

COMMISSION OF THE EUROPEAN COMMUNITIES

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PROBLEMS OF THE OIL REFINING INDUSTRY : PROGRESS REPORT

(Communication from the Commission to the Council)

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Introduction

1. In its Communication adopted by the Council of October 1981 (COM (81)534 of 30.9.81) the Commission described the problems of the oil refining industry in the Community, stressing the need to reduce basic refining capacity and to concentrate operations at fewer more complex refineries. The Commission suggested that this process of adaptation at Community level could and should be left to the companies themselves, provided neither regional security of supply nor freedom of competition was affected, and that the role of governments was to provide appropriate conditions for it to be carried out efficiently and at the lowest social cost. The Commission, for its part, undertook to keep the situation under continual review in consultations with industry and governments, to prepare forecasts of the respective trends in capacity and demand, and to report to the Council as necessary.

2. Since the October Council the Commission has accordingly examined recent developments and reviewed prospects in the refining sector, and tried to assess the progress so far made towards bringing capacity in to line with future demand for the various petroleum products. A new round of consultations with companies representing over 80% of the refining activity in the Community, and with the European Trade Union Confederation, has been completed. Account has been taken of the information so obtained in the analysis and recommendations which follow.

The General Situation and Outlook

3. During 1981 and the early months of 1982 there has been a progressive deterioration in the profitability of the downstream activities (refining and distribution) of the industry in the Community. Without doubt the main reason for this trend has been the excess of crude oil and finished products on offer in a market characterised by a sharp and continuing fall in consumption (by 8.5 % in 1981). Other factors have contributed to the downward pressure on

product prices and ontrading margins. For example the lower crude oil acquisition costs of those companies producing domestic oil at a tax-paid cost below that of imports, and/or with access to the (then) cheaper Saudi crudes, tended to bring about a level of product prices unsatisfactory to many operators. Moreover average supply costs declined less than product prices because official crude oil selling prices were slow to respond to market realities, whilst processing at Community refineries by OPEC countries anxious to increase crude oil exports added to the quantities of product offered on Community markets and brought product prices lower. Delays in the revision of maximum prices in those member states where controls exist were also an important factor in reducing company earnings.

4. Although a further fall in consumption is expected in 1982, many companies believe that demand will rise and margins increase towards the end of the year as economic recovery gets under way, stock levels fall, and the world surplus in crude oil supply diminishes following the reduction in OPEC exports.
5. There will remain, however, the structural problems of excess capacity in refining and distribution and of changes in the relative demand for the various petroleum products. It is essential that over the next few years these problems should be overcome through the closure of redundant primary capacity and the construction of conversion units. This process of adaptation, by reducing costs and increasing trading margins, should enable efficient companies to earn a satisfactory return on their investment in the Community market, and to be fully competitive with refiners overseas.

Basic Refining Capacity versus Demand

6. The latest projections of demand, made in the light of the recent further falls in consumption, compare with industry refining capacity as follows :

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EEC - 10 : Demand versus Primary Capacity
(Millions of tonnes/year)

	<u>1973</u>	<u>1980</u>	<u>1981</u> ⁽¹⁾	<u>1982</u>	<u>1985</u> ⁽²⁾
Consumption	603	519	477	460	-450 ⁽²⁾
Net Exports (+)/ Imports (-)	+25	-18	-19	-20	-30
Stock Change	+ 8	+12	- 4	-10	-
Demand on Refineries	636	513	454	430	-420-
Capacity (year end)	787	810	784	754	600 ⁽³⁾
% Utilisation	81	63	58	57	-70-

(1) Provisional figures

(2) Figures between dashes are mid-points of range of projections

(3) Capacity requirements as estimated in COM (81) 534 of Sept. 1981.

7. The figure of 450 million tons for consumption in 1985 is in no sense a forecast for that year but merely the central figure around which different projections by companies and other organisations vary by more than +/- 10 %. Member States' projections of some months ago add up to over 500 m.t. It seems likely that current assessments of future consumption are unduly influenced by the sharp fall in oil use in the past few years (18,5 % between 1979 and 1982).
8. Net imports of finished products into the Community are currently running at about 20 m.t/y, or nearly 5 % of Community consumption, compared with an export surplus of 25 m.t. in 1973. Following the completion in the next few years of new export refineries overseas, particularly in producing countries, international trade in petroleum products is expected to rise by 1985/6 by about 30 m.t/y. On present evidence this expansion in world trade is not expected to lead to a very large increase in Community imports, which are, however, assumed to rise by 10 m.t/y by 1985. Great uncertainty clearly attaches to estimates of this kind and it will be necessary to review the situation from year to year.

9. Consumption in the range of 400-500 m.t. combined with net imports of 30 m.t., would mean a demand on Community refineries in the range of 370 - 470 m.t. In view of the degree of uncertainty inherent in these figures, the Commission believes it prudent to estimate capacity requirements by reference to the upper figure of 470 m.t which, combined with capacity of 600 m.t/y, would give a utilisation ratio approaching 80 % instead of 70 % for the median figure of 420 m.t/y appearing in the table of para 6.

Distillation Capacity

10. Virtually all the major companies are reviewing their refinery operations, with a view to reducing capacity and costs by taking out of service redundant distillation units at large refineries and/or by closing refinery sites and supplying from elsewhere. The state of advancement of plans, however, varies greatly from one company to another. Most companies have decided upon broad objectives regarding capacity in the Community and some have identified one or more of the locations where reductions will be made. Other companies have made more limited progress and have not yet decided by how much and where capacity will have to be reduced.

Isolated refineries pose a special problem because there is no alternative supply source near at hand. In such cases the savings to be realised by closing the plants may not compensate for the costs of transporting products over considerable distances, and it may be preferable to keep the refinery in partial use. The closure of refineries which are jointly owned by several companies is also plainly likely to be complicated and delayed by the need to reach agreement among the partners and for each to make other supply arrangements. Again it is not uncommon for refineries to be linked to adjacent petrochemical or other plants to which they supply feedstock, and in those cases too closure presents problems requiring time for their solution.

11. Preliminary and incomplete indications given by the companies suggest a total reduction, if all the intended partial and complete closures are carried out, of about 150 m.t/y compared with January 1981. This figure compares with a net

reduction over the years 1977-80 of 44 m.t/y. Of the 150 m.t/y reduction now contemplated, more than half consists of closures either carried out or firmly committed. Of the remainder, however, one third has not yet even been specified as to location. The company plans of early 1982 can be summarised as follows :

<u>EEC - 10 : Present state of refinery closure plans</u>	<u>M.t/y</u>
Distillation capacity installed at 1.1.81	810
Closed in 1981 : One refinery and 7 Crude distillation units (CDUs)	26
Proposed closures :	
Firm : 10 refineries + 1 CDU	53
Probable : 3 refineries + 7 CDUs	45
	<hr style="width: 100px; margin-left: auto; margin-right: 0;"/> 124
Additional capacity reduction planned but not yet specified by location	26
	<hr style="width: 100px; margin-left: auto; margin-right: 0;"/> 150
	660
Capacity requirement estimated by the Commission (COM (81) 534)	600
	<hr style="width: 100px; margin-left: auto; margin-right: 0;"/> 60

This reduction in total Community capacity is distributed fairly evenly among all the larger member states, the percentage of closures varying from 15 to 25. Almost all companies are affected although the proportion of their capacity so far scheduled for closure varies considerably according to the stage reached in corporate plans in this regard.

12. A number of companies are discussing with competitors possible exchange and processing arrangements which would enable plants to be closed without any increase in distribution costs. Several such deals have either already been concluded or are under discussion.

Social Problems

13. The potential effects upon employment of capacity reductions are increasing as the scope for shutting down redundant distillation columns at large refineries is exhausted and entire refineries have to be closed. The number employed at the 14 refineries so far identified for closure varies, according to their size, complexity and age, from 200 to 1700, whilst the average is of the order of 500 - 600 for a refinery of 5 m.t/y. Because oil refineries are capital intensive and employ relatively few people, the companies should in most cases be able to make satisfactory arrangements for those made redundant by closures. In fact those companies now actively engaged in closing refineries are generally optimistic that in most cases redeployment, early retirement and natural wastage will reduce the problem to small dimensions. In a few cases, however, where plants are situated in areas of high unemployment, unions are concerned that a large part of the work force may remain unemployed. The secondary effects of closures on local firms supplying goods and services to refineries may also clearly be of importance, although difficult to measure.
14. If certain closures do prove to have serious structural consequences for regions or zones of the Community, a need may arise for assistance by national or local authorities with job-creation schemes. Community finance from the Regional Development Fund might also be provided for this purpose. European Social Fund Aid could also be made available, in eligible cases and to complement national efforts, either for retraining or for recruitment subsidies to small/medium-sized firms taking on redundant refinery labour in assisted areas.
15. Although individual refinery closures may therefore have serious local effects upon employment, the restructuring of the refining industry will plainly also bring benefits to economic activity and employment generally. Most companies are undertaking large programmes of investment to expand conversion and upgrading capacity which provide employment in the engineering, contracting and construction industries, as well as directly creating jobs in the refining sector.

Conversion Capacity

16. Apart from the distillation capacity surplus, the companies' main problem is to adapt the product yield of refineries to the changing pattern of demand, and in particular to the much reduced outlet for residual fuel. New conversion plant brought into service in 1981 increased the capacity of the main categories of units by about 15%. The further major investment planned by the industry over the next few years is shown by the following figures compiled from company returns of January 1982 under Council Regulation 1056/72.

EEC - 10 : Intake Capacity of Conversion Plant
(millions of tons/year)

	<u>end-year</u>		
	<u>1973</u>	<u>1980</u>	<u>1985/6</u>
Catalytic Crackers	43.0	45.1	60.0
Thermal Crackers (incl. visbreakers and cokers)	20.8	42.8	68.0
Hydrocrackers	1.6	4.3	8.5
Total	<u>65.4</u>	<u>92.2</u>	<u>136.5</u>
Total in terms of cat. crackers	<u>55</u>	<u>75</u>	<u>108</u>
as % of distillation capacity installed	7.0	9.3	18.0*

*) Based on Commission's estimate of 600 m.t/y capacity required in 1985.

Differences in the yields of the various types of plant make it difficult to compare total conversion capacity from one year to another. If plant of all types is expressed as equivalent catalytic cracker capacity, by reference to distillate yield on feedstock, there is an estimated increase of 45 % in total conversion capacity between 1980 and 1985-6 and the effective ratio of conversion to distillation capacity will have risen two and a half times over the period 1973-85/6.

17. The completion of these programmes of investment may not of course be taken for granted. It depends on the continued existence of a sufficient differential between distillate and residue prices and on industry confidence in the long term prospects for the Community market.
18. The following table illustrates how output of the various products in 1985 might compare with demand assuming that the production of the light fractions (motor gasoline and naphtha) were maximised.

EEC - 10 : Estimated 1985 Products Balance assuming 420 million tons of crude processed and light ends maximised.

	<u>LPG</u>	<u>Mogas/ Naphtha</u>	<u>Kero/ Gasoil</u>	<u>Residual Fuel Oil</u>	<u>Ref.fuel Others</u>	<u>Total</u>
Estimated production from 1980 refining structure	9.5	88.0	161.0	115.0	46.5	420
Estimated output of plant to be added 80-5	0.5	11.0	7.0	(22.0)	3.5	-
Estimated production 1985	10.0	99.0	168.0	93.0	50.0	420
Estimated consumption 1985	12.0	111.0	164.0	113.0	50.0	450
Net Imports	2.0	12.0	(4.0)	20.0	-	30

This projection suggests that the conversion capacity in place in the mid 1980's will be sufficient to avoid excess fuel oil production. The balance shows deficits in fuel oil and naphtha which are expected to be available on world markets.

19. Conclusions

1. The analysis and recommendations of the Commission's Communication to the October Council (COM (81) 534) are still generally valid, although the further fall in consumption, and reduced forecasts, have reinforced the need to reduce Community capacity by at least 200 million tons/year, from 810 m.t/y installed at January 1981.

2. Although there are other important factors adversely affecting the industry's earnings, particularly in the short-term, the large surplus of capacity in refining is a principal and remediable cause of the generally unsatisfactory return on capital employed in recent years.
3. Partial and complete closures of refineries carried out in 1981, or planned for 1982 and subsequent years, amount in total to about 150 m.t/y of the 200 m.t/y judged by the Commission to be appropriate. Of this planned reduction of 150 m.t/y, however, one third is only tentative and the effort towards rationalisation will have to be sustained by the industry and facilitated by governments.
4. The direct and indirect effects of closures on employment are increasing as more complete refineries, as opposed to redundant distillation units at large refineries, are taken out of service. Although, in many cases, companies expect that most workers will be re-employed or pensioned, closures in areas of high unemployment of refineries with relatively large labour forces may lead to serious problems.
5. The process of adapting the refining structure to the changing pattern of product demand, through investment in conversion plant, appears to be in line with requirements. Provided all the projects notified are completed, capacity should be adequate for the mid-1980's.

20. Further action by the Commission

Subject to the outcome of discussions in Council, the Commission intends to :

- keep under review with governments, companies and unions the progress made by the industry in reducing primary capacity and installing conversion facilities at Community refineries.
- monitor trends in the quantities and prices of petroleum products imported from third countries.
- report to the Council if specific Community intervention in this sector appears to be necessary.