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REPORT FROM THE COMMISSION

THE MARKET FOR SOLID FUELS IN THE COMMUNITY IN 1997 AND THE OUTLOOK FOR 1998

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THE MARKET FOR SOLID FUELS IN THE COMMUNITY IN 1997 AND THE OUTLOOK FOR 1998

I. INTRODUCTION

1.1. Article 46 of the ECSC Treaty states that, to provide guidance on the course of action to be followed by all concerned, and to determine its own course of action, the Commission must conduct a study of market and price trends. Amongst other things, this includes periodic reports on the solid fuel market and short-term forecasts.

1.2. This report analyses the situation of the Community solid fuel market in 1997, makes forecasts for 1998 and gives corrected and updated data for 1996. At the time of writing, some uncertainties still exist for some countries due to the lack of data provided by member states for 1998. The figures used have been estimated by the Commission.

The data for 1996 and 1997 are those available in January 1998. The forecasts for 1998 were made by the Member States at the end of 1997, or estimated by the Commission where these were not available.

1.3. Three new Member States - Austria, Finland and Sweden - joined the European Union on the 1st January 1995. Where comparative data only exists for the 12 Member States as of the end of 1994, a special indication is explicitly made.

1.4 The format of this report differs from previous years, in that while most sections still cover broadly the same ground, many details for individual countries are not included in the subject headings, but are discussed in a separate section.

II. SUMMARY AND CONCLUSIONS

2.1 Recovery in the economic situation continued in1997 with an expected increase in GDP of 2.6%; before the South East Asian crisis it was expected that GDP would continue to rise in 1998 by some 3%, helped by strong supply side fundamentals, strong demand and good monetary conditions.

2.2 Despite the growth in GDP in 1997 energy demand fell slightly (0.7%) in that year largely because of the milder weather experienced in most of Europe, compared with a particularly cold winter in 1996. Nuclear electricity performed very well and oil consumption also increased; solid fuels again lost market share while gas also lost some of its market (a comparison affected by the high demand from the cold winter of 1996).

In 1998 there was expected to be an increase in energy consumption of 1¾%, assuming normal weather conditions. Gas was likely to recover its growth, and

oil also would increase its market, while the decline in the use of coal and lignite would continue.

2.3 The demand for solid fuels continues to be very dependent on power station use; two thirds of coal goes to power generation, while for lignite the proportion is around 90%. Hence the solid fuel market will continue to be vulnerable to changes in power station fuelling, particularly since it is regarded as the swing supplier. However the strong performance of the iron and steel industry has helped to increase coal use in that sector.

Consumption of solid fuels in 1997 declined by 5.8% compared with 1996; this represented a reduction of 6.7% for coal and only 2.8% for lignite, where production is tied more closely to the power stations that use the fuel and in many cases pollution controls have already been installed.

In 1998 the reduction in consumption of solid fuels is likely to be much less, about 2.3% overall, while again coal is forecast to lose 2.6% of its market, and lignite only 1.2%.

2.4 Total inland deliveries of coal are estimated to have fallen by 3 million tonnes in 1997 to 268 million tonnes. The biggest losses were seen in UK, Germany and France, while increases were noted in a number of countries, notably Spain. The iron and steel industry thrived in 1997 with a consequential increase in demand for coal in that sector, to reach 9.6 million tonnes.

In 1998 it is expected that inland deliveries will again fall, by 25 million tonnes, to 244 million tonnes. Of this reduction, 21 million tonnes will be lost from the power station market. The iron and steel industry is likely to sustain the levels of deliveries seen in 1997. The biggest reduction is likely in the UK (although ways of assisting the coal industry are still being discussed); France will also see a reduction in deliveries, as will Portugal.

1996 was a year of destocking; in 1997 the trend overall was reversed, and, with the exception of coke supplies, stocks increased again. However there were significant variations from this trend; heavy stocking was seen in Denmark and the UK, whilst Germany and Spain both lifted significant tonnages from power station stockpiles.

The expectation is that 1998 will show a reduction in stocks, with lifting in Denmark and the UK, reversing the previous year's stockpiling.

2.5 Hard coal production continues its decline in Europe as different countries address the problems of high cost capacity. Production was 123 million tonnes in 1997, and is expected to fall to 108 million tonnes in 1998.

The reduction in production was less than 4 million tonnes in 1997, but in 1998 a more significant cut-back will be experienced. Germany's restructuring will have the effect of 2 million tonnes of lost output, while in the UK lost capacity may be up to 12 million tonnes; the final result will depend on what political measures can be implemented to support the industry. France's steady decline continues, while there is as yet little evidence of the cuts promised in Spain to eliminate its high cost production.

2.6 Imports of hard coal from third countries increased in 1997 by 8 million tonnes, to reach 146 million tonnes. This level is likely to fall back to 143 million tonnes in 1998, a reduction of 3 million tonnes.

The chief reason for the increase in imports in 1997 was the activity in the UK, where the high value of the pound sterling made purchases in dollar denominations very attractive; this was reinforced by the low spot prices available in the market, and the commercial opportunities available because of the completion of the UK contracts in March 1998. Columbia picked up most of the additional tonnage. Spain reduced its import requirement because of its high domestic stock levels, while Denmark, Germany and Finland were all taking additional supplies.

In 1998 the import picture was more varied; Germany and Spain were expected to be active importers, while Denmark and the UK reduced their activity. The USA and Poland were expected to reduce their supplies to the European Union, USA because of the low price available and Poland because of domestic demand and restructuring.

2.7 The overall production of lignite continues to decline, mainly in Germany, but underlying this is the development of the Greek lignite industry to support the growth in power generation. The overall reduction in 1997 was 12 million tonnes, to a level of 247 million tonnes; in 1998 the reduction is expected to be only 5 million tonnes. Germany will lose 7 million tonnes of its production, offset by increases in Greece.

Peat production in 1997 fell by 1.6 million tonnes with losses in both Ireland and Finland; it is expected to recover to 14 million tonnes in 1998 as Ireland brings on more capacity.

2.8 Coke production capacity declined in 1997 by 0.7 million tonnes to 46.4 million tonnes. Actual production fell by only 0.5 million tonnes to 39.8 million tonnes, supported by the strong demand for iron and steel, and from industry generally. Imports increased in 1997 by 0.8 million tonnes to 7.3 million tonnes.

In 1998 a further loss of capacity is expected, almost 2 million tonnes, to leave 44.6 million tonnes capacity. Production is not expected to fall as much as this; a reduction of less than a million tonnes is expected, to 39.1 million tonnes. Much

of this reduction is connected with the need to improve pollution controls; some of the older coke ovens are environmental problems, and have to be closed or refurbished. Imports were expected to be slightly lower than in 1997, at 7.1 million tonnes.

2.9 The international coal market grew slightly in 1997, to reach an estimated 479 million tonnes of traded coal, of which coking coal was estimated to be about 190 million tonnes. Seaborne trade expanded by 8 million tonnes to 440 million tonnes; freight prices were broadly falling throughout the year, while coal prices started at the previous year's levels, and declined towards the end of 1997.

The Far East Asian crisis in the late summer of 1997 led to uncertainty about activities in 1998, but the weakness of the Australian dollar and the oversupply on that continent, despite the industrial disputes, has had a significant effect on world coal prices, particularly for coking coals. The expansion in export production in South Africa and in Colombia have completed the price weakness for steam coals in the Atlantic market.

Supply in 1998 is expected to continue in surplus, with weak prices; a number of buyers have been acquiring significantly larger proportions of their purchases from the spot market because of the offers available, and reducing their contract purchases. Some forecasters suggest that demand may improve in 1999 with a consequent increase in prices; this is not a universally-held view.

2.10 Average CIF prices during 1997 for steam coal imported into the Community from third countries were some 2% lower than in the previous year, when expressed in US dollars.

2.11 In 1997 the importance of the power generation market in the overall market for coal has been evident. The competition in this market has in 1997 come not only from the hydroelectric sector (dependent on the weather) but also from very strong performances by the nuclear industry in most countries with a nuclear sector. In other sectors, apart from iron and steel, the decline in consumption has continued, and coal has not yet been able to improve its image of a dirty and old-fashioned fuel. Environmental concerns continue to hamper the use of coal, even when modern technology can overcome a large proportion of the difficulties. Gas is seen as a clean, (usually) cheap and easy fuel, and continues to grow in its dominance of the market.

COMPARISON OF THE MAIN FEATURES OF THE SOLID FUEL MARKET (million tonnes)					
	1996 actual	1997 estimates	1998 forecast	1997/96 (%) **	1998/97 (%)**
HARD COAL					
Resources					
- Production	127.6	122.1	108.0	-2.9	-12.3
- Recoveries	3.0	2.5	2.2	-16.1	-11.9
- Imports from third countries	138.5	146.2	142.7	+3.0	-2.0
Total	**269.1**	**270.8**	**252.9**	**+0.1**	**-6.7**
Deliveries					
- To coking plants	54.2	53.3	51.4	-1.7	-3.5
- To power stations*	185.2	183.2	162.1	-1.1	-11.5
- To others	32.0	32.0	30.3	-0.1	-5.4
- Exports to third countries	0.3	0.5	0.5	+41.6	+9.4
Total	**271.8**	**268.9**	**244.2**	**-1.1**	**-9.2**
COKE					
Resources					
- Production	40.3	39.9	39.4	-0.9	-1.3
- Imports from third countries	6.5	7.3	7.1	+12.6	-2.2
Total	**46.8**	**47.2**	**46.5**	**+1.0**	**-1.4**
Deliveries					
- To steel industry	41.8	42.4	42.2	+1.4	-0.3
- Other deliveries within the Community	5.5	5.6	5.3	+2.1	-6.3
- Exports to third countries	0.4	0.3	0.4	-25.3	+22.6
Total	**47.6**	**48.3**	**47.9**	**+1.4**	**-0.9**
LIGNITE					
Resources					
- Production and imports	261.1	249.7	244.2	-4.4	-2.2
Deliveries					
- To briquetting plants	27.5	23.1	18.6	-16.0	-19.5
- To power stations	229.0	223.0	222.7	-2.6	-0.1
- Others (incl. exports to third countries)	4.0	3.2	2.8	-20.3	-13.5
Total	**260.6**	**249.4**	**244.1**	**-4.3**	**-2.1**
PEAT					
Resources					
- Production and imports	14.3	13.3	13.1	-7.1	-1.6
Deliveries					
- To briquetting plants	1.7	2.5	2.7	+53.5	+5.4
- To power stations	10.4	8.1	8.0	-21.5	-1.3
- Others (incl. exports to third countries)	2.3	2.5	2.4	+8.9	-4.1
Total	**14.3**	**13.1**	**13.1**	**-8.0**	**-0.5**

(!) The sums may not add up due to rounding.

* Including industrial and pithead power stations. ** The variations are calculated in kt.

III. THE ECONOMIC SITUATION IN THE COMMUNITY IN 1997 AND THE OUTLOOK FOR 1998

3.1 This brief is based on data drawn from the **Autumn 1997 Forecast** which was presented to the press on 14 October 1997 **and does not include any effects of the recent SE Asian crisis**. The negative consequences of the crisis on Europe's growth outlook are expected to be limited given the small share that SE Asia represents in EU exports. Further it is assumed that the economic problems in SE Asia will not lead to any systemic risk for the world banking sector or international financial markets and that the general confidence level in Europe and the US is not fundamentally affected.

3.2 The picture painted in the Autumn 1997 forecast is that of a recovery progressively gaining momentum in the EU. Sound supply side fundamentals, an easing of the policy-mix made possible by EMU-related discipline, and brightening demand prospects provide the background for a broadening and strengthening of the recovery.

3.3 **GDP rose** on average in the EU in 1996 by 1.8 %, and is forecast to accelerate to 2.6 % in 1997 and 3.0 % in 1998. Germany and France are forecast to attain growth rates of 2.5% and 2.3% respectively in 1997, while most EU countries should experience rates above this range. Growth in Italy recovered sharply in the second quarter and is forecast to reach 1.4% growth for the year 1997 as a whole.

3.4 **Supply side fundamentals** are good and still improving. Profitability of investment is high and increasing. The macroeconomic development of wages is appropriate. Inflation is historically low and increasingly predictable, facilitating cost calculations by firms. **External demand** for EU goods and services remains strong. EU exporters are taking advantage of healthy growth in international trade from an improved competitive position due to the control of domestic costs further enhanced by the strength of the dollar. **Monetary conditions** are growth-supportive thanks to impressive and credible efforts to ensure convergence and appropriate wage developments. Interest rates are low and the absence of exchange rate tensions among EU countries is reassuring.

3.5 The upturn in the largest continental economies was driven first by **exports** but increasing domestic demand should follow. **Private consumption** in the EU is forecast to accelerate, underpinned by moderate increases in real wages, a fall in precautionary savings and, more and more, by rising employment. Stronger demand, both industurial and domestic, high and increasing profitability of investment and low interest rates should also allow **investment** to become more dynamic.

3.6 Accompanying the recovery, **employment** is forecast to increase by ½% in 1997, rising to ¾% in 1998. However, given the growth of the labour force, the **unemployment rate** is not reduced by an equal amount. From a peak of just under 11% in 1996, the average unemployment rate in the EU is expected to fall to 10¾% in 1997 and 10¼% in 1998.

3.7 The **inflation rate** as measured by consumer prices declined further in 1996 to 2.5 % on average in the EU and a further reduction to around 2 % is forecast for 1997 and 1998. The monthly harmonised inflation rate in the EU in October stood at 1.7%. Import price rises due to the appreciation of the dollar should be however partially offset by the moderate evolution of unit labour costs in the EU. They should not have a major impact on inflation as the availability of spare productive capacity and increased price competition in goods markets mute the pass through.

3.8 Members States have continued taking significant measures to put their public finances in order and reach a deficit compatible with the Maastricht criteria. The average **deficit/GDP ratio** in the EU fell to 4.2 % in 1996 and is forecast to decrease further to 2.6 % in 1997 and 2.2% in 1998, suggesting that budgetary consolidation is on a sustainable path. For the EU as a whole, the **debt/GDP ratio** peaked in 1996 at 73.0% and is now on a declining trend.

IV. DEVELOPMENT OF COMMUNITY ENERGY MARKETS

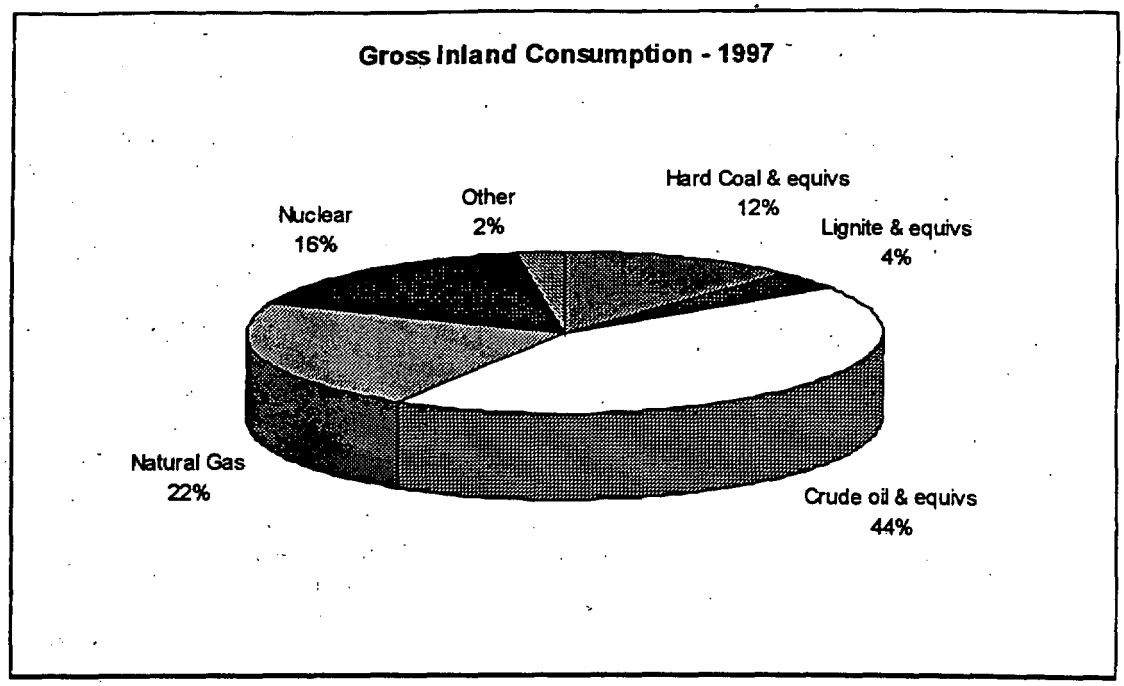
4.1 At the time of writing, statistics were available for only 8 months of 1997. On this basis, it appears that the total European Community primary energy demand, in terms of gross inland consumption, will have decreased slightly compared to 1996, by some 0.7%, despite economic growth estimated at 2.6% in the Community.

Economic growth is expected to be some 3% in 1998, while energy demand is forecast to grow only 1¾%, assuming normal weather conditions.

The main factor explaining the drop in energy consumption in 1997 was the milder weather during the early part of the year, which was compared with a particularly cold winter in 1996 in most parts of Europe. Industrial activity has improved in 1997 relative to 1996, although in some countries the increase occurred well into the year.

Denmark and Sweden both had a reduction in energy consumption well below the Community average (down 19% and 5% respectively), while gross energy consumption increased well above average in Ireland (4% compared with the previous year), Spain (a gain of 8%) and Finland, where energy consumption grew by 14%.

4.2 The share of different fuels in gross inland consumption in 1997 is shown in the graph below, based on the pattern of the first 8 months of the year. Coal and lignite, and to a lesser extent gas, lost market share to nuclear energy.



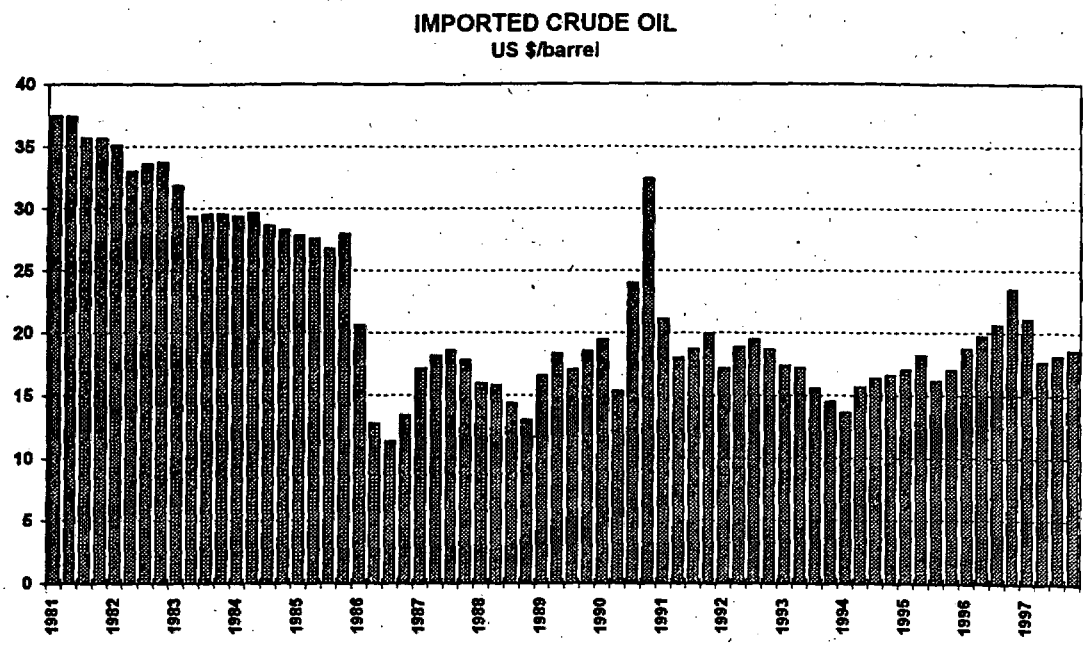
4.3 In 1998 gas is likely to reap the benefit from the increasing gross energy demand, estimated at around 23 million tons oil equivalent or 1.7%. There is likely to be scope for more nuclear, oil and hydro use resulting in further cuts in the use of coal and lignite. However the reduction in coal and lignite use is unlikely to be as severe as that estimated to have been experienced in 1997.

4.4 Gross inland consumption of coal in 1997 was expected to have reduced by 6.7% compared with 1996. Much of this reduction was due to milder weather, and lower demand in the electricity generating market. In particular the good performance in the nuclear sector helped to keep down coal consumption.

4.5 Lignite consumption is likely to have fallen by around 3% in 1997 compared with 1996, much of this reduction having taken place in Germany, although Spain's consumption of lignite also fell substantially. Again this was a result of milder weather and competition from other fuels in the power generation market.

4.6 Peat consumption increased by two thirds during 1997, mainly in Finland, where electricity demand was high by comparison with 1996. Irish peat consumption dropped slightly.

4.7. Crude oil CIF prices for imports into the Community fell during 1997, particularly in the last quarter of the year. The average price during 1997 was estimated at 18.91 US dollars/barrel, a reduction of 1.74 US dollars/barrel or 8.4% compared with the average imported crude oil price of 20.65 US dollars/barrel in 1996. These prices are not yet sufficiently low in comparison with coal prices to have a major impact on fuel use in power generation, or to cause substantial fuel switching.



Average oil price predictions for 1998 were revised downwards as a result of the fall in oil prices in the closing period of 1996. Analysts' forecasts for 1998 appear to be around $17 per barrel for the marker Brent blend, or even lower (down to $16 in the first quarter) compared with an average $18.37 in 1997, when prices ranged from $15 (at the year end) to $21 per barrel. 1998 started with ample stocks of crude oil, so prices will remain low for some time unless there are supply interruptions.

4.8 Oil products consumption in 1997 was expected to be no more than 1% in 1996. Slightly over one third of total oil products consumption is of gasoil or diesel oil, while nearly a quarter is motor spirit. Residual fuel oil for power station use, kerosene or jet fuel, predominantly for transport use, and naphtha for chemical feedstock are the other products with a substantial level of consumption. In the case of residual fuel oil, the share is about 1/8 of total oil products. Demand for residual fuel oil in the early part of the year was low by comparison with 1996, because of the mild winter and consequent lower demand in the heating market. However, the levels of demand increased during the year, probably as a result of increasing demand in the transport sector.

The expectation for oil consumption in 1998 is of a half percent increase, but a significant change in oil prices could alter oil's relative position in the heating and power market.

4.8.1 One of the products of oil refineries may be petcoke (or petroleum coke). This is manufactured predominantly in the United States, although small quantities are produced at refineries in Europe (around 2 million tons in 1996 from Germany, Italy and Spain). The US product determines the price, and in 1997 the glut of

petcoke from the USA led to substantial exports, at very competitive prices. In 1996 petcoke had been scarce and expensive. Petcoke has a high sulphur content and high levels of vanadium (vanadium emissions can be controlled with scrubbers). Because of the high levels of petcoke stocks in the US, this fuel has become popular in a number of markets where it can be used direct or blended with coke or coal to reduce costs. It is used in power generation (subject to emissions controls), in the cement market, in the iron and steel industry and in the domestic (smokeless) market (either on its own or as part of a blend).

4.9 In 1997 gas lost market share and volume because of the mild winter. Inland consumption was expected to have declined by some 2.4%. The warmer weather caused a lower demand within the domestic sector, the predominant market for gas; power sector consumption did not drop so steeply.

1998 is expected to be a better year for gas demand, with a likely increase in consumption of gas of some 7%, assuming normal weather.

4.10 Nuclear power stations in the Community in general were expected to have performed well in 1997. Total consumption was likely to have increased by some 2.4%, with a particularly strong level of consumption in Germany (up some 12% compared to the previous year). UK, Belgian and Finnish installations also increased their output, while Sweden reduced its dependence on nuclear fuel. In the Netherlands, the Borssele nuclear power station had a long outage in the spring for additional safety modifications, and for four months the Netherlands produced no nuclear power.

The likelihood is that nuclear power will increase its share of the market slightly in 1998, by around 1%. It is expected that in particular France will have improved performance at its installations, although there are indications of potential, but not yet serious, problems in some of their most recent plants.

4.11 Hydroelectric power and other sources were expected to have performed nearly 5% better in 1997 than in the previous year. Drought in Scandinavia had been relieved, and reservoir levels were filling up, enabling a return to use of hydro power. Heavy rains in Germany and Austria also increased their supplies of hydro power, although in the Iberian peninsula less use was made of hydro power than in 1996 because of low reservoir levels.

The contribution to gross inland consumption from hydroelectric power and other sources is expected to increase in 1998 by some 3%.

4.12 Total electricity demand, measured by gross inland consumption, probably decreased by 2.8% in 1997 compared with 1996. The relatively milder weather, particularly in February and March, will have been a factor in the lower consumption. Industrial activity was in many countries slow to develop after the

recession of 1996, so improvements in industrial demand will not have shown through in electricity consumption until later in the year.

V. DEMAND FOR SOLID FUELS

5.1 Deliveries of hard coal

5.1.1 Inland hard coal deliveries within the Community in 1997 amounted to 268.4 million tons, some 9 million tons higher than forecast in the previous report, and only 3.1 million tons less than the 271.5 million tons delivered in 1996. The reduction was about 1% of total deliveries. Total deliveries (including net imports) were expected to have reached 268.9 million tons. The comparisons are affected by the very cold winter that was experienced in 1996, whereas 1997 was, for most member countries, milder than usual.

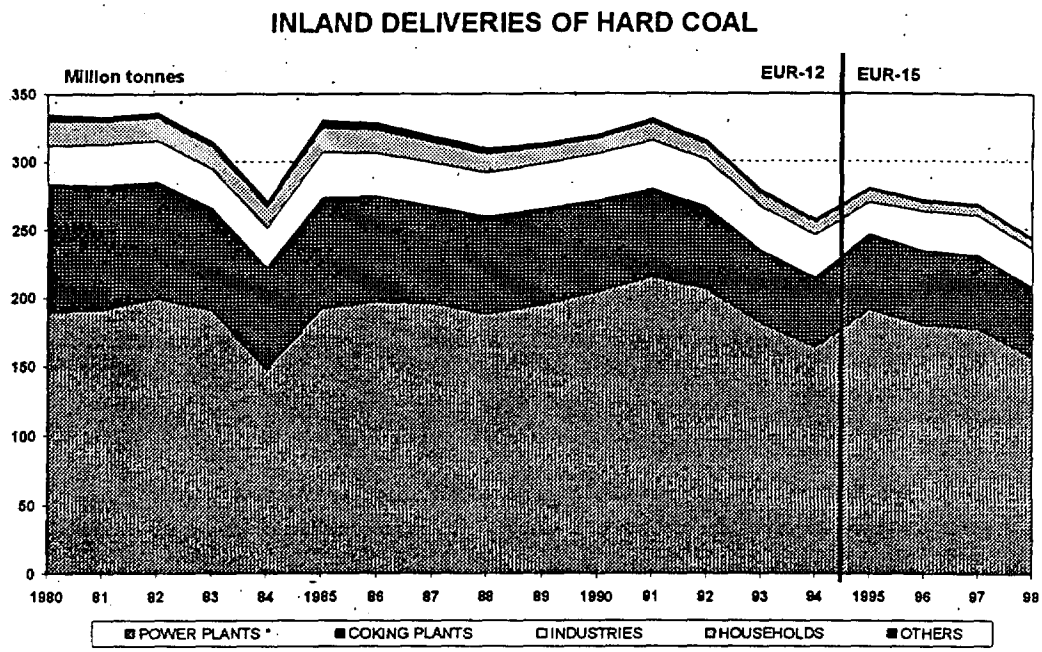
5.1.2 As indicated in section IV, economic factors have improved for most European Community countries, and industrial activity has increased, although at varying rates in the Member States (see section XI).

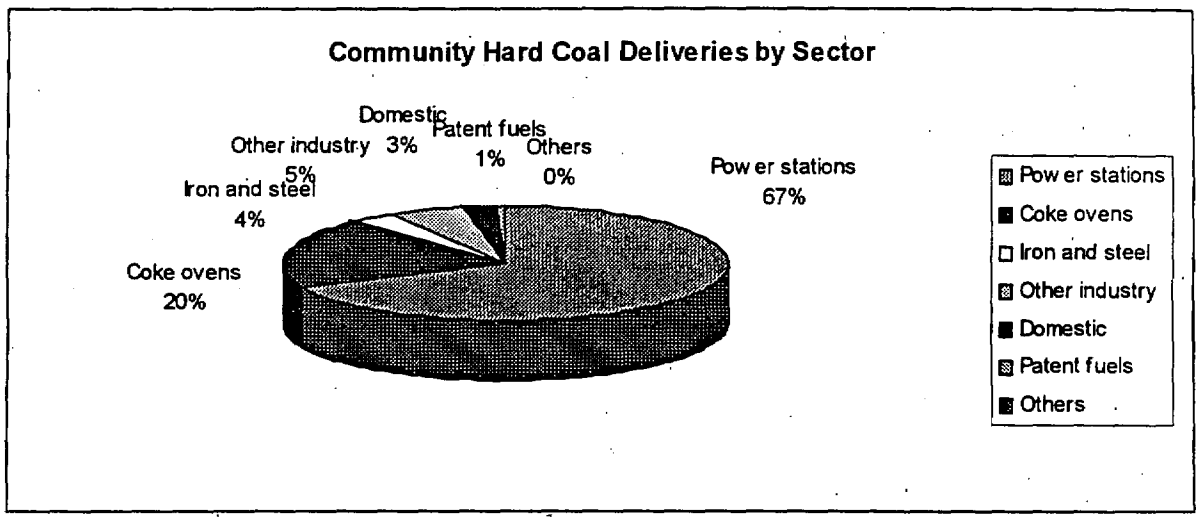
In terms of markets, there were reductions in tonnages delivered to thermal power stations (2 million tons or 1% reduction in that market), coke ovens (1 million tons or 2% reduction) and other industries (1 million tons or 4% reduction). These reductions were offset by an increase in tonnages delivered to the iron and steel industry (up 1 million tons or 14%) and an increase of 3% in the domestic heating market (up 0.2 million tons). In some market sectors, deliveries were not for immediate consumption, but were put to stock. This was particularly noticeable in the power generation market, for example in Denmark and the UK, although the stock build was partially offset by destocking by generators in Germany and Spain.

In 1997 the power generation sector (including autoproducers) moved down from a 70% share of total inland deliveries in the previous year, to a 68% share, the same as in 1995. The higher share in 1996 was attributable in part to the cold winter that year. Power generation and coke ovens, the two largest sectors, accounted for 88% of the total market.

By country, there were some large increases in demand for hard coal for power generation in percentage terms, for example, in Greece demand was 20% up on 1996 levels, albeit on a very small tonnage. Other countries with a significant increase in tonnages delivered were Ireland, Finland and Portugal. Germany continued its slide in demand, losing 2.2 million tons from the 1996 level, while France reduced deliveries by 1.4 million tons.

Tonnages in stocks at power stations increased by 2.6 million tons, while producers' stocks increased by 0.8 million tons.



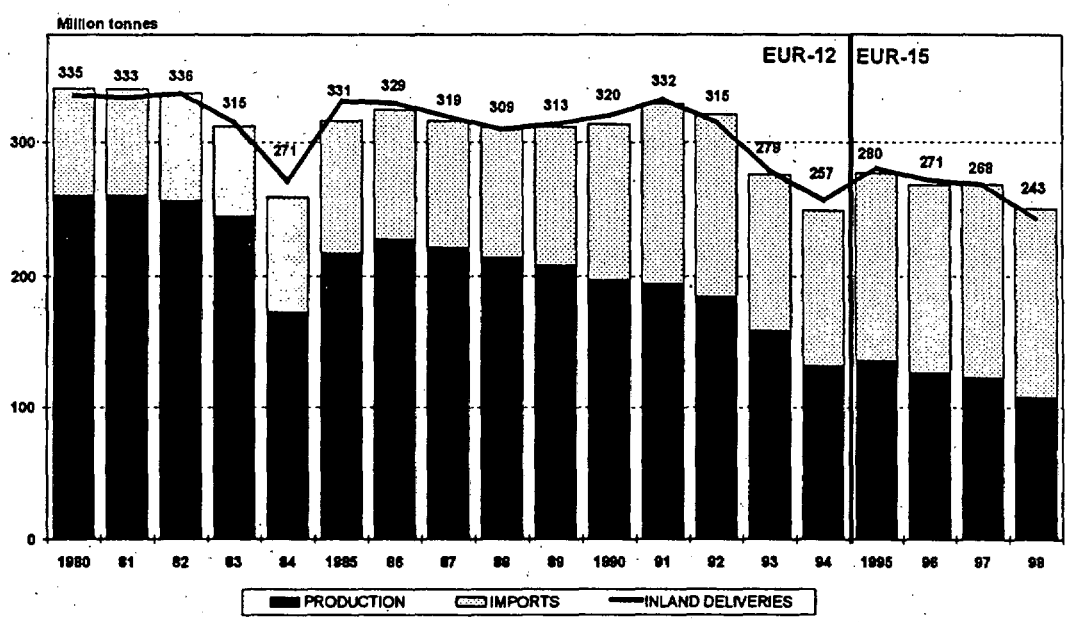


5.1.3 For 1998, total inland deliveries of hard coal are expected to drop significantly, by nearly 25 million tons (over 9%) to around 244 million tons. There is likely to be an 8 million ton stock reduction (largely at generators' sites) to reduce the unnecessarily large stockpiles built up in 1997, particularly in Denmark and the UK. The iron and steel industry is forecast to continue its strong performance, and is expected to increase slightly its demand for coal, but reductions are expected in all other sectors. In tonnage terms, 21 million tons will be lost from the thermal power station market, while coke ovens will lose 2 million tons, and the domestic heating market is expected to reduce by nearly 1 million tons. The

countries where the drop in deliveries is likely to be substantial are Denmark (3 million tons), France (4 million tons, but 3 million tons are expected to be lifted from stock), Portugal (1 million tons) and the UK (over 15 million tons, where 5 million tons are likely to be drawn from stocks).

Since electricity generation accounts for nearly 70% of inland deliveries, changes in tonnages in that market to a large extent explain the overall trend. However it is important to note that the quantitative projections in coal use need to be treated with particular caution, since coal is in general the fuel which provides flexibility within national generation systems. Any significant changes in weather will have an impact on coal burn, as will the availability of hydro, particularly in countries where hydro power is expected to provide a significant proportion of generation. Variations in the performance of nuclear power stations can also have a substantial impact on coal burn. The penetration of gas into the generation market also reduces coal demand. This has been particularly prominent in the UK where the rate of development of new gas stations has slowed for the time being (although new stations continue to come on stream). The next area where large scale gas development is expected is in Iberia, following the introduction of the Maghreb pipeline from Algeria bringing supplies of gas to a much wider catchment area. This, in association with the liberation of the electricity market, and growth in economic activity, provides an ideal background for the development of new gas-fired power generation.

TREND IN PRODUCTION AND IMPORTS OF HARD COAL



5.2 Coke-making (Tables 4 and 5)

5.2.1 Growth of crude steel production in the European Community is thought to have been accelerating month by month during 1997, and it is expected that total production may reach 158 million tons, compared with 147.2 million tons in 1996, an increase in production of over 7%. There had been heavy destocking in 1996, both by producers and merchants, so the increased demand was very welcome to the industry, although it appears there could have been some continuation of stock lift by producers into 1997.

Imports of crude steel to Europe increased slightly in 1997 to 13 million tons, while exports fell to 25 million tons. This was largely a result of the strength of the US dollar against most European currencies. However there was an adverse effect on UK competitiveness, since the pound sterling was stronger than the US dollar.

In 1997, three sectors showed an increase in their indicator of activity of over 4%, namely electrical engineering, motor vehicles, and other forms of transport. Mechanical engineering was close behind, at 3.8%, while manufacture of metal articles registered a 2.7% increase in activity. The disappointment was in building and civil engineering, which dropped below the level of activity recorded in 1996.

5.2.2 The forecasts for 1998 are for continuing growth in crude steel production. It is expected that domestic demand will expand as economic growth continues in Member States. Production is forecast to reach 163 million tons, an additional 5 million tons of crude steel (1.9% increase).

The increasing demand for crude steel is likely to cover almost all sectors in which the steel industry is active. In particular, mechanical engineering is expected to outpace the rest of the sectors. 'Other means of transport' is also expected to perform well. The exception is again in building and civil engineering, where it is expected that activity will do little more than stand still.

5.2.3 Nearly 90% of coke consumed in the European Community goes to the iron and steel industry, mainly for use in the blast furnaces. The coke-making process is constantly being improved and technical modifications have tended to reduce the amount of coke required in the production of pig-iron. In addition the use of electric arc furnaces has been increasing, thereby reducing the demand for coke. For example, Luxembourg has now switched entirely to the electric arc process for its steel making.

Increasing quantities of lower quality, and cheaper, steam coals are being used for injection into the blast furnaces as part of the charge. This pulverised coal (PCI) or granular coal (GCI) can be used in conjunction with coke to produce steels of the same quality at a lower cost to the producer, and reduces the

consumption of coke per ton of pig-iron produced. These technical changes in iron and steel-making processes are reducing the demand for coke, and thus for coking coals, and also reduce the coal required per ton of steel produced. The demand for coke and for coking coals in Europe will therefore decline, perhaps compensated only by the increasing use of PCI.

5.2.4 Deliveries of coal to the iron and steel industry increased in 1997 as a result of the higher levels of activity in the steel industry. 9.6 million tons were expected to have been delivered, up 1.2 million tons from the 1996 level (14.2%). A further slight increase (0.1 million tons) is forecast in 1998.

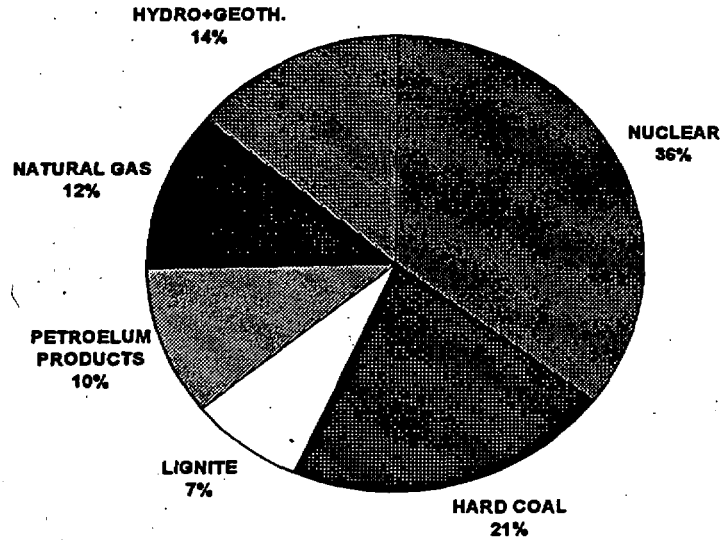
5.2.5 Deliveries of coal to coke ovens decreased slightly in 1997 (0.9 million tons) to 53.3 million tons. A further decrease of 1.9 million tons is forecast in 1998, leaving coal deliveries to coking plants at 51.4 million tons.

5.2.6 Coke deliveries within the Community were estimated at almost 48 million tons in 1997, up from 47.2 million tons. Of this, 88% went to the iron and steel industry (42.4 million tons). Deliveries of coke to all markets in 1998 are forecast to fall slightly (0.5 million tons), although the reduction in deliveries to the iron and steel industry are very slight (42.2 million tons).

5.3 Power stations (Tables 6A and 6B)

5.3.1 The fuel mix for power generation varies enormously between Member States, ranging from France which in 1996 had 83% nuclear power in its generation fuel mix, to Austria which used 63% hydro power, to Denmark which is almost entirely dependent on thermal power stations (shared between coal, oil and gas). The mix can vary from year to year, depending on the availability of hydro power, the performance of nuclear stations, and the relative prices of coal, lignite, oil and gas which influence the share of each of them in the fuel mix.

5.3.2 The overall picture for EUR-15 is shown below.



While total electricity generation appears to have decreased by almost 3% because of the warmer winter, generation from hydro power stations is expected to have increased by over 6% as rainfall, and reservoir levels, improved. Nuclear power has shown an increase of over 2%, as a result of better performance in most countries. Thermal power stations, on the other hand, have lost nearly 5% of their output. Within the public supply market, natural gas continued to take an increasing share (up 13%), while lignite, and especially coal, were losers (by 5% and approaching 22% respectively). As indicated elsewhere, coal is in general regarded as the 'swing' supplier; lignite is in a slightly different position since production is often tied to a local power station with contractual obligations.

Cross border trading in electricity is becoming more widespread, encouraged in recent years by the stance taken by the European Commission towards liberalisation of trade in the electricity market. Significant trading occurs in a number of countries. In 1996 Denmark exported electricity amounting to some 50% of its own total consumption, while France exported some 16%. As regards imports, Luxembourg relies on neighbours for around 95% of its gross consumption (85% net after allowing for exports), while Austria imported 17% of its gross consumption (but only 2% net). Italy, Portugal, Belgium and Netherlands also have rely on substantial levels of imports.

Most Member States have made progress towards the adoption of the EC Directive on common rules for the internal market in electricity. However some countries have had problems in implementation of the directive. For example, in Germany laws recently passed by the Bundestag to open the natural gas and electricity markets have been refused by the Bundesrat, the German Upper House which represents the Länder.

The Spanish Electricity Law, to permit more flexibility in the purchase of electricity for large users, was scheduled to start at the beginning of 1998. This is expected to lead to cheaper electricity prices as competition becomes fiercer. It will also encourage the development of new power stations, inevitably mostly gas-fired, as generation will be fully open to competition. While economic growth in Spain, presently running at strong levels, will help to increase electricity demand and absorb this extra capacity, it will surely put pressure on coal generation as the new stations come on stream. An intention to build at least 3,000 MW of CCGTs (Combined Cycle Gas Turbine) by 2004 (some 6% of total capacity in Spain) has been announced by Gas Natural alone, while a joint venture between generator Iberdrola and oil company Repsol plans to build a further 3,000 MW of capacity between 1998 and 2003, starting with an IGCC (Integrated Gasification Combined Cycle) plant at a refinery site near Bilbao. A number of other Spanish companies have also stated their intention to compete in the new power generation market.

One result of TPA agreements is more international trading and grid connections. Greece and Italy have announced that an electricity link between their countries is to go ahead. There are plans to develop new power links from Norway via the North Sea to the Netherlands (Eems) and to Germany (Unterweser) to make more use of the huge resources of hydro power that could be developed. Discussions have been held about the feasibility of an electricity link from Iceland to Holland, to go via Scotland and England on its way to the Continent. A five-member consortium, led by Electricité de France, is studying the feasibility of connecting Europe's electricity network UCPTE with grids in Russia, Belarus, Moldova and Ukraine. This is only a selection of the proposals that have been discussed or agreed.

5.3.3 In 1997, hard coal deliveries to power stations were considerably higher than had been anticipated in the previous report, leading to a less pessimistic outcome. Total supplies amounted to 183 million tons, 6 million tons more than expected. However, as mentioned elsewhere, some 4 million tons of this coal were put to stock, particularly in the UK and in Denmark. The level of supply dropped just over 1% by comparison with 1996 (down 2 million tons).

The picture is rather more gloomy for 1998, when deliveries of hard coal to power stations are expected to drop by 21 million tons to 162 million tons, a loss of 11.5% of the power station market. The reduction in the UK generation market of 14 million tons (28%) accounts for much of this change; coal use is continually being challenged by utility and independent gas generators and a strong nuclear performance. Other significant changes will occur in Denmark (down 3 million tons or 22%) and in France (down 2.5 million tons, 32%).

5.3.4 The appearance of independent power projects (IPPs) in the UK has had a significant impact on the consumption of gas, and consequently on coal burn.

Whilst an electricity generator is likely to produce electricity using a portfolio of fuels, and will choose its fuels on the basis of price and station running costs, the situation is slightly different for an IPP, where gas is frequently contracted on a 'take or pay' basis, and an electricity sale contract is also in existence (usual requirements for the financing of an IPP). The power purchaser will normally bear the risk on electricity price fluctuations. For an IPP the determination is whether to run or not, a rather different choice than for a generator with a number of power stations and a range of fuels. With the expected developments in the Spanish generation market, similar considerations may become pertinent.

Details of significant recent and future developments in power generation are shown in the countries section.

5.3.5 Deliveries of lignite to public and pithead power stations declined by 6 million tons in 1997, a reduction of less than 3%. Germany's reduction in lignite deliveries accounts for slightly more than this tonnage, but Greece continues to increase its use of the fuel, and deliveries are expected to have grown by over 2 million tons. In 1998, Greece will continue that growth, while the drop in German deliveries is forecast to be 2.5 million tons. Overall, deliveries are expected to stay fairly steady in 1998. Peat deliveries reduced in 1997 compared with 1996 (the result of better levels of hydro in Finland), but are expected to remain steady in 1998.

Within Germany a number of new lignite power stations are being built to conform to latest environmental standards. They will in most cases replace existing lignite power stations. Greece is also expanding its lignite generation capacity, with 335 MW to have been commissioned in 1997, and a further 560 MW station planned. In Ireland, approval has now been granted for the construction of a new peat-fired power station, to burn 1 million tons a year. In addition to the 50 employees needed to run the power station, a further 450 people will be required to harvest the peat.

5.4 Other industries (Table 7)

5.4.1 'Other industries' includes all the coal consuming manufacturing industries that are not specifically listed. The chief of these is the cement industry, but the chemical industry, sugar, paper and ceramic industries all use some hard coal in their processes. However coal is only one of several possible fuels, and can face displacement if the price of coal is uncompetitive. At present, these industries account for around 5% of total hard coal deliveries.

Total deliveries of hard coal to other industries are expected to have reached 14 million tons in 1997, slightly less than the forecast in the previous report because of sluggish growth in some countries. Deliveries were a million tons less than in 1996. In particular the construction industry gave a lacklustre performance in

most Member States in 1997, with a knock-on effect on cement demand. This was particularly true in Germany, where coal deliveries dropped by some 700,000 tons (losing nearly a quarter of the market). In the Netherlands too, half the market was lost when deliveries reached only 365,000 tons. In this case gas may also have claimed some of the market share. The only star performance was that produced by Spain, where coal deliveries rose 270,000 tons to nearly 1.5 million tons, an increase of nearly 23%. Spain has been one of the countries to have accelerating economic growth throughout the year, and this will have helped to maintain demand. However the construction industry did not fully share this rapid growth, except for the new housing market, and this would have had an impact on cement demand.

Coke deliveries to this 'other industries' sector, dealt with in more detail elsewhere, were more robust in 1997, increasing by 10% (300,000 tons), but in 1998 they are expected to drop back to 1996 levels at about 3.5 million tons.

5.4.2 1998 should in general see a continuing demand for coal within these 'other industries', but a slight reduction in deliveries is likely (perhaps some 860,000 tons or 6%). In many Member States, demand is expected to remain broadly level. Likely exceptions are UK (-350,000 tons, some 11% down), Portugal (-300,000 tons, a reduction of 40%), France (-190,000 tons or 7%) and Finland (+300,000 tons, more than 3 times that in 1997).

5.5 Domestic use (Table 8)

5.5.1 Deliveries of fuels (hard coal, patent fuels and coke) to the domestic market (including workers' coal) continued to decline. The domestic market faces continuing competition from gas and electricity, and in modern houses the frequent lack of fireplaces and chimneys is a bar to the use of solid fuels. However in 1997 the total domestic market only lost 140,000 tons or 1.5% of its market.

Deliveries of hard coal to the domestic market actually increased in 1997 (displacing patent fuels and coke about equally). The chief increases were in UK (230,000 tons) and Ireland (140,000 tons) while reductions were expected in Germany (100,000 tons).

5.5.2 The forecast for 1998 indicates a reduction in deliveries of solid fuels to the domestic market of nearly a million tons, over 11% of the market. Most of this reduction is expected in the hard coal part of the market, and particularly in the UK, where Commission estimates indicate a reduction of some 600,000 tons, with perhaps 100,000 tons reduction in UK patent fuel deliveries. In 1998 Germany's reduction in hard coal deliveries is again likely to be about 100,000 tons lower.

5.5.3 Demand for lignite briquettes and peat briquettes in the domestic sector is also reducing, by 500,000 tons in 1997 (12%) and by only 300,000 tons (8%) in 1998. The majority of sales of lignite briquettes are in Germany, while peat briquettes are used in small quantities in Ireland.

5.6 Deliveries of lignite and peat (Table 9)

5.6.1 In 1997 total deliveries of lignite and peat amounted to about 263 million tons, of which 250 million tons are lignite and 13 million tons are peat (5%). Some 88% of total deliveries went to power stations, and a further 10% went to briquetting plants, leaving 2% for the remaining markets. Germany accounts for 2/3 of total deliveries of lignite and peat, while Greece's share is nearly a quarter Between them they account for 90% of the lignite and peat markets. The majority of lignite briquettes are made in Germany, while Finland is the major producer of peat briquettes, although a significant proportion of Ireland's peat production goes to briquetting. Total peat production is likely to have dropped by 1.2 million tons, mostly in Finland.

5.6.2 Deliveries in 1998 are expected to reduce by some 5 million tons (2%) in total to 257 million tons. The drop in Germany is expected to be around 7 million tons (mostly to briquetting plants), while Greece will increase its requirement by 2 million tons. between them still accounting for about 90% of the market. In 1998, because of a reduction in deliveries to briquetting plants, power stations are forecast to use 90% of total lignite and peat deliveries. The peat market is forecast to remain steady in 1998.

5.6.3 Future developments in power generation in the peat and lignite markets are referred to in the section on power stations above (Section 5.3).

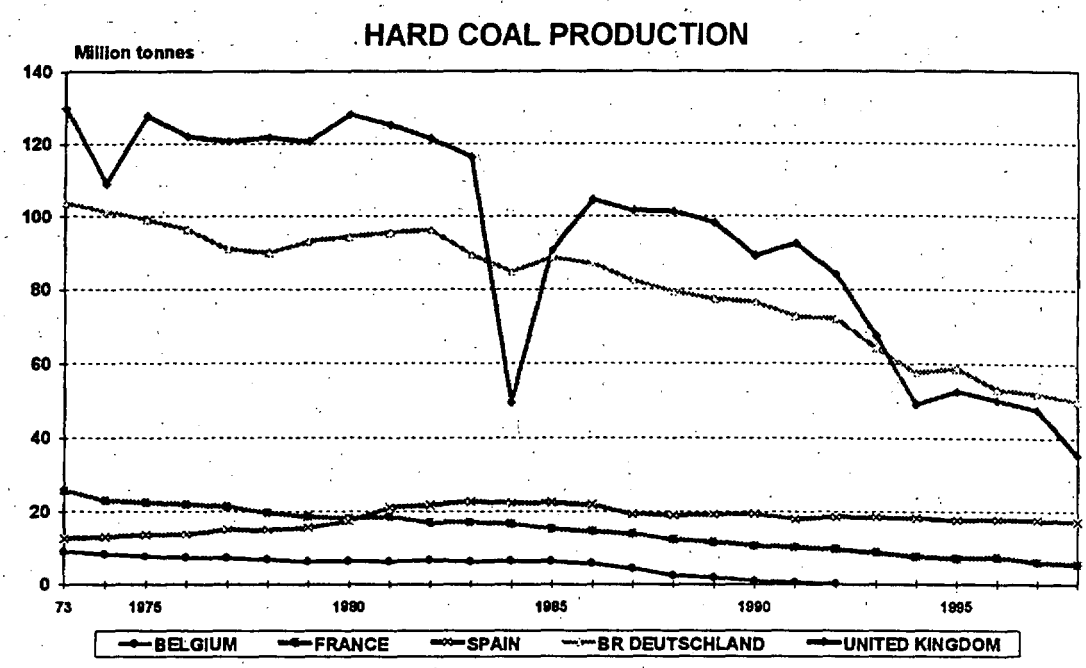
VI. COMMUNITY SOLID FUEL PRODUCTION

6.1 Hard Coal Production

6.1.1 Restructuring continues in the coal industries of Europe, and Community hard coal production continues to be affected, to varying degrees, by the policies of the Member States to restructure, rationalise and modernise their industries in order to improve their competitiveness. Hard coal production in the European Community reduced again in 1997 in all coal producing countries.

The estimated total production was 123.1 million tons, a reduction of 2.9% or 3.6 million tons on the production levels of 1996. This was most marked in France, which

lost 1.3 million tons, predominantly from the Lorraine coalfield. In Germany the last remaining colliery in the Aachen coalfield, Sophia Jacoba, was closed, (although the briquetting plant continues there) whilst European Commission estimates suggest that in the UK over a million tons were lost from deep-mined output. There were other substantial changes in the UK, as the mining company Coal Investments collapsed, and some assets were sold. Three collieries were sold to Midlands Mining, and two others closed. Other collieries also ceased production (some detail? - here or in country).



6.1.2 Forecasts for 1998 indicate a severe decline in coal production in the Community. Production is expected to fall to 108 million tons, a drop of 15 million tons, or 12.3%. The major share of this reduction (some 12 million tons) is expected to take place in the UK, where the expiry of electricity contracts in March 1998 has created a problem for UK coal producers, who are competing for business in a very competitive world market at a time when the pound sterling is very strong against the dollar. This will jeopardize a quarter of UK production.

Reductions in coal production in Germany in 1998 are expected to amount to some 2 million tons (nearly 4%) of current output, in line with the plan agreed between the producers, the Unions, the federal government and the Länder. Most of this reduction will occur in the Ruhr coalfield.

France's gradual reductions in production continue, and output in 1998 is expected to fall by over half a million tons, or 9% of current production. The reductions in Spain are less marked, and are more widespread in the regions. The y amount to 0.4 million tons, 2% of 1997 output levels.

6.1.3 For the future, a study is being undertaken at the Sulcis mine in Sardinia, with the expectation that it will reopen. The coal would provide 50% of the fuel requirements for power generation in a new combined cycle gasification plant, which should be in operation by 2000. The consortium planning to operate the mine will take on the previous Carbosulcis workers. Competitiveness of this whole operation seems to be however extremely unclear.

6.2 Lignite Production

6.2.1 Lignite production in 1997 is expected to have reduced from the levels of 1996, by 11 million tons, some 4.4%. This is lower than had been anticipated in the previous report, largely because Greece has not increased its output as fast as had been anticipated, and Germany is expected to have reduced its output further than had been forecast last year.

The estimated reductions in lignite production in Germany amount to nearly 12 million tons (6%) mostly from the Lausitz area. Spain's lignite industry has managed to maintain production at higher levels than had been expected last year, whilst France managed to reverse some of the decline of 1996, and was thought to have produced some 1.1 million tons, an increase of nearly 40% on 1996 production. In Greece, expansion of the lignite production was less than had been forecast; it increased by only 0.3 million tons, or half a percent.

6.2.2 Forecasts for 1998 indicate that lignite production will reduce again, but by half as much as in 1997. Output is forecast to be around 242 million tons, down 5.4 million tons on the expected figure for 1997. Again, Germany anticipates a decline in its production in 1998, of some 7.4 million tons, most of it from Lausitz (where two opencast mines are scheduled for closure by the year 2000). Production in Greece is expected to increase by 2.1 million tons, all from the Ptolemais area.

6.3 Peat Production

6.3.1 Production of peat in 1997 was disappointing by comparison with the expectations of the previous year. Total production is expected to have amounted to some 12.7 million tons, against a forecast of 14.2 million tons last year.This was mostly due to a disappointing level of production in Ireland, where output was estimated at only 4.5 million tons, areduction of half a million tons, against an expectationof an increase of approaching a million tons. Production in Finland was also down, to 7.4 million tons, slightly below expectations.

6.3.2 Forecasts for 1998 suggest that production levels will return to those expected in 1997, so that Ireland's output is estimated to be nearly 6 million tons, bringing expected total production of peat in the Community to over 14 million tons in 1998.

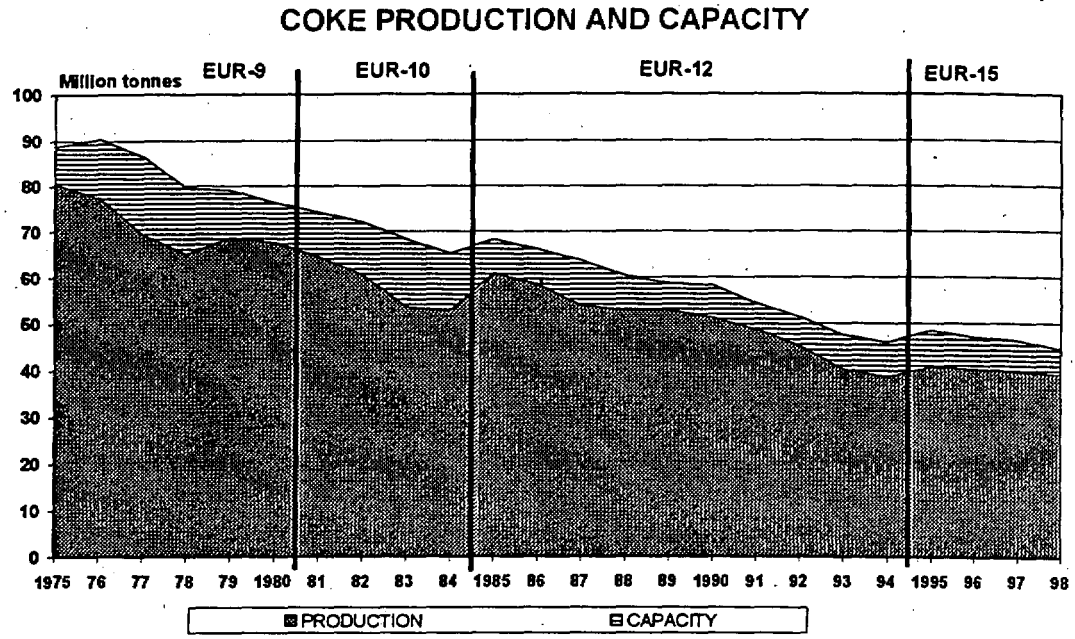
There has been some controversy as to the classification of peat. Because it is a solid fuel, it has historically been classified in the same group as the main hydrocarbons, coal,

lignite, oil and gas. Wood and wood products have a separate classification of their own. However, there have been arguments, that peat is a form of biomass, and it is treated as such in Finland. However, the EU directive (at present under discussion) on the taxation of energy products does not specifically mention peat, so there is argument as to whether it belongs to the coal and solid fuels category, or to the biomass category. This has particular significance in terms of CO_2 emissions, which would therefore be excluded from environmental constraints and energy taxes, if it is classified as a renewable biomass fuel. It would also make the peat industry eligible for support under EC renewable energy programmes. The Commission has rejected the requests of the Finns for a re-classification.

6.4 Coke Production

6.4.1 Coke production in the Community in 1997 was more buoyant than had been forecast the previous year, but was nevertheless down 1 million tons (-2.5%) on 1996 levels. Provisional figures indicate coke production in 1997 of 39.9 million tons, against an expectation of 39.3 million tons, and compared with production in 1996 of 40.3 million tons. France and Belgium both performed better than had been expected because of their improving industrial growth rates.

The yield of coke from coal is increasing, and in 1997 was almost 75% (although German coke works appeared to achieve a yield of over 80%). Utilisation of capacity is expected to be up marginally from 1996 levels, to reach 86% in 1997. This was partly the result of closure of capacity (predominantly in the iron and steel industry) of some 0.7 million tons in the year, 0.4 million tons of which was in Belgium and the rest in Germany, Austria and the UK. However there is a wide range of utilisation figures if individual countries are considered; in particular, Italy and the Netherlands appear to have particularly low utilisation rates.



6.4.2 It is expected that there will be more closures in 1998, both at colliery plants and in the iron and steel industry. Some 1.8 million tons of capacity are expected to close, in France (0.9 million tons), Spain (0.5 million tons), Belgium and Austria. This will increase the Community utilisation rate to over 88%.

Forecasts for coke production in 1998 indicate a reduction of half a million tonnes to 39.4 million tons. This includes a reduction in production of 0.6 million tons in Belgium, and smaller decreases elsewhere; Germany and the Netherlands each expect to produce 0.1 million tons extra coke in 1998.

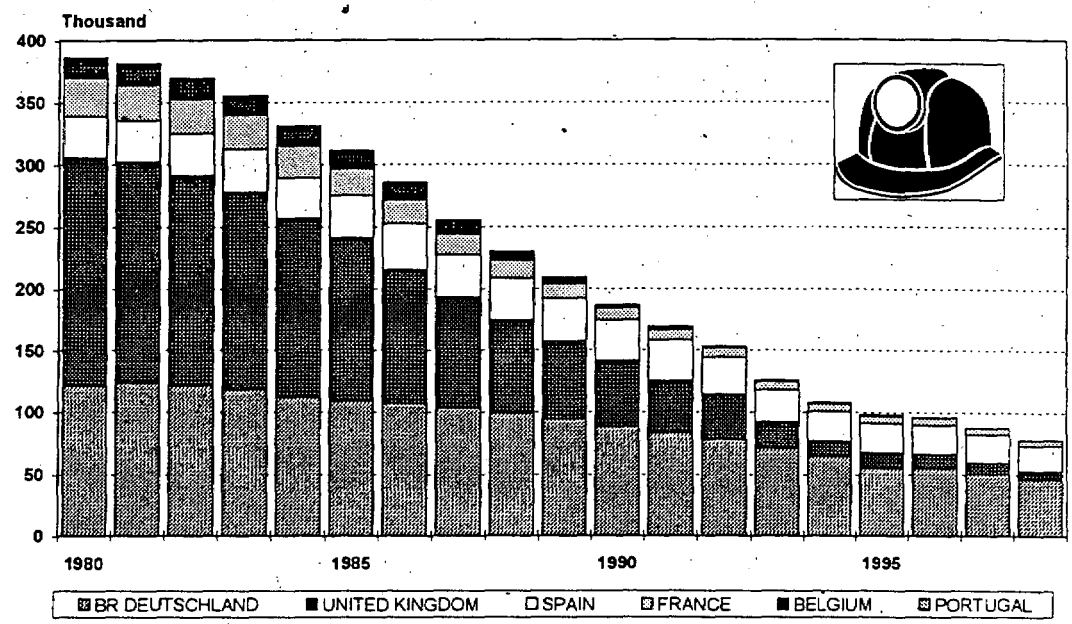
The production of coke is intimately tied to steel production, and changes in technology will continue to have an impact on the requirements for coke, continuing the downward trend in production. Further closures in production capacity are inevitable, although a number of steel companies are making environmental improvements via new or refurbished capacity to replace old batteries. By 2005, it is expected that coke demand will have declined by some 6 million tonnes, while available capacity may have closed still further to require coke imports of around 5 million tonnes.

6.5 Labour and Productivity

6.5.1 Personnel employed underground (as a yearly average) are estimated to have decreased in 1997 by some 7,200 men, 7.6% of the underground workforce. There were losses in all the mining countries, but the largest reduction was in Germany, where some 4,700 people are expected to have lost their jobs as a result of the agreed restructuring plans This represents 8.5% of the German workforce underground. In France the reduction was 12% of underground workers, while in Spain less than 5% of underground jobs were lost.

On a Community level productivity underground increased by only 29 kg per man hour, from 733 to 762 kg per man hour. On a country level, it is estimated that productivity in UK deep mines increased by nearly 250 kg per man hour, to reach a level of 1670 kg per man hour, a gain of over 17%. UK underground productivity is more than double that in Germany and France, and more than five times that found in underground mines in Spain.

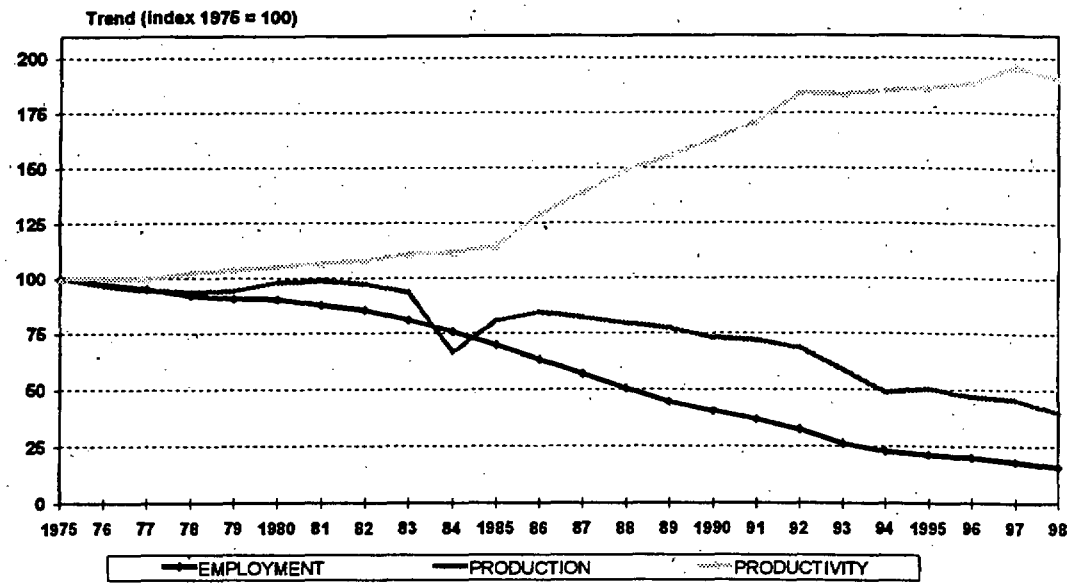
PERSONNEL EMPLOYED UNDERGROUND



6.5.2 Forecasts of personnel employed underground in 1998 indicate a Community-wide reduction of some 9,600 persons. There will be significant reductions in all the mining countries; Germany and UK are likely to see the largest reductions in jobs lost, with forecasts of 3,800 and 3,200 jobs respectively. Spain may lose 2,100 jobs and France 500. The situation in the UK was still uncertain when the Commission estimates were made.

It is expected that productivity underground will continue to rise slightly in most Member States but will fall in the UK because of their recent problems with contracts to the electricity generators and the reductions in indigenous tonnages that are being contracted. France and Spain each expect to increase productivity by around 20 kg per man hour underground, while the increase in Germany is estimated at only 13 kg. The effect of an estimated reduction of 35 kg per man hour in the UK is to bring the Community average down by 21 kg per man hour to some 741 kg per man hour underground in 1998.

TREND OF THE COAL INDUSTRY
EMPLOYMENT, PRODUCTION AND PRODUCTIVITY



6.6 Investment trends

6.6.1 Investment in the coal industry in coal extraction and preparation was 560 million ECU in 1997, compared with 609 million ECU in 1996. While Germany increased its investment expenditure in ECU terms, the other countries all reduced their investment. In 1998 it is expected that investment will fall in all the Member States. Comparisons will be affected by movements in exchange rates relative to the ECU, but the table below shows investment in ECU per ton of production. However it must be emphasised that investment is to maintain and improve the future production and productivity, and not to sustain current production, so the table must be treated as indicative only.

INVESTMENT IN THE COAL INDUSTRY PER TON OF PRODUCTION

(ECU per ton)

	1996 Actual	1997 Estimates	1998 Forecasts
Germany	4.88	5.12	4.48
Spain	9.60	8.25	5.08
France	3.04	2.62	2.75
United Kingdom *	3.23	2.81	3.61
EUR-15	**4.81**	**4.55**	**4.20**

* based on Commission estimates

6.7 State Aids

6.7.1 In accordance with the Community State aid framework Decision 3632/93/ECSC, Member States which had the intention of granting aid to the coal industry (France, Germany, Spain and the UK) submitted their modernisation, rationalisation and restructuring plans to the Commission during 1994. Aid notifications were received in 1997 from all of these Member States, but proposals are still under consideration at the Commission.

6.7.2 Financial aid from the Member States to the hard coal industry is discussed in a separate report, so only a brief summary of the financial aid to current production authorised by the Commission is given in this table:

	TOTAL INTERVENTION TO CURRENT PRODUCTION (MECU)			INTERVENTION PER TONNE (ECU)		
	1995	1996	1997	1995	1996	1997
Germany	4784.2	5363.3	4877.3	81.3	101.0	95,23
France	56.9	87.6	--	8.1	12.0	--
Spain	731.9	730.8	698.2	41.5	41.2	40.83
United Kingdom	--	--	--	--	--	--
Total	**5573**	**6181,7**	--	**40.9**	**48.8**	--

6.7.3 With respect to State aid to the coal industry, it should be noted that, at the end of 1996, the maximum period of three years for the temporary derogation allowed for in Article 9(7) came to an end. This permitted arrangements existing at 31 December 1993, under which aid was granted in conformity with the provisions of Decision 2064/86/ECSC and which are linked to agreements between producers and consumers, exempted under Article 85(3) of the EC Treaty and/or authorised under Article 65 of the ECSC Treaty, must be modified by 31 December 1996 to bring them into line with the provisions of this Decision.

6.7.4 In Germany, as a result of the decision of the Constitutional Court to declare the "Kohlepfennig" levy system unconstitutional, subsidies for the supplies of steam coal to the power sector have been financed from the public budget since January 1996.

In accordance with decision n° 3632/93/ECSC and taking account of social and regional considerations, the Commission authorised Germany to grant aids for the current production of the coal-mining industry for 1997 of about ECU 4877.3 million. In its decision of 29 July 1998, the Commission ordered refunding for 1996 of aid totalling ECU 7 million, which had been granted for the production of sized anthracite of the companies Sophia Jacoba GmbH and Preussag Anthrazit GmbH.

In these two decisions, the Commission pointed out that pursuing the principle applied by Germany that aid is only to be paid for production which is supplied for electricity generation and to the Community iron and steel industry, Germany undertakes to sell the

production intended for use by industry and as domestic coal at prices which cover the production costs.

6.7.5 On 3 June 1998 the Commission took 3 decisions on state aid granted by Spain to the coal industry. The aid for current production authorised by the Commission is :

- additional aid of Pta 20 452 million (123.28 MECU) for 1994, 1995, 1996 ;
- aid of Pta 116 877 million (704.55 MECU) for 1997 ;
- aid of Pta 126 855 million (764.7 MECU) for 1998.

In its decision on additional state aid for 1994, 1995 and 1996, the Commission did not authorise an amount of Pta 4 824 million.

6.7.6 At the time of writing, the Commission has not authorised any aid to the French coal industry for 1997 under the provisions of Decision 3632/93/ECSC.

6.7.7 The Commission authorised, under the provisions of Decision 3632/93/ECSC, the United Kingdom make a budgetary provision for the financial year 1998/99 totalling GBP 891 million. This would be disbursed over the period until the expiry of the ECSC Treaty in July 2002.

The budgetary provisions consist of:

- GBP 92 million for contributions to pension schemes of former workers of the British Coal Corporation and their dependants;
- GBP 24 million to cover exceptional social-welfare benefits to workers who lost their jobs as a result of the restructuring, rationalisation and modernisation of the United Kingdom coal industry;
- GBP 365 million for a concessionary entitlement to coal and smokeless fuel, or, in certain cases, cash-in-lieu for former workers of the British Coal Corporation and their dependants;
- GBP 177 million for compensation for industrial injury and damage to health for former workers of the British Coal Corporation and their dependants;
- GBP 15 million to cover the costs arising from the residual activities of the British Coal Corporation;
- GBP 218 million to cover environmental damage caused by mining activities before privatisation.

6.7.8 In Germany, from January 1996, hard coal subsidies were funded from the federal government budget under legislation passed in December 1995. In 1997 Commission approval of the Hüttenvertrag ceased; in any case, it was evident that the high subsidy costs could not continue to be supported, and in March 1997 a package of aid, linked

with certain restructuring measures, was finally agreed between the federal government, the state governments involved in the coal industry, the three coal mining companies and the unions; the legal framework was agreed in November 1997.

The agreement of March 1997 gave producers a measure of freedom in deciding where they wanted subsidies to be applied; there are three categories of aid, sales subsidies for coking coal and for steam coal, and funding for future mine closures. The subsidies for coal will be reduced from a total of DM 9.35 billion in 1998 to DM 5.5 billion in 2005. The sum total includes an annual financial contribution from the state government of North Rhine Westphalia of DM 10 billion up to 2005. In addition, Ruhrkohle AG will contribute another DM 0.2 billion per year from 2001 onwards, to be funded from the profits made in the non-mining activities of RAG.

The federal government and Saarland intend to dispose of their interests in Saarbergwerke AG to RAG. A new company, Deutsche Steinkohle AG would own all Germany's remaining coal mines. This proposed restructuring is still being considered by the European Commission's Competition Directorate DG4.

As a result of the restructuring agreement a number of colliery closures and mergers have been agreed to eliminate the highest cost output. By 2005 only ten or eleven mines are expected to be in operation producing about 30 million tonnes a year. By then it is expected that a total of 480,000 jobs will have been lost in the German hard coal industry.

6.7.9 On 23 August 1997, the Commission published in the Official Journal a letter of formal notice that had been sent to the German Government concerning an alleged mis-use of State aid.
Following complaints from the UK anthracite producer Celtic Energy, the European Commission asked the German government to justify the state aid provided to the Ibbenburen mine. Ibbenburen had been selling anthracite coal in the UK and other markets at a price that appeared to be substantially below its cost of production. The UK Trade and Industry Secretary also complained to the Commission about German state aid to two anthracite producers (Sophia Jacoba and Preussen Anthrazit).

In March 1998, it was announced that Preussag Anthrazit GmbH, the current owner of Ibbenburen Mine, had agreed an undisclosed settlement with Celtic Energy.

6.7.10 The UK submitted a complaint to the Commission about the level of subsidies permitted to the Spanish coal industry. It contended that the high domestic subsidies restricted the possibility for UK exports to Spain and so was anti-competitive. The Commission is analysing the case.

VII. SOLID FUEL PRICES

7.1 Exchange rate

7.1 In 1997 the value of the US dollar continued its rise against most European currencies, reaching 0.915 ECU/$ in the third quarter; it dropped back slightly in the last quarter to give an average increase in dollar strength of 11.9% year on year (12.3% for the last quarter). Against other European countries gains in relative value by the dollar were in general above the ECU percentage rate. The chief exception was the UK which improved its strong position, gaining 4.8% year on year.This makes coal purchases priced in dollars more attractive for mainland Europe, but makes exports less valuable.

Exchange rates vis-á-vis the US dollar appear to have had a significant impact on coal prices from the exporters. Both the Australian dollar and the South African rand have lost value against the US dollar, with the effect that they have been able to cut dollar prices in a competitive market, and still cover their costs. Utility and coking prices in US dollar terms, from Australia to Japan have been forced down by the relative change in the Japanese yen against the Australian dollar. South Africa has been aggressively paring its US dollar price to compete with Colombian coals, particularly in the European market.

7.2 Shipping and freight costs

7.2.1 1996 had been a poor year for the shipping industry; levels of the Baltic Freight Index (BFI) fell below 1000 in 1996, a level not seen since 1992. Early in 1997 the position had improved above the 1500 level, and between January and March prices were firmer. There was more optimism in the market because of the continuing growth in industrial output from OECD countries. In 1996 some 16.7 Mdwt of new bulkers came in to the market. For 1997, 16.1 Mdwt was due for delivery, but with some expectation that freight prices would be sustained. In the event the shipping market was relatively uneventful, and the BFI slid back to the 1200 level. The peak of activity occurred in July and August when dry bulk ships were in demand for the grain trade, and the BFI rose to 1372. Towards the end of November the BFI had fallen back to 1168, and finished the year at 1253. For 1998 the picture has been of weak prices, with better levels of activity in the Far East market than in the Atlantic, and rates for capesize vessels less volatile than in the panamax market. Early in 1998 the BFI hit an 11 year low when it fell to 932, but improved in February and March. There appears to be little optimism that prices will improve much; this will help to keep prices down for coal buyers.

The Baltic Freight Index is dominated by events in the panamax market (70% weighting), and so does not always give a the whole picture. In the latter part of 1997 there were reports of higher prices on Capesize vessels, while the panamax market was dull. Charterers were reported to be splitting loads and using panamaxes to take advantage of cheaper rates. In 1998 the draft of the Panama Canal is to be reduced between March and October because of lack of water, reported to be the effect of El

Niño; the usual draft of 39ft has been reduced to 38ft and again to 36.5ft. This will restrict activity in the panamax market.

7.2.2 Prices for transatlantic shipments ranged between $5 and $7 per tonne, some $0.50 - $0.60 higher than those seen in 1996. South African freight rates were kept down ($5.95 -$7.75) by the very low coal prices; in June the freight element of costs reached 17% of total delivered costs; in January 1998 rates of $5.10 were quoted for a capesize vessel, while Columbia to UK was down to $5.00 (some $2.50 below the usual rate. Activity from Australia to Europe was low in 1997 and rates ranged between $8.20 and $11.00 to ARA, while in February 1998 as little as $7.50 was quoted to west coast UK.

7.3 Trend of imported steam coal prices

7.3.1 International steam coal prices during the year have been steadily eroded to the extent that by the year end, the US East Coast suppliers had ceased to compete for new business in the export market. The oversupply in the market helped buyers to keep prices down, and after a relatively firm first three months, prices were seen to slide, beginning to pick up (in some quarters) when the traditional buying season began in the autumn.

Price levels were led downwards by South Africa, where producers were prepared to reduce costs to maintain the volume of sales. In July the $30 barrier was broached, falling to $28.50 soon after; by September spot prices of $25 were reported (basis 6,000 kc/kg NAR). The Colombians also needed to sell their increased output, but this was always easier to sell because of its higher quality, so prices were not so heavily discounted; by September spot prices of $33 - $34 (basis 11,800 Btu/lb GAR) were reported. In Australia the price slide had already begun in late 1996 as output rose (US$32 was reported, basis 6,400 kc/kg GAR); there were high stockpiles despite the industrial disputes; producers were keen to sell on the spot market, and price reductions were easier to accept because of the weakness of the Australian dollar. The reduced industrial activity in Japan, added to good nuclear performance there, had cut demand for power station deliveries; Japan too was switching from contract to spot purchases. The Australian spot price in September was reported to be below $26 (basis 6,700 kc/kg GAD).

The MCIS marker of prices of steam coals imported into North West Europe slid from US $41.67 in December 1996 (6,000 kc/kg NAR material) to $36.38 in December 1997, a fall of 12.7%. By March 1998 it had fallen further to $32.40, similar to prices last seen in the third quarter of 1993.

7.3.2 Purchases by European utilities in 1997 were carried out against a background of supply overhang at the end of 1996, and some utilities delayed contract agreements hoping for lower freight rates. Prices were on the whole slightly stronger than in 1996, with the exception of the Australian market where FOB prices were unchanged, but freight costs were higher. Columbian prices were up by $1 - £2 and South African prices were

reported at rollover; US deals were slightly higher ($1 - $2), and used largely by buyers wanting higher calorific value coals and wishing to keep their portfolio diversity.

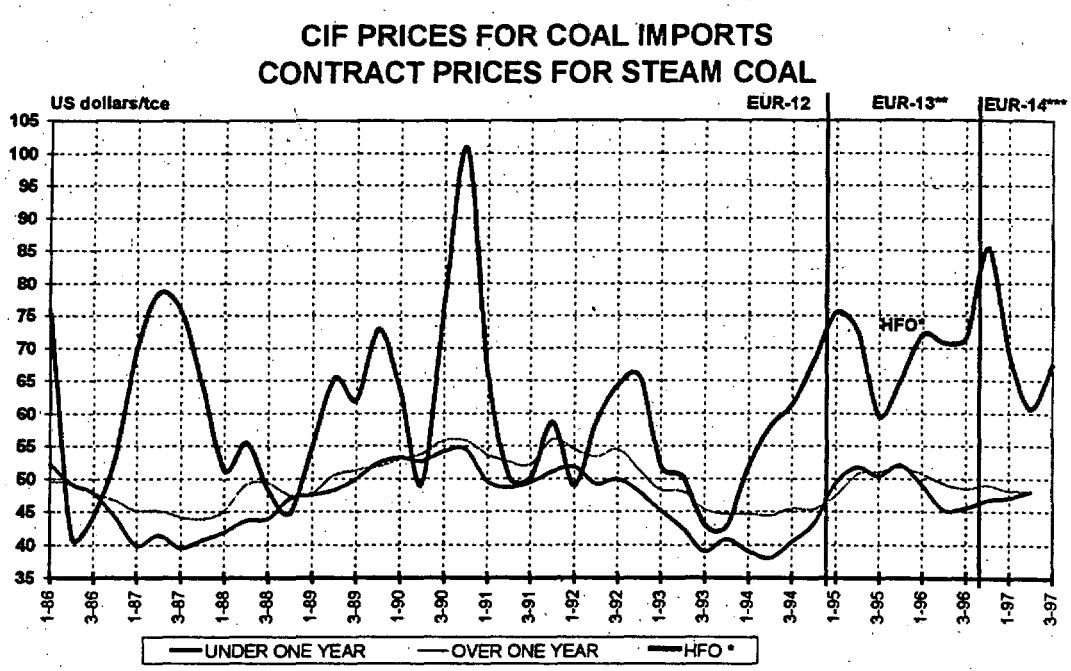
	FOB ($/t)	Freight ($/t)	C&F	($/t)G.C.V. (Kcal/kg)
SOUTH AFRICA	30-35	6-8	36-44	6,200-6,600
COLOMBIA	31-40	5-7	36-45	6,200-6,700
USA	32-40	5-10	40-50	6,200-6,900
AUSTRALIA	30-34	8-11	40-44	6,000-6,600

The outlook for 1998 is of considerably lower prices; a number of buyers have decided to use price as the chief factor in their contract decisions, and will acquire a higher proportion of their needs from the spot market. South Africa was attempting to keep prices above $27, but deals at $26 had been reported. Columbia was offering coal at $31 - $32, while the US was not in the market in the early part of the year; Australia was selling little to the Atlantic market.

7.3.3 Prices for steam coal imports into the European Commission are reported quarterly and published by the Commission, with revisions where necessary when further information is available. The Member States provide the Commission with the figures in accordance with Decisions 77/707/ECSC and 85/161/ECSC. The figures are broadly representative of steam coals imported by electricity utilities (Tables 15A and 15C).

Between the depths of the second quarter of 1994 (42.68 US dollars per tce CIF) and the peak of the fourth quarter 1995 (51.84 US dollars) average imported steam coal prices rose every quarter. Following that high level, there was a gentle slide down to the first quarter 1997, when prices fell to 47.69 US dollars per tce, a reduction of some 8% in five quarters. The succeeding two quarters of 1997 showed reported prices of over $48, reaching $48.10 in the third quarter. On average CIF prices expressed in US dollars were 2.1% lower for the first 3 quarters of 1997 as compared with the full year 1996. They do not yet reflect the slide in prices shown by other indices.

During 1997 there has been only a small differential between spot and contract prices. For the three quarters of 1997 for which information is available, the ratio of spot to contract price has been almost 99%, while in 1996 it was 96%. Another noticeable feature is that spot purchases have been taking a larger share of the total coal purchased. In the third quarter 1997, nearly 49% of coal was bought under short term deals, compared with only 33% in the comparable quarter of 1996. The CV of spot purchases was in general higher than that for contract deals, with the exception of some cargoes from USA or Colombia.



7.4 Coking coal prices

7.4.1 The EC guide CIF price for coking coal is based on purchases of coking coals from USA, Australia, Poland and Canada, on the basis of a reference grade of coking coal; for much of 1996 it had been around $57.50 after dropping from $58.40 at the start of the year. 1997 continued at similar price levels throughout the year. Freight rates during 1997 were higher than in 1996, implying that coking coal prices were slightly lower than in the previous year.

Because of the strength of the US dollar, prices in local currencies were, for most countries, around 15% more expensive in the last quarter of 1997 compared with the same quarter of 1996, while in dollar terms the price increase was less then half a percentage point. The UK was exceptional in finding the guide price had decreased by over 1% in sterling terms.

7.4.2 Prices for the European steel mills in 1997 were reported to be at slight reductions on 1996 in FOB terms, except perhaps for the high volatile coals. For those buyers who delayed contract negotiations, there were reported to be price reductions of several dollars to be found in the spot market.

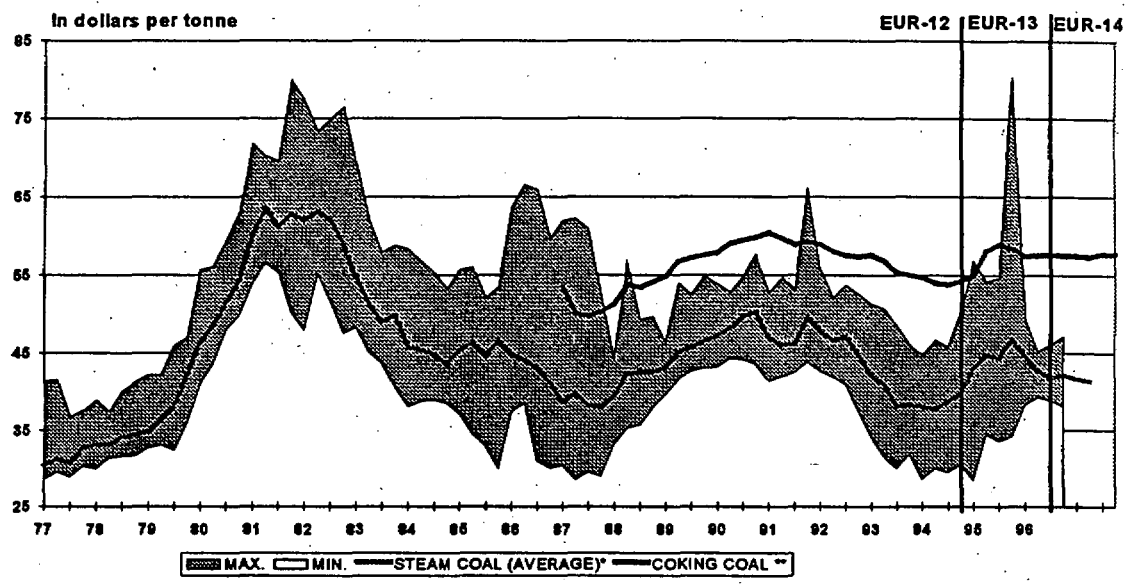
1998 contract negotiations were being carried out in a market that was over-supplied, so it is likely that keener prices will have been agreed.

The table below gives indicative price levels for contracts with European steel mills in 1997:

CANADA	46.20 - 47.90 $/t FOB
USA High Vol.	52.50 - 54.00 $/t FOB
USA Mid Vol.	59.00 - 61.00 $/t FOB
USA Low Vol.	54.00 - 55.00 $/t FOB
AUSTRALIA	50.75 - 52.50 $/t FOB
POLAND	51.50 - 52.50 $/T FOB

7.5 Prices reported to the European Commission are discussed above under the separate coal types. The graph below shows the range of steam coal import prices for the Community, and compares the average steam coal price with the coking coal reference price. The ratio of coking coal to steam coal price has remained around 1.19 - 1.20 since the second quarter of 1996.

AVERAGE CIF PRICES FOR HARD COAL IMPORTED FROM THIRD COUNTRIES



VIII. TRADE IN SOLID FUELS

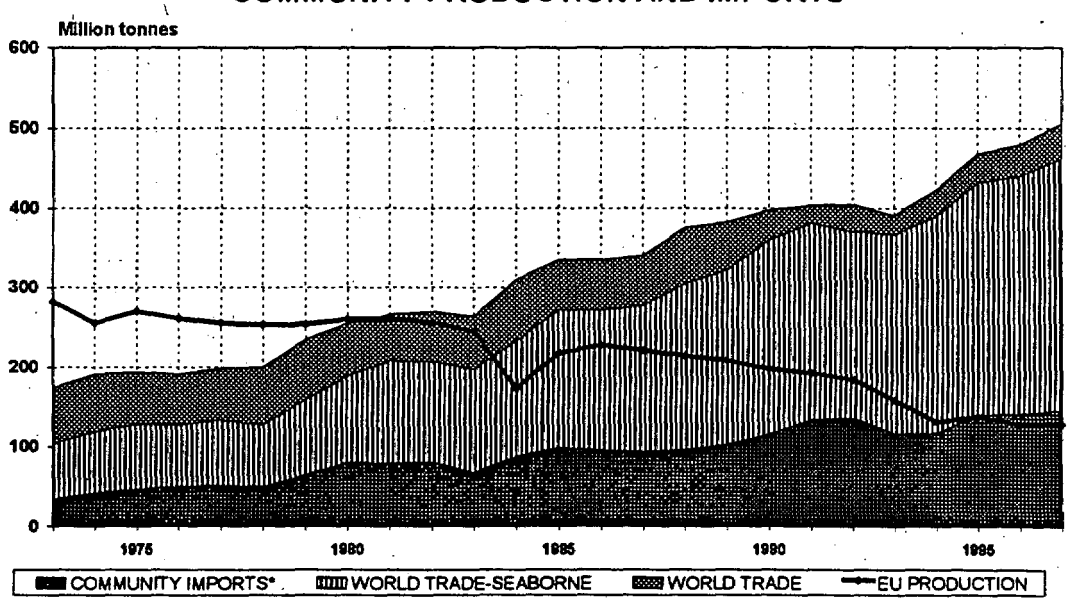
8.1 Hard coal: world trade and production

8.1.1 Statistics for coal production in 1997 are not yet available for some countries, but preliminary figures indicate that world production of hard coal may have grown slightly to 3,754 million tonnes, an increase of some 13 million tonnes or 0.3% above the 1996 level of 3,741 million tonnes. Significant increases occurred in North America (USA), Australia and India, while reductions in production were notable in the former CIS, China, and to a lesser extent South Africa. A number of countries achieved changes that were significant in their terms, although not from a global standpoint.

8.1.2 World coal trade increased by 5.4% to 505 million tonnes from 479 million tonnes in 1996. Coking coal trade increased by 5 million tonnes to 195 million tonnes, while steam coal trade increased by 21 million tonnes to 310 million tonnes (an increase of over 7%).

8.1.3 Seaborne coal trade represented 12.3% of total world production, and 91% of total traded coal. Seaborne trade in 1997 was estimated to be 462 million tonnes, compared with 440 million tonnes in 1996. Most of the increase of 22 Mt (5%) occurred in Japan and the newly-industrialised countries in East Asia. Seaborne imports to the European Community increased by 4 million tonnes to 145 million tonnes, an increase of 2.8%.

EVOLUTION OF THE WORLD TRADE FOR COAL
COMMUNITY PRODUCTION AND IMPORTS



* Including new German Länder from 1991 and EUR-15 from 1994.

8.1.4 1997 started well for the international coal trade; demand was strong, while many suppliers had responded to the growing demand in 1996, and were developing additional capacity, either by expansion of existing mines or with plans for new mines; expansions were in progress in Colombia, South Africa, Australia and Indonesia, while China became active in the international market in the latter part of the year. In addition, there were a number of plans for port expansion, particularly in South Africa (Richards Bay) and Australia (Newcastle); Colombia and Venezuela were also considering infrastructure improvements to expand coal exports. Supply was therefore booming. Broadly, supply and demand were in reasonable balance.

However the strong demand evident in the early part of 1997 was not sustained. By mid-year it became apparent that demand was not likely to be as strong as had been expected, and a supply surplus was developing. Prices began to fall, and suppliers became more anxious to sell their stocks in a weak market. Some suppliers, notably in the US (the traditional 'swing' supplier), pulled out of the export business because prices were too low. The reduction in prices was perhaps reinforced by the strength of the US dollar; buyers did not want to increase their costs in the local currency while producers could concede some cut in price before the effect was felt in their local currency. Towards the end of the year, there was further evidence of reducing supplies in the market, particularly in Australia and Indonesia.

In late summer the Asian financial crises developed, and many Far Eastern currencies plummeted in value. This has led to uncertainties in the expected pattern and levels of world coal trade for 1998, since the Pacific region was expected to be the main source of growth in demand, in particular with plans for a substantial number of coal-fired power stations, often linked with new coal mine development, as independent power projects (IPPs). Many producers had been expanding their existing mines, or developing new ones, to meet the expected surge in demand. In Indonesia, it looked as if the total coal mine expansion would be half that originally intended (down to 13 million tonnes), although continuing political and economic problems there mean that nothing is certain, particularly when up to 80% of mining costs are dollar dependent.

In 1998 it is expected that steam coal demand will be stronger in the Pacific Rim, with additional requirements from power utilities in China, Japan, Taiwan and South Korea. The indications are that in most cases there will be a recovery in the markets of the Far East.

8.1.5 The Atlantic market yields a slightly different picture. In 1997 demand in Europe was likely to be disappointing, because of the high levels of coal stocks held at the end of 1996. Demand was also likely to be lower because rainfall had restored reservoir levels in Scandinavia, and levels had improved in Austria and in Iberia. However, imports to UK and Germany were up substantially in the first part of the year, by 48% and 25% respectively; the UK imports were partly an overhang from the previous year, when generators had bought spot cargoes at very favourable prices when freight rates were

low, while German deals were being fixed while the government, unions and management were trying to resolve the subsidy issue. This activity was not sustained in the later part of the year.

8.1.6 Activity in the coking coal market was less frenetic than in steam coal in 1997. The world market was broadly in balance, and while there was competition for volume between producers, prices remained at rollover levels. The weakness of the Australian dollar helped that market to keep its hold on the semi-soft coking coal market, while Canada and the US dominated the high vol. market. One feature was in specification, in that a number of coals previously in the mid-vol range were being sold into the semi-soft market.

The outlook for coking coals in 1998 was of a very competitive market; there were reports of prices being shaved by US$5 or more by some buyers. This was evident firstly in the Japanese market, but was repeated also in dealings with Brazil and subsequently in Europe.

8.1.7 The world PCI market continues to grow; statistics are not always easy to identify, since it is sometimes classified as a coking coal (eg in Japan) but more often as a steam coal

8.1.8 Coke manufacture is being cut back in a number of countries because of the increasing stringency of emissions controls; the problem is likely to become more acute towards the next century. Changes in technology will reduce the amount of steel made using basic oxygen furnaces, which require coke. Electric arc furnaces, and other newer technologies, are substituting for some of the older traditional types. At present, China is the major supplier of traded coke, and dependence on its supplies will increase. Total world demand for coke is forecast to increase by 11 million tonnes between 1997 and 2005.

China is the world's largest exporter of coke, and the rest of the world will be dependent on Chinese supplies to fill the gap in supply, despite the concerns in China about pollution caused by the beehive coking plant. It is likely that the authorities will look leniently on the problem for some time.

In western Europe the expected decline in demand (-6 million tonnes by 2005) will be exceeded by closures, leaving a likely shortfall of some 5 million tonnes to be filled by imports.

8.1.9 The market in petcoke was very active in 1997; prices dropped significantly as producers at American refineries increased their output, and the product achieved considerable sales into Europe, particularly in the cement market and for blending in to industrial and domestic coals. It also displaces or is blended with some conventional coke where quality is not a problem. There were also reports of trial cargoes being

taken by National Power in the UK. Petcoke is a refinery product using the heavy residue from oil. It has a high sulphur level, and other undesirable emissions which can make it unacceptable in some markets. Prices as low as $10 FOB Gulf (6% S) were reported.

Community trade with third countries (Tables 17 and 18)

8.2.1 Imports of hard coal from third countries were expected to have increased by 4.4 million tonnes in 1997. The greatest increase was 4.7 million tonnes (+27%) into the UK, where imports were estimated to have reached 22 million tonnes. Other countries where imports increased significantly were Denmark (+1.1 million tonnes) Germany (+1.1 million tonnes), Ireland (+0.5 million tonnes), Portugal (+0.5 million tonnes) and Finland (+0.8 million tonnes).

Reductions in imports were noted in particular in Spain (-3 million tonnes), but also in Belgium (-0.6 million tonnes) and France (-0.8 million tonnes). Spain's indigenous stocks were high at the beginning of 1997, and France had imported heavily in 1996, while the reductions in Belgium were likely to be due to the conversion of its steel making to electric arc furnaces.

8.2.2 The prospects for 1998 are for a slight reduction in imports of hard coal from third countries, by some 3 million tonnes. Spain and Germany expect to increase their imports; Spain is likely to take 2 million tonnes more than in 1997, since stocks are now at more normal levels, while Germany expects to increase imports by nearly 2 million tonnes as it closes some of its own high cost production.

Denmark is likely to reduce hard coal imports in 1998 by some 3 million tonnes (partly displaced by orimulsion) while France will reduce its requirement by 0.6 million tonnes. Portugal also will import less than in 1997 (- 1 million tonnes), dropping its import requirement below 5 million tonnes. Estimates of the reduction in imports to UK were a drop of 1.5 million tonnes (largely the effect of the strength of sterling on the steel industry), but it is still not clear what deal will be agreed between the generators and RJ Budge, so imports may well be below that figure.

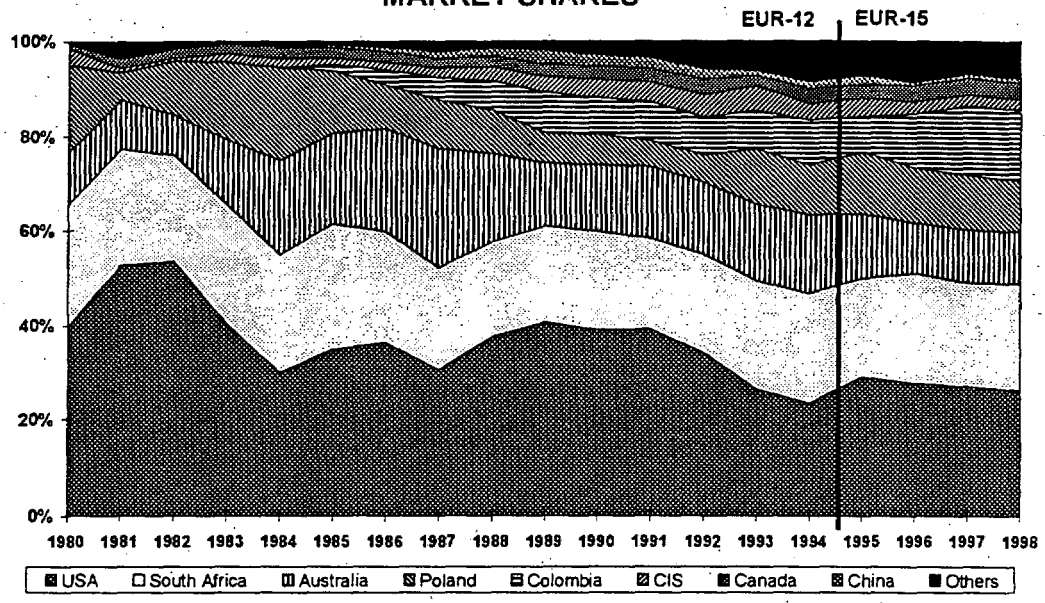
8.2.3 The USA continues to dominate supplies to the European Union (39.3 million tonnes in 1997), and with South Africa (31.8 million tonnes) accounts for almost half of imports in 1997. Colombia has the next position, followed by Australia and Poland with similar levels of supply. The relative positions will not be much changed in 1998, although Australia and Poland may change places.

8.2.4 The source of imports to the European Union in 1997 differed slightly from that in 1996. Imports from Colombia increased by 5 million tonnes (+14%), while because of favourable freight rates Australia was able to increase its share by 1 million tonnes

(+7%) after a difficult year in 1996. The losers were South Africa (-0.7 million tonnes) and Others (-2.3 million tonnes).

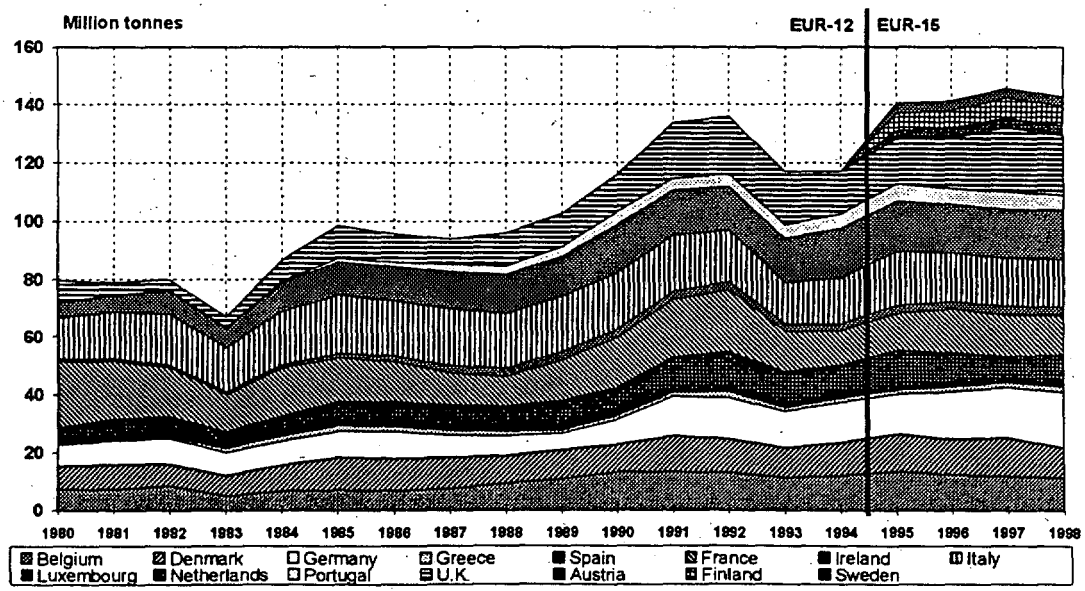
8.2.5 In 1998 it is likely that the US will reduce imports to the European Union, by nearly 2 million tonnes and Poland is expected to reduce its sales to Europe by over 1 million tonnes. Other importers may increase their share of imports by 1 million tonnes.

HARD COAL IMPORTED FROM THIRD COUNTRIES
MARKET SHARES*



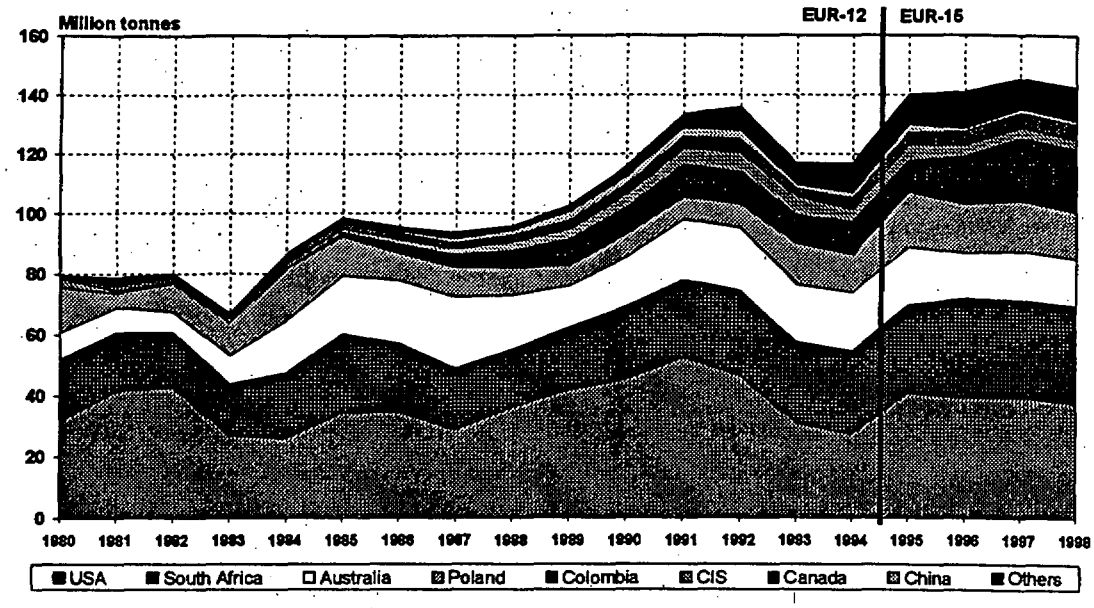
* Including new German Länder from 1991 and EUR-15 from 1994

HARD COAL FROM THIRD COUNTRIES
BY MEMBER STATE*



* Including new German Länder from 1991 and EUR-15 from 1994

HARD COAL IMPORTED FROM THIRD COUNTRIES*



* Including new German Länder from 1991 and EUR-15 from 1994

Intra-Community trade (Tables 19A and 19B, 20A and 20B)

8.3.1 As usual, discrepancies exist between the figures that each country claims to have exported to other Member States, and what Member States report that they have received. Therefore for the purposes of comparison, the figures for imports, which are usually lower, will be taken as the basis for this report.

The Single Market, and the removal of custom checks from 1st January 1993, has created difficulties for Member States trying to determine the volume of coal in intra-Community trade. Distortions can arise as a result of imports to the ports of North West Europe ARA (Amsterdam, Rotterdam, Antwerp) which are then moved on to other countries.

8.3.2 The intra-Community hard coal trade in 1997 appeared to have reduced substantially from 1996 levels of 3.1 million tonnes. 1997 receipts suggest that only 1.9 million tonnes were traded. The estimates for 1998 are for a further reduction to 1.6 million tonnes. This is consistent with the planned reductions in coal production within the Community, particularly in Germany.

8.3.3 Hard coal produced within the Community is technically free to move between Member States. However, national arrangements, consumption and pricing systems still do not favour such movements. Further, the prices producers are paid for their exports are generally comparable to those of deliveries from non-Community countries and, taking account of Community production costs and transport, are not usually profitable. Therefore intra-Community trade is only likely if subsidies are to be receivable from the

importing country, which would allow the price of this Community coal to be aligned with third country imports. UK has been in discussion with Germany and Spain to try and facilitate some shipments of UK coals.

Since 1st January 1991 there have been no intra-Community restrictions on the imports of hard coal originating in third countries which have been put in circulation within the Community.

8.3.4 Intra-community trade in coke has been reducing, from 1.9 million tonnes in 1996 to 1.7 million tonnes in 1997. Forecasts for 1998 indicate intra-Community coke trade of 1.5 million tonnes. A third of this is the surplus of 0.5 mt from Aceralia in Spain (mainly from their newly refurbished Gijon plant) sold to Italy and Germany. Germany's August Thyssen plant is partially closed, and will shut down by 2000. A decision on permission for a replacement is due to be made in the near future.

IX. STOCKS

9.1 Stocks of hard coal increased slightly during 1997 after a period of destocking in 1996. Producers' stocks are expected to have risen by 0.8 million tons to 17.6 million tons, an increase of less than 5%. The changes have been relatively slight, with increases of around 0.3 million tons in both Germany and UK. Stocks in Spain increased slightly, while stocks held by producers in France fell slightly. Germany's producer coal stocks now amount to over 20% of annual production, compared with 10% or less in other Member States.

Stocks at power stations have increased overall by 5% to 53.1 million tons, but there has been heavy stock lifting in both Germany (2.3 million tons) and Spain (2 million tons), compared to very substantial coal stocking at power stations in Denmark (2 million tons) and the UK (5.2 million tons, according to Commission estimates) Except for the stock building in the UK and stock reductions in France, the direction of stock movements was in line with the previous year's expectations.

Total stocks (mines plus power stations) are estimated at 70.9 million tons at the end of 1997, compared with 67.3 million tons at the end of 1996. The most substantial change has been in the UK, where a total of 18.7 million tons are on the ground, an additional 5.5. million tons. This represents more than a third of deliveries to UK power stations in 1997.

Coke stocks at coking plants fell slightly overall during 1997, by 0.4 million tons to 3.4 million tons. This is in line with the improvements in production in the iron and steel industry. The largest change was a reduction of coke stocks of 0.4 million tons in Germany, where coking

plant stocks now stand at 1.1 million tons. Coal stocks at coking plants have dropped by 0.1 million tons to 5.0 million tons. There were only minor changes in Member States.

9.2 It is likely that hard coal stocks held at power plants will fall in 1998. In particular, Denmark and the UK are expected to reduce their high levels of stocks, by 3 million tons and 5 million tons respectively. Spanish producers expect their stock levels to decline to a level slightly below that of 1996, at 0.6 million tons.

9.3 The combined (collieries and utilities) coal stocks at the end of 1997 represent:

- *some 41% of the total hard coal deliveries to power plants during the year (38% in 1996), or nearly 5 months of Community hard coal consumption by the utilities during 1997;*
- *around 26% of the total inland deliveries in the Community during 1997 (nearly 25% in 1996), or some 3 months of total Community hard coal demand;*
- *some 57% of the Community hard coal production during the year (53% in 1994), or nearly 7 months of Community hard coal production, and*
- *some 49% of the hard coal imports to the Community from third countries during 1997 (48% in 1996).*

As last year, around 87% of these stocks are concentrated in five Member States: Germany with some 28% of the total, the United Kingdom now with some 26%, Spain with some 14%, and Denmark and France with 11% and 8% respectively.

X. ENVIRONMENT

10.1 EC Initiatives

10.1.1 During 1997 the European Commission approved a paper on Energy for the Future: Renewable Sources of Energy[1]. According to this documents member states might abstain from taxing energy that has been produced by means of sun, wind, tide, geothermal heat or hydroelectric power, or from biomass, wood or charcoal.

10.1.2 The Commission approved a proposal of directive on energy taxation in 1996 on the taxation of energy products; it is still being discussed within the council.

[1] COM(97) 599 final of 26.11.97

10.1.3 The EU drew up a scheme within a new energy framework programme , the Carnot programme to promote commercially viable clean coal technology. Its objective was to develop co-operation with industrial partners, principally in power generation. The aim was to reduce electricity costs, improve efficiencies and reduce harmful emissions with demonstrated and commercially tested clean coal technologies.

10.2 Kyoto Protocol

The Kyoto Protocol, negotiated in December 1997, set out new commitments on the reduction of greenhouse gases (GHGs) for developed countries (Annex I Parties). There are no such commitments for developing countries.

The Protocol will enter into force 90 days after it has been ratified by 55 Parties, which together account for 55% of the industrialised world's greenhouse gas emissions in 1990. While many countries were happy to ratify the agreement speedily, there was considerable dispute within a number of countries, notably the United States, who have not yet agreed to ratify the Protocol. The US Senate was concerned that major developing countries were excluded from the protocol, a position that they found unacceptable.

After considerable debate, the Annex I Parties agreed to different levels of reductions: 8% for most countries including the EU, 7% for the United States, 6% for Canada, Japan, Hungary and Poland, and 5% for Croatia. Russia and Ukraine aim to stabilise at 1990 levels, while some countries were allowed an increase - Norway (1%), Australia (8%) and Iceland (10%). Any changes in land use and forestry activities since 1990 that would achieve a net reduction would also be included in the equation for national emission targets. Emissions trading has been written in to the Protocol, after considerable negotiations; rules will be discussed in Buenos Aires in 1998.

The targets for Annex I Parties are to be reached over a commitment period between 2008 and 2012. All six greenhouse gases are included, carbon dioxide (which accounts for a large majority of the emissions), methane, nitrous oxide, perfluocarbons, hydrofluocarbons and sulphur hexafluoride.

The Protocol contains a number of ways in which flexibility can be introduced, and any country over-achieving in one time period can 'bank' its extra achievement for the next phase. There is scope for combining groups of Annex I Parties to achieve a common target, even though some of the individual members may not achieve their allotted reductions; the European Union is one such organisation (but would be held responsible for non-compliance).

Non-Annex I Parties are expected to fulfil their part in efforts to reduce the emissions of greenhouse gases. However no fixed limits have been imposed.

The Clean Development Mechanism will credit developed countries with credits against their domestic emissions targets if they assist developing countries to reduce GHGs by investment in environmentally friendly technologies in these countries.

10.3 Carbon Taxes

10.3.1 A few EC countries have imposed carbon/energy taxes, namely Denmark, Finland, the Netherlands and Sweden. The comments below highlight recent additions or changes.

10.3.2 In 1996 Denmark introduced a more comprehensive tax scheme, to replace its energy tax on households (1977) and its CO_2 tax (1993); the new scheme consists of 3 rates, on heavy industry, light industry and on space heating. Leaded and unleaded gasoline is not subject to the carbon tax since it is alreadily heavily taxed; diesel is taxable, but total taxes still leave a price lower than that for gasoline. The rates of tax are on a sliding scale, increasing between 1996 and 2000. Companies entering a voluntary agreement to increase energy efficiency, which is then successfully implemented, will be subject to a much lower level of tax. The table below shows the range of taxes (in Danish Krone) per tonne of CO_2.

	1996	2000	Rate after efficiency schemes
Heavy industry *	5 DKK	25 DKK (3.7 US$)	3 DKK (in 2000)
Light industry	50 DKK	90 DKK (13.4 US$)	68 DKK (in 2000)
Space heating	200 DKK	600 DKK (89 US$)	n/a

Notes: * or industry facing competition

10.3.3 In 1997 Finland introduced an electricity consumption tax in addition to its existing carbon taxes. After the first 3 months of operation, a differential rate was introduced from April 1997, so that industry pays 0.0145 Mk/kwh, while other customers are charged 0.033 Mk/kwh. Initially all consumers had been charged 0.024 Mk/kwh.

XI. COUNTRY DETAILS

11.1 Belgium

11.1.1 Belgium's gross inland consumption of energy looked unlikely to show much growth during the year. Coal's share of consumption was likely to have reduced by some 10%, while gas also lost some 6% compared with the previous year. Electricity consumption in the first quarter of 1997 was slightly lower than in 1996, but increased later in the

year. Nuclear production increased its contribution, partly because of the start-up at the end of 1996 of the Chooz nuclear power station on the French border, in which Electrabel has a 25% share. The additional nuclear output displaced generation from thermal power stations.

11.1.2 Hard coal deliveries in Belgium fell by nearly 330,000 tonnes in 1997 to 11.6 million tonnes. Coking coal deliveries to coking plants dropped by 436,000 tonnes (-8%) and coal deliveries to the iron and steel industry reduced by just over 100,000 tonnes (-9%), while supplies to other industries increased by 163,000 tonnes (+36%).

It is expected that inland coal deliveries will fall by 448,000 tonnes in 1998, most of this reduction will be in the coking market and for iron and steel. In 1998 coke production is expected to fall by 600,000 tonnes (-17%). These reductions in demand in the steel industry are a result of the closure of one of the country's steel plants; some switching to electric arc furnaces may also be involved. Further steel plants are under threat because of their costs.

11.1.3 Coal supply to Belgium is predominantly from imports, with small quantities of recoveries and of intra-Community deliveries. In 1997 deliveries totalled 12.6 million tonnes, of which 11.9 million tonnes was from imports. They were sourced predominantly from USA (4.5 million tonnes) and South Africa (almost 3.8 million tonnes), and a substantial tonnage (2.2 million tonnes) from Australia. In 1998 imports are expected to be slightly reduced (-0.4 million tonnes) although the spread of sources will remain similar to 1997. Belgium also imports small quantities (0.3 million tonnes) of lignite which go to other markets.

11.1.4 There are no plans to build further coal-fired power generation plant, but it has not been ruled out in the Five Year Plan; the price is not competitive at present, and the image of coal is poor. There are many schemes in Belgium to develop the use of gas for power generation, often in CHP plant. Two CCGT schemes are under construction at Bruges and Ghent.

11.2 Denmark

11.2.1 Gross inland energy consumption is likely to have fallen by up to 20% in 1997. The reduction was mainly because of the cut in electricity generation from coal as a result of high levels of hydro availability in the Nordic area. There was a reduction of around a quarter in total consumption of both coal and oil, offset by a slight (2%) increase in the use of gas. About 90% of coal consumption is in thermal power generation.

11.2.2 Hard coal deliveries in 1997 amounted to 13.5 million tonnes, compared to 13.1 million tonnes in 1996. Power station deliveries were 13.0 million tonnes, some 0.4 million tonnes higher than the previous year. Small quantities were also delivered to the iron and steel industry, other industries and the domestic market. Deliveries of coke were only 30,000 tonnes, to other industries. At the end of the year stockpiles were high

since electricity export demand had been weak. Stocks at power stations were 7.7 million tonnes, representing some 60% of an average year's coal burn.

It is expected that hard coal deliveries in 1998 will fall to 10.5 million tonnes, a fall of 22%. Reductions in power station deliveries account for most of the fall. Some reduction, perhaps 1.5-2 million tonnes, will be the result of purchases of orimulsion for use on a trial basis in Denmark. Coke deliveries are expected to fall by 5,000 tonnes to 25,000 tonnes.

11.2.3 Coal supply is entirely from third country imports. Over three quarters of the 13.5 million tonnes of deliveries came from South Africa (30%), Poland (25%) and Colombia (22%), while 12.5% came from Australia. It is likely that a similar pattern of deliveries will pertain in 1998.

11.2.4 In April 1997 the Danish Government decided not to licence any further development of coal-fired power generation; the 400 MW station at Nordjylland, due to come on stream in 1998, will be the last coal-fired station to be built. The ban was imposed in line with the European Union target to reduce greenhouse gases throughout the EU to 15% below 1990 levels by 2010; Denmark's contribution to the achievement of this overall level is a 25% reduction. The ban includes any proposal which has partial coal fuelling, and the Avedøre 2 biomass project has been re-configured to replace the planned 25% coal element with other fuels. It was not clear if orimulsion would be permitted, or included in this ban. Coal accounts for some 80% of Danish power generation fuelling. In addition to generation for its own use, Denmark is a substantial exporter of electricity, primarily to other Scandinavian countries, and provides an essential supply for them when hydroelectric reservoir levels are low. However electricity Pool pricing is an issue, particularly when substantial stocks of coal have to be carried by generators.

11.3 Germany

11.3.1 Gross inland energy consumption in 1997 appeared to be some 2% lower than in 1996. Coal consumption was likely to have reduced by 8%, while lignite consumption fell by 5%. Oil consumption increased by 1%, while natural gas consumption was expected to have fallen by as much as 9%, because of the relatively mild winter in early 1997. Nuclear energy performed well, producing 12% more than in 1996. Hydro power was low, and resulted in an increase in electricity imports of some 40%.

Electricity generation in Germany in 1997 was dominated by its nuclear sector, which performed extremely well during the year, reducing coal and lignite burn in German power stations. As elsewhere in Europe, total electricity generation was likely to be less than in the previous year, largely because of the cold winter experienced in 1996. During that year, barge transport had become impossible over much of Germany for some weeks as the major rivers froze over, thus reducing coal transportation and use. However other features had an effect on the normal pattern of generation in 1997, namely the heavy flooding experienced late in the year. This made barge shipments to southern Germany impossible for a period of about a month.

11.3.2 Hard coal demand in 1997 was 69.1 million tonnes, compared with 71.3 million tonnes in 1996. The main change was the reduction of 2.1 million tonnes (-4%) in deliveries to power stations, which amounted to 45.4 million tonnes (nearly two thirds of total deliveries). Deliveries to coking plants were little changed at 13.1 million tonnes. Deliveries of coking coal to the iron and steel increased by 27% (0.4 million tonnes) as a result of the increasing strength of that sector; steel production rose by nearly 13% in 1997, as a result of restocking, the boom in the German automotive industry and increased exports. Deliveries to other industry fell by 0.3 million tonnes to 5.7 million tonnes; this includes the increased deliveries of 0.4 million tonnes to industry power stations. Inland deliveries of coke amounted to almost 15 million tonnes, of which 12.7 million tonnes went to the steel industry. This was an increase of 0.9 million tonnes or 8%. There were falls in deliveries to other industries and the domestic sector.

In 1998 inland deliveries are expected to be 69.2 million tonnes, of which 45.4 million tonnes are expected to go to power stations. The main change is likely to be a 5% increase in deliveries to the iron and steel industry, which is expected to continue its increase in steel production. Coke deliveries will drop slightly across the board. In 1998 3 coke oven batteries at the Thyssen Bruckhausen plant will close. Replacement coke will be supplied from RAG domestic supplies; any gap is likely to be filled by imported Polish coke.

11.3.3 Hard coal production in Germany declined by 1.2 million tons in 1997. The bulk of this 2.2% decrease was in the Aachen coalfield, which closed during the course of the year. Imports from third countries increased by 1.1 million tonnes (7%) to 17.5 million tonnes. After reductions in recoveries and receipts from ECSC countries, total availabilities were 70.2 million tonnes, a reduction of 0.8 million tonnes.

By the year end, all agreements were in place (Ruhrkohle, Federal Government, North Rhine-Westphalia (NRW) and Saarland) to combine all parts of the hard coal mining industry within one company, to be called Deutsche Steinkohle AG.

During 1997 a number of collieries were closed or merged as part of the agreement on State Aids. The Sophia Jacoba anthracite mine, the last remaining mine in Aachen, closed in Spring 1997. A further closure resulted from the merger in July 1997 of the Ewald/Schlägel and Hugo/Consolidation mines in the Ruhr.

In 1998, as a result of the agreed streamlining of the German coal industry and the reduction of State Aids, hard coal production is expected to decrease by just over 2.0 million tons, predominantly in the Ruhr coalfield. Exceptionally, production at Ibbenburen is expected to increase slightly (50,000 tons or 3%). Imports will increase by 1.8 million tonnes to 17.5 million tonnes.

11.3.4 The subsidies being paid to the German coal industry had increased to levels that were unacceptable to the German Federal budget. Mining costs of German hard coal in 1996 were some DM290 /tce (US$171 /tce), compared with a free German border price of

around DM75 /tce (US$ 44 /tce). Subsidies to the industry over the last ten years have averaged DM10.5 billion (US$ 6.2 billion) per annum, enabling domestic coal to hold its own in the market.

On 13 March 1997, the Federal Government finally agreed with the mining sector and the Mining and Energy Workers' Union on a package of aid to be given to hard coal. This will replace the aid to electricity coal, and the 'Hüttenvertrag' agreement with the iron and steel industry. (Coal and lignite in the heating market are not eligible for any subsidy, and have to survive or fall on their commercial viability.) The financial arrangements will run until 2005, and have been agreed with the governments of the two mining states North Rhine-Westphalia and Saarland. The result will be to reduce federal and state aid by nearly half to DM5.5 billion (US$3.2 billion) in 2005. From 1998 all financial aid from the Federal government for steam coal, coking coal and future mine closures will be paid under one heading.

A condition of part of the aid is that Ruhrkohle should take over the whole of the coal industry, including Saarbergwerke and Ibbenburen. The last remaining colliery in Aachen, the Sophia Jacoba Mine finally closed in spring 1997, although it will continue to market the coal stocks on the surface until these are cleared. A further closure will result from the merger planned for July 1997 of the Ewald/Schlägel and Hugo/Consolidation mines in the Ruhr. With the loss from these collieries of some 3 Mtpa capacity, other collieries will need to increase their output during the year to achieve the anticipated production for 1997 unless there are substantial stocks at the merging collieries.

It is intended that the hard coal industry should run under a single organisation, enabling further rationalisation to be carried out; three more pits are likely to close by 2000, and another 4 or 5 by 2005, reducing the total number of deep mines to 10 or 11 at that time. The output expected from these remaining mines may be around 30 Mtpa compared to 50 Mtpa at present. Over the next 8 years direct job losses are expected to total about 48,000 jobs. Forecasters suggest that the total coal needs of Germany will remain around current levels, at 60 Mtpa. This indicates that imports of some 30 Mtpa will be needed by 2005.

11.3.5 The package agreed with the Government to establish a new schedule of state aids for the coal industry amounts to some 69 billion Deutschmarks in the period 1997 to 2005. It includes commitments for interest bearing payments, to be made from the year 2006. The aids are subject to the transfer of Saarland's 26% share in Saarbergwerke AG and of the Federal Government's 74% share to Ruhrkohle AG. The coal mining division of Ruhrkohle and its new assets should be transferred into a new company Deutsche Steinkohle AG, a subsidiary of Ruhrkohle AG. This package of aids will have to be examined by the Commission.

PLANNED GERMAN HARD COAL SUBSIDIES FROM 1997 TO 2005
(in billion Deutschmarks)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Federal funds [1]	8.05	7.75	7.30	7.00	6.3	5.7	5.0	4.4	3.8	55.3
Federal for Saarland [2]		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.6
Mining [3]					0.2	0.2	0.2	0.2	0.2	1.0
North Rhine-Westphalia	0.86	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8.86
Federal		0.3	0.3	0.3	0.15	0.15	0.15	0.15	0.15	1.65
NRW, additional					0.15	0.15	0.15	0.15	0.15	0.75
Total aid	8.91	9.25	8.8	8.5	8.0	7.4	6.7	6.1	5.5	69.16

Notes: 1. Some funds are conditional on Ruhrkohle AG taking over the federal share of Saarbergwerke AG

2. Saarland transfers its 26% share in Saarbergwerke AG to Ruhrkohle AG
3. To be provided from profits in Ruhrkohle AG's non-mining activities

11.3.6 The brown coal industry is predominantly tied to power generation, and in 1997 production declined by some 12 million tons (-6.2%); the majority of this reduction was from the Lausitz coalfield. Rheinland also reduced output, as did Mitteldeutschland. Lignite power generation is coming under pressure from gas generation projects, particularly in the former East Germany where the local economy is weak.

In 1998 the decline in lignite production is expected to be less marked (only 0.8 million tons or 4.2%), most of it at Lausitz. Production at Helmstedt is creeping up year by year.

Looking ahead, two opencast mines in the Lausitz area are scheduled to cease production by the year 2000. On the other hand, a number of power plants which are scheduled for closure on environmental grounds will be replaced by up to 4 new units, three of which are already under construction. In the Mitteldeutschland area, where the old power stations cannot be retrofitted they are being replaced by modern blocks; in total a further 2900 MW of lignite fired capacity will be available in the long term. Permission is still awaited for the huge Garzweiler 2 power project, to burn lignite and planned to be commissioned by 2006. Other smaller refurbishments or replacements are being carried out.

Government aid to the East German lignite mining industry is to be cut. The Federal Government has been providing 75% of the total aid for restructuring (DM 1.5 bn to date), which is essential to update lignite mining and power generation to modern standards. The restructuring is due to be completed by 2002; this withdrawal of aid support may force reductions in manpower.

11.3.7 Germany increased its imports of hard coal by 1.1 million tonnes to 17.5 million tonnes in 1997. South Africa raised its delivered tonnage by that amount providing 37%

of total import requirements. The US and Colombia also gained additional tonnages at the expense of other suppliers (each provides 14% of the total), while Polish imports remained at similar tonnages (20% of total).

In 1998, imports will again increase, by 10% to 19.3 million tonnes. There are likely to be additional tonnages from all the regular major import suppliers.

11.3.8 In 1997 the number of personnel employed underground reduced by 8% (4,700) to 50,500 workers. A similar percentage reduction is expected in 1998 to bring employment underground to 47,700 persons. Productivity in German coal mines was 780 kg pre manhour, an increase of 22 kg from the previous year. Commission estimates suggest that productivity should reach 793 kg/manhour in 1998.

11.3.9 In May 1997 the UK supported a claim to the European Commission by the Welsh company Celtic Energy, complaining about the anti-competitive effects of alleged unfair subsidy in the anthracite market. The Commission have investigated the complaint, but have not yet made public their findings. However Celtic Energy withdrew their complaint in March 1998 following a settlement with Preussag Anthrazit.

11.4 Spain

11.4.1 Gross inland energy consumption was likely to have increased by at least 8% in 1997. There were increases in nearly all sources of energy resulting from continuing strong industrial growth. The exceptions were the nuclear industry which had an average level of production, and hydro where availability was reduced because of low rainfall in the winter months. In particular hard coal consumption was likely to have increased by over 25% based on reduction of stocks, although lignite consumption reduced by about half that percentage. Natural gas was showing an increase of over 30%.

11.4.2 Total inland hard coal deliveries in Spain amounted to 28.4 million tonnes in 1997, an increase of 5% on 1996. Almost all the additional coal went to power stations, who took 84% of total hard coal deliveries, some 24 million tonnes. About 3.5 million tonnes went to the iron and steel industry. Some 30,000 tonnes of coke were delivered for use in other industries. By the end of 1997 coal stocks had reduced to 10.2 million tonnes, from 12 million tonnes at the beginning of the year. Power station stocks had reduced 2 million tonnes to 9.3 million tonnes (nearly 40% of annual consumption) while producers stocks had increased slightly to 0.9 million tonnes. Coke demand, from the iron and steel industry, fell by 175,000 tonnes to just over 2.5 million tonnes (-6%) in 1997.

Deliveries in 1998 were expected to be similar to 1997, for both coal and coke. Stocks were likely to remain at 1997 levels, although slightly less coal would be at producers sites.

11.4.3 Production of hard coal (including subbituminous) in Spain in 1997 was likely to have reduced slightly, to 17.5 million tonnes. However imports were likely to be substantially

reduced because of the higher levels of hydro power available after the wet winter. Production of coke was little changed at 2.4 million tonnes, although imports almost halved to reduce total availability by 0.2 million tonnes.

In 1998 hard coal production was expected to decrease by 0.4 million tonnes, from Asturias the Bierzo-Villablino and from Aragon-Cataluña. Third country imports are likely to be 23% higher, at 10.9 million tonnes, after the cutbacks in 1997 which resulted from high hydro levels. Coke production and imports are expected to be little changed.

11.4.4 After eight months of negotiations, Spain's industry minister and the mining unions signed a plan for the future of the coal industry that would guarantee some indigenous production until 2005, albeit at a reduced production level and with a smaller workforce. Production was plannded to reduce by 30% to 13.6 million tonnes by that time. Much of the reduction in manpower levels was expected to be achieved by voluntary early retirement.

The major proportion of job losses was likely to be from Hunosa and Minas de Figaredo in the Asturias coalfield, and investments totalling Pta 536 billion (US$ 3.5 billion) have been planned to bring new industry, infrastructure and training schemes to the mining area. From 1998 - 2001 the state-owned Hunosa would need to close some collieries and its opencast mines. In Leon the new mine being constructed by Hullera Vasco Leonesa should open in 1999. Negotiations between the various coal companies were completed by the end of 1997, but were not acceptable to the miners from Hunosa and Minas de Figaredo in Asturias, who went on strike for much of the month of January. A new agreement was hammered out, slowing closures and job losses. The result was acceptable to the miners, but exceeds the production and manpower levels requested by the Commission. The plan indicates a reduction in the number of employees to 6,500 in these companies, by 2001. The revised plan does not set a level for production, except to say that it will not exceed 1.8 million tonnes. The Commission had rejected the initial Spanish proposal to reduce annual output from 2.5 million tonnes to 2.1 million tonnes; it called for a further reduction to 1.5 million tonnes because of Spain's failure in implementing the previous four-year plan ending in 1997. The plan has been finally authorized by the Commission.

Most of the current tariff-based aid (Pta 65 bn or US$454m) goes to finance coal companies operating losses. From 1998, the expected annual state aid of Pta 117 bn (ECU 698.2m) will be paid from the state budget, after a 4.2% tax on the electricity sales.

11.4.5 In 1997 two thirds of hard coal imports to Spain were from the USA and South Africa. USA's 3.5 million tonnes covered nearly 40% of their requirements; South Africa lost tonnage in the cuts from 1996, but still provided 2.5 million tonnes. In 1998 South Africa is expected to regain much of that lost tonnage, shipping 4.1 million tonnes to Spain, and overtaking supplies from USA of 3.6 million tonnes.

11.4.6 Lignite production (excluding black lignite) in 1997 reduced by 0.2 million tonnes to 9.4 million tonnes. All the production goes to power stations. Little change is expected in 1998. In the longer term, lignite production will reduce as reserves are depleted. It is hoped that reserves life will coincide with the life of the power plant.

11.4.7 It was expected that during 1997 the average size of the workforce underground would reduce by 1,100 to 22,500 persons. In 1998 the target was a reduction of 2,100 to 20,400. These estimates were made before the revision to the mining plan. Productivity underground was expected to be 314 kg per manhour, and to rise to 338 kg per manhour in 1998. The 1997 figure was about 40% of the Community average productivity. Investment in coal extraction and preparation was cut substantially (15%) in 1997 to 144.3 million Ecu. In 1996 it had been at a rate which was twice the Community average if measured in terms of Ecu per ton of production. By 1998 investment is expected to reduce by a further 40% when it will be at a rate only 20% higher than the average Community level.

11.4.8 Elcogas's experimental coal gasification electricity generation plant at Puertollano has been given additional support from government funds reserved to pay to utilities 1Pta for each Kwh produced from Community Coal. This is in addition to the payment of Pta42.5 billion in stranded costs resulting from investments made before the transition period to full liberalisation in 1998-2008. The financial problems arose as a result of the restructuring of the electricity market, and the elimination of subsidies through the pricing regime.

11.4.9 The UK had submitted a complaint to the European Commission on the grounds of anti-competitive action by Spain. UK coals were kept out of the Spanish market because of their sulphur content, despite levels that are lower than some of the protected Spanish production. Imported coal was expected not to exceed 1% sulphur. In the meantime, Spain has removed all restrictions to trade of community coal based on sulphur content.

11.5 France

11.5.1 Gross energy consumption in France was likely to be little changed from 1996 consumption. In the first quarter of 1997 electricity consumption was down by over 5% because of the milder weather compared with early 1996. Overall electricity consumption was expected to be less than in 1996. Coal use in the iron and steel industry was higher as a result of improved economic activity, but early in the year it had lost some share of the electricity market compared to 1996; the consumption of lignite was up by about 25% on 1996 levels.

Early in the year there was a two month delay in the start-up of the second unit at Chooz nuclear power station which helped maintain the demand for coal. By October 1997 the levels of water for hydro power were low, and temperatures lower than usual. In addition there were outages at two nuclear plants, so all coal fired generator sets were brought into service.

11.5.2 Hard coal deliveries in France were 21.7 million tonnes in 1997, a drop of 1.7 million tonnes (-7%) compared with 1996. The reductions of 2 million tonnes (-32%) in power station deliveries was compensated by an increase of 0.5 million tonnes (+20%) in deliveries to the iron and steel sector. Unusually, in France the coking market is the dominant sector in coal use, with about a third of the market, while power generation uses around 20%. Coke deliveries in 1997 were similar to the previous year, at about 5.1 million tonnes, mostly for the iron and steel industry.

In 1998 deliveries are likely to reduce by some 4 million tonnes, equivalent to 20% of the market in 1997. Power stations will reduce deliveries by 2.1 million tonnes, and coking plants by 1.6 million tonnes. Power stations stocks were very high at the end of 1997, with sufficient fuel on the ground to last for more than a year of normal demand. Coke consumption is expected to increase by 1 million tonnes because of higher deliveries to the iron and steel industry.

11.5.3 Production of hard coal in 1997 fell to 6 million tonnes in 1997, a reduction of 18%, as the streamlining of capacity in the French coal industry proceeds. In 1997 three mines closed; La Mure in Isère, Carmaux in Tarn and Forbach in the Moselle Valley all finished production reducing the total workforce to some 13,700 employees at the end of the year. The number of underground workers averaged only 5,000 during the year. Most of the job losses were achieved through early retirement. There are no plans for closures in 1998, but manpower cuts will reduce average underground employment to 4,500. Total availability of hard coal in 1997 was 21.1 million tonnes. In addition to 14.3 million tonnes of imports from non-Community countries, some quantities were available from recoveries or intra-community trade.

Hard coal production in 1998 will reduce to 5.4 million tonnes, having lost the benefit of output from the three mines closed in 1997. Total availability will fall to 20 million tonnes, with 0.5 million tonnes reduction in imports. Coke production is likely to remain at current levels.

11.5.4 Hard coal imports in 1997 were supplied predominantly from the USA, Australia, South Africa and Colombia, who supplied 80% of requirements. In the previous year the USA had dominated supplies, and Poland had had a more significant share. For 1998 the balance is likely to be similar to 1997.

11.5.5 Lignite production in France increased in 1997, from 0.8 million tonnes to 1.1 million tonnes. About 40% of production is used in power generation; the rest goes to other markets. In 1998 production is likely to reduce to 1.0 million tonnes.

11.5.6 Charbonnages de France reported substantial losses in 1997; they would have been higher but for adjustments to the allocation of State Aids from the government. These subsidies have now been halted, so more job losses may follow.

11.5.7 During 1998 a further two nuclear units will come on stream at Civaux; 600 MW should start early in the year, with the second 600 MW in the summer. The experimental Superphenix generator is to be closed, following the re-starting of the earlier Phenix unit.

11.6 Greece

11.6.1 Gross inland consumption was likely to have increased by a little more than 1% in 1997, most of it the result of oil consumption (up 6%). The early part of the year was very mild, particularly by comparison with 1996. Lignite consumption was relatively steady, while the small amount of coal consumption was likely to have dropped by up to 40%. Electricity growth started to increase in the second quarter, partly helped by electricity imports. 75% of Greek electricity is fuelled by lignite; oil and hydro provide the remainder in more or less equal shares.

11.6.2 Hard coal deliveries were 1.8 million tonnes in 1997, compared to 1.5 million tonnes in 1996. Most of the consumption (over 80%) is by other industries; some coal goes to power generation, mostly as a sweetener for some lignite power stations, and a little goes to the iron and steel industry. For 1998 an additional 0.1 million tonnes will go to other industry.

11.6.3 Supplies of hard coal are provided by imports, some 1.8 million tonnes in 1997. South Africa supplied nearly half of the requirement.

11.6.4 Lignite production was 60.1 million tonnes in 1997, marginally more than in 1996 with additional supplies from the Ptolemais area. It is likely that production from Ptolemais will increase by a further 2.1 million tonnes in 1998, bringing total lignite production to 40.1 million tonnes, an increase of over 3%.

98% of lignite production goes direct to power stations, small quantities go to other markets or are converted to briquettes.

11.6.5 Electricity growth has been rising at an average of 4% per year recently. The Greek Public Power Corporation (PPC) is planning to expand its capacity by some 36% (3350 MW) over the next 6 - 7 years. This expansion will be fuelled mainly by lignite, hydro and natural gas. The plans include 920 MW gas-fired generation already under construction and due to come on line in 1998 in Piraeus and Lavrion (Attica). It is possible that the plans will include a 600 MW hard coal fired plant at Aliveri (Evia), depending on relative costs.

Some lignite stations already burn substantial quantities of imported steam coal to improve the efficiency of the plant. It is likely that environmental controls (EU directives) may oblige them to increase the proportion of imported coal.

11.7 Ireland

11.7.1 Ireland has been experiencing strong growth, and this is reflected in its gross energy consumption, which is likely to have increased by some 4% in 1997. Oil use is likely to have increased by some 8%, and natural gas by 1%. Coal and peat use are likely to have reduced by 1 - 2% in 1997.

11.7.2 Deliveries of hard coal in 1997 were 3.2 million tonnes, almost 80% of which was for power generation. This was an increase of 14%, which is unlikely to be sustained in 1998, when deliveries are expected to fall by 8% to 2.9 million tonnes.

11.7.3 Ireland has a very small hard coal industry, amounting to some 2,000 tonnes. Other than this, supplies of hard coal are imported; in 1997 over half of the 3.2 million tonnes came from Columbia, while the USA filled much of the remaining requirement. The situation is likely to be similar in 1998, with total imports of 2.9 million tonnes.

11.7.4 Peat production in 1997 was 5.1 million tonnes. Some 3.1 million tonnes went to power generation, and 1.4 million tonnes were for other uses. About 0.5 million tonnes went to briquetting plants, to be used in the domestic market. The peat harvest in the autumn of 1997 was reported to have been halvedby problems from heavy rain. Production in 1998 is likely to fall to 4.9 million tonnes, with a slight reduction in both main markets.

11.7.5 A 120 MW peat-fired power station (christened Europeat) was approved for construction as an IPP project in Co. Offaly. It will entail the development of additional peat bogs to supply 1 million tonnes a year for the plant, helping to improve employment in the area; 450 people will be needed for the peat harvesting, and 50 for power station operation.

11.7.6 The Irish power market will open to competition in 1999. Oil is likely to be the first to be driven off the merit order, but if a power interconnector is built to the UK, local coal and peat generation could lose market share.

11.8 Italy

11.8.1 Italy's gross inland consumption is likely to have fallen slightly in 1997 (about 1%); natural gas and hydro use have increased slightly. Hard coal use is likely to have dropped by 11%, while the very small element of lignite also reduced. Even oil, resilient in so many other countries, is likely to have reduced consumption by some 3% because of its substantial power station element. However electricity generation appears to have increased by some 2% with the help of the good hydro supplies (up 10% on 1996 levels).

Coal is thought to be under-utilised in the the National Energy Plan. Italy has a powerful environmental lobby, and a strong oil and gas lobby, and coal has been squeezed

between these. For instance, over a quarter of total electricity generation continues to be fired by oil.

11.8.2 Hard coal deliveries in Italy amounted to some 16.9 million tonnes in 1997, up 0.6 million tonnes on 1996. Just under half (8.0 million tonnes) went to power stations, and the remainder to coking (7.0 million tonnes) and the iron and steel industry (1.3 million tonnes). A very small amount of indigenous lignite goes to power generation. Coke deliveries amounted to 5.4 million tonnes, most of which went to the steel industry.

No forecasts had been made for 1998. However coking coal demand is likely to reduce in 1998. The closure of Riva's Acc. di Cornigliano plant in Genoa will eliminate consumption of some 0.9 million tonnes of coking coal; this will be partly compensated by the opening of a new steel plant at Trieste with a steel capacity of 0.6 mtpa, requiring nearly 0.3 million tonnes of coking coal for its operation.

11.8.3 Italy's supply of hard coal is from imports which amounted to 16.3 million tonnes in 1997, 1.5% less (-0.2 million tonnes) than in 1996. Over 40% is sourced from the US, and 23% from South Africa; Australia, Canada and Colombia also provide substantial tonnages.

11.8.4 The Sulcis mine in Sardinia had been a producer of sub-bituminous coal for the island before its closure in 1992. It has recently been put into the hands of a consortium who are planning to reopen the mine, using the coal to provide 50% of the fuelling for a combined cycle power generation plant. They are trying to resolve the employment and social issues, and will employ former Carbosulcis employees. It is hoped to start re-development in 1998.

11.8.5 The new 4 * 640 MW coal-fired power station at Brindisi South is due to commence operation in 1998, but has experienced many delays. It is expected to burn 2,000 tonnes of coal per year, but will be subject to an environmental impact report. As a result of the delays ENEL did not go ahead with some of its proposed US imports in 1997, and chose to reduce its coal stocks. When Brindisi South is fully operational, the Brindisi North power station will close. There have been suggestions that Brindisi South will be used to try out orimulsion, reducing the possible coal burn there.

11.9 Luxembourg

11.9.1 Gross inland energy consumption in Luxembourg was likely to have remained steady in 1997. Crude oil and gas consumption have both increased by about 4%, while coal consumption will have fallen by over 20%. Electricity consumption appears to have remained steady, but the contribution from hydro is likely to have increased.

11.9.2 Deliveries of hard coal in 1997 were 199,000 tonnes, a reduction of 18% on the previous year. 60% was for other industries, and 40% for the iron and steel industry, which showed a reduction of 25% on the 1996 level. Coke deliveries, all to the steel

industry, amounted to 214,000 tonnes, 47% of the previous year's deliveries because of conversion to electric arc furnaces.

Deliveries of hard coal were expected to fall further in 1998 to 165,000 tonnes. All the reduction will be from the iron and steel sector, where deliveries are expected to fall to 45,000 tonnes. Coke deliveries were expected to cease in 1998. In the steel industry, conversion to electric arc furnaces has phased out the demand for coking coal; the last blast furnace was closed in August 1997.

11.9.3 Luxembourg has no indigenous coal or lignite production. All coal is imported, either from within the Community (mostly Germany) or from third countries. In 1997 imports were equally divided between ECSC and external suppliers. South Africa has been the sole external supplier, while the majority of intra-Community trade is from Germany. Very small quantities of lignite are imported for other markets, while small quantities of briquettes are imported for domestic heating.

11.9.4 Because of its special position, Luxembourg has been allowed a 2 year extension in implementation of competition in the electricity industry, to February 2001. The country imports the bulk of its electricity demand, but through two unconnected grids, from Belgium and from Germany. There is also a small local grid. In order to implement the TPA regulations, a new 400 kV interconnection needs to be installed, which, for technical reasons, will be delayed until after 2000.

11.9.5 There are proposals to develop a large scale independent generation project outside Luxembourg City. Tenders were being sought by the end of 1997 for a build-own-operate (BOO) steam gas turbine of 250-350 MW capacity.

11.10 Netherlands

11.10.1 Gross inland energy consumption was expected to remain unchanged in 1997. Coal consumption was likely to have increased by around 18%, and oil consumption may have increased by some 7%. Consumption of gas, on the other hand, was likely to have reduced by about 7%. Nuclear production was badly hit, by a simultaneous outage and closure, and no nuclear power was generated for about 4 months. Total nuclear consumption is likely to have been less than half the normal level, and electricity imports increased to bridge the gap.

11.10.2 Deliveries of hard coal were 14.2 million tonnes in 1997, slightly less than in the previous year. Over 60% of this was for power stations, nearly 30% for coking and and most of the rest, some 7%, to the iron and steel industry. Deliveries of hard coal in 1998 are expected to be very similar to those in 1997. Deliveries of coke were 2.3 million tonnes, over 90% of which was for the steel industry. There was very little difference in coke deliveries year on year. Small quantities of lignite were imported and used for briquetting and other uses.

11.10.3 The Netherlands has no domestic coal industry. All coal is imported, almost all of it from outside the Community. The USA, Columbia and South Africa share 70% of import volumes, and a variety of other countries fill the rest of the requirement. This pattern is fairly consistent at present. Intra-community supplies of 0.2 million tonnes come from Germany and Belgium.

11.10.4 Hoogovens have been testing steel making with higher volumes of PCI. Early in 1997 they were consistently achieving 210 kg/thm; they have been testing up to 250 kg/thm, to reduce their coking coal requirement.

11.10.5 The Dodewaard nuclear power station stopped operations at the end of March 1997, closing after 28 years of operation. The power station was not competitive, and there was no government support to maintain its operation. Decommissioning is planned to take place over a period of 40 years.

11.10.6 The Dutch government has rejected a proposal for subsidies to convert existing coal-fired power plant to gas, in order to reduce CO_2 emissions. The existing plant has 17 years of life remaining, and conversion to gas would reduce CO_2 emissions by 660,000 tonnes annually. However the efficiency of the plant would still only be 39%; the government has said the conversion would be a matter for the generators.

11.10.7 The electricity industry in the Netherlands has been structured in 4 regional generating companies, with SEP, the planning organisation, to co-ordinate planning. A merger of the 4 companies has been proposed, to be called GBP, and SEP should be absorbed into the company. GKE would remain as fuel buyer for the combined company. This forms part of the restructuring proposed in advance of the liberalisation of the electricity industry. Liberalisation is proposed in 3 phases, firstly industrial customers, then medium sized enterprises, followed by domestic users in 10 years time.

11.11 Austria

11.11.1 The gross inland energy consumption in Austria was expected to be little changed in 1997, largely because of the lower demand in the first quarter, the result of the milder winter. Coal burn (around 12% of gross inland consumption) was likely to have reduced by some 20%. Lignite consumption is very small, and was unlikely to have changed much. Oil use was likely to have increased by up to 5%, but natural gas consumption was likely to have declined slightly; its use in generation was down by over 35%. Hydroelectric power benefitted from good water flows and was producing up to 20% more than in 1996, while exports had increased by over 20%, compared with a reduction in total imports of up to 15%.

11.11.2 Recent statistics for coal or future estimates are not available to the Commission from Austria, so comments here are based on Commission estimates. Internal deliveries of coal are likely to have been about 3.4 million tonnes, of which about one third goes to power generation and two thirds to coking plants; a small amount goes to other

industry (predominantly non-metallic minerals). In 1998 the amount of coal to the coking market is likely to fall by about 0.2 million tonnes to around 1.7 million tonnes as coke production capacity is reduced.

Coke deliveries amount to a little over 2 million tonnes. Around 70% goes to the steel industry, and the remainder to other industry and the domestic sector.

Lignite production in Austria is just over 1 million tonnes a year. Around 0.9 million tonnes goes to power generation, while most of the rest goes to briquetting plants and to the domestic market.

11.11.3 Coal supply is imported, almost all of it from third countries. On past trends about half of that was likely to have been from Poland, and much of the remainder from 'other' countries. Coke supply from local production was around 1.6 million tonnes. The remaining supply was mostly from third countries.

11.11.4 Government proposals for liberalisation of the electricity market in Austria have been the subject of much debate. The argument centres around the interests of the regional utilities, conflicting with the Verbund and the concept of a national grid. The industry is to an extent united by a common threat from electricity imports, and a fear of foreign ownership of their utilities. However it is vulnerable to external competition or takeover because of its high personnel costs, which are beginning to be addressed by some utilities.

11.11.5 Electricity growth in Austria to the year 2006 has been forecast to grow by some 1.9% a year on average (1.14 Gwh), based on plans by the electricity industry. It is likely that a third of the required new capacity will be hydro (630 MW) and the rest (1040 MW) thermal; on present trends, gas will fuel the majority of this expansion. There are limits to the future expansion of hydro; any major expansion would require a new Danube dam, unlikely on political and economic grounds. The Green Party in Austria is already disputing smaller hydro schemes.

11.12 Portugal

11.12.1 Gross internal energy consumption in Portugal was expected to be slightly lower in 1997 than in 1996, partly because of the very mild winter in 1997. Coal consumption was expected to be down by 35%, while oil use was likely to have risen by 10%. In the electricity market consumption is likely to have fallen by up to 15%. Hydro power appears to have been running at lower levels than may be expected. Portugal is heavily dependent on hydro power (nearly 50% in the wet winter of 1996, but more usually around 40%), while oil is a significant contributor to the thermal generation, and may provide 10% or more of total generation needs. In Portugal, oil is regarded as the swing supplier.

11.12.2 Inland deliveries of hard coal in Portugal amounted to 5.8 million tonnes in 1997, an increase of 9% on 1996. Some 4.6 million tonnes (almost 80%) went to power stations,

while half a million tonnes was for coking use (an increase of nearly 50%), and the remainder for other industry.

For 1998 it is expected that deliveries will fall by about a million tonnes. Some reduction will occur in other industry demand, but most of this will be from power station supply. Coke deliveries increased to 330,000 tonnes (+15%), mostly for the steel industry, and are likely to remain at that level in 1998.

11.12.3 Coal supply is entirely from third country imports; South Africa was the major supplier (1.9 million tonnes or 35% of requirement), while US and Colombia provided around 1.3 million tonnes each. In 1998 Colombia is likely to retain its volumes, while South Africa and USA will both lose tonnage.

11.12.4 In 1997 a 25% share of Electricidade de Portugal (EdP) was privatised. The remaining 24% government share is likely to be sold in 1999.

11.12.5 Gas-fired power station development is on its way in Portugal both from LNG and with the extension of the Maghreb pipeline through Spain. A 330 MW CCGT was due on stream in March 1998, with another 2 330 MW in 1999. However in the longer term, it is expected that coal will retain its market share. The Sines power station should not be affected by new developments coming on line, since oil generation is likely to be backed off the merit order before coal.

11.13 Finland

11.13.1 Gross internal energy consumption in 1997 was likely to have increased by nearly 15%. Coal use more than doubled, but takes a small share (around 7%) of the market. Oil consumption was expected to have reduced by around 5%, as was nuclear production; hydro production was likely to have increased by some 6%, whilst electricity imports were up by over 35%; half of these were from EC sources. Electricity exports go to Sweden and Norway.

11.13.2 Total inland deliveries of coal in 1997 amounted to some 7.0 million tonnes, (up 13% from 6.2 million tonnes) of which 77% went to power stations and 17% to coking plants. The increase was for power generation, also offsetting a reduction in coking demand. In 1998 deliveries were expected to fall by 5%; coking demand was likely to revert to its 1996 level, while demand for electricity would reduce. Deliveries of coke were 1.2 million tonnes in 1997, mostly for the steel industry, and were expected to be similar in 1998.

Peat production in Finland was 7.4 million tonnes in 1997, a reduction of 12%. Of this 5 million tonnes went to power stations and 2 million to briquetting plants, for use by power stations and industry.

11.13.3 Coal supply in Finland is entirely imported from third countries, almost 80% of it from Poland and the CIS. Of the 7.0 million supplied, 4 million tonnes was from Poland and 1.5 million tonnes from the CIS. Supply in 1998 is expected to be 5% lower, but similarly sourced.

11.13.4 Gas-fired power station development is increasing in Finland; new gas-fired facilities are coming on strean in Helsinki, and Vattenfall has proposed building a CCGT station close to the Russian border to provide electricity exports to Sweden, for completion late in 1999. Pressure is growing for a new nuclear plant, supported by a national opinion poll, but this will not be developed for some time. Energy taxes are now on electricity and not charged upstream as had been the case.

11.14 Sweden

11.14.1 Gross inland energy consumption was expected to have fallen by 5% in 1997, largely because of comparison with the cold winter of 1996. Coal, oil and nuclear power will all have reduced consumption by around 6%, while hydro production appears to have increased by approaching 50% because of good reservoir levels; electricity exports have substantially increased, while imports have fallen.

11.14.2 According to Commission estimates, coal deliveries in Sweden amounted to 3.3 million tonnes in 1997, about half of which went to coking plants, and a third to power generation. The iron and steel industry and other industries accounted for the remainder. Power station supply was up 25% on 1996 levels, while iron and steel deliveries were down 13% because of high stock levels. Deliveries of coke were estimated at 1.6 million tonnes, an increase of 9%; 93% of coke went to the steel industry.

11.14.3 Coal supply to Sweden was 3.2 million tonnes in 1997, all from imports; 99% of supplies was from third countries, of which nearly 40% was from Poland. The USA and Australia provided nearly 30% and 16% respectively. Coke production was estimated at 1.1 million tonnes, while imports brought total supply to a level of 1.5 million tonnes. Peat production was about 0.8 million tonnes, and went to other users.

11.14.4 Following a referendum in 1996, Sweden made a commitment to close its nuclear power stations because of their environmental impact. However its nuclear power provides 45% to 50% of the total electricity requirement, and progress on closures has been slow. The first station scheduled for closure will be one unit of the station at Barsebaeck; closure has now been postponed beyond 1998. Coal use is likely to remain stable or increase in the next 5 years.

11.4.5 Sweden is planning to introduce a new Energy Authority in order to be able to co-ordinate the implementation of European Commission directives. A new energy tax will be introduced in 1999.

11.15 United Kingdom

11.15.1 Gross inland consumption in the UK was expected to have reduced by around 2%, largely because of the mild winter in 1997, particularly when compared with the cold of 1996. Coal consumption is likely to have fallen by up to 15%, while gas and oil have kept the same levels of consumption as in 1996. Looking at electricity, generation reduced by around 5%. Nuclear production increased by some 10%, while the small element of hydro increased by over 35%.

11.15.2 Commission estimates of inland deliveries of coal were 68.3 million tonnes in 1997, a reduction of 4% or 3.0 million tonnes compared with 1996. Power station deliveries were 50.4 million tonnes, while 8.5 million tonnes went to coking plants and 0.8 million tonnes to the iron and steel industry. Some 4.5 million tonnes went to other industries, of which nearly a third was for power generation. Domestic heating deliveries were over 3 million tonnes, and over 1 million tonnes was for miscellaneous use, mostly for patent fuel plants. Compared with 1996, power station deliveries were down 5%, while deliveries to the iron and steel industry increased by 25%. Deliveries to other industries reduced by 8%.

The picture in 1998 is uncertain because of ongoing negotiations about coal supplies to the generators. However Commission estimates suggest that inland deliveries will fall to 52.3 million tonnes, a reduction of 23%. The major part of this reduction will be at power stations where deliveries will be some 14.2 million tonnes lower. Deliveries to the iron and steel industry may increase by 150,000 tonnes (20%).

11.15.3 Coal supply in 1997 was estimated at 71.2 million tonnes (compared with 67.5 million tonnes in 1996, of which 47.7 million tonnes (a 16% reduction) were from indigenous production, 1.4 million tonnes from recoveries and 22.0 million tonnes (+27% increase) from imports. At the year end coal stocks were high, with 14 million tonnes held by generators and 4 million tonnes by producers, representint more than 4 months supply.

Estimates for supply in 1998 are for a total of 57.2 million tonnes, of which 20.5 million tonnesis likely to be imported. This will depend on the outcome of Government and industry negotiations seeking to prevent early colliery closures.

11.15.4 Coke deliveries in 1997 were about 7.7 million tonnes of which 88% went to the steel industry (an increase of 4% on 1996 deliveries) and the remainder to other industries and the domestic sector. In 1998 deliveries were estimated to fall by 4%.

Coke supply in 1997 was 7.9 million tonnes, 79% of it from local production. Most of the remainder was from third countries. In 1998 supply was expected to fall by 3%, with reductions in domestic and imported sources.

11.15.5 Despite considerable efforts to reduce the cost of production in Britain's collieries, the UK coal industry has been hampered by the recent high value of the pound sterling in relation to the US dollar. This, together with world oversupply, has meant that coal imports have become considerably cheaper than indigenous coal. In addition, the 5 year

coal contracts with the major electricity generators, set up before coal privatisation, were due to expire in March 1998. The increasing use of gas for power generation has eroded the total coal burn. This left the coal companies seeking to renew their contracts at a time of reducing market share and with severe price competition from coal imports. Some of the smaller companies agreed contracts at lower prices.

In late 1997 RJB, the owner of the major part of the privatised English coal industry, had very little of its production contracted beyond March 1998 because it could not match world coal prices, and appeared unable to reduce its prices sufficiently to be attractive to the generators. If this problem was not addressed, about half of RJB's 19 remaining deep mines would be likely to close, with the reported likely loss of anything up to 9,000 jobs. The newly-elected Labour Government was concerned about the implications for the coal industry and employment, and sought ways to assist RJB in its efforts to gain contracts. Under pressure, the English generators agreed to extend their existing contracts by three months to June 1998, to allow more time for discussions. There are political pressures for the Government to find a way to encourage indigenous coal burn, but the mechanism to be used is as yet unclear. The liberalisation of parts of the electricity utility market during 1998 adds increasing uncertainty about each generator's market share in the future.

11.15.6 Because of the domestic coal issue, a moratorium still exists on consents for new gas-fired power stations. The two major generators are discussing further closures of coal-fired generating capacity and wishing to develop more CCGTs to replace them. The Regulator has suggested that any closed coal-fired station should be offered for sale. There is still much discussion about the best way to provide a competitive electricity industry using a variety of fuels at competitive prices.

11.15.7 In the UK, RJB has discontinued the proposed extension to Calverton Colliery, which would have provided access to new reserves, because of uncertainties in contracts that may be available from electricity generators after March 1998, the expiry date of contracts put in place before coal privatisation. It has also announced a proposal to close the Asfordby mine in the South Midlands, because geological conditions were making mining unsafe and uneconomic. Most of the 500 men at the colliery will be transferred to work at other collieries in the group. RJB is attempting to find proposals for coal sales to the generators in the future that will help to overcome the uncertainties in the electricity market as it is liberalised form March 1998, and to counteract the use of gas.

Development work was also halted at Maltby, Prince of Wales and Thoresby collieries until the uncertainties about demand have been resolved. Before these difficulties had emerged, RJB had applied for a licence to draw up plans for a new colliery prospect in the East Midlands, at Witham. The proposal is now unlikely to be pursued.

11.15.8 Midlands Mining, a company formed as a partial management buyout after Coal Investments went into receivership in late 1996, took over two collieries, Silverdale and Annesley Bentinck. Silverdale recently experienced severe problems because of

fragmented geology; its closure was announced in September 1997, to take place when existing workings are completed at the end of 1998. The company has obtained a licence to explore the use of coalbed methane from Silverdale and also from Annesley Bentinck. Many of the workforce from Silverdale will transfer to Annesley Bentinck, and output there is being increased in order to fulfil existing contracts.

11.15.9 The other four collieries previously leased by Coal Investments, Coventry, Hem Heath, Markham Main (Yorkshire) and Cwmgwili in Wales, did not find a buyer when the company went into receivership. They have been closed and flattened, and sale of the sites is under way or completed.

11.15.10 Scottish Coal appears to have overcome the geological difficulties at its Longannet mine. The company has now been restructured to separate its deep-mine Longannet from its opencast activities, and is now investing to develop a new area of reserves at the colliery to ensure its long term future. The low sulphur coal goes direct to Longannet power station. Scotland's other deep mine, Moncktonhall Colliery, has finally been closed after a period of time in mothballs; 300 mining jobs were lost when it ceased production.

11.15.11 In Wales, Celtic Energy and Tower Colliery are together seeking permission to develop a new mine at Margam. It is to be developed from an opencast site currently being worked by Celtic Energy so after completion of working, the opencast space will be developed with colliery buildings and space on site for colliery spoil from the new underground workings. The coal produced will be coking quality anthracite; the site is very close to the British Steel works at Margam.

Celtic Energy had acquired a closed power station at Uskmouth with the intention of reopening it and using Welsh coal; it has sold the option to operate the power station to the American company AES, who are suggesting that they will use low sulphur South African coal as fuel. There have been disputes with the Environment Agency who claim that if it is re-opened it will need to conform to the latest emissions standards.

At the end of 1996, Celtic Energy lodged a complaint with the European Commission concerning the activities of the German anthracite industry, who, it was alleged, had been selling subsidised anthracite products on the UK market, distorting natural competition. The Commission examined the case, but at the time of writing had not yet announced their decision. However in April 1998 a settlement was made between Preussag Anthrazit Gmbh and Celtic Energy and Celtic Energy withdrew its complaint.

11.15.12 In 1997 the port of Hunterston in south west Scotland was refurbished, and is now used to import coal for shipment to generators in Yorkshire. It had been closed when Ravenscraig steelworks was shut. A new rail terminal has been developed at Avonmouth docks in south west England for coal imports. Its initial contract is for importation of 70,000 tonnes of coal for the cement industry in the Midlands.

ANNEXES

TABLE 1

Gross internal energy consumption
European Union (EUR-15)

	1996 Provisional		1997 Provisional		1998 Forecasts	
	M Toe	%	M Toe	%	M Toe	%
Solid fuels	224.7	16.5	211.7	15.7	206.9	15.1
Oil	586.9	43.1	591.6	43.8	594.8	43.3
Natural Gas	301.8	22.2	294.5	21.8	315.3	22.9
Nuclear energy	217.1	16.0	222.3	16.5	225.0	16.4
Other (1)	29.9	2.2	31.3	2.3	32.3	2.4
Total	1360.4	100.0	1351.5	100.0	1374.3	100.0

Source : Based on Eurostat

(1) includes hydro and the balance of foreign trade

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TABLE 2

Share of solid fuels in gross internal energy consumption

	Year	Hard coal		Lignite and peat		Total Solid Fuels	
		M Toe	%	M Toe	%	M Toe	%
	1973	194.5	20.9	27.5	3.0	222.0	23.8
E	1974	187.7	20.6	29.3	3.2	217.0	23.8
U	1975	166.9	19.4	27.2	3.2	194.1	22.6
R	1976	176.6	19.3	32.2	3.5	208.8	22.8
1	1977	173.5	19.0	29.9	3.3	203.4	22.3
0	1978	175.7	18.7	29.8	3.2	205.5	21.8
	1979	191.3	19.4	31.9	3.2	223.2	22.6
	1980	202.6	19.6	35.7	3.5	238.3	23.1
E	1981	201.1	20.1	37.5	3.8	238.6	23.9
U	1982	197.3	20.2	37.2	3.8	234.5	24.0
R	1983	192.4	20.0	38.0	3.9	230.4	23.9
1	1984	180.6	18.2	39.1	3.9	219.7	22.2
2	1985	200.7	19.5	38.3	3.7	239.0	23.2
	1986	195.8	18.8	35.8	3.4	231.5	22.2
	1987	198.1	18.6	33.2	3.1	231.3	21.8
	1988	193.0	17.9	33.8	3.1	226.8	21.0
	1989	195.6	17.8	35.4	3.2	231.0	21.0
	1990	199.4	17.9	34.9	3.1	234.3	21.0
	1991	203.3	16.9	70.9	5.9	274.2	22.8
EUR12*	1992	192.8	16.1	63.6	5.3	256.5	21.5
	1993	172.8	14.5	58.7	4.9	231.5	19.5
	1994	176.4	14.7	55.2	4.6	231.6	19.3
	1995	178.5	13.6	54.1	4.1	232.6	17.7
EUR15	1996	171.8	12.6	52.9	3.9	224.7	16.5
	1997	160.3	11.9	51.4	3.8	211.7	15.7
	1998	156.1	11.4	50.8	3.7	206.9	15.0

* Including the new German Länder

TABLE 3

COMMUNITY HARD COAL DELIVERIES BY SECTOR AND BY COUNTRY

(In millions of metric tons)

	1996 Actual	1997 Estimates	1998 Forecasts	1997 / 1996 % Difference	1998 / 1997 % Difference
A. Sector					
- Thermal power stations (1)	185.2	183.2	162.1	-1.1	-11.5
- Coke ovens	54.2	53.2	51.1	-2.0	-3.9
- Iron and steel industry	8.4	9.6	9.7	14.2	1.4
- Other industries	15.2	14.0	13.1	-7.8	-6.2
- Domestic sector & coal worker	6.7	6.8	6.0	2.6	-12.7
- Patent fuel plants	1.5	1.4	1.3	-6.7	-7.5
- Own consumption at mines	0.1	0.1	0.1	-19.7	-22.7
- Gasworks	0.0	0.0	0.0	0.0	0.0
- Others	0.2	0.1	0.1	-39.1	-10.2
Total	**271.5**	**268.4**	**243.5**	**-1.2**	**-9.3**
B. Country					
Belgium	11.9	11.6	11.2	-2.8	-3.9
Denmark	13.1	13.5	10.5	2.8	-22.2
Germany	71.3	69.1	69.2	-3.0	0.1
Spain	27.0	28.4	28.3	5.1	-0.3
France	23.4	21.7	17.5	-7.3	-19.6
Greece	1.5	1.8	1.9	21.3	5.6
Ireland	2.8	3.2	2.9	13.7	-7.9
Italy	16.3	16.9	16.9 *	3.5	0.0
Luxembourg	0.2	0.2	0.2	-17.8	-17.1
Netherlands	14.5	14.2	14.3	-2.0	0.4
Austria	3.4 *	3.3 *	3.1 *	-1.9	-6.0
Portugal	5.3	5.8	4.8	8.7	-16.8
Finland	6.2	7.0	6.7	12.7	-5.3
Sweden	3.2	3.3 *	3.3 *	5.2	0.0
United Kingdom	71.2	68.3 *	52.8 *	-4.2	-22.7
EUR-15	**271.5**	**268.4**	**243.5**	**-1.2**	**-9.3**

(1) Including pithead power stations and "other" power stations

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* Commission estimates

TABLE 4

COKE DELIVERIES BY SECTOR AND BY COUNTRY

(In thousands of metric tons)

	1996 Actual	1997 Estimates	1998 Forecasts	1997 / 1996 % Difference	1998 / 1997 % Difference
A. Sector					
- Iron and steel industry	41780	42373	42232	1.4	-0.3
- Other industries	3436	3742	3489	8.9	-6.8
- Domestic sector	1177	1028	948	-12.7	-7.8
- Other	850	848	832	-0.2	-1.9
Total	**47243**	**47991**	**47501**	1.6	-1.0
B. Country					
Belgium	3845	3758	3105	-2.3	-17.4
Denmark	36	30	25	-16.7	-16.7
Germany	14358	14955	14645	4.2	-2.1
Spain	2695	2520	2530	-6.5	0.4
France	6097	6060	7055	-0.6	16.4
Greece	13	14	14	7.7	0.0
Ireland	7	8	7	14.3	-12.5
Italy	5122	5370	5370 *	4.8	0.0
Luxembourg	454	214	0	-52.9	-100.0
Netherlands	2275	2300	2300	1.1	0.0
Austria	2000 *	2000 *	2000 *	0.0	0.0
Portugal	286	330	330	15.4	0.0
Finland	1239	1165	1178	-6.0	1.1
Sweden	1450	1582 *	1582 *	9.1	0.0
United Kingdom	7366	7685 *	7360 *	4.3	-4.2
EUR-15	**47243**	**47991**	**47501**	1.6	-1.0

* Commission estimates

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TABLE 5

DELIVERIES OF HARD COAL TO COKING PLANTS BY MEMBER STATES (1)

(In thousands of metric tons)

1996 : Actual 1997 : Estimates 1998 : Forecasts		National hard coal*	Hard.coal from other ECSC countries*	Total ECSC hard coal	Hard coal from third countries	Total supplies
Belgium	1996		35	35	5284	5319
	1997					4883
	1998					4639
Germany	1996	13191		13191		13191
	1997					13130
	1998					13250
Spain	1996		9	9	3299	3308
	1997					3350
	1998					3300
France	1996	1563		1563	5824	7387
	1997					7125
	1998					5520
Italy	1996				6730	6730
	1997					6950
	1998					6950 *
Netherlands	1996				4468	4468
	1997					4100
	1998					4100
Austria	1996		3 *	3 *	1963 *	1966 *
	1997					1900 *
	1998					1700 *
Portugal	1996				331	331
	1997					491
	1998					491
Finland	1996		9	9	1261	1270
	1997					1166
	1998					1290
Sweden	1996		13	13	1627	1640
	1997					1592 *
	1998					1592 *
United Kingdom	1996	407 *		407 *	8228 *	8635
	1997					8500 *
	1998					8300 *
EUR-15	1996	15161	69	15230	39015	54245
	1997					53187
	1998					51132

(1) For 1997 and 1998 the breakdown by origin is not available

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* The breakdown by origin for 1996 is a Commission estimation

TABLE 6A

DELIVERIES OF HARD COAL TO POWER PLANTS BY MEMBER STATES

(In thousands of metric tons)

1996 : Actual 1997 : Estimates 1998 : Forecasts		Public power stations (1)					Private generating plants		Total
		National hard coal	Hard coal from other ECSC countries	Total ECSC hard coal	Hard coal from third countries	Total public power stations	Collieries	Other industry	
Belgium	1996		18	18	4535	4553			4553
	1997					4609			4609
	1998					4517			4517
Denmark	1996		18	18	12541	12559			12559
	1997					13000			13000
	1998					10100			10100
Germany	1996	40778		40778	6718	47496	1200	3100	51796
	1997					45400	1200	3500	50100
	1998					45400	1200	3400	50000
Spain	1996	13708		13708	8864	22572			22572
	1997					23928			23928
	1998					24000			24000
France	1996	5676		5676	653	6329	2625	526	9480
	1997					4280	2835	510	7625
	1998					2210	2480	500	5190
Greece	1996				170	170			170
	1997					200			200
	1998					205			205
Ireland	1996				2331	2331			2331
	1997					2493			2493
	1998					2300			2300
Italy	1996		5	5	7445	7450			7450
	1997					8000			8000
	1998					8000 *			8000 *
Luxembourg	1996								
	1997								
	1998								
Netherlands	1996				8500	8500			8500
	1997					8700		300	9000
	1998					8800		275	9075
Austria	1996		2	2	1086	1088 *			1088 *
	1997					1088 *			1088 *
	1998					1088 *			1088 *
Portugal	1996				4203	4203			4203
	1997					4605			4605
	1998					3915			3915
Finland	1996		44	44	4529	4573		300	4873
	1997					5443		300	5743
	1998					4959		300	5259
Sweden	1996		22	22	805	827			827
	1997					1039 *			1039 *
	1998					1039 *			1039 *
United Kingdom	1996	47400		47400	5785	53185		1652	54837
	1997					50400 *		1350 *	51750 *
	1998					36200 *		1200 *	37400 *
EUR-15	1996	107562	109	107671	68165	175836	3825	5578	185239
	1997					173185	4035	5960	183180
	1998					152733	3680	5675	162088

(1) For 1997 and 1998 the breakdown by origin is not available

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* Commission estimates

TABLE 6B

DELIVERIES OF SOLID FUELS TO PUBLIC AND PITHEAD POWER STATIONS (EXCLUDING OTHER INDUSTRIES)

(In millions of metric tons)

	1996 Actual	1997 Estimate	1998 Forecast	1997 / 1996 % Difference	1998 / 1997 % Difference
Belgium					
- Hard coal	4.6	4.6	4.5	1.2	-2.0
Denmark					
- Hard coal	12.6	13.0	10.1	3.5	-22.3
Germany					
- Hard coal	48.7	46.6	46.6	-4.3	
- Brown coal	159.6	153.0	150.5	-4.1	-1.6
Spain					
- Hard coal	22.6	23.9	24.0	6.0	0.3
- Brown coal	9.8	9.4	9.4	-3.6	
France					
- Hard coal	9.0	7.1	4.7	-20.5	-34.1
- Brown coal	1.0	0.5	0.4		-20.0
Greece					
- Hard coal	0.2	0.2	0.2	17.6	2.5
- Brown coal	57.4	59.0	61.3	2.9	3.9
Ireland					
- Hard coal	2.3	2.5	2.3	6.9	-7.7
- Peat	3.2	3.1	3.0	-3.7	-3.3
Italy					
- Hard coal	7.5	8.0	8.0 *	7.4	
- Brown coal	0.3	0.2	0.2 *	-32.3	
Netherlands					
- Hard coal	8.5	8.7	8.8	2.4	1.1
Austria					
- Hard coal	1.1 *	1.1 *	1.1 *		
- Brown coal	1.0 *	0.9 *	0.9 *	-12.8	
Portugal					
- Hard coal	4.2	4.6	3.9	9.6	-15.0
Finland					
- Hard coal	4.6	5.4	5.0	19.0	-8.9
- Peat	7.1	5.0	5.0	-29.5	
Sweden					
- Hard coal	0.8	1.0 *	1.0 *	25.6	
United Kingdom					
- Hard coal	53.2	50.4 *	36.2 *	-5.2	-28.2
EUR-15					
- Hard coal	**179.7**	**177.2**	**156.4**	**-1.4**	**-11.7**
- Brown coal	**229.0**	**223.0**	**222.7**	**-2.6**	**-0.1**
- Peat	**10.4**	**8.1**	**8.0**	**-21.5**	**-1.3**

* Commission estimates

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TABLE 7

HARD COAL AND COKE DELIVERIES TO OTHER INDUSTRIES (EXCLUDING THE IRON AND STEEL INDUSTRY AND POWER STATIONS)

(In millions of metric tons)

	1996 Actual	1997 Estimates	1998 Forecasts	1997 / 1996 % Difference	1998 / 1997 % Difference
A. HARD COAL					
Belgium	458	621	625	35.6	0.6
Denmark	329	300	250	-8.8	-16.7
Germany	2868	2200	2200	-23.3	
Spain	721	700	650	-2.9	-7.1
France	2905	2890	2700	-0.5	-6.6
Greece	1193	1465	1560	22.8	6.5
Ireland	127	209	200	64.6	-4.3
Italy	803	650	650 *	-19.1	
Luxembourg	136	120	120	-11.8	
Netherlands	718	65	50	-90.9	-23.1
Austria	330 *	330 *	330 *		
Portugal	815	720	435	-11.7	-39.6
Finland	100	126	115		
Sweden	410	422 *	422 *	2.9	
United Kingdom	3240	3150 *	2800 *	-2.8	-11.1
EUR-15	**15153**	**13968**	**13107**	**-7.8**	**-6.2**

B. COKE					
Belgium	94	140	92	48.9	-34.3
Denmark	34	30	25	-11.8	-16.7
Germany	1359	1250	1200	-8.0	-4.0
Spain					
France	869	850	850	-2.2	
Greece	13	14	14	7.7	
Ireland	3			-100.0	
Italy	195	200	200 *	2.6	
Luxembourg					
Netherlands		200	200		
Austria	260 *	260 *	260 *		
Portugal	37	80	80	116.2	
Finland	50	13	13	-74.0	
Sweden	65	105	105	61.5	
United Kingdom	457	600 *	450 *	31.3	-25.0
EUR-15	**3436**	**3742**	**3489**	**8.9**	**-6.8**

* Commission estimates

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TABLE 8

DELIVERIES OF SOLID FUELS TO THE DOMESTIC SECTOR (WORKERS INCLUDED)

(In thousands of metric tons)

1996 : Actual 1997 : Estimates 1998 : Forecasts	Belgium	Denmark	Germany	Spain	France	Greece	Ireland	Italy	Luxem-bourg	Nether-lands	Austria	Portugal	Finland	Sweden	United Kingdom	EUR-15
A. HARD COAL, PATENT FUELS, COKE																
Hard coal																
1996	495	128	1331	350	987		319	60							2981	6651
1997	468	100	1225	350	956		456	50		10					3210 *	6825
1998	450	50	1170	310	936		410	50 *							2580 *	5956
Patent fuels																
1996	18		331		371										815	1535
1997	14		290		335										710 *	1349
1998	13		270		310										625 *	1218
Coke																
1996	7		781		96			57			273 *				230	1444
1997	7		600		90		8	50			273 *				285 *	1313
1998	3		540		85		7	50 *			273 *				260 *	1218
Total																
1996	520	128	2443	350	1454		319	117			273 *				4026 *	9630
1997	489	100	2115	350	1381		464	100		10	273 *				4205 *	9487
1998	466	50	1980	310	1331		417	100 *			273 *				3465 *	8392
% 1997 / 1996	*-6.0*		*-13.4*		*-5.0*		*45.5*	*-14.6*							*4.4*	*-1.5*
% 1998 / 1997	*-4.7*		*-6.4*	*-11.4*	*-3.6*		*-10.1*								*-17.6*	*-11.5*
B. LIGNITE BRIQUETTES AND PEAT BRIQUETTES 1996	12		3814				290		6		120 *					4242
1997	15		3300				275		5		120 *					3715
1998	13		3000				266		5		120 *					3404

* Commission estimates

TABLE 9

DELIVERIES OF LIGNITE AND PEAT BY SECTOR AND MEMBER STATE

(In millions of metric tons)

1996 : Actual 1997 : Estimates 1998 : Forecasts	Raw Products											
	Power stations			Briquetting plants			Others			Total		
	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998
Belgium							0.2	0.3	0.2	0.2	0.3	0.2
Denmark												
Germany	159.6	153.0	150.5	27.3	22.8	18.3	2.4	1.6	1.2	189.2	177.4	170.0
Spain	9.8	9.4	9.4							9.8	9.4	9.4
France	1.0	0.5	0.4				0.7	0.6	0.6	1.7	1.1	1.0
Greece	57.4	59.0	61.3	0.2	0.2	0.2	0.6	0.7	0.7	58.2	59.9	62.2
Ireland	3.2	3.1	3.0	0.4	0.5	0.6	1.5	1.4	1.3	5.1	4.9	4.9
Italy	0.3	0.2	0.2 *							0.3	0.2	0.2 *
Luxembourg							0.0	0.0	0.0	0.0	0.0	0.0
Netherlands				0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Austria	1.0 *	0.9 *	0.9 *	0.1 *	0.1 *	0.1 *	0.0 *	0.0 *	0.0 *	1.1 *	1.0 *	1.0 *
Portugal												
Finland	7.1	5.0	5.0	1.3	2.1	2.1		0.3	0.3	8.4	7.4	7.4
Sweden							0.8	0.8 *	0.8 *	0.8	0.8 *	0.8 *
United Kingdom												
EUR-15	239.4	231.1	230.7	29.2	25.7	21.3	6.3	5.7	5.1	274.9	262.5	257.2

* Commission estimates

TABLE 10A

HARD COAL PRODUCTION BY AREA

(In thousands of metric tons)

	1996	1997	1998
Ruhr	42844	42480	40730
Aachen	1071	200	
Ibbenburen	1633	1650	1700
Saar + Kleinzechen	7608	7670	7520
GERMANY	**53156**	**52000**	**49950**
Central Asturias	3158	3120	3100
Bierzo-Villablino + Narcea	6882	6740	6600
Norte Leon + Palencia	1954	1950	1950
Sur	1695	1690	1650
Aragon-Cataluña, Baleares	4064	4000	3800
SPAIN	**17753**	**17500**	**17100**
Lorraine	6165	5000	4600
Centre-Midi	1145	981	826
FRANCE	**7310**	**5981**	**5426**
IRELAND	**1**	**2**	**2**
Sulcis (Sardinia)			
ITALY			
Deep-mined	32223	31100 *	20750 *
Opencast	16315	16550 *	14750 *
UNITED KINGDOM	**48538**	**47650 ***	**35500 ***
EUR 15	**126758**	**123133**	**107978**

* Commission estimates

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TABLE 10B

LIGNITE PRODUCTION BY AREA

(In thousands of metric tons)

	1996	1997	1998
GKB	1105	1105 *	1105 *
WTK			
AUSTRIA	**1105**	**1105 ***	**1105 ***
Rheinland	102779	100975	100100
Helmstedt	3874	3925	4035
Hessen	181	162	150
Bayern	62	60	60
Lausitz	63574	54900	48300
Mitteldeutschland	16771	15535	15500
GERMANY	**187241**	**175557**	**168145**
Ptolemais	36479	38000	40100
Megalopolis	12607	12300	12300
Amindeo	7837	7800	7800
Others	2858	2000	2000
GREECE	**59781**	**60100**	**62200**
La Coruña	9604	9400	9400
SPAIN	**9604**	**9400**	**9400**
Centre-Midi	799	1100	1000
FRANCE	**799**	**1100**	**1000**
Valdarno	302	200	200 *
ITALY	**302**	**200**	**200 ***
EUR 15	**258832**	**247462**	**242050**

* Commission estimates

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TABLE 10C

PEAT PRODUCTION BY AREA

(In thousands of metric tons)

	1996	1997	1998
IRELAND	**5060**	**4457**	**5898**
North Finland			
East Finland			
West Finland			
South Finland			
FINLAND	**8400**	**7400**	**7400**
SWEDEN	**813**	**800 ***	**800 ***
EUR 15	**14273**	**12657**	**14098**

* Commission estimates

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TABLE 11A

COKE PRODUCTION

(In millions of metric tons)

	Coke production capacity	% difference compared with the previous year	Hard coal deliveries	Coke production
1996 : Actual				
Belgium	3.8	-5.0	5.3	3.6
Germany	11.9	-3.3	13.2	10.7
Spain	2.7	-28.9	3.3	2.4
France	6.4		7.4	5.6
Italy	8.2	-1.2	6.7	5.0
Netherlands	3.8		4.5	2.9
Austria	1.6	14.3	2.0 *	1.6 *
Portugal	0.4	-20.0	0.3	0.3
Finland	0.9		1.3	0.9
Sweden	1.2	9.1	1.6	1.2
United Kingdom (a)	6.2	-8.8	8.6	6.2
EUR-15	47.1	-0.6	54.2	40.3
1997 : Provisional				
Belgium	3.4	-10.5	4.9	3.6
Germany	11.8	-0.8	13.1	10.6
Spain	2.7		3.4	2.4
France	6.4		7.1	5.3
Italy	8.2		7.0	5.1
Netherlands	3.8		4.1	2.9
Austria	1.5	-6.3	1.9 *	1.5 *
Portugal	0.4		0.5	0.3
Finland	0.9		1.2	0.8
Sweden	1.2		1.6	1.2
United Kingdom (a)	6.1	-1.6	8.5 *	6.2 *
EUR-15	46.4	-1.5	53.2	39.8
1998 : Forecasts				
Belgium	3.2	-5.9	4.6	3.0
Germany	11.8		13.3	10.7
Spain	2.2	-18.5	3.3	2.4
France	5.5	-14.1	5.5	5.3
Italy	8.2		7.0 *	5.1 *
Netherlands	3.8		4.1	3.0
Austria	1.3	-13.3	1.7 *	1.3 *
Portugal	0.4		0.5	0.3
Finland	0.9		1.3	0.8
Sweden	1.2		1.6 *	1.2
United Kingdom (a)	6.1		8.3 *	6.0 *
EUR-15	44.6	-3.9	51.1	39.1

(a) Without LTC for the United Kingdom

* Commission estimates

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TABLE 11B

COKING PLANT CAPACITY DISTRIBUTION

(Million tonnes)

	1996 Actual	1997 Estimates	1998 Forecasts
- Colliery plants	6.9	6.8	5.9
- Iron and steel industry	38.2	37.8	36.9
- Independent (*)	1.9	1.8	1.8
EUR-15	**47.0**	**46.4**	**44.6**

* Without LTC for the United Kingdom

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TABLE 12A

PERSONNEL EMPLOYED UNDERGROUND
(yearly average)

(in thousands)

	1996 Actual	1997 Estimates	1998 Forecasts
Germany	55.2	50.5	46.7
Spain	23.6	22.5	20.4
France	5.7	5.0	4.5
United Kingdom	10.6 *	9.9 *	6.7 *
EUR-15	**95.1**	**87.9**	**78.3**

* Commission estimates

TABLE 12B

OUTPUT PER MAN/HOUR UNDERGROUND

(Kg per man/hour)

	1996 Actual	1997 Estimates	1998 Forecasts
Germany	758	780	793 *
Spain	308	314	338
France	755	718	739
United Kingdom	1423 *	1670 *	1645 *
EUR-15	733	762 *	741 *

* Commission estimates

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TABLE 13

INVESTMENTS IN THE COAL INDUSTRY (COAL EXTRACTION AND PREPARATION)

(million ECU)

	1996 Actual	1997 Estimates	1998 Forecasts
Germany	259.6	266.2	224.0
Spain	170.4	144.3	86.9
France	22.2	15.7	14.9
United Kingdom	157.0	134.0	128.2
EUR-15	**609.2**	**560.2**	**454.0**

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TABLE 14

Exchange rates : US $ - European currencies

1 US Dollar =	ASCH	BFR	DKR	DM	DRA	PTA	FF	FM	IRL	LIT	HFL	ESC	SWK	UKL	ECU
1996															
1st quarter	10.33	30.18	5.677	1.468	241.40	123.69	5.035	4.531	0.6332	1573.4	1.644	152.30	6.781	0.6531	0.777
2nd quarter	10.71	31.29	5.873	1.522	242.27	127.47	5.159	4.721	0.6366	1555.3	1.703	156.50	6.734	0.6561	0.797
3rd quarter	10.54	30.85	5.778	1.498	238.00	126.58	5.094	4.536	0.6218	1521.4	1.680	153.61	6.634	0.6433	0.786
4th quarter	10.77	31.53	5.867	1.530	241.10	128.82	5.174	4.585	0.6088	1522.1	1.717	154.56	6.679	0.6119	0.792
Year : 1996	10.59	30.96	5.799	1.505	240.70	126.64	5.116	4.593	0.6251	1543.0	1.686	154.24	6.707	0.6411	0.788
1997															
1st quarter	11.65	34.18	6.316	1.656	259.85	139.90	5.589	4.932	0.6267	1635.6	1.861	166.10	7.358	0.6129	0.848
2nd quarter	12.06	35.37	6.528	1.714	271.93	144.73	5.779	5.147	0.6560	1690.6	1.928	172.58	7.702	0.6114	0.875
3rd quarter	12.71	37.28	6.878	1.806	283.72	152.42	6.084	5.385	0.6770	1761.5	2.034	182.92	7.828	0.6152	0.915
4th quarter	12.36	36.22	6.686	1.756	276.15	148.33	5.883	5.286	0.6779	1720.7	1.979	179.18	7.640	0.6030	0.890
Year : 1997	12.20	35.76	6.602	1.733	272.91	146.35	5.834	5.188	0.6594	1702.1	1.950	175.19	7.632	0.6106	0.882
% Difference															
4th Qu. 1997 /4th Qu 1996	14.8	14.9	14.0	14.8	14.5	15.1	13.7	15.3	11.3	13.1	15.3	15.9	14.4	-1.5	12.3 %
Year 1997 /year 1996	15.2	15.5	13.9	15.2	13.4	15.6	14.0	12.9	5.5	10.3	15.7	13.6	13.8	-4.8	11.9 %

TABLE 15 A

Quarterly average CIF prices for coal imported from third countries

(US $)

	1996				1997			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
A. STEAM COAL (1)								
NCV (Kj/Kg)	25968	25981	25669	25620	25625	25221	n.a.	n.a.
- per tonne	44.59	42.80	41.85	42.16	41.71	41.38	n.a.	n.a.
- per tce	50.31	48.27	47.77	48.22	47.69	48.08	n.a.	n.a.
B. COKING COAL (2)								
NCV (Kj/Kg)	29386	29386	29386	29386	29386	29386	29386	29386
- per standard tonne (3) (4)	57.40	57.50	57.60	57.50	57.44	57.30	57.70	57.70
- per tce	57.24	57.34	57.44	57.34	57.28	57.14	57.54	57.54
Ratio B/A (%) per tce	113.8 %	118.8 %	120.2 %	118.9 %	120.1 %	118.8 %	n.a.	n.a.

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(1) As per the quarterly reports from the Member States (Decision 86/161/ECSC of the 26th February 1985 modifying Decision 77/707/ECSC of the 7th November 1977).
(2) Guide price (Decision 73/287/ECSC of the 25th July 1973 and Decision 3632/93/ECSC of the 28th December 1993). Reference date : the beginning of the quarter.
(3) Specification of the standard quality : ashes 7.5%, water 8%, volatile matter 26%, sulpher 0.8%.
(4) Trends of the mean value : at the first of January of each year :

1970	17.50	1977	61.65	1984	66.20	1991	60.40
1971	23.90	1978	62.10	1985	62.75	1992	58.90
1972	23.65	1979	63.95	1986	61.90	1993	57.50
1973	26.05	1980	68.50	1987	53.40	1994	54.70
1974	31.90	1981	75.70	1988	51.30	1995	55.00
1975	59.55	1982	82.45	1989	54.85	1996	57.40
1976	62.75	1983	76.25	1990	57.80	1997	57.44

TABLE 15B

COKING COAL IMPORTS

Guide price in national currencies per tce, new reference grade

Reference date	USD	ASCH	BFR	DKR	DM	DRA	PTA	FF	FM	IRL	LIT	HFL	ESC	SWK	UKL	ECU
1996																
1st quarter	57.40	592.66	1732.41	325.84	84.27	13856	7100	288.99	260.10	36.34	90311	94.36	8742	389.22	37.49	44.59
2nd quarter	57.50	615.84	1799.39	337.71	87.53	13931	7330	296.62	271.44	36.60	89430	97.93	8999	387.21	37.73	45.83
3rd quarter	57.60	607.07	1776.97	332.78	86.27	13709	7291	293.44	261.29	35.82	87631	96.77	8848	382.11	37.06	45.20
4th quarter	57.50	619.08	1812.90	337.33	87.98	13863	7407	297.50	263.64	35.01	87518	98.70	8887	384.03	35.19	45.57
1997																
1st quarter	57.44	669.37	1962.03	362.80	95.12	14926	8036	321.01	283.32	36.00	93946	106.90	9541	422.67	35.20	48.72
2nd quarter	57.30	691.22	2026.70	374.04	98.21	15582	8293	331.15	294.95	37.59	96872	110.47	9889	441.32	35.03	50.11
3rd quarter	57.70	733.28	2151.30	396.87	104.21	16371	8795	351.03	310.74	39.07	101638	117.35	10555	451.70	35.50	52.78
4th quarter	57.70	713.00	2089.99	385.77	101.31	15934	8559	339.44	305.02	39.11	99285	114.17	10338	440.84	34.79	51.36
% Difference																
4th Qu. 1997 /4th Qu 1996	0.3	15.2	15.3	14.4	15.2	14.9	15.5	14.1	15.7	11.7	13.4	15.7	16.3	14.8	-1.1	12.7 %

TABLE 15C

STEAM COAL IMPORTS

Average price in national currencies per tce

Reference date	USD	ASCH	BFR	DKR	DM	DRA	PTA	FF	FM	IRL	LIT	HFL	ESC	SWK	UKL	ECU
1996																
1st quarter	50.31	519.45	1518.43	285.59	73.86	12145	6223	253.29	227.97	31.85	79156	82.70	7662	341.15	32.86	39.08
2nd quarter	48.27	516.98	1510.55	283.50	73.48	11695	6153	249.00	227.86	30.73	75074	82.21	7554	325.05	31.67	38.48
3rd quarter	47.77	503.47	1473.71	275.99	71.55	11369	6047	243.36	216.70	29.70	72676	80.25	7338	316.90	30.73	37.49
4th quarter	48.22	519.17	1520.31	282.89	73.78	11626	6212	249.49	221.09	29.36	73394	82.77	7453	322.05	29.51	38.21
1997																
1st quarter	47.69	555.75	1628.99	301.22	78.97	12392	6672	266.53	235.23	29.89	77999	88.75	7921	350.93	29.23	40.45
2nd quarter	48.08	579.99	1700.58	313.85	82.41	13074	6959	277.87	247.49	31.54	81285	92.69	8298	370.31	29.40	42.05
3rd quarter	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4th quarter	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
% Difference																
2nd Qu 1997 /2nd Qu 1996	**-0.4**	**12.2**	**12.6**	**10.7**	**12.2**	**11.8**	**13.1**	**11.6**	**8.6**	**2.6**	**8.3**	**12.7**	**9.8**	**13.9**	**-7.2**	**9.3 %**

TABLE 16

WORLD HARD COAL PRODUCTION AND TRADE

I. WORLD TRADE BY COUNTRY AND REGION	1995	1996	1997 (1)
Community imports from third countries	140	141	145
Imports : Japan	123	126	134
Imports : NIC-Asia (2)	82	83	92
Imports : other countries	87	90	91
(a) Subtotal coal sea-borne trade	**432**	**440**	**462**
of which: - Coking coal	192	190	200
- Others	240	250	262
Intra-Community coal trade	6	5	5
Intra-Eastern European trade (3)	10	12	12
USA-Canada trade	9	12	16
Other overland trade	11	9	9
(b) Subtotal regional trade	**36**	**38**	**42**
(c) TOTAL WORLD TRADE (=a+b)	**468**	**479**	**505**
of which: - Coking coal	192	190	
- Others	276	289	505
Difference from year to year (%)	***12.5***	***2.2***	***5.4***
II. WORLD PRODUCTION OF COAL			
Western Europe	136	127	123
(EUR)	*136*	*127*	*123*
North America	897	925	954
(USA)	*859*	*885*	*913*
(Canada)	*39*	*40*	*41*
CIS	340	308	
China	1361	1374	1364
Poland	137	138	140
South Africa	206	208	183
Australia	191	193	
India	273	289	
Japan	6	6	4
Latin America	39	41	43
(Colombia)	*26*	*30*	
Rest of the world	120	133	943
(d) TOTAL WORLD PRODUCTION OF COAL	**3707**	**3741**	**3754**
III. SEA-BORNE TRADE OF COAL IN % OF WORLD PRODUCTION (a/d)	**11.7**	**11.8**	**12.3**

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(1) Commission estimates : March 1998

(2) Newly-Industrialised Countries in East Asia : Hong Kong, South Korea and Taiwan

(3) Countries with an economy in transition (Bulgaria, Czech Republic, Slovakia, Hungary, Poland, Romania, CIS)

TABLE 17

IMPORTS OF HARD COAL FROM THIRD COUNTRIES

(In millions of metric tons)

	1995 Actual	1996 Actual	1997 Estimates	1998 Forecasts
A. By country of destination				
Belgium	13.7	12.5	11.9	11.5
Denmark	13.0	12.4	13.5	10.5
Germany	13.9	16.4	17.5	19.3
Greece	1.4	1.8	1.8	1.9
Spain	13.6	11.8	8.8	10.9
France	12.8	15.1	14.3	13.7
Ireland	2.7	2.6	3.1 *	2.9 *
Italy	18.5	16.5	16.3	16.3 *
Luxembourg	0.1	0.1	0.1	0.1
Netherlands	17.0	16.6	16.8	17.0
Austria	2.9	3.4 +	3.4 *	3.4 *
Portugal	6.0	5.3	5.8	4.8
Finland	5.7	6.2	7.0	6.7
Sweden	3.5	3.2	3.2 *	3.2 *
United Kingdom	15.6	17.3	22.0 *	20.5 *
EUR-15	**140.3**	**141.2**	**145.6**	**142.7**
B. By country of origin				
USA	40.7	39.2	39.3	37.5
Canada	4.0	4.8	5.0	4.9
Australia	19.1	15.1	16.2	15.6
South Africa	29.0	32.5	31.8	32.0
Poland	18.4	16.3	16.7	15.5
CIS	5.5	3.7	3.6	3.3
China	2.7	0.9	1.3	1.4
Colombia	10.6	16.2	21.3	21.3
Others	10.4	12.6	10.3	11.3
EUR-15	**140.3**	**141.2**	**145.6**	**142.7**

* Commission estimates

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TABLE 18

COAL IMPORTS FROM THIRD COUNTRIES

(In thousands of metric tons)

1997	U.S.A	Canada	Australia	South Africa	Poland	CIS	China	Colombia	Others	Total Imports
Belgium	4500	237	2223	3797	325	300	204	175	115	11876
Denmark	300	300	1700	4050	3400	300		3050	400	13500
Germany	2500	100	1000	6500	3500	100		2500	1300	17500
Spain	3500	400	900	2500	120	40		100	1280	8840
France	3900	750	2800	2400	750	20	400	2300	930	14250
Greece	300			850		400		250		1800
Ireland	949 *			176 *				1638 *	380 *	3143
Italy	6960	1040	2120	3720	200	480	500	960	320	16300
Luxembourg				100						100
Netherlands	4500	350	800	2900	1100		100	4100	2950	16800
Austria					1565 *	146 *			1691 *	3402 *
Portugal	1613	165	256	1759				1785	238	5816
Finland	553	40		325	3977	1468		482	190	7035
Sweden	930 *	51 *	514 *		1261 *	271 *	16 *		170 *	3213 *
UK	8800 *	1600 *	3900 *	2750 *	550 *	100 *	60 *	3940 *	300 *	22000 *
EUR-15	39305	5033	16213	31827	16748	3625	1280	21280	10264	145575

(In thousands of metric tons)

1998	U.S.A	Canada	Australia	South Africa	Poland	CIS	China	Colombia	Others	Total Imports
Belgium	4455	249	2112	3607	309	270	194	184	127	11507
Denmark	250	250	1350	3150	2650	200		2350	300	10500
Germany	2900	200	1200	6800	3700	100		2800	1600	19300
Spain	3600	400	900	4100	50	50		600	1200	10900
France	3900	650	2600	2150	700	20	450	2150	1100	13720
Greece	300			950		400		250		1900
Ireland	875 *			162 *				1510 *	350 *	2897
Italy	6960 *	1040 *	2120 *	3720 *	200 *	480 *	500 *	960 *	320 *	16300 *
Luxembourg				100						100
Netherlands	4500	400	800	2900	1100		100	4100	3100	17000
Austria					1565 *	146 *			1691 *	3402 *
Portugal	996	165		1535				1200	945	4841
Finland	616	40		325	3741	1310		482	150	6664
Sweden	930 *	51 *	514 *		1261 *	271 *	16 *		170 *	3213 *
UK	7200 *	1500 *	4000 *	2500 *	200 *	50 *	100 *	4750 *	200 *	20500 *
EUR-15	37482	4945	15596	31999	15476	3297	1360	21336	11253	142744

* Commission estimates

TABLE 19A

INTRA-COMMUNITY TRADE OF COAL IN 1998

(In thousands of metric tons)

To \ From ---->	Belgium	Denmark	Germany	Spain	France	Greece	Ireland	Italy	Luxem-bourg	Nether-lands	Austria	Portugal	Finland	Sweden	United Kingdom	Total deliveries / Total receipts
Belgium			200		5 *					350					120 *	675
			253		1					40					92	386
Denmark	1															1
Germany	223				80 *					1350					2080 *	3733
	100				30					170						300
Spain	14		20							50					300 *	384
	50		100		40					40					70	300
France	450		130							200					180 *	960
	90		150							5					105	350
Greece																
Ireland															380 *	380
															10	10 *
Italy			5		4 *											9
Luxembourg	50															50
	42		10							13						65
Netherlands	300		5		1 *											306
	150		50													200
Austria																
			1 *		2 *											3 *
Portugal					1 *											1
Finland															20	20
Sweden	20														20 *	40
	12 *	14 *								1 *					8 *	35 *
United Kingdom	6		40							350						396
Total deliveries	1064		400		91 *					2300					3100 *	6955
Total receipts	394	14	464		33					229					215	1649

1st Line : data supplied by the exporting Member State; 2nd Line : data supplied by the importing Member State

* Commission estimates

TABLE 19B

INTRA-COMMUNITY TRADE OF COAL IN 1997

(In thousands of metric tons)

From ---> / To	Belgium	Denmark	Germany	Spain	France	Greece	Ireland	Italy	Luxem-bourg	Nether-lands	Austria	Portugal	Finland	Sweden	United Kingdom	Total deliveries / Total receipts
Belgium			250		10 *					300					100 *	660
			253		1					40					92	386
Denmark															10 *	10
Germany	197				156 *					1300					360 *	2013
	150				50					300						500
Spain	20		25							50					120 *	215
	30		100		35					20					65	250
France	430		130							200					160 *	920
	5		170							5					140	320
Greece																
Ireland			1							10					430 *	441
															11	11
Italy			10		9 *					10						29
Luxembourg	33															33
	65		14							20						99
Netherlands	280		10		1 *											301
	150		50													200
Austria			2													2
			1 *		2 *											3 *
Portugal					1 *											1
Finland																
Sweden	10		2												20 *	32
	12 *	14 *								1 *					8	35 *
United Kingdom	10		70							330						410
			100 *													100 *
Total deliveries	990		500		178					2200					1200 *	5068
Total receipts	382	14	588		53					366					251	1904

1st Line : data supplied by the exporting Member State; 2nd Line : data supplied by the importing Member State

* Commission estimates

TABLE 20A

INTRA-COMMUNITY TRADE OF COKE IN 1998

(In thousands of metric tons)

From —> / To	Belgium	Denmark	Germany	Spain	France	Greece	Ireland	Italy	Luxem-bourg	Nether-lands	Austria	Portugal	Finland	Sweden	United Kingdom	Total deliveries / Total receipts
Belgium					54 *					200						254
			1		29					3					1	34
Denmark					1 *											1
			5 *	6 *											4 *	15
Germany	98			40	57 *					300					35 *	530
					50				150	200						400
Spain			5		16 *			6 *								27
					10							10			10	30
France	118		10	30				30 *		350					25 *	563
	70									280						350
Greece								6 *								6
								2 *								2
Ireland																
Italy			15	10	60 *					50						135
					26 *					4 *						30 *
Luxembourg	229		5													234
Netherlands	28		30		11 *											69
	25		75													100
Austria	1		10		7 *			8 *								26
			24 *		8 *			19 *								51 *
Portugal				10												10
Finland			5		37 *					50						92
	6		2		27					140					27	202
Sweden	6		20		45 *										40 *	111
	30			8	13			5		27			2		64	149
United Kingdom	8			10	32 *					50						100
	20 *				40 *					80 *						140 *
Total deliveries	488		100	100	320 *			50 *		1000					100 *	2158
Total receipts	151		107	14	193			26	150	734			2		96	1503

1st Line : data supplied by the exporting Member State; 2nd Line : data supplied by the importing Member State

* Commission estimates

TABLE 20B

INTRA-COMMUNITY TRADE OF COKE IN 1997

(In thousands of metric tons)

From —> / To	Belgium	Denmark	Germany	Spain	France	Greece	Ireland	Italy	Luxem-bourg	Nether-lands	Austria	Portugal	Finland	Sweden	United Kingdom	Total deliveries / Total receipts
Belgium					47 *					200						247
					20					1					1	22
Denmark					1 *											1
			6 *	7 *											4 *	17
Germany	55			40	50 *					275					10 *	430
					50				150	200						400
Spain			5		14 *			6								25
					10							10			5	25
France	153		5	30				30		325					20 *	563
	70									280						350
Greece	1							6								7
								2 *								2
Ireland																
Italy			15	5	52 *					30						102
					26					4						30
Luxembourg	180		5													185
	67									141						208
Netherlands	30		25		9 *											64
	25		75													100
Austria	1		10		6 *			8								25
			24 *		8 *			19 *								51 *
Portugal				10												10
Finland			5		32 *					50						87
	6		2		27					140					27	202
Sweden	18		20		39 *										50 *	127
	30 *			8 *	13 *			5 *		27 *			2 *		64 *	149 *
United Kingdom	1			15	28 *					20						64
	20 *				35 *				80 *							135 *
Total deliveries	439		90	100	278 *			50		900					80 *	1937
Total receipts	218		107	15	179			26	230	793			2		96	1691

1st Line : data supplied by the exporting Member State; 2nd Line : data supplied by the importing Member State

* Commission estimates

TABLE 21

STOCKS

(In millions of metric tons)

	Producers (Hard coal)			Power Stations (Hard coal)			Coking plants (Coke)			Coking plants (Hard coal)		
	1996 Actual	1997 Estimate	1998 Forecast	1996 Actual	1997 Estimate	1998 Forecast	1996 Actual	1997 Estimate	1998 Forecast	1996 Actual	1997 Estimate	1998 Forecast
Belgium	0.0			0.4	0.5		0.1	0.1		0.3	0.3	
Denmark				5.7	7.7	7.5						
Germany	11.3	11.6	11.6	10.3	8.0	5.0	1.5	1.1	0.9	0.3	0.3	0.3
Spain	0.7	0.9	0.6	11.3	9.3	9.6	0.2	0.2	0.2	0.5	0.5	0.5
France	0.7	0.6	0.6	5.3	4.8	5.3	0.6	0.5	0.5	0.2	0.2	0.2
Greece							0.0	0.0	0.0 •			
Ireland	0.0	0.0	0.0 •	0.3	0.5 •	0.4 •						
Italy				1.3	1.2 •	1.2 •	0.5	0.5 •	0.4 •	0.9 •	0.9 •	n.a.
Luxembourg												
Netherlands				1.8 •	1.8 •	1.8 •	0.3	0.3 •	n.a.	0.5 •	0.5 •	n.a.
Austria				1.4	1.4 •	1.4 •						
Portugal				1.1	1.2	1.2	0.0	0.0	0.0	0.1	0.1	0.2
Finland				2.0	2.0	2.0 •				0.3	0.2	n.a.
Sweden				0.6	0.6 •	0.6 •	0.1	0.2 •	0.1 •	0.7	0.7 •	n.a.
United Kingdom	4.1	4.4 •	n.a.	9.1	14.3 •	9.0 •	0.5	0.5 •	n.a.	1.2	1.2 •	n.a.
EUR-15	16.8	17.6	n.a.	50.5	53.1	45.0	3.8	3.4	n.a.	5.1	5.0	n.a.

• Commission estimates

TABLE 22

HARD COAL BALANCE SHEET FOR 1998

(In thousands of metric tons)

	Belgium	Denmark	Germany	Spain	France	Greece	Ireland	Italy	Luxem-bourg	Nether-lands	Austria	Portugal	Finland	Sweden	United Kingdom	EUR-15
1. PRODUCTION (t = t)			49950	17100	5426		2								35500 *	107978
2. RECOVERIES	325		200		490		1								1200 *	2216
3. RECEIPTS FROM ECSC COUNTRIES	386		300	300	350		10		65	200	3 *			35 *		1649
4. IMPORTS FROM THIRD COUNTRIES	11507	10500	19300	10900	13720	1900	2897	16300 *	100	17000	3402 *	4841	6664	3213 *	20500 *	142744
5. AVAILABILITIES (1+2+3+4)	**12218**	**10500**	**69750**	**28300**	**19986**	**1900**	**2910**	**16300 ***	**165**	**17200**	**3405 ***	**4841**	**6664**	**3248 ***	**57200 ***	**252938**
6. TOTAL INLAND DELIVERIES	11153	10500	69160	28300	17476	1900	2910	16900 *	165	14250	3120 *	4841	6664	3341 *	52800 *	243480
A.- POWER STATIONS AT MINES			1200		2480											3680
B.- POWER STATIONS	4517	10100	45400	24000	2210	205	2300	8000 *		8800	1088 *	3915	4959	1039 *	36200 *	152733
C.- COKING PLANTS	4639		13250	3300	5520			6950 *		4100	1700 *	491	1280	1592 *	8300 *	51132
D.- IRON AND STEEL INDUSTRY	900	100	2200		2900	130		1250 *	45	1000				262 *	900 *	9687
(of which POWER STATIONS)																
E.- OTHER INDUSTRIES	625	250	5600	650	3200	1560	200	650 *	120	325	330 *	435	415	422 *	4000 *	18782
(of which POWER STATIONS)			*3400*		*500*					*275*			*300*		*1200* *	5675
F.- DOMESTIC HEATING	450	50	1100	270	930		410	50 *							2440 *	5700
G.- MISCELLANEOUS (TOTAL 1 - 6)	22		410	80	236	5				25	2 *			28 *	960 *	1766
1. ISSUE TO WORKERS			*70*	*40*	*6*										*140* *	*256*
2. PATENT FUEL PLANTS	*22*		*300*		*210*										*805* *	*1337*
3. OWN CONSUMPTION AT MINES			*20*	*40*	*20*										*5* *	*86*
4. GASWORKS																
5. RAILWAYS						*1*					*2* *				*10* *	*13*
6. OTHERS			*20*			*4*				*25*				*26* *		*75*
7. DELIVERIES TO ECSC COUNTRIES	1064		400		91 *					2300					3100 *	*6955*
8. EXPORTS TO THIRD COUNTRIES	27		10		9 *					150					300 *	*496*
9. TOTAL DELIVERIES (6+7+8)	**12244**	**10500**	**69570**	**28300**	**17576**	**1900**	**2910**	**16900 ***	**165**	**16700**	**3120 ***	**4841**	**6664**	**3341 ***	**56200 ***	**243976**
10. MOVEMENT OF PRODUCERS' AND IMPORTERS STOCKS (5-9)	-26		180		2410			-600 *		500	285 *			-93 *	1000	8962

* Commission estimates

TABLE 23

HARD COAL BALANCE SHEET FOR 1997

(In thousands of metric tons)

	Belgium	Denmark	Germany	Spain	France	Greece	Ireland	Italy	Luxem-bourg	Nether-lands	Austria	Portugal	Finland	Sweden	United Kingdom	EUR-15
1. PRODUCTION (t = t)			52000	17500	5981		2								47650 *	123133
2. RECOVERIES	361		200		500		3								1450 *	2514
3. RECEIPTS FROM ECSC COUNTRIES	386		500	250	320		11		99	200	3 *			35 *	100 *	1904
4. IMPORTS FROM THIRD COUNTRIES	11876	13500	17500	8840	14250	1800	3143	16300	100	16800	3402 *	5816	7035	3213 *	22000 *	145575
5. AVAILABILITIES (1+2+3+4)	12623	13500	70200	26590	21051	1800	3159	16300	199	17000	3405 *	5816	7035	3248 *	71200 *	271222
6. TOTAL INLAND DELIVERIES	11601	13500	69120	28378	21726	1800	3159	16900	199	14200	3320 *	5816	7035	3341 *	68270 *	268365
A.- POWER STATIONS AT MINES			1200		2835											4035
B.- POWER STATIONS	4609	13000	45400	23928	4280	200	2493	8000		8700	1088 *	4605	5443	1039 *	50400 *	173185
C.- COKING PLANTS	4883		13130	3350	7125			6950		4100	1900 *	491	1166	1592 *	8500 *	53187
D.- IRON AND STEEL INDUSTRY	1000	100	2100		2880	130	1	1250	79	1000				262 *	750 *	9552
(of which POWER STATIONS)																
E.- OTHER INDUSTRIES	621	300	5700	700	3400	1465	209	650	120	365	330 *	720	426	422 *	4500 *	19928
(of which POWER STATIONS)			*3500*		*510*					*300*			*300*		*1350* *	5960
F.- DOMESTIC HEATING	468	100	1150	300	950		456	50		10					3050 *	6534
G.- MISCELLANEOUS (TOTAL 1 - 6)	20		440	100	256	5				25	*2* *			26 *	1070 *	1944
1. ISSUE TO WORKERS			*75*	*50*	*6*										*160* *	*291*
2. PATENT FUEL PLANTS	*20*		*310*		*220*										*895* *	*1445*
3. OWN CONSUMPTION AT MINES			*25*	*50*	*30*										*5* *	*110*
4. GASWORKS																
5. RAILWAYS						*1*					*2* *				*10* *	*13*
6. OTHERS			*30*			*4*				*25*				*26* *		*85*
7. DELIVERIES TO ECSC COUNTRIES	990		500		178 *					2200					1200 *	*5068*
8. EXPORTS TO THIRD COUNTRIES	16		20		17 *					200					200 *	*453*
9. TOTAL DELIVERIES (6+7+8)	12607	13500	69640	28378	21921	1800	3159	16900	199	16600	3320 *	5816	7035	3341 *	69670 *	268818
10. MOVEMENT OF PRODUCERS' AND IMPORTERS STOCKS (5-9)	16		560	-1788	-870			-600		400	85 *			-93 *	1530 *	2404

* Commission estimates

TABLE 24

COKE BALANCE SHEET FOR 1998

(In thousands of metric tons)

	Belgium	Denmark	Germany	Spain	France	Greece	Ireland	Italy	Luxem-bourg	Nether-lands	Austria	Portugal	Finland	Sweden	United Kingdom	EUR-15
1. PRODUCTION (t=t)	3000		10700	2400	5300			5100 *		3000	1300 *	330	820	1150 *	6030 *	39130
2. RECEIPTS FROM ECSC COUNTRIES	34	15	400	30	350	2		30 *		100	51 *		202	149 *	140 *	1503
3. IMPORTS FROM THIRD COUNTRIES	561	10	3100	220	400	12	9	230 *		200	549 *	30	156	217 *	1440 *	7134
4. TOTAL AVAILABILITIES (1+2+3)	3595	25	14200	2650	6050	14	9	5360 *		3300	1900 *	360	1178	1516 *	7610 *	48264
5. TOTAL INLAND DELIVERIES	3106	25	14645	2530	7055	14	7	5370 *		2300	2000 *	330	1178	1582 *	7360 *	47501
A.- STEEL INDUSTRY	3000		12500	2530	6000			5120 *		2100	1440 *	250	1165	1477 *	6650 *	42232
B.- OTHER INDUSTRIES	92	25	1200		850	14		200 *		200	260 *	80	13	105 *	450 *	3489
C.- DOMESTIC SECTOR	3		300		85		7	50 *			273 *				230 *	948
D.- MISCELLANEOUS of which :	10		645		120						27 *				30 *	832
1. ISSUE TO WORKERS			*240*												*30* *	*270*
2. OWN CONSUMPTION			*5*													*5*
3. OTHERS	*10*		*400*		*120*						*27* *					*557*
6. DELIVERIES TO ECSC COUNTRIES	488		100	100	320 *			50 *		1000					100 *	2158
7. EXPORTS TO THIRD COUNTRIES	30		10	20	70 *			60 *				30			150 *	370
8. TOTAL DELIVERIES (5+6+7)	3623	25	14755	2650	7445	14	7	5480 *		3300	2000 *	360	1178	1582 *	7610 *	47871
9. STOCK MOVEMENT AT PRODUCTION & IMPORTS (4-8)	-28		-555		-1395		2	-120 *			-100 *			-66 *		-1607

Commission estimates

TABLE 25

COKE BALANCE SHEET FOR 1997

(In thousands of metric tons)

	Belgium	Denmark	Germany	Spain	France	Greece	Ireland	Italy	Luxem-bourg	Nether-lands	Austria	Portugal	Finland	Sweden	United Kingdom	EUR-15
I. PRODUCTION (t=t)	3600		10600	2400	5260			5100		2800	1500 *	330	807	1150 *	6200 *	39947
II. RECEIPTS FROM ECSC COUNTRIES	22	17	400	25	350	2		30	208	100	51 *		202	149 *	135 *	1691
III. IMPORTS FROM THIRD COUNTRIES	575	13	3200	245	300	12	8	230	6	200	549 *	30	156	217 *	1550 *	7291
IV. TOTAL AVAILABILITIES (1+2+3)	4197	30	14200	2670	5910	14	8	5360	214	3200	2100 *	360	1165	1516 *	7885 *	47138
V. TOTAL INLAND DELIVERIES	3758	30	14955	2520	6060	14	8	5370	214	2300	2000 *	330	1165	1582 *	7685 *	47991
A.- STEEL INDUSTRY	3600		12700	2520	5000			5120	214	2100	1440 *	250	1152	1477 *	6800 *	42373
B.- OTHER INDUSTRIES	140	30	1250		850	14		200		200	260 *	80	13	105 *	600 *	3742
C.- DOMESTIC SECTOR	7		350		90		8	50			273 *				250 *	1028
D.- MISCELLANEOUS of which :	11		655		120						27 *				35 *	848
1. ISSUE TO WORKERS			*250*												*35* *	*285*
2. OWN CONSUMPTION			*5*													*5*
3. OTHERS	*11*		*400*		*120*						*27* *					*558*
VI. DELIVERIES TO ECSC COUNTRIES	439		90	100	278 *			50		900					80 *	1937
VII. EXPORTS TO THIRD COUNTRIES			10	20	62 *			60				30			120 *	302
VIII. TOTAL DELIVERIES (5+6+7)	4197	30	15055	2640	6400	14	8	5480	214	3200	2000 *	360	1165	1582 *	7885 *	48293
IX. STOCK MOVEMENT AT																
PRODUCTION & IMPORTS (4-8)			-455	30	-490		0	-120			100			-66 *		-1155

Commission estimates

TABLE 26

LIGNITE AND PEAT BALANCE SHEETS FOR 1998

LIGNITE

(In thousands of metric tons)

	Belgium	Germany	Spain	France	Greece	Ireland	Italy	Luxem-bourg	Nether-lands	Austria	EUR-15
. RAW PRODUCT											
AVAILABILITIES :	226	169995	9400	1000	62200	9	210 *	10	50	1105 *	244205
PRODUCTION		168145	9400	1000	62200		200 *			1105 *	242050
IMPORTS	226	1850				9	10 *	10	50		2155
UTILIZATION :	226	169995	9400	1020	62200	9	210 *	10	50	998 *	244118
BRIQUETTING PLANTS		18300			240				20	80 *	18640
POWER STATIONS		150500	9400	400	61280		210 *			898 *	222688
OTHERS	226	1195		620	680	9		10	30	20 *	2790
. BRIQUETTES											
AVAILABILITIES :	14	6820			110	3		5		172 *	6931
PRODUCTION		6470			110						6580
ARRIVAL FROM ECSC COUNTRIES	14					3		5		171 *	193
IMPORTS FROM THIRD COUNTRIES		350								1 *	351
UTILIZATION	15	6820			110	3		5		151 *	6482
POWER STATIONS		200			75	3				10 *	288
INDUSTRY		2390								19 *	2409
DOMESTIC	13	3000						5		120 *	3138
DELIVERIES TO OTHER ECSC COUNTRIES	2	620									622
EXPORTS TO NON-MEMBER COUNTRIES		30									30
OTHERS		580			35					2 *	617

PEAT

(In thousands of metric tons)

	Ireland	Finland	Sweden	EUR-15
. RAW PRODUCT				
AVAILABILITIES :	4850	7400	814 *	13064
PRODUCTION	4850	7400	800 *	13050
IMPORTS			14 *	14
UTILIZATION :	4850	7400	805 *	13055
BRIQUETTING PLANTS	600	2068		2668
POWER STATIONS	3000	5032		8032
OTHERS	1250	300	809 *	2359
. BRIQUETTES				
AVAILABILITIES :	270	790		1060
PRODUCTION	270	790		1060
ARRIVAL FROM ECSC COUNTRIES				
IMPORTS FROM THIRD COUNTRIES				
UTILIZATION	270	790		1060
POWER STATIONS		537		537
INDUSTRY		221		221
DOMESTIC	266			266
DELIVERIES TO OTHER ECSC COUNTRIES				
EXPORTS TO NON-MEMBER COUNTRIES				
OTHERS	4	32		36

Commission estimates

TABLE 27

LIGNITE AND PEAT BALANCE SHEETS FOR 1997

LIGNITE

(In thousands of metric tons)

	Belgium	Germany	Spain	France	Greece	Ireland	Italy	Luxem-bourg	Nether-lands	Austria	EUR-15
A. RAW PRODUCT											
- AVAILABILITIES :	268	177407	9400	1140	60100	10	210	10	50	1105 *	249700
PRODUCTION		175557	9400	1100	60100		200			1105 *	247462
IMPORTS	268	1850		40		10	10	10	50		2238
- UTILIZATION :	268	177407	9400	1120	59900	10	210	10	50	998 *	249373
BRIQUETTING PLANTS		22800			240				20	80 *	23140
POWER STATIONS		153000	9400	500	59000		210			898 *	223008
OTHERS	268	1607		620	660	10		10	30	20 *	3225
I. BRIQUETTES											
- AVAILABILITIES :	20	7390			110	3		5		172 *	7501
PRODUCTION		7040			110						7150
ARRIVAL FROM ECSC COUNTRIES	20					3		5		171 *	199
IMPORTS FROM THIRD COUNTRIES		350				0				1 *	351
UTILIZATION	20	7390			110	3		5		151 *	7054
POWER STATIONS		200			75	3				10 *	288
INDUSTRY		2620								19 *	2639
DOMESTIC	15	3300						5		120 *	3440
DELIVERIES TO OTHER ECSC COUNTRIES	5	620									625
EXPORTS TO NON-MEMBER COUNTRIES		30									30
OTHERS		620			35					2 *	657

PEAT

(In thousands of metric tons)

	Ireland	Finland	Sweden	EUR-15
- AVAILABILITIES :	5062	7400	814 *	13276
PRODUCTION	5062	7400	800 *	13262
IMPORTS			14 *	14
- UTILIZATION :	4917	7400	809 *	13126
BRIQUETTING PLANTS	460	2072		2532
POWER STATIONS	3102	5032		8134
OTHERS	1355	296	809 *	2460
I. BRIQUETTES				
- AVAILABILITIES :	279	790		1069
PRODUCTION	279	790		1069
ARRIVAL FROM ECSC COUNTRIES				
IMPORTS FROM THIRD COUNTRIES				
UTILIZATION	279	790		1069
POWER STATIONS		537		537
INDUSTRY		221		221
DOMESTIC	275			275
DELIVERIES TO OTHER ECSC COUNTRIES				
EXPORTS TO NON-MEMBER COUNTRIES				
OTHERS	4	32		36

Commission estimates