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Before the  
Subcommittee on Energy and Power  
Interstate and Foreign Commerce Committee  
U.S. House of Representatives

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Mr. Chairman, I am pleased to appear before this Subcommittee to discuss the issues that have recently been raised concerning the Strategic Petroleum Reserve (SPR). In my remarks today, I will address the following topics:

- o Background on the current SPR program;
- o Benefits and costs of the reserve; and
- o Alternative oil acquisition strategies.

#### BACKGROUND

The Strategic Petroleum Reserve program, which *is* administered by the Department of Energy, has experienced serious difficulties both in developing storage capacity and in acquiring oil. Although the Congress authorized a reserve of 1 billion barrels, only 248 million barrels of storage **capacity** have been completed, and the reserve stands at only 92 million barrels, with no oil having been delivered since August 1979. Furthermore, the **President's** revised budget submission for fiscal year 1981 reflects a decision not to resume oil purchases until June of that year.

The Congress is now considering legislation that would direct the Department of Energy to resume crude oil purchases. Concern about the reserve's impact on the federal budget and the effect of renewed purchases

on the international oil market, however, have caused the Congress to reevaluate the entire program. Both the House and the Senate Budget Committees assume limited oil purchases in their first budget resolutions for 1981 as reported. The Senate Budget Committee also restricts oil purchases in its revised second budget resolution for 1980.

#### BENEFITS AND COSTS OF THE RESERVE

The Strategic Petroleum Reserve is intended to mitigate the economic dislocation that would be caused by full or partial interruption of the flow of oil from abroad. During a supply interruption, the availability of the reserve oil would tend to reduce the upward pressure on oil prices and reduce potential losses in Gross National Product (GNP). For example, without a strategic reserve, a year-long shortfall of 2 million barrels per day in 1984--that is, about 21 percent of projected oil imports--would reduce GNP in that year by approximately \$145 billion (3.6 percent of projected 1984 current dollar GNP); it would also increase unemployment by about 1.1 percentage points and create significant inflationary pressure. This assumes that there would be no price controls or oil allocation regulations. Virtually the entire impact on the GNP and unemployment, as well as a large portion of the inflationary effect, could be averted by a

reserve of about 750 million barrels. Similarly, a reserve of 1 billion barrels could almost completely offset a year-long shortfall of 3 million barrels per day in 1984--about 31 percent of projected oil imports--which would otherwise cause about a \$226 billion (5.5 percent) loss in current dollar GNP and increase unemployment by about 1.8 percentage points. The 1-billion-barrel reserve would also be able to offset the economic effects of a cutoff of all imported oil for almost four months.

The costs of developing the Strategic Petroleum Reserve are not insignificant. Development of each 250-million-barrel increment over the current level would cost between \$1 billion and \$5 billion depending upon the timing, the rate of construction, and the type of storage capacity. Total additional development costs to reach a 1-billion-barrel reserve may therefore be estimated at \$4 billion to \$11 billion in current dollars over the next six to ten years. Filling the capacity with the purchase of 1 billion barrels of oil could be expected to cost approximately \$50 billion, but these costs could be recovered, and probably with a profit, when the reserve was drawn down or the program was terminated.

Each barrel of reserve oil, for which storage capacity costs between \$3 and \$20 to develop, would thus appear to have the potential to offset close to \$200 in 1984 current dollar GNP losses. Further, although the

timing, size, and duration of future interruptions are difficult to predict, the risk of interruption seems to be increasing. The level of imports is expected to rise from the present 42 percent of total domestic petroleum consumption to about 57 percent in 1990, primarily because domestic production is declining. In addition, the political stability of several key producing countries is increasingly uncertain, so that one or more oil supply interruptions in the next 20 years appear highly probable. The low cost of the oil reserve relative to the economic losses it could avert make the reserve a highly cost-effective federal program for protecting against the risks of growing dependence on imported oil. Indeed, it is the only program that could offset the short-term economic impact of oil supply interruptions.

#### OIL ACQUISITION STRATEGY

The **program's** large benefits relative to costs, as well as our increasing dependence on imported oil, seem to bolster the arguments for acquiring the oil as rapidly as possible, subject to the constraints imposed by the federal budget and the international oil market.

### Budget Impacts and Constraints

At current world oil prices, it would cost approximately \$3.2 billion per year to purchase oil at a rate of 200,000 barrels per day. At this rate, it would take approximately two years to fill the current storage capacity of 248 million barrels. If oil were purchased at a rate of 400,000 barrels per day, the reserve would be filled in 13 months, at a total cost over that period of approximately \$5.6 billion. While this represents a sizable outlay, the money spent on purchasing oil is expected to be recouped when the oil is eventually sold. Moreover, because we expect continued real increases in the price of oil, the total budgetary cost of the program could be reduced by expanding capacity and purchasing more oil sooner, despite the premiums that would have to be paid for accelerating construction.

Methods could be found to reduce the impact on the budget deficit of spending for the SPR. One would be to increase the oil import fee and dedicate the additional revenues to building the reserve. An increase of \$1 to \$2 per barrel would likely provide the reserve with a secure source of funds. Further, the fact that the oil import fee and the SPR are both aimed at reducing the risks associated with high levels of imported oil provides a rationale for coupling the programs. Another option might be to allow

private investors to buy title to oil in the reserve. The reserve could then function as a futures market, with investors buying and selling the titles speculatively. In the event of a drawdown of the reserves, the government would pay **titleholders** for the quantity sold.

### International Concerns

International considerations have played a major role in slowing the progress of the reserve program. Producing nations have opposed the program publicly, while agreements among consuming nations apparently limit the U.S. **government's** ability to purchase oil for the reserve in a tight market.

Producer Opposition. While the public opposition of the producer nations to the reserve program is clear, their response to renewed U.S. stockpiling is difficult to predict. The possibility of production cutbacks cannot be ignored, especially while countries such as Saudi Arabia are producing at higher levels than they would prefer. Producer opposition to renewed stockpiling might be minimized, however, if the United States

dedicated some of its federal production to the reserve. One option would be to dedicate the current 150,000 barrels per day from the Naval Petroleum Reserve or some of the royalty oil that is due the federal government for offshore leases. Although such dedication would force the refineries currently receiving this oil to replace it **with** purchases on the world market, the strategy might be more acceptable to producing nations.

Market Restraints. The countries belonging to the International Energy <sup>American</sup> ~~Agreement~~ (IEA) agreed in 1979 to consult with each other before resuming stockpiling. They further agreed that no country would resume stockpiling if that would result in pressure on world oil prices. Substantial oil purchases for the reserve in a tight oil market could result in increased prices that would be felt by all consumers. A high purchase rate of 400,000 barrels per day represents about 1 percent of the oil traded daily on the international oil market. In a tight, competitive oil market, the price effect could be as much as \$4 per barrel. At lower, more likely purchase rates of 100,000 to 200,000 barrels per day, the effect would be only \$1 to \$2 per barrel. The oil market, however, does not always exhibit such sensitivity. Prices are not set solely by market conditions. If any price increases resulted from SPR purchases, they would more likely stem from political rather than economic **factors**, and thus would be difficult to predict.



While critics of the reserve have cited tight oil market conditions as a reason for not purchasing oil, the oil market over the next 6 to 18 months is expected to be very favorable to reserve purchases. Softening spot market prices over recent months, together with the prospects of an impending recession, may be expected to curtail the rate at which crude oil prices rise over the next year or two.

If market concerns remain a constraint, the United States might wish to consider alternative policies that would have a neutral effect on the world oil market. For example, it might be possible to increase production at Elk Hills by 30,000 to 50,000 barrels per day and dedicate this additional production to the reserve. Another alternative might be to find ways of reducing current domestic demand and use the resulting oil saving for the reserve.

## CONCLUSION

The Strategic Petroleum Reserve is a highly cost-effective program for reducing the risks of high oil import levels and future interruptions of supply. To fill the remaining storage capacity of 156 million barrels of oil would cost approximately \$5.6 billion and could be accomplished in

13 months at a high rate of 400,000 barrels per day. Budget limitations and international oil market conditions are the two major constraints to current purchases of oil for the reserve. If budget limitations are severe, various alternatives are **available--such** as increasing the oil import fee, or initiating private financing. With respect to the international oil market, the constraints are twofold: the opposition of producing nations and possible upward pressure on oil prices resulting from the reserve purchases. Producer opposition might be minimized by dedicating federal oil from the Naval Petroleum Reserve or royalty oil from offshore leases. It is highly probable that the oil market will have a considerable amount of slack over the next 6 to 18 months, so that the economic climate for renewed purchases should be very favorable. If market concerns are serious, however, alternative policies could be considered, such as increasing oil production from Elk Hills or reducing domestic demand and using the savings **for** the reserve.