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THE PETROLEUM OUTLOOK FOR 1981

Statement before the

Committee on Energy and Natural Resources
United States Senate
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by

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The question to be addressed at this hearing is whether world oil supplies will be adequate to meet expected demand in 1981. The reason for asking the question is of course the Iranian-Iraqi war which has drastically curtailed the export capability of these two major oil exporters. Without that war, or some other large-scale involuntary oil interruption, commercially available supplies would clearly have been in excess of demand throughout 1981.

The impact of the war on the world oil market has been relatively limited up to now. Four months after its start there is still no discernible shortage or even tightness of any product in any major market. Nor are there indications of an impending shortage in the very near future anywhere in the world.

What impact a continuation of the war would have on world oil supplies beyond the first quarter of 1981 is difficult to assess because of the inherent unpredictability of military events. However, one can estimate the volume of oil exports required from the two belligerents and speculate on the probability of obtaining it under various assumptions. But before addressing myself to this question I would like to discuss briefly the reason that the current Middle East oil interruption has had so much less impact on the world market so far than the one in 1979 which was of roughly similar magnitude and degree of uncertainty.

Probably the principal reason is the difference in demand and inventory movements between then and now. In the first half of 1979, when the Iranian oil interruption occurred, oil demand in the industrial countries rose by nearly 2%. This was reversed in the second half of the year. But from mid-1979 to early 1980 a large scale countercyclical inventory accumulation put continued strong upward pressure on world oil supplies and, hence, on prices, even though Iran had resumed oil exports on a substantial scale.

WORLD INVENTORY CHANGES DURING COMPARABLE 9-MONTH PERIODS, 1974-80

(End of Second Quarter to End of First Quarter of Following Year)

	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80
MM Bbls	(100)	(200)	(100)	(200)	(183)	529
M B/D	(365)	(727)	(365)	(730)	(668)	1,924

Note: Parentheses indicate inventory decline

Source: "International Energy Indicators," DOE

In 1980 oil demand, which had started to decline before the outbreak of the Iranian-Iraqi war, has apparently continued to decline since then. At the same time, the exceptionally high level of inventories at the outbreak of the war, both by historical standards and relative to current demand, has permitted a larger than normal stock reduction in the fourth quarter of 1980. Yet, at year-end world inventories were still well above "normal."

In the U.S., oil inventories dropped by 42 million barrels, or nearly 4%, in the fourth quarter but at year-end were still about

2.5% above a year ago when they were already well above the average of recent previous years.

U.S. STOCKS OF CRUDE OIL AND MAJOR PETROLEUM PRODUCTS AT YEAR END*
(million Bbls)

1978	1,010.7
1979	1,073.3
1980	1,102.1

*Crude oil, unfinished oil, gasoline, jet fuel, kerosine, middle distillates, residual fuel oil. Excludes the Strategic Petroleum Reserve.

Source: American Petroleum Institute

Since U.S. domestic demand in December 1980 was about 2.5% below a year ago, U.S. petroleum stocks relative to year-end demand were really higher than is indicated by the actual year-to-year stock change. For all of 1980 the drop in U.S. oil demand amounted to nearly 8%,which was much more than had been expected by most government and industry forecasters at the beginning of the year. In part, last year's inventory increase was a function of this unexpectedly sharp drop in demand.

Year-end 1980 inventory and consumption data for the rest of the world are not yet available. At the end of the third quarter foreign oil inventories were substantially higher than in any recent previous year.

END 3RD QUARTER OIL STOCKS OUTSIDE U.S.
(Million Bbls)

	1976-78 (average)	1979	1980
Japan	394	437	503
Rest of World	2,187	2,445	2,676

Source: "International Energy Indicators," DOE. Includes government controlled stocks.

There are preliminary indications that they declined in the fourth quarter, both for seasonal reasons and to offset the loss of exports from Iran and Iraq. But at year-end these inventories were probably still at a seasonal record high. This, too, reflects in part the decline in foreign oil demand in 1980 which, at almost a million B/D, was much sharper than had been forecast in the early part of the year.

On a global basis (excluding the Soviet Bloc and China) the combination of this decline in consumption and the ready availability of oil supplies in desired quantities throughout the first nine months of 1980 has brought about an inventory accumulation which was estimated to be 500-550 million barrels in excess of normal current stock requirements by the beginning of the Iranian-Iraqi war. The war appears to have reduced this excess inventory cushion. But at the start of the current year it was still quite significant--probably 350-400 million barrels. Thus, from the inventory point of view we entered 1981 in relatively good shape, notwithstanding more than 3 months of war.

This is borne out by current prices in the world spot markets for crude oil and refined products. This market, which is quite small in volume, is usually highly sensitive to impending changes in supply or demand. The spot market reacted very strongly to the potential impact of the war-induced supply interruptions last October and early November. But since then it has remained remarkably quiet. Currently, spot market prices of sweet crude oils carry no premiums above the official sales prices while those for

sour crudes have premiums of about 10 percent, except for those crudes which have official premiums superimposed on the official sales prices. Relative to some of the latter, current spot market prices are at a discount. Spot market prices of refined products are generally too low to permit profitable refining of the crude oils purchased in the spot market.

This means that in the consensus view of the companies which regularly or sporadically trade in the spot market--that includes most of the world's oil companies--there is at present no need to bid up spot prices to obtain additional supplies as a protection against an impending shortage. The spot market is by no means a perfectly functioning mechanism, as we have seen in the past. But its message at the moment is clear: world oil supply and demand are not significantly out of balance. Probably the decision of the member countries of the International Energy Agency to discourage companies from bidding up spot market prices also played a part in this development. But the primary reason is clearly the short-term market perceptions of oil buyers.

I would now like to turn to the principal issue of this hearing, namely what will be the U.S. and world supply and demand balance in 1981, particularly after the first quarter. Let us first look at the U.S. Last year's 1.4 million B/D drop in domestic oil consumption, while certainly exceptionally large, was probably not due to a special circumstance or a cyclical movement and, hence, is not likely to be reversed this year. In fact, with the economy in 1981 expected to be nearly as stagnant as last year, oil demand may

register a further decline, though much less than last year's--probably no more than 300,000 B/D. All major products, with the possible exception of kerosine jet fuel, will share in the decline.

On the U.S. supply side we expect a continuation of the recent annual decline trend of about 100,000 B/D in the lower 48 states. Alaskan production will remain unchanged. Since the decline in supplies is less than the expected fall in demand, it would reduce our import requirements somewhat below last year's. However, if the government continues to build up our Strategic Petroleum Reserve we may require total imports of about the same magnitude as last year's 6.8 million B/D.

These figures assume no inventory reduction in 1981. Yet given the current level of our national inventory we can safely draw it down by 100,000 B/D or slightly more. This would reduce our imports by a corresponding amount. I would like to point out in this connection that U.S. stocks of all products appear adequate relative to demand, including heating oil, despite the fact that the weather in the country's oil heating areas has been 20% colder than in the previous year from the beginning of the current heating season to mid-January 1981.

Abroad we expect a substantial decline in consumption in Western Europe largely because most countries there are moving, or have already moved, into a cyclical economic recession. Other industial countries will not show much change in oil consumption from last year. Only the developing nations, particularly OPEC, will show a significant increase over 1980. Our estimated world oil demand for 1980 and 1981 is shown in the table on the following page.

NON-COMMUNIST WORLD OIL DEMAND

(Million B/D)

	1979 (actual)	1980 (estimate)	1981 (forecast)
U.S.	18.5	17.1	16.8
Western Europe	14.9	14.0	13.6
Japan	5.5	5.0	5.0
OPEC	2.5	2.7	2.9
Other	10.4	10.7	11.0
	51.8	49.5	49.3

Source: 1979: BP Annual Statistical Review (except OPEC demand).

On the foreign supply side we expect an increase in non-OPEC crude production of about 1.3 million B/D, of which half a million B/D would come from Mexico and 400,000 B/D from the North Sea.

If we now combine our global oil supply and demand estimates we can see how much oil will be required from OPEC to balance the world oil market in 1981.

ESTIMATED NON-COMMUNIST WORLD OIL SUPPLIES

(Million B/D)

	1979 (actual)	1980 (est'd)	1981 (forecast)
U.S. Crude & Natural Gas Liquids	10.1	10.2	10.1
Non-OPEC Foreign Crude	9.1	9.8	11.1
Foreign Natural Gas Liquids	1.7	1.8	2.0
Processing Gains & Net Sino-Soviet Exports	1.5	1.4	1.3
Subtotal, World Supplies, excl. OPEC crude	22.4	23.2	24.5
OPEC Crude	30.5	26.8*	24.8**
Total World Supplies	52.9	50.0	49.3
World Demand	51.8	49.5	49.3
Stock Change	+1.1	+0.5	-

*Actual (preliminary)
**Required to balance supply and demand.

The OPEC requirements shown in the table assume no reductions in world inventories in 1981. If the existing excess inventory cushion is drawn down at the rate of about 700,000-800,000 B/D it would last until the end of the year and would reduce OPEC oil requirements by a corresponding amount. Thus, it may be possible in 1981 to get along with the remarkably low OPEC crude production level of 24 million B/D without the need for excessive inventory reduction.

Does this mean that we are unlikely to face a supply problem in 1981? Not necessarily. In October 1980 (the latest month for which published data exist) when Iran's and Iraq's combined production amounted to only 600,000 B/D, total OPEC crude production was no more than 23.3 million B/D, including the extraordinarily high output of 10.3 million B/D from Saudi Arabia. That country may be expected to produce at a rate of 10 million B/D through the first quarter of 1981 but is known to strongly prefer a reduction in output thereafter. Thus, to avoid a faster inventory drawdown than we have assumed, Iran's and Iraq's combined production would have to reach a rate of at least 2 million B/D--but preferably 2.5 million B/D--in the near future. With the recent resumption of exports from Iran's Kharg Island terminal on a significant scale, and the restarting of the 700,000 B/D pipeline flow from Iraq into the Turkish Mediterranean port of Dortyol, the two countries appear to be on the way towards achieving the required output rate. This would still be equal to only 40%-50% of their combined production immediately prior to the war.

But whether the volumes of exports associated with these production rates could be maintained on a sustained basis is likely to depend on the duration and course of the war. If the war should end shortly it is quite probable that the required Iranian-Iraqi production rates can be reached fairly quickly. If, on the other hand, the war should continue for some time, as seems more likely as of now, military action may well block most of the two countries' oil exports, as was done in the last quarter of 1980.

The suggestion has been made that the two countries may quietly refrain from further damaging each other's oil installations or from interfering with each other's oil exports, since both are equally highly dependent on them. However, this suggestion assumes a degree of rational thinking and action which would differ sharply from the two countries' recent behavior towards each other.

Thus, as long as the Iran-Iraqi war continues oil exports from the two countries must be considered precarious. If these exports should cease again for an extended period an eventual world oil shortage is likely to ensue.