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**THE WORLD OIL OUTLOOK**

Statement by

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President

before the

United States Senate

Committee on

Energy and Natural Resources

March 11, 1987

Mr. Chairman

Thank you for inviting me to testify at your Committee's hearings on the World Oil Outlook.

In your letter you raised a number of questions on which the Committee would like to have comments. I would like to address myself to several of these in the following paragraphs.

1. What is the Outlook for Foreign Oil Supplies?

In answering this question it might be useful to break foreign supplies into 3 groups: OPEC, non-OPEC outside the U.S. and net exports from the Centrally Planned Economies (CPE's). As we know of course OPEC crude production peaked in 1979 at 30.9 million B/D, then declined steadily to 16.2 million B/D in 1985. During the same period foreign non-OPEC oil output rose by over 6 million B/D while net exports from the Soviet Bloc and China nearly doubled, to more than 2 million B/D. In 1986 OPEC production increased substantially, by nearly 2 million B/D, while foreign non-OPEC production remained almost flat due to commercial and governmental reactions to the price collapse. This year OPEC production should be well below last year's 18.1 million B/D but well above the 1985 volume. Foreign non-OPEC production will once again show a significant increase, partly because of a reversal of last year's commercially induced reduction in exports and partly because of rising new production. Net CPE exports are likely to remain flat, as they did in 1986.

To determine foreign supplies in the foreseeable future, say, to the mid-1990's, we must start with a price assumption.

Let us assume the current price level will be approximately maintained this year and then rise about in line with inflation to the mid-1990's. While this may be viewed as a realistic scenario, if the current OPEC price system approximately holds it is probably on the low-side.

Under this scenario we see non-OPEC production outside the U.S., which amounted to nearly 16 million B/D in 1986, rising by 1.5-2.0 million B/D over the next few years but starting to decline in the first half of the 1990's. The largest single factor in the decline will be the drop in North Sea production. Net Soviet and Chinese oil exports will decline from 1988-1989 on, and by 1995 may well be less than half of last year's nearly 2 million B/D. Thus, OPEC exports from about 1990 on must (1) offset the decline in foreign non-OPEC supplies as well as U.S. supplies (which will be discussed below) and net CPE exports, and (2) provide for the entire growth in world oil demand.

Altogether, this is likely to be a big volume from the early 1990's on, particularly since under our assumed price scenario world demand can be expected to exhibit an annual growth rate of perhaps one million B/D during the first half of the 1990's, following a lower but still significant rate during the remainder of the 1980's. However, physically or volumetrically, OPEC should not have the slightest difficulty in meeting the required demand over the next 10 years at least. I don't want to go into all the calculations of OPEC reserve-to-production ratios and historical and current excess capacity in my brief testimony. But we know that OPEC's existing excess capacity amounts to at

least 10 million B/D and will be substantially increased within a year following the end of the Iran-Iraq war. There is a vast potential to increase producing capacity further, particularly in the Middle East, by low-cost drilling activities. Thus, the required increase in OPEC output between 1987 and 1997 could be met under our price scenario without straining OPEC's productive facilities. The question therefore is not whether these volumes can be supplied at those prices by OPEC but whether they will be supplied, particularly during the end phase of this period.

2. How Important will Middle East Oil be to the U.S. and its Allies?

There is a widely held assumption that U.S. and European reliance on Middle East oil will grow substantially in the foreseeable future. We think this is a correct assumption, given the well-known concentration of oil reserves in that part of the world. Under our price scenario, or even a somewhat higher one, most OPEC producers outside the Middle East will have rapidly shrinking spare capacity from the early 1990's on. Venezuela is a probable exception. Thus the growth in OPEC exports during the 1990's must come primarily from the Middle East. Last year the Middle East accounted for 64% of total OPEC crude production, compared to a 60% average for the period 1984-85. By 1995 it is likely to be more than two-thirds. By then most of the world's excess producing capacity will be concentrated in the four major Middle East producing countries, which will inevitably become the world's swing producers, collectively or individually. In 1985 Saudi Arabia rejected this role in a declining market because of the magnitude and duration of the decline. However,

being the swing producer in a rising market is obviously a very different and far more attractive proposition.

In determining their price/volume policy in the 1990's Saudi Arabia and the other Middle East producers can be expected to consider also the interests of those OPEC members who by then can no longer raise their revenues through higher output but only through higher prices. Of course, given their gigantic untapped reserves, the Middle East countries whose current proved reserves are equal to nearly 100 years of production, compared to 36 years for all other OPEC members, should not want to see prices rise to the point of depressing world consumption once again and stimulating high cost oil and other energy production. Thus, they can be expected to resist maximizing short term price gains obtained at the risk of medium to long term market losses. How successful they will be in this depends to a significant extent on political and strategic factors that have little to do with the economics of oil. In other words, the very low cost and superabundance of Middle East oil may not be the principal future determinants in setting its price, just as they were not its historical determinants. Rather, the price will be determined by the region's position as the world's marginal supplier.

3. What are the Prospects for Continuing Decline in Domestic Oil Production over the Short Term and over the Long Term?

The continuing decline in U.S. oil production is virtually inevitable under any realistic price scenario. But the future rate of the decline is very much a function of world oil prices and U.S. government policy. Last year U.S. crude output dropped

by over 700,000 B/D between the 1st and the 4th quarter. All of the decline occurred in the lower-48 states whose output dropped by 10%. The decline was primarily a result of the price collapse. However, it is good to remember that a secular decline starting in the late 1980's had been widely expected and predicted even if prices had moved up from the 1985 level instead of down. For instance, the Department of Energy in its 1985 High Price Case Forecast projected a decline in U.S. crude production from 9.0 million B/D in 1985 to 8.4 million B/D in 1990 and 7.4 million B/D in 1995, assuming a price increase in real dollars from \$27 in 1986 to \$37 in 1995. The difference between the expected and actual decline is illustrated by the fact that the DOE's projection for 1990 was reached in the 4th quarter of 1986. (However, a significant part of this decline may reflect postponed drilling rather than a permanent loss of reserves). The coming decline in Alaskan North Slope production is probably still in line with the DOE's earlier projection. In the lower-48, however, the price collapse has increased the size of the decline probably by several hundred thousand B/D.

The lower prices will also cause an increase in demand. The DOE's 1985 Base Case Forecast shows demand rising from 15.7 million B/D in 1985 to 16.1 million B/D in 1990 and 16.5 million B/D in 1995. Under the much lower actual prices the DOE's 1990 demand level was reached in 1986 and under currently projected prices, the 1995 level could well be reached by 1990.

Thus under the new price scenario U.S. import dependency will now grow substantially faster than had been expected prior to 1986, both because of a more rapid decline in production and a

more rapid increase in consumption. In 1985 net imports were equal to 27% of total U.S. demand, the lowest level since 1972. Last year the ratio rose to 33%, by 1990 it is likely to be about 40% and by the mid-1990's it could well exceed the historic peak of 47% attained in 1977.

4. What if Anything should the U.S. do about our Growing Dependence on Foreign Oil?

Serious arguments and counter arguments can be, and are, made for a policy of doing nothing as well as for one of substantial government intervention.

One argument for the do-nothing case assumes that the world oil price reached bottom in 1986 and is now on a recovery path based on OPEC's new price/volume constraints which will be adhered to closely enough to raise prices above the \$20 level during the course of 1988. This would provide approximately the same incentive to domestic producers as did the \$26 average, lower-48, wellhead price of 1985, in view of the substantial reduction in drilling and leasing costs since then. The argument assumes additional price increases in the post-1988 period at least in line with inflation. Hence, under this scenario, OPEC would come to the rescue of the domestic oil industry. Consequently no governmental action would be required.

This is an optimistic but not unrealistic scenario. In fact, many oil companies assume price increases on that order of

given OPEC's past record of inability to maintain effective intra-organizational discipline and the group's substantial actual and potential surplus capacity which will overhang the market for a good many years. Even if OPEC succeeds in forestalling another price collapse, the aforementioned risk factors are likely to maintain a high degree of price uncertainty (which is very different from price volatility) in the minds of oil producers for sometime. They may therefore base their investment decisions on a flat or downward price trend even if an upward trend is discernible.

Another argument for doing nothing is that, except for the U.K., Canada and Australia, most major industrial and industrializing countries have already a far higher degree of dependency on imported oil than the U.S. is likely to have even by the mid-1990's. Yet, these countries pay no more for their oil than we do and have as ready access to it. The only time they experienced shortages was during the disruptions of 1973 and 1979 when we did, too. Thus, our international competitiveness would not be hurt if our oil import dependency increased, while an adequate Strategic Petroleum Reserve could probably protect us from the consequences of limited foreign supply disruptions.

Again, this argument for doing nothing must be taken seriously but so must the objections to it. These are of a geopolitical and economic nature. Geopolitically, since the U.S. is one of the world's two super powers, it is argued that increased foreign dependency on such an essential commodity as oil must be viewed in the context of the current super power struggle, keeping in mind that the other super power is a net



exporter of all fossil fuels. Furthermore, since the incremental foreign supplies would have to come, directly or indirectly, from the Middle East, our political mobility in that complex and unstable region could undoubtedly become constrained if our oil requirements from it grew rapidly to the point of becoming irreplaceable.

The significantly faster increase in oil imports under the lower price level does of course have a positive impact on the economy by keeping energy costs lower. But there are also substantial negative effects such as the impact of the higher imports on the balance of trade and, even more importantly, on U.S. oil and gas production. The question has been asked whether an essential, basic domestic industry, such as oil and gas production, should be allowed to decline steadily, possibly irrevocably, not because its resources have been depleted but because they can be supplied below domestic replacement cost from abroad. It is certainly a legitimate question. Another matter to consider is the fact that by importing perhaps 2-3 million B/D more by the mid-1990's than we would under a higher price or other kind of new production incentive, we may put considerable additional upward pressure on world prices by then, possibly more than offsetting the import price advantage of the earlier years.

5. If it is Decided to Take Action, What can be Done?

There are two types of action the government can take to help domestic oil producers directly. One is to raise prices, the other is to reduce taxes. The first, which would probably be imposed through an import fee, would have an immediate positive effect on domestic producers' cash flow, but a negative effect on the economy at large by raising energy costs domestically and weakening our international competitive position. It is also likely to trigger retaliatory action on the part of some oil exporters, including such non-OPEC countries as the U.K. and Canada. An import fee would probably stimulate production from existing fields in the short run. However, it is less certain to stimulate additional exploration, partly because of the political uncertainty of its duration and partly because producers are free to invest the higher cash flow obtained from the import fee outside the oil and gas producing industry. Some would undoubtedly do so.

Lowering the producing industry's tax burden would probably be a slower stimulant than a price increase but would of course not raise energy costs. Initially, any such tax measure, if it is effective, would tend to reduce fiscal revenues. But over time it may well cause them to rise as a result of the additional drilling activity, followed by additional production. Perhaps a higher percentage depletion deduction or some other drilling tax incentive given to all producers of any new well may be an appropriate instrument to concentrate this stimulation where it would be most effective.

I have tried to point up some of the arguments and counter arguments for taking or not taking action to stimulate domestic oil production. The uncertainty confounding the oil and gas industry will inevitably lead to further shrinkage of the drilling and producing side of the business. It is clear that this is a problem of major proportions for the producing regions of the country. Whether it is also a problem for the entire nation and the national security is less clear. The U.S. government can protect against over- or under-reaction by looking at its role in three steps.

The government's role, in the first instance, should be to protect against the impact of short-term foreign disruption, a very different problem from long-term dependency on foreign oil. A strong SPR, aggressively developed to its programmed maximum level of 750 million bbls, is the first line of defense. It provides a mechanism to augment supply and dampen price increases in the event of an emergency. If no other funds are available, the cost of building up this reserve could be paid out of a fractional increase in motor fuel taxes.

The government's second role is to stay out of the industry's way. Thus, removal of impediments to exploration and production should receive first priority, and repeal of the outmoded "Windfall Profits" Tax should head the list. It would be ironic if the economic incentive of a price increase to a level above \$20 would immediately be partly offset by a tax originally imposed on the assumption that oil prices would never decline.

The government's last decision should be whether to intervene, and even here, it should proceed cautiously. Small targeted measures will provide the biggest benefit at the least cost. These might include the production tax incentives such as I have mentioned. Somewhere on the list, but definitely not near the top, should be consideration of the broad, blunt market interventions such as import fees.