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Mr. Chairman, I am pleased to appear before this Subcommittee to discuss the President's proposal for phased decontrol of domestic crude oil prices, coupled with a windfall profits tax. I will first present a summary of the major energy and economic effects of the President's proposals and then address the following four issues of special concern to this Subcommittee:

- The pros and cons of imposing windfall profits taxes on the increased oil revenues resulting from decontrol.
- The possibility of continuing the tax on upper-tier oil after 1981 and how this would affect both producer and federal tax revenues.
- The nature of the incentives that are included in the President's proposal for accelerated oil exploration and development.
- The pros and cons of creating an Energy Security Trust Fund.

MAJOR ENERGY AND ECONOMIC EFFECTS

Over the next several years, the President's proposals would provide several benefits, but they would also impose a number of costs. On the benefit side, higher crude oil prices would create economic incentives for energy consumers to reduce oil demands through the substitution of alternative fuels and outright conservation and for producers to increase oil production from both older wells and new exploration. Although the oil price increases from decontrol would encourage investments in solar energy

and conservation, they would probably not be sufficient to make unconventional fuels, such as liquefied coal or shale oil, economic. Combined, these supply and demand effects would provide some relief from oil imports.

On the cost side, price increases for domestic oil, coming as they do on the heels of the recent OPEC price hikes, would further accelerate inflation and might slow economic activity and increase unemployment. Moreover, these price increases would place new burdens on low-income households and transfer windfall income gains from consumers to producers through higher prices for oil that could be produced at the current, lower regulated prices. The President proposes to capture part of this windfall for public purposes through a windfall profits tax. He also proposes rebating some of the tax revenues to low-income households to reduce the burden of the oil price increases.

To analyze the President's proposals, we have compared them with an indefinite continuation of the controls now in place. Since the legislation that mandates price controls on domestic oil expires October 1, 1981, oil prices would increase to world levels on that date if additional legislation is not passed. Consequently, most of the demand reductions, supply responses, and inflationary effects that are attributed to the President's plan would take place anyway when prices are decontrolled in 1981. Therefore, it appears that the relevant baseline for analysis is one of continued price

controls. Relative to an immediate decontrol in 1981, the President's program has the advantages of distributing the inflationary impact over several years and providing more short-run production. Although the more complete specifications of the President's program may affect our conclusions, our current analysis does not differ greatly from the Administration's. The preliminary results can be summarized as follows:

- The President's proposal for the phased decontrol of oil prices would reduce demand by about 100,000 barrels per day by 1981 and by 250,000 to 350,000 barrels per day by 1985. It is important to stress, however, that the saving would be much higher after 1985 because energy is primarily used in association with capital equipment that takes, on average, 10 to 15 years to replace.

- The phased decontrol proposed by the President would provide incentives to producers to increase production in the near term. We estimate this would result in increased domestic production of approximately 200,000 barrels per day by 1981 and 400,000 to 500,000 barrels per day by 1985. A significant percentage of this oil, however, represents increased production that would have become available at a later date as prices increased; thus, decontrol would only change the timing of that production. This is particularly true for 1981 when most of the response is from old wells. The combined effect of this supply response and the demand reduction cited above would be to reduce imports by 650,000 to 850,000 barrels per day by 1985.

- Compared with the wellhead price increases allowed under current law, the President's proposal for phased decontrol would result in a transfer from consumers to oil producers of $0.6 billion in 1979, $5.1 billion in 1980, and $11.3 billion in 1981, for a total of $17.6 billion by the end of 1981. (All numbers are in current dollars and represent total revenue increases before either windfall or corporate profits taxes.)

- If the President's proposals to tax these windfall gains are enacted by the Congress, the transfer to the oil companies would be reduced (on an accrual basis) by $10.0 billion between now and the

end of 1981. The federal government would tax back approximately \$4.0 billion in windfall profits tax and an additional \$6.0 billion in normal corporate profits tax during that period.

- The President's plan has been designed to delay somewhat the adverse inflationary effects of decontrol. Our initial estimates indicate that the inflation rate would be higher by 0.1 percentage point in 1979, by 0.2 percentage point in 1980, and by 0.3 percentage point in 1981. In total, the President's proposals for phased decontrol of oil would increase the level of prices by about 0.6 percent by the end of 1981. This represents an increase of approximately 5 cents per gallon on petroleum product prices by the end of 1981. In subsequent years, feedback effects would continue to increase the price level so that by 1983 prices would be approximately three-fourths of a percent higher under decontrol. All these effects would be additional to both the price increases resulting from the March 26, 1979, OPEC pricing decisions and the price increases allowed under the Energy Policy and Conservation Act (EPCA).

WHAT CONSTITUTES A WINDFALL?

Underlying the debate on the President's proposed windfall profits tax--and, in fact, underlying our present price control system as well--is the idea that U.S. oil producers are entitled to a reasonable price for their product, but that they are not necessarily entitled to receive the full proceeds resulting from the actions of a foreign oil cartel. In 1977, President Carter argued that:

> In 1973-1974, the oil producing countries raised the world oil price fourfold. Deregulation of oil and gas prices would make U.S. producers the beneficiary of those arbitrary price rises and would yield windfall profits from the increased value of oil and gas in existing fields. The producers have no

equitable claim to that enhanced value because it is unrelated to their activities or economic contributions.

Oil industry spokesmen point out, however, that such windfall profits are not ordinarily taxed at higher than normal rates. After all, the government does not impose especially high taxes on speculative gains made in the stock market, or on profits derived from the sale of a home. Why should oil investments be treated any differently? Further, industry spokesmen would argue that the increased revenues resulting from oil decontrol represent a return on risky investment that should be returned to the investor. Specifically, according to this view, some investors might have expected oil prices to be decontrolled when they made their drilling and other investments.

Those in favor of windfall profits taxes to capture the increased revenues for the public sector view the situation differently. For oil that would not be produced unless the world price was offered (truly new oil), one can justify the higher decontrolled price. For oil that is already being produced at lower prices, it is more difficult to justify returning the full additional revenues to the private sector. This is true, in part, because most of the investments to produce what is now labelled lower- and upper-tier oil were made with the expectation of the lower prices that prevailed in the past. When drilling investments were made in the 1950s and 1960s, few producers expected that oil would one day receive a $13 price per barrel.

Similarly, not many who made drilling investments in 1973 foresaw that prices of up to $20 would occur so soon. In this sense, higher prices do constitute a "windfall."

The reason for higher oil prices is also important. To some extent, oil prices are rising because of a non-competitive, international oil market dominated by a producers' cartel (OPEC). Under U.S. law, such a cartel would be illegal. This monopoly-like power results in prices that are probably somewhat higher than a competitive market would allow. If U.S. producers were allowed to collect this monopoly premium, they would profit inordinately from the cartel's actions.

In summary, the additional producers' revenues should not be taxed at any higher rate if they are perceived as a return for investment and risk. On the other hand, if prices have been increased substantially and unexpectedly above the market price by a non-competitive, international cartel, then an argument can be made for a windfall profits tax to return at least part of these revenues to the public.

THE TAX ON UPPER-TIER OIL

One of the most critical, and apparently unresolved, issues in the Administration's tax proposals concerns the status of the windfall profits tax

after October 1, 1981. If the tax ended on that date, then all the subsequent revenues flowing from the decontrol of upper-tier oil (which by that time would include all former lower-tier oil) would accrue to the oil industry. In 1982, for example, these revenues would amount to about $7 billion in 1979 dollars. From October 1981 to 1990, they would total approximately $58 billion in 1979 dollars. If these revenues were subject only to the normal federal profits taxes, at an assumed 40 percent marginal rate, $23 billion would flow to the government in increased revenues and the remaining $35 billion would remain with the companies. If the windfall profits tax were still in effect, an additional $1.32 per barrel, or about $17.5 billion, would be paid to the Treasury over the period 1981 to 1990, leaving the companies with $17.5 billion as well. (All estimates are in 1979 dollars.) Consequently, the additional revenues from decontrol--both for the producers and, possibly, the federal government--are far more significant after 1981 than they are during the transition period of 1979 to 1981.

Whether or not an excess profits tax should be maintained on upper-tier oil after October 1, 1981 depends on potential supply response, administrative ease, and equity considerations. It is doubtful that any significant additional supply would be stimulated by ending the upper-tier tax. Because the small incremental revenue change would come on top of a price that is already close to world levels, and because the upper-tier wells are generally new and thus not in need of large new investments, the

additional \$1.32 per barrel in after tax profits would be unlikely to have more than a negligible effect on production. Most of the increased production under the President's proposals would come from the decontrol of old and so-called "marginal" wells, and from the increased incentives offered for tertiary recovery and truly new production. Continuation of the taxes would, however, maintain some of the complex administration of the current oil price control system, which inevitably produces some inequities and inefficiences. With respect to the equity issue, it depends on whether or not these additional revenues are truly a windfall, as previously discussed.

INCENTIVES FOR EXPLORATION AND DEVELOPMENT

Are the incentives proposed by the President, including the phased decontrol of oil prices and the windfall profits tax, adequate to promote large amounts of oil exploration and development over the next few years? Most economists view this question in terms of the prices allowed for new oil production: If the price of oil is high enough, rational investors will undertake the investment required to produce it. All the investment funds need not come from oil companies' internal cash flow, they argue, for the high price would be enough to attract the necessary capital, through borrowing. Viewed in this context, the incentives proposed by the President to encourage new oil exploration and development are most certainly

adequate. For truly new oil, the producers would be allowed the world price, currently over $16.00 per barrel. For marginal wells, the President would more than double the allowed price, from $6.00 to about $13.00 per barrel over the next 6 months. For tertiary recovery, the marginal revenue to the producers would actually exceed the world price, since producers undertaking tertiary projects would also be allowed more rapid decontrol for already flowing barrels. It appears, therefore, that in terms of price incentives, the President's proposals would be adequate to encourage a significant amount of new investment.

Some producers, along with segments of the banking community, have argued that, because oil exploration and development is relatively risky investment, it is difficult to obtain external financing and internally generated funds are a necessity. Therefore, they reason, without the additional cash flow, the required investment for exploration and development will not occur. This view, however, is inconsistent with most conventional economics. Given the large price incentives in the President's program, all of the domestic oil that could be produced at a price of $16.00 per barrel should be produced. To argue that increased cash flow would result in even more oil production, one must argue that this new production would not occur at a $16.00 price. It is extremely doubtful that increased cash flow would be used to subsidize the oil production that is unprofitable at the world price.

Recent studies, moreover, tend to contradict the view that cash flow determines the level of investment in petroleum exploration. One study, for example, which examined both major oil companies and independents, found only a weak relationship between internal cash flow and investment in exploration and development. Also, this study found evidence of considerable borrowing by both majors oil producers and independents for exploration and development. It is instructive, however, to consider the potential to expand oil exploration and development in the coming years.

Although there has been a slight decline in drilling activity in the past three to four months, 1978 was a good year for oil drilling in the U.S., with more drilling than any other year in the past two decades. Although complete data are not yet available, total expenditures for exploration and development may well have exceeded $19 billion in 1978, compared to $16.3 billion in 1977. Given the new price incentives proposed by the President, how much more could the industry spend over the next several years? Industry sources indicate that there is about 15 percent excess capacity in the drilling industry and that additional rigs could be constructed in the coming years to meet new demands. On the basis of industry-supplied data, which includes rapid construction of new rigs and equipment in the next few years, we estimate that drilling rates might be expanded by a maximum of 25 to 30 percent by 1981, compared to last year's levels. The key constraint to even more rapid expansion is the limited number of available drilling rigs.

In dollar terms, after allowing for some inflation in costs, CBO estimates that total expenditures for oil exploration and development might rise to as much as $25 to $27 billion by 1981.

How then does the increase in cash flow generated by the President's pricing and taxing proposals compare to the funds that the industry could productively use for drilling in the next few years? Projections of this sort are necessarily speculative because of increases in drilling costs and other factors, but based on our analysis, the estimated $7.6 billion in after tax cash flow provided in the President's plan over the 1979-1981 period would finance at least two-thirds of the maximum additional explorations and development that could take place between now and 1981. In light of the evidence of widespread use of external financing in the oil industry, it would appear that, even on the basis of a cash-flow analysis, the industry would have no difficulty financing rapid growth in exploration and development. Therefore, it seems reasonable to conclude that exploration and development activity would not be further stimulated by any reductions in the windfall taxes. Alternatively, because of the high price incentives proposed for new oil explorations and development, it is probably true that the excess profits tax could even be increased somewhat without any significant reduction in exploration activity. Additional revenues that were not used in exploration activity would most likely be invested in both other energy resources and nonenergy related industries.

THE PROS AND CONS OF AN ENERGY TRUST FUND

The President has also proposed that the Congress establish an Energy Security Trust Fund to redistribute the tax revenues to low-income households to soften the burden of higher oil prices, and to mass transit and energy research and development to foster the transition to a more energy-efficient economy.

Although such a trust fund has the advantage of providing a mechanism to assist low-income households in offsetting higher energy prices, it has some disadvantages from budgetary and policy coordination standpoints. First, trust funds, with their long-term earmaking of funds, limit budgetary control since they are only marginally affected by budget resolutions and the appropriations process. Second, since both energy investments and mass transit currently have relatively large federal programs, additional expenditures from a trust fund would create some coordination problems for the Congress in their authorization and appropriation processes and for the executive agencies in the administration of these programs.

Finally, if OPEC prices did not increase in real terms, the revenue flow into this fund would decrease over time and would, in fact, terminate when old and new oil was exhausted. Such a phaseout of the funding source

might cause problems in managing these programs, particularly those for energy investments which are long-term capital projects.

In summary, oil price decontrol, coupled with a windfall profits tax, would help to reduce the demand and increase the supply of oil which should, in turn, reduce oil imports by about 6 to 8 percent by 1985. However, the resultant price increases would exacerbate our inflation problem, pose special hardships on low-income households, and create equity problems regarding who should receive the additional revenues from decontrol. Depending upon how these issues are resolved, particularly the equity consideration of whether or not the tax on upper-tier oil is permanent, oil decontrol could have a positive effect on long-term energy problems. Regarding the incentives in the President's program for accelerated oil exploration and development, it appears that the decontrol of new oil would provide large incentives, and that oil companies would not need significant additional revenues to finance their investments. Finally, the Energy Security Trust Fund has an advantage in providing a mechanism to offset some of the increased energy costs to low-income consumers but also has certain disadvantages from the standpoints of budgetary control and policy coordination.

Mr. Chairman, I would be happy to respond to any questions from your subcommittee.