eurostat

STATISTISCHES TELEGRAMM
STATISTICAL TELEGRAM
TELEGRAMME STATISTIQUE

Orig. : French

STATISTICAL ASPECTS OF THE ENERGY ECONOMY IN 1980

Although some figures are provisional, the first results of the Global Energy balance-sheet provide an overall picture of the energy situation in the Community and in each of the Member States in the past year.

1980 was marked by a general reduction in energy consumption in all Member States. The decrease for the Community of Nine was 4.6 %, or 44 million tonnes of oil equivalent. This is the greatest and most widespread decline in overall energy consumption since 1975.

1980 could be defined as an abnormal year compared with the economic patterns observed hitherto in that, over a period of many years, gross domestic product and overall energy consumption followed the same positive or negative trend, even though not very closely. Last year, however, although most countries experienced a positive trend in their gross domestic product (the United Kingdom and Denmark are exceptions), there was a decrease in gross inland energy consumption ranging from - 1.2 % for Italy to - 9.2 % for the United Kingdom.

The reduction of 4.6 % in energy consumption for the Community as a whole should be compared with an increase in the gross domestic product of 1.3 % and a decline in industrial production of 0.8 %. This significant fall in consumption is due to various factors accompanying the poor economic situation such as structural changes resulting from the steel crisis (which is a major energy-consuming sector), the discouraging effect of the increased cost of energy products, the higher temperatures recorded in 1980 compared with 1979 and the first repercussions of the measures introduced to ensure more efficient use of energy.

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As for the structure of consumption according to source of primary energy, the tendency of oil's share to decrease in favour of that of coal and nuclear power, which began in 1979, is clearly confirmed ; oil's share of consumption fell from 54.2 % in 1979 to 51.8 % in 1980, whereas that of coal and nuclear power rose from 19.7 % to 20.7 % and from 3.8 % to 4.6 % respectively. Natural gas, too, increased its share from 17.8 % to 18.2 %, although its absolute value fell by 4 million tonnes of oil equivalent.

Gross inland energy consumption for the Community of Nine

millions of tonnes of oil equivalent

	1980		1979		1980/79
Hard coal	191.7	20.7 %	190.8	19.7 %	+ 0.5 %
Lignite (and peat)	28.8	3.1 %	28.9	3.0 %	- 0.3 %
Crude oil	479.6	51.8 %	525.2	54.2 %	- 8.7 %
Natural gas	168.1	18.2 %	172.5	17.8 %	- 2.5 %
Nuclear power	42.6	4.6 %	37.2	3.8 %	+ 14.5 %
Primary electricity and others	15.0	1.6 %	15.1	1.6 %	- 0.7 %
TOTAL	925.9	100 %	969.7	100 %	- 4.5 %

At the level of individual countries, total energy consumption decreased in all Member States. Deviations from the Community average of - 5 % ranged from - 1 % for France and Italy to - 9 % for the United Kingdom. In order to appreciate the significance of these figures better, they should be seen in an overall economic context, especially in comparison with other economic aggregates such as the gross domestic product and the index of industrial production, which are given in the table below.

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Gross inland energy consumption, by country

millions of tonnes of oil equivalent

	1980		1979		1980/79
EUR 9	925.9	100 %	969.7	100 %	- 4.5 %
BR Deutschland	268.8	29.0 %	281.8	29.1 %	- 4.6 %
France	182.9	19.8 %	185.3	19.1 %	- 1.3 %
Italia	132.5	14.3 %	134.1	13.8 %	- 1.2 %
Nederland	65.1	7.0 %	67.6	7.0 %	- 3.7 %
Belgique-België	46.4	5.0 %	48.5	5.0 %	- 4.3 %
Luxembourg	3.6	0.4 %	3.8	0.4 %	- 5.3 %
United Kingdom	199.5	21.6 %	219.8	22.7 %	- 9.2 %
Ireland	8.0	0.9 %	8.4	0.9 %	- 4.8 %
Danmark	19.1	2.1 %	20.3	2.1 %	- 5.9 %

Trend of energy consumption, gross domestic product and the index of industrial production, by country

Variations 1980/79 in %

	EUR 9	D	F	I	NL	B	L	UK	IRL	DK
Energy consumption	- 4.5	- 4.6	- 1.3	- 1.2	- 3.7	- 4.3	- 5.3	- 9.2	- 4.8	- 5.9
Gross domestic product	+ 1.3	+ 2.0	+ 1.8	+ 4.0	+ 1.1	+ 1.2	+ 0.8	- 2.6	+ 1.0	- 0.9
Index of industrial production	- 0.7	- 0.1	- 0.6	+ 5.0	- 0.4	- 0.2	- 3.3	- 7.0	.	- 0.1

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With regard to coverage of the Community's requirements, there are several points to be made :

- If all nuclear heat production is considered as indigenous, primary production - although it increased by only 0.7 % - could have covered almost half of the gross total consumption, because of the decline in overall demand, if there had not been a large increase in stocks of national coal through lack of sales.

- Net oil imports (i.e. imports of crude oil and petroleum products less exports) were about 420 million tonnes, i.e. 54 million tonnes less than in 1979. Coal imports, on the other hand, increased by 10 million tonnes of oil equivalent, reaching the highest levels ever. For all energy products, the fall in net imports was about 35 million toe (- 6.4 %). However, as a result of increases in stocks of oil, the Community's degree of energy dependence* only fell by 1 point, from 55 to 54 %.

Production of primary energy sources in the Community of Nine

millions of tonnes of oil equivalent

	1980		1979		1980/79
Coal	151.7	33.4 %	146.7	32.5 %	- 3.4 %
Lignite (and peat)	27.8	6.1 %	27.9	6.2 %	- 0.3 %
Crude oil and condensates	90.7	19.9 %	89.0	19.7 %	+ 1.9 %
Natural gas	128.3	28.2 %	137.5	30.4 %	- 6.7 %
Nuclear power	42.6	9.4 %	37.2	8.2 %	+ 14.5 %
Primary electricity and others	13.7	3.0 %	13.7	3.0 %	- 0.0 %
TOTAL	454.9	100 %	451.9	100 %	+ 0.7 %

N.B. : It is pointed out that the figures in this telegram were drawn up according to the definitions of the final energy balance-sheet, in which all operations are treated on the basis of the real content of each energy source. Consequently, primary electrical energy (hydroelectric and geothermic power) is converted at 3 600 kJ per kWh (86 g of oil equivalent). Furthermore, nuclear power, which is considered a national resource, is treated as primary heat produced by the reactor.

* Ratio between net imports and gross total consumption.

ANNEX 1

SUMMARY FINAL ENERGY BALANCE SHEET

– 1980 –

	EUR 9	BR Deutschland	France	Italia	Nederland	Belgique België	Luxem-bourg	United Kingdom	Ireland	Danmark
										millions of tonnes of oil equivalent
Primary production	454.8	120.7	43.0	16.8	69.7	7.3	0.0	195.5	1.6	0.3
Imports	718.2(1)	179.8	166.7	132.3	77.2	60.6	3.7	69.9	6.8	21.1
Changes in stocks (2)	- 15.3	- 4.5	- 4.8	+ 0.2	- 0.9	+ 0.1	- 0.0	- 5.0	- 0.0	- 0.0
Exports	208.3(1)	23.8	18.0	12.5	74.1	19.2	0.1	58.5	0.3	1.9
Gross consumption	949.4	271.7	186.9	136.9	71.9	48.8	3.6	202.0	8.0	19.5
Bunkers	23.6	2.9	4.0	4.4	6.9	2.4	-	2.4	0.1	0.4
Gross inland consumption	925.9	268.8	182.9	132.5	65.1	46.4	3.6	199.5	8.0	19.1
										thousand Terajoules
Primary production	19 041.2	5 051.3	1 798.6	705.0	2 916.4	306.2	0.9	8 184.7	65.5	12.6
Imports	30 063.9	7 525.5	6 976.9	5 540.0	3 232.0	2 537.6	154.6	2 927.9	284.1	885.3
Exports	8 719.3	998.1	751.3	523.4	3 100.4	805.1	2.8	2 448.0	11.9	78.3
Gross inland consumption	38 756.6	11 250.5	7 654.5	5 547.3	2 723.2	1 942.5	152.4	8 353.1	333.2	799.9

(1) Including intra-community trade. (2) + decrease of stocks; - increase of stocks.

N.B. : The tonne of oil equivalent is defined as a standard unit of crude oil having a net calorific value of 41.8 million kilojoules (10 million kilocalories) per tonne.

ANNEX 2

GROSS INLAND CONSUMPTION OF ENERGY SOURCES

– 1980 –

millions of tonnes of oil equivalent

	EUR 9	BR Deutsch-land	France	Italia	Nederland	Belgique België	Luxem-bourg	United Kingdom	Ireland	Danmark
Hard coal (1)	191.7	55.7	30.6	10.5	4.1	11.4	1.8	70.9	0.9	5.9
Lignite (1)	28.8	26.7	0.9	0.3	0.0	0.1	0.0	–	0.7	0.0
Crude oil (1)	479.6	127.8	107.5	93.5	29.2	23.0	1.1	78.7	5.6	13.2
Natural gas	168.1	44.5	21.0	22.9	30.4	8.9	0.4	39.3	0.7	–
Nuclear energy	42.6	11.1	16.3	0.7	1.1	3.1	–	10.4	–	–
Primary electrical energy and others	15.0	3.1	6.4	4.6	0.3	– 0.2	0.3	0.3	0.1	0.0
TOTAL	925.9	268.7	182.9	132.5	65.1	46.4	3.6	199.5	8.0	19.1

(1) Including the balance of foreign trade and stock changes of derived products

EVOLUTION OF THE PRINCIPAL ENERGY AGGREGATES

– EUR 9 –

	1975	1976	1977	1978	1979	1980 prov.
I. ABSOLUTE FIGURES IN MILLIONS OF TONNES OF OIL EQUIVALENT						
– Gross inland consumption of primary energy	847.6	902.3	897.9	924.5	969.7	925.9
among which : petroleum	478.3	508.4	496.2	512.7	525.2	479.6
nuclear energy	23.9	26.6	31.3	33.9	37.2	42.6
– Production of primary energy	365.5	380.0	408.5	417.0	451.9	454.9
among which : petroleum	12.1	22.2	48.7	63.7	89.0	90.7
nuclear energy	23.9	26.6	31.3	33.9	37.2	42.6
– Net imports (1)	518.4	557.7	526.9	527.9	545.1	509.9
among which : petroleum	482.6	517.8	481.1	472.1	474.2	420.3
II. INDICES (1973 = 100)						
– Gross domestic product	100	105	107	111	114	115
– Gross inland consumption of energy	100	106	106	109	114	109
among which : petroleum	100	106	104	107	110	100
– Production of primary energy	100	104	112	114	124	124
among which : petroleum	100	183	402	526	736	750
– Net imports (1)	100	108	102	102	105	98
among which : petroleum	100	107	100	98	98	87
III. ANNUAL VARIATION (compared to previous year)						
– Gross domestic product		+ 4.9 %	+ 2.3 %	+ 3.2 %	+ 3.3 %	+ 1.3 %
– Gross inland consumption of energy		+ 6.5 %	– 0.5 %	+ 3.0 %	+ 4.9 %	– 4.5 %
among which : petroleum		+ 6.3 %	– 2.4 %	+ 3.3 %	+ 2.4 %	– 8.7 %
– Production of primary energy		+ 4.0 %	+ 7.5 %	+ 2.1 %	+ 8.4 %	+ 0.7 %
among which : petroleum		+ 83.5 %	+119.4 %	+ 30.8 %	+ 39.7 %	+ 1.9 %
– Net imports (1)		+ 7.6 %	+ 1.6 %	+ 0.2 %	+ 3.3 %	– 6.4 %
among which : petroleum		+ 7.3 %	– 7.1 %	– 1.9 %	+ 0.5 %	– 11.4 %
IV. $\frac{\text{NET IMPORTS (1)}}{\text{GROSS INLAND CONSUMPTION + BUNKERS}}$						
– Total	59.1 %	59.8 %	56.8 %	55.3 %	54.8 %	53.7 %
among which : petroleum	55.0 %	55.5 %	51.6 %	49.5 %	47.6 %	44.3 %

(1) Imports minus Exports