.

²²U.S. Department of Energy, *Real Property Asset Management*, DOE Order 430.1C (Washington, D.C.: August 2016).

Congress as it examines whether it should grant such authority. Without examining a full range of options in the SPR post-sale configuration study, DOE risks missing beneficial ways to modernize the SPR while saving taxpayer resources. In May 2018, we recommended that in completing its ongoing SPR post-sale configuration study, DOE should consider a full range of options for handling potentially excess assets and, if needed, request congressional authority for the disposition of these assets. DOE agreed with this recommendation.²³

Finally, as DOE takes steps to plan for the SPR's modernization, ongoing uncertainty regarding the SPR's long-term size and configuration have complicated DOE's efforts. Congress has generally set the SPR's size by mandating purchases or sales of oil. DOE officials told us they do not know whether Congress will mandate additional sales over the next 10 years or whether other changes may be required to the configuration of the reserve. Any additional congressionally mandated sales would require DOE to again revisit its modernization plans and assessments of the potential uses of any excess SPR assets. Oil market projections also have implications for the future of the SPR. The United States is projected to become a net exporter by the late 2020s and would then no longer have a 90-day reserve obligation, but it is projected to return to being a net importer between 2040 and 2050. These projected fluctuations could affect the desired size of the SPR in the future. Such uncertainties create risks for DOE's modernization plans, as DOE may end up spending funds on facilities that later turn out to be unnecessary should Congress ultimately decide on a larger- or smaller-sized SPR than DOE anticipates. In May 2018, we suggested that Congress may wish to consider setting a long-range target for the size and configuration of the SPR that takes into account projections for future oil production, oil consumption, the efficacy of the existing SPR to respond to domestic supply disruptions, and U.S. IEA obligations.²⁴

In conclusion, we found that given the constrained budget environment and the evolving nature of energy markets and their vulnerabilities, it is important that DOE endeavor to ensure that the SPR is an efficient and effective use of federal resources.

²³[GAO-18-477](#).

²⁴[GAO-18-477](#).

Chairman Upton, Ranking Member Rush, and Members of the Subcommittee, this concludes my prepared statement. I would be pleased to answer any questions that you may have at this time.

GAO Contact and Staff Acknowledgments

If you or your staff members have any questions about this testimony, please contact Frank Rusco, Director, Natural Resources and Environment, at (202) 512-3841 or ruscof@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Key contributors to this testimony included Quindi Franco (Assistant Director), Nkenge Gibson (Analyst-in-Charge), Philip Farah, Ellen Fried, Cindy Gilbert, Gregory Marchand, Celia Mendive, Patricia Moye, Camille Pease, Oliver Richard, Dan Royer, Rachel Stoiko, and Marie Suding.

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