Supplement

ENERGY IN EUROPE

Short term energy outlook for the European Community

AUGUST 1990

Commission of the European Communities □ Directorate-General for Energy

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Luxembourg: Office for Official Publications of the European Communities, 1990

Catalogue number: CB-BR-90-001-EN-C

Printed in Belgium

PREFACE

This short-term Energy outlook was prepared before the events of early August when Iraq invaded Kuwait. Clearly the implications of this event are only unfolding and the Commission is monitoring the situation closely and a revised outlook for 1991 will be published during the Autumn.

In the meantime the present issue includes important adjustments to the historic series and in particular for that of 1988. In addition particular attention has been paid to the influence of weather conditions on the level of energy consumption and an analysis of recent winters has been undertaken to identify the impact assumptions about weather conditions can have on energy forecasts.

Short-term energy outlook for the European Community [1]

According to provisional data, total primary energy demand in the Community during 1989 increased by about 2%. The main factor influencing energy demand was once again and for the third consecutive winter, the extremely mild temperature in Europe. For this reason energy demand growth this year is now expected to be more or less the same as in 1989, around 2%.

On the assumptions of a return to "normal" weather conditions by the fourth quarter of 1990, continuing economic growth (3.1% for 1991) and stable energy prices, Community energy demand could grow by more than 3% next year.

After a sharp increase last winter, oil prices have declined continuously and could remain weak for the rest of this year, leading to an increase in oil deliveries of about 1.5% this year and more than 2% in 1991. In spite of the mild weather conditions, demand for natural gas continued to be strong. After an increase of 4.5% in 1989, demand could grow by 4% in 1990 and, on the basis of a "normal" climate, by 8% in 1991.

If there is a "normal" winter, electricity demand could also increase considerably this year (3.3%) and faster still in 1991 (4.7%). Given the low level of hydro-electricity and the slow-down of nuclear by 1991, demand for solid fuels could reverse the decline this year and grow again in 1991.

A summary of the main assumptions used in the preparation of this short term energy outlook (STEO) and of its main results is presented in Table 1.

Table 1: EUR-12
Summary of Main Assumptions and Results
(Last Revision: 12 July 1990)

							Annual Percentage Change					
	1986	1987	1988	1989	*1990*	*1991*	1986	1987	1988	1989	*1990*	*1991*
I.MAIN ASSUMPTIONS												
GDP (1985=100)	102.7	105.7	109.8	113.4	*116.8*	*120.4*	2.7	2.9	3.9	3.3	*3.0*	*3.1*
Private Consumption (1985=100)	104.2	108.4	112.9	116.4	*120.2*	*123.6*	4.1	4.1	4.2	3.0	*3.3*	*2.8*
Industrial Production (1985=100)	102.0	104.2	108.7	112.7	*116.6*	*120.7*	2.2	2.1	4.4	3.7	*3.4*	*3.5*
Consumer Prices (1985=100)	103.5	106.9	110.7	116.4	*122.0*	*127.2*	3.5	3.2	3.6	5.2	*4.8*	*4.3*
Exchange Rate ECU/USD	0.983	1.154	1.184	1.102	*1.219*	*1.223*	29.0	17.4	2.5	-6.9	*10.6*	*0.4*
Imported Crude Oil Price												
(USD / bbl)	14.51	17.87	14.78	17.65	*17.62*	*18.25*	-47.3	23.2	-17.3	19.5	*-0.2*	*3.6*
(ECU / bbl)	14.91	15.50	12.48	16.04	*14.46*	*14.92*	-59.0	3.9	-19.5	28.5	*-9.8*	*3.2*
Degree Days	2710	2774	2409	2376	*2353*	*2697*	13	77	-288	-321	*-344*	*0*
II.MAIN RESULTS												
Oil												
Total Inland Deliveries (Mt)	441.1	442.3	450.6	453.9	*460.8*	*470.4*	2.8	0.3	1.9	0.7	*1.5*	*2.1*
Hard Coal												
Total Inland Deliveries (Mt)	327.3	319.0	310.2	310.9	*308.7*	*311.6*	-0.1	-2.5	-2.7	0.2	*-0.7*	*0.9*
Total Solids												
Gross Inl.Consumption (Mtoe)	231.5	231.2	227.0	230.5	*228.7*	*232.8*	-3.1	-0.1	-1.8	1.5	*-0.8*	*1.8*
Natural Gas												
App. Gross Consumption (Mtoe)	186.8	198.9	191.2	199.8	*207.7*	*224.3*	1.3	6.5	-3.9	4.5	*4.0*	*8.0*
Electricity												
Consumpt. Intern.Market (Twh)	1416.3	1464.4	1505.0	1543.8	*1595.1*	*1670.8*	2.9	3.4	2.8	2.6	*3.3*	*4.7*
Nuclear Heat												
Production (Twh)	1537.5	1580.4	1694.9	1829.0	*1913.9*	*1926.1*	6.8	2.8	7.2	7.9	*4.6*	*0.6*
Total Energy												
Gross Inl.Consumption (Mtoe)	1043.2	1062.6	1076.1	1095.9	*1116.2*	*1151.1*	1.4	1.9	1.3	1.8	*1.8*	*3.1*
Energy Ratio (1984 = 100)												
Total Gr.Inl.Consumption/GDP	100.1	99.0	96.5	95.2	*94.1*	*94.1*	-1.3	-1.0	-2.6	-1.4	*-1.1*	*0.0*

1 Manuscript complement on 20 July 1990.

Energy in 1989

According to the SOEC monthly data, apparent energy consumption during the last quarter of 1989 grew by 2.1%, resulting in a yearly growth of 2%. Given that on average the weather was even warmer than in 1988, the estimated underlying growth was of the order of 2.3%.

The 2% growth is lower than our last forecast of 2.5% which assumed "normal" weather in the fourth quarter. It is however closer to our May forecast which was based on a less optimistic assumption of economic growth.

It should be noted however, that serious statistical discrepancies between the monthly and annual figures of the SOEC for 1988 (see Box A), make the interpretation of 1989 monthly data difficult. On the basis of annual data for 1988, the estimated growth of inland consumption in 1989 is lower (1.8%).

1988 REVISITED

According to SOEC monthly data, primary energy demand in the Community in 1988 increased by 0.3% (see Eurostat, Rapid Reports, Energy and Industry, 1990/8). According to annual data, published for the first time in December 1989, energy demand increased by 1.3% (see Eurostat, Energy, Statistical Yearbook, 1988).

In fact, the difference between the sum of monthly data and annual data, that was only 3.5 Mtoe in 1987, is 14.3 Mtoe in 1988. In the oil sector the difference is 11 Mtoe, explained by underestimated monthly figures of oil imports, in particular in Italy (5.5 Mtoe) and Spain (2.6 Mtoe).

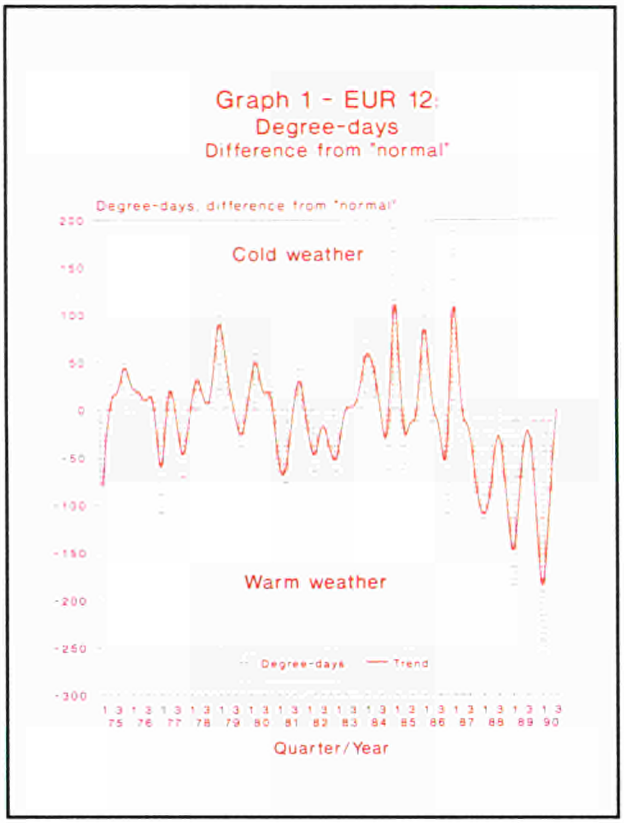
TABLE A: 1988 REVISITED

in Mtoe	Monthly data		Annual data	Difference	for memory
	SOEC Nov-89	SOEC Jul-90	SOEC Jul-90	SOEC Jul-90	STEO Jul-90
1987					
1. Solids	230.8	231.9	231.2	-0.7	231.7
2. Oil	468.8	471.7	476.6	4.9	475.8
3. Gas	199.0	199.0	198.0	-1.0	198.9
4. Heat	137.7	137.7	138.1	0.4	137.8
5. Electricity	16.5	16.5	16.5	0.0	16.5
6. Other	2.3	2.3	2.2	-0.1	2.2
TOTAL	1055.1	1059.0	1062.6	3.5	1062.9
1988					
1. Solids	225.8	226.3	227.0	0.7	226.8
2. Oil	473.3	476.3	487.3	11.0	480.6
3. Gas	191.2	191.1	192.5	1.4	191.2
4. Heat	147.5	147.5	148.7	1.2	147.6
5. Electricity	18.3	18.3	18.3	0.0	18.3
6. Other	2.3	2.3	2.2	-0.1	2.2
TOTAL	1058.4	1061.8	1076.1	14.3	1066.7
Growth rate in %					
1. Solids	-2.2%	-2.4%	-1.8%		-2.1%
2. Oil	1.0%	1.0%	2.3%		1.0%
3. Gas	-3.9%	-4.0%	-2.8%		-3.9%
4. Heat	7.2%	7.2%	7.7%		7.1%
5. Electricity	10.6%	10.5%	10.6%		10.5%
6. Other	0.0%	0.0%	-0.3%		-0.3%
TOTAL	0.3%	0.3%	1.3%		0.4%

Source: SOEC (Sirene) and Table 4

As long as annual data for 1989 are not available, it is impossible to know if the monthly figures continue to be underestimated or not. However, to balance the statistical error appearing in the 1989 "balance sheet of petroleum products" of SOEC (about 7 million tonnes), we introduced an adjustment to the oil data for 1989, 1990 and 1991 (see Annex I and Tables 4 and 5). For this reason the rate of growth of total "Gross Inland Consumption" of energy in 1989 and 1990 is slightly different from the one of "Apparent Consumption" (Tables 8 and 9).

NOTE: This report is based on statistical data available as of 2 July and covering, with some minor exceptions, the first one or two months of 1990. In all tables observed data are presented in **boldface** characters and forecasts in *italics*.



In addition, it is clear now that the exceptional weather conditions during the last three years (Graph 1) are seriously distorting the seasonality of the European energy market, as well as resulting in a substantial energy saving. For this reason we used our "ERASME" model to estimate weather corrected figures (Box B). From this analysis it seems that the cumulative weather impact in 1988, 1989 and the first half of 1990 is of the order of 60 Mtoe (equivalent to three times the annual consumption of a country like Greece). It is clear that the interpretation of recent energy figures must be made with extreme caution.

THE IMPACT OF WEATHER CONDITIONS

In our STEO published in May 1989 we estimated the impact of the exceptionally warm weather in 1988 as some 2.3% of total primary comsumption.

Since this kind of weather (see Graph 1), which represents a major deviation from the average temperatures observed during the last 30 years in Europe (and defined as "normal" weather) has now persisted for the third consecutive winter, we considered necessary to estimate its impact on energy consumption and produce some weather corrected figures. Those are summarized in the table and the two graphs.

The estimates presented in this Box were made using the "ERASME" model and are only indicative. They show however that during 1988, 1989 and the first half of 1990 the weather impact in the Community was of the order of 20 Mtoe per year, which is almost 2% of the Community's total primary energy consumption. It also shows that energy intensity gains for this period, particularly for 1988 are misleading. Weather corrected energy consumption is much more correlated to real energy prices than the observed figures.

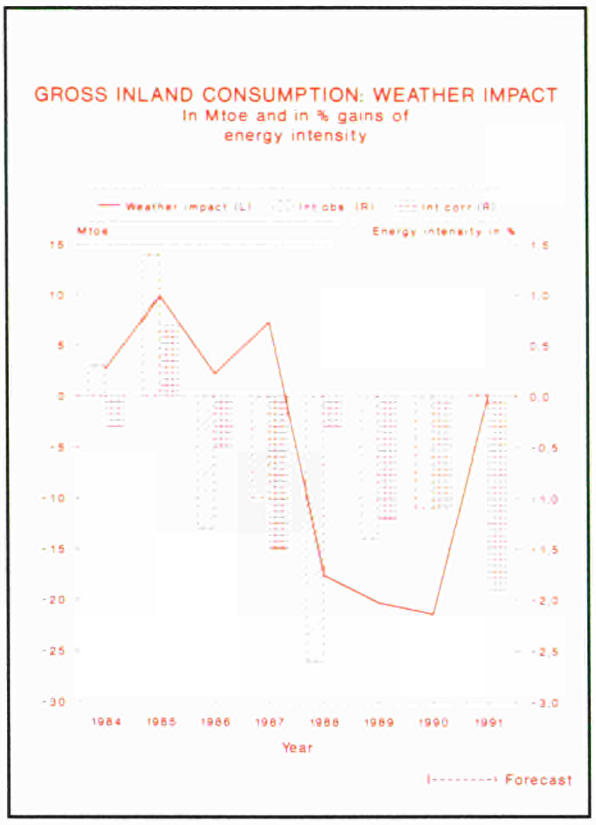
TABLE B: 1988 THE IMPACT OF WEATHER CONDITIONS

	Units	1983	1984	1985	1986	1987	1988	1989(1)	1990(1)	1991(1)	1983-87	1988-90	1983-91
Temp.,dif.from aver.	Deg-day	-51	49	106	13	77	-288	-321	-344	0	194	-953	-759
Obs.Primary Consump.	Mtoe	963.9	990.4	1029.0	1043.2	1062.6	1076.1	1095.9	1116.2	1151.1			
Annual growth rate (2)	%		2.7%	3.9%	1.4%	1.9%	1.3%	1.8%	1.8%	3.1%	2.5%	1.7%	2.2%
Weather impact	Mtoe	-3.8	2.7	9.9	2.2	7.3	-17.6	-20.3	-21.4	0.0	18.3	-59.3	-41.0
	in %	-0.4%	0.3%	1.0%	0.2%	0.7%	-1.6%	-1.9%	-1.9%	0.0%			
Weather Corr.Consump.	Mtoe	967.7	987.7	1019.1	1041.0	1055.3	1093.7	1116.2	1137.6	1151.1			
Annual growth rate	%		2.1%	3.2%	2.1%	1.4%	3.6%	2.1%	1.9%	1.2%	2.2%	2.5%	2.2%
Obs.Final Consump.	Mtoe	712.4	727.7	745.5	758.3	772.9	777.5	779.4	794.3	820.1			
Annual growth rate	%		2.1%	2.4%	1.7%	1.9%	0.6%	0.2%	1.9%	3.2%	2.1%	0.9%	1.8%
Weather impact	Mtoe	-2.8	1.9	7.6	1.7	5.6	-12.6	-14.6	-15.3	0.0	14.0	-42.5	-28.5
	in %	-0.4%	0.3%	1.0%	0.2%	0.7%	-1.6%	-1.9%	-1.9%	0.0%			
Weather Corr. Consump.	Mtoe	715.2	725.8	737.9	756.6	767.3	790.1	794.0	809.6	820.1			
Annual growth rate	%		1.5%	1.7%	2.5%	1.4%	3.0%	0.5%	2.0%	1.3%	1.8%	1.8%	1.7%
Obs.Electric.Consump.	Twh	1267.4	1322.1	1376.4	1416.3	1464.4	1505.0	1543.8	1595.1	1670.8			
Annual growth rate	%		4.3%	4.1%	2.9%	3.4%	2.8%	2.6%	3.3%	4.7%	3.7%	2.9%	3.5%
Weather impact	Twh	-4.7	3.9	10.7	1.9	7.9	-24.0	-27.2	-29.0	0.0	19.7	-80.2	-60.5
	in %	-0.4%	0.3%	0.8%	0.1%	0.5%	-1.6%	-1.8%	-1.8%	0.0%			
Weather Corr. Consump.	Twh	1272.1	1318.2	1365.7	1414.4	1456.5	1529.0	1571.0	1624.1	1670.8			
Annual growth rate	%		3.6%	3.6%	3.6%	3.0%	5.0%	2.7%	3.4%	2.9%	3.4%	3.7%	3.5%
Obs.Gas App.Consump.	Mtoe	166.9	176.2	184.5	186.8	198.9	191.2	199.8	207.7	224.3			
Annual growth rate	%		5.6%	4.7%	1.3%	6.5%	-3.9%	4.5%	4.0%	8.0%	4.5%	1.5%	3.8%
Weather impact	Mtoe	-2.2	1.6	6.0	1.5	4.5	-9.8	-11.4	-12.0	0.0	11.4	-33.2	-21.8
	in %	-1.3%	0.9%	3.3%	0.8%	2.3%	-5.1%	-5.7%	-5.8%	0.0%			
Weather Corr.Consump.	Mtoe	169.1	174.6	178.5	185.3	194.4	201.0	211.2	219.7	224.3			
Annual growth rate	%		3.3%	2.2%	3.8%	4.9%	3.4%	5.1%	4.0%	2.1%	3.5%	4.2%	3.6%
GDP	1985=100	95.3	97.6	100.0	102.7	105.7	109.8	113.4	116.8	120.4			
Annual growth rate	%		2.4%	2.5%	2.7%	2.9%	3.9%	3.3%	3.0%	3.1%	2.6%	3.4%	3.0%
Obs.Primary Intensity	1984=100	99.7	100.0	101.4	100.1	99.0	96.5	95.2	94.1	94.1			
Annual growth rate (2)	%		0.3%	1.4%	-1.3%	-1.0%	-2.6%	-1.4%	-1.1%	-0.0%	-0.2%	-1.7%	-0.7%
Corr.Primary Intensity	1984=100	100.3	100.0	100.7	100.1	98.6	98.4	97.2	96.2	94.4			
Annual growth rate (2)	%		-0.3%	0.7%	-0.5%	-1.5%	-0.3%	-1.2%	-1.1%	-1.9%	-0.4%	-0.8%	-0.8%
Obs.Final Intensity	1984=100	100.3	100.0	100.0	99.0	98.0	94.9	92.1	91.2	91.3			
Annual growth rate	%		-0.3%	0.0%	-1.0%	-1.0%	-3.2%	-2.9%	-1.1%	0.1%	-0.6%	-2.4%	-1.2%
Corr.Final Intensity	1984=100	100.9	100.0	99.2	99.0	97.6	96.7	94.1	93.2	91.5			
Annual growth rate	%		-0.9%	-0.8%	-0.2%	-1.5%	-0.9%	-2.7%	-1.0%	-1.7%	-0.8%	-1.5%	-1.2%
Obs.Electr.Intensity	1984=100	98.2	100.0	101.6	101.8	102.2	101.1	100.4	100.8	102.4			
Annual growth rate	%		1.9%	1.6%	0.2%	0.5%	-1.1%	-0.7%	0.3%	1.6%	1.0%	-0.5%	0.5%
Corr.Electr.Intensity	1984=100	98.8	100.0	101.1	101.9	102.0	103.0	102.5	102.9	102.7			
Annual growth rate	%		1.2%	1.1%	0.8%	0.1%	1.0%	-0.5%	0.4%	-0.2%	0.8%	0.3%	0.5%
Real Crude Oil Price	ECU 85/b	38.4	39.0	36.4	14.4	14.5	11.3	13.8	11.9	11.7			
Annual growth rate	%		1.5%	-6.5%	-60.4%	0.5%	-22.2%	22.1%	-13.9%	-1.1%	-21.6%	-6.5%	-13.8%

Note 1: In the absence of annual data, 1989 figures must be considered as provisional. 1990 and 1991 figures are forecasts.

Note 2: Observed growth rates in 1989 and 1990 when based on Apparent Consumption are of 2.0% and 2.1% respectively. Observed primary intensity figures are therefore -1.2% and -0.8% and corrected figures are -1.0% and -0.8% respectively.

Source: Tables 1, 2, 4, 6, and ERASME model.



The figures in this table can be compared with some national estimates. For example according to French (provisional) data the weather impact on primary energy consumption in France during 1989 was 3.1 Mtoe or 1.5%, and during the first quarter of 1990 5.2 Mtoe or 9.2%. For the same quarter the difference between observed and weather corrected electricity demand in France was 8.1 TWh or 8.5% of observed demand (source: Observatoire de l'Energie). According to British data the weather impact on total UK inland energy consumption in 1989 was 4.6 Mtoe or 2.3% (source: Department of Energy).

As usual in our outlook we assume a return to "normal" weather conditions. However this assumption now has an important impact on our forecast of energy demand for the fourth quarter of 1990 and particularly for the first quarter of 1991. The question that now arises is what would be the reaction of consumers to a "normal" winter (not to speak of a "cold" one like those we had in 1985, 1986 and 1987) after having experienced three consecutive warm winters? If they react as before, without sacrificing their comfort levels, a "normal" first quarter in 1991 could lead to an additional 15 to 18 Mtoe of primary energy consumption (between 5% and 6% of additional quarterly demand).

In any case, it seems now that demand for all types of fuel increased in 1989. Oil consumption increased by some 3 million tonnes (0.6%) as a result of the continuing strong demand in the transportation sector (estimated at about 3.5%) and a substantial (but probably exceptional) increase of oil use by the power sector (almost 17%).

In spite of weather conditions, demand for natural gas expanded by more than 4% (more than 30% in Spain). It becomes more and more clear that natural gas is rapidly penetrating the European energy market, creating some important structural modifications.

Electricity demand increased by only 1.7% in the fourth quarter, leading to an annual growth of 2.6%. At the same time, hydro-electricity production dropped by more than 30%. The hydraulic deficit, which has also depressed nuclear production in France in the second part of the year, resulted in a substantial increase of conventional thermal generation (6.7%) with a positive effect on total solid fuels consumption (1.5%).

Working assumptions for 1990 and 1991

Macroeconomic assumptions are based on the latest forecasts by the Commission's Directorate-General for Economic Affairs (DG II). A GDP growth of 3% in 1990 and 3.1% in 1991 is assumed. The average crude oil price is assumed to be 17.6 USD/bbl in 1990 and 18.3 USD/bbl in 1991. "Normal" weather conditions are assumed after the third quarter of 1990.

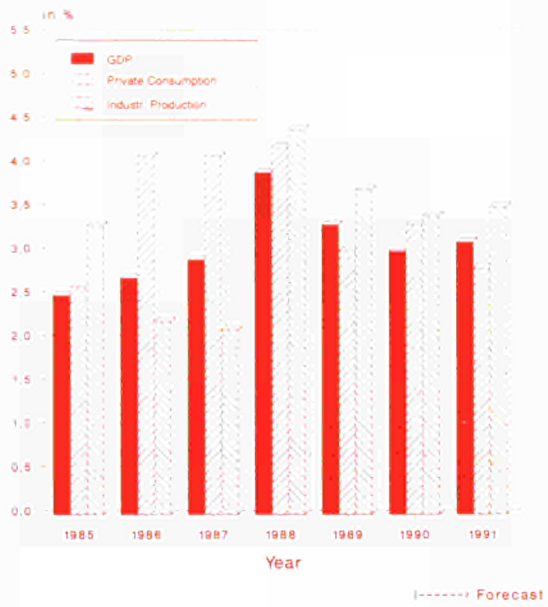
Table 2 presents the main working assumptions underlying the 1990 and 1991 forecasts.

In accordance with the Commission's latest economic forecasts (published in June) an average GDP growth for EUR-12 of 3% in 1990 and 3.1% in 1991 is assumed. This is lower than the 3.9% and 3.3% recorded in 1988 and 1989 respectively, but it is still higher than the rates of growth experienced during the first five years of the present period of expansion (1983 to 1987).

The rate of growth in private consumption is expected to accelerate slightly in 1990 to 3.3%, mainly as a result of stronger growth in Germany. In 1991 the rate of growth in private consumption could decelerate somewhat to 3% (Graph 2).

Inflation this year could be around 5% but could ease in 1991. As usual the assumption is made that the USD/ECU nominal exchange rate will remain constant throughout the forecasting period.

Graph 2 - EUR 12:
Macroeconomic indicators
Annual percentage change



An average oil price of 17.6 USD/bbl is assumed for 1990 (virtually the same average level as in 1989) increasing slightly to 18.3 USD/bbl in 1991 (see next section and Graph 3).

Finally, it is assumed that "normal" weather conditions will prevail after the third quarter of 1990.

The forecasts are, as usual, based on the results of the "ERASME" model but they also incorporate, as far as possible, other information from different sources (DG XVII, Member States, energy experts etc).

Graph 3 - Eur 12: Average crude oil import price (cif)

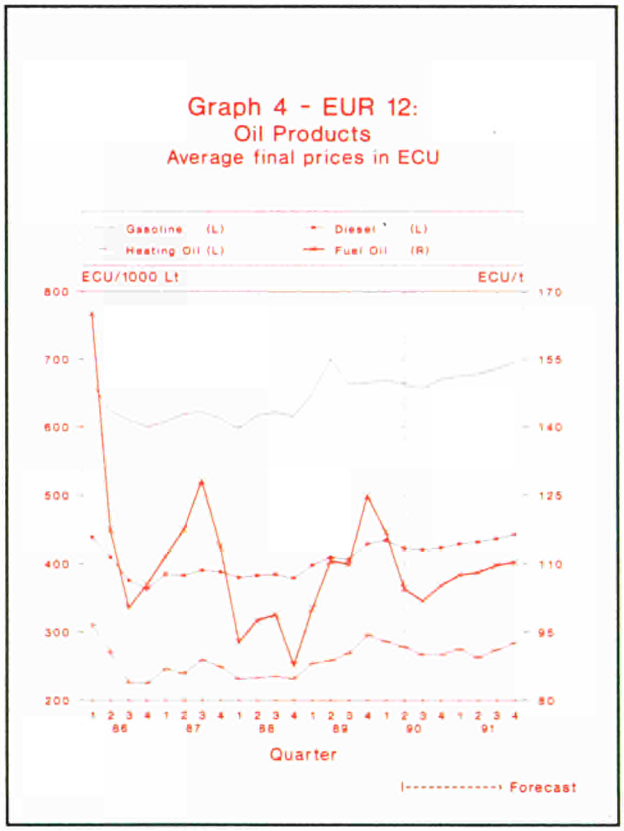
Energy Price

The oil price

Crude oil prices increased unexpectedly by the end of 1989 mainly as a result of extraordinarily cold weather in the US. By January 1990 the Community average import price (cif) was 20.5 USD/bbl, the highest recorded since January 1986. Import prices eased by March, while spot prices reached an 18 month low by June.

Given the recent volatility of the word crude oil market. and the uncertainties surrounding it, mainly on the supply side, any attempt to forecast oil prices in the short-term is extremely risky. In line with other similar projections, we are assuming in this forecast (last revision: 12 July 1990) a slow but steady increase of average import prices starting from July 1990 and leading to an average import price for 1990 of 17.6 USD/bbl, the same in fact as in 1989 (Tables 2 and 3 and Graph 3). Given the dollar devaluation in the first half of 1990, import prices of crude oil in ECU in 1990 could decline on average by 10% after an increase of almost 29% in 1989.

Our working assumption for 1991 is based on an average price of 18 USD/bbl in the first half of the year and 18.5 USD/bbl in the second half, amounting to an average annual price of 18.25 USD/bbl.



Final energy prices

Final prices of oil products increased slightly during the last quarter of 1989. Following the profile assumed for the imported crude price, they could decline during this summer and increase slightly thereafter.

During the last quarter of 1989 final energy prices in general and oil prices in particular, increased slightly (Table 3 and Graph 4. See also Annex II presenting updated historical figures). According to provisional estimates for the beginning of 1990 final prices of oil products eased somewhat. On the basis of our assumptions on crude oil price, a renewed slight increase is possible by the end of the year and in 1991. However, in annual terms, real prices will probably decline in both years.

Considering the usual lags in the transmission of the impact of oil prices on other fuels, average annual natural gas prices could rise more in 1990 and stabilize in 1991. Coal prices will probably remain at the same levels, while electricity prices could increase more in 1991.

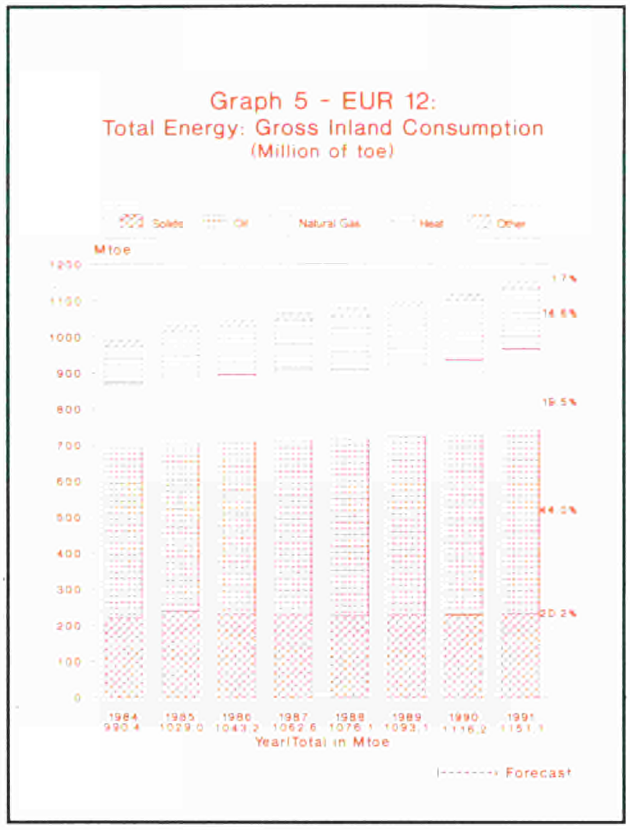
However, given the insufficient quality of historical data on average final energy prices, other than oil, these forecasts must be considered only as indicative.

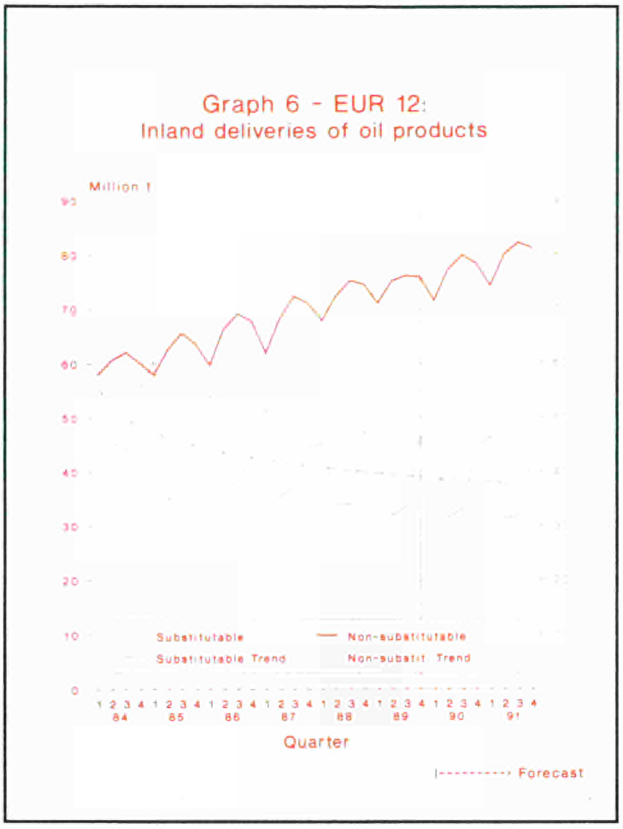
Overall energy in 1990 and 1991

Taking account of the exceptional weather conditions in the first quarter of 1990, a growth in total energy demand of about 2% is expected this year. Assuming "normal" weather in 1991, energy demand could grow by more than 3% next year.

In view of the statistical problem discussed in Box A, and to avoid confusion, the discussion in the following section is on the basis of monthly figures (Apparent Consumption, see also Annex I). In any case, our new forecast for 1990 is significantly different from the one published in November 1989.

The exceptional weather in the first half of the year has probably resulted in an overall energy saving of the order of 21 Mtoe in six months (against 16 for the same period of 1989 and 20 for the whole year, see Box B). In the absence of SOEC data later than February, we estimate that total consumption during the first half of 1990 could have been by 1.5% higher than in 1989. However on a "weather corrected" basis it could be 2.4% higher. For the year as a whole, apparent consumption could increase by 2.1% and on a "weather corrected" basis by 2.2% (see Boxes A and B, Tables 4, 8 and 9 and Graph 5).





In conclusion, paradoxically, although we now foresee a much lower growth of energy demand in 1990 than in our previous forecast, the underlying "weather corrected" growth of 2.2% is slightly higher than the corresponding figure of 1.9% in the November 1989 forecast, in spite of a slightly less optimistic assumption on economic growth. This difference is explained by our new assumption of lower oil prices in ECU terms.

Our forecast for 1991, based on "normal" weather, gives an overall growth in energy demand of 3.1%. As shown in Box B this can be attributed in two parts: 1.9% due to climatic factors and only 1.2% due to economic growth. Both those figures are of course very uncertain. In particular this forecast implicitly assumes a substantial gain in energy intensity. In terms of weather corrected primary energy, the underlying decrease in energy intensity is of the order of 1.9%, a value that has been never observed since 1983 (see Box B).

A small part of this can be explained by technical reasons (the way that hydro-electricity is accounted in the SOEC balance sheets). Another part is explained by our crude oil price assumption. Finally two other factors were considered:

- In case of a "normal" winter, some households could regulate more effectively their heating consumption.

- In some cases, energy consumers could try to use energy more efficiently given the increasing public awareness on this question.

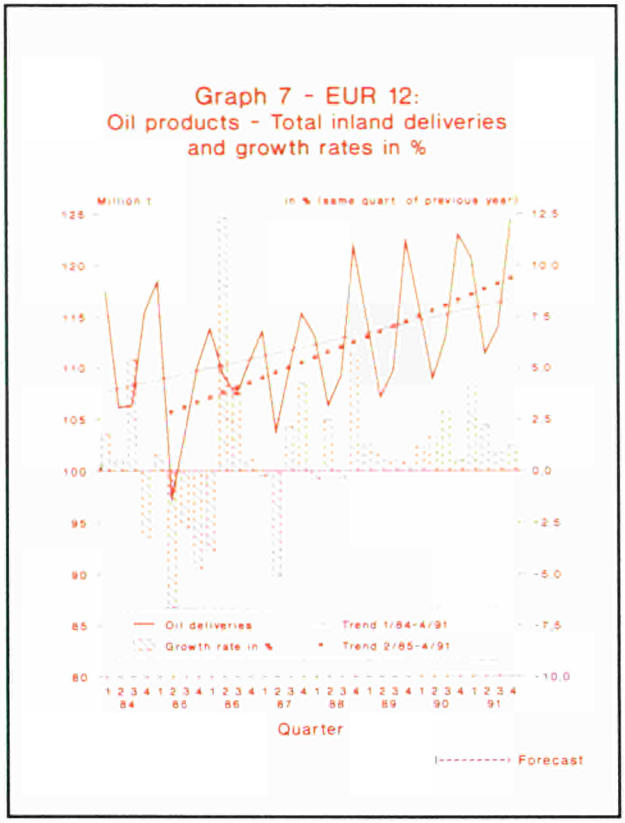
However, it is clear that the distortions generated by the exceptional climatic conditions must render any short-term energy outlook more uncertain than usual.

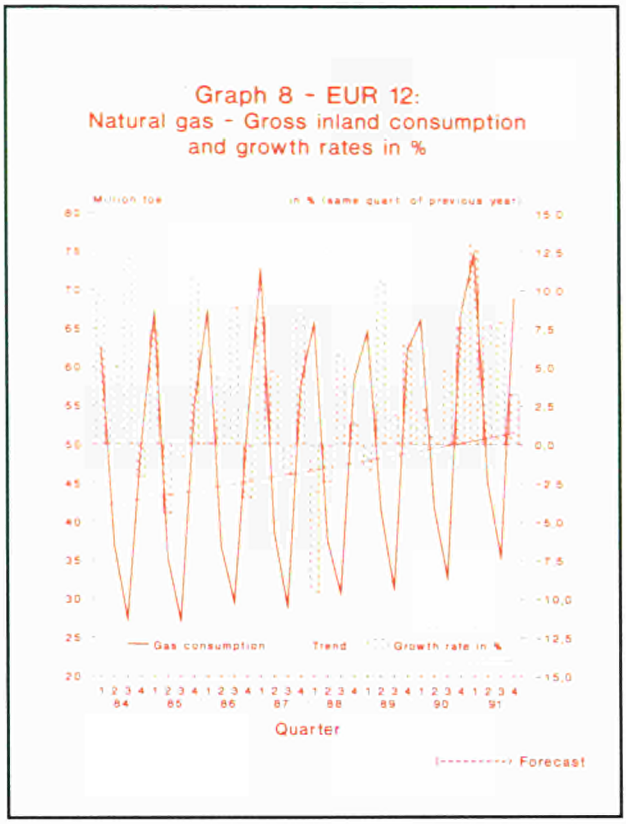
Oil

Mainly because of lower heating oil deliveries, demand for oil, in terms of total inland deliveries, increased by only 0.7% during 1989. With lower real oil prices in 1990 deliveries are expected to grow by 1.5%. Demand could grow by more than 2% next year. Production of crude oil decreased in 1989 for the second consecutive year but it is expected to increase in both 1990 and 1991.

Deliveries of transportation fuels (motor gasoline, automotive diesel oil and kerosenes) increased by 3.7% in 1989, while deliveries of heating oil declined by almost 10% as the result of the combined effect of good weather, increasing prices (16% on average-Table 3) and continuing penetration of competitive fuels (mainly natural gas).

Because of this decline and in spite of a substantial increase in oil burned in power stations (explained by low hydro-electric production, see section on electricity), deliveries of substitutable oil products (heating oil and heavy fuel oil) decreased by 3.2%, while those of non-substitutable products increased by 2.9%. Overall inland deliveries only increased by 0.7% (Tables 5, 8 and 9 and Graphs 6 and 7).





Demand for transportation fuels will probably continue to grow in both 1990 and 1991 at a rate faster than 3%, with diesel oil increasing its penetration in the transportation market. It is however more difficult to forecast deliveries of other oil products.

The weather has modified the seasonality of heating oil deliveries. After a massive decrease of heating oil deliveries in Germany in 1989 (more than 20% down), provisional estimates show that demand has increased substantially in the first half of this year, no doubt with the aim of restoring consumer stocks. At the same time demand has been affected by the climate in other big countries (France and Italy). By the end of the year total heating oil deliveries in the Community could be more or less at the same level as in 1989. In 1991, on the basis of our climatic assumptions, deliveries could increase for the first time since 1986.

The long trend of decline of heavy fuel oil deliveries has been reversed in 1989 by the increased demand in the power sector. However, industrial demand continuous to decline. Once again, the climatic uncertainties are such that it is difficult to forecast demand in the short term. Assuming however a progressive recovery of hydro-electric production, deliveries of fuel oil could again decline in 1991.

In total, oil deliveries could increase by 7 million tonnes in 1990 (1.5%) and 9 to 10 million tonnes in 1991 (2.1%).

Oil production, affected by accidents, was 23 million tonnes less last year than in 1988 and more than 30 million tonnes less than in 1987. Production is expected to recover slowly this year and in 1991, remaining however below 1988 levels.

Given the patterns of production and demand, net oil imports may continue to increase in both 1990 and 1991.

Natural gas

Demand for natural gas increased by 4.5% in 1989. This fast growing trend will probably continue in 1990 and 1991. Under the assumption of a "normal" winter demand in 1991 could grow by 8%.

Although demand for natural gas in the first quarter of 1989 was affected by the climate, it recovered by the second quarter. According to SOEC monthly data, apparent consumption for the year increased by 4.5 %. The graph in Box B shows that the "weather corrected" consumption increased by more than 5%. Use of natural gas for power generation, in particular, increased by more than 13%.

Consumption of natural gas is more weather dependent than any other fuel. With "normal" weather conditions during the forecast period, total demand could increase by 4% in 1990 and by 8% in 1991, of which almost 6% is explained by the climate. "Weather corrected" figures are respectively 4% and 2.1%. Demand from the power sector will probably grow faster than final consumption. (see Box B, Tables 5, 8 and 9 and Graph 8).

Indigenous production of natural gas increased in 1989 by 5.5 Mtoe (4.6%). However, net imports increased also substantially (5.2 Mtoe or 7%). Both production and net imports will probably continue to expand this year and in 1991.

Solids

After three consecutive years of decline, total demand for solids grew in 1989 by 1.5%. Demand, which is more and more linked to the power sector, could decline slightly this year and increase next year.

Total inland deliveries of hard coal which declined by more than 17 million tonnes between 1985 and 1988, remained almost stable in 1989. Deliveries to power plants increased by 5 million tonnes, while deliveries to all other sectors were declining. (Tables 6, 8 and 9 and Graph 9).

The future of coal demand depends more and more on the power sector. However, the share of hard coal in total inputs of conventional thermal power stations decreased from 55.1% in 1987 to 53.8% in 1988 and to 52.3% in 1989. Weather partly explains this evolution. Nevertheless, we are perhaps in the beginning of a structural change resulting in a slower increase of demand for solid fuels from the power sector. Given the present attitude in some Member States, it is possible that natural gas will penetrate the power sector faster than previously expected, slowing the growth of coal demand.

In 1990 total hard coal deliveries could decline by 2 million tonnes but could recover slightly in 1991, without reaching the level of 1987.

Production of hard coal in 1989 was 6 million tonnes less than in 1988. Net imports increased by almost 8 million tonnes. According to recent forecasts by Member States production could decrease by 8 million tonnes by the end of 1990. Net imports will continue to rise in both 1990 and 1991.

Electricity

On the basis of current available figures, electricity demand increased by 2.6% in 1989, the lowest growth rate since 1983. Demand could increase by 3.3% in 1990 and more than 4% in 1991.

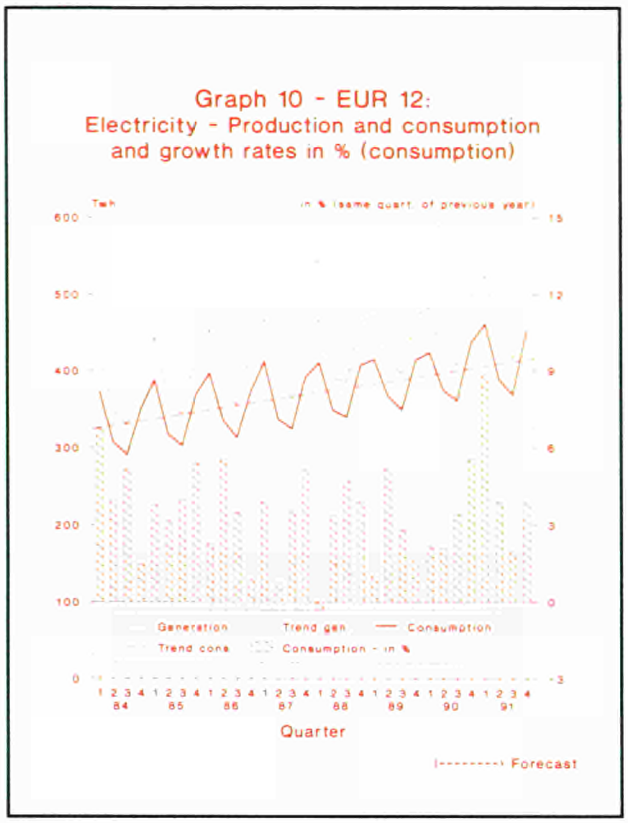
Electricity demand in the Community in 1989, when corrected for weather, increased by 2.7% which is a surprisingly low growth implying, for the first time since 1983, a reduction of electricity intensity. In the absence of annual data for final consumption, it is difficult to explain the reasons for this behaviour (which probably is not only explained by price increases). For example, in the case of the UK (the country with the lowest growth in electricity demand in 1989) electricity intensity in the industrial sector in 1989 decreased by 1.6% while it increased by 0.1% in 1988. It is true that electricity prices for large users by the fourth quarter of 1989 were 11.5% higher than in the same quarter of 1988 (source: Department of Energy) and industrial production of intermediate goods declined by 3.3%.

Our actual forecast for demand growth in 1990 and 1991 is of 3.3% and 4.7% respectively. The "weather corrected" figures are 3.4% and 2.9% respectively (Box B, Tables 7, 8 and 9, Graph 10). This means that electricity intensity (corrected for the climate) in the Community will grow slightly in 1990 and decline in 1991 when real electricity prices could rise (Tables 2 and 3).

A part of this additional demand will probably be satisfied by the nuclear sector this year. Production of nuclear heat during 1989 increased by 7.9% (less than our previous forecast, as new French power plants became operational a little later than expected).

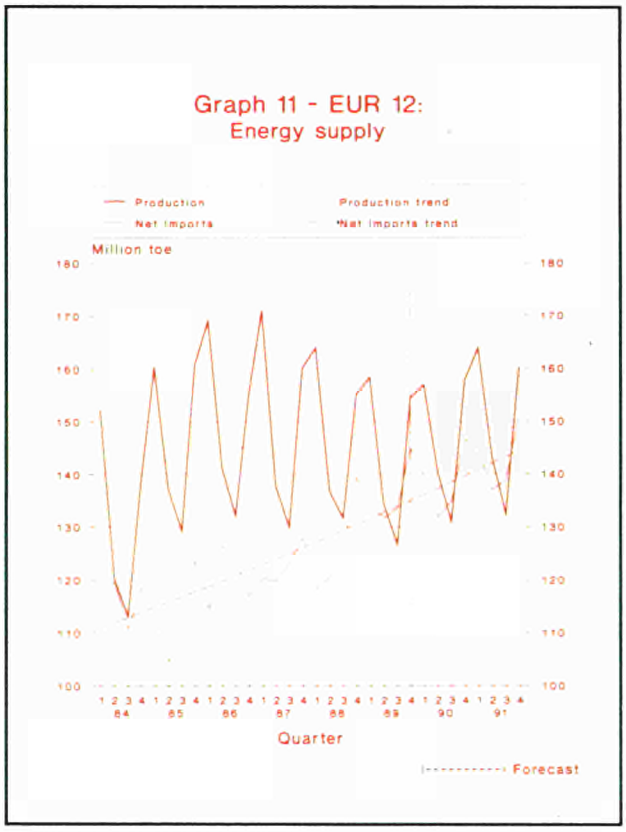
Annex III shows our assumptions on nuclear capacity. On this basis the forecast for growth in the production of nuclear electricity is for 4.2% in 1990 and 0.7% next year.

Hydro-electric production last year suffered as a result of low rainfall. By the end of 1989 it was by 31.5% lower than in 1988. This production gap was partly covered by conventional thermal power generation (+6.7%), resulting



in a substantial increase in consumption of all type of fuels: solids (+4%), oil (+16.6%) and natural gas (+13.2%).

Given that even with "normal" rainfall, production of hydro-electricity could not reach even by 1991 the levels of 1988 (table 7), production of electricity by conventional



thermal power stations could continue to increase and could rise by 1.3% by the end of 1990 and by 4.4% in 1991, with a peak in the first quarter of 1991.

It is difficult to predict if use of oil will remain at the same high levels. Contradictory trends come from different parts of the Community. In the UK, for example, utilities are switching to heavy fuel oil but in Italy it seems that there is a preference for natural gas. Weather conditions and rainfall will also influence the use of oil. Overall, it is probable that oil will decline slightly, remaining nevertheless at a much higher level than in the years 1986 to 1988.

Total supply

Total primary production of energy decreased by 2.3% during 1989. This was mainly due to the decrease in the production of oil and hydro-electricity. Both indigenous production and net imports could increase this year and next. Dependency on imports which increased sharply in 1989, could remain at this level in both 1990 and 1991.

Due to the decline in crude oil production (-23.3 Mtoe), primary electricity (-5.2 Mtoe) and hard coal (-3.7 Mtoe) and in spite of an increase in the production of other sectors (Other solids: +1.6 Mtoe, Natural gas: +5.5 Mtoe, Nuclear: +11.5 Mtoe) total inland primary production dropped in 1989 by 13.6 Mtoe, or by 2.3%. Net imports increased by more than 40 Mtoe, or 8% (Table 4, Graph 11).

Supposing a higher oil production in 1990, total production could increase by 12 Mtoe and net imports by only 8 Mtoe. In 1991 production could still increase by another 14 Mtoe but imports could rise by more than 18 Mtoe.

Net imports are forecast to represent about 48.3% of total primary energy consumption (including bunkers) in 1990 and 48.5% in 1991, compared to 43.2% in 1985, 45.6% in 1988 (46.2% on the basis of the latest observed annual data on imports) and an estimated 48.4% in 1989.

This evolution confirms that since 1986 energy dependency of the Community is increasing as net imports are following a stable upward trend (Graph 11). In 1991 net oil imports could represent a similar part of total energy consumption as in 1984 (about 35%, Table 4).

Data and definitions

The short-term energy outlook is presented in nine tables:

Table 1 : Summary of main assumptions and results, on an annual basis.

Table 2 : Macroeconomic, oil price and weather assumptions.

Historical values for macroeconomic variables are based on EUROSTAT figures, the average import oil price is estimated by DG XVII and degree-days are the weighted average (by the population) of degree-days in 9 Member States (Spain, Greece and Portugal are excluded). Those data, on a monthly basis, are published in the "Energy, Monthly Statistics" bulletin of EUROSTAT.

Table 3 : Energy prices.

These figures are based on data collected by DG XVII and by the OECD.

Tables 4 to 7 present energy data:

Table 4 : Primary energy balance sheet.

Table 5 : Oil and natural gas.

Table 6 : Solid fuels.

Table 7 : Electricity and heat.

The contents of those tables are discussed in Annex I.

Tables 8 and 9: Quarterly growth rates for main variables:

Table 8 : Presents the quarterly growth rates for main variables relative to the same quarter of the previous year.

Table 9 : Presents quarterly year-to-date growth rates for the same variables.

Short-term energy outlook on PC diskette

DG XVII is now offering all the historical data and forecasts published in the short-term energy outlook on PC floppy disk. You can now consult these data on your personal computer.

For more informations please contact the editor.

TABLE 2 - EUR 12
Macroeconomic, Oil price, and Weather Assumptions
(Data available the 2 July 1990)

	1Q89	2Q89	3Q89	4Q89	1Q90	2Q90	3Q90	4Q90	1Q91	2Q91	3Q91	4Q91	1984	1985	1986	Year 1987	1988	1989	1990	1991
A. Macroeconomic Variables																				
1. Gross Domestic Product (GDP)																				
(1985=100)	112.6	113.1	113.5	114.4	115.3	115.9	117.5	118.5	119.2	119.6	120.8	122.1	97.6	100.0	102.7	105.7	109.8	113.4	116.8	120.4
Percentage change																				
from prior year	3.6	3.7	2.8	3.0	2.4	2.5	3.5	3.6	3.4	3.2	2.8	3.0	2.4	2.5	2.7	2.9	3.9	3.3	3.0	3.1
from prior quarter(x4)	5.4	1.8	1.4	3.2	3.2	2.2	5.3	3.6	2.4	1.4	3.8	4.3								
2. Private Consumption																				
(1985=100)	115.4	116.0	116.5	117.5	118.5	119.2	120.9	122.1	122.4	122.7	123.7	125.4	97.5	100.0	104.2	108.4	112.9	116.4	120.2	123.6
Percentage change																				
from prior year	3.4	3.7	2.6	2.5	2.7	2.8	3.8	3.9	3.3	2.9	2.3	2.7	1.6	2.6	4.1	4.1	4.2	3.0	3.3	2.8
from prior quarter(x4)	2.8	2.1	1.7	3.4	3.5	2.5	5.6	3.8	1.1	0.9	3.3	5.4								
3. Industrial Production																				
(1985=100)	114.8	114.4	102.5	119.2	118.0	117.8	106.6	124.0	122.1	122.0	110.3	128.3	96.6	99.8	102.0	104.2	108.7	112.7	116.6	120.7
Percentage change																				
from prior year	3.5	4.2	3.5	3.5	2.8	3.0	4.0	4.0	3.5	3.5	3.5	3.5	2.3	3.3	2.2	2.1	4.4	3.7	3.4	3.5
from prior quarter(x4)	-1.4	-1.4	-41.6	65.2	-4.0	-0.6	-38.1	65.2	-5.9	-0.6	-38.1	65.2								
4. Steel Production																				
(1985=100)	108.2	107.4	99.0	99.5	104.3	109.0	101.5	104.0	108.5	111.7	103.0	105.0	99.1	99.9	92.7	93.0	101.3	103.0	104.7	107.1
Percentage change																				
from prior year	4.0	5.3	2.8	-5.2	-1.8	1.5	2.5	4.5	4.0	2.5	1.5	1.0	22.6	0.8	-7.2	0.3	9.0	1.7	1.6	2.3
from prior quarter(x4)	4.6	4.5	-31.3	2.0	19.3	18.1	-27.7	9.9	17.3	12.0	-31.3	7.8								
5. Chemical Indus.,NACE 25																				
(1985=100, SA)	114.8	114.6	114.7	116.5	117.1	118.4	118.9	120.6	121.2	122.6	123.1	124.8	97.1	99.7	100.6	104.3	110.5	115.2	118.7	122.9
Percentage change																				
from prior year	5.7	4.8	3.2	3.3	2.0	3.3	3.7	3.5	3.5	3.5	3.5	3.5	6.1	2.7	0.8	3.7	5.9	4.2	3.1	3.5
from prior quarter(x4)	7.0	-0.6	0.1	6.4	2.0	4.5	1.7	5.6	2.0	4.5	1.7	5.6								
6. Consumer Price Index																				
(1985=100)	114.2	116.0	117.0	118.5	120.2	121.5	122.4	124.0	125.5	126.7	127.6	129.2	94.3	100.0	103.5	106.9	110.7	116.4	122.0	127.2
Percentage change																				
from prior year	4.9	5.4	5.2	5.2	5.3	4.7	4.6	4.6	4.4	4.3	4.3	4.2	7.2	6.0	3.5	3.2	3.6	5.2	4.8	4.3
from prior quarter(x4)	5.7	6.3	3.4	5.1	5.7	4.2	3.1	5.1	5.0	3.8	3.1	4.7								
7. Exchange Rate																				
(1 ECU = xx US $)	1.126	1.074	1.078	1.128	1.206	1.222	1.223	1.223	1.223	1.223	1.223	1.223	0.790	0.762	0.983	1.154	1.184	1.102	1.219	1.223
Percentage change																				
from prior quarter	-3.8	-4.6	0.4	4.6	6.9	1.3	0.1	0.0	0.0	0.0	0.0	0.0	-11.4	-3.5	29.0	17.4	2.5	-6.9	10.6	0.4
B. Oil Prices																				
Imported Crude Oil																				
(cif, USD/barrel)	16.66	18.40	16.96	18.60	19.47	16.50	17.00	17.50	18.00	18.00	18.50	18.50	28.98	27.54	14.51	17.87	14.78	17.65	17.62	18.25
Percentage change																				
from prior quarter	27.4	10.4	-7.8	9.7	4.7	-15.3	3.0	2.9	2.9	0.0	2.8	0.0	-3.7	-5.0	-47.3	23.2	-17.3	19.5	-0.2	3.6
C. Weather																				
Degree Days	1069	360	0	947	996	346	0	1011	1254	432	0	1011	2746	2803	2710	2774	2409	2376	2353	2697
Difference from average	-185	-72	0	-64	-258	-86	0	0	0	0	0	0	49	106	13	77	-288	-321	-344	0

Sources: EUROSTAT, DG XVII

TABLE 3 - EUR 12
Energy Prices
(Last revision: 12 July 1990)

	1Q89	2Q89	3Q89	4Q89	1Q90	2Q90	3Q90	4Q90	1Q91	2Q91	3Q91	4Q91	1984	1985	1986	Year 1987	1988	1989	1990	1991
A. IMPORT PRICES																				
A1. Crude Oil (cif)																				
USD/barrel	16.66	18.40	16.96	18.60	19.47	16.50	17.00	17.50	18.00	18.00	18.50	18.50	28.98	27.54	14.51	17.87	14.78	17.65	17.62	18.25
ECU/barrel	14.80	17.13	15.73	16.49	16.15	13.50	13.90	14.31	14.72	14.72	15.13	15.13	36.77	36.40	14.91	15.50	12.48	16.04	14.46	14.92
Growth rate from previous quarter, in %																				
USD/barrel	27.4	10.4	-7.8	9.7	4.7	-15.3	3.0	2.9	2.9	0.0	2.8	0.0	-3.7	-5.0	-47.3	23.2	-17.3	19.5	-0.2	3.6
ECU/barrel	32.3	15.8	-8.2	4.8	-2.1	-16.4	2.9	2.9	2.9	0.0	2.8	0.0	8.8	-1.0	-59.0	3.9	-19.5	28.5	-9.8	3.2
Real prices in ECU																				
(in 1985 prices)	13.0	14.8	13.4	13.9	13.4	11.1	11.4	11.5	11.7	11.6	11.9	11.7	30.0	36.4	14.4	14.5	11.3	13.8	11.9	11.7
(in 1989 prices)	15.1	17.2	15.7	16.2	15.6	12.9	13.2	13.4	13.7	13.5	13.8	13.6	45.4	42.4	16.6	16.9	13.1	16.0	13.8	13.7
Growth rate from previous quarter, in %																				
(in real ECU)	30.5	14.0	-9.0	3.5	-3.4	-17.2	2.2	1.6	1.6	-0.9	2.0	-1.2	1.5	-6.5	-60.4	0.5	-22.2	22.0	-13.8	-1.1
A2. Steam Coal																				
USD/tce	47.8	49.9	51.0	52.0	52.7	54.3	54.7	54.0	54.2	54.5	54.4	55.3	51.0	51.8	48.3	43.1	46.4	50.2	53.9	54.6
ECU/tce	42.5	46.5	47.3	46.1	43.7	44.4	44.7	44.1	44.3	44.5	44.5	45.2	64.7	68.2	49.3	37.4	39.3	45.8	44.2	44.6
Growth rate from previous quarter, in %																				
USD/tce	1.0	4.4	2.1	2.1	1.2	3.1	0.8	-1.4	0.4	0.6	-0.1	1.6	-11.5	1.2	-6.4	-10.8	7.6	8.2	7.4	1.2
ECU/tce	5.0	9.5	1.7	-2.4	-5.3	1.7	0.7	-1.4	0.4	0.6	-0.1	1.6	-0.0	5.3	-27.7	-24.2	5.1	16.1	-2.9	0.9
Real prices in ECU																				
(in 1985 prices)	37.2	40.1	40.4	38.9	36.3	36.6	36.6	35.6	35.3	35.2	34.8	35.0	68.6	68.2	47.7	35.0	35.4	39.1	36.3	35.1
(in 1989 prices)	43.3	46.8	47.0	45.3	42.3	42.6	42.6	41.4	41.1	40.9	40.6	40.7	79.9	79.4	55.5	40.7	41.3	45.6	42.2	40.8
Growth rate from previous quarter, in %																				
(in real ECU)	3.5	7.8	0.8	-3.6	-6.7	0.7	-0.1	-2.7	-0.9	-0.4	-0.9	0.4	-6.8	-0.5	-30.2	-26.6	1.4	10.4	-7.3	-3.3
B. FINAL CONSUMER PRICES																				
B1. Oil Products																				
Gasoline (ECU/1000 lt)	648	701	664	665	669	664	657	670	675	677	686	695	723.0	752.6	624.6	615.2	613.0	669.4	665.0	683.3
Diesel (ECU/1000 lt)	398	410	406	429	434	423	420	423	429	431	436	443	481.2	506.1	396.7	386.5	381.4	410.7	425.1	434.8
Heating Oil (ECU/1000lt)	254	259	269	296	286	278	267	267	275	263	274	284	370.9	395.4	257.9	248.4	232.6	269.5	274.8	273.9
Residual Fuel Oil (ECU/t)	100	111	110	125	117	105	102	105	106	108	110	110	242.7	243.8	122.1	117.7	94.2	111.4	107.2	108.9
Growth rate from previous quarter, in %																				
Gasoline	5.2	8.1	-5.3	0.2	0.6	-0.8	-1.0	1.9	0.7	0.4	1.2	1.4	4.9	4.1	-17.0	-1.5	-0.4	9.2	-0.7	2.7
Diesel	5.0	2.9	-0.7	5.6	1.2	-2.7	-0.5	0.6	1.4	0.6	1.1	1.4	5.5	5.2	-21.6	-2.6	-1.3	7.7	3.5	2.3
Heating Oil	9.9	1.6	4.1	10.0	-3.2	-2.8	-4.1	0.1	3.0	-4.6	4.2	3.9	5.6	6.6	-34.6	-3.7	-6.3	15.9	2.0	-0.3
Residual Fuel Oil	14.3	10.5	-0.7	13.6	-6.3	-10.6	-2.6	3.3	2.2	0.5	1.5	0.6	18.1	0.4	-49.9	-3.6	-20.0	18.2	-3.8	1.6
B2. Natural Gas																				
Households (1984 =100)	82.1	83.8	68.6	87.9	90.0	92.3	95.5	91.4	92.9	94.5	97.8	93.5	100.0	105.4	97.2	81.6	83.7	85.6	92.3	94.7
Industry (1984 =100)	52.3	51.4	52.9	55.1	56.3	56.2	55.8	54.9	55.2	54.9	55.2	55.5	100.0	104.6	74.6	57.6	52.3	52.9	55.8	55.2
Growth rate from previous quarter, in %																				
Households	-0.7	2.1	5.8	-0.8	2.3	2.6	3.4	-4.3	1.6	1.8	3.4	-4.3	4.4	5.4	-7.6	-16.0	2.5	2.3	7.8	2.6
Industry	2.1	-1.7	3.0	4.1	2.3	-0.3	-0.7	-1.5	0.5	-0.4	0.5	0.5	10.8	4.6	-28.5	-22.9	-9.3	1.2	5.5	-1.1
B3. Coal																				
Households (ECU/t)	209.1	200.9	200.3	206.2	207.7	203.8	204.0	207.5	209.0	205.9	205.9	209.2	199.1	207.3	203.5	199.5	203.2	204.1	205.7	207.5
Industry (ECU/t)	90.7	90.4	91.2	92.1	92.7	91.8	91.4	90.9	91.6	91.2	90.7	90.3	97.1	99.7	95.5	91.1	90.7	91.1	91.7	91.0
Growth rate from previous quarter, in %																				
Households	0.5	-3.9	-0.3	3.0	0.7	-1.9	0.1	1.7	0.8	-1.5	-0.0	1.6	9.4	4.1	-1.8	-2.0	1.9	0.4	0.8	0.9
Industry	0.8	-0.3	1.0	1.0	0.6	-1.0	-0.4	-0.5	0.8	-0.5	-0.5	-0.4	1.7	2.7	-4.3	-4.6	-0.4	0.4	0.6	-0.8
B4. Electricity																				
Households (ECU/100 Kwh)	10.92	11.04	11.23	11.23	11.08	11.11	11.28	11.29	11.45	11.64	11.98	12.10	10.39	10.75	10.53	10.47	10.77	11.11	11.19	11.79
Industry (ECU/100 Kwh)	6.23	6.05	8.12	6.41	6.34	6.22	6.33	6.57	6.66	6.50	6.60	6.85	5.91	6.11	5.93	5.89	5.96	6.20	6.37	6.65
Growth rate from previous quarter, in %																				
Households	0.1	1.1	1.7	0.0	-1.4	0.3	1.6	0.1	1.4	1.7	2.9	0.9	6.5	3.5	-2.1	-0.5	2.8	3.2	0.7	5.4
Industry	2.1	-2.9	1.1	4.7	-1.1	-1.8	1.6	3.9	1.3	-2.4	1.4	3.8	4.4	3.4	-3.0	-0.7	1.5	3.8	2.6	4.5

Sources: IEA, DG XVII estimates

TABLE 4 - EUR 12
Primary Energy Balance and Final Consumption (million toe)
(Last revision: 12 July 1990)

	1Q89	2Q89	3Q89	4Q89	1Q90	2Q90	3Q90	4Q90	1Q91	2Q91	3Q91	4Q91	1984	1985	1986	Year 1987	1988	1989	1990	1991
Primary Production																				
Solid Fuels:	43.2	39.5	37.0	40.2	39.2	39.0	37.0	40.4	39.3	38.3	36.4	40.1	145.2	169.7	173.7	166.6	161.9	159.8	155.6	154.1
Hard Coal	34.3	31.1	28.9	31.7	30.6	30.6	28.2	31.0	29.9	29.9	27.5	30.3	107.5	133.8	139.7	134.1	129.7	126.0	120.3	117.7
Lignite	8.9	8.4	8.1	8.5	8.7	8.4	8.9	9.4	9.4	8.3	8.9	9.8	37.7	35.9	34.0	32.5	32.2	33.8	35.3	36.4
Oil	29.4	26.5	29.8	31.7	30.5	29.6	29.9	31.3	31.2	29.7	30.3	32.1	145.5	149.2	150.1	148.7	140.7	117.4	121.3	123.3
Natural Gas	39.3	26.2	19.9	38.5	40.3	26.9	20.8	39.8	45.0	29.0	21.7	40.9	119.4	126.7	123.6	128.5	118.4	123.9	127.7	136.5
Heat:	43.4	38.1	36.7	41.0	43.5	40.8	39.6	42.6	43.8	40.9	39.7	43.0	97.3	125.6	134.0	137.8	147.6	159.1	166.4	167.5
Nuclear	42.9	37.6	36.2	40.5	43.0	40.3	39.2	42.1	43.3	40.4	39.3	42.6	95.5	123.9	132.2	135.9	145.8	157.3	164.6	165.6
Geothermy	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	1.8	1.7	1.7	1.8	1.8	1.9	1.8	1.9
Primary Electricity	2.5	3.6	2.6	2.6	3.0	3.6	2.9	3.2	3.9	4.6	3.6	3.6	15.0	14.6	14.2	15.0	16.5	11.3	12.7	15.8
Other	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	1.7	1.8	1.7	2.2	2.2	2.3	2.3	2.5
TOTAL	158.3	134.4	126.7	154.4	157.0	140.4	130.9	157.8	163.9	143.1	132.3	160.4	524.0	587.5	597.3	598.7	587.4	573.8	586.1	599.7
Recovered Production																				
Hard Coal	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.5	2.4	3.3	3.1	2.3	2.3	2.0	1.9	1.8
Oil	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	1.6	1.2	1.3	1.3	1.2	1.3
TOTAL	0.8	0.8	0.9	0.8	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.7	3.6	4.7	3.5	3.6	3.3	3.0	3.2
Net Imports																				
Solid Fuels:	16.2	16.4	16.0	17.9	19.0	15.9	15.8	18.6	21.6	16.8	16.5	20.6	56.9	62.4	59.7	60.3	62.0	66.5	69.4	75.5
Hard Coal	16.2	16.5	16.1	17.7	18.8	15.4	15.7	18.3	21.3	16.5	16.6	20.1	55.8	62.3	59.3	59.5	61.4	66.5	68.2	74.4
Oil	97.2	95.2	100.8	105.8	98.3	97.7	102.4	103.1	99.1	100.6	104.5	104.7	349.8	333.3	356.2	357.6	368.0	399.0	401.4	408.9
Natural Gas	21.3	19.4	16.2	21.2	22.2	17.7	16.0	24.4	23.9	18.9	17.1	25.1	57.0	59.1	64.8	71.8	72.9	78.1	80.2	85.0
Electricity	0.2	0.6	0.6	0.2	0.3	0.6	0.7	0.3	0.3	0.6	0.7	0.3	1.5	1.2	1.2	1.6	1.6	1.6	1.9	2.0
TOTAL	135.0	131.6	133.5	145.1	139.8	131.9	134.8	146.4	144.9	137.0	138.8	150.7	465.3	456.0	481.9	491.3	504.7	545.1	552.9	571.4
Change in Stocks																				
Solid Fuels:	-2.1	2.9	0.7	-3.8	-2.9	2.4	2.1	-3.6	-4.3	2.8	3.1	-3.1	-15.2	-4.1	5.8	-2.6	-0.7	-2.3	-2.0	-1.5
Hard Coal	-1.2	3.8	1.0	-3.8	-2.7	2.6	1.9	-3.4	-4.0	3.0	2.7	-3.3	-12.4	-0.4	4.4	-4.2	1.1	-0.2	-1.7	-1.7
Coke	-0.9	-0.8	-0.3	-0.0	-0.3	-0.3	0.1	-0.3	-0.4	-0.3	0.3	0.1	-3.5	-2.6	1.5	0.9	-1.5	-2.0	-0.8	-0.3
Oil	-2.2	0.6	6.1	-0.7	-1.7	3.6	4.6	-3.4	-4.5	4.7	6.4	-2.1	-3.5	0.7	3.7	2.1	-1.4	3.7	3.1	4.4
Natural Gas	-4.1	4.0	4.9	-2.5	-3.7	2.7	4.1	-2.8	-5.9	2.8	3.4	-3.1	0.1	1.3	1.6	1.4	0.2	2.2	0.2	-2.8
TOTAL	-8.5	7.5	11.7	-7.1	-8.4	8.7	10.8	-9.7	-14.8	10.3	12.9	-8.4	-18.5	-2.1	11.1	0.9	-2.0	3.6	1.3	0.1
Bunkers	7.2	7.8	7.9	7.3	7.2	7.6	7.5	7.1	6.9	7.1	7.1	6.8	23.8	26.2	30.5	29.5	31.0	30.2	29.4	27.9
Apparent Gross Consumption																				
Solid Fuels:	62.0	53.5	52.7	62.3	61.6	52.9	51.2	63.0	65.6	52.7	50.2	64.3	219.7	239.5	230.8	231.7	226.8	230.5	228.7	232.8
Hard Coal	52.2	44.3	44.4	53.6	52.5	43.9	42.4	53.1	55.6	43.9	41.8	54.2	178.2	199.8	197.6	200.0	192.2	194.6	192.0	195.5
Coke	0.6	0.6	0.0	-0.1	0.2	0.2	0.0	0.2	0.2	0.1	-0.1	0.1	2.7	1.3	-2.5	-1.1	1.2	1.1	0.6	0.3
Lignite	9.2	8.5	8.3	8.8	8.9	8.8	8.8	9.7	9.8	8.7	8.5	10.0	38.8	38.4	35.6	32.9	33.4	34.6	36.2	37.0
Oil	122.0	113.7	117.0	131.1	123.4	116.4	120.5	130.9	128.2	118.8	121.6	132.5	475.3	455.9	473.7	475.8	480.6	483.8	491.3	501.2
Natural Gas	64.7	41.7	31.2	62.2	66.2	41.9	32.7	66.9	74.8	45.1	35.3	69.1	176.2	184.5	186.8	198.9	191.2	199.8	207.7	224.3
Heat	43.4	38.1	36.7	41.0	43.5	40.8	39.6	42.6	43.8	40.9	39.7	43.0	97.3	125.6	134.0	137.8	147.6	159.1	166.4	167.5
Primary Electricity	2.8	4.2	3.2	2.8	3.3	4.2	3.6	3.5	4.2	5.2	4.3	4.0	16.5	15.8	15.4	16.5	18.3	12.9	14.7	17.7
Other	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	1.7	1.8	1.7	2.2	2.2	2.3	2.3	2.5
TOTAL	295.4	251.6	241.5	300.0	298.6	256.8	248.2	307.6	317.4	263.4	251.8	313.5	986.8	1023.0	1042.3	1062.9	1066.7	1088.4	1111.2	1146.1
Adjustment to Annual Figures																				
Solid Fuels	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.5	0.7	-0.6	0.2	0.0	0.0	0.0
Oil	1.9	1.9	1.9	1.9	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	-3.4	6.6	0.2	0.8	6.7	7.5	5.0	5.0
Natural Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	-0.9	1.3	0.0	0.0	0.0
Heat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	-0.2	0.1	0.3	1.1	0.0	0.0	0.0
Primary Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	1.9	1.9	1.9	1.9	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	3.6	6.0	0.9	-0.4	9.4	7.5	5.0	5.0
Gross Inland Consumption																				
Solid Fuels	62.0	53.5	52.7	62.3	61.6	52.9	51.2	63.0	65.6	52.7	50.2	64.3	219.6	239.0	231.5	231.2	227.0	230.5	228.7	232.8
Oil	123.9	115.5	118.9	133.0	124.7	117.6	121.8	132.2	129.5	120.1	122.9	133.7	471.9	462.5	473.9	476.6	487.3	491.3	496.3	506.2
Natural Gas	64.7	41.7	31.2	62.2	66.2	41.9	32.7	66.9	74.8	45.1	35.3	69.1	176.6	184.7	186.8	198.0	192.5	199.8	207.7	224.3
Heat	43.4	38.1	36.7	41.0	43.5	40.8	39.6	42.6	43.8	40.9	39.7	43.0	104.0	125.3	134.0	138.1	148.7	159.1	166.4	167.5
Primary Electricity	2.8	4.2	3.2	2.8	3.3	4.2	3.6	3.5	4.2	5.2	4.3	4.0	16.6	15.8	15.4	16.5	18.3	12.9	14.7	17.7
Other	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	1.7	1.8	1.7	2.2	2.2	2.3	2.3	2.5
TOTAL	297.3	253.5	243.3	301.9	299.8	258.1	249.5	308.8	318.6	264.6	253.0	314.7	990.4	1029.0	1043.2	1062.6	1076.1	1095.9	1116.2	1151.1
Net imports as % of consumption																				
Hard Coal	31.1	37.2	36.2	33.0	35.7	35.1	37.1	34.4	38.3	37.6	39.6	37.1	31.4	31.2	30.0	29.9	32.0	34.2	35.5	38.1
Oil	74.2	77.2	79.5	75.4	74.5	78.0	79.2	74.0	72.7	79.1	80.4	74.5	70.6	68.2	70.6	70.7	71.0	76.5	76.4	76.6
Natural Gas	32.9	46.5	51.8	34.1	33.5	42.2	48.8	36.5	31.9	42.0	48.4	36.3	32.3	32.0	34.7	36.3	37.9	39.1	38.6	37.9
TOTAL	44.3	50.4	53.1	46.9	45.5	49.6	52.5	46.3	44.5	50.4	53.3	46.9	45.9	43.2	44.9	45.0	45.6	48.4	48.3	48.5
Oil imports as % of total energy consumption	31.9	36.4	40.1	34.2	32.0	36.8	39.8	32.6	30.4	37.0	40.2	32.6	34.5	31.6	33.2	32.7	33.2	35.4	35.0	34.7
Estimated Final Consumption																				
Solid Fuels	13.7	14.2	12.7	14.0	13.3	13.3	12.5	13.9	13.2	13.0	12.2	13.6	61.8	68.7	61.8	59.7	57.0	54.5	53.0	51.9
Oil	104.1	99.7	101.7	110.7	104.9	101.2	104.4	111.8	109.3	104.1	105.9	113.1	395.2	391.5	407.5	409.5	418.8	416.2	422.2	432.3
Natural Gas	55.8	33.8	23.4	52.7	56.9	34.5	24.7	55.2	62.9	36.5	26.6	56.6	145.3	155.1	156.8	166.5	161.7	165.5	171.4	182.5
Derived Gas	3.1	3.0	2.6	2.8	3.0	3.0	2.7	2.7	2.8	2.8	2.6	2.5	12.8	13.2	12.1	11.6	11.5	11.5	11.4	10.6
Heat	1.3	1.1	1.1	1.4	1.4	1.1	1.1	1.5	1.6	1.1	1.1	1.5	3.9	4.4	4.4	5.2	4.6	4.9	5.1	5.3
Electricity	34.1	30.1	28.7	34.0	34.8	30.8	29.7	35.9	37.9	32.0	30.3	37.2	108.7	112.7	115.8	120.4	123.8	126.9	131.1	137.3
TOTAL	212.0	181.6	170.2	215.6	214.3	183.8	175.1	221.0	227.5	189.4	178.6	224.5	727.7	745.5	758.3	772.9	777.5	779.4	794.3	820.1
for memory: SOEC Annual data																				
Available for Final Consumption													722.9	747.8	754.2	773.6	778.2			
Total Non-energy Consumption													69.9	69.5	69.5	69.7	75.1			
Total Energy Consumption													655.8	676.2	689.1	704.1	706.9			
Total Final Consumption													725.7	745.7	758.6	773.8	782.0			
Statistical Error													-2.8	2.1	-4.4	-0.2	-3.8			

TABLE 5 - EUR 12
Oil and Natural Gas: Supply and Disposal
(Last revision: 12 July 1990)

	1Q89	2Q89	3Q89	4Q89	1Q90	2Q90	3Q90	4Q90	1Q91	2Q91	3Q91	4Q91	1984	1985	1986	Year 1987	1988	1989	1990	1991
1. OIL (Million tonnes)																				
Primary Production	29.0	26.1	29.4	31.2	30.2	29.4	29.7	31.0	31.0	29.5	30.0	31.9	144.0	147.7	148.5	146.4	138.6	115.6	120.3	122.4
of which: Crude	27.9	25.2	28.6	30.2	29.3	28.5	28.9	30.1	30.0	28.7	29.3	30.9	140.3	144.2	143.7	141.2	134.4	111.9	116.8	118.9
Oil products	1.0	0.8	0.8	0.9	0.9	0.8	0.8	1.0	1.0	0.8	0.8	0.9	3.7	3.5	4.8	5.2	4.2	3.7	3.5	3.5
Recovered Production	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	1.5	1.1	1.2	1.2	1.1	1.2
Change in Stocks	-2.3	0.8	6.2	-0.7	-1.7	3.6	4.6	-3.4	-4.5	4.7	6.4	-2.1	-3.5	0.7	3.8	2.2	-1.4	3.8	3.1	4.4
Net Imports	96.9	94.8	100.3	105.4	98.1	97.5	102.1	102.9	98.9	100.4	104.3	104.5	349.5	332.6	355.4	356.6	366.8	397.3	400.6	406.1
Bunkers	7.4	8.0	8.1	7.8	7.4	7.8	7.8	7.3	7.1	7.4	7.3	7.0	24.5	27.0	31.4	30.4	31.9	31.1	30.3	28.8
Apparent Consumption	121.0	112.5	115.8	129.9	122.8	115.7	119.8	130.2	127.6	118.2	120.9	131.8	472.7	452.9	470.2	471.5	476.2	479.3	488.5	498.4
Adjustment	1.8	1.8	1.8	1.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-2.3	7.3	0.7	1.6	7.4	7.0	4.0	4.0
Gross Inland Consumption	122.8	114.3	117.5	131.7	123.8	116.7	120.8	131.2	128.6	119.2	121.9	132.8	470.4	460.1	470.9	473.1	483.6	486.3	492.5	502.4
Transformation Input	131.9	125.1	135.2	144.2	134.2	131.8	137.2	144.9	139.1	133.2	140.4	147.4	517.7	492.3	515.6	506.0	525.2	536.4	548.1	560.1
of which:																				
Refineries	119.9	116.1	125.4	130.8	121.9	122.8	127.4	132.3	126.3	124.7	131.1	134.6	462.3	448.9	476.1	467.0	487.0	492.2	504.4	516.7
Power Generation	11.6	8.7	9.4	13.1	12.0	8.7	9.5	12.2	12.4	8.2	9.0	12.4	52.9	41.3	37.3	37.3	36.7	42.8	42.4	42.0
Refineries Gross Output	118.8	115.4	124.7	130.1	121.6	122.2	126.8	131.9	126.2	124.2	130.7	134.3	456.6	444.6	473.1	464.2	484.5	489.0	502.5	515.5
Refineries Consumption	7.2	7.0	7.4	7.6	7.5	7.2	7.4	7.7	7.7	7.4	7.6	8.0	25.7	24.8	27.4	27.2	28.1	29.3	29.9	30.7
Refineries Net Output	111.5	108.4	117.3	122.5	114.1	115.0	119.4	124.1	118.5	116.8	123.1	126.3	430.9	419.8	445.7	437.0	456.4	459.7	472.6	484.7
Avail.Final Consumption	102.4	97.6	99.6	110.0	103.6	99.9	103.1	110.4	107.9	102.8	104.6	111.7	383.5	387.6	401.0	404.1	414.8	409.5	417.0	427.0
Final Consumption (est)	102.6	98.1	99.9	109.0	103.6	99.9	103.1	110.4	107.9	102.8	104.6	111.7	390.1	385.8	401.6	403.3	412.4	409.6	417.0	427.0
Statistical Difference	-0.1	-0.6	-0.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-6.6	1.9	-0.7	0.8	2.4	-0.1	0.0	0.0
Inland Deliveries:																				
Motor Gasoline	24.1	26.0	26.9	25.6	24.8	26.8	27.7	25.9	24.6	27.3	28.3	26.3	91.6	91.2	95.5	97.9	101.0	102.7	105.2	106.5
Kerosenes	5.8	6.5	7.4	6.6	6.1	6.6	7.6	6.8	6.4	6.8	7.7	7.0	21.0	21.7	22.8	24.0	25.5	28.3	27.1	27.9
Gas/Diesel Oil-Total	43.1	36.3	39.4	47.0	44.8	37.9	39.5	47.8	48.4	40.0	40.5	48.3	155.9	162.3	169.9	168.5	169.6	165.7	170.1	177.2
of which:																				
Autom.Diesel	19.3	20.3	20.2	21.3	19.7	21.6	21.8	22.6	21.2	22.9	23.1	24.1	49.6	60.8	65.8	69.9	76.2	81.1	85.8	91.3
Heating Gas Oil	23.8	15.9	19.2	25.7	25.1	16.4	17.7	25.2	27.2	17.1	17.3	24.3	106.3	101.4	104.1	98.5	93.4	84.7	84.3	85.9
Heavy Fuel Oil	19.7	16.0	14.4	20.8	19.4	15.2	15.4	19.5	19.3	14.2	14.5	19.2	98.2	78.1	74.2	70.4	67.3	70.9	69.5	67.2
Other Products	21.9	22.3	21.7	22.4	20.9	22.3	22.7	23.0	22.0	23.0	22.9	23.7	78.9	78.0	78.8	81.6	87.2	88.2	88.9	91.7
TOTAL	114.6	107.1	109.7	122.4	115.9	108.9	112.9	123.0	120.7	111.3	113.9	124.5	445.6	429.2	441.1	442.3	450.6	453.9	460.8	470.4
Total Oil Stocks (end of period)	123.7	124.3	130.6	129.9	128.2	131.8	136.4	133.0	128.5	133.1	139.5	137.4	120.9	121.5	125.4	127.5	126.1	129.9	133.0	137.4
2. NATURAL GAS (Million toe)																				
Primary Production	39.3	28.2	19.9	38.5	40.3	26.9	20.8	39.8	45.0	29.0	21.7	40.9	119.4	126.7	123.6	128.5	118.4	123.9	127.7	136.5
Change in Stocks	-4.1	4.0	4.9	-2.5	-3.7	2.7	4.1	-2.8	-5.9	2.8	3.4	-3.1	0.1	1.3	1.6	1.4	0.2	2.2	0.2	-2.8
Net Imports	21.3	19.4	16.2	21.2	22.2	17.7	16.0	24.4	23.9	18.9	17.1	25.1	57.0	59.1	64.8	71.8	72.9	78.1	80.2	85.0
Apparent Consumption	64.7	41.7	31.2	62.2	66.2	41.9	32.7	66.9	74.8	45.1	35.3	69.1	176.2	184.5	186.8	198.9	191.2	199.8	207.7	224.3
Adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	-0.9	1.3	0.0	0.0	0.0
Gross Inland Consumption	64.7	41.7	31.2	62.2	66.2	41.9	32.7	66.9	74.8	45.1	35.3	69.1	176.6	184.7	186.8	198.0	192.5	199.8	207.7	224.3
of which:																				
Power Generation	6.5	6.5	6.6	7.1	6.7	5.8	6.8	9.1	9.1	6.9	7.4	9.9	24.8	22.7	21.9	23.8	23.6	26.7	28.4	33.3
Final Consumption (est)	55.8	33.6	23.4	52.7	56.9	34.5	24.7	55.2	62.9	36.5	26.6	56.6	145.3	155.1	156.8	166.5	161.7	165.5	171.4	182.5

TABLE 6 - EUR 12
Solid Fuels: Supply and Disposal (*)
(Last revision: 12 July 1990)

	1Q89	2Q89	3Q89	4Q89	1Q90	2Q90	3Q90	4Q90	1Q91	2Q91	3Q91	4Q91	1984	1985	1986	Year 1987	1988	1989	1990	1991
1. HARD COAL (Million tonnes)																				
Primary Production	56.7	51.8	47.7	52.5	50.6	50.7	46.6	51.3	49.5	49.5	45.6	50.2	172.6	217.5	228.2	221.8	214.7	208.7	199.2	194.8
Recovered Production	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.0	1.0	1.0	1.1	5.4	7.4	6.8	5.0	5.0	4.5	4.2	4.1
Change in Stocks:																				
Collieries	2.5	2.1	-0.1	-3.7	-2.1	2.0	0.9	-2.3	0.7	2.1	0.6	-2.7	-8.0	-10.3	0.3	-2.8	1.2	0.8	-1.5	0.7
Power Plants	-5.2	3.8	2.2	-2.6	-2.5	2.3	2.3	-3.4	-7.4	2.9	3.9	-2.8	-13.0	8.2	8.2	-4.3	0.6	-1.8	-1.3	-3.4
Coking Plants	0.3	0.6	-0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	1.4	-0.8	-0.1	0.1	0.4	0.0	0.0
Total	-2.4	6.5	1.5	-6.2	-4.6	4.3	3.2	-5.7	-6.7	5.0	4.4	-5.6	-21.5	-0.7	7.6	-7.2	1.9	-0.8	-2.8	-2.8
Net Imports	24.6	25.2	24.6	26.9	28.6	23.5	24.0	27.8	32.4	25.2	25.2	30.6	86.4	96.4	91.8	90.9	93.4	101.3	103.9	113.5
Apparent Consumption	84.9	71.5	71.9	86.7	84.8	71.0	68.4	85.9	89.6	70.7	67.3	87.4	285.9	322.0	319.2	324.7	311.1	314.9	310.0	315.0
Adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	-0.2	0.3	-1.3	-0.2	0.0	0.0	0.0
Gross Inland Consumption	84.9	71.5	71.9	86.7	84.8	71.0	68.4	85.9	89.6	70.7	67.3	87.4	285.4	321.8	319.5	323.4	310.9	314.9	310.0	315.0
Transformation Input	75.5	62.9	61.6	75.2	75.8	62.3	59.9	75.7	80.5	62.0	58.8	77.4	245.7	272.9	276.9	280.4	269.8	275.2	273.7	278.8
of which:																				
Power Generation	57.1	44.3	44.3	57.0	58.3	44.7	42.4	58.1	63.5	44.9	41.8	60.3	167.9	188.2	195.4	205.4	195.4	202.6	203.5	210.5
Coke	18.0	18.1	16.8	17.7	17.0	17.2	17.2	17.0	16.7	16.9	16.8	16.6	75.1	81.3	78.1	71.9	71.7	70.7	68.4	67.0
Production Patent Fuels	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.5	0.3	0.2	0.2	0.4	3.1	3.6	3.2	3.0	2.5	1.6	1.6	1.1
Avail.Final Consumption	9.7	9.0	10.7	11.9	9.4	9.0	8.8	10.7	9.4	8.8	8.7	10.4	42.7	52.5	45.8	46.1	43.5	41.3	37.9	37.3
Final Consumption (est)	9.4	9.9	8.8	10.9	9.4	9.0	8.8	10.7	9.4	8.8	8.7	10.4	41.1	50.0	45.4	45.9	42.3	39.0	37.9	37.3
Industry	5.6	6.1	6.0	6.9	5.9	6.0	6.0	7.0	5.9	6.1	6.2	7.0	22.0	28.1	24.1	26.8	25.7	24.6	24.9	25.1
Domestic	3.8	3.8	2.8	4.0	3.5	3.0	2.8	3.7	3.5	2.8	2.5	3.4	19.0	21.9	21.3	19.1	16.5	14.4	13.0	12.2
Statistical Difference	0.3	-0.8	1.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.5	0.4	0.2	1.3	2.3	0.0	0.0
Deliveries of Hard Coal to:																				
Power Plants	50.4	46.4	44.8	52.5	54.3	45.3	43.0	52.8	54.5	46.2	44.0	55.5	146.5	189.2	195.3	194.9	189.1	194.1	195.5	200.2
Coking Plants	18.0	18.1	16.8	17.7	17.0	17.2	17.2	17.0	16.7	16.9	16.8	16.6	75.1	81.3	78.1	71.9	71.7	70.7	68.4	67.0
Patent Plants	0.5	0.4	0.4	0.6	0.4	0.3	0.4	0.6	0.3	0.2	0.3	0.4	2.8	3.4	3.4	3.0	2.7	1.9	1.7	1.2
All Industries	6.8	7.6	7.5	8.6	7.2	7.5	7.5	8.7	7.3	7.5	7.7	8.8	28.8	33.6	30.9	31.5	31.3	30.5	30.8	31.2
Households	3.4	3.4	2.5	3.5	3.1	2.7	2.5	3.2	3.2	2.6	2.3	3.0	16.0	18.3	18.1	16.1	14.1	12.8	11.4	11.1
Other	0.3	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.6	1.8	1.4	1.6	1.5	0.8	0.9	0.8
TOTAL	79.4	76.2	72.2	83.1	82.3	73.2	70.7	82.5	82.2	73.6	71.2	84.6	270.7	327.5	327.3	319.0	310.2	310.9	308.7	311.6
Power Sector:																				
Deliv. to Power Plants	50.4	46.4	44.8	52.5	54.3	45.3	43.0	52.8	54.5	46.2	44.0	55.5	146.5	189.2	195.3	194.9	189.1	194.1	195.5	200.2
Industry	1.5	1.7	1.7	1.9	1.6	1.6	1.6	1.9	1.6	1.7	1.7	1.9	8.4	7.2	8.3	6.3	7.0	6.7	6.8	6.9
Total	51.9	48.1	46.5	54.4	55.9	47.0	44.7	54.8	56.1	47.8	45.7	57.5	154.9	196.4	203.6	201.2	196.1	200.8	202.3	207.1
Change in Stocks	-5.2	3.8	2.2	-2.6	-2.5	2.3	2.3	-3.4	-7.4	2.9	3.9	-2.8	-13.0	8.2	8.2	-4.3	0.6	-1.6	-1.3	-3.4
Consumption in Power Stations	57.1	44.3	44.3	57.0	58.3	44.7	42.4	58.1	63.5	44.9	41.8	60.3	167.9	188.2	195.4	205.4	195.4	202.8	203.5	210.5
2. HARD COKE (Million tonnes)																				
Coking Plants																				
Production	12.9	12.9	13.2	13.0	12.6	12.8	12.8	12.7	12.4	12.6	12.5	12.4	56.2	60.6	58.4	53.8	52.9	51.9	50.8	49.8
Change in Stocks	-1.3	-1.2	-0.4	0.0	-0.5	-0.4	0.2	-0.4	-0.7	-0.4	0.5	0.2	-5.2	-3.9	2.2	1.4	-2.2	-3.0	-1.1	-0.5
Deliveries to the Iron and Steel Industry	12.2	12.2	11.7	11.1	11.4	11.6	11.2	11.1	11.2	11.2	10.8	10.7	52.1	53.2	47.9	45.0	47.1	47.1	45.3	44.0
Final Consumption	9.2	9.1	8.8	8.7	8.6	8.7	8.5	8.7	8.5	8.5	8.2	8.4	43.0	44.3	38.9	35.6	36.1	35.8	34.5	33.5
3. LIGNITE (Million tonnes)																				
Production	49.6	46.6	45.5	47.1	48.1	46.5	49.4	52.1	52.1	46.3	49.3	54.4	196.4	186.8	183.0	179.8	179.8	188.8	196.0	202.1
Gross Inland Consumption	50.3	47.1	46.1	47.9	48.5	47.3	48.8	52.7	53.0	47.1	48.2	54.7	197.9	195.6	187.5	180.1	183.8	191.4	197.3	202.9
Consumption in Power Stations	44.9	40.9	41.6	43.6	43.2	41.5	44.3	48.3	47.8	41.3	43.7	50.3	174.1	170.9	162.7	156.4	163.8	171.0	177.3	183.0

(*) NOTES:
1) Final demand figures for hard coal include patent fuels
2) From 1987 Spanish black lignite ("negro") is included in hard coal figures.

TABLE 7 - EUR 12
Electricity: Generation and Disposal
(Last revision: 12 July 1990)

	1Q89	2Q89	3Q89	4Q89	1Q90	2Q90	3Q90	4Q1990	1Q91	2Q91	3Q91	4Q91	1984	1985	1986	Year 1987	1988	1989	1990	1991
1. ELECTRICAL POWER (TWh)																				
A. GENERATION																				
Total Gross Generation	472.8	414.0	395.3	473.0	482.6	423.2	407.9	498.0	524.0	438.3	414.9	516.1	1499.9	1571.1	1612.0	1659.3	1706.7	1755.1	1811.6	1893.2
(Produced by Pumping)	3.2	3.4	3.3	3.8	3.6	3.6	3.3	3.5	3.2	3.2	2.9	3.1	12.2	13.6	12.5	11.9	12.5	13.7	14.1	12.5
net of Pumping	469.6	410.6	392.0	469.2	479.0	419.6	404.6	494.5	520.8	435.1	411.9	512.9	1487.7	1557.5	1599.4	1647.4	1694.2	1741.4	1797.6	1880.7
of which:																				
Primary (Hydro):	29.3	41.8	30.7	29.8	34.7	42.1	33.9	37.5	45.3	53.6	41.8	42.4	174.1	169.9	165.4	173.9	192.1	131.6	148.2	183.1
Derived:	440.3	368.8	361.3	439.4	444.2	377.4	370.7	457.0	475.5	381.5	370.1	470.5	1313.6	1387.6	1434.1	1473.4	1502.1	1609.8	1649.4	1697.6
Nuclear	171.7	149.9	143.1	162.7	171.3	160.4	154.6	167.6	172.6	160.8	155.1	169.6	399.0	483.2	522.6	538.2	581.2	627.4	653.8	658.1
Conventional Thermal	267.8	218.1	217.5	275.9	272.2	216.3	215.3	288.6	302.1	219.9	214.2	300.1	911.7	901.7	908.7	932.2	917.8	979.3	992.4	1036.3
Geothermal	0.8	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.8	2.7	2.8	3.0	3.1	3.2	3.2	3.2
Total Net Production	446.4	390.7	372.5	446.7	455.7	399.2	383.8	469.5	494.9	413.8	390.8	486.9	1419.5	1486.3	1523.5	1567.8	1611.1	1658.4	1708.2	1786.5
net of Pumping	443.2	387.3	369.2	442.9	452.1	395.5	380.5	466.1	491.6	410.6	387.9	483.8	1407.3	1472.7	1511.0	1555.8	1598.8	1642.7	1694.2	1773.9
B. DISPOSAL																				
Total Gross Generation	472.8	414.0	395.3	473.0	482.6	423.2	407.9	498.0	524.0	438.3	414.9	516.1	1499.9	1571.1	1612.0	1659.3	1706.7	1755.1	1811.6	1893.2
Net Imports	2.7	7.2	6.5	2.4	3.6	7.1	8.0	3.6	3.9	7.3	7.9	3.7	18.0	14.3	13.7	18.5	20.5	18.9	22.4	22.8
Gross Inland Consuption	475.5	421.2	401.8	475.5	486.2	430.3	415.9	501.6	527.9	445.6	422.8	519.8	1517.9	1585.4	1625.6	1677.8	1727.2	1774.0	1834.0	1916.1
Absorbed by Pumping	4.5	4.8	4.6	5.3	5.0	5.0	4.6	4.8	4.5	4.4	4.1	4.4	17.0	18.8	17.3	16.4	16.9	19.2	19.5	17.4
Production Losses	26.3	23.3	22.8	26.3	26.9	24.0	24.1	28.4	29.1	24.5	24.0	29.1	80.4	84.8	88.5	91.5	95.8	98.7	103.4	106.8
Available for Int.Market	444.7	393.1	374.4	443.9	454.3	401.3	387.2	468.3	494.3	416.7	394.7	486.3	1420.5	1481.8	1519.9	1569.9	1614.7	1656.1	1711.1	1791.9
Distribution Losses	30.3	26.5	25.3	30.3	30.9	27.1	26.1	31.9	33.5	28.1	26.6	33.0	98.3	105.4	103.5	105.5	109.7	112.3	115.9	121.2
Consumption Int.Market	414.5	366.6	349.1	413.6	423.4	374.2	361.1	436.5	460.8	388.6	368.1	453.3	1322.1	1376.4	1416.3	1464.4	1505.0	1543.8	1595.1	1670.8
Energy Branch Consumption	18.4	16.1	15.4	18.4	18.8	16.5	15.9	19.4	20.4	17.1	16.2	20.1	58.5	64.5	69.3	64.6	65.3	68.5	70.7	73.8
Final Consumption (est)	396.0	350.5	333.7	395.1	404.6	357.7	345.2	417.1	440.3	371.5	351.9	433.1	1264.3	1310.9	1347.0	1399.5	1439.8	1475.3	1524.5	1596.9
2. INPUT TO CONVENTIONAL THERMAL POWER STATIONS (Million toe)																				
Hard Coal	33.1	25.7	25.7	33.0	33.8	25.9	24.6	33.7	36.8	26.1	24.3	35.0	96.6	107.2	112.4	117.8	113.0	117.5	118.1	122.1
Lignite	8.0	7.3	7.4	7.8	7.7	7.4	7.9	8.6	8.5	7.3	7.8	8.9	33.4	32.5	30.7	28.3	29.2	30.4	31.6	32.6
Brown Coal Briquettes	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.6	0.6	0.3	0.3	0.3	0.3	0.2
Petroleum Products	11.2	8.3	9.1	12.5	11.5	8.3	9.1	11.7	11.9	7.9	8.6	11.9	50.7	39.4	35.8	35.7	35.3	41.1	40.7	40.3
Natural Gas	6.5	6.5	6.6	7.1	6.7	5.8	6.8	9.1	9.1	6.9	7.4	9.9	24.6	22.7	21.9	23.8	23.6	26.7	28.4	33.3
Derived Gas	1.4	1.4	1.8	1.4	1.3	1.4	1.6	1.5	1.5	1.5	1.6	1.6	5.4	5.5	5.5	5.1	5.8	5.8	5.9	6.1
Other	0.6	0.6	0.6	0.8	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	1.7	1.8	1.7	2.2	2.2	2.3	2.3	2.5
TOTAL excl Geothermal	60.8	49.9	51.0	62.5	61.8	49.5	50.5	65.4	68.6	50.3	50.3	68.0	213.3	209.8	208.7	213.3	209.5	224.3	227.3	237.2
Geothermal	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	1.8	1.7	1.7	1.8	1.8	1.9	1.8	1.9
TOTAL	61.3	50.4	51.5	63.0	62.3	50.0	51.0	65.9	69.1	50.8	50.7	68.5	215.1	211.5	210.4	215.1	211.3	226.1	229.1	239.1
3. HEAT (TWh)																				
Production Nuclear Heat	499.0	437.1	421.5	471.4	499.9	468.9	455.5	489.5	503.7	470.3	456.9	495.1	1111.0	1440.3	1537.5	1580.4	1694.9	1829.0	1913.9	1926.1
Production Geoth. Heat	5.4	5.4	5.4	5.4	5.6	5.4	5.2	5.3	5.6	5.4	5.3	5.4	20.8	19.8	20.1	21.5	21.4	21.5	21.5	21.7
Production Total Heat	504.4	442.5	426.9	476.8	505.5	474.3	460.7	494.9	509.4	475.7	462.2	500.5	1131.8	1460.0	1557.6	1601.9	1716.3	1850.5	1935.4	1947.8
Adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.9	-2.6	0.9	4.2	13.5	0.0	0.0	0.0
Gross Consumption	504.4	442.5	426.9	476.8	505.5	474.3	460.7	494.9	509.4	475.7	462.2	500.5	1209.5	1457.5	1558.5	1606.0	1729.8	1850.5	1935.4	1947.8
Nuclear Capacity (GW)	103.1	103.1	102.8	102.0	101.9	105.3	104.4	104.4	104.4	105.4	105.4	106.7	70.7	79.1	89.1	94.8	101.4	102.0	104.4	106.7

TABLE 8 - EUR 12
Main Variables: Growth Rates from same Quarter of previous Year - in %
(Last revision: 12 July 1990)

	1Q89	2Q89	3Q89	4Q89	1Q90	2Q90	3Q90	4Q90	1Q91	2Q91	3Q91	4Q91
A. SPECIFIC UNITS												
1. HARD COAL												
Primary Production	2.5	-1.7	-4.2	-7.6	-10.8	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2
Net Imports	5.2	9.3	7.3	11.6	16.1	-6.5	-2.6	3.6	13.4	6.9	5.3	10.1
Apparent Consumption	-1.8	1.0	3.3	2.8	-0.1	-0.8	-4.9	-0.9	5.7	-0.4	-1.5	1.8
Gross Inland Consumption	-1.8	1.0	3.4	2.9	-0.1	-0.8	-4.9	-0.9	5.7	-0.4	-1.5	1.8
Deliveries												
Power Plants	1.9	-0.3	5.2	3.9	7.7	-2.4	-4.0	0.7	0.3	1.9	2.3	5.1
Coking Plants	-3.2	4.3	-6.7	0.3	-5.4	-5.0	1.9	-3.9	-1.7	-1.9	-2.3	-2.4
All Industries	-12.6	1.0	2.0	0.4	5.6	-1.4	-0.6	0.7	1.1	0.7	2.6	0.7
Domestic	-18.4	13.1	-19.4	-7.4	-8.8	-21.9	-0.4	-10.2	2.4	-2.5	-5.6	-5.1
TOTAL	-2.1	0.9	0.3	1.8	3.7	-3.9	-2.1	-0.7	-0.2	0.6	0.8	2.5
Transform.Power Generation	-0.6	3.0	7.7	5.7	2.2	0.9	-4.3	2.0	8.8	0.5	-1.3	3.7
Final Consumption (est.)	-16.2	0.6	-8.5	-5.5	-0.3	-8.8	-0.3	-2.2	-0.6	-1.8	-1.2	-2.3
2. COKE												
Production	-4.0	-2.1	0.3	-1.2	-2.1	-0.8	-3.3	-2.4	-1.6	-1.8	-2.2	-2.3
Deliv. to Iron and Steel	4.3	4.2	-0.2	-8.7	-6.7	-4.8	-3.8	0.5	-1.3	-3.0	-3.9	-3.5
Final Consumption (est.)	1.7	2.7	-1.3	-6.9	-6.3	-4.6	-3.6	0.3	-1.3	-2.9	-3.7	-3.3
3. LIGNITE												
Primary Production	9.5	15.9	2.1	-5.4	-3.0	-0.2	8.3	10.6	8.4	-0.4	-0.1	4.4
Apparent Consumption	8.4	15.1	1.8	-5.9	-3.7	0.4	6.0	10.2	9.3	-0.5	-1.3	3.7
Gross Inland Consumption	8.1	14.9	1.6	-6.1	-3.7	0.4	6.0	10.2	9.3	-0.5	-1.3	3.7
Transform.Power Generation	13.1	12.4	2.8	-7.7	-3.7	1.4	6.5	10.8	10.5	-0.5	-1.3	4.1
4. OIL												
Crude Production	-23.8	-26.8	-10.8	-3.4	4.9	13.1	1.2	-0.6	2.5	0.5	1.3	3.0
Total Primary Production	-23.4	-26.4	-10.8	-4.0	4.4	12.6	1.1	-0.5	2.5	0.4	1.1	2.7
Net Imports	16.6	9.5	6.1	2.7	1.3	2.9	1.8	-2.4	0.9	3.0	2.1	1.6
Apparent Consumption	0.4	1.5	-0.0	0.8	1.4	2.8	3.5	0.2	3.9	2.1	0.9	1.2
Gross Inland Consumption	0.3	1.4	-0.1	0.7	0.8	2.1	2.8	-0.4	3.9	2.1	0.9	1.2
Deliveries												
Motor Gasoline	2.6	2.0	0.2	1.7	2.7	2.9	3.1	1.3	-0.8	2.0	2.1	1.5
Gas/Diesel Oil	-6.0	-2.9	2.3	-1.9	4.0	4.6	0.3	1.8	8.1	5.4	2.4	1.1
Autom. Diesel Oil	7.7	7.4	6.0	4.7	2.4	6.1	8.0	6.4	7.7	6.0	5.9	6.3
Heating Gas Oil	-14.8	-13.5	-1.3	-6.7	5.3	2.7	-7.9	-2.1	8.4	4.5	-2.0	-3.7
Heavy Fuel Oil	13.3	3.5	-1.5	5.0	-1.7	-4.8	6.8	-6.5	-0.4	-6.7	-5.8	-1.6
Kerosenes	1.2	4.2	1.6	5.0	4.9	1.8	3.1	2.6	4.9	2.2	1.8	3.0
Other products	5.8	2.8	-1.7	-1.6	-4.4	0.0	4.7	2.7	5.3	3.1	1.1	2.9
TOTAL	1.3	0.8	0.4	0.4	1.2	1.7	2.9	0.5	4.1	2.2	0.9	1.2
Transform.Power Generation	22.9	11.7	13.0	17.4	3.3	-0.3	0.3	-6.4	3.4	-5.5	-5.2	1.4
Input to Refineries	4.3	0.1	-0.0	0.2	1.6	5.8	1.5	1.2	3.7	1.5	2.9	1.7
Refineries Gross Output	3.7	0.1	0.3	-0.2	2.4	5.9	1.7	1.4	3.8	1.6	3.1	1.8
Final Consumption (est.)	-0.7	0.0	-0.6	-1.3	1.0	1.8	3.1	1.3	4.2	2.9	1.5	1.2
5. NATURAL GAS												
Primary Production	-2.0	13.3	-0.2	9.1	2.5	2.5	4.6	3.3	11.8	7.8	4.0	2.8
Net Imports	12.3	9.4	0.9	4.9	4.2	-8.9	-1.3	15.1	7.6	7.3	7.1	2.8
Apparent Consumption	-1.2	11.6	3.0	7.1	2.3	0.5	4.8	7.6	13.0	7.7	7.9	3.2
Gross Inland Consumption	-1.7	10.8	1.9	6.5	2.3	0.5	4.8	7.6	13.0	7.7	7.9	3.2
Transform.Power Generation	-2.5	24.4	32.1	5.9	4.0	-11.1	1.7	28.6	35.0	19.8	9.7	8.2
Final Consumption (est.)	-1.7	8.2	-4.4	6.5	2.1	2.8	5.7	4.7	10.4	5.7	7.5	2.4
6. HEAT												
Production of Nuclear Heat	12.1	15.3	1.9	3.1	0.2	7.3	8.1	3.9	0.8	0.3	0.3	1.1
Apparent Consumption	12.0	15.1	1.9	3.1	0.2	7.2	7.9	3.8	0.8	0.3	0.3	1.1
Gross Inland Consumption	11.2	14.1	1.1	2.4	0.2	7.2	7.9	3.8	0.8	0.3	0.3	1.1
7. ELECTRICITY												
Primary electricity:												
Apparent Consumption	-44.2	-24.8	-22.6	-23.3	19.7	0.5	12.5	27.5	28.2	23.7	18.9	12.2
Total Gross Generation	1.3	6.1	2.5	1.9	2.1	2.2	3.2	5.3	8.6	3.6	1.7	3.6
Total Net Production	1.2	5.8	2.6	2.1	2.1	2.2	3.0	5.1	8.6	3.7	1.8	3.7
Generation Primary	-45.7	-26.4	-27.8	-23.2	18.6	0.7	10.4	25.7	30.4	27.4	23.5	13.2
Generation Derived	7.5	11.7	6.3	4.0	0.9	2.3	2.6	4.0	7.0	1.1	-0.2	2.9
Generation Nuclear	12.4	15.0	3.0	2.2	-0.3	6.9	8.1	3.0	0.8	0.3	0.3	1.2
Generation Conv.Thermal	4.7	9.5	8.5	5.2	1.6	-0.8	-1.0	4.6	11.0	1.6	-0.5	4.0
Gross Inland Consumption	1.2	5.7	2.7	1.7	2.3	2.2	3.5	5.5	8.6	3.6	1.7	3.6
Available Internal Market	1.0	5.2	2.8	1.7	2.1	2.1	3.4	5.5	8.8	3.8	1.9	3.8
Consumption Intern.Market	1.0	5.2	2.8	1.7	2.2	2.1	3.4	5.5	8.8	3.9	2.0	3.8
Final Consumption	0.9	5.1	2.7	1.6	2.2	2.1	3.4	5.5	8.8	3.9	2.0	3.9
B. II. TOE												
Primary Production	-3.4	-1.6	-3.8	-0.4	-0.8	4.5	3.4	2.2	4.4	1.9	1.0	1.7
Net Imports	14.0	9.3	5.5	4.1	3.6	0.2	1.0	0.9	3.7	3.9	2.9	3.0
Aparrent Consumption	0.7	4.8	0.8	2.1	1.1	2.1	2.8	2.5	6.3	2.6	1.4	1.9
Gross Inland Consumption	0.6	4.6	0.6	1.9	0.9	1.8	2.5	2.3	6.3	2.6	1.4	1.9
of which:												
Solids	-0.2	3.7	2.2	0.8	-0.5	-1.0	-3.0	1.1	6.5	-0.4	-1.8	2.0
Oil	0.6	1.6	0.2	0.9	0.6	1.8	2.4	-0.6	3.9	2.1	0.9	1.2
Natural Gas	-1.7	10.6	1.9	6.5	2.3	0.5	4.8	7.6	13.0	7.7	7.9	3.2
Heat	11.2	14.1	1.1	2.4	0.2	7.2	7.9	3.8	0.8	0.3	0.3	1.1
Primary Electricity	-44.2	-24.8	-22.6	-23.4	19.7	0.5	12.5	27.5	28.2	23.7	18.9	12.2
Total Final Consumption	-1.4	2.8	-1.0	0.7	1.1	1.2	2.9	2.5	6.2	3.1	2.0	1.6

TABLE 9 - EUR 12
Main Variables: Year to Date Growth Rates - in %
(Last revision: 12 July 1990)

	1Q89	2Q89	3Q89	4Q89	1Q90	2Q90	3Q90	4Q90	1Q91	2Q91	3Q91	4Q91
A. SPECIFIC UNITS												
1. HARD COAL												
Primary Production	2.5	0.4	-1.0	-2.8	-10.8	-6.7	-5.3	-4.5	-2.2	-2.2	-2.2	-2.2
Net Imports	5.2	7.3	7.3	8.4	16.1	4.7	2.3	2.6	13.4	10.5	8.8	9.2
Apparent Consumption	-1.8	-0.6	0.6	1.2	-0.1	-0.4	-1.8	-1.6	5.7	2.9	1.6	1.6
Gross Inland Consumption	-1.8	-0.5	0.7	1.3	-0.1	-0.4	-1.8	-1.6	5.7	2.9	1.6	1.6
Deliveries												
Power Plants	1.9	0.8	2.2	2.7	7.7	2.9	0.7	0.7	0.3	1.1	1.4	2.4
Coking Plants	-3.2	0.5	-2.0	-1.4	-5.4	-5.2	-2.9	-3.2	-1.7	-1.8	-2.0	-2.1
All Industries	-12.6	-5.9	-3.4	-2.3	5.6	1.9	1.0	0.9	1.1	0.9	1.5	1.3
Domestic	-18.4	-5.3	-9.5	-8.9	-8.8	-15.3	-11.4	-11.0	2.4	0.1	-1.6	-2.6
TOTAL	-2.1	-0.7	-0.4	0.2	3.7	-0.0	-0.7	-0.7	-0.2	0.2	0.4	0.9
Transform.Power Generation	-0.6	1.0	2.9	3.7	2.2	1.6	-0.2	0.4	8.8	5.2	3.3	3.4
Final Consumption (est.)	-16.2	-8.4	-8.4	-7.6	-0.3	-4.6	-3.3	-3.0	-0.6	-1.2	-1.2	-1.5
2. COKE												
Production	-4.0	-3.1	-1.9	-1.8	-2.1	-1.4	-2.1	-2.1	-1.6	-1.7	-1.8	-2.0
Deliv. to Iron and Steel	4.3	4.2	2.8	-0.2	-6.7	-5.7	-5.1	-3.8	-1.3	-2.2	-2.7	-2.9
Final Consumption (est.)	1.7	2.2	1.0	-1.0	-6.3	-5.4	-4.9	-3.6	-1.3	-2.1	-2.6	-2.8
3. LIGNITE												
Primary Production	9.5	12.5	8.9	5.0	-3.0	-1.6	1.6	3.8	8.4	4.1	2.7	3.1
Apparent Consumption	8.4	11.5	8.2	4.3	-3.7	-1.7	0.8	3.1	9.3	4.4	2.5	2.8
Gross Inland Consumption	8.1	11.3	8.0	4.1	-3.7	-1.7	0.8	3.1	9.3	4.4	2.5	2.8
Transform.Power Generation	13.1	12.8	9.3	4.4	-3.7	-1.3	1.3	3.7	10.5	5.1	2.9	3.2
4. OIL												
Crude Production	-23.8	-25.3	-20.8	-16.7	4.9	8.8	6.1	4.3	2.5	1.5	1.4	1.8
Total Primary Production	-23.4	-24.8	-20.5	-16.6	4.4	8.2	5.8	4.1	2.5	1.5	1.4	1.7
Net Imports	16.6	13.0	10.5	8.3	1.3	2.0	2.0	0.8	0.9	1.9	2.0	1.9
Apparent Consumption	0.4	0.9	0.6	0.6	1.4	2.1	2.6	1.9	3.9	3.0	2.3	2.0
Gross Inland Consumption	0.3	0.8	0.5	0.6	0.8	1.4	1.9	1.3	3.9	3.0	2.3	2.0
Deliveries												
Motor Gasoline	2.6	2.3	1.6	1.6	2.7	2.8	2.9	2.5	-0.8	0.6	1.1	1.2
Gas/Diesel Oil	-6.0	-4.6	-2.4	-2.3	4.0	4.3	2.9	2.6	8.1	6.8	5.4	4.2
Autom. Diesel Oil	7.7	7.6	7.0	6.4	2.4	4.3	5.5	5.8	7.7	6.8	6.5	6.4
Heating Gas Oil	-14.8	-14.3	-10.4	-9.3	5.3	4.3	0.3	-0.4	8.4	6.9	4.2	1.9
Heavy Fuel Oil	13.3	6.7	5.6	5.4	-1.7	-3.1	-0.2	-2.1	-0.4	-3.2	-4.0	-3.3
Kerosenes	1.2	2.7	2.3	3.0	4.9	3.2	3.2	3.0	4.9	3.5	2.9	2.9
Other products	5.8	4.3	2.2	1.2	-4.4	-2.2	0.1	0.8	5.3	4.2	3.1	3.1
TOTAL	1.3	1.0	0.8	0.7	1.2	1.4	1.9	1.5	4.1	3.2	2.4	2.1
Transform.Power Generation	22.9	17.8	16.3	16.6	3.3	1.7	1.3	-1.1	3.4	-0.3	-1.8	-0.9
Input to Refineries	4.3	2.2	1.4	1.1	1.6	3.7	2.9	2.5	3.7	2.6	2.7	2.5
Refineries Gross Output	3.7	1.9	1.3	0.9	2.4	4.1	3.3	2.8	3.8	2.7	2.8	2.6
Final Consumption (est.)	-0.7	-0.4	-0.4	-0.7	1.0	1.4	2.0	1.8	4.2	3.5	2.8	2.4
5. NATURAL GAS												
Primary Production	-2.0	3.6	2.7	4.6	2.5	2.5	3.0	3.1	11.8	10.2	8.8	6.9
Net Imports	12.3	10.9	7.9	7.0	4.2	-2.1	-1.8	2.8	7.6	7.5	7.4	6.0
Apparent Consumption	-1.2	3.5	3.3	4.5	2.3	1.6	2.3	4.0	13.0	11.0	10.3	8.0
Gross Inland Consumption	-1.7	2.8	2.6	3.6	2.3	1.6	2.3	4.0	13.0	11.0	10.3	8.0
Transform.Power Generation	-2.5	9.4	16.1	13.2	4.0	-3.5	-1.8	6.3	35.0	28.0	21.6	17.3
Final Consumption (est.)	-1.7	1.6	0.5	2.3	2.1	2.4	3.1	3.6	10.4	8.6	8.4	6.5
6. HEAT												
Production of Nuclear Heat	12.1	13.6	9.7	7.9	0.2	3.5	4.9	4.6	0.8	0.5	0.5	0.6
Apparent Consumption	12.0	13.4	9.6	7.6	0.2	3.5	4.9	4.6	0.8	0.5	0.5	0.6
Gross Inland Consumption	11.2	12.5	8.7	7.0	0.2	3.5	4.9	4.6	0.8	0.5	0.5	0.6
7. ELECTRICITY												
Primary electricity:												
Apparent Consumption	-44.2	-33.9	-30.7	-29.2	19.7	8.1	9.5	13.4	28.2	25.7	23.5	20.8
Total Gross Generation	1.3	3.5	3.2	2.8	2.1	2.1	2.5	3.2	8.6	6.2	4.8	4.5
Total Net Production	1.2	3.3	3.1	2.8	2.1	2.1	2.4	3.1	8.6	6.3	4.9	4.6
Generation Primary	-45.7	-35.8	-33.6	-31.5	18.6	8.1	8.8	12.6	30.4	28.7	27.1	23.6
Generation Derived	7.5	9.4	8.4	7.2	0.9	1.6	1.9	2.5	7.0	4.3	2.9	2.9
Generation Nuclear	12.4	13.6	10.1	7.9	-0.3	3.1	4.6	4.2	0.8	0.6	0.5	0.7
Generation Conv.Thermal	4.7	6.8	7.3	6.7	1.6	0.5	0.1	1.3	11.0	6.8	4.6	4.4
Gross Inland Consumption	1.2	3.3	3.1	2.7	2.3	2.2	2.6	3.4	8.6	6.2	4.8	4.5
Available Internal Market	1.0	2.9	2.9	2.6	2.1	2.1	2.5	3.3	8.8	6.5	5.1	4.7
Consumption Intern.Market	1.0	2.9	2.9	2.6	2.2	2.1	2.5	3.3	8.8	6.5	5.1	4.7
Final Consumption	0.9	2.8	2.8	2.5	2.2	2.1	2.5	3.3	8.8	6.5	5.1	4.8
B. II. TOE												
Primary Production	-3.4	-2.6	-3.0	-2.3	-0.8	1.6	2.1	2.1	4.4	3.2	2.5	2.3
Net Imports	14.0	11.6	9.5	8.0	3.6	1.9	1.6	1.4	3.7	3.8	3.5	3.3
Apparent Consumption	0.7	2.8	2.0	2.0	1.1	1.5	1.9	2.1	6.3	4.6	3.6	3.1
Gross Inland Consumption	0.8	2.4	1.6	1.8	0.9	1.3	1.7	1.8	6.3	4.5	3.6	3.1
of which:												
Solids	-0.2	1.6	1.6	1.5	-0.5	-0.7	-1.5	-0.8	6.5	3.3	1.7	1.8
Oil	0.6	1.1	0.8	0.8	0.6	1.2	1.6	1.0	3.9	3.0	2.3	2.0
Natural Gas	-1.7	2.8	2.6	3.8	2.3	1.6	2.3	4.0	13.0	11.0	10.3	8.0
Heat	11.2	12.5	8.7	7.0	0.2	3.5	4.9	4.6	0.8	0.5	0.5	0.6
Primary Electricity	-44.2	-33.9	-30.7	-29.2	19.7	8.1	9.5	13.4	28.2	25.7	23.5	20.8
Total Final Consumption	-1.4	0.5	0.1	0.3	1.1	1.1	1.7	1.9	6.2	4.7	3.9	3.2

Annex I : Energy data

The energy data used to prepare this outlook come mainly from the monthly energy statistics of the SOEC, published in the EUROSTAT publication "Energy: Monthly Statistics" (also available in CRONOS and SIRENE computer databases). For the moment those figures are not corrected for seasonal or weather variations.

I. Data in specific units

Tables 5 for hydrocarbons, 6 for solid fuels and 7 for electricity, present data in their initial form (in specific units). Those data are, in general, published without adjustment (with only a few exceptions which are described later).

For all fuels, a line called "Apparent Consumption" is estimated by the following formula:

Apparent Consumption = Primary Production + Recovered Production + Net Imports - Change in Stocks - Bunkers (for oil). (1)

Due to important differences when compared with published annual balance sheets, a line called "Adjustment to annual figures" is added and Gross Inland Consumption, in specific units (Tables 5 to 7) and in Toe (Table 4), is given by the relation:

Gross Inland Consumption = Apparent Consumption + Adjustment. (2)

The latest known annual balance sheet covers 1988. Exceptionally, for reasons explained in Box A, adjustment for oil for the years 1989 to 1991 is different from zero.

For the following fuels: oil and natural gas (Table 5), hard coal and lignite (Table 6), the line "Input to Power Generation" is estimated on the basis of monthly data of consumption by the thermal public supply power stations (published by the SOEC in the monthly bulletin) and annual data (published in annual balance sheets) including all other producers of electricity.

The following remarks give some additional informations for each fuel:

Table 5 - Oil

a) Crude oil: The item "other inputs" of SOEC crude oil balance sheet is added to net imports (value for 1989: 1.4 Mt).

b) Oil products: The item "out of refinery production" of SOEC balance sheet of petroleum products is considered as "recovered production".

c) The line "Available to final consumption" is estimated:

Available to Final Consumption = Gross Inland Consumption - Transformation Input + Refineries net Output (3)

d) The line "Final consumption" is estimated:

Final Consumption = Total Inland Deliveries - (Total Transformation Input - Input to Refineries) (4)

This information makes it possible to identify the relationship between Gross Inland Consumption and Deliveries:

Gross Inland Consumption = Total Inland Deliveries + (Input to Refineries - Refineries net Output) + Statistical Difference (5)

Table 5 - Natural Gas

The line "Natural Gas, Final Consumption" is estimated on the basis of annual data.

Table 6 - Hard coal

a) Hard Coal figures include patent fuels: Net imports, not shown in the table because of their small quantity, are added to hard coal apparent consumption, starting from 1987, and patent fuels production is considered as transformation output.

b) From 1987 Spanish black lignite ("negro") is included in hard coal figures (5.8 Mt in 1986).

c) The line "Input to Power Generation" is estimated by the formula:

Input to Power Generation = Deliveries to Power Plants + Transformation for Power Generation in Industry - Change in Stocks in Power Plants (6)

The line "Transformation for Power Generation in Industry" is estimated on the basis of annual data.

d) The line "Transformation input" is given by the formula:

Transformation Input = Input to Power Generation + Deliveries to Coke + Deliveries to Patent Plants (7)

e) The line "Available to final consumption" is estimated:

Available to Final Consumption = Gross Inland Consumption - Transformation Input + Production of Patent Fuels (8)

f) The line "Final consumption" is estimated:

Final Consumption = Final Consumption of Industry + Final Consumption Domestic (9)

where:

Final Consumption of Industry = Deliveries to all Industries + 'Other' Deliveries - Transformation for Power Generation in Industry (10)

Final Consumption Domestic = Deliveries to Households + Patent Fuels (11)

This information makes it possible to identify the relationship between Gross Inland Consumption and Deliveries:

Gross Inland Consumption = Total Inland Deliveries - Change in Stocks in Power Plants + Statistical Difference (12)

Table 6 - Lignite

a) Lignite gross inland consumption includes brown coal briquettes.

b) From 1987 Spanish black lignite ("negro") is included in hard coal figures (5.8 Mt in 1986).

c) The historical primary production monthly figures are adjusted to annual values.

Table 7 - Electricity

a) Primary production is treated in the same way as in SOEC's annual balance sheet.

Primary Electricity = Gross Production of Hydro - Pumping (Electricity produced) (13)

b) Geothermal electricity is considered as derived, while geothermal heat is considered as a primary energy, following the concepts of the annual balance sheet.

c) Distribution losses, consumption by the energy branch and final consumption are estimated on the basis of annual figures.

Table 7 - Input to power stations

Those data, in toe, are calculated from the same variables in specific units, adjusted according to annual figures, and cover all producers.

Table 7 - Heat

a) The distinction between primary nuclear and geothermal heat follows the conventions of SOEC's balance sheet.

b) Data on nuclear capacity are based on the informations of the "ELECNUC" data base (see Annex III).

II. Data in Toe

Table 4 presents a complete quarterly primary balance sheet which is estimated by applying a conversion factor to each corresponding variable in specific units.

Starting from July 1989, the SOEC is publishing (in the monthly bulletin) a complete monthly primary balance sheet in toe, replacing the previous quarterly balance sheets. The time series run from January 1987. This new information is directly used in the case of hard coal, lignite and crude oil.

From this issue an estimation of final consumption by fuel is also presented.

The following table shows the conversion factors used to transform quarterly data from specific units to toe.

Historic	1979 to 83	1984	1985	1986	1987-89
Hard Coal					
Production	0.615	0.623	0.615	0.612	SOEC/MBS
Recov.Production	0.450	0.450	0.450	0.450	SOEC/MBS
Imports	0.660	0.650	0.650	0.650	SOEC/MBS
Exports	0.675	0.675	0.675	0.675	SOEC/MBS
Stocks	0.580	0.580	0.580	0.580	SOEC/MBS
Patent Fuels					SOEC/MBS
Coke	0.681	0.681	0.681	0.681	0.681
Lignite					
Production	0.192	0.192	0.192	0.186	SOEC/MBS *
Imports	0.400	0.400	0.400	0.400	SOEC/MBS
Exports	0.480	0.480	0.480	0.480	SOEC/MBS
Stocks	0.220	0.220	0.220	0.220	SOEC/MBS
Crude Oil					
Production	1.008	1.008	1.008	1.008	SOEC/MBS
Imports	1.004	1.004	1.004	1.004	SOEC/MBS
Exports	1.010	1.010	1.010	1.010	SOEC/MBS
Stocks	1.005	1.005	1.005	1.005	1.005
Oil Products					
Production	1.100	1.100	1.100	1.100	1.100
Recov.Production	1.100	1.100	1.100	1.100	1.100
Imports	1.000	1.000	1.000	1.000	1.000
Exports	1.003	1.003	1.000	1.000	1.000
Stocks	0.970	0.970	0.970	0.970	0.970
Bunkers	0.970	0.970	0.970	0.970	0.970
Natural gas	0.0215	0.0215	0.0215	0.0215	0.0215
Heat and electricity	0.086	0.086	0.086	0.086	0.086

SOEC/MBS: SOEC Monthly Balance Sheet
*) Lignite production - adjusted

Forecast	Prod	Rec.Prod	Net Imp.	Stocks	Bunkers	Power Gen.	Fin.Consum.
Hard Coal	0.604	0.450	0.656	0.600		0.580	0.680
Patent Fuels			0.700				
Coke			0.681	0.681		0.681	0.681
Lignite	0.180		0.400	0.220		0.178	0.370
Crude Oil	1.008						
Oil Products	1.008	1.100					
Total Oil			1.002	1.000	0.970	0.960	1.013
Natural gas	0.0215		0.0215	0.0215		0.0215	0.0215
Heat and electricity	0.086		0.086				0.086

The main differences with the SOEC balance sheet can be summarized as follows:

a) Coke: A slightly different conversion factor is used (0.681 in place of 0.7)
b) Lignite: Our primary production figures are slightly adjusted.
c) Oil: SOEC uses a 1:1 conversion factor for oil products. In addition, recovered production is ignored.
These factors can lead to considerable differences for EUR-12. For example the difference in apparent consumption for 1989 is of 4.1 Mtoe (483.8 against 479.7 Mtoe, or 0.9%).
d) Annual, rather than monthly data, are used for geothermal heat and other fuels.

The following table compares the 1989 figures by source. (See also table in Box A comparing the 1987 and 1998 figures).

1989	SOEC	STEO	Diff	in %
1. Hard Coal	194.67	194.67	-0.00	0.0%
2. Patent Fuels	-0.11	-0.11	0.00	0.0%
3. Coke	1.12	1.09	0.03	2.7%
4. Lignite	34.40	34.56	-0.17	-0.5%
5. Briquettes	0.26	0.26	0.00	0.0%
6a. Crude Oil	485.70	487.15	-1.44	-0.3%
6b. Oil Products	-6.06	-3.37	-2.69	-44.4%
6. Total Oil	479.64	483.78	-4.14	-0.9%
7. Natural Gas	199.76	199.80	-0.04	0.0%
8. Nuclear Heat	157.27	157.29	-0.03	0.0%
9. Geothermal Heat	1.74	1.85	-0.11	-6.3%
10. Electricity	12.94	12.94	-0.00	-0.0%
11. Other	2.29	2.30	-0.01	-0.3%
TOTAL	1083.98	1088.44	-4.46	-0.4%

Source: SIRENE, July 1990

It can be seen that the major difference comes from the oil sector.

Annex II: New final price data

We have recently updated our historical time series of final energy prices in ECU (Table 3). The following table shows the new data and compares it with the old times series.

	MSP	GDO Tr	GDO Dom	RFO Ind	Gas Dom	Gas Ind	Coal Dom	Coal Ind	El. Dom	El. Ind
		ECU/1000l		ECU/ton	ECU/10e7 Kcal GCV		ECU/ton		ECU/100 kwh	
OLD Series										
1978	364.9	226.3	128.9	74.4	153.3	78.2	86.5	42.1	5.37	3.10
1979	423.1	264.8	181.0	90.4	161.2	88.4	103.4	49.4	5.78	3.33
1980	519.8	339.8	250.3	131.2	201.2	119.5	133.4	62.2	6.93	4.02
1981	624.8	405.3	302.1	185.1	253.8	158.3	159.3	76.5	8.20	4.72
1982	664.0	438.5	346.5	193.9	304.2	194.9	170.3	88.1	9.17	5.25
1983	690.4	456.3	351.0	205.5	335.4	195.0	176.1	92.5	9.62	5.53
1984	722.2	481.4	370.3	242.4	350.1	215.9	193.8	94.1	10.20	5.77
1985	752.4	506.1	395.8	243.4	369.2	225.8	203.6	96.6	10.59	6.01
1986	624.5	396.8	258.0	122.1	338.1	159.7	199.1	92.7	10.52	5.87
1987	615.2	386.0	248.3	117.8	283.1	124.4	200.0	91.8	10.51	5.81
1988	614.6	381.1	234.0	94.3	288.8	118.1	204.8	90.3	10.70	5.89
1 Q 1987	607.1	384.3	245.9	111.5	280.0	127.0	201.2	91.0	10.31	5.80
2 Q 1987	618.9	382.3	239.1	117.4	284.8	123.0	196.4	91.0	10.34	5.66
3 Q 1987	622.6	389.9	259.1	128.2	290.9	122.4	199.6	93.6	10.70	5.80
4 Q 1987	612.3	387.6	249.2	113.9	277.0	125.1	202.7	91.7	10.68	6.00
1 Q 1988	599.3	380.6	232.5	92.9	281.8	123.5	204.8	92.5	10.50	5.95
2 Q 1988	618.2	381.7	234.1	97.5	282.4	118.2	202.3	89.5	10.61	5.77
3 Q 1988	623.5	383.8	236.3	99.1	294.2	116.2	202.6	89.7	10.86	5.83
4 Q 1988	617.4	378.1	233.0	87.8	296.8	114.6	209.5	89.3	10.82	6.03
1 Q 1989	649.5	397.3	256.1	100.5	286.9	119.7	210.5	89.6	10.92	6.12
NEW Series										
1978	374.0	226.6	129.0	74.3	151.2	74.2	88.0	42.3	5.44	3.02
1979	422.1	265.2	180.6	90.4	158.6	84.1	103.9	50.0	5.85	3.45
1980	519.7	339.6	250.6	131.5	195.8	117.4	137.7	63.0	7.00	4.06
1981	624.3	405.6	302.1	185.5	248.9	158.5	163.7	78.0	8.32	4.79
1982	663.9	439.1	346.8	193.9	308.1	189.8	176.0	91.7	9.41	5.35
1983	689.0	456.0	351.4	205.5	332.3	195.0	182.0	95.4	9.76	5.67
1984	723.0	481.2	370.9	242.7	346.8	215.9	199.1	97.1	10.39	5.91
1985	752.6	506.1	395.4	243.8	365.5	225.8	207.3	99.7	10.75	6.11
1986	624.6	396.7	257.9	122.1	337.0	161.4	203.5	95.5	10.53	5.93
1987	615.2	386.5	248.4	117.7	283.2	124.5	199.5	91.1	10.47	5.89
1988	613.0	381.4	232.6	94.2	290.4	112.9	203.2	90.7	10.77	5.98
1 Q 1987	607.1	384.7	246.0	111.5	280.0	128.3	200.7	90.4	10.26	5.85
2 Q 1987	618.9	382.8	239.2	117.4	284.9	122.7	195.9	90.5	10.33	5.73
3 Q 1987	622.6	390.4	259.1	128.1	290.8	122.0	199.1	92.4	10.66	5.88
4 Q 1987	612.3	388.0	249.2	113.8	277.0	124.8	202.4	91.1	10.64	6.09
1 Q 1988	597.9	379.9	231.2	92.7	287.0	117.7	203.2	92.2	10.49	6.03
2 Q 1988	616.8	382.5	232.8	97.6	287.6	112.6	200.7	90.1	10.73	5.87
3 Q 1988	621.8	384.4	234.9	98.9	299.9	110.6	201.0	90.5	10.95	5.90
4 Q 1988	615.7	378.8	231.5	87.6	286.9	110.5	208.0	90.0	10.91	6.10
1 Q 1989	648.0	397.8	254.4	100.1	284.8	112.8	209.1	90.7	10.92	6.23
Difference										
1978	9.1	0.3	0.1	-0.1	-2.2	-4.0	1.5	0.2	0.07	-0.08
1979	-0.9	0.5	-0.4	0.0	-2.6	-4.4	0.6	0.6	0.07	0.12
1980	-0.1	-0.2	0.3	0.3	-5.4	-2.1	4.2	0.8	0.07	0.04
1981	-0.5	0.2	0.0	0.3	-4.9	0.2	4.4	1.5	0.12	0.07
1982	0.0	0.6	0.3	0.0	3.9	-5.1	5.7	3.6	0.24	0.10
1983	-1.4	-0.4	0.3	0.0	-3.1	0.0	5.9	2.9	0.14	0.13
1984	0.8	-0.2	0.6	0.4	-3.2	0.0	5.3	3.0	0.19	0.15
1985	0.3	0.0	-0.4	0.4	-3.8	0.0	3.6	3.1	0.16	0.11
1986	0.1	-0.1	-0.2	0.0	-1.1	1.8	4.4	2.8	0.00	0.06
1987	0.0	0.4	0.1	0.0	0.0	0.1	-0.5	-0.7	-0.03	0.07
1988	-1.6	0.4	-1.3	-0.1	1.6	-5.3	-1.6	0.4	0.07	0.08
1 Q 1987	0.0	0.4	0.1	0.0	0.0	1.3	-0.6	-0.6	-0.06	0.05
2 Q 1987	0.0	0.5	0.1	0.0	0.0	-0.4	-0.6	-0.5	0.00	0.08
3 Q 1987	0.0	0.5	0.0	-0.1	0.0	-0.3	-0.5	-1.3	-0.04	0.09
4 Q 1987	0.0	0.4	0.0	-0.1	0.1	-0.3	-0.4	-0.6	-0.04	0.08
1 Q 1988	-1.5	-0.7	-1.2	-0.2	5.3	-5.9	-1.6	-0.3	-0.01	0.08
2 Q 1988	-1.4	0.9	-1.3	0.1	5.2	-5.6	-1.6	0.6	0.11	0.10
3 Q 1988	-1.7	0.5	-1.4	-0.2	5.8	-5.5	-1.7	0.8	0.09	0.07
4 Q 1988	-1.6	0.7	-1.5	-0.2	-10.0	-4.1	-1.5	0.7	0.10	0.07
1 Q 1989	-1.5	0.5	-1.7	-0.4	-2.1	-6.8	-1.4	1.1	0.01	0.11

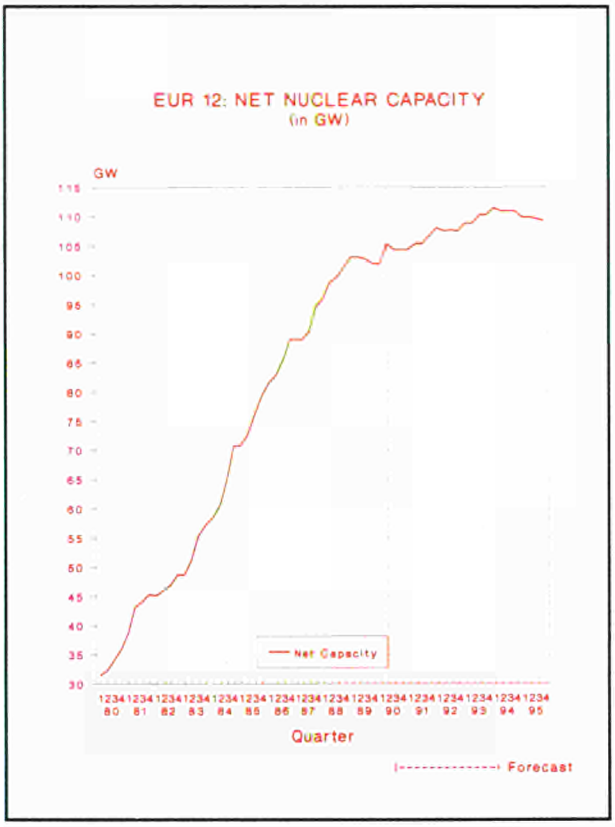
Source: IEA, SOEC, DG XVII estimates

Annex III: Net nuclear capacities

The following table compares our data on net nuclear capacity (source: "ELECNUS") with other sources. It also shows the assumptions on future modifications of net capacity.

A. Nuclear net capacities , by end 1989 (in MW)

	ELECNUC	SOEC	UNIPEDE
1. Belgium	5500	5501	5500
2. France	52893	52588	53760
3. Germany	21786	22426	22713
4. Italy	0	1120	0
5. Netherlands	516	507	508
6. Spain	7554	7509	7446
7. UK	13776	12382	12058
TOTAL	102024	102033	101985



B. Assumed modifications of net capacity (in MW)

	New units	MW	Decommissioning	MW	Total net capacity
1 Q 89	G : Neckar-2	1225	UK : Berkeley-1	138	103110
	UK : Torness Pt-2	625			
2 Q 89					103110
3 Q 89			G : Uentrop	296	102814
4 Q 89			G : Wurgassen	640	
			UK : Hunterston A-2	150	102024
1 Q 90			UK : Hunterston A-1	150	101874
2 Q 90	F : Cattenom-3	1300	F : St.Laurent A-1	480	105334
	F : Penly-1	1330			
	F : Golfech-1	1310			
3 Q 90			F : Chinon A-3	480	
			S : Vandellos-1	480	104374
4 Q 90					104374
1 Q 91					104374
2 Q 91	F : Cattenom-4	1300	F : Chooz A-1	305	105369
3 Q 91					105369
4 Q 91	F : Penly-2	1330			106699
1 Q 92	F : Chooz B-1	1455	UK : Winfrith	92	108062
2 Q 92			F : St.Laurent A-1	515	107547
3 Q 92	G : Kalkar (?)	295	UK : Bradwell-1	163	107680
4 Q 92			UK : Bradwell-2	163	107517
1 Q 93	F : Golfech-2	1310			108827
2 Q 93					108827
3 Q 93	F : Chooz B-2	1455			110282
4 Q 93					110282
1 Q 94	UK : Sizewell B	1175			111457
2 Q 94			F : Bugey-1	540	110917
3 Q 94					110917
4 Q 94					110917
1 Q 95			UK : Trawsfynydd	508	
			UK : Hinkley Point A	556	109853
2 Q 95					109853
3 Q 95			UK : Dungeness A-1	276	109578
4 Q 95			UK : Dungeness A-2	276	109302

Sources: ELECNUC, SOEC, UNIPEDE

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