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Subcommittee on Energy and Mineral Resources
Committee on Energy and Natural Resources
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Mr. Chairman, I am pleased to appear before this Subcommittee to discuss the current status of the Strategic Petroleum Reserve (SPR) and options for its financing. In my remarks today, I will address the following issues:

- o The importance of the SPR in mitigating the adverse effects of possible oil import disruptions;
- o The costs of building a reserve and methods of financing it; and
- o The advantages and disadvantages of the various financing methods.

The substance of this testimony is drawn from a report now being prepared by the Congressional Budget Office (CBO). We expect to release this study next week.

THE EFFECTIVENESS OF THE STRATEGIC PETROLEUM RESERVE

Despite the decline in oil imports that the United States has experienced in the past several years, oil import disruptions still pose a significant problem, from both an economic and national security perspective. While other policy options are available during such a contingency--ranging from laissez-faire to special taxes or rationing--none are as effective as the SPR at mitigating the economic losses created by oil supply interruptions.

Several previous CBO studies have examined the sizable benefits of a strategic reserve. We found that, in the event of a year-long national shortfall of 2.0 million barrels per day, a reserve of 750 million barrels could avert a real GNP loss of 3.6 percent and added unemployment of 1.1 percentage points, and abate the significant inflationary effects. By these calculations, each barrel of SPR oil is capable of averting up to \$200 in GNP losses during a disruption. Moreover, the SPR may actually reduce the probability of such a disruption by making the so-called "oil weapon" less effective.

COSTS AND FINANCING OF THE RESERVE

To realize these benefits, however, the United States must pay the costs of building the SPR, which include the construction of storage capacity, oil acquisition, and maintenance and administration. Current Administration plans call for a fill rate of 200,000 barrels per day for the remainder of fiscal year 1981, and 230,000 barrels per day in fiscal year 1982. Together with the 115 million barrels of oil now in the reserve, this would create a reserve of 250 million barrels by the end of 1982. Maintenance of the latest Administration plan for filling the reserve, which averages about 195,000 barrels per day over the next seven years, would create a 750 million barrel reserve by the end of 1989.

Filling the reserve under this schedule would require total budget authority of \$36.6 billion in fiscal years 1981-1989, including the \$1.3 billion sought by the Administration for this fiscal year. A supplemental appropriation is necessary because of the cessation of the entitlements benefits the reserve received while oil price controls were still in effect. Annual budget requirements for the SPR fluctuate with the planned rate of fill, rising from \$4.4 billion in fiscal year 1982 to a peak of \$7.4 billion in fiscal year 1987. The total cost of a 750 million barrel reserve, including the funds appropriated to date, is estimated to be \$44.8 billion.

Under current policy, federal taxpayers bear the burden of paying for the accumulation of the reserve. In the event of a supply interruption, the federal government would sell the oil, and taxpayers would either reap the profits accruing from oil price increases or sustain the losses that would occur if oil prices did not rise enough to cover the carrying cost of the oil.

Rather than have the federal government spend so much money during the accumulation period, some have suggested that part or all of the SPR costs be financed by the private sector. Private investors could be induced to buy shares in the SPR as a speculative investment and take the profit or loss associated with changes in the oil price. Alternatively, oil firms (predominantly refiners) could be required to hold larger private inventories or to contribute to the SPR.

No matter how the reserve is financed, there is an inescapable cost to society as a whole of accumulating and holding the reserve. Current resources that could be used for consumption or investment are being set aside--in the form of oil--for future use. When the reserve is used, society as a whole benefits since the SPR oil can mitigate the adverse economic effects of an oil supply interruption. Alternative financing methods differ, however, in at least four respects:

- o Who bears the risk that the SPR will not be a profitable investment?
- o Who controls the release of the oil?
- o How does the reserve affect the federal budget?
- o Can the desired fill rate be maintained?

ADVANTAGES AND DISADVANTAGES OF SPR FINANCING METHODS

SPR financing arrangements can be grouped into four general types:

- o Current Policy. At present, the SPR is financed from general revenues. Yet, since each dollar spent on the SPR could have been used to lower the deficit or retire federal debt, each dollar is effectively borrowed at the Treasury bill rate of interest. Thus, issuance of any special federal debt instrument (such as a SPR bond) to finance the SPR buildup would be tantamount to a continuation of current policy.
- o Public Capitalization of the SPR (or SPR "Shares"). This type of financing would allow private investors to purchase shares representing a specified quantity of oil in the reserve. The oil itself would belong to the federal government, but the investor would be

guaranteed the market value of the oil represented by the shares to which he held title. This approach is typified by the bill submitted by Congressman Gramm (H.R. 2304).

- o Development of an Industrial Petroleum Reserve (IPR). This alternative would shift the focus and costs of the SPR program to firms. Using the authority in the Energy Policy and Conservation Act, the President could require that all firms importing oil store up to 3 percent of their annual consumption in a separate emergency inventory. An IPR could be developed by a Presidential requirement (or "decree"), by tax incentives, or by allowing private investors to pay for storing IPR oil for firms as they would for the government under the SPR shares plan.
- o Mandated Private Contributions to the SPR. Firms importing, refining, or producing oil could be directed to supply specified amounts of oil to the SPR. The costs of the oil could be imposed on firms (to the extent that they would be unable to pass the costs along to consumers), or firms could be given a guarantee of the market value of their contribution when the SPR was depleted. This approach is used in S. 707, submitted by Senator Kassebaum.

Current Policy--Debt Financing

The current system of SPR procurement may have the advantage of being the most efficient in the long run. Treasury bill financing has the lowest risk of all types of borrowing, and, therefore, has the lowest expected costs. Current policy, however, has the clear disadvantage of having a significant budgetary impact. By adding to the federal deficit, budgetary financing of the SPR may add to inflationary expectations.

SPR Shares

If oil prices rise at a rate greater than the interest rate (usually represented by the riskless Treasury bill rate), the SPR will be a profitable investment. This is true because funds spent on SPR shares could have been invested at this interest rate. Thus, whoever purchases SPR shares assumes the risk that the SPR will not be profitable. The sale of shares representing barrels of oil in the reserve has the advantage of allowing investors to determine if they are willing to assume the risks associated with SPR financing. This voluntary approach is the most efficient way to allocate risk in a market economy.

Moreover, the sale of SPR shares would reduce the federal deficit and the portion of economic activity attributable to the federal government. These reductions may be seen in the financial community as a precursor to lower inflation rates and, in turn, lower interest rates. These benefits are essential elements in the President's economic program.

The disadvantage associated with the sale of SPR shares is the absence of a guarantee of prompt completion of the SPR. The demand for SPR shares may be insufficient to finance the desired rate of oil procurement. If demand should fall short, some back-up system, probably involving outlays by the federal government, would have to be employed. Thus, under a shares arrangement, a guarantee of prompt completion of the reserve can only be made at potential budgetary cost. In addition, it should be noted

that investors will commit funds to the SPR only if they believe that oil prices will rise at a rate greater than the Treasury bill rate of interest. If they are right, and oil prices rise by more than this interest rate, then the reserve could have cost society less in the long-run if financed through the sale of conventional Treasury securities.

H.R. 2304. Representative Gramm has submitted H.R. 2304, the Private Equity Petroleum Reserve Act, which uses the sale of SPR shares to finance the SPR. Petroleum Equity Certificates, as they are termed in the bill, would be sold for 10-year periods at the current market price of oil. Investors would be guaranteed the prevailing price of crude oil when their oil was depleted, minus storage and handling costs.

The bill allows for the sale of shares representing the existing oil in the reserve. While the sale of shares representing this oil would generate substantial receipts if successfully sold, and would reduce the federal deficit, the immediate sale of these shares would give the SPR administrator less future flexibility. That is, by selling shares representing oil already in the SPR, we forsake the opportunity to sell that oil when the SPR is depleted.

Industrial Petroleum Reserve Options

The major advantage of an Industrial Petroleum Reserve is that such a decentralized, privately held reserve might be appropriate in some disruption situations. Specifically, the government might be unwilling to deplete the SPR during disruptions that are small or seen as transient. Therefore, IPRs might be a worthwhile supplement to the SPR as a first line of defense against this type of disruption.

The disadvantage associated with IPR options concerns the integrity of the reserve itself. If firms believe that their IPR reserves would be available to them during an oil import interruption, they might be tempted to reduce their conventional inventories. This would seriously reduce the effectiveness of the IPR. Also, compliance problems might be experienced, such as the depiction of tank and pipeline "bottoms" as usable inventory. Moreover, a plan that decrees the creation of an IPR would force the costs of reserve development onto firms, which, in turn, would attempt to pass the costs on to consumers. Since the abilities of firms to acquire and store oil, and to pass along price increases, vary, some firms would be placed at competitive disadvantage by this option.

Mandated Contributions to the SPR

The major advantage of mandating contributions to the SPR from the oil industry is that it would remove SPR costs from the budget. In addition, penalties for noncompliance could assure a prompt rate of fill.

The disadvantage associated with such a plan lies in the imposition of SPR costs or risks on one particular group, in this case, the oil industry. Moreover, since firms vary in their ability to pass along costs to consumers, this plan--as with an IPR--would place some firms at a competitive disadvantage within their industry.

S. 707. The Strategic Petroleum Reserve Amendments of 1981 (S. 707), submitted by Senator Kassebaum, reflect the "mandated" approach. This bill requires that importers of crude oil provide the equivalent of five days of their import volumes of crude oil to the SPR each year. This requirement would only be applied to importers of more than 75,000 barrels per day, but this covers the vast majority of crude imports. Since crude oil imports now total about 5 million barrels per day, the Kassebaum bill would result in the procurement of 25 million barrels annually, approximately one-third of the fill rate now planned by the Administration over the next seven years. Under the bill's provisions, the federal government would pay a 10 percent carrying charge to participating firms, who could recoup the market

value of their SPR oil, minus the accumulated carrying charges, upon depletion. The Kassebaum bill thus has the disadvantage of imposing the financial risks of the SPR on oil importing firms--as in an IPR.

Since the bill would not create a decentralized, privately held reserve to complement the SPR, keeping firms' reserves in the SPR salt dome facilities would reduce the chance that firms would lower their own conventional inventories. The Kassebaum proposal also has the advantage of complementing the current SPR procurement program at minimal cost to the federal government in the short term. If this proposal were to be enacted, and 25 million barrels of oil procured for the SPR through this method, the budgetary savings would be approximately \$1.0 billion in fiscal year 1982. These savings would be achieved, however, by shifting the costs to the firms delivering the oil and their consumers, and allowing the firms to retain the potential profits of oil price increases.

CONCLUSION

In summary, the likely appreciation in the price of oil makes private financing of the SPR a tenable strategy. The sale of SPR shares would allow capital markets to determine efficiently who will bear the risks associated with SPR development. It would also produce the benefits associated with

reductions in the federal deficit and the share of economic activity attributable to the federal government. The disadvantage of selling SPR shares is that the revenue raised in this manner might be insufficient to fund the desired level of SPR procurement. Some back-up system, presumably involving federal outlays, might be necessary. Congressman Gramm's bill reflects both these advantages and disadvantages.

The creation of an Industrial Petroleum Reserve would add to the diversity of possible policy responses to an oil import disruption. IPR options, however, all have the potential disadvantage of inducing firms to hold a lower conventional inventory. A solution to this compliance problem might have to be developed before decentralized reserves could be considered as an effective policy tool.

The SPR could be developed by mandating that firms contribute oil to it, as proposed by Senator Kassebaum. This plan has the disadvantage of imposing the risks of SPR development on one particular group, rather than allowing the market to allocate this risk. On the other hand, this proposal would remove part of the cost of filling the SPR from the federal budget without losing the benefits of federal control over release of the oil. For this portion of the reserve, firms would bear the risk of loss--or retain the profits--of oil price increases.

Finally, while alternate financing proposals are attractive and apparently workable, we should not lose sight of the importance of filling the SPR rapidly. This will be particularly true during the next year, when renewed supplies from Iraq and Iran may make more oil available from SPR purchases. Plans to institute a new financing mechanism will have to be developed and implemented rapidly if the SPR buildup is to continue without interruption.