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Statement On

the

ENERGY INDEPENDENCE AUTHORITY (S. 2532)

Presented To

the

COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS

UNITED STATES SENATE

by

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May 10, 1976

I would like to thank you for inviting me to testify at today's hearing on S. 2532, the bill to establish an Energy Independence Authority (EIA) which would have the authority to spend up to \$100 billion over the next 8-9 years in providing financial assistance to the energy sector of the U.S. economy. In your letter of invitation you asked me to address myself in particular to the national security aspect of the bill.

The connection between the proposed EIA and national security is spelled out in Title I of the Bill which states that the principal purpose of the Authority is to attain energy independence by 1985 and that such independence is "essential...for maintenance of national security."

The Bill does not define energy independence. When the Administration first used the term at the end of 1973 it was clearly meant to be taken literally, that is, reducing oil imports to zero or close to it. Since then the concept has changed significantly. Thus, while the FEA's first Project Independence Report, issued in November 1974, contained two zero import scenarios for 1985 among its four scenarios which assumed maintenance of existing prices, the update of this report, issued last February, does not have any zero import scenario among the eight 1985 scenarios which assume maintenance of existing prices. Similarly, the FEA's Base Case scenario has also undergone

a substantial upward revision. The earlier Base Case showed an import ratio of 17% of U.S. oil demand by 1985 which was considered unrealistic by most other forecasters. This has now been changed to a 25% import ratio which must still be considered optimistic (though not unrealistic) on the basis of a majority of other recent import forecasts.

I am only quoting these numbers to illustrate how far we have moved from the original concept of energy independence. I think one can say categorically that the attainment of true energy independence or even approaching this target is unachievable by 1985-86, almost regardless of what we do.

But if we cannot achieve energy independence can we at least attain a substantial reduction in energy dependence from the current level of 41-42% of U.S. oil demand, and can the EIA be of help in this endeavor?

There are two ways to reduce our level of oil imports significantly by 1985. One is luck, the other is a massive national effort, affecting all aspects of the economy. The first approach would require nothing less than the discovery of very large domestic reserves of oil and gas in the next two to three years. For instance, if we can find two fields the size of Prudhoe Bay in the Outer Continental Shelf and if we can develop them with a minimum of technical and regulatory delay we might by 1985/86 be able to reduce our oil imports to perhaps 25-27% of our demand which would of course be a

major improvement over our present dependency. The probability of such an occurrence is considered very low by oil company and government geologists. But capital availability has very little to do with it. Oil companies are willing and able to explore our frontier areas to the maximum extent possible. The only things that have held them back so far were government delays in putting the frontier areas up for leasing and private and public environmental opposition to exploratory drilling. There is no indication that the search for offshore or Alaskan oil has been hampered by lack of capital.

Short of the unlikely event of such major new discoveries, a substantial oil import reduction by 1985 would require an effective national policy which would have to assign the highest priority to the attainment of this goal. Obviously, this would necessitate the reordering of other national priorities. Putting aside for the moment the question of whether such a reordering is justifiable or desirable, let us look briefly at what contribution, if any, the EIA could make towards the achievement of this goal.

The two principal means of import reduction over the period under consideration would have to come from a substantial lowering of demand and the modification of environmental restrictions. Demand curtailments can be achieved<sup>directly</sup> through rationing or indirectly through price increases (by means of excise taxes or by letting energy prices rise to world levels) or through conservation measures. The first two obviously do not require the type of financial aid the EIA would have to offer.

Energy conservation does require some capital expenditures. But in general the expenditure is likely to be self-liquidating through lower energy costs. Any conservation expenditure that cannot be justified in this way runs the risk of creating a resource misallocation. But apart from this, if the government wishes to encourage the installation of conservation equipment and mechanisms there are much simpler ways of accomplishing this goal than by creating a \$100 billion financial assistance agency. Fast tax write-offs and tax credits have frequently and successfully been used in the past to encourage specific investments considered in the national interest. I think capital expenditures for energy conservation equipment would respond readily to such treatment if the government finds it desirable to encourage them.

In the area of environmental restrictions, the principal changes required in order to lower future oil imports would be a change in some air pollution standards to permit the burning of additional coal, and a change in the environmental restrictions on strip mining of low-sulfur western coal. I am not here advocating these changes but without them the vast potential of domestic coal reserves cannot be fully utilized as a substitute for oil and gas in industrial and power plants. Again, whatever effort this requires, additional capital not otherwise available is not one of them.

One environmental measure, the installation of flue-gas scrubbers to permit the burning of high-sulfur coal by utilities, does require

a considerable amount of capital. However, the principal reason that many utilities are less than enthusiastic about scrubbers is that scrubbers are new and some utilities still lack confidence in their round-the-clock operability. Furthermore, they insist there are less expensive ways to cope with the hazards of sulfur emissions, such as intermittent sulfur control depending on weather conditions. Whatever the validity of these and other reasons for not installing scrubbers, they have little to do with unavailability of capital. Furthermore, all the scrubbers which are likely to be installed between now and early 1980's (when the EIA would have to cease giving financial aid) are expected to cost less than \$5 billion, a large part of which would be financed privately even if EIA funds became available.

Next, a reduction in oil imports would of course require an increase in domestic oil and gas production. We have already discussed the search in the Frontier areas. In the more conventional areas the expectation for substantial production increases is not very good. But the man-made constraints here are not capital availability but price controls. Higher prices for some of the "old" oil would encourage more secondary and perhaps even some tertiary recovery. Certainly, the removal of price controls on newly discovered gas, or at least a substantial increase in its price, would greatly encourage the search for this hydrocarbon. It is difficult to see what function the EIA would have in all this.

The situation is quite different for synthetic oil and gas. Here substantial amounts of high risk capital are required to start an entirely new industry whose product will probably be as high-priced, at least initially, as the highest cost imported oil at current prices. So here a certain amount of government financial assistance would clearly be helpful. However, this is already provided in another much more modest bill which has the specific purpose of encouraging the development of a synthetic fuels industry. As you know, such a bill was passed by the Senate last year but, regrettably, was defeated in the House. Currently, a somewhat similar bill (HR 12112) is under consideration in the House. The \$4 billion provided in this bill over the next two years would probably be enough to get the program off the ground, although I believe the bill would be much more effective if it were not limited to loan guarantees but allowed a variety of forms of financial assistance. If the program proves successful, additional appropriations can be authorized later on.

It should be pointed out, however, that the absolute maximum of synthetic fuels production that can realistically be expected by 1985 under the most favorable circumstances would be 750-800,000 b/d. In the absence of any special government assistance, we may have 250,000-300,000 b/d by then. Thus, the contribution of government financed synthetic fuel plants to energy independence would be quite small, no more than 2.5 to 3% of total U.S. oil demand. Certainly, it would not

warrant the expenditure of a substantial share of the proposed \$100 billion to which the EIA would have access.

Finally, there is the question of financing nuclear power stations which is specifically mentioned in the bill. These have of course very high capital costs. But, here again, capital shortage does not presently put a major restraint on the construction of these plants. Most recent cancellations are due either to excessive delays on the part of regulatory agencies in granting permits or to downward adjustments in electric power demand projections. If electric utilities were encouraged by funds available from the EIA to build additional plants they would then have to promote the sale of the output from these plants. This would tend to make them much less eager to institute such energy conservation practices as marginal cost rate structures than they would otherwise be. The result would probably be a net increase in the use of electric power which would be counter to the very purpose of the EIA.

Altogether, then, it would seem that we will not be able to do much more than we are already doing on the supply side towards reducing our foreign energy dependence. On the demand side we can do much more if we want to. But the more we do the more it will impact on the rest of the economy. We can also increase our domestic coal output but not without causing some additional environmental deterioration. But whatever we decide to do, the type of financial assistance proposed under the EIA would not be required.



Yet, the problem with an institution such as the proposed agency is that if it does not find economically and socially justifiable outlets for its activities it is likely to come up with some less justifiable ones. Thus, it is entirely possible that by 1985 we may be stuck with billions of dollars of uneconomic projects or with projects that would otherwise have been financed through private funds without risk or cost to the taxpayer.

Now I would like to return briefly to the national security aspects of our future oil imports. Obviously, all other things being equal, a lower level of imports is preferable to a higher, from the point of view of national security. But a fairly substantial level of imports is quite tolerable over the next 9 to 10 years - strategically, economically and logistically. The question is of course what is tolerable. Let us suppose we will have to import up to 10 million b/d by 1985. Can we cope with a volume of this magnitude?

Let us look first at the strategic implications. The principal danger here is another political embargo or a cut-off of supplies as a result of foreign military actions. Our Strategic Petroleum Reserves which are now in the process of being built up will go a long way to reduce this danger. By the end of 1982 we will have 500 million barrels of strategic reserves under the existing law. While this will certainly help, a higher level of

strategic reserves would be more desirable. A volume of 750 to 800 million barrels, together with a relatively modest rationing program, could protect us for 7-8 months from the effects of a sustained foreign oil interruption large enough to deprive us of half of our total imports. This would probably enable us to cope with any realistically conceivable emergency situation. It would seem therefore that we could derive a much higher national security benefit from spending 3 to 4 billion dollars over the next 5 years to raise our strategic oil reserves to 750-800 million barrels than by spending that same amount on EIA-funded projects.

The physical availability of 10 million b/d of foreign oil for U.S. import purposes would not seem to be in question between now and 1985. Current excess oil producing capacity in the OPEC nations, reasonable estimates of world oil demand increases over the next 10 years and the development of new supply sources abroad all indicate that such a volume of oil could be obtained without depriving other importing nations of their needs.

The future price of imported oil is of course a matter of conjecture. But if we can accept the statements of most of the more responsible OPEC spokesmen that OPEC's future pricing policy will aim only at the maintenance of existing oil prices in real terms we will be able to cope with the cost of a 10 million b/d import level in 1985, assuming the long-term historic trend in the growth rate of our export trade will continue.

I would like to make clear that I'm neither advocating nor projecting a 10 million b/d import level for 1985. I am merely saying that if we needed such a level it would probably be obtainable, affordable and protectable.

The year 1985 is of course an arbitrary cut-off point for an analysis of our oil import dependency. Beyond that date our dependency could become more problematic. By the later 1980's OPEC's excess producing capacity will probably have disappeared and most incremental world oil demand may have to be met from a very small number of sources with all the potential political and economic risks attendant to such a situation.

While such a development is not certain it is certainly possible. We can only hope that in the intervening 10 years we will have learned more about energy conservation, enhanced oil recovery techniques, and the utilization of coal without environmental degradation, will have constructed a first generation of shale oil and coal gasification plants and will have made a beginning in the commercial development of solar energy and other exotic forms of energy. Unless we have, all the fears about oil import dependency that will probably prove unfounded in the next 9 to 10 years may become only too real in the following decade.