



Telephone: (212) 867-0052

**Petroleum Industry Research Foundation, Inc.**

**122 EAST 42<sup>nd</sup> STREET**

**New York, N. Y. 10017**

Statement On

STRATEGIC PETROLEUM RESERVES

Presented To  
the

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

UNITED STATES SENATE

BY

JOHN H. LICHTBLAU  
EXECUTIVE DIRECTOR

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I appreciate the Committee's invitation to testify on the subject of strategic petroleum reserves. I was privileged to testify before this Committee on the same subject nearly four years ago, about seven months before the Arab oil embargo and the OPEC price revolution. It is gratifying that the concept of strategic government oil storage, first proposed to and by the Committee at that time, has finally become law, essentially in the form originally proposed. On the other hand, it is regrettable that four years after these hearings we still have no strategic oil reserve at all and will not even reach the first stage in developing one for nearly two more years.

In my testimony today, I would like to address myself primarily to the Federal Energy Administration's (FEA) recently published Strategic Petroleum Reserve Plan. I would like to begin by commending the FEA for the quality of this report. It is well written, well researched and well argued. Most of my differences with the report are differences of opinion and judgement rather than fact.

#### Need for an Accelerated Storage Program

My first difference, however, is not with the report but with an aspect of the legislation on which it is based. I believe development of a strategic oil reserve should be given a higher priority and held to a shorter time schedule than is the case under the present law, for we might quite literally need it any day. This is not meant to sound alarmist. But with current and near-term oil imports accounting for

over 40% of our demand (a higher share than projected in the FEA report for 1980 and 1985), we need maximum attainable protection against import interruption at the earliest achievable date.

The possibility of substantial and sustained import interruptions go far beyond the conventional scenario of another Arab oil embargo resulting from another Arab-Israeli war. For instance, the civil war in Nigeria from 1967 to 1969 caused a virtual cessation of the country's crude oil exports, not by design but by blocking access to most of the producing fields. If a similar situation were to occur in either of the two OPEC super producers -- Saudi Arabia and Iran -- at recent production levels, a world-wide crude oil shortage could develop in 60-90 days under some circumstances.

Another consideration is that nearly 45% of our crude oil imports are of low-sulfur quality and are mostly used in refineries which require such crude. If production from any of the three major low-sulfur crude exporters -- Nigeria, Libya and Indonesia -- became interrupted on a sustained basis, U.S. refinery output might have to be seriously curtailed.

Thus, the possibilities of import interruptions are really quite varied. They can occur at any time and for reasons outside the control of the exporting country's government. This is why I believe we must adopt somewhat of a crash program approach rather than a business-as-usual one in developing our strategic petroleum reserves.

In this connection I would like to point out that while the FEA is planning to meet the Early Storage target of 150 million barrels by the end of 1978, as required under the law, it expects to have actual available storage facilities of 240 million barrels by then, according to the Report. It seems to me if the storage is there, it ought to be

fully utilized, if possible. I do not believe the law prohibits such an accelerated storage program.

If the first 240 million barrels of storage can be put in place in 1977 and 1978, additional facilities of about the same magnitude can perhaps be developed in the following two years. If this is possible, the FEA's ultimate target of a 500 million barrels strategic petroleum reserve could be attained at the end of 1980, two years ahead of the legislative deadline.

#### Availability of Crude

Availability of crude is unlikely to be an obstacle to the achievement of such an accelerated target. Over the 3 1/2 year period from mid-1977 to the end of 1980, storage shipments would have to rise from an initial level of 250,000-300,000 b/d to nearly 450,000 b/d in the last year. World demand for OPEC oil is expected to be relatively flat from late 1977 through the end of 1980 because of the large volume of non-OPEC production -- primarily from the North Slope of Alaska, the North Sea and Mexico -- which will come on stream during this period. Thus, the required volumes should be readily obtainable without a significant effect on prevailing price levels. Through 1978, it might also be possible to satisfy part of the storage requirements from Alaskan crude which will probably be in temporary surplus on the West Coast until a pipeline to the interior is built.

### Storage Sites

However, other obstacles may prove more difficult to overcome in accelerating the storage build-up. They would be mainly in the area of environmental constraints, construction time, and availability of equipment. To reduce these obstacles would require the construction of very few, very large storage facilities rather than a larger number of smaller ones. The FEA is currently looking at 32 salt dome and mine storage candidates. Four or five of these could accommodate the entire required volume plus any desired later expansion.

### Construction of Superports

Another time saving factor, which would also reduce costs, is maximum utilization of existing dock and oil delivery facilities. Of major importance in this connection would be the earliest possible start of construction of the LOOP and Seadock ports for supertankers at the Gulf Coast so that they may be ready to receive deliveries by 1980. Crude oil imports into the Gulf Coast have risen from virtually nothing in 1972 to 2 million b/d by the end of 1976. By 1980 they could approach 5 million b/d. This will greatly strain existing dock facilities and could well create a bottleneck in bringing in strategic storage imports, in the absence of superports. The ports would also greatly reduce the time required to refill the strategic storage following withdrawals during a sustained interruption. Finally, the proposed ports would of course reduce the delivered cost of the stored oil because of lower transportation cost.

### Increasing the Storage Ceiling

I do not think the 500 million barrels is an adequate ultimate level of protection from import interruptions. Neither does the FEA. However, the Report considers the level adequate for any likely type of import interruption in 1982, based on an assumed import level of 7.5 million b/d in both 1980 and 1985. For both years this is at least 1 million b/d below the projection of most oil companies as well as some government agencies. However, the FEA has increased its import projection for 1985 in every year since it first published one in 1974. It can be expected to continue these upward adjustments.

In trying to set an adequate storage level Congress used the highest consecutive three month level of crude oil imports in 1974-75 (5.4 million b/d) as a base. The problem with this formula is its historic rigidity. This year crude imports will be at least one million b/d above the base level. By the early 1980's they will probably be 1.5 million b/d higher. Thus, on a current basis the three-month import formula requires at least 650 million barrels of storage by 1982. Consequently, the program should not be stopped when the 500 million barrels target has been reached but should be continued for another couple of years at an annual rate of about 100 million barrels. This would not require any change in the law or other action at this time. But the FEA may want to consider it in selecting its storage facilities.

### A Strategic Reserve of Residual Fuel Oil

I agree with the FEA's overall findings that no strategic storage of refined products is required but I disagree with its findings that

this also applies to residual fuel oil consumed in PAD I (East Coast).

Last year PAD I imported over one million b/d of residual fuel oil (exclusive of shipments from the Virgin Islands) or 66% of its total requirements for this product. No other U.S. region has a remotely comparable foreign dependency for any of its oil products.

We expect the level of these imports into PAD I to be about the same in 1980. The FEA, by contrast, projects nationwide residual fuel oil imports of only 700,000 b/d for 1980. If our figures are right the need for a residual fuel oil storage program is stronger than the FEA has assumed.

But apart from the question of volume, I am uneasy about several aspects of the FEA's plan to assure adequate residual fuel supplies during an import interruption. The FEA proposes to ship crude oil from its strategic storage to non-U.S. refineries in the Caribbean for processing and reshipment to the U.S. There are two potential problems with this plan which are not addressed in the Report. (1) The FEA does not explain what assurance there is that all the products made from the strategic-reserve crude shipped to the Caribbean will actually come back to the U.S., and that these re-imports will not affect the volume of other shipments from these refineries to the U.S. (2) There is no comment in the Report of how to enforce U.S. price controls on these imports, i.e. prevent them from being sold back at world prices which are likely to be substantially higher than U.S. prices during an import interruption.

In evaluating these eventualities, it should be kept in mind that not only the oil companies but also their Caribbean host governments may

become involved in these matters, depending on the type of interruption and the reason for it.

Because of these uncertainties I think a modest reserve of residual fuel oil as an integral part of the government's overall strategic petroleum storage program would be desirable to provide minimum protection for the East Coast against import interruptions. For example, a stock level of 15 million barrels of residual oil would protect against a one-third import interruption for 45 days. This would at least be enough to permit time for the rearranging of supply sources and, thus, avoid the necessity of having to buy at the soaring spot prices which usually accompany the beginning of supply interruptions. To the extent to which it may be desirable to put this reserve into tanks the preferable location would of course be the principal importing region of this product.

#### Entitlements

The FEA proposes to use the existing crude oil entitlements program to reduce the cost of oil from world market levels to the average price paid by U.S. refiners for controlled and uncontrolled domestic and foreign oil. As the Report points out, this would reduce the cost burden of the strategic reserve on the federal budget. While this is obviously desirable from the fiscal view point, I question the use of entitlements for this purpose on other grounds: (1) The creation of a strategic petroleum reserve is clearly a national security measure and should be treated as such. It should therefore be funded just



as any other national security measure, namely out of general revenue which means the cost would be borne by all tax payers. (2) The use of entitlements understates the real cost of the storage program to the nation by transferring part of it to oil consumers. (3) The stated purpose of the entitlements program is to equate crude oil costs among refiners. It should therefore not be used for an entirely extraneous purpose. (4) The proposed use of entitlements to lower the cost of oil for strategic storage would give the Federal Government a direct vested interest, to the tune of several hundred million dollars annually, in the continuation of the entitlements program beyond its stipulated expiration date. This could influence government policy on the subject of crude oil price controls beyond April 1979.

This concludes my prepared statement. I would be glad to try to answer any questions you may have.