

ASPO – 18 Février 2019
Histoire économique et énergétique

AUTHOR : Michel LEPETIT
Président de GLOBAL WARNING
Chercheur associé au LIED
michel.lepetit@global-warning.fr

CONTRIBUTION : Selection of texts and excerpts ; transcription from typewritten texts ;
checking of tables figures

SOURCE : OECD archives
45 pages

DOCUMENT : DIE/E/PE/70.60

TITLE : SUPPLEMENTARY REPORT BY THE SPECIAL COMMITTEE FOR OIL
ON OIL SUPPLY AND DEMAND PROSPECT TO 1975

DATE : 28/04/1970

BACKGROUND : “Six day war”, Suez Canal shutdown and oil embargo : 5-10 June 1967
Mounting troubles with Libya :
on May 7th, 1970, beginning of oil production limitations
US oil production will peak in November 1970

TEXT : EXCERPTS

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
Oil Section
DIE/E/PE/70.60

CONFIDENTIAL
Paris, 28th April, 1970
Or. Engl.

SUPPLEMENTARY REPORT BY THE SPECIAL COMMITTEE FOR OIL
ON OIL SUPPLY AND DEMAND PROSPECT TO 1975
(prepared by the High Level Group)

CHAPTER I
INTRODUCTION

1. Following a review by the High Level Group the Special Committee for Oil submitted a Report on Oil Supply and Demand Prospects to 1970-1975 (CES/67.28) to the Council on 25th May 1967.

2. The Group's main conclusions were :

- a. No physical reason was seen to fear shortage of oil or any significant rise in costs for the period under review ;

(...)

4. Before the Report could be considered by the Executive Committee the outbreak of the “six-day war” of early June 1967 led to a massive interruption of oil supplies from the Middle East to Europe and the United States of America.

(...)

9. In this Report, therefore, your Committee proposes to review the consequences for oil which flowed from the political events of 1967 ; to look at the changing pattern of oil supply sources ; to discuss recent development in oil transportation methods ; and to revise its former supply and demand estimates for 1970-1975. We also attempt a forward look beyond 1975 to the end of the decade, though the margins of error in such long range forecasting are of necessity very large indeed, and only an impressionistic picture can have much validity.

CHAPTER 2 THE OIL EMERGENCY OF 1967

(...)

43. In the last two years, since the submission of the last study of demand and supply prospects, the source picture has continued to broaden both in the old producing areas and elsewhere. New producers in the East, West-Africa (especially Nigeria), South-East Asia and Australia have emerged. In addition, the prospects in Alaska and the Arctic may be of considerable significance in the world oil picture. Seen in the light of rising energy needs – for example oil consumption in OECD Europe is expected to rise by almost 50% in the period 1970 to 1975 – this broadening of the supply picture is counteracting the growth of dependence in absolute terms of OECD Member countries on certain oil-producing areas.

44. With regard to world oil reserves the picture is one of continuing ample supply. The development in Alaska may stabilize the reserve position of North America. Details of the present outlook in terms of reserves are set out in Annex II ; the key figures for the assessment of the overall outlook are that at the end of 1965, proved reserves were put at 48 billion tons, at the end of 1968 they were put at 62,9 billion tons, and the trend of the curve world-wide is at present upward.

(...)

Reserve production capacity in OECD

46. In its previous report, the Committee stressed the importance of stand-by capacity in North America as a factor in the security of the rest of the OECD’s oil supplies and of the terms of supply. In the light of more recent development, it now appears that stand-by capacity in North America is much lower than previously estimated and may, in fact, disappear by 1975.

CHAPTER 4 FUTURE SUPPLY AND DEMAND

47. In Annex I of CES/67.28 the Committee set out their estimates of the world demand and supply pattern for oil in 1970 and 1975, together with actual figures for 1965. Table 9 below represents the result of our re-assessment of the likely pattern in the light of known development since the previous report was prepared and of the trends which have developed since that time.

TABLE 9						
NORMAL OIL SUPPLY AND DEMAND IN THE NON-COMMUNIST WORLD 1968, 1970 AND 1975						
Million metric tons crude oil equivalent	1965		1970		1975	
	Demand	Supply	Demand	Supply	Demand	Supply
	United States	635	500	680	540	800
Other North America	85	80	95	90	120	120
Other Western Hemisphere	100	240	105	240	140	270
Western Hemisphere	820	820	880	870	1060	1030
OECD Europe	505	20	600	20	850	20
Other Eastern Hemisphere - West of Suez	50	195	55	285	65	475
Middle East and the Eastern Mediterranean	45	555	50	620	70	875
Japan	140	0	175	0	300	0
Other Eastern Hemisphere - East of Suez	120	40	145	60	200	105
Eastern Hemisphere	860	810	1025	985	1485	1475
Net imports from Communist Bloc		50		50		40
TOTAL NON-COMMUNIST WORLD	1680	1680	1905	1905	2545	2545

48. We have not attempted a detailed assessment of demand and supply up to 1980 but, instead, show in Table 10 below broad ranges within which total demand of OECD countries may lie. These figures are not formal estimates, but are given simply as an indication of order of magnitude.

TABLE 10	
ESTIMATED RANGE OF OIL DEMAND IN THE OECD MEMBER COUNTRIES IN 1980	
	Million Metric Tons
North America	950 - 1100
O.E.C.D. Europe	900 - 1200
Japan	370 - 510
Total	2220 - 2810

- (1) The lower figure for Japan and North America is taken from "Energy Policy - Problems and Objectives", O.E.C.D. 1966, whilst that for Europe is the residual when account is taken of current trends of other energy forms and their possible outcome within a likely total demand figure for 1980. The upper value is extrapolated from Table 9 as far as Japan and North America are concerned, whilst for Europe it represents an increase of some 7% in yearly oil requirements for the period 1975 to 1980.

49. From the detailed picture in Table 9, we note that the Western Hemisphere as a whole has changed from a net exporting area to a net importing area, and that the requirements of the

OECD area and indeed of the whole non-Communist world are increasing more rapidly than available North American capacity. We consider that the proportion of demand for total supplies from the Middle East is likely to remain substantially constant and that the drop in supplies from the Western Hemisphere will be offset by increases in those from the Eastern Hemisphere outside the Middle East. But Eastern Hemisphere supplies outside the Middle East are by no means inherently secure, as was demonstrated in the 1967 crisis ; our current examination gives no support for any relaxation in stockpiling policies of OECD Member countries.

CHAPTER 5

TRANSPORTATION OF PETROLEUM : PROSPECTS AND TRENDS

(...)

CHAPTER 6

CONCLUSIONS

71. In addition to the re-examination described earlier in this report we have also looked again at the other matters discussed in our earlier report CES/67.28. Our conclusions over the whole fields are :

(a) As before, we see no reason to fear physical shortage of oil in the period under review, nor indeed in the further period to 1980 which we have examined for the first time.

(b) On the assumption that there will be no drastic interventions of a political or economic character, we see no reason to change an earlier assessment that there is unlikely to be any major rise in overall costs in the period under review.

(c) We note that the oil supply arrangements of the OECD Member countries – and the inherent flexibility of the international oil industry – enabled and, insofar as the emergency continues, are still enabling the supply difficulties caused both by the “six day war” and the events in Nigeria to be overcome without any real difficulty.

(d) We also note, however, that the “six day war” did not result in any prolonged interruption of supplies and did not, therefore, lead to a situation within the ambit of the calculations of the effects of hypothetical emergencies on which our previous report was based. This was of course while there was considerable flexibility available in the tanker fleet at the time and no great strain was in the event thrown upon national oil stocks. It is by no means sure that this will be the case in future crises. But it has become quite clear that North American reserve capacity cannot be counted on for aid in an emergency and it is unlikely that it ever will be again available as it was in the 1956/57 and 1967 crises. We do not therefore believe the Organisation can conclude that current stock levels are adequate. We propose to continue study of this question and report again to the Council.

(e) Again we note that in the event, while the arrangements for international consultation with the oil companies worked well, no need arose for the arrangements for sharing supplies to be put to the test. Nevertheless, we have no specific proposals to make for changing these arrangements, but will continue to keep them under review.

(f) Per the future we wish to draw the Council's attention particularly to two developments which offer hope for an easing of OECD Member countries' vulnerability to interruption of oil supply from particular areas :

- (i) The increase in deep sea transportation capacity of the world tanker fleet which has taken place in the past few years, mainly due to the large building programme for VICC's, and which we feel, with the continued closure of the Suez Canal, will continue for some years. This increase enhances the world's ability to move oil from wherever it may be available to consuming centres and thus helps to remove the fear that the closure of a particular transportation route or of particular sources of supply could cause more than inconvenience. On the other hand, there are combinations of threat, especially, a closure of pipelines and an interruption of crude production west of Suez, which could cause damage to Member countries, but it is the case, for the time being at least, that a given combination today would be relatively less dangerous than it would have been a few years ago. However, we must note that if new pipelines are built to move large quantities of oil from Middle East producing sources to the Eastern Mediterranean, there will be, as was mentioned earlier, a reduction in security as fewer new tankers will be built ;
- (ii) The continuing diversification of major sources of supply of crude oil throughout the world, in the short term in Africa (particularly along the Western coast), Indonesia and the Far East and in the longer term, perhaps Australia and the North American Arctic, diminishes the importance of any one geographical area as a source of oil.

ANNEX I
STATE OF PRECAUTIONNARY PLANNING IN
THE OECD MEMBER COUNTRIES

(...)

ANNEX II
THE ADEQUACY OF WORLD OIL RESERVES

1. "Proved reserves", which presently amount to 63 billion tons, refer to oil which may be recovered from well delineated fields in current commercial and technical conditions. These estimates of "published proved" reserves have no official foundation but are accepted as useful figures. They may not always be revised as fields become more fully delineated, and are generally regarded as conservative.
2. Published proved reserves in no way represent ultimate reserves. There is little incentive for oil companies to delineate their reserves more than is necessary for programming purposes. In any case, now fields take time to develop, and there may be then further delay before the results appear in the published statistics of proved reserves.

3. The main Middle Eastern concessions, where reserves are already sufficient for many years to come, are far from fully explored. Many fields in Africa are not at present properly delineated, and reserves have probably been under-estimated. The exploration of remote areas such as Alaska, and, increasingly the development of off-shore exploration, have revealed new prospects. World-wide, much more oil is discovered annually than is taken out of the ground.
4. The amount of oil in place is considerably greater than the recoverable reserves. At the present time 25-30 per cent. of the oil in place is normally extracted, although this may vary from 10 per cent. to 60 per cent. depending upon the type of oil and the rock in which it is situated. Secondary recovery techniques (e.g., the use of water, chemical or gas injection), which are already widely used in the United States, could increase the average "recovery factor" by as much as 50 per cent. during the next decade. They could also make possible the exploitation of very heavy oils not previously considered to constitute reserves.
5. In 1968 the world's "published proved" reserves were divided as follows :

<u>Billion metric tons</u>	
Middle East	36,8
Africa	5,9
U.S.A.	5,0
Bloc	7,6
Caribbean	2,6
Other	5,0
Total :	62,9
* 1,000 million tons	

Although the major portion of the world reserves lie in the Middle East (60 per cent.) African reserves have recently shown substantial increases.

6. Ratios of "published proved" oil reserves to annual production reflect the different stage of development of each area. This ratio ranges from 10:1 in the U.S.A. to 65:1 in the Middle East. The world average being 35, present proved reserves should be at least adequate to 1980.
7. Looking further ahead, estimates of ultimate reserves are inevitably speculative. They are normally obtained by geological comparison of prospective structures or basins with areas which have been more thoroughly explored and developed. The most recent studies of the world's sedimentary basins and off-shore possibilities have indicated that total reserves may be some five times greater than the current proved reserves – i.e. 300 billion tons. This may turn out to be an underestimate. Apart from

conventional reserves, there are very large potential reserves in the form of oil shales and tarsands. Possible world oil shale reserves have been estimated to be as great as 45,000 billion tons of which about 400 billion are known resources mostly in the U.S.A. Small commercial production from the Athabasca tarsands in Canada has recently started ; the richest part of these deposits contains recoverable oil nearly equivalent to the world's proved reserves. The oil ultimately available from coal may be up to 100 times greater than current proved oil reserves.