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DRAFT REPORT ON OIL SUPPLY AND DEMAND
PROBLEMS AND PROSPECTS TO 1980
(Note by the Secretariat)

At its 24th Session, on 25th October, 1972, the Oil Committee set up an ad hoc Group (1) to prepare the preliminary assessment of oil supply and demand prospects as required by the Council in C/M(72)28(Final) Part II, Item 253, paragraph 5 of the conclusion [PE/M(72)3, Item 4].

The ad hoc assessment group met on 26th October, 1972 and on 20th and 21st March 1973, to prepare the attached draft report which is submitted to the High Level Group and the Oil Committee for consideration and approval, for submission to the Council in compliance with the mandate referred to in paragraph 1 above.

(1) Composed of Australia, France, Germany, Italy, Japan, United Kingdom, United States and the Commission of the European Communities.

DRAFT

O.E.C.D. OIL IN THE 1970s : PROBLEMS AND PROSPECTS

1. This paper has been prepared within the context of the overall study of long-term energy policies and related questions pursuant to the instructions of the Council at its 306th Meeting on the 20th and 24th October, 1972, [C/M(72)28(Final) Part II, item 253, paragraph 5 of the conclusion]. Its purpose is to analyse O.E.C.D. oil supply and demand problems of the 1970s and to suggest possible solutions.

2. The European members of O.E.C.D. became net importers of energy during the 1930s and the gap between indigenous supply and domestic demand has widened almost every year since then. Lacking their own oil and gas, and with a coal industry unable to respond, for a variety of reasons, to rising energy demand, they have had to rely on imported energy. Japan, poor in indigenous energy sources, has historically had to look abroad for supplies since it entered the oil age. North America, heavily endowed with oil and gas, remains proportionately less dependent on imports than the rest of the O.E.C.D.

3. The assessment in the new report of the Oil Committee (1) of oil production, consumption and import requirements for the O.E.C.D. during the 1970s are, in the main, acceptable, though North American imports requirements in 1980 now appear to have been under-estimated. Among the main features of the current decade will be:
    a. A sharp improvement in European indigenous supplies from North Sea oil production
    b. An increasing absolute reliance of the O.E.C.D. on imported oil, brought by increments in demand far exceeding increments in domestic production;
    c. The pressure of the United States as a competitor for oil.

(1) "Oil – The Present Situation and Future Prospects," O.E.C.D., Paris, 1973

Three of every four tons growth in oil demand during 1971-1980 by the O.E.C.D. will have to be met by imports.

4. Much have been made of the contribution of North Sea oil. In relation to the needs of individual countries, the North Sea may be important. But placed against the needs of Europe as a whole, its value becomes much diminished. The demand for oil in O.E.C.D. Europe during 1971-1980 may increase by some 500 million tons. In the absence of other indigenous sources, virtually all of the difference will have to be made up through imports which, when added to current requirements, will entail in 1980 an oil import demand of some 930 million tons. Indeed the projected import of oil by O.E.C.D. Europe in 1980 will equal that of North America and Japan combined.

5. Much has also been made of the discovery in the late 1960s of oil in the north slope of Alaska, with suggestions that the geographic centre of world oil would shift to the Arctic. This has not happened, nor is it likely to, given the geological circumstances,

the difficult operating conditions, the problems of access to markets and the actively expressed environmental concerns for the region. The availability of an outlet, in the form of a pipeline traversing the state of Alaska, has been delayed and it seems that the line will not now be completed until 1976 at the earliest. Similarly, development of the American Continental Shelf has been delayed by environmental considerations.

6. To summarise : in 1970, two of every three barrels of oil consumed in the O.E.C.D. area had to be purchased abroad. No change in this ratio is expected for the current decade.

7. O.E.C.D. Europe will be able to point to a lessening dependence upon imports, reflecting the availability of North Sea oil, but this gain will be offset by the emergence of the United States as a major competitor for available oil. Its dependence on imports is forecast to rise from about 22 per cent in 1970 to some 40 per cent in 1980. Japan is likely to remain, for all practical purposes, completely dependent on imports.

TABLE 1 million tons

Area	Demand		Imports		Imports as percentage of demand	
	1970	1980	1970	1980	1970	1980
O.E.C.D. Europe	620	1113	597	934	96,3%	84,0%
North America	763	1207	165	478	21,6%	39,6%
Japan	190	466	190	464	100,0%	99,6%
Total	1573	2786	952	1876	60,5%	65,2%

8. The emergence of the United States as a major competitor for available oil gives rise to important questions : will there be enough oil in 1980 to satisfy the needs of O.E.C.D. Europe, North America and Japan ? Can the oil producing nations generate producing capacity sufficient to cover, in 1980, the imports needs of the O.E.C.D. Member countries estimated to approach 1.9 billion tons of oil that year, i.e. double the needs of 1970 ? In short, where will this oil come from ?

9. Many countries produce oil considerably in excess of their own requirements. They include Venezuela, North Africa (Libya and Algeria), Nigeria, Indonesia, the Soviet Union, the Arab Gulf States and Iran. Of these net exporters, the Soviet Union, Qatar and Venezuela are unlikely to improve on their export capability in the years ahead. Indeed, on a net basis, it is probable that the Soviet Union will have less oil to sell to non-Communist countries in 1980 than it has today. At the same time, if Kuwait and Libya continue to pursue conservation policies, they will not be in a position to add to exportable surpluses. Indonesia and Algeria are likely to show increases in export

capability, but these will not be substantial in terms of world requirements. Iraq, the Emirates and Nigeria do not today possess proved reserves sufficient for any decisive contribution to increased production during the present decade ; although the potential of Iraq, if realized, could make that country a significant exporter. Consequently, Saudi Arabia and Iran now appear to be the countries on which we must principally rely to meet the needs of North America, Europe and Japan.

TABLE 2

Area or country	Proved reserves 1st January, 1972 (billion Barrels)	Proved reserves 1st January, 1972 (*) (billion Tons)
Middle East	367,4	50,3
Saudi Arabia	145,3	19,9
Iran	55,5	7,6
Kuwait	66,0	9,0
Iraq	36,0	4,9
Abu Dhabi	18,9	2,6
Indonesia	10,4	1,4
Nigeria	11,7	1,6
Venezuela	13,9	1,9
Soviet Union (**)	39,0	5,3
World Total	583,5	79,9

(NB Except for the Soviet Union the figures are from the Oil and Gas Journal : the World Total figure is from the new O.E.C.D. Oil Report, "Oil – The Present Situation and Future Prospects")
(*) Converted at rate of 7.3 barrels per ton.
(**) Other sources have published considerably higher figures.

10. World oil reserves have always been considered ample for the tasks in hand and the O.E.C.D. Oil Committee has yet to be in a position where, in its forward-looking studies, it has had to contemplate physical shortage of oil because of inadequate reserves. Moreover, there has been no question in any of the post-war studies of future oil needs, as to where the oil would come from. At least for the remainder of this decade, the Middle East stands as the dominant source.

11. While the new O.E.C.D. Oil Report and other important studies have investigated future energy demand, efforts to develop reasonable estimates of future energy supply have been few. Future demand for energy is usually derived by postulating a fixed relationship between energy demand and gross national product or some

appropriate economic index. There is no comparable tool which can be employed to forecast supply. Political, economic and environmental factors which weigh heavily upon energy production levels simply cannot be prejudged with any acceptable degree of accuracy.

12. Individual countries in forecasting energy supply and demand balances, use imports to fill the gap if indigenous energy supplies appear to fall short of meeting expected demand. But it is rare for a country to look beyond the indicated imports to determine whether such imports will indeed be available in the amounts required and at the time needed.

TABLE 3

COUNTRIES WHICH ACCOUNT FOR THE MAIN INCREASES IN PRODUCTION
Production in Million Barrels per day
(Million tons per year)

Country	1970		1980 (*)		Increment	
Saudi Arabia	3,8	*190*	17,0	*850*	13,2	*660*
Iran	3,8	*190*	8,0	*400*	4,2	*210*
Nigeria	1,1	*55*	4,0	*200*	2,9	*145*
Iraq	1,6	*80*	4,0	*200*	2,4	*120*
Abu Dhabi	0,7	*35*	2,5	*125*	1,8	*90*
Indonesia	0,9	*45*	2,5	*125*	1,6	*80*
Total	11,9	*595*	38,0	*1900*	26,1	*1305*

(*) These are approximations which in the event may prove to be optimistic or pessimistic.

13. These production estimates are subject to varying margins of error but, except for Saudi Arabia and Iran, even sizeable over-estimates would not involve significant amounts of oil. If there is to be any substantial deviation from the estimates given in Table 3, it will probably relate to Iraq, whose potential is generally thought to be high, possibly double the indicated 1980 levels given the proper circumstances.

14. As the import requirements of O.E.C.D. countries have been estimated at 1.9 billion tons for 1980, the preceding estimates indicate that these requirements should be covered under normal circumstances. In fact, the six countries shown in Table 3 should alone ne able to satisfy the estimated demand ; to the production of these six countries would be added the amount that will remain once the needs of the non-O.E.C.D. countries were met from the production of the other producing countries such as Kuwait, Libya, Venezuela and countries with less production. Clearly, however, fulfilment of these forecasts depends to a large extent on the policy which will be followed by the governments of producer countries. In view of the substantial

increase in production expected in Iran and Saudi Arabia, oil policy developments in these two countries take on particular importance.

15. We have not focussed on eastern Europe, including the Soviet Union, as a producer and consumer of oil. Our forecasts hitherto for this area have been generally limited to the amount of oil thought to be available for sale to the non-Communist nations of the world. There is, today, accumulating evidence that eastern Europe may, for a variety of reasons, look to the Middle East for oil. Just how much oil eastern Europe might seek is not yet clear, but the possibility presents an extra dimension to the general problem of oil sufficiency.

16. Increasing dependence upon imported energy carries with it increasing vulnerability to supply interruptions. The O.E.C.D. has had to contend in 1956 and 1967 with two such major interruptions and there have been a number of smaller interruptions. All have been accommodated without undue impact upon the consumer and upon industrial activity. The O.E.C.D. has amply demonstrated its ability to co-operate effectively in the event of an emergency and the mechanisms it has adopted to allow it to do so have served it well. While our contingency planning must always embrace consideration of the possibility of future major interruptions, we must also, against today's background of continuing negotiations and confrontations between OPEC countries on the one hand and the oil companies on the other, seek some form of co-operation which will assist us, at those times which do not actually involve disruption in normal oil movements.

17. In two previous reports on oil, the first released in 1960 and the second in 1964, the oil Committee was able to note that the rise in demand for oil had been balanced by a growth in the resources required to satisfy this demand ; that productive capacity remained ahead of demand and that oil prices had reflected keen competition. In short, the market had shifted from a sellers' to a buyers' market and had remained that way. The consumer, at least, could face the future with confidence. The new O.E.C.D. Oil Report observes however that the state of the oil market as it entered the 1970s was completely unlike that which existed at the beginning of the 1960s. A variety of circumstances – the continued closure of the Suez Canal, the reduction in Libyan supplies, the interruption of Tapline service, difficulties in tanker capacity and the gradual disappearance of excess production capacity – has combined to transform what for the better part of the decade had been a buyers' market into a sellers' market. This change brought inevitable upward pressure on oil prices and enabled the producing nations to secure for themselves greater control over the market. Higher posted prices have been sought by the host nations and have been gained, through negotiation and through unilateral action.

18. The issue of participation has now been taken up between the host nations and the oil companies. General agreement has been reached by four of the Arab Gulf States on the principles of participation ; the relations in this connection between the companies and the other producing countries remain to be defined. The essence of the agreement is that the host nations will secure for themselves a 25 per cent equity beginning in 1973, rising to 51 per cent by 1982. The 1971 agreement on posted

prices will yield tremendous oil-derived revenues for the host nations. Similarly, participation will give them title to tremendous volumes of oil. These two tools should bring economic advantage to consumer and producer alike.

19. We see few direct problems from our review of oil supply and demand during the 1970s. Supply/demand balances for 1970 and the subsequent two years were in no way indicative of the uneasy relationships between producer and consumer or of the prolonged and sometimes arduous negotiations between the host nations and the oil companies. Similarly, a simple supply/demand balance for 1980 does not yield an indication of absolute oil shortages for that year. It is, however, devoid of political and economic implications other than showing that the bulk of oil production will continue to be concentrated in the Middle East.

20. It is the implied problems in the realm of politics, economics and security of supply that are of concern. They include, not necessarily in order of importance, the following :

(i) In general, supplies of oil during the decade should be sufficient to meet expected demand, but the concentration of major increases in production in Saudi Arabia and Iran heightens concern for security of supply.

(ii) Attention should be drawn to the necessity of developing new reserves of oil which will be needed in the longer term. In order to finance the necessary exploration and development a very considerable capital investment will be required.

(iii) The emergence of the United States as a major competitor for OPEC oil has special significance for other O.E.C.D. members, as has the United States pre-occupation with environmental factors.

(iv) There are legitimate concerns for the protection of the environment and for the alleviation of pollution. The effect of these concerns on oil and energy supplies should not be underestimated.

(v) Bilateral deals of a preferential character between producer and consumer governments carry them a real danger of launching all consumers into a competitive cycle which would increase the price of imported sources of energy.

(vi) Excessive competition between buyers of oil which would lead to a bidding-up of prices should be avoided.

(vii) The problem of direct access to their own sources of crude oil for national oil companies of consuming countries is of particular concern to certain Member countries.

(viii) The earnings of the oil producing countries may amount to $50 billion or more by 1980. This would have important implications for the balance of payments structure of O.E.C.D. countries, particularly the United States. While some of the oil producers could be expected to spend most or all of their receipts on importing goods and services from the O.E.C.D. area, others have limited absorptive capacity and are likely to run very large current surpluses and hence have substantial surplus funds to invest abroad, largely in the O.E.C.D. area. Some of these funds might be invested in long-term forms, including direct investment in the international oil industry itself ; but a substantial part might also be invested in more liquid forms, and this could become a potential source of instability in the international monetary system. The most serious issue may not be a lack of physically available supplies but rather that of providing incentives to producing countries, which have no immediate need to increase their exports, to make the needed supplies available.

(ix) The first half of the decade, and perhaps more, will be devoted to negotiations between the host nations and the oil companies. The Tehran Agreement on posted prices will end in 1975 and all parties will be faced with the prospect of re-negotiation. Higher prices are inevitable but must be kept within acceptable limits.

(x) The absence of acceptable industry-government communications is of growing concern to the consumer governments.

(xi) There is growing awareness that steps must be taken to improve government-to-government co-operation.

21. The Oil Committee of the O.E.C.D. and individual Member countries will find that these problems have been expressed at various times during recent meetings and in documents issued by the Committee. But they have been addressed only obliquely and quite often the delegates have done little more than recognize their existence. It is important now to foster collective solutions to the problems. Some of the related problems and possible solutions go beyond the aegis of the Oil Committee and will undoubtedly be treated in other Committees, e.g. balance of payments questions in Working Party N°. 3 of the Economic Policy Committee, and in the study on long-term energy policies and related questions within the context of which the present assessment falls.