



Highlights of [GAO-08-521T](#), a testimony before the Committee on Energy and Natural Resources, United States Senate

Why GAO Did This Study

The Strategic Petroleum Reserve (SPR) was created in 1975 to help insulate the U.S. economy from oil supply disruptions and currently holds about 700 million barrels of crude oil. The Energy Policy Act of 2005 directed the Department of Energy (DOE) to increase the SPR storage capacity from 727 million barrels to 1 billion barrels, which it plans to accomplish by 2018. Since 1999, oil for the SPR has generally been obtained through the royalty-in-kind program, whereby the government receives oil instead of cash for payment of royalties on leases of federal property. The Department of Interior's Minerals Management Service (MMS) collects the royalty oil and transfers it to DOE, which then trades it for oil suitable for the SPR.

As DOE begins to expand the SPR, past experiences can help inform future efforts to fill the reserve in the most cost-effective manner. In that context, GAO's testimony today will focus on: (1) factors GAO recommends DOE consider when filling the SPR, and (2) the cost-effectiveness of using oil received through the royalty-in-kind program to fill the SPR.

To address these issues, GAO relied on its 2006 report on the SPR, as well as its ongoing review of the royalty-in-kind program, where GAO interviewed officials at both DOE and MMS, and reviewed DOE's SPR policies and procedures. DOE provided comments on a draft of this testimony, which were incorporated where appropriate.

To view the full product, including the scope and methodology, click on [GAO-08-521T](#). For more information, contact Frank Rusco at (202) 512-3841 or ruscof@gao.gov.

STRATEGIC PETROLEUM RESERVE

Options for Improving the Cost-Effectiveness of Filling the Reserve

What GAO Found

To decrease the cost of filling the SPR and improve its efficiency, GAO recommended in previous work that DOE should include at least 10 percent heavy crude oils in the SPR. If DOE bought 100 million barrels of heavy crude oil during its expansion of the SPR it could save over \$1 billion in nominal terms, assuming a price differential of \$12 between the price of light crude oil and the lower price of heavy crude oil, the average differential over the last five years. Having heavy crude oil in the SPR would also make the SPR more compatible with many U.S. refineries, helping these refineries run more efficiently in the event that a supply disruption triggers use of the SPR. DOE indicated that, due to the planned SPR expansion, determinations of the amount of heavy oil to include in the SPR should wait until it prepares a new study of U.S. Gulf Coast refining requirements. In addition, we recommended that DOE consider acquiring a steady dollar value—rather than a steady volume—of oil over time when filling the SPR. This “dollar-cost-averaging” approach would allow DOE to acquire more oil when prices are low and less when prices are high. GAO found that if DOE had used this purchasing approach from October 2001 through August 2005, it would have saved approximately \$590 million, or over 10 percent, in fill costs. GAO's simulations indicate that DOE could save money using this approach for future SPR fills, regardless of whether oil prices are trending up or down as long as there is price volatility. GAO also recommended that DOE consider giving companies participating in the royalty-in-kind program additional flexibility to defer oil deliveries in exchange for providing additional barrels of oil. DOE has granted limited deferrals in the past, and expanding their use could further decrease SPR fill costs. While DOE indicated that its November 2006 rule on SPR acquisition procedures addressed our recommendations, this rule does not specifically address how to implement a dollar-cost-averaging strategy.

Purchasing oil to fill the SPR—as DOE did until 1994—is likely to be more cost-effective than exchanging oil from the royalty-in-kind program for other oil to fill the SPR. The latter method adds administrative complexity to the task of filling the SPR, increasing the potential for waste and inefficiency. A January 2008 DOE Inspector General report found that DOE is unable to ensure that it receives all of the royalty oil that MMS provides. In addition, we found that DOE's method for evaluating bids has been more robust for cash purchases than royalty-in-kind exchanges, increasing the likelihood that cash purchases are more cost-effective. For example, in April 2007, DOE solicited two different types of bids—one to purchase oil for the SPR in cash and one to exchange royalty oil for other oil to fill the SPR. DOE rejected offers to purchase oil when the spot price was about \$69 per barrel, yet in the same month, DOE exchanged royalty-in-kind oil for other oil to put in the SPR at about the same price. Because the government would have otherwise sold this royalty-in-kind oil, DOE committed the government to pay, through foregone revenues to the U.S. Treasury, roughly the same price per barrel that DOE concluded was too high to purchase directly.