COMMISSION OF THE EUROPEAN COMMUNITIES

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THE ENERGY SITUATION IN THE COMMUNITY

Situation 1972 - Forecasts 1973

C O N T E N T S

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Introduction

This report on the situation of the Community energy market in 1972 and the outlook for 1973 represents one of the energy policy measures proposed by the Commission in its "First Guidelines for a Community Energy Policy" submitted to the Council in 1968.

In a recent memorandum on "Progress necessary in the Community Energy Policy", the Commission once again underlined the importance of the measures it had proposed, together with the need to "improve the quality of the information at its disposal ... so that exceptional developments and problems may become more familiar and easier to detect in advance"[1]

Regrettably, as far as this objective is concerned, the present report offers no perceptible improvement on the previous ones. Numerous gaps remain in the facts and figures.

On the other hand, a new aspect has been introduced. In attempting to forecast probable market trends in 1973, the report had to include in its analysis the three countries which joined the Community in the New Year. The analysis is somewhat limited in that statistical material for these countries was not yet available in comparable form to that of the original six countries, and also in that the status of the candidate countries in 1972 did not permit the necessary additional investigations to be made.

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[1] Doc. COM(72) 1200 final, pp. 7 and 8

Despite these handicaps, the report none-the-less attempts to sketch out the market situation and foreseeable trends for the Community in its enlarged form[1, 2].

I. The trend of economic activity

After the fairly marked slowdown in 1971, economic activity showed a tendency to improve in 1972. Hesitant at first then more decisive in the second half of the year, this more favourable trend was linked to the general improvement of the world economic situation and the increase in private consumption.

The pace of the recovery varied in different countries and different branches of activity but was accompanied throughout by sharp cost and price increases, giving rise to considerable concern. There was also a general revival of investment activity after the lull in 1971.

In 1973 economic expansion will probably continue at an increasing pace in both the new member countries and the original Six. Although investment growth still seems fairly slow in the United Kingdom, in the other member countries it appears to be definitely livelier (5-6% against about 2% in 1972).

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[1] Unless otherwise stated, figures for the Community refer to the nine States which have made up the Community since January 1973. When comparable figures were not available, the original members and new members (or certain of them) are mentioned separately.

[2] Figures for 1972 are generally based on estimates made during the last quarter of the year.

Detailed energy balance sheets for the original member countries in 1971, 1972 and 1973 are published separately (limited distribution). Less detailed accounts are also included for the new members, together with some petroleum statistics.

As regards GNP, an overall rise of 5% (volume) is expected in the original member countries; in the United Kingdom it will probably be 3.4 - 5%.

The prospective revival of economic activity in the Community is not without its problems, the main one being inflation. In this connection, mention must be made of the resolution adopted by the Council at its session of 30-31 October in which it expressed the intention to keep price increases inside a rate of 4% in 1973.

Table 1. Economic indicators

	1971	1972	1972	1973
	Actual figure	Forecast at end 1971	Present estimate	Forecast
Original Member States				
GNP (volume)	+3.5%	+2.7%	+3.5%	+5.0%
Industrial production	+2.3%	+1.5%	+4.0%	+5.5%
Steel output (million tonnes)	103	104/106	112	117
New Member States				
GNP (UK only)	+1.2%	-	+3.5%	+3.5/+5%
Steel output (million tonnes)	25	-	26	29

Steel output in the enlarged Community as a whole rose by 7.8% in 1972 but thereby did no more than to offset the decline registered in 1971. Only a small part of the increased production answered an increase in

steel consumption; the rest went towards stock replenishing and exports.

Weather played an important role in 1972. For the second consecutive year, hydroelectric production was adversely affected for a number of months and increased demand was placed on power plants.

II. The trend of demand[1]

A. Situation in the Six in 1972

Although the economic trend in the Community in 1972 was basically similar to that of the previous year, with GNP keeping to a growth rate of 3.5%, the demand for energy increased at a proportionally higher pace (+3.7% against +1.2% in 1971), largely due to the very low initial reference figure. According to estimates available at the end of the year, total requirements in 1972 amounted to 1,022 million tce.

Reckoning 40 million tce for fuelling heavy shipping vessels and 87 million tce for exports, energy consumption in the Community reached 895 million tce in 1972, or 4.2% more than in the previous year. The coverage of these requirements by the various sources of primary energy followed a similar pattern to that of preceding years.

Two thirds of total requirements were met by imported energy; oil represented 95% of these imports (about 650 million tce).

Generally speaking, as regards demand for energy, 1972 must be seen as a year of transition between the slack economic period of 1971, when demand barely progressed at all, and the revival of expansion in 1973.

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[1] See Tables 1-5 in Annex 2.

B. Outlook for the Six in 1973

Current forecasts indicate that demand in 1973 should benefit from the steady resumption of economic growth in the Community. Without attaining a rate of expansion comparable to that of the sixties, total demand in the six countries will rise by about 4.5%, assuming that bunker requirements and exports stay at much the same level as in 1972.

Expected growth (+5.5%) of Community industrial production in 1973 will push up internal demand for energy by 5 - 5.5%. Consumption would thus amount to a little over 940 million tce, of which 20% could be covered by solid fuels, 13% by natural gas, 6% by primary electricity and 61% by petroleum products. Petroleum's share in the market would therefore increase less sharply than in 1971-72. This must be attributed to the slower progress of demand and increasing output of natural gas and nuclear electricity.

Nuclear production, although still representing only a small fraction of internal demand in 1973 (1.3%), will have almost doubled its rate of increase in two years. This trend is largely due to the marked rise of output expected in Germany and France.

The production of electricity in these two countries is also undergoing another significant change, namely that coal consumption by power plants will decline much more sharply than hitherto. This would bring Community coal consumption for electricity production down to 44.5 million tce in 1973, or less than 80% of the volume charged in 1971. Taking the place of coal will be natural gas and fuel oil, the latter being used in rapidly increasing quantities in German power plants.

Other than the power stations, one of the main consumers in 1973 will be the iron and steel industry. Community steel production, forecast to reach 117 million tonnes, could exceed the 1970 record (109 million tonnes) by more than 6.7%, and energy requirements would increase by about 7.5% on their 1972 level. Coke consumption in the Community may well climb back to the 1971 figure of about 60 million tce (against 58 in 1972).

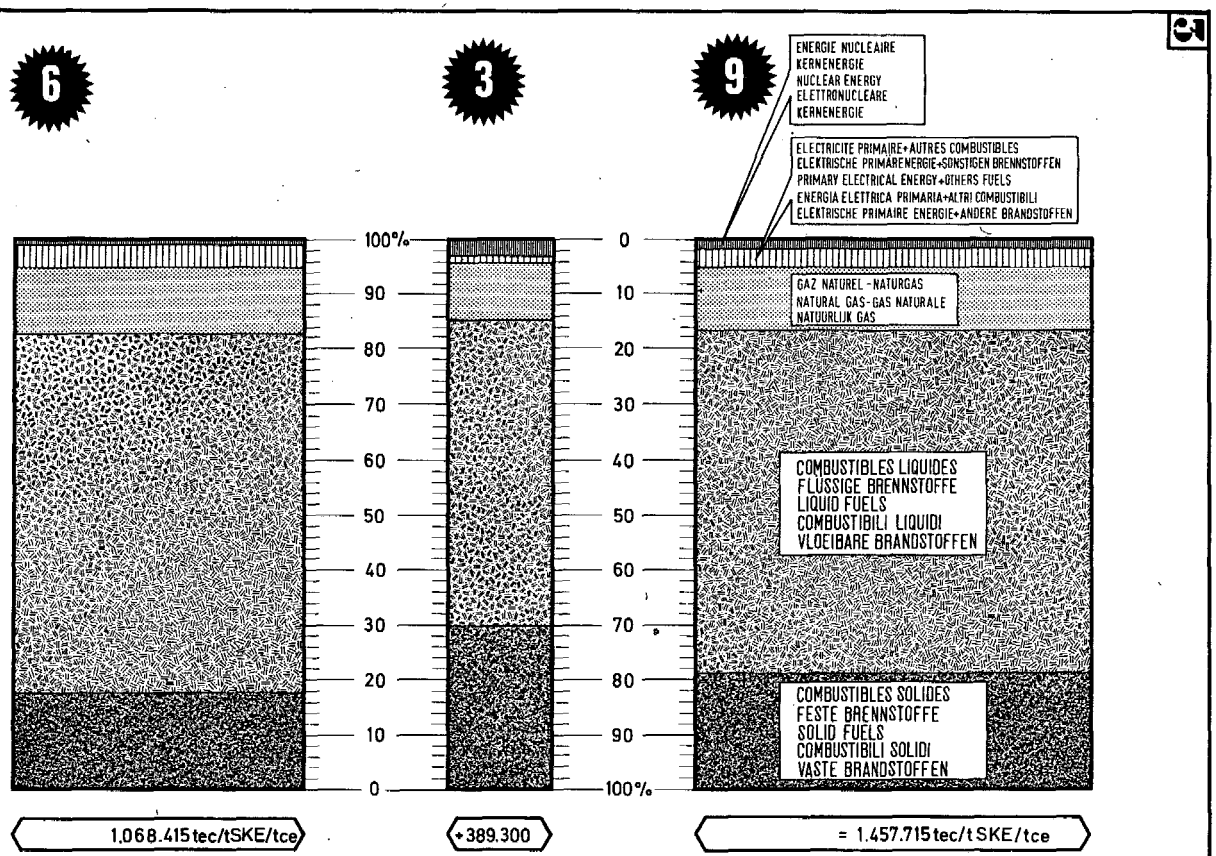
The increased energy requirements (+5-6%) of the rest of the industrial world (i.e., excluding iron and steel plants) will be covered equally by petroleum, natural gas and electricity. Transport requirements will develop at about the same pace as industrial needs, whereas growth in the domestic sector could be somewhat slower (+4-5%), assuming normal weather conditions and no notable acceleration of private consumption.

The Community's dependence on imports for its energy requirements in the coming year will be much the same as in 1972.

C. The Nine in 1973

The GNP of the nine member countries of the European Community will progress on average by 4.5-5% in 1973, bringing an increase of slightly less than 6% in total energy requirements. In terms of volume, these will amount to about 1.5 thousand million tce, or some 80 million more than in 1972. The extra demand is equal to the total requirements of both Belgium and Denmark in 1970.

Half the extra demand will be covered by an increase in Community resources, expected to reach 545 million tce (+8.5% on 1972) largely as a result of increased output of natural gas. The enlarged Community will therefore depend on imports for about 64% of its total energy requirements in 1973.



PREVISIONS 1973 - AUSSICHTEN 1973 - FORECASTS 1973 - PREVISIONI 1973 - VOORUITZICHTEN 1973

STRUCTURE DES BESOINS TOTAUX EN ENERGIE DANS LA COMMUNAUTE ELARGIE
STRUKTUR DES GESAMTENERGIEBEDARFS DER ERWEITERTEN GEMEINSCHAFT
STRUCTURE OF THE TOTAL ENERGY REQUIREMENTS OF THE ENLARGED COMMUNITY
STRUTTURA DEL FABBISOGNO ENERGETICO TOTALE DELLA COMUNITÀ ALLARGATA
STRUCTUUR VAN DE TOTALE ENERGIEBEHOEFTEN VAN DE UITGEBREIDE GEMEENSCHAP

The coverage of energy needs in the Nine will be assured mainly by petroleum products (62%), followed by solid fuels (21%) and then natural gas (12%). The remaining 5% will be covered by hydroelectric power, various products such as peat, and by an increasing volume of nuclear energy (1.2% of total demand in 1971; 1.7% in 1973). This general pattern of demand shows some individual variations in the different countries.

Taking internal consumption on its own (i.e., ignoring bunker requirements, exports and fluctuations in stocks), the amount of energy required by the Nine in 1973 will be 1,315 million tce. Imported oil will cover 57% of this demand, other imports 2%, and Community resources the remaining 41%. These figures reflect the impact of the resources of the new Member States on the Community balance sheet. Not since 1968 has such a high proportion of internal demand been met by the Community's own energy resources.

III. The market situation in 1972 and its consequences

A. Petroleum

1. World reserves and production

During 1971, proven world petroleum reserves[1] increased by 3,000 million tonnes to reach the figure of 87,000 million tonnes (27 years' current production). This increase refers to the eastern hemisphere, and particularly to oil fields in the Middle East. There was also a rise in Western Europe's reserves which progressed from 0.7 to 2.3 % of the world total as prospecting was pursued in the North Sea.

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[1] Including associated liquid hydrocarbons.

World output of crude petroleum was about 3% higher in 1972 than in 1971. Production in the Middle East rose by about 8%, with Saudi Arabia contributing an increase of 25%, Iran offering 8% and Iraq registering a perceptible drop in production. Output also droped in Africa, but not so sharply as in 1971. The steep fall in Libyan production (more than 20%) was partly offset by increased output in Algeria and Nigeria.

2. Relations between producer countries and petroleum companies

The year of 1972 was overshadowed by the problems of finding a new equilibrium in relations between oil companies and producer countries.

First of all, the agreement concluded in Geneva in January 1972 brought an increase of 8.49% in posted prices to counteract the effects of dollar devaluation. But because of relatively low demand, spot prices for crude petroleum were not affected by the increase.

Subsequently, various events took place which, although not affecting supplies immediately, are likely to have major repercussions in the future[1].

On the one hand, certain governments took steps to nationalize drilling concessions or to cut back production. On the other hand, a number of producer countries successfully negotiated for shares in drilling claims.

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[1] For more details see Annex 1.

The concrete terms of this participation must still be defined for each country concerned and for each claim. But an irreversible process is now under way, and will ultimately operate profound changes in the conditions of supply. The quantities of petroleum which will be in the hands of national companies of the producer states represent an entirely new factor on the world market.

In the immediate term, the effect of this participation will be felt in a moderate increase in the average cost of crude petroleum for the oil companies. Petroleum products will feel the effect more gradually, but it will be combined with that of the tax increases agreed upon in 1971.

3. The petroleum situation in the United States

The question of US energy supplies for the coming years is known to be causing some anxiety in all the circles concerned. This anxiety is already affecting the petroleum situation in the United States and producing slight but tangible repercussions on the world market.

In 1972, for the second year in succession, American output of crude petroleum declined, and it is estimated that it may drop by a further 2% in 1973, bringing it to about 465 million tonnes.

This downward trend, combined with the uncertainty surrounding the matter of petroleum transport from Alaska, is increasing American reliance on imports to meet the constant growth of demand.

In June and September 1972, authorized quotas for imports of crude petroleum and finished products in the region east of the Rocky

Mountains were raised by 11.5 million tonnes and 7.5 million tonnes respectively. The total volume of permitted imports in this region in 1972 amounted to 30 million tonnes from Canada and 65 million from other countries. Importers were also authorized to clear certain quantities in anticipation of quotas due to be opened in 1973. Elsewhere, in districts I-IV, the traditional method for calculating imports in relation to internal output was abandoned and replaced by a method based on the deficit in supplies, as in California (district V).

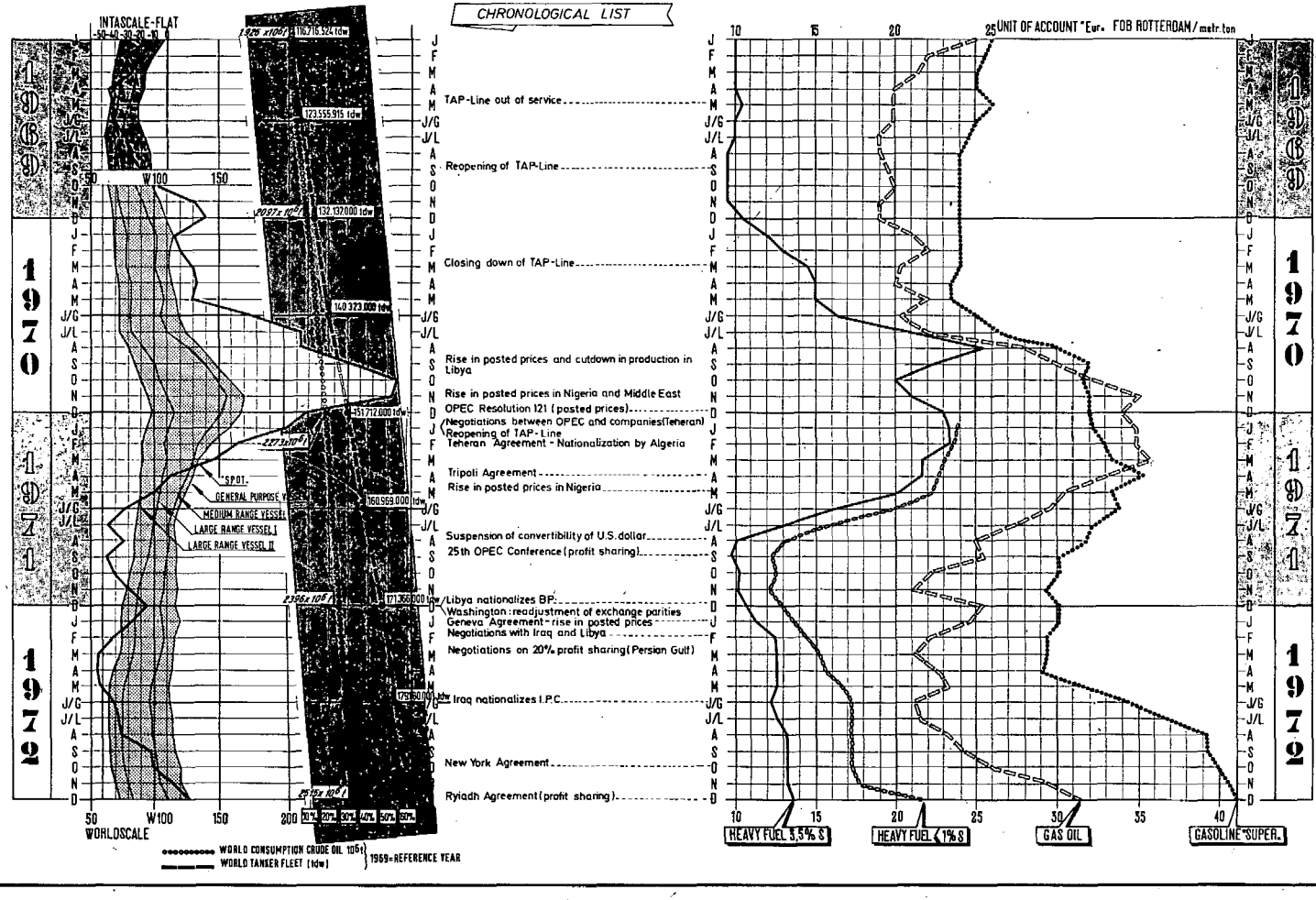
Imports of crude petroleum in 1972 amounted to 110 million tonnes, compared to 84 million in 1971. As regards origin, there was an appreciable increase in deliveries from the Middle East and Africa. In 1973, crude petroleum imports are expected to climb to 150 million tonnes, while fuel oil imports will total about 100 million tonnes and other products 50 million tonnes. Total imports will thus reach about 300 million tonnes, or slightly less than 40% of the oil requirements of the United States for the year.

4. The situation of sea transport

a) Facilities available

The tonnage of available oil tankers increased once again by 13% in 1971, and that of mixed cargo vessels by 35%; all in all, the fleet engaged in petroleum transport rose by about 17%. Against these figures, the increase in demand may be estimated at about 13% for 1971, which explains the dejected market situation at the beginning of 1972. Tonnage on order, mainly vessels over 200,000 tonnes, remained very high in 1972, and the number of mixed cargo vessels (oil, ore, cereals) is still increasing rapidly.

FREIGHT RATE TRENDS, PRINCIPAL DEVELOPMENTS ON THE WORLD MARKET AND OIL PRODUCT QUOTATIONS FROM 1969 TO 1972



b) The market[1]

Since summer 1971, the tanker transport situation has been marked by too great an availability of vessels. In the first five months of 1972 supply continued to exceed demand, and rates on the spot freight market dropped below their normal seasonal level (down to WS 20/30 in March-April for the Persian Gulf to Europe).

The Japanese seamen's strike in the summer of 1972 checked the downward trend temporarily, and by the end of the summer there were signs of the seasonal recovery. Rates for the Persian Gulf to Europe stood at WS 85/90 in early October, and reached WS 100 and even 110 by the end of December.

The increase was less marked in the Mediterranean; but sustained demand for the transport of low-sulphur fuel oil to the United States caused a steeper increase in rates on this route for vessels of small and medium tonnage (up to WS 130).

c) Outlook for 1973

If world demand for petroleum grows at the expected pace (assuming economic revival and normal temperatures), and provided that traditional supply flows are not disturbed, the overall availability of oil vessels may well be excessive at the end of the winter 1972-73. But the continuing demand for low-sulphur fuel oil to be shipped to the United States may keep freight rates for certain categories of vessels at a fairly high level.

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[1] See graph 1.

5. Prices of petroleum products [1]

A distinction must be drawn between the trend of prices in the early months of 1972 and that of the last six months.

By the end of 1971, the strong upward trend which consumer prices had followed during the course of the year had almost entirely flattened out, at least in the case of gas-oil and fuel-oil, and despite a slight hardening of heavy fuel oil prices the situation remained favourable for the consumer during the first half of 1972.

The only exception was petrol. Rotterdam prices, which had reached $32 per tonne for super grade and $23 per tonne for normal grade petrol at the start of 1972, had climbed to $35 and $28 per tonne respectively by the beginning of June. Apart from seasonal price fluctuations and a heavy demand for naphtha, one of the reasons for this increase was the relative inelasticity of supplies. Refineries tended to run somewhat below capacity, and supplies of heavy crude from the Persian Gulf increased in relation to light crude from Northern Africa. Quality factors also modified the pattern of demand (low-lead petrol for Germany).

Supplies of gas-oil were fairly plentiful in comparison to demand (effect of above-average temperatures during the winter in northern

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[1] See table in Annex 2 and graph 1. Prices for petrol products on this graph are given in units of account, to avoid the effects of variations in the dollar exchange rate.

regions of the Community), as also were those of fuel-oil. Demand from the United States, particularly for low-sulphur fuel oil (quoted at $16), continued to affect the European markets.

During the second half-year, prices for oil products at Rotterdam and Genoa were generally harder as demand grew appreciably and certain operators bought back surpluses. The firmer prices led to smaller rebates to consumers on the internal markets of the Community.

Wholesale prices for petrol continued to rise gradually, unaffected by the seasonal drop in demand. By the end of December, fob Rotterdam prices were approaching $47/t (super grade) and $41/t (normal grade). These prices represent a 50% increase on those of the early year.

Demand for naphtha - used in the petrochemical industry and in the manufacture of town gas - continued to be fairly high. But supplies were limited for the same reasons as were mentioned earlier in connection with petrol. An additional limiting factor was the seasonal increase in demand for carburant. Prices therefore continued to rise at a steady pace ($22 per tonne in April, $32 per tonne in November).

Prices for gas-oil were pushed up in the second half-year by increased demand in anticipation of the winter. At the end of the year they reached $35/t (about $27 at the end of 1971).

Fuel-oil prices, for their part, seemed to reflect the combined effect of greater demand, particularly by power stations, and smaller rebates on posted prices. The latter step represented an attempt by operators to hold on to dwindling profit margins, threatened both by the higher cost of crude petroleum and by the low prices ruling on an increasing portion of the market.

Prices at Rotterdam for heavy fuel-oil with 3.5% sulphur remained around $14/t, slightly exceeding $15 at the end of December. The premium on low-sulphur fuel oil tended to increase: the difference was about $2-3/t mid-year, reaching $3.5 by November and almost $8 in December.

Prospective price trends for petroleum products are a matter of some concern to public authorities in all the Member States. On the one hand these authorities are keenly aware of the increase of certain cost factors and the declining receipts of oil companies, which could affect their ability to finance investments; but on the other hand the governments are committed to a policy of combating inflation and containing the general upsurge of prices.

It is to be hoped that any steps taken by Member States to cope with either of these problems will not accentuate the price disparities already existing in the Community.

Indirect taxation is one of the main factors causing differences in prices of oil products to the consumer. In this connection, it is to be noted that Germany reduced the specific tax on heavy fuel-oil from 20 to 15 DM per tonne on 1 January 1973. In Italy, the introduction of VAT modified the price structure for petroleum products, but the overall fiscal charge will not be much different.

B. Coal

1. Production and situation of the collieries

In 1972, coal production in the enlarged Community fell by 40 million tce in relation to 1971.

Table 2. Production of coal

(million tce)[1]

Country	1971	1972 (estimates)	1973 (forecasts)
Germany	111.9	103.3	96.7
Belgium	9.9	9.5	9.0
France	30.2	27.3	25.6
Ireland	0.1	0.1	0.1
Italy	0.1	0.1	-
Netherlands	3.6	2.8	1.9
United Kingdom	134.8	107.9[2]	126.3
Community	290.7	250.9	259.7

[1] Figures may be slightly different from national figures due to approximation.

[2] Production losses due to the strike are estimated at 21 million tce.

As Table 2 shows, the particularly marked drop in output was partly due to the miners' strike in the United Kingdom (-21 million tce) and partly to the continuing decline (-5 million tce in the United Kingdom and -12 million tce in other countries).

In Belgium, France and the Netherlands, cuts in production proceeded in 1972 according to schedule, at rates of 10, 4 and 22% respectively. Coal production in Germany was adjusted (-8%) in accordance with market outlets; stocks of coal and coke increased appreciably.

In the United Kingdom, where the miners' strike continued until the end of February, production regained a near-normal rate fairly rapidly. Drawings on stocks were particularly heavy at the start of the year, but gradual replenishment after the strike brought undistributed stocks up to 10.5 million tonnes by the end of September.

In the enlarged Community as a whole, coal stocks rose from 20 to 24 million tce in one year and coke stocks from 7.9 to 10.5 million tce.

For 1973, trends are expected to be similar to those of 1972 in all countries except the United Kingdom. Forecasts in this country indicate a rise in output, but it must be remembered that production in 1972 was low because of incidental factors, and also because the decline which had been interrupted in 1971 had reaffirmed itself.

Average output per miner (working below ground) rose by 4% in 1972 in the Community of the Six. For the United Kingdom comparisons are difficult, both with the previous year and with other countries, because of the effect of the strikes. It is worth noting, however, that from March onwards UK miners received a wage increase of more than 20% (by decision of the Wilberforce Commission), bringing their pay more in line with the general trend of incomes.

The Community coal industry suffered severely from the unfavourable economic situation in 1972, and the outlook for the coming year offers no hope of an improvement in the financial position of the collieries.

Table 3. Average output per miner and per shift, and wage bill for registered labour[1]

	Output			Wage bill
	in kg per shift 1972	estimates	forecasts	estimates
		1972/71	1973/72	1972/71
Germany	4,250	+5.3%	+3.5%	+7.0%
Belgium	2,620	-0.1%	+3.0%	+10.0%
France	2,709	+3.2%	+3.0%	+8.0%
Netherlands	3,240	+3.2%	+3.0%	+10.0%
United Kingdom	(3,272)[2]	(+2.3%)[3]	-	-

[1] Provisional figures

[2] This figure refers to the 12-month period ending at the end of March 1972. It therefore reflects the effects of the strike during winter 1971/72. Furthermore, it is not strictly comparable to output figures of the other countries.

[3] Figure referring to the period between the end of the strike and the end of November, according to an official source. This rate of increase, calculated differently, is not comparable to figures concerning output in the other Member States.

Average aid per tonne (including aid to coking coal) paid to collieries in the Community of the Six increased by at least 11% in 1972 (8.3% in 1971), from 3.10 to 3.54 ua per tonne. The latter figure could be raised if the Commission agrees to the additional applications made recently by three Member States pursuant to Decision 3/71/ECSC. A further increase in aid is expected in 1973.

2. Imports

About 15% of the demand for coal in the Six is covered by imports from non-member countries. But in terms of quality almost half these imports consists of coking coal. In response to a drop in demand, total imports were cut by 5 million tonnes to a level of 26.4 million tonnes in 1972, of which 1.6 million came from the UK. In the coming year, imports into the Six from non-member countries are estimated at 26 million tonnes (excluding deliveries from the United Kingdom which have been considered as intra-Community trade since January 1973, and which will gradually regain their 1971 level of about 2.2 million tonnes).

The changes observed in supply patterns in 1971, namely a cut in imports from the United States to the particular benefit of imports from Poland, followed a trend which had been taking shape for some years. The changes were confirmed in 1972 when deliveries from Poland reached a total of 7 million tonnes.

Australian collieries are continuing their marketing drive and focussing efforts on the conclusion of long-term supply contracts for coking coal. Deliveries in 1973 should attain, and perhaps exceed, three million tonnes. From Canada, several shiploads have been purchased in the way of a trial by Community users. The trend towards the diversification of supply sources may become more marked in the long term.

Coal imports into the three new Member States amounted to about 8 million tonnes in 1972 and may be estimated at 6 million tonnes for 1973. In the United Kingdom, where restrictions on coal imports were lifted at the end of 1970, current purchases from abroad mainly consist of coking coal. Denmark imports coal, chiefly from Poland, for use in power stations.

For the enlarged Community, it may be estimated that total imports will rise from 31 million t in 1972 to 32 million t in 1973.

3. Prices

Posted prices for coal in the Community of the Six stayed fairly steady between 1964 and 1969, but then rose rapidly in response to market tensions in 1970 and 1971, especially for coking coal. By adjusting their coking coal prices to those offered by non-member countries, the Community producers were able to improve their receipts. But by mid-1971 the monetary situation was again making the position of Community producers difficult.

In 1972, prices for coal from non-member countries tended to remain steady as market tensions relaxed. Prices for Community coal rose more slowly than in 1971, but costs continued to mount.

Producers in non-member countries must also face increased costs and for some years their export contracts have generally contained a sliding scale clause allowing them to revise prices upwards in relation to various cost factors.

Until September 1972, Atlantic freight rates for coal transport remained fairly low (about $2 to $2.25 per tonne). Since then, spot freight rates have risen appreciably and were already reaching $4 to 4.5 per t in the late October. This seems to be partly the effect of the demand for vessels to transport cereals from North America towards the Soviet Union and China. These deliveries will no doubt continue to affect freight rates for a large part of 1973.

C. Gas

1. Natural gas reserves

During last year, the proven and probable reserves of the enlarged Community remained unchanged at about 4,200 thousand million m^3. The quantities tapped were almost entirely offset by the confirmation of new sources.

Gas strata detected in the Adriatic and in the continental shelf off the North Sea coasts of Denmark and the Netherlands have only been partially evaluated as yet. In the Dutch area of the North Sea, several new deposits have been detected. Some of these are fairly small and would only be commercially viable if tapped simultaneously and channelled to the mainland by a common pipeline. Otherwise costs would be too high. No definite information about further discoveries in the British area were announced during 1972.

Apart from these reserves, several Community firms are known to be interested in purchasing gas from the Norwegian continental shelf. Reserves there are currently evaluated at no less than 400 thousand million m^3. Some of the strata contain gas associated with petroleum, in which case any decisions regarding the removal of the oil would influence those concerning the destination of the gas.

2. Trend of the market for natural gas[1]

a) Production, intra-Community trade, imports

In 1973, natural gas production in the Community will amount to about 149 thousand million m^3, compared to 128 thousand million m^3 in 1972.

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[1] Annex 2 contains a table of natural gas supplies in the Community.

The growth rate of production, which was about 30% in 1970 and 1971, fell to 24% in 1972 and will settle somewhere around 17% in 1973. The reasons for this trend are that Germany, France and Italy are running at capacity, while production in the Netherlands - almost half the total amount - is showing a more moderate (although still high) rate of growth.

In 1973, 47% of the output in the Netherlands will be exported (42% in 1972). These deliveries will cover 36% of the demand for natural gas in Germany, 46% in France and 99% in Belgium.

Totalling 33 thousand million m^3 in 1973, supplies from mainland strata to other member countries will be almost two years ahead of the schedule of deliveries stipulated in initial contracts. Furthermore, in 1972, Belgian and French importers obtained an increase of about 10-15% on the total quantities to be supplied by the Netherlands. Finally, the duration of supply contracts concluded by these importers was extended. For the future, however, the Netherlands exporter has stated that on the basis of present production capacity he cannot contemplate any further increases in his commitments. On the other hand, a company with drilling rights on the continental shelf has concluded a supply contract with German customers for a yearly quantity of 6.5 thousand million m^3 in normal operating conditions. This contract has not yet received the necessary approval of the Netherlands Government.

Imports from non-member countries, although increasing very rapidly, are just getting under way in several of the conntries of the enlarged Community, and will still only cover about 3% of natural gas consumption in 1973.

Negotiations are continuing on various sides, however, for the purchase of additional quantities of gas, to ensure more plentiful

supplies in the Community in the longer term. Buyers in various countries are forming consortia to gain the benefit of cheaper rates attached to the transport of larger quantities of gas.

From the short-term point of view, and in the context of total energy requirements, natural gas supplies are fairly inelastic. This is mainly due to the rigidity of the infrastructure, and it means that natural gas supplies could only respond fairly feebly to a sudden and sharp increase in demand, if other sources of energy were temporarily in short supply.

b) Consumption[1]

In the Community as a whole, excluding Italy, natural gas consumption in 1973 will increase less steeply than in preceding years (+17% against +25% in 1972 and +29% in 1971). In France, Italy and the Netherlands, growth rates will be in the region of 10%, whereas in Germany and United Kingdom they will continue to exceed 20%.

This trend of consumption will be generally observed in all sectors where natural gas is used. Exceptions to the rule will be industrial consumption in France, which will develop faster than the average rate forecast for the country as a whole, and domestic consumption in Italy which will also progress faster than the average rate.

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[1] In addition to natural gas, large quantities of derived gases (about 30% of total gas supplies) are used in the Community. These gases are used principally in the iron and steel industry, and to a lesser extent power stations. In 1973, a drop of more than 2% is expected in domestic consumption of derived gases, owing to the conversion of gas networks to natural gas.

3. Prices of natural gas

Gas prices varied only slightly in 1972. Adjustments were generally the result of modifications in rates (Netherlands and Italy in particular), or of fluctuations in the prices of other items to which natural gas rates are tied. In this respect, fuel oil prices played a role of varying importance in the different countries.

In France, for instance, the national natural gas authority benefited from a 3% increase as from 1 August 1972, when industrial and domestic rates were raised by 3% and 4% respectively.

In the Netherlands, industrial rates were adjusted by virtue of a new mechanism relating them to heavy fuel oil prices. But the adjustments brought no notable change in gas rates because fuel oil prices had dropped in the meantime. The possibility of relating gas rates to fuel oil rates in the domestic sector is at present being studied. Finally, after the introduction of an environment tax on fuels on 1 July 1972, natural gas is now taxed at a rate of 15 cts NL per 1,000 m^3.

As from 1973, the frontier price of Netherlands gas will be related partly to that of tax-free fuel oil for foreign customers who obtained an increase in contractual quantities[1]. If fuel oil rose in price in 1973, therefore, there would be a slight, but still limited, increase in the price of gas exported from the Netherlands.

[1] The system will be introduced by stages, so that the price of gas is ultimately related to that of tax-free low sulphur fuel oil at Rotterdam.

D. Electricity

After the temporary slowdown in 1971, internal consumption of electrical energy regained a growth rate in line with the long-term trend. The rate of increase of consumption is, however, lower in the United Kingdom than in the other Member States. For 1973, gross internal consumption is expected to rise by 6.7% (7.3% in the Six, 5.3% in the new member countries).

Except in the United Kingdom, where the miners' strike hindered coal supplies to power plants at the beginning of the year, electricity requirements in the Community were easily covered, and there was generally some surplus of production and transport facilities owing to poor growth of demand in 1971. Cross-frontier deliveries of power developed considerably, in particular deliveries to Germany.

The trend of production differs according to the type of power station[1]:

- Nuclear power plants are covering an increasing fraction of the demand: 5.8% in 1972 and 6.8% in 1973.

  Progress is most spectacular in the original Member States, where nuclear production will have almost doubled between 1971 and 1973.

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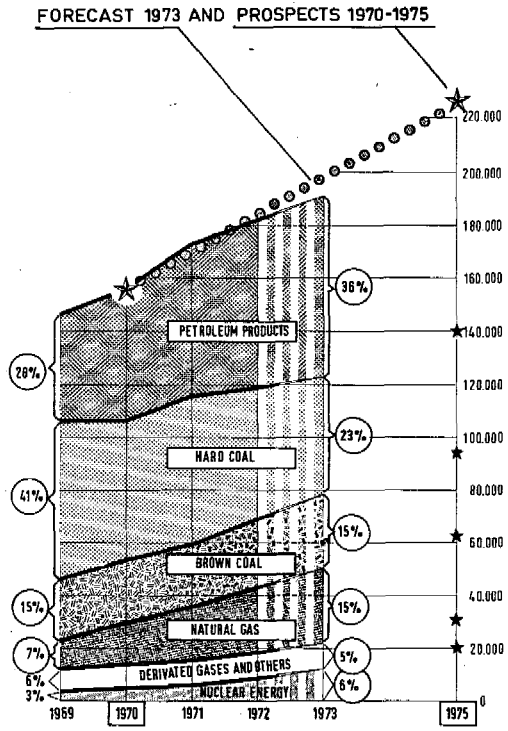
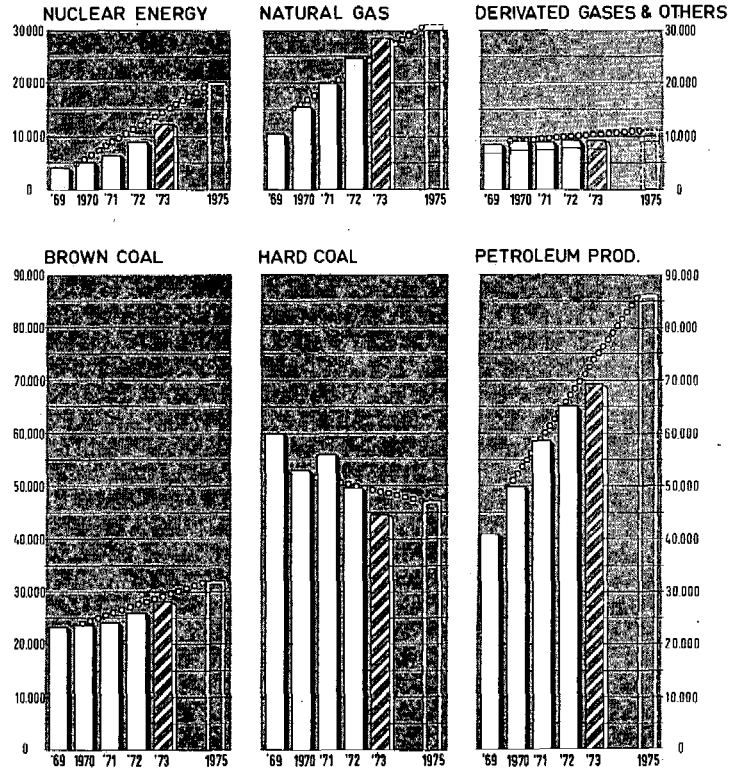
[1] Table 8 in Annex 2 gives details of the coverage of electricity requirements. Graph 2 shows the relative consumption of the various sources of primary energy in power plants (conventional and nuclear) in the Six.

ENERGY TRANSFORMED IN THERMAL AND NUCLEAR POWER STATIONS





(COMMUNITY OF 6)
UNIT: 10^3 tce

At the end of 1972, the installed capacity of the nuclear power plants in operation in the Community amounted to 10,900 MWe, of which 5,300 MWe in the United Kingdom, 2,700 in France, 2,200 in Germany and 600 in Italy.

About twenty other power plants are at present under construction in the Community. They represent some 17,000 MWe (of which more than 6,000 in the United Kingdom, 5,000 in Germany and 3,000 in France), and will come into operation during the course of the next four years. Only a very small proportion will become operational in 1973[1].

Power plants on order and planned approach an installed capacity of 16,000 MWe, but will not come into service before 1978. If there is no delay in the completion of these plants, total installed nuclear capacity could by then reach some 44,000 MWe. Further efforts to develop nuclear energy are still required.

- Output by hydroelectric plants was insufficient in 1972, although less so than in the previous year. The expected return to normal output and the opening of new plants should enable the Community to cover 11.5% of total energy requirements by hydroelectric power in 1973.

- Output by conventional power plants[2] amounted to 786 TWh in 1972 and is estimated to increase by 42 TWh in 1973. The quantities

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[1] Table 9 in Annex 2 gives a detailed breakdown of nuclear power plants according to their state of completion and their location.

[2] See Table 10 in Annex 2.

of fuel required for these levels of output are 271 and 281 million tce respectively[1]. The fairly low forecast for 1973 is based on the assumption that hydraulic conditions will be back to normal and that nuclear output will increase appreciably.

The disparity between the increase in fuel needs (4%) and the increase in production (5.6%) reflects the improved rate of specific consumption which results from continual modernization and rationalization of power plant management.

In the original Member States, the consumption of liquid fuels, which was already slightly in excess of coal consumption in 1971, continued its upward course with an increase of 11% in 1972. Liquid fuels thus covered 37% of the fuel needs of conventional power plants and will pursue their progress in 1973 (39%). Natural gas continues to be used in rapidly increasing quantities and already occupies a comparable place to that of lignite (15%); it could even overtake lignite in 1973. The decline of coal as a power plant fuel became more marked in 1972, falling from 34 to 29% of consumption, which represents a sudden drop of 6 million tce. In Germany, new measures to encourage the use of Community coal in power plants came into force in June 1972, following up those applicable to coal power plants coming into operation before mid-1971. The effect of the new measures, however, will not be felt for several years since they apply to new plants still under construction.

The pattern of consumption in the new Member States is very different owing to the predominating use of coal in the United Kingdom. The proportional importance of this fuel dropped sharply

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[1] Including requirements for public service power plants supplying heat (about 4 million tce).

in 1972 (from 66% to 60%) and will continue to decline in 1973 to a level of 59%, despite a slight increase in the actual quantities charged. Next in line are petroleum products (36% in 1973) whose importance is steadily rising. Natural gas consumption almost doubled in 1972, but still represents only a small part of total consumption (2%).

For the enlarged Community as a whole, 1973 will be the first year in which the consumption of petroleum products is higher than that of coal (38% against 37%).

E. Nuclear fuels

1. Natural uranium

According to reasonably safe estimates, world resources of natural uranium did not increase appreciably in 1972, maintaining their level of about 900,000 workable tonnes, at less than $10 per pound of U_3O_8.

Supplies of natural uranium are still plentiful, and requirements are expected to be satisfactorily covered in both the short and the medium term.

Prices, which had been gradually declining since 1969, began to mark time at about $5 per pound of U_3O_8 for contracts signed in the first half of the year, with annual increases of 2-4% being applicable for deliveries made between 1973 and 1978. In the second six months, the upward trend became somewhat more pronounced with an annual increase of about 5%, but the trend was less transparent because Japanese operators began purchasing and negotiating for very large quantities intended to cover Japan's

requirements well into the future. The terms of these transactions are not known.

The isolation of the American market, protected by an embargo on imported natural uranium, continued to cause a marked imbalance. In addition, no decision was taken by the American authorities regarding the sale of USAEC stocks on the market.

Drawings have been made on these stocks since 1971 due to the raising of the tails assay in enrichment operations in the United States. Whereas the official tails assay is 0.2% for calculating prices and determining the quantities of uranium to be supplied, it is in fact set at 0.3%. This means that USAEC stocks are gradually reduced without affecting the American market.

2. Enriched uranium

For some years the Community has been endeavouring to acquire its own enrichment facilities. These efforts progressed during 1972 and are scheduled to continue during 1973. On 30 May 1972, the special group of the Consultative Committee on Nuclear Research, briefed by the Council at the end of 1970 to collect all the technical and economic information relevant to the establishment of enrichment facilities in the Community, presented a report analysing and evaluating its various findings. On the basis of the report, the Commission on 23 June submitted a number of proposals which are at present being examined in the appropriate departments of the Council and Parliament.

In addition, the research association formed in February 1972 by firms and agencies of several countries (Germany, Belgium, France, Italy, Netherlands, United Kingdom, Spain and Sweden), for the purpose of studying the possibility of building a

multinational gaseous diffusion enrichment plant (Eurodif), will pursue its work during 1973 in order to complete it by early 1974 at the latest. It is expected that a preliminary report will be drawn up in the first few months of 1973.

Finally, pursuant to the tripartite agreement between Britain, the Netherlands and West Germany, for setting up uranium enrichment plants using the method of ultracentrifugation, the two pilot plants at Almelo, Netherlands, and the one at Capenhurst, Great Britain, came into operation during 1972. It is estimated that the combined production of these three plants will reach 100,000 kg SWU by the end of 1973.

In connection with supplies of enriched uranium from the United States, the Commission and the American Government signed, on 20 September 1972, an amendment to the Euratom/US cooperation agreement. The amendment concerns the updating of supply clauses, and provides, among other things, for some flexibility in supply procedures, giving Community industry the faculty of carrying out fuel element manufacture and conversion operations for American customers. The amendment is currently before the American Congress for ratification.

Furthermore, the Community took the necessary steps with the American authorities to obtain an increase in its supply quota of 215 t of U^{235}. This increase, which must be approved by the Congress, will be sufficient to meet the requirements of reactors needing fuel before the end of 1976 and also those of the Community manufacturing and converting industry.

During the first nine months of 1972, the Supply Agency concluded twelve toll enrichment contracts with USAEC, involving a total of a little over 37 tonnes of U^{235}; it also imported, under earlier

contracts, about 400 t of uranium enriched to between 0.7 and 5% for use in power reactors, and 750 kg of uranium enriched to between 5 and 94% for research purposes. At the end of September 1972, about 197 of the 215 t authorized by the US Congress had been committed by contract.

Finally, mention must be made of the contract now being negotiated between the USAEC and Japanese electricity producers.

This contract is of interest because of the quantities involved (10 million kg SWU) and because of the payment clauses. Whereas the deliveries are to be spread out between 1973 and 1981, payment will be made in full as soon as the contract is signed (probably mid-1973) and at the price ruling at that time.

3. Plutonium

Generally speaking, research into plutonium recycling is being actively pursued by all Community producers of nuclear electricity. This will not fail to have a favourable, if limited, impact on requirements of enriched uranium. The plutonium market is beginning to show signs of activity. For instance, the fuel recovered from one nuclear plant was sold elsewhere in the Community in 1972. Not counting contracts for small quantities, industrial transactions involving about 140 kg of plutonium were operated in 1972.

IV. Conclusions: Problems and outlook in 1973

A. Enlargement of the common market

The year 1973 will be marked by the admission to the Community of three countries whose energy supply situations are in many ways similar, but in other ways very different from the situation in the

original member countries[1]. It is probable, however, that the effects of the enlargement of the Community will only be felt in the medium term: market interpenetration will take place gradually and structures will not be adjusted to the new dimensions for some time.

One important aspect of the enlargement is the question of hydrocarbon output and the hopes attached to further prospecting in the continental shelf areas of the new Member States. Although making no more than a modest contribution as yet, these resources are tending to reduce Community reliance on imports.

With regard to coal, the collieries of the original member countries must bear in mind the possible penetration of UK coal into the markets of the Six.

3. Growth of demand and conditions of supply

The Community energy market was relatively calm in 1972. This was primarily due to the moderate growth of demand after a year of virtual stagnation.

A recovery may be expected in 1973 but, as graph 4 shows, the level of demand may remain below the level suggested by the overall trend forecast for 1970-75. At least this may be the case in the original six member countries.

This delayed development, which is the result of poor growth in 1971 and 1972, must not however be misleading.

First of all, it is not impossible that the economy may improve abruptly in 1974 and 1975 and bring demand back to a healthy level.

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[1] Graph 3 gives some indication of the effects of enlargement on the structure of the energy balance sheet.

Such a hypothesis would require a yearly growth of demand of 7.8% in the original Member States, which does not seem exceptionally high since it is below the figures for 1968, 1969 and 1970.

Furthermore, the outlook for 1970-75 fits into a larger perspective in which there are even greater chances of making up lost ground.

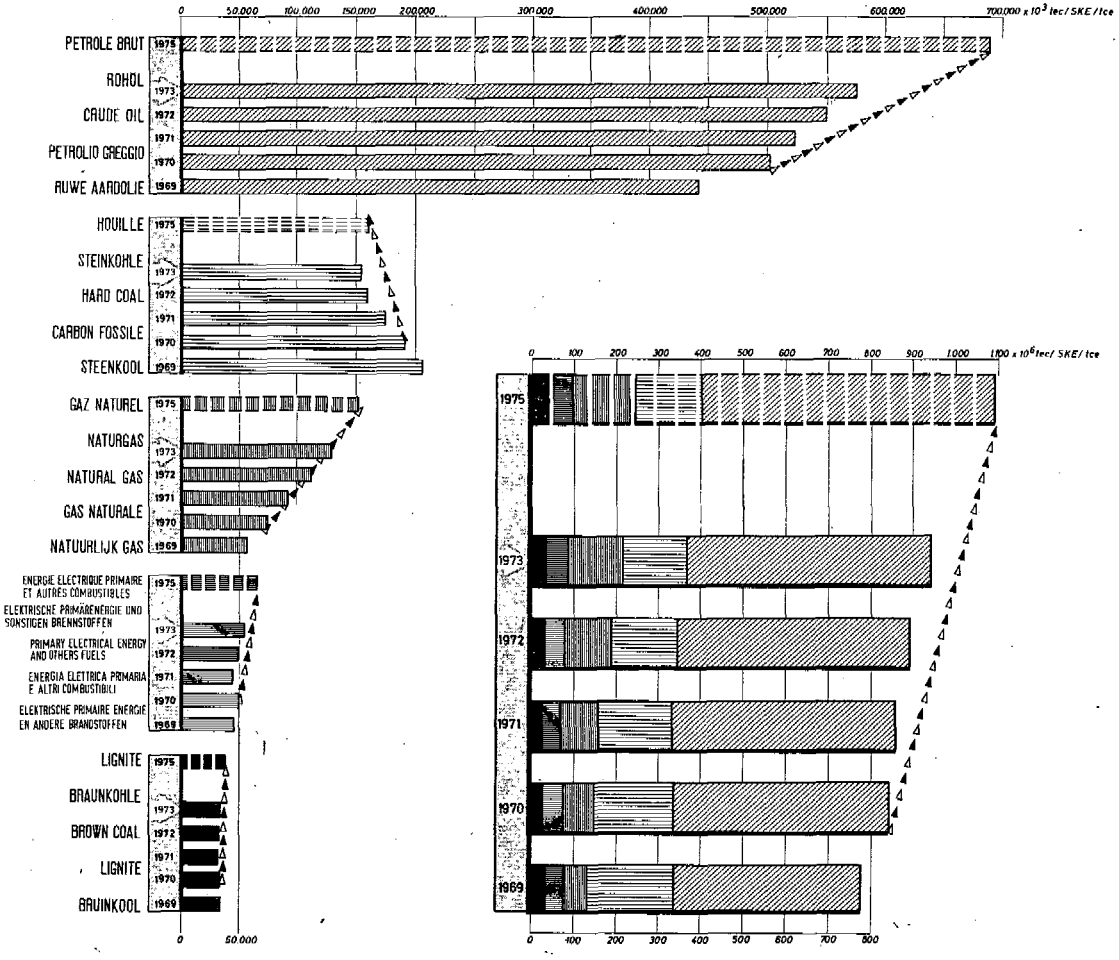
Finally, graph 4 indicates that a strong revival of demand would mainly concern petroleum, which would have to cover almost all the extra requirements as supplies of other sources of energy are less elastic.

The satisfactory nature of current supplies from the quantitative point of view is thus only relative, and the situation remains at the mercy of accidental circumstances such as those which combined against coking coal in 1969, or against petroleum in 1970-71. If such circumstances occurred, severe tensions could be created on the markets.

The price trend generally reflected the fairly relaxed market situation in 1972, but also suffered from the widely prevailing inflationary movement. In this connection, mention must be made of the Council resolution to keep price rises below a limit of 4% in 1973. This objective will be difficult to achieve in the energy sector for several reasons.

For one thing, Community coal stands at a disadvantage with relation to coal imported from non-member countries. Continually rising costs mean that the collieries are finding it increasingly difficult to meet their overheads and to adjust output to demand.

As regards crude petroleum, 1972 was marked by further changes in the pattern of supply. This trend had already begun in 1971.



CONSOMMATION INTERIEURE BRUTE D'ENERGIE PRIMAIRE

PREVISIONS 1973 ET PERSPECTIVES 1970-1975

Communauté des 6.

BRUTTO-INLANDSVERBRAUCH VON PRIMÄRENERGIE

AUSSICHTEN 1973 UND PERSPEKTIVEN 1970-1975

Gemeinschaft der 6.

GROSS INLAND CONSUMPTION OF PRIMARY ENERGY

FORECASTS 1973 AND PROSPECTS 1970-1975

Community of 6.

CONSUMO INTERNO LORDO DI ENERGIA PRIMARIA

PREVISIONI 1973 E PROSPETTIVE 1970-1975

Comunità dei 6.

BRUTO-BINNENLANDSVERBRUIK VAN PRIMAIRE ENERGIE

VOORUITZICHTEN 1973 EN PROGNOSES 1970-1975

Gemeenschap der 6.

Although the increased cost of crude petroleum had only a slight impact on the prices of petroleum products, particularly due to the lack of tension on the world market, this related situation is only relative and may be tightened by various factors now making their appearance.

On the one hand, US imports from the eastern hemisphere are increasing rapidly, at a pace which may continue to exceed forecasts made a year or so ago. These imports consist mainly of light crude from North Africa and low-sulphur products generally derived from this crude.

Secondly, in some countries of Africa and the Middle East, production is running closer to capacity than in the past. In certain cases this is due to technical factors involved in the mining or dispatching operations, and in others to restrictions imposed by the authorities.

It is also to be expected that in future operators will attempt to pass on to the consumer the increasing pressure placed on their own profit margins. The market is thus exposed to possible price increases, which could be high if demand rose strongly, or if supplies of crude petroleum from certain sources were cut back or interrupted.

In this respect, it has been seen that the market is not only sensitive to contractions of total supplies of crude petroleum, such as those which occured in 1967 and in 1970-71: in 1972, the pattern of availability of various qualities of crude was modified, producing repercussions on the pattern of production of the refineries, and thereby contributing to a rise in the prices of certain products despite the general absence of tension elsewhere.

In view of this situation, one particular aspect of the security of supply must be underlined, namely that, in addition to ensuring overall coverage of requirements, it is essential for the refineries to organize their production in relation to the trend of supply, so that a qualitative balance is assured between the various products in demand on the market.

Annex 1

Additional information about petroleum supplies

1. Nationalization of the Iraq Petroleum Company

In February 1972, the rate of output of the IPC in northern Iraq (Kirkuk deposit) was reduced by 30 to 40%. According to the company, this drop in production was due to the fact that supplies were plentiful and freight rates low, making petroleum cheaper from the Persian Gulf.

On 16 May, the Government of Iraq addressed an ultimatum to the IPC asking it to resume production at the previous rate, to establish a schedule of steady output and to enable the national company to buy up any surplus.

As no agreement was reached, the Iraq Government decided on 1 June to nationalize the Kirkuk deposit and the pipelines to Banias and Tripolis. Shortly afterwards, anxious to foster friendly relations with France, it signed a ten-year outline agreement with the French Government to allow the CFP, with a 23.75% share in the IPC, withdrawal rights corresponding to this percentage in the future production of Kirkuk.

Since then, negotiations have been under way between the Iraq Government and the IPC on the question of compensation for the Kirkuk field and the pipelines, and also for the Rumaila field which was the subject of an earlier dispute.

In 1971, consignments of crude from the north of the country amounted to about 55 million tonnes per year. In March/April 1972 they were down to a rate equivalent to 35 million tonnes per year. After the interruption in June, deliveries gradually picked up again, and in September were apparently back to their March/April level. But their destination was different: a third of the deliveries went to the CFP and two thirds to new customers, mainly in East European countries.

2. Kuwait and Libya

In April, the Kuwait Government officially informed the shareholding companies of the Kuwait Oil Company that production should not exceed 150 million tonnes per year in 1972, pending a new estimate of the reserves by an independent bureau of geologists.

In Libya, the limitation of production decided by the government at the beginning of 1971, as part of its policy to conserve resources, is still being maintained and deliveries are greatly reduced.

3. Participation

Shortly after the conclusion of the agreements of Teheran and Tripoli early in 1971, the producer countries applies for direct participation in the oil companies of the Middle East. After preliminary contacts, the negotiations began in January 1972. The points up for discussion were the compensation to be paid to the companies, the terms for buying up the fraction of petroleum reverting to the State and the successive stages by which the producer States could increase their participation.

A basic agreement was reached on 5 October 1972 in New York, stipulating that in the first stage the producer countries could acquire, on 1 January 1973, a 25% share in the production activities of the companies (including exploration, working, pipelines, production and storage facilities, shipping and exporting processes, both for crude petroleum and for natural gas). The share may increase gradually to 51% in 1983.

The agreement provides that payment for the "share" transferred to the producer States will be calculated on the accountable value of the assets, adjusted to an index set by an independent agency. The price for crude reverting to the State is set at 20-30% above the cost, inclusive of tax.

One month after the agreement was concluded in New York, four States round the Persian Gulf (Saudi Arabia, Kuwait, Abu-Dhabi and Qatar) had accepted the main lines of it, subject to the negotiation of certain implementing procedures. Iraq reserved its reply pending the settlement of its dispute with the Iraq Petroleum Company.

On the basis of the buy-back prices negotiated by two of the countries, it may be estimated that the average cost of crude for concessionary companies would increase by 7-13 cents per cask, depending on quality. This represents a 5-8% increase on the cost after payment of taxes and charges, as the reference price includes the increases applicable as from 1 January 1973 by virtue of the Teheran and Geneva agreements.

Furthermore, at the beginning of October 1972, an agreement was reached between the Libyan Government and the ENI company on procedures for working the new deposit of Abu-Tiffel, discovered some years earlier by the concessionary company. Under the terms of this agreement, the Libyan State is to hold a 50% share in the producer company, and to bear half the cost of the research undertaken so far.

4. The attitude of Iran

The legal position of the oil companies in Iran (the Consortium) is basically different from that of the other producer countries as the claim and other property of the former Anglo-Iranian Oil Company were nationalized in 1954. An arrangement had been found to enable the Consortium to operate in Iran on the claim belonging to the National Iranian Oil Company.

Negotiations took place between the Consortium and the NIOC to establish new procedures for working the deposits and buying the crude.

In the first stage, the following principles had been adopted:

1. extension of the 1954 agreement, originally due to expire in 1979, until 1994;

2. yearly increase of 10% in production by the Consortium, to attain a volume of 400 million tonnes/year before 1990, and

3. recognition of NIOC's right to purchase more than 20 million tonnes/year from the Consortium towards 1980, on relatively advantageous terms.

During December 1972 these principles were disputed by the Iranian Government, and a new basis for agreement must be sought.

Annex 2

TABLES

Table 1. Elements determining the trend of total requirements in the Community of the Six

	In thousands of tce			Variations in %	
	1971	1972	1973	1972-1971	1973-1972
Internal consumption	858,822	894,688	941,121	+ 4.2	+ 5.2
Bunkers, exports	120,997	126,825	127,566	+ 4.8	+ 0.6
Statistical difference and variations in stocks	5,440	704	- 272	-	-
Total	985,259	1,022,217	1,068,415	+ 3.7	+ 4.5

Table 2. Coverage of total requirements of the Community of the Six

	In thousands of tce			Distribution in %			In millions of tpe		
	1971	1972	1973	1971	1972	1973	1971	1972	1973
Solid fuels	206,188	194,356	189,872	20.9	19.0	17.8	144.3	136.1	132.9
Liquid fuels	642,740	666,730	694,315	65.2	65.2	65.0	449.9	466.7	486.0
Natural gas	90,345	110,630	128,302	9.2	10.8	12.0	63.3	77.4	89.8
Primary electricity	44,435	48,816	54,241	4.5	4.8	5.1	31.1	34.2	38.0
(of which nuclear)	(6,106)	(8,777)	(12,117)	(0.6)	(0.8)	(1.1)	(4.2)	(6.1)	(8.5)
Other products	1,551	1,685	1,685	0.2	0.2	0.1	1.1	1.2	1.2
Total	985,259	1,022,217	1,068,415	100	100	100	689.7	715.6	747.9

Table 1 bis. Elements determining the trend of total requirements in the Community of the Nine

	In thousands of tce			Variations in %	
	1971	1972	1973	1972-1971	1973-1972
Internal consumption	1,198,028	1,237,037	1,312,653	+ 3.3	+ 6.1
Bunkers, exports	133,673	140,416	141,902	+ 5.0	+ 1.1
Statistical difference and variations in stocks	17,471	- 969	3,160	-	-
Total	1,349,172	1,376,484	1,457,715	+ 2.0	+ 5.9

Table 2 bis. Coverage of total requirements of the Community of the Nine

	In thousands of tce			Distribution in %			In millions of tpe		
	1971	1972	1973	1971	1972	1973	1971	1972	1973
Solid fuels	341,713	306,024	307,332	25.3	22.2	21.1	239.2	214.2	215.1
Liquid fuels	834,377	862,854	909,967	61.8	62.7	62.4	584.0	604.0	637.0
Natural gas	114,223	143,223	169,253	8.5	10.4	11.6	80.0	100.2	118.5
Primary electricity	56,270	61,515	68,205	4.2	4.5	4.7	39.4	43.1	47.7
(of which nuclear)	(16,519)	(19,767)	(24,375)	(1.2)	(1.4)	(1.7)	(11.6)	(13.8)	(17.1)
Other products	2,589	2,868	2,958	0.2	0.2	0.2	1.8	2.0	2.1
Total	1,349,172	1,376,484	1,457,715	100	100	100	944.4	963.5	1020.4

Table 3. Overall energy balance sheet of the Community of the Six

A. Requirements				B. Coverage of requirements			
in millions tce	1971	1972	1973	in millions tce	1971	1972	1973
1. Internal consumption	858.82	894.69	941.12	1. Internal resources	335.90	348.39	359.80
solid fuels	204.05	189.53	186.21	solid fuels	186.08	175.67	166.40
liquid fuels	520.86	546.81	573.17	liquid fuels	18.61	18.57	18.57
natural gas[1]	90.59	110.42	127.98	natural gas	90.44	109.03	124.05
primary electricity[1]	43.32	47.93	53.77	primary electricity	40.77	45.12	50.78
2. Exports	82.07	86.55	86.57	2. Imports	661.57	683.65	716.33
liquid fuels	75.06	79.65	80.15	solid fuels	28.34	27.94	30.85
3. Deliveries to the Community (p.m.)	(107.71)	(112.80)	(120.36)	liquid fuels	627.32	648.16	675.75
solid fuels	(25.36)	(23.41)	(21.28)	gas	0.69	2.17	4.58
liquid fuels	(59.43)	(58.45)	(58.79)	electricity	5.22	5.38	5.15
gas	(19.25)	(26.81)	(36.26)	3. Supplies from the Community (p.m.)	(109.56)	(113.10)	(120.69)
electricity	(3.67)	(4.13)	(4.03)	solid fuels	(25.48)	(23.41)	(21.28)
4. Bunkers	38.93	40.27	41.00	liquid fuels	(60.87)	(58.45)	(58.79)
5. Variations in stocks (processers + consumers)	+ 3.81	+ 0.95	-	gas	(19.29)	(26.81)	(36.26)
6. Statistical difference	+ 1.63	- 0.24	- 0.27	electricity	(3.92)	(4.43)	(4.36)
7. Total requirements	985.26	1022.22	1068.42	4. Variations in stocks (producers and importers)	- 12.21	- 9.82	- 7.71
				5. Coverage of requirements	985.26	1022.22	1068.42

[1] Including balance of external trade

Table 3bis. Overall energy balance sheet of the Community of the Nine

A. Requirements				B. Coverage of requirements			
in millions tce	1971	1972	1973	in millions tce	1971	1972	1973
1. Internal consumption	1198.03	1237.04	1312.65	1. Internal resources	506.85	501.75	544.56
solid fuels	333.58	300.15	303.16	solid fuels	320.98	283.35	295.77
liquid fuels	694.26	732.86	772.34	liquid fuels	18.91	18.85	18.86
natural gas[1]	114.47	143.01	168.93	natural gas	113.22	140.47	163.84
primary electricity[1]	55.72	61.02	68.22	primary electricity	53.74	59.08	66.09
2. Exports	85.57	90.81	91.13	2. Imports	858.15	886.70	935.59
liquid fuels	77.87	83.09	83.43	solid fuels	33.18	34.08	33.67
3. Deliveries to the Community (p.m.)	138.58	143.00	151.91	liquid fuels	818.11	844.00	891.11
solid fuels	28.47	25.74	24.13	gas	1.79	3.31	5.73
liquid fuels	86.77	85.83	87.01	electricity	5.07	5.31	5.08
gas	19.25	26.81	36.26	3. Supplies from the Community (p.m.)	140.45	143.29	152.23
electricity[2]	4.09	4.62	4.51	solid fuels	28.62	25.74	24.13
4. Bunkers	48.10	49.59	50.77	liquid fuels	88.20	85.83	87.01
				gas	19.29	26.81	36.26
				electricity	4.34	4.91	4.85
5. Variations in stocks (processers + consumers)	10.69	1.97	-	4. Variations in stocks (producers and importers)	- 15.83	- 11.97	- 22.43
6. Statistical difference	6.78	- 2.93	3.16				
7. Total requirements	1349.17	1376.48	1457.72	5. Coverage of requirements	1349.17	1376.48	1457.72

[1] Including balance of external trade

[2] + Other primary products

Table 4. Internal consumption of energy from primary and equivalent sources (Community of the Six)

	Volume in millions of tce			Variations in %		Proportion of total in %			Volume in millions of tpe (approximation)		
	1971	1972	1973	1972-71	1973-72	1971	1972	1973	1971	1972	1973
Coal and equivalents	172.93	157.43	152.44	- 9.0	- 3.2	20.1	17.6	16.2	121.1	110.2	106.7
Lignite and equivalents	31.12	32.10	33.76	+ 0.9	+ 5.2	3.6	3.6	3.6	21.8	22.5	23.6
Crude oil and equivalents	520.86	546.81	573.17	+ 5.0	+ 4.8	60.7	61.1	60.9	364.6	382.8	401.2
Natural gas	90.59	110.42	127.98	+21.9	+15.9	10.6	12.3	13.6	63.4	77.3	89.6
Primary electricity and others [2]	43.32	47.93	53.77	+10.7	+12.2	5.0	5.4	5.7	30.3	33.5	37.7
Total [1]	858.82	894.69	941.12	+ 4.2	+ 5.2	100	100	100	601.2	626,3	658.8

[1] The total may differ from the sum of the separate items due to rounding off.

[2] Including balance of foreign trade

Table 4 bis. Internal consumption of energy from primary and equivalent sources (Community of the Nine)

	Volume in millions tce			Variations in %		Proportion of total in %			Volume in millions of tpe (approximation)		
	1971	1972	1973	1972-71	1973-72	1971	1972	1973	1971	1972	1973
Coal and equivalents	302.43	268.05	269.40	- 11.4	+ 0.5	25.2	21.7	20.5	211.7	187.6	188.6
Lignite and equivalents	31.15	32.10	33.76	+ 3.0	+ 5.2	2.6	2.6	2.6	21.8	22.5	23.6
Crude oil and equivalents	694.26	732.86	772.34	+ 5.6	+ 5.4	57.9	59.2	58.8	486.0	513.0	540.6
Natural gas	114.47	143.01	168.93	+ 24.9	+ 18.1	9.6	11.6	12.9	80.1	100.1	118.2
Primary electricity and others [2]	55.72	61.02	68.22	+ 9.5	+ 11.8	4.7	4.9	5.2	39.0	42.7	47.8
Total [1]	1198.03	1237.04	1312.65	+ 3.3	+ 6.1	100	100	100	838.6	865.9	918.8

[1] The total may differ drom the sum of the separate items due to rounding off.

[2] Including balance of foreign trade

Table 5. Variations in internal consumption by sector - Community of Six

Sector	1971		1972 Estimates		1973 Forecasts	
	Fuel 10^6 tce	Electricity TWh	Fuel 10^6 tce	Electricity TWh	Fuel 10^6 tce	Electricity TWh
Industry	208,642	302,052	218,070	320,518	234,439	340,228
iron and steel	67,991	50,880	69,252	53,269	74,826	56,396
other industries	140,651	251,172	148,818	267,249	159,613	283,832
Transport	108,381	19,458	115,976	20,187	121,970	20,980
road	91,957	-	98,127	-	103,499	-
other	16,424	19,458	17,849	20,187	18,741	20,980
Domestic sector	213,596	204,541	218,496	224,837	224,986	245,568
Not broken down	2,002	-	1,800	-	1,765	-
End consumers[1]	532,621	526,026	554,342	565,542	583,160	606,776
Consumption by energy sector	46,508	57,162	48,040	59,756	50,789	62,770
Processing losses	6,787		5,362		6,026	
Power plants	167,071	- 492,831[3]	173,988	- 523,570[3]	179,472	- 552,136[3]
Distribution losses	2,080	39,123	2,072	41,786	2,284	44,588
Non energy products	61,989	-	64,634	-	67,301	-
Hydroelectric, geothermal and nuclear plants + balance of foreign trade[2]	41,766 ←	129,480	46,250 ←	143,514	52,089 ←	161,998
Total internal consumption[1]	858,822		894,688		941,121	

[1] Possible differences due to rounding off

[2] Electricity was converted into tce on the basis of mean specific consumption

[3] Balance sheet of primary energy (i.e., electricity consumption by secondary energy producers, less secondary production of electricity)

Table 6. Fuel oil prices ruling at Genoa and Rotterdam - November 1970 - September 1972

	Heavy fuel oils[2]			Domestic fuels (1 to 1.6° Engler deliveries of over 5,000 l)[3]		
	tax-free	incl. of tax	tax	tax-free	incl. of tax	tax[4]
Rotterdam						
November 1970	19.1-21.1	23.0-25.0	3.9	31.9	33.2	1.3
May 1971	21.3-23.3	25.2-27.2	3.9	37.0	38.5	1.5
October 1971	11 -13	15 -17	3.9	28-30	29.31	1.2
May 1972	12.5	16.4	3.9	24.3-29.4	25.5-30.6	1.2
July 1972	12.5	16.6	4.1	23.1-28.2	24.3-29.4	1.2
September 1972	13.4	17.5	4.1	22.4-27.5	23.6-28.7	1.2
Genoa						
November 1970	16.1	21.1	5.0	32.9-34.5	44.8-46.4	11.9
May 1971	20.9	22.8	1.9	36.1-37.3	48.0-49.6	11.9
October 1971	16.7-17.0	18.6-18.9	1.9	33.7	45.6	11.9
May 1972	20.5	22.4	1.9	40.3	52.2	11.9
July 1972	19.6	21.5	1.9	38.3	50.2	11.9
September 1972	18.8	20.7	1.9	36.4	48.3	11.9

[1] 1970-1971 $/t : $1 = 3.62 Fl = Lit. 625 ; 1972 : E (u.a.)/t : 1 E = 3.52 Fl = Lit. 631.34

[2] Refinery price

[3] Franco price

[4] Netherlands : VAT of 4 % to be paid by private consumers. Professional consumers pay combined charge of 4 % VAT and excise duty at approximately 14.5 u.a./t ; but as VAT is deductable, the actual fiscal charge is that of excise duty.

Table 7. Natural gas supplies in the Community

	1971			1972 (Estimates)			1973 (Forecasts)		
	$10^9 m^3$ [1]	Increase 1971-70 %	% of the Community	$10^9 m^3$ [1]	Increase 1972-71 %	% of the Community	$10^9 m^3$ [1]	Increase 1973-72 %	% of the Community
Germany									
Production	15.7	+ 19.8		18.0	+ 14.6		18.4	+ 2.2	
Imports from Netherlands	6.4	+ 72.9		10.2	+ 59.4		15.8	+ 54.9	
Imports from USSR	-	-		-	-		0.5	-	
Exports to non-member countries	-	-		0.1			0.2		
Quantities available for internal use	22.1	+ 31.5	21.2	28.1	+ 27.1	21.5	34.5	+ 22.8	22.4
France									
Production	7.9	+ 2.6		8.0	+ 1.3		8.0	-	
Imports from Netherlands	4.7	+ 51.6		6.1	+ 29.8		7.7	+ 26.2	
Imports from Algeria	0.6	-		0.7	+ 16.6		1.5	+114.2	
Quantities available for internal use	13.2	+ 15.8	12.6	14.8	+ 12.1	11.3	17.2	+ 16.2	11.2
Italy									
Production	14.6	+ 2.1		15.5	+ 6.2		16.1	+ 3.9	
Imports from Libya	0	-		1.3	-		2.1	61.5	
Quantities available for internal use	14.6	+ 2.1	14.0	16.8	+ 15.1	12.9	18.2	+ 8.3	11.8

[1] m^3 converted conventionally, where appropriate, to the common PCS of 8400 Kcal/m^3

Table 7 bis. Natural gas supplies in the Community

	1971			1972 (Estimates)			1973 (Forecasts)		
	$10^9 m^3$ [1]	Increase 1971-70 %	% of the Community	$10^9 m^3$ [1]	Increase 1972-71 %	% of the Community	$10^9 m^3$ [1]	Increase 1973-72 %	% of the Community
Netherlands									
Production	43.8	+ 38.2		57.5	+ 31.3		70.1	+ 21.9	
Exports to Community	17.4	+ 54.0		24.2	+ 39.1		32.7	+ 35.1	
Quantities available for internal use	26.4	+ 29.4	25.3	33.3	+ 26.1	25.5	37.4	+ 12.3	24.4
Belgium - Luxembourg									
Production	0.1	-		0	-		0	-	
Imports from Netherlands	6.3	+ 40.0		7.7	+ 22.2		9.0	+ 16.8	
Quantities available for internal use	6.4	+ 39.1	6.1	7.7	+ 20.3	6.1	9.0	+ 16.8	6.0
United Kingdom									
Production [2]	20.7	+ 65.6		28.6	+ 38.2		36.2	+ 26.6	
Imports from Algeria	1.0	-		1.0	-		1.0	-	
Quantities available for internal use	21.7	+ 60.7	20.8	29.6	+ 36.4	22.7	37.2	+ 25.7	24.2
Enlarged Community									
Production [2]	102.8	+ 29.5		127.6	+ 24.1		148.8	+ 16.6	
Imports	1.6	-		3.0	+ 87.5		5.5	+ 70.0	
Exports	0	-		0.1	-		0.2	+100.0	
Quantities available for internal use [2]	104.4	+ 28.9	100.0	130.5	+ 25.0	100.0	153.7	+ 17.8	100.0

[1] m^3 converted conventionally, where appropriate, to the common PCS of 8400 Kcal/m^3

[2] Not including possible production from Danish off-shore deposits in 1973

Table 8. Coverage of electricity requirements - Community of the Nine

	Total (TWh)			Variation (%)		Distribution (%)		
	1971	1972 (Estimates)	1973 (Forecast)	1972-71	1973-72	1971	1972 (Estimates)	1973 (Forecast)
Energy required[1]	848.8	903.0	961.6	+ 6.4	+ 6.5	93.5	93.6	93.4
Requirements of auxiliary plants and pumping	58.9	62.4	68.5	+ 5.2	+ 9.7	6.5	6.4	6.6
Gross internal consumption	907.7	965.4	1030.1	+ 6.4	+ 6.7	100	100	100
Covered by :								
Imported energy	5.2	4.9	5.4	- 5.8	+10.2	0.6	0.5	0.5
Primary production[2]	154.0	169.7	191.1	+10.2	+12.6	17.0	17.6	18.6
(of which nuclear)	(46.5)	(56.4)	(70.2)	(+21.2)	(+24.4)	5.1)	(5.8)	(6.8)
Conventional power plant production	743.8	785.6	827.2	+ 5.6	+ 5.3	81.9	81.4	80.3
Pumping plant production	4.7	5.2	6.4	+10.6	+23.0	0.5	0.5	0.6

[1] Internal consumption and distribution loss

[2] Nuclear, hydroelectric and geothermal

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