

# COMMISSION OF THE EUROPEAN COMMUNITIES

COM(83) 304 final

Brussels, 3rd June 1983

## THE OIL REFINING INDUSTRY OF THE COMMUNITY

(Communication from the Commission to the Council)

COM(83) 304 final

Communication from the Commission to the  
Council on the Oil Refining Industry of the Community.

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I. Introduction :

1. In a Communication to the Council of October 1981 (COM (81) 534 final) the Commission drew attention to the problems of the oil refining industry and in particular to its poor profitability over the greater part of the period 1974-80.
2. The Commission identified, as a major and remediable cause of the industry's inadequate margins, the large excess of basic refining capacity which had arisen mainly as a result of the fall in oil consumption following the oil price increases of 1973/4 and 1979/80 (the trends in capacity and demand are shown in Annex 1). It suggested that the capacity required to supply the foreseen level of demand of about 500 million tons (m.t.) was of the order of 600 million tons per year (m.t/y), 25% less than that available in January 1981.
3. The difficulties of the Community's industry were compounded by similar developments elsewhere in the world, which led to over-capacity in every phase. In particular the fall in the import requirements of the USA and other traditional EEC export markets restricted the outlet for Community refiners at a time when North African exports were increasing their share of the home market. Annex 2 illustrates the change in the capacity-demand balance in the main regions of the world since 1973.
4. A further cause for concern was the need for the industry, in these depressed conditions, to undertake major investments to adapt its output to a rapidly changing pattern of product demand, characterised by a steep decline in the use of heavy fuel oils for electricity generation and by certain other major industries.
5. The Commission recommended to the Council that the solution of these problems could and should be left to the companies themselves, each adapting its EEC operations to the foreseen demand for its products, provided that neither security of supply nor freedom of competition was endangered in the process. The Commission for its part undertook to monitor progress and to report to the Council as necessary. This was last done in a Communication to the July 1982

Council (COM (82) 360 of 15.6.1982).

6. The Commission has sought to assist indirectly in the restructuring process by providing to the industry a degree of transparency not previously available and by suggesting what future capacity requirements were likely to be. In bilateral consultations which have taken place for some years at six monthly intervals, the companies have supplied data regarding existing capacity, planned investments and withdrawals, and refinery processing, which have enabled the Commission to draw up a reasonably accurate picture of the state of the industry and its future shape. The capacity forecasts made in this way have then been compared with the expected trend and composition of demand, and the results made available to the industry in aggregated form as a reference for action by individual companies.
  
  7. The Commission has just completed a new round of consultations with the industry, and with member states. The purpose of this document is to inform the Council of the present situation and prospects of the industry and to seek the Council's agreement to a number of orientations for the future.
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## II. Distillation Capacity and Needs

8. The volume of crude processed in Community refineries declined by a further 7.5% in 1982 to 422 m.t., one third below 1973, as a result of lower consumption, higher net imports of finished products, and withdrawals from stocks. This trend, and the expectations of Member States and industry for the future are summarised in the table below.

EEC - 10 : Demand on Community Refineries 1973-90 (m.t.)

	<u>1973</u>	<u>1981</u>	<u>1982</u>	<u>1990</u>		
				Ind.(1)		MS(2)
Consumption	603	475	452	425 -	455	465
Net Imports (-)	+25	-15	-24*	-70 -	-30	-30
Stock Change	+ 8	- 5	- 6	-	-	-
Refinery Intake	<u>636</u>	<u>455</u>	<u>422</u>	<u>355 -</u>	<u>425</u>	<u>435</u>
Mid-year Capacity						
- actual/firm plans	755	770	720	630		
- required at 80% <sup>(3)</sup> utilisation	800	570	525	440 -	530	540
- % Utilisation	84	59	58			

\* By difference. Recorded figure of 35 contains some feedstocks.

(1) The range of the estimates provided by ten companies in February/March 1983.

(2) Consumption is aggregate of Member State estimates of 9/82; Net imports are Commission estimate.

(3) 80% utilisation is generally regarded as satisfactory for economic operation and as giving adequate cover for demand fluctuations.

### Consumption

9. Current estimates of the demand upon Community refineries in 1990 thus range from a low of 355 m.t. to a high of 435 m.t. If 80% is taken as an acceptable level of average plant utilisation, the corresponding rounded figures for total capacity required would be 450-550 m.t./y. The Commission recommends that the Community's available capacity should be sufficient to cover the highest likely level of demand and that planning should therefore be based on a figure of 550 m.t./y for the year 1990. Moreover the Commission believes that on this occasion the companies' estimates err on the low side because :

- they were elaborated against the assumption that the oil price would remain in real terms at the level of end 1982, i.e. above \$30/bbl. Lower figures are serious possibilities in the light of events in recent months. Although the companies maintain that energy demand is price-inelastic over a considerable range, the Commission believes that on the contrary it will prove responsive to falling prices as it did to the preceding rise.
- should estimates of Community energy demand prove too low, there would be a disproportionate rise in the consumption of oil as the swing fuel. Thus a 5% increase in energy consumption in 1990 would raise oil demand by 11% in 1990 if the contribution from other fuels were unchanged.
- Community estimates of energy from nuclear, and perhaps coal are more likely to be over- than under-stated, and any shortfall will be made good at least partly by oil.

#### Imports of Petroleum Products

10. Predictions regarding the future level of net imports of finished products, the other determinant of the demand on Community refineries, also vary widely from 30 m.t. to 70 m.t. in 1990. Since 1973 the external balance has moved from a surplus of 25 m.t. to an estimated deficit of 24 m.t. in 1982, thereby reducing demand on Community refineries by 50 m.t/y or 8%. This deterioration has resulted partly from reduced exports, in line with the general contraction in international product trade (by 10% 1981 /1973), but mostly from increased imports from sources as diverse as the USA, Spain and Algeria and particularly the USSR whose shipments to the Community are three times those of the next supplier.
11. The increase in net imports of products from 15 m.t. in 1981 to an estimated 24 m.t. in 1982 was largely due to the anomalous relationship in 1982 between prices for crude oil and products. Many producers, OPEC and non-OPEC, anxious to increase sales in a weak market, offered products, manufactured in their own or third party refineries, at prices equivalent to a value for crude much below its official price. EEC refiners therefore found it profitable to run less crude and to increase purchases of products manufactured overseas.

12. It seems unlikely that the unusual price relationships of 1982 and early 1983 can become a lasting feature of the market (although they may well recur from time to time) because discounted product prices eventually undermine official crude oil prices - as they did in the first quarter of 1983. In trying to assess the future trend in product imports the Commission has therefore regarded the 1982 figure as abnormally high and based its estimates on the 1980-82 average of around 20 m.t. It must be recognised, however, that any forecast is subject to even greater uncertainty than usual and that developments will therefore have to be closely monitored.
13. Although increased shipments from other sources, and particularly the USSR, cannot be ruled out, the main factor determining the future trend in EEC imports is expected to be the increase in the mid 1980's in the export capacity of OPEC countries, especially Saudi Arabia. The Commission's estimate of OPEC export availability is shown at Annexe 3 but it must be stressed that individual estimates vary over a considerable range. The capacity forecast includes only those OPEC refineries known to be under construction or committed. It is consequently conservative, especially as regards the late 1980's because no provision can yet be made for new construction in Iran or Iraq which will undoubtedly take place eventually. The forecast of OPEC countries' domestic consumption is that made by the OPEC Secretariat to 1985 and extrapolated to 1988 giving a rate of annual average increase of 8.5%.
14. Taking capacity utilisation at 85% - a very high average figure - export availability is estimated on the above assumptions to rise by 30 m.t/y to 120 m.t/y between 1980 and 1985/6. Of this increase it seems reasonable, although arbitrary, to assume that one third will come to the EEC, roughly in line with the Community's share of OPEC crude exports. EEC net imports would consequently rise from below 20 m.t/y in 1980/81 to about 30 m.t/y in 1985/6.

### III. The Reduction of Crude Distillation Capacity

15. Since EEC capacity peaked at around 830 m.t/y in 1977 some 155 m.t/y has been retired, bringing the total installed at the end of 1982 to about 675 m.t/y. (720 mt/y at midyear). Over the period 1977-82 18 refineries were closed, 14 of them in 1981 and 82 alone, and a considerable number of units dismantled at refineries remaining in operation. Firm plans for 1983-90, including

five more complete site closures, will bring capacity down to about 630 m.t/y, 200 m.t/y below the 1977 total and 80 m.t/y above the estimate of capacity required mentioned in para 9. A considerable further effort by the industry to cut capacity by another 80 m.t/y would therefore be needed to reach the Commission's suggested figure of 550 m.t/y.

16. Capacity reductions have always been discussed in Community terms because it would have been impracticable, inefficient and inappropriate to seek similar and simultaneous cuts in all member states. In fact, however, over the period 1977-86, there are not expected to be large disparities in the proportion of capacity withdrawn in those countries where there is a substantial refining activity. As annexe 4 shows, the estimated percentage reductions apart from Greece and Ireland, lie mostly in the 20's except for Belgium and the Netherlands whose industries, heavily export-orientated, have suffered most from the fall in Community and third country demand, and where over 30% of capacity will close.
17. Companies commented, often in some detail, on the results of efforts to resettle those employed at refineries which had been or were to be closed. It was clear that, in most of the fifteen cases covered, the number of employees who would be left without a job or an early pension would be small. In the worst cases, namely the one or two old refineries with relatively large work forces and located in areas of high unemployment, the number might reach a few hundred. The number originally employed at the fifteen plants was about 7000, some 10% of the industry work force; about 1000 are likely to be left without a job or an early pension. Companies stressed the importance of planning and early action in limiting the consequences of closures for the staff. In several instances recruitment had been stopped long before closure actually took place, both at the plant concerned and at others belonging to the same group, with the result that natural wastage had greatly reduced the size of the problem of redundancy. Estimates of secondary unemployment in firms supplying goods and services to refineries are not available. The effects are obviously least where sites remain in use as terminals and where investments by other employers in the area are in progress.

18. It was stressed that even when job losses were small the closure of plants was difficult, protracted and costly. These high "exit" costs could, according to several companies, deter owners from closing plants, especially when the obligation to maintain compulsory stocks made it impossible to realise the potential working capital savings available from closure.
19. The continued supply of the areas served by refineries now closed appears to have presented few problems. In Ireland, however, the government has judged it necessary to purchase and reopen the only refinery, closed by its previous owners, because of its concern about security of supply. Certain features of the measures taken to ensure continued operation of this refinery are currently being questioned both by the Commission and in the Courts.
- Most of the other sites have remained in operation as terminals, supplied with products by the former crude oil lines, or by water, from another of the companies' refineries. In one or two cases arrangements have been made between companies to supply each other's product requirements in specific areas following refinery closures. In themselves, such arrangements are not contrary to the Treaty, provided that free competition in the market is not affected.
20. Several companies expressed the view that the surplus of distillation capacity was no longer a major cause of low profitability. They argued that, given the relationship between crude oil and product prices, there was no commercial incentive for the EEC refiner, processing OPEC crude, to use spare primary capacity unless he could upgrade the primary distillation yield. Hence the existence of spare distillation units had no effect on prices in the market. The Commission does not share this view. Although the EEC refiners may see no margin on primary distillation, OPEC producers, anxious to increase their sales of low cost crude, are plainly in a different position and in fact processed in 1982 quite large quantities in European refineries for the distillation yield. Spare topping capacity, especially in the Mediterranean, cannot therefore be disregarded and the Community should continue its efforts to bring total capacity into line with domestic demand.
21. The offer for sale of several of the refineries closed by international majors has raised the question whether in fact apparent reductions in the capacity in service will prove to be illusory because plants are resold to companies whose supply costs are lower. The Commission has in the past argued that this would probably not occur on a significant scale, because producers' integrated margins on production and refining were unlikely to exceed, and could well be less than that on crude oil sales. In 1982 however, the case for acquiring downstream



assets was transformed by the inability of certain producers to sell at official prices as much crude oil as they wished or was permitted under OPEC quota agreements. In these circumstances the only way in which producers can increase crude oil production, while keeping faith with their OPEC obligations, is to increase product sales either from their own refineries or from third party refineries under processing arrangements. Acquisition of existing assets will inevitably appear the soundest and least disruptive way to secure a long-term outlet for products at consumer rather than spot prices. To the extent, however, that the newcomers acquire refining capacity in excess of the marketing outlet purchased they will be under the same economic pressure as the former owners to close some of it.

22. As the demand for OPEC crude revives the incentive for producers, to invest downstream is likely to diminish. It is, however, too early to judge the extent to which capacity will simply change hands rather than be permanently withdrawn, and developments will have to be monitored.

#### IV. Structural and operating changes in the market

23. There have occurred in the last year or so therefore several developments of considerable importance, namely :
- an increase in purchases/imports of products and feedstocks by Community refiners and a corresponding reduction in the quantity of crude oil acquired.
  - an increase in processing of crude by producing countries in Community and third country refineries.
  - the acquisition by producers of downstream assets in the Community.
24. The first two developments resulted from the discounting of product prices relative to the official crude price; they are reversible and may prove to be short-lived. They were beneficial in forcing crude oil prices down towards the market clearing level; detrimental in so far as they caused new disparities in the acquisition costs of different importers to the disadvantage of companies locked in to crude oil contracts at official prices. Processing arrangements were profitable to EEC refiners and did not destabilise the market when the products were purchased by established refiner/marketers and distributed through their networks ; they had adverse effects on market prices, however, when the products were unloaded on to an already glutted spot market.

25. The acquisition by the Kuwait Petroleum Corporation of the refining and marketing assets of some of the US Gulf Corporation's European affiliates, and by Saudi Arabian interests of those of Standard of Indiana in Italy, are developments of more profound and lasting importance. The same is true of the formation by Petroven and Veba of a joint venture to process heavy Venezuelan crude oils.
26. All these investments by producing countries offer potential advantages to the Community. They give to the producers concerned a long-term interest in maintaining regular supplies to the Community and a first-hand knowledge of the realities of the market place. They should improve understanding and cooperation between producing and importing countries. To the extent that refinery acquisitions remove the producers' need to build refining capacity at source, they reduce the general burden of excess capacity. In cases where, as in the Petroven/Veba venture, investments in advanced and novel processes provide in the Community the capability to treat very heavy crudes, there is again to diversity of supply, and a transfer of technology to the producer.
27. It is important, of course, that the producers should supply crude oil to their refining affiliates at the same price as to third parties, so that they compete on even terms in the market place. The Commission believes that the newcomers are likely to take this consideration into account.
28. The transfer of refining assets to producing countries could, however, in some circumstances, have adverse effects upon the diversity and consequently the security of supply. For example, if a significant part of the Community industry were to come into the ownership of one or two producing countries, the effects upon the Community of any interruption of exports from those countries could be serious.

V. Conversion Capacity

29. While coping with the problem of excess primary capacity the companies have been obliged to undertake large programmes of investment to adapt the product output of refineries to the changing pattern of demand, and, in particular, to the much reduced outlet for residual fuel oil, which is expected to remain uncompetitive with other energy forms, particularly coal. Estimates of the changes to be expected in the relative demand for the various products differ considerably from one company to another but a middle of the range forecast is as follows :-

EEC - 10 Consumption of Main Product Group 73-90

	<u>1973</u>		<u>1981</u>		<u>1990</u>	
	<u>m.t.</u>	<u>%</u>	<u>m.t.</u>	<u>%</u>	<u>m.t.</u>	<u>%</u>
Gasoline	72	12.0	79	16.6	83	18.0
Gasoil/Kero	201	33.3	170	35.8	180	38.0
Fuel Oil	205	34.0	126	26.5	103	22.0
Other/own use	125	20.7	100	21.1	104	22.0
Total	<u>603</u>	<u>100.0</u>	<u>475</u>	<u>100.0</u>	<u>470</u>	<u>100.0</u>

30. While consumption of motor gasoline and gasoil/kerosine is forecast to rise slightly, fuel oil use is expected to fall by a further 20% by 1990 to a level only 50% of 1973. It would then represent 22% of the barrel as compared with 34% in 1973. "Other products", which include the petrochemical feedstock naphtha, and other non-energy products, roughly maintain their volume and increase their share.
31. Progress by the industry in expanding conversion capacity, and its current firm projects, are summarised in the table below :

EEC-10 Intake Capacity of Conversion Plant 1973-86

(Million of tonnes/year)

	<u>73</u>	<u>81</u>	<u>82</u>	<u>86</u>
Catalytic Crackers	43.0	59.0	66.5	68.7
Thermal crackers	}	{	11.2	11.8
Visbreakers			36.7	48.0
Cokers			8.5	11.0
Hydrocrackers	<u>4.0</u>	<u>6.7</u>	<u>7.0</u>	<u>12.5</u>
Total	68.0	122.1	138.0	152.0
Equivalent catcracker capacity *	60.0	100.0	110.0	125.0
% of distillation capacity	8	13	15	23
% of crude run	9	22	26	28

In order roughly to measure the growth in overall capacity to convert residue to distillates, the capacities of other types of plant of widely differing capability have been calculated in terms of the degree of conversion relative to the catalytic cracker, the most commonly used unit. So measured, conversion capacity has almost doubled since 1973 and is estimated to rise a further 14% by 1986. By 1986 it should be possible to upgrade 28% of the crude distilled in Community refineries compared with 9% in 1973.

32. The Commission estimates that, if current programmes are carried through, the capacity available will be at least adequate to meet any likely pattern of product demand in 1990, especially having regard to the expansion of conversion capacity in Spanish refineries.

\* Relative distillate yields taken as : Catcracker 1.00, Visbreaker 0.33, thermal cracker 0.65, Hydrocracker 1.50, Coker 1.50.

VI. Conclusions

33. Voluntary action by the companies reduced industry's primary capacity during 1981/82 by 100 m.t/y (13%) bringing the total at the end of 1982 to about 675 m.t/y. Additional closures firmly planned should further reduce capacity to 630 m.t/y. The burden of capacity reduction is being shared by all the larger member states and by all the major refining groups.

The approach to the problem of over-capacity adopted by the Council of October 1981 appears therefore to have been effective and should, in the Commission's view, be continued.

34. The capacity requirement suggested to the Council in 1981 was 600 m.t/y. The subsequent fall in consumption and the lower estimates for 1990 now generally accepted, suggest that the capacity requirement in that year is unlikely to exceed 550 m.t/y. A further major effort by the companies will therefore be needed to bring capacity from the present 675 m.t/y to 550 m.t/y as rapidly as possible.

35. The unemployment effects of refinery closures in 1981/2 are in most cases slight and the number without work or pension as a result of them of the order of 1000 in total. No special measures for Community assistance are therefore necessary at the present time.

36. Subject to the point mentioned in 19 above, there is no evidence that closures have posed any problems of continuity or security of supply. In one or two cases arrangements have been made between companies to supply each others requirements. As already noted, such arrangements are not in themselves contrary to the Treaty provided that free competition in the market is not affected.

37. The rising trend in net imports of finished products into the Community is within acceptable limits but developments remain uncertain.

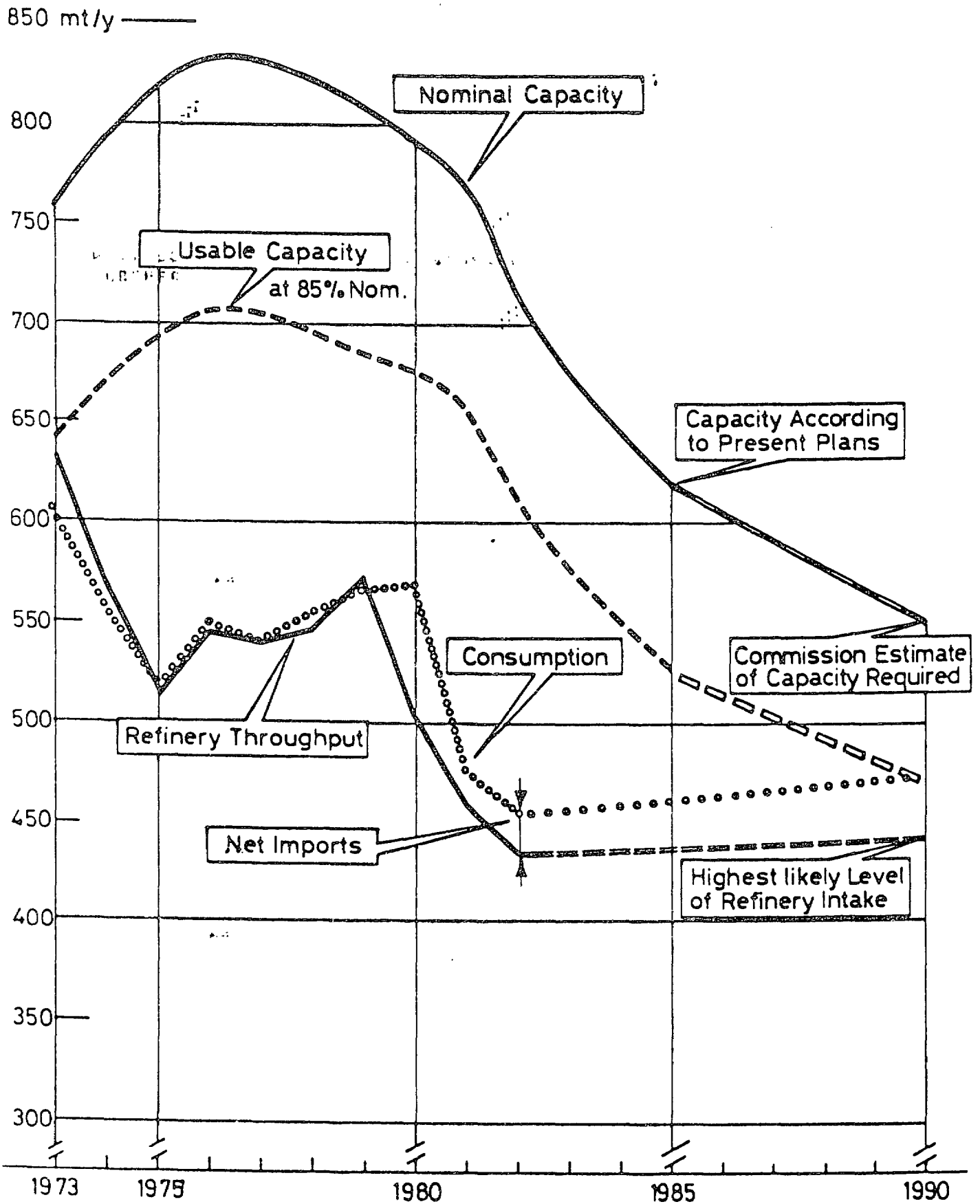
38. The acquisition of downstream assets in the Community by the state entities of producing countries, which began in 1982 and seems likely to continue in 1983, is a development of considerable importance and could have implications for established supply patterns.

39. The Commission intends to monitor the trend in net imports of petroleum products, and investments by oil exporting countries in refining and marketing assets in the Community. It will continue consultations with governments, companies, and Trades Unions and will report further to the Council as necessary.

Action requested of the Council

40. The Council is requested to agree :-
- (a) that present Community policies towards the oil refining industry, which seeks solutions to its problems through the voluntary action of the companies, monitored by the Commission, should be continued.
  - (b) that further efforts to reduce Community distillation capacity to 550 m.t/y, and to concentrate operations at fewer more complex refineries, are necessary and should be encouraged.

# Eur 10: PRIMARY DISTILLATION CAPACITY CONSUMPTION AND REFINERY THROUGHPUT AND REFINERY THROUGHPUT



UTILISATION OF DISTILLATION CAPACITY  
IN WESTERN WORLD

Million tonnes

		<u>Consumption</u>	<u>Net Exports of Refined products</u>	<u>Total Demand* on Refineries</u>	<u>Capacity mid-year</u>	<u>% Utilisation</u>
EEC	1973	603	+ 25	628	755	83
	1981	475	- 15	460	770	60
USA	1973	818	- 140	678	695	97
	1981	743	- 56	687	910	75
JAPAN	1973	269	- 35	234	230	100
	1981	224	- 23	201	282	71
REST	1973	653	+ 118	771	905	85
	1981	828	+ 54	882	1318	67
TOTAL	1973	2343	- 32	2311	2585	89
	1981	2270	- 40	2230	3280	68

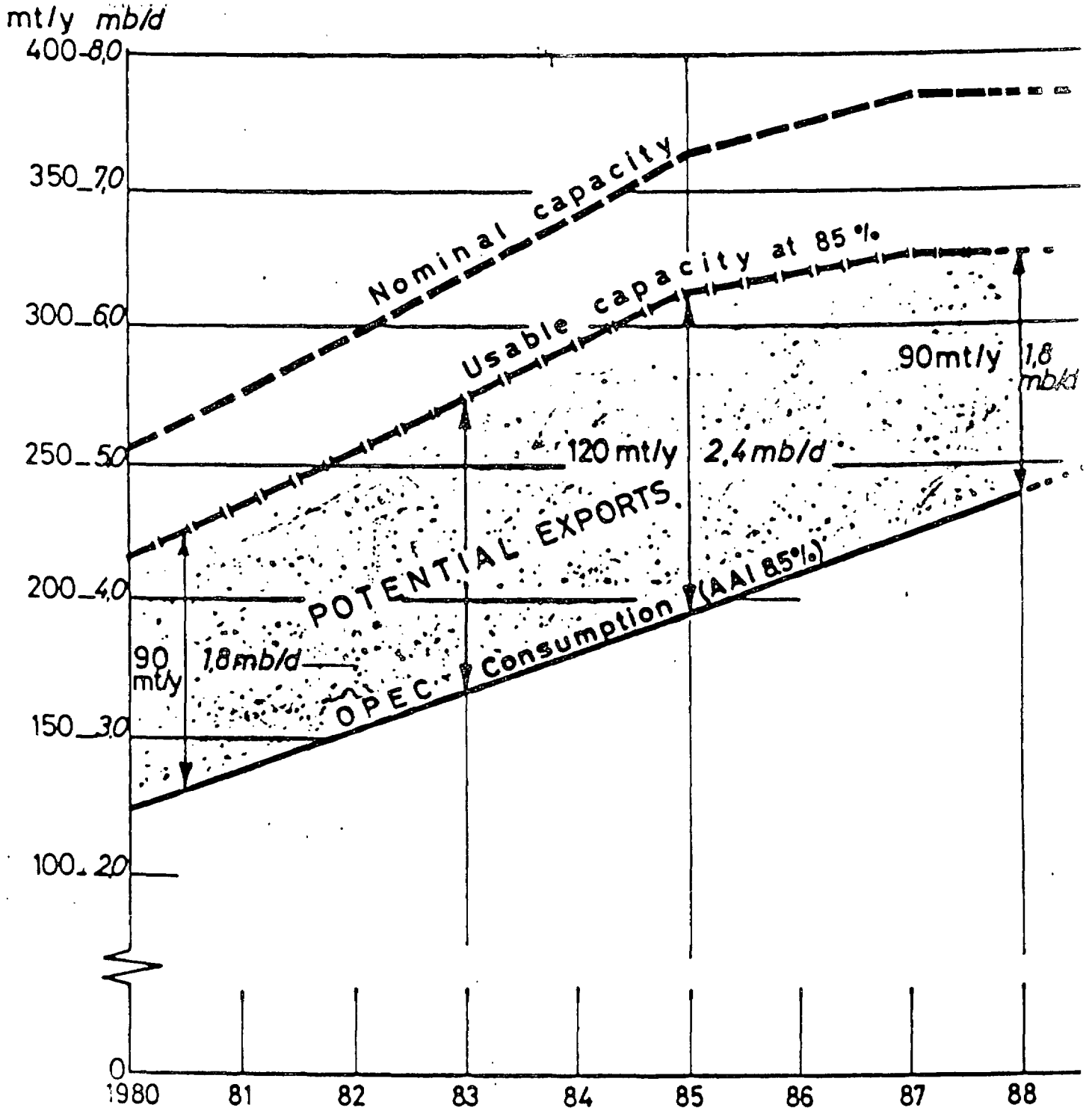
\* Ignoring stock movements

Source : (except EEC ) BP Statistical Review of World Industry.



# OPEC : Estimated potential product export capacity 1980-1988

(Millions of tonnes per year - Millions of barrels per day)



OPEC : Estimated Distillation Capacity 1980-88 (Thousands of b/d)

OPEP : Estimation de la capacité de distillation 1980-1988 (Millions de b/j)

OPEC : geschätzte Destillationskapazität 1980-88 (in Tausend Fass/Tag)

GROUP	1980	1981	1982	1983	1984	1985	1986-90
S. Arabia	750	850	1050	1050	1300	1800	2000
Kuwait	594	594	594	594	594	594	594
U.A.E.	15	135	135	195	220	220	220
Qatar	11	61	61	111	111	111	111
Iraq	305	305	305	305	305	305	305
Iran	530	530	530	530	530	530	530
M.E.	2205	2475	2675	2785	3060	3560	3760
Alg.	436	611	611	611	611	611	761
Libye	130	130	350	350	350	350	350
Gabon	44	44	44	44	44	44	44
Nigeria	260	260	260	260	260	260	260
Africa	870	1045	1265	1265	1265	1265	1415
M.E / Africa	3075	3520	3940	4050	4325	4825	5175
Latin America	1540	1540	1540	1540	1623	1623	1623
Far East	470	470	470	470	870	870	870
	5085	5530	5950	6060	6818	7318	7668

EEC-10 : Closures carried out or planned 1977 - 90

(millions of tonnes/year)

	<u>Capacity</u>		<u>Closed</u>	<u>Firm</u>	<u>Total actual/</u>	<u>x</u>	<u>Probable</u>	<u>Total actual,</u>	<u>x</u>
	<u>1/77</u>	<u>1/83</u>	<u>77-82</u>	<u>Projects</u>	<u>Firm</u>			<u>firm, probable</u>	
				<u>1983-90</u>	<u>1977-90</u>		<u>1983-90</u>	<u>1977-90</u>	
B	55.3	36.3	19.0	-	19.0	34			
DK	10.9	8.1	2.8	-	2.8	26			
D	152.6	120.2	32.4	1.7	34.1	22			
E*	17.9	18.7	(0.8)	-	(0.8)	-			
F	171.5	142.5	29.0	8.0	37.0	22			
Ire	2.9	2.9**	-	-	-				
I	182.0	155.0	27.0	13.4	40.4	22			
N	102.4	78.4	24.0	8.8	32.8	32			
UK	136.6	111.1	25.5	12.5	38.0	28			
<u>EEC-10</u>	<u>832.1</u>	<u>673.2</u>	<u>158.9</u>	<u>44.4</u>	<u>203.3</u>	<u>24</u>	<u>50.6</u>	<u>253.9</u>	<u>30</u>

\* Future capacity under review by government.

\*\* of which the Irish government only intends to use half.

Source : company estimates of Feb/Mar 1983 and comments by some member governments.