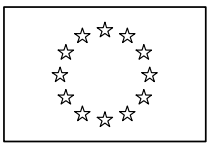

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The market for solid fuels in the Community in 2003 and 2004

TABLE OF CONTENTS

The following definitions apply in this document:

– Steam coal: coal used for the generations of electricity and heat.

– Coking coal: coal used for the production of coke.

– Metallurgical coal: coking coal plus PCI coal used in the steel industry.

– PCI coal: Pulverised Coal Injection: thermal coal injected into the blast furnaces.

This report has been produced using data provided by the Member States and observations from market participants up to August 2004

The views expressed in this document do not commit the European Commission

INTRODUCTION

Article 7 of Council Regulation EC N° 405/2003 of 27th February 2003 concerning the Community monitoring of imports of hard coal from Third Countries[1] provides that, "on the basis of the information collected in application of this Regulation, the Commission shall publish in an appropriate form, (…) during the first quarter of each year, a report on the market in solid fuels in the Community concerning the rpeceding year together wit a market outlook for the current year".

This annual report has been prepared to fulfil this requirement. There has been a very considerable delay in the publication of this report due to the transitional nature of the year 2004 and the necessary work to obtain and check the information for the annexed tables for the 25 Member States.

[1] Published in the Official Journal L62 of 06.03.2003, p. 1

TABLES AND GRAPHS INCLUDED IN THE REPORT

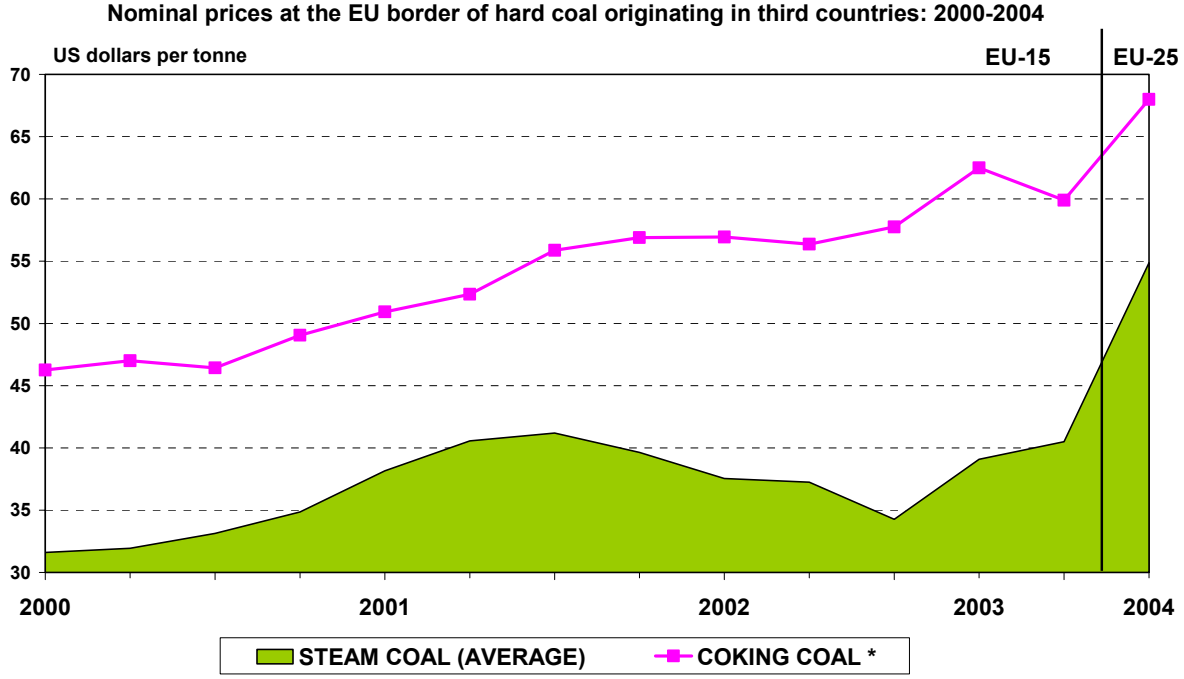
1. GENERAL CONSIDERATIONS

1.1. Three distinct periods over 2003/2004

2003 will remain a very special vintage in the memory of the actors on the coal and coke market and observers as many totally unexpected situations arose or were initiated. The first half of 2004 saw either an aggravation or an attenuation of these special circumstances.

Figure 1.

Nominal prices at the EU border of hard coal originating in third countries: 2000-2004



1.1.1. First half of 2003

During this period, coal prices and freight rates fell slightly after the short recovery of late 2002. While the situation did not return to the extreme lows of August 2002, when FOB2 prices at Richards Bay, the main South African coal export port, fell to $ 21 per metric tonne for South African coals, a low of $ 23 per metric tonne was nearly reached in April 2003 after a peak of $28 per tonne in late December 2002.

This situation did certainly not induce coal producers or shipowners to consider new investments. Buyers were not rushing to replenish stockpiles as they expected to have access to whatever they needed on steadily better terms.

1.1.2. Second half of 2003 through to the end of first half of 2004

Dramatic developments in the demand for steam and coking coal, together with freight and other raw materials, triggered by China during the summer led to coal and freight prices at levels never seen in living memory.

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[2] FOB: Free on Board

Steam coal FOB at Richards Bay reached $ 40 per metric tonne at the turn of the year and had climbed to $ 65 per metric tonne by early July 2004.

Coking coal prices, under pressure from the heavy demand for coke/steel, jumped from around mid-$40 per metric tonne FOB US East Coast and FOB Australia to a wide range of between $ 90 and $ 160 (spot) per metric tonne.

Freight prices started to rocket to unknown levels as Chinese demand for iron ore, coal and many other commodities rallied all available ships from the Atlantic to the Pacific.

Nevertheless, this abnormal activity calmed down by the end of the first quarter 2004 to more acceptable levels, which still remained substantially higher than those seen in mid-2003 (Table 3). As an example, Australian freight to ARA3 increased from $ 17 per metric tonne in July 2003 to $ 40 per metric tonne in January 2004, before falling back to around $ 23 per metric tonne at the end of June 2004.

Metallurgical coke experienced even more dramatic fluctuations. Chinese coke prices (12.5 % ash) exceeded the level of $ 100 per metric tonne/FOB China in late 2002, jumped to $ 150 per metric tonne in May 2003, rocketed to over $ 450 per metric tonne by the end of first quarter 2004 and then dropped to just under $ 300 per metric tonne by the end of June 2004.

1.1.3. Second half of 2004 onwards

As outlined above, the impressive increases of metallurgical coke and freight have now been somewhat reversed, even if coke prices remain very high in relation to costs of production, including mainly coking coal.

Freight rates are now more rewarding for shipowners, who have filled the order books of all shipyards worldwide and are waiting for the delivery of their new vessels (2005/2006). In the meantime, old ships have had their lifetime extended, instead of being scrapped as would usually have occurred to take advantage of the high steel scrap levels.

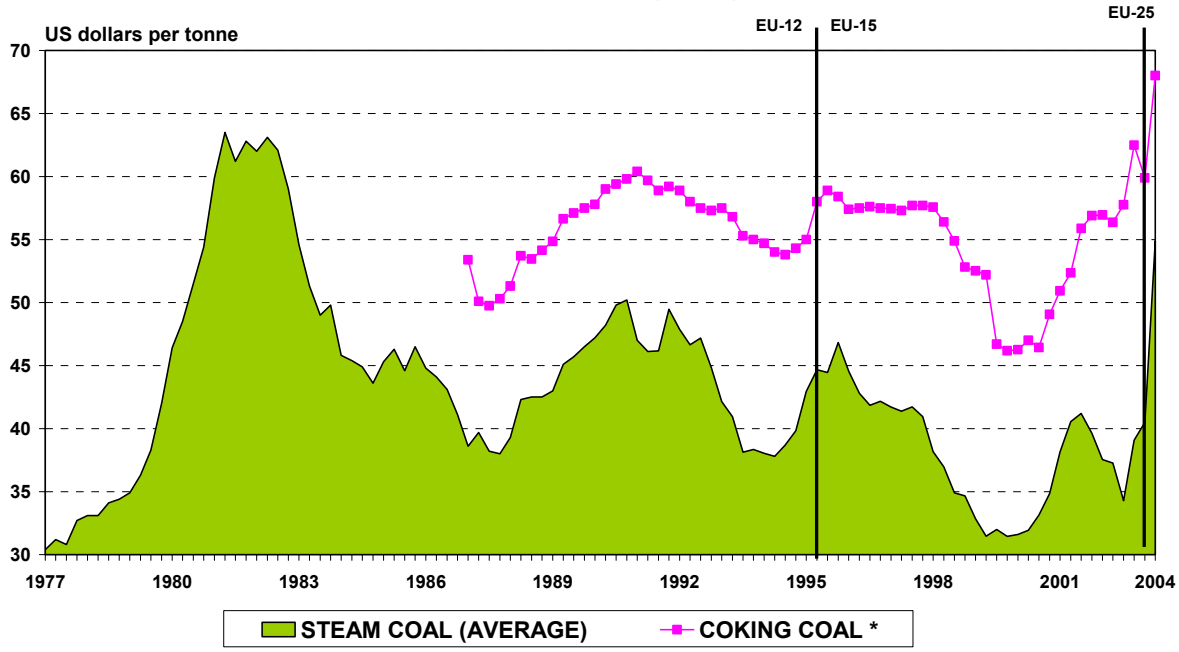
The FOB prices for steam and coking coal continue to progress and there is no sign that the situation will normalize in the near future. Indeed, it is unlikely to normalize before the end of 2005/2006.

The historical trend in average nominal prices at the EU border (FOB prices plus freight) can be seen in the following graph.

[3] ARA: Amsterdam, Rotterdam, Antwerp

Figure 2.

Nominal prices at the EU border of hard coal originating in third countries: 1977-2004



*Ash 7.5% (dry), Moisture 8%, Sulphur 0.8% (dry), Volatile matter 26% (dry)

1.2. Main factors influencing the market

When examining the main factors which have generated this unusual turmoil in the coal and coke market worldwide, it is important to underline that solid fuels like lignite and peat were unaffected as they are generally produced and consumed in the same geographical area.

They contributed to ensuring more stability in power generation, avoiding the fluctuations of the international coal trade, particularly seaborne.

1.2.1. China

China switched from being a large exporter to being a massive importer of numerous commodities, and India follows.

The impressive growth of China's economy continues to affect the world economy. China's GDP grew from 8 % in 2002 to 9.1 % in 2003. For the first quarter of 2004, a figure of 9.8 % year-on-year was announced, which surprised many experts. In the meantime, the rush on a number of commodities is provoking dramatic increases in prices and freight fixtures.

China used to export large quantities of cheap coke not only to India and Japan, but also to USA (close to 1 million metric tonnes in 2002) and to Europe (over 4.5 million metric tonnes in 2001 and 2002).

Prices were extremely competitive on the European market, which seriously affected indigenous European coke production. The independent coke plants in Germany, France (Coke de Drocourt) and Belgium (Cokeries d'Anderlues) closed.

This situation was reversed after the summer of 2003, as China gave greater priority to its own internal needs. This helped to generate the incredible increase in FOB prices highlighted above, as well as intense activity in the freight market. In addition, in order to secure a better quality of coke, Chinese producers decided to import massive quantities of high quality coking coal from mid-2003, mainly from Australia and Canada, and Chinese imports jumped from 250,000 metric tonnes in 2002 to 2.5 million metric tonnes in 2003, a figure which has already been reached by the end of June this year.

Due to high internal demand, China decided to issue fewer export licenses for coke. This decision generated major difficulties for the steel industry around the world and particularly in Europe, where a quota of 4.5 million metric tonnes was expected in 2004.

Several blast furnaces in Europe have had to reduce their intake due to scarcity of coke.

The EU Trade Commissioner led an official mission to China at the end of May 2004 in order to discuss, with the local authorities, the fulfilment of Chinese exporters' contracts to deliver the 4.5 million metric tonnes European quota before the end of 2004. Agreement was reached and China promised to ship the expected quantity. Nevertheless some observers have raised doubts whether this commitment would be achieved as, by the end of June 2004, less than 1.5 million metric tonnes had been shipped to Europe. Rapid increase in the demand for steel

The growth of China's economy has been particularly noticeable by the rapid increase of their demand for steel, which has been increasing year on year at a rate of 20 % or more since 2001.

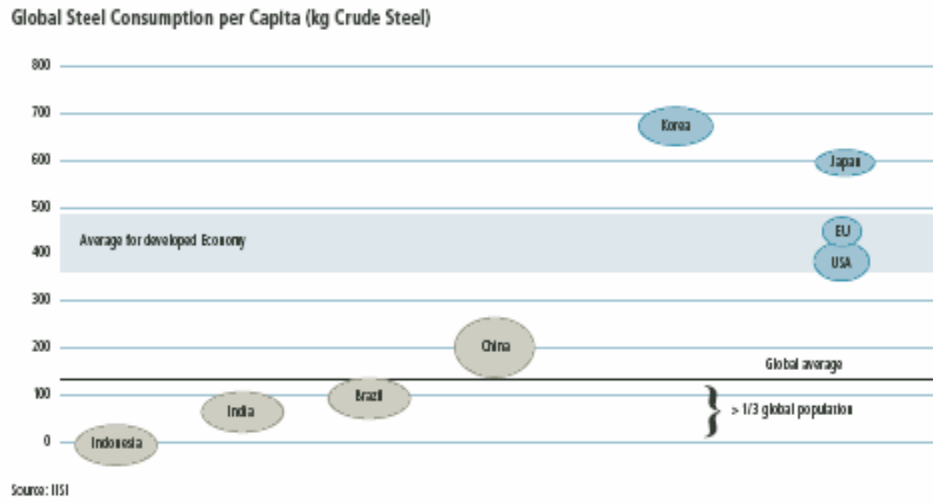
The level reached of over 230 million metric tonnes represents more than 26 % of worldwide apparent steel consumption (I.I.S.I.4), compared to the year 2000 when China, with 125 million metric tonnes, accounted for 16 % of world consumption.

While world crude steel production jumped from 903 million metric tonnes in 2002 to 963 million in 2003, China was responsible for nearly two thirds of this 60 million metric tonnes increase. And yet the per capita consumption of crude steel in China (at 189 kilos in 2002) has not yet even reached half of that of the USA (406 kilos) or EU-15 (399 kilos).

And per capita consumption of crude steel in India at the moment is only 32.3 kilos.

[4] International Iron and Steel Institute

Figure 3



This significant increase in steel production has evidently had a major impact on coke demand and consequently on the demand for coking coal. The following table indicates the average amount of coking coal needed to produce 1000 metric tonnes of crude steel, not only as an average worldwide but also specifically for China where less steel is produced using the Electric Arc Furnace technology and so proportionately higher amounts of coking coal are necessary.

Figure 4

Evaluation of the quantity of coke and coking coal needed to produce 1000 metric tonnes of crude steel[5]

		Average worldwide	China
a)	Crude Steel quantity	1000 metric tonnes	1000 metric tonnes
b)	Ratio B.O.F/Crudesteel produced[6]	63 %	83 %
c)	Crude steel in B.O.F. (a*b)	630 metric tonnes	830 metric tonnes
d)	Ratio Pig Iron/Crude steel[7]	1.115	1.115
e)	Pig iron quantity (c*d)	702 metric tonnes	925 metric tonnes
f)	Coke rate[8]	0.425 metric tonne	0.425 metric tonne
	Size coke needed (e*f)[9]	298 metric tonnes	393 metric tonnes
	Coke production required	351 metric tonnes	463 metric tonnes
	Coking coal necessary[10]	474 metric tonnes	625 metric tonnes

5 Table based on a presentation made by Mr L. Bohyn, Director of Roa Mining Cy Ltd. at Coaltrans Bali in June 2004

6 On a worldwide basis, 63 % of crude steel is produced in Basic Oxygen Furnaces (B.O.F). The remainder is generally produced in Electric Arc Furnaces (E.A.F.). However, in China, B.O.F. accounts for 83 % of the crude steel produced

7 A ratio of 1.115 is applied for production for production of pig iron (based on historical data).

8 An average coke rate of 425 kilos per tonne of hot metal has been taken

9 Sized coke is needed in blast furnaces in order to optimize the flow of reducing gases. 85 % of the coke produced (size: 25/80 mm or 40/80 mm) is used for this purpose and the remaining 15 % (fines) is available for sintering or other applications

10 Around 135 kilos of coking coal is needed to produce 100 kilos of coke

In other words, in order to cope with the increase of 60 million metric tonnes of crude steel production between 2002 and 2003 (China accounted for 38 million metric tonnes, with the balance of 22 million metric tonnes being produced by the rest of the world), around 34 million metric tonnes of coking coal were needed. Of this, close to 24 million metric tonnes were for China alone.

To continue this evaluation of the extra quantities of coal needed, coal for Pulverised Coal Injection (P.C.I.)[11] must also been taken into consideration. This technology introduced in the early 1980s is still progressing. The advantage is that 100 kilos of coal used for this purpose (generally anthracite type or mid-ash material) replaces around 135 kilos of coking coal which would be used for coke-making.

To generate the extra 60 million metric tonnes of crude steel produced in 2003 (based on the same pattern China/balance of the world), the PCI coal needed, at an average rate of 843 metric tonnes of pig iron per 1000 metric tonnes of steel and an average rate of 130 kilos of PCI coal per ton of hot metal, amounts to over 6.5 million metric tonnes.

Therefore, to summarize these calculations: in theory, the additional 60 million metric tonnes of crude steel production has required:

– 34 million metric tonnes of coking coal, and

– 6.5 million metric tonnes of PCI coal.

– Which gives a total of 40.5 million metric tonnes of coal!

This underlines the impact that rapidly increasing steel production is having on the international coal market. No doubt these new requirements will exert continuing pressure on the prices for coke and coking coal, until the projects for new mine capacity and improvement/rehabilitation in coking plants are realized due to better economic conditions.

1.2.2. Exchange rates

The table below shows very clearly how the weakening of the US dollar has affected main coal producers around the world.

[11] Pulverised Coal Injection: thermal coal injected into the blast furnaces

Figure 5

Exchange rates

US $ versus	Australian $	S. Afr. Rand	Canadian $	€ EURO	New-Zeal $
2002					
January	1,934	11,63	1,600	1,132	2.357
July	1,806	10,10	1,546	1,007	2.080
2003	11%	-25%	-4%	-17%	-21%
January	1,716	8,70	1,541	0,942	1.853
July	1,514	7,55	1,382	0,880	1.706
2004	24%	-20%	-16%	-16%	-20%
January	1,296	6,94	1,296	0,791	1.484
July	1,396	6,15	1,323	0,812	1.535
Ratio:					
Jan 2002/ Jan 2004	-33%	-40%	-19%	-30%	-37%
Jan 2002/ Jul 2004	-28%	-47%	-17%	-28%	-35%

South Africa obviously suffered more than other producers from the decline in the US dollar exchange rate and this was exacerbated through the first semester of 2004. For most of the other areas, the US dollar seems to have stabilized.

Nevertheless, Australia seemed to be in 2004 in a more favourable position than its main competitor in steam coal and PCI: South Africa.

China has maintained a fixed exchange rate of 8.277 Yuan to 1 US $ throughout the whole of the period under review.

1.2.3. Freight market under heavy pressure

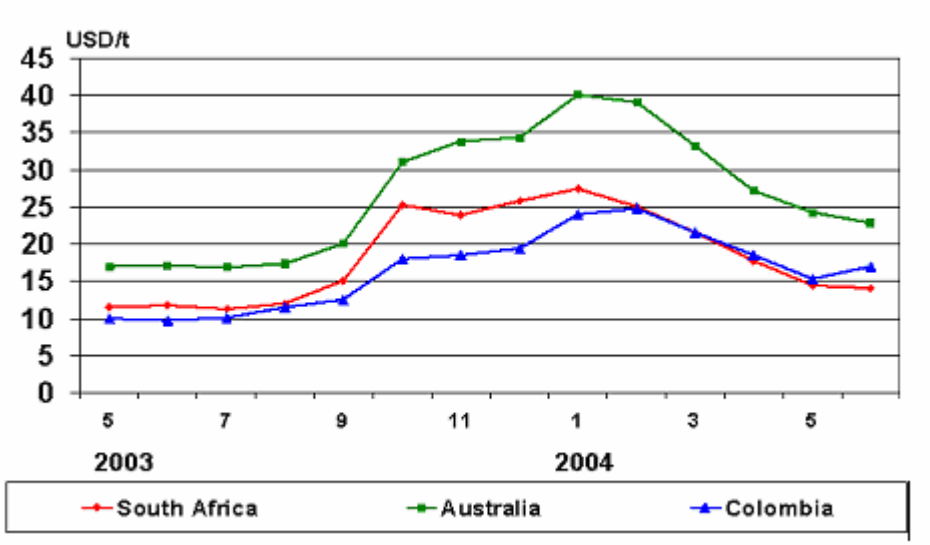
As mentioned earlier, Chinese demand for a number of commodities, and particularly iron ore and coal, has attracted a large number of dry bulk carriers from the Atlantic Basin to the Pacific.

Loading operations in Australia and Indonesia have been under heavy pressure: accidents in the coal terminals of Dalrymple Bay and Newcastle, heavy rain and political events in Indonesia have all provoked queuing and unusually long waiting times in ports. This has forced charterers to look for additional vessels to secure their deliveries.

As an example, the waiting time in Australia stood at up to 3 weeks in February 2004 (with a nearly comparable situation in Brazil and China) and a vessel was fixed between Abbot Point (Queensland-Australia) and Port Talbot (U.K.) at little less than $ 40 per metric tonne.

Figure 6

International freight development Australia – Colombia – South Africa to ARA (in US dollars per tonne)[12]



Freight rates have fluctuated considerably over the past two years. For example, Cape size vessels loading in Richards Bay bound for Rotterdam in October 2002 were quoted at around $ 8/metric tonne. By December 2003, the same voyage was fixed at more than $ 26/metric tonne.

From March 2004, prices started to come down and the South African rates to ARA fell into line with the Colombian freights to ARA (whose increase had been less spectacular) at a level below $ 20/metric tonne in April.

Freight levels then gradually came down further to $ 14-15 per metric tonne which is, in fact, still slightly above the traditional range for those routes. This can be explained by the higher bunker prices.

In mid- June, some rumours in the market indicated that China was coming back on the freight market as it had in July 2003, and prices reacted by quoting $ 2 to 3 per metric tonne extra. But this was not confirmed and by early July prices had fallen back to previous level around $ 15 per metric tonne.

The daily price for a Panamax size vessels in the Atlantic rose from $ 10,000 per day, in the early part of the fourth quarter of 2002, to over $ 34,000 per day in the late fourth quarter of 2003 and peaked at the end of February 2004 at around $ 50,000 per day. The situation then calmed down and level in early summer 2004 was established at $ 25-30,000 per day.

For Cape size vessels, daily prices for a round voyage in the Atlantic jumped from $ 15,000 per day to $ 30,000 per day in mid-2003, $ 75,000 per day in late December

[12] Source : Verein der Kohlenimporteure. ARA is Amsterdam, Rotterdam, Antwerp

2003 and up to 95,000 per day in late February 2004. In April 2004, daily prices came down to $ 45-50,000 and then fell to $ 40-45,000 per day.

The reason for this stability at a higher level is that some multiannual contracts have been negotiated by large consumers. This level is rewarding for the shipowners and is reasonably acceptable for the customers, certainly in comparison to the prices quoted in February 2004.

A three year contact for a Cape of 175,000 metric tonnes was quoted at $ 40,000 per day and a similar 3 years for 75,000 metric tonnes was quoted at $ 30,000/day.

With this pressure on the freight market, the order books for both Panamax and Cape size vessels are full for deliveries through 2006. On an existing Cape-size fleet of more than 600 vessels, over 120 (around 20 %) are on the order books. For Panamax, figures for existing fleet are close to 1,100, with 160 (around 15 %) on order.

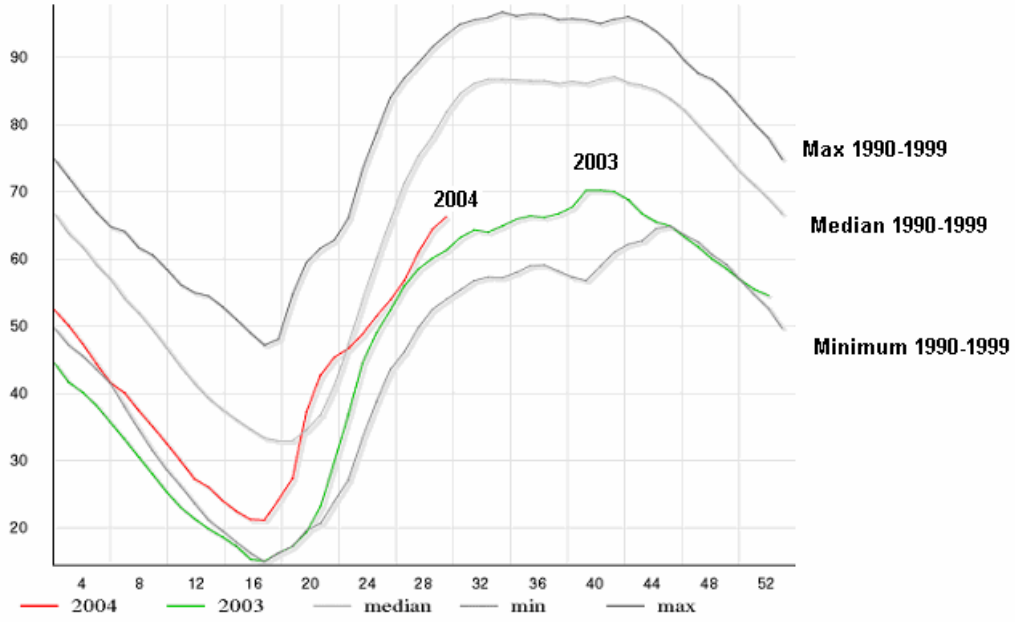
The life of the vessels is also being extended. The present average age for Panamax and Cape size is around 11 years, and now recycling of old vessel is taking place, with scrapping decisions postponed to take advantage of the current situation that began in the third quarter of 2003.

Market observers do not expect a significant decrease in current prices later on in the year, although there will be some adjustments that will continue in 2005. It is, however, clear that there will be no return to the prices seen in 2000/2001 as shipbuilding and steel prices are becoming increasingly expensive.

1.2.4. Low hydroelectricity production in Scandinavia

Figure 7

Scandinavian area – Evolution of the reservoir content in percentage terms over 2003 and 2004 (source: Nordpool)



Since mid-2002, water levels in the reservoirs of the Scandinavian exchange area have been continuously decreasing. By mid-April 2003, the average minimum level in the dams of the exchange area (Finland, Sweden, and Norway) fell below 15 % and in Sweden fell below 10 %, meaning that some reservoirs were totally dry. This was the consequence of the very dry winter of 2002/2003.

The summer 2003 was also very dry and situation hardly improved. However, by mid-2004, the situation returned to a more normal situation, with average levels exceeding slightly 60 %.

This period of drought evidently generated an increased demand for coal in the Baltic area, where Poland and Russia are traditional coal suppliers. However, the lack of availability of coal from these suppliers forced the Scandinavians to look for other sources such as Indonesia, South Africa, Colombia, Australia and China.

The table above shows the evolution of the reservoir content in the Scandinavian area: Norway, Finland and Sweden. This indicates the maximum, median and minimum reservoir levels for the period 1990 to 1999. In addition, it shows that the level for the first four months of 2003 was below the average minimum levels of the 1990ies, and remained only just above for the majority of the year. The recovery only really started in the second quarter of 2004.

It should be noted that in Spain during 2003 the situation was entirely the inverse (reference section 3.18 below).

1.3. Ownership changes in the mining and steel industries

In the steel sector, NIPPON STEEL, which three years ago shared first place as leading steel producer with the USINOR Group, at a level of around 25 million metric tonnes, increased production to over 31 million metric tonnes in 2003. Nevertheless, in the worldwide ranking, they fell to third position.

At the end 2003, Usinor, which became ARCELOR in 2001, confirmed its position as the world's leading producer with around 43 million metric tonnes of crude steel produced. The group specializes in high added value quality steel, principally for the automotive industry. It now covers the traditional countries: France, Belgium, Germany, Luxembourg as well as Spain, Brazil and China. Further extensions are under consideration, including Poland.

The new challenger is the (London based) Indian Group: LNM. In less than 3 years, LNM has become a global steel company producing over 35 million metric tonnes of crude steel. It is established in Algeria, Kazakhstan, Romania, South-Africa, USA (Inland steel) and furthermore, as strong believer in the future prospects of EU-25, it has invested in Germany, France, Czech Republic and more recently Poland. Its production in Europe represents more than 50 % of their worldwide performance, at 19 million metric tonnes, and it is also developing activities with China by exporting mainly from Kazakhstan over 2 million metric tonnes of steel.

Consolidation over recent years has led to the creation of 4 large mining groups, generally referred as the "BIG 4":

– BHP BILLITON is active in coal operations in:

  – Australia: *Energy Coal Operations owns Hunter Valley Operations – New South Wales* (100 %): 6.4 million metric tonnes in 2003, with expansion planned up to 12 million metric tonnes in 2006.

  – *Carbon Steel Materials* reported an annual production of metallurgical coal of close to 35 million metric tonnes in 2003. This consisted of around 28 million metric tonnes with *Queensland Coal* (including a 50% share in *BMA BHP Billiton Mitsubishi Alliance* and an 80% share in *BHP Mitsui Coal*) and 7 million metrictonnes from *Illawara Coal*.

  – USA: *Energy Coal Operations* owns *New Mexico Coal* (100 %), which produced over 14 million metric tonnes of thermal coal in 2003.

  – South Africa: *Energy Coal Operations* own *Ingwe Coal Corporation* (100 %) since the merger with Billiton in 2001. Production at the end of June 2003 was 54 million metric tonnes per year. Ingwe operates 7 mines, with 3 of them jointly owned with *Xstrata Coal*.

  – In mid-2004, *BHP Billiton* and *Anglo American* announced a project of joint expansion in the Western Complex - particularly at *Ingwe's* Khutala and Klipspruit mines. This will more than compensate the closure of the Rietspruyt mine in 2002 due to depletion.

  – South America: *Energy Coal Operations* owns 33.3% of the *Cerrejon Coal Company* (CCC) which, with a production of 22 million tonnes, accounted for close to half of Colombian exports in 2003.

– ANGLO AMERICAN (U.K.) total production of the group amounted to 87 million metric tonnes in 2003. This represents a 40 % increase since 1999.

  – Australia: attributable saleable coal production rose 4 % in 2003 to 26.1 million metric tonnes. New projects are currently under examination.

  – South Africa: apart from the joint venture with *BHP Billiton* in the Western Complex as mentioned above, *Anglo* runs a number of 100% owned mining operations. A major expansion of production is underway.

  – South America: the 33.3 % share in *Cerrejon Coal Company* achieved an operating profit increase of 40 % and an expansion from 22 to 28 million metric tonnes in 2007.

  – Venezuela: its 25 % share in *Carbones del Guasare* was hit by the national strike at the beginning of 2003.

– XSTRATA (owned by *Glencore* - Switzerland). Production is over 70 million tonnes, on a managed basis, of which 90 % is exported. This places *Xstrata Coal* as Australia's leading exporter of thermal coal and South Africa third largest coal exporter.

- Australia accounts for 77 % of its coal production (44 % from New South Wales and 33 % from Queensland).

- The balance (23%) is mined in South Africa.

– RIO TINTO (U.K.) This international group reported a turnover of US $ 12 billion in 2003. The share of iron ore and coal operations are about similar, around 18 % each, with the balance being industrial minerals, copper and gold.

  - 44 % of its total operations are realized in Australia and 30% in North America.

  - The balance is in Indonesia (9 %) and around 6 % each in Africa, South America and Europe.

  - Rio Tinto decided to sell its interests in Colombia (*Carbones del Cerrejon*) and in Indonesia (*PT Kaltim Prima*) in October 2003.

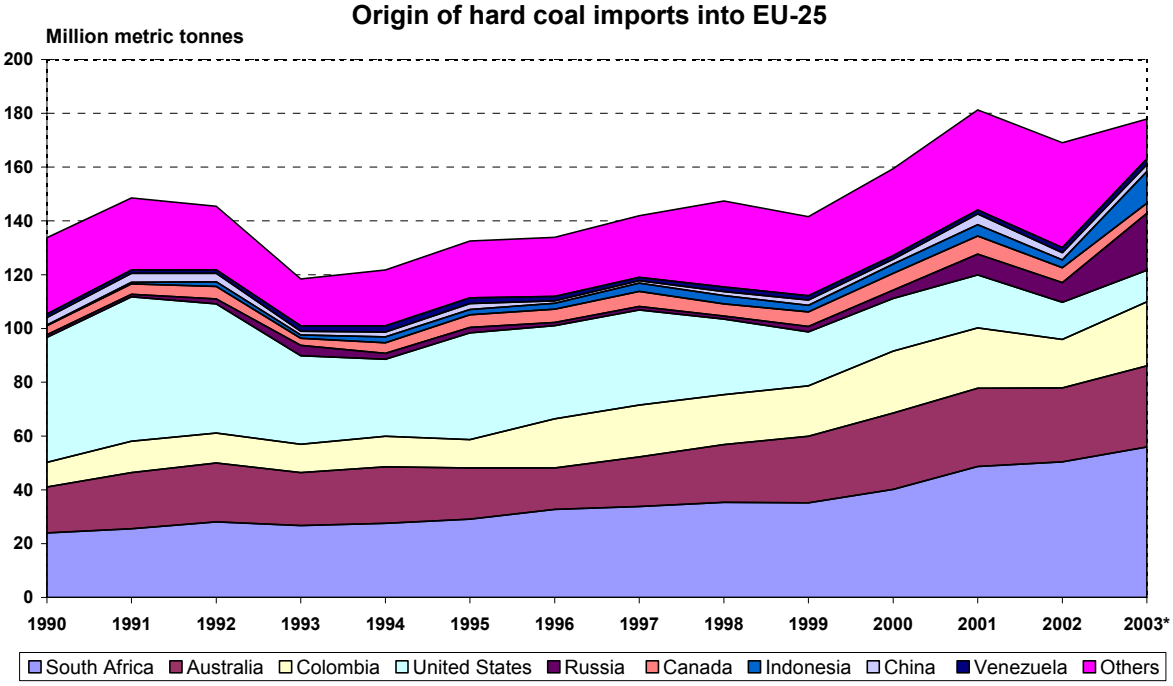
  - In the USA, coal production is centred on the mines operated by *Kenneco Energy and Coal Company* either with 100 % ownership or in partnership with full management responsibility. The mining area is west of Mississippi, mainly in the states of Wyoming, Montana and Colorado. This type of coal is not exported (except for a single customer in Spain). Production of this low calorific value coal amounted to around 108 million metric tonnes in 2003.

  - In Australia, the total production of *Rio Tinto Coal Australia* plus Rio Tinto's pro-rata share of *Coal and Allied's* production totals around 32 million metric tonnes.

Some concerns have been expressed about the effects of this consolidation on the international market. However, the experience of the recent years has demonstrated that coal prices are driven by a large number of different factors which indicate that the market continues to remain highly competitive.

2. INTERNATIONAL HARD COAL AND COKE MARKET

Figure 8.
Origin of hard coal imports into EU-25



2.1. Overview

Figure 9
Estimated world steam and coking coal production and exports in 2003 (million tonnes)

	Production			Exports		
Country	Steam	Coking	Total	Steam	Coking	Total
China	1342.20	159.24	1502.44	79.77	13.14	92.91
US	851.88	40.01	891.88	18.86	20.04	38.90
India	317.52	22.87	340.39	1.08	0.16	1.24
Australia	161.89	112.22	274.11	99.95	107.79	207.74
S. Africa	238.01	1.33	239.33	71.45	0.00	71.45
Russia	133.21	55.21	188.43	46.64	13.15	59.78
Poland	84.26	16.15	100.41	17.41	2.71	20.12
Germany	11.48	17.27	28.75	0.18	0.00	0.18
UK	27.86	0.37	28.23	0.54	0.00	0.54
Others	372.65	70.93	443.58	195.28	30.27	225.55
Total	3541.96	495.59	4037.54	531.17	187.26	718.42

Source: IEA Coal Information 2004.

In general terms, there has not been any significant change in the quantities traded and consumed in EU-15 and EU-25 between 2002 and 2003. This also applies with respect to the quantities for the early part of 2004. Supplies will continue to be scarce through 2004 and most probably into 2005.

The effect of the cost of a tonne of CO2 in the framework of the EU's Emission Trading will start to be noticed in 2005 as the scheme comes into operation on January 1, 2005.

The main concern recently has been the price sensitivity due to the factors described in section 1.2 above and these price variations can been seen in Figure 10, which was prepared by CEMBUREAU around July 1, 2004. It covers the period from 1986 through to July 2004 and the data shown are average South African prices, on a FOB Richards Bay basis, and CIF ARA. It clearly demonstrates how the steam coal market is characterized by a sequence of cycles.

Over the 18 year period, average nominal FOB Richards Bay prices gradually increased from $ 25 per metric tonne to $ 31 per metric tonne. However, four clear cycles can be observed.

– The first one lasted around 6 years (from mid-1987 through to mid-1993), with a peak of around $ 33per metric tonne at the end of 1988.

– The second started with a low price of $ 20 per metric tone FOB Richards Bay in mid-1993, increased to $ 36 FOB per metric tonne in mid- 1995 and then decreased to a level lower than $ 20per metric tonne in mid-1999.

– The third cycle only lasted 3 years, from mid-1999 through mid-2002. The highest prices reached were $ 33 per metric tonne for a 6 month period corresponding to the first half of 2001, before decreasing to $ 21 per metric tonne.

– Fourth cycle was much shorter, lasting no more more than 9 months with a peak at the end of 2002, then decreasing to $ 23/24 during the second quarter of 2003.

It is interesting to note that, during these 4 cycles, the range of prices remained between $ 19/20 per metric tonne FOB Richards Bay at the lower end and, at the upper end, peaks of between $ 33.50 and $ 36 per metric tonne FOB. However, from mid-2003, this pattern radically changed with a continuous FOB price increase, which was still ongoing in July 2004. A major factor in this has been China.

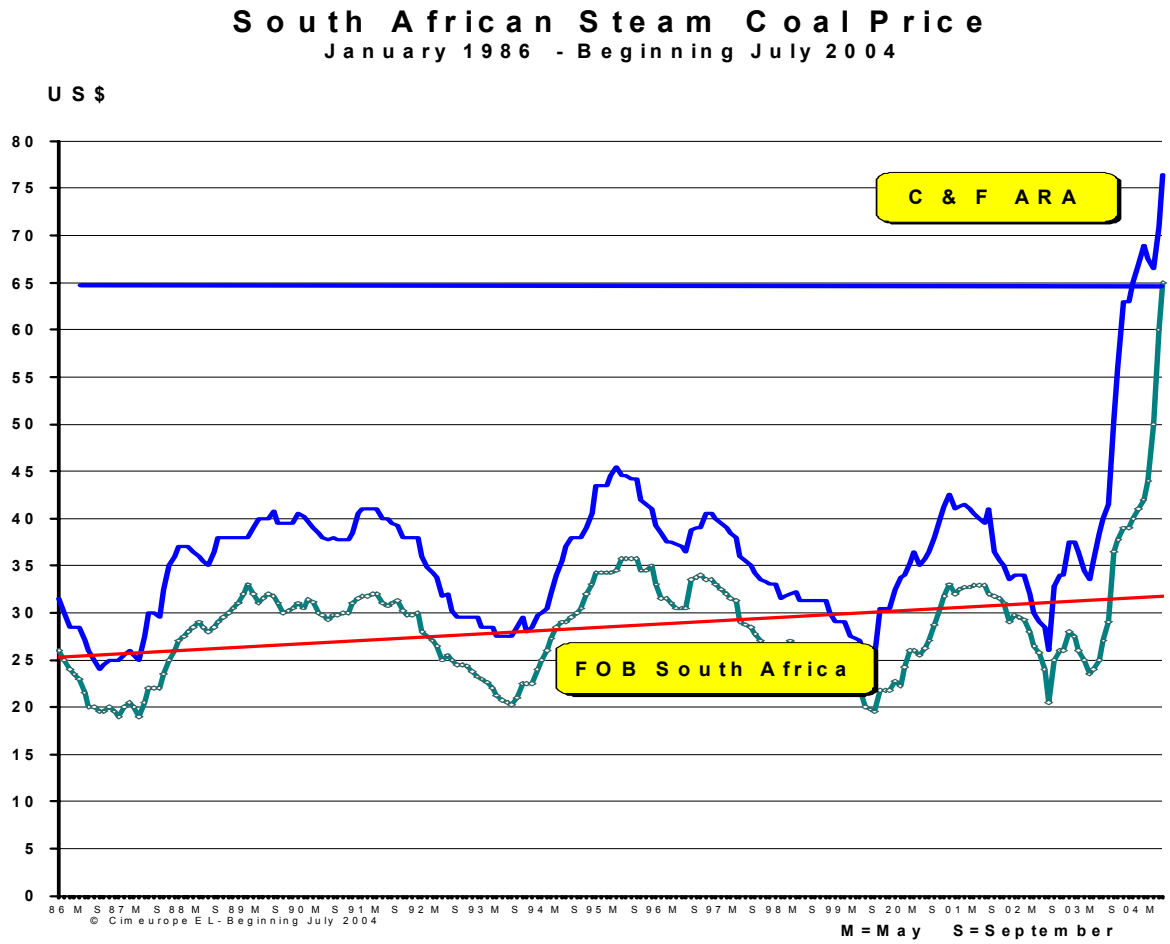
The high demand for huge quantities of freight came suddenly at the end of the third quarter 2003. This demand did not concern coal specifically, but also iron ore and a number of other bulk commodities. At the time, many coal buyers were still under the impression that the downwards price trend seen in early 2003 would continue and certainly through the generally quieter summer months. Stocks at the power plants and in the ports were particularly low for that reason. In addition, low levels of hydroelectricity in the Scandinavian countries severely aggravated the situation.

Early in 2004, freight levels reached $ 27 per metric tonne for Richards Bay to ARA. This has since gradually declined to around $ 15 per metric tonne. This may be considered as a slightly higher level than the traditional price range experienced during previous years, which usually ranged between $ 9 and $ 14 per tonne for Cape size vessels. However, this higher level can be explained by the higher bunkering costs.

Early in July 2004, freight prices increased again slightly as China came back again on the freight market. However, this was at a slower pace, which has meant that sharp price increases could be avoided.

Nevertheless, at the end of June 2004, FOB Richards Bay prices rose above $ 65 per metric tonne and headed towards $ 70 per metric tonne for spot business. CIF ARA prices of $ 80/85 for 6000 Kcal/Kg (25.12 GJ/T) were offered, but this may not last, although the main buyers appear to have managed to cover their sea freights at a "reasonable" level through the rest of 2004 and often into 2005. However, a new situation may be expected thereafter.

Figure 10



Russian coals are now being considered as active challengers to the traditional steam coal suppliers like Poland and South African. Reliability relative to the terms of contract (respecting quality requirements, absence of stones and foreign residues, timely logistics, better marketing, etc) will secure their better acceptance into the European markets.

A similar move is occurring in the coking coal market, as the higher demand for this type of raw material not being compensated by new greenfield projects being put on stream. Instead, alternative systems are being put into place. For example, in North America some traders decided to pay a relatively high price for low grade coking

coal from West Virginia and Virginia, which were traditionally sold as high calorific coal to local power stations. These higher ash and high sulphur content coking coals, blended or not with classical high quality coking coals, are being exported to the Far East, Indian and European markets through East US Coast and Gulf terminals at spot prices reaching well over $ 150 per metric tonne FOB. Prices for this material used to be below $ 50 FOB per metric tonne US port. This has generated a direct side-effect: US power stations, which are working at full capacity, need to compensate for this lack of domestic supply by importing more quantities from Colombia and Venezuela. With prices of domestic coals climbing, this has reducing the availability of coal for export to European markets.

2.2. Main actors on the international scene

2.2.1. Australia

Traditionally, Australian coal mining activities have been export orientated. The percentage of coal exported increased from 60% in the late nineties to over 80 % by 2003.

Over 215 million metric tonnes were shipped out of ports in Queensland and New South Wales in 2003, compared to 202 million metric tonnes in 2002. These two regions together account for 95 % of Australian coal production.

Of the 215 million metric tonnes exported, steam coal represented 105 million metric tonnes. Of this, 45 million metric tonnes went to Japan, 10 million metric tonnes to Europe and 3 million metric tonnes to China.

Coking coal exports reached 110 million metric tonnes, with 41 million metric tonnes to Japan, 22 million metric tonnes to Europe and 2 million metric tonnes to China.

Evidently, the impressive increase China's demand, as well as that of the other large developing countries in the area, is exerting a tremendous pressure on the Australian coal producers.

The Australian coal mining activity has experienced severe restructuring in recent years, with the "BIG 4" playing a major role in the industry:

– BHP BILLITON which formed a 50/50 joint venture together with Mitsubishi (Japan) in 2001: BMA (BHP Billiton Mitsubishi Alliance).

– BHP BILLITON also owns 80 % of BHP Mitsui Coal and 100 % of BHP Billiton Illawarra Coal

– ANGLO AMERICAN (U.K.), whose Australian subsidiary Anglo Coal Australia merged with Mitsui (Japan) in 2002. Attributable saleable coal reached 26.1 million metric tonnes in 2003.

– XSTRATA (owned by Glencore - Switzerland) which acquired MIM Holdings in 2003. 50 million metric tonnes of the 70 million metric tonnes of coal (both steam and coking) produced by the group are mined in Australia.

– RIO TINTO (U.K.) through Rio Tinto Coal Australia (23.2 Million metric tonnes in 2003) and its subsidiary (75.7 % share) Coal and Allied Industries (27.2 Million metric tonnes in 2003).

As highlighted in point 1.2.6 above, these four big groups are active not only in Australia, but also in South Africa, South America and also partly in U.S.A. Realizing the necessity of expanding their sales potential in the Far East zone, these groups have announced plans for a future expansion of coking coal mining of more than 30 million metric tonnes.

The revived demand at the end of 2003, principally from China, was a very encouraging factor for these companies and the renegotiation of ongoing deals with mid to long term commitments have been finalized with a substantial price increase. This was a clear signal for further investment considerations.

Special attention however will be given to terminals in order to avoid accidents like those that occurred in Newcastle in late 2003 and in Dalrymple Bay (Queensland) in February 2004. These generated huge waiting time before loading.

2.2.2. China

As mentioned previously, the impressive development of China's economy has drastically affected traditional market flows.

In terms of production, China is the most important in the world with close to 1.6 billion metric tonnes. More than 80 % of Chinese coal production is used for power generation and 65 % of China's primary energy consumption is based on coal.

China's steam coal exports remain focused on the Far East market, but represent less than 5 % of total coal production. Total exports of steam coal returned in 2003 to levels similar to 2001. In 2002, exports had decreased by close to 12 %.

A number of projects are waiting to get State approval in order to obtain the necessary financial support. These include a 15 million metric tonnes coal mine project involving 2 x 600 MW coal-fired power stations and a related railway line.

The situation is very different for coking coal, however, where exports dropped significantly between 2002 and 2003 and imports of higher quality coking coals have increased. The reason is that in order to produce the better pig iron requested for the new building industry, China needed better quality metallurgical coke. It therefore imported higher quality Australian coking coal, with imports from Queensland soaring from 180,000 metric tonnes in 2002 to 1.8 million metric tonnes in 2003, and further quantities will be needed.

New coking coal mining projects are underway in China, including an 8 million metric tonnes coking coal mine in the Shanxi Province.

2.2.3. Colombia

Exports from Colombia have increased drastically since 2002. In 2002, Colombia exported 35.4 million metric tonnes. However, in 2003, exports increased by 25 % (or 9 million metric tonnes) to reach 44.4 million metric tonnes.

The largest part of this increase went to USA, which jumped from 6.8 to 12 million metric tonnes and which may well increase further. However, EU-25 remains the largest buyer of Colombian coal, with 24 million metric tonnes in 2003 (representing an increase of 3.5 million tonnes over 2002). Canada, Israel and the Central and South American countries are the remaining customers.

By acquiring *Cerrejon Norte* from Exxon in 2000, the consortium formed by BHP Billiton, Anglo-American and Glencore (each with a 33.3 % share), under the name of "Cerrejon Coal", became the largest exporter of Colombian coal. From less than 19 million metric tonnes in 2002, the prospects are for around 25 million metric tonnes by 2004/2005.

With Drummond as the other main producer, with tonnage available for export forecast at over 20 million metric tonnes in 2004, total Colombian exports may well reach 52 million metric tonnes. This would represent nearly a 50 % increase since 2002.

Further investment in logistics will be necessary, including the development of coal loading terminals. However, the largest part of this increased production is likely to find a home in the US Gulf, due to the high demand on the US domestic market, rather than in Europe.

2.2.4. South Africa

South Africa has, for many years, been "the" reference for good quality low sulphur steam coal for European customers.

Total production exceeded 220 million metric tonnes in 2003, making South Africa the 6th largest coal producer worldwide after China, USA, Australia, India and Russia.

Three of the four big international coal producing groups are present in South Africa:

- Anglo American's coal division *Anglo coal* (Anglo);
- BHP Billiton through its subsidiary *Ingwe Coal* (Ingwe);
- Xstrata Coal (Zug-Switzerland) through *Xstrata Coal South Africa* (XCSA).

The 3 groups together own 86 % of the Richards Bay Coal Terminal, which currently exports around 95 % of South African coal exports. This amounted to around 72 million metric tonnes in 2003. Plans for the maximum expansion of the Richards Bay Coal Term up to 84-86 million metric tonnes have been approved, with a completion date in late 2006.

Another bottleneck for future increases in exports is the rail system, which is run by the state-owned company Spoornet. Heavy investments are needed to replace the existing worn-out material and to adapt it to the increasing traffic that will result when the next phase of development of Richards Bay is completed.

Alternative ports are not sufficient to cope with increasing demand for coal exports. Durban Coal Terminal (around 2 million metric tonnes) and Matola Coal Terminal in Maputo -Mozambique (which is announcing plans to increase throughput up to 5 million metric tonnes by 2006).

Anglo and Sasol (the world's largest manufacturer of oil from coal, developed in the 1950s in order to reduce South African dependence on oil imports) have announced a plan to develop together the Kriel South coalfield, which will produce around 10 million metric tonnes of coal by 2005.

Ingwe and XCSA are also announcing a further significant expansion of coal production in combination with drastic cost-cutting measures in order to counter the Rand's increasing strength against the US dollar, high inflation and high interest rates.

As already indicated, Ingwe operates 7 mines, of which 3 are jointly owned by XCSA.

2.2.5. U.S.A.

The U.S.A. is the second largest coal market after China, both for production and consumption. In 2003, production reached the level of 970 million metric tonnes, which represented a decline of 2.3 % compared to the previous year. Rail congestion, flooding due to heavy rains, a one day disruption in the electric power grid and legal problems have contributed to this reduction.

At the same time, exports slightly increased by 3 million metric tonnes to reach 39 million metric tonnes, of which some 20 million metric tonnes is metallurgical and 19 million metric tonnes are steam coal.

For steam coal exports, close to 80 % go to Canada. This leaves around 3 million metric tonnes (high calorific value, high sulphur) for overseas, mainly to Europe.

At the end 2003/early 2004, the new traffic of low grade coking coal, previously destined for local US utilities, was purchased by traders and shipped from the East coast and Gulf terminals to coking coal customers in Europe and the Far East.

There are 2 main reasons for this move:

– The quality of these coking coals was not previously acceptable, mainly due to their high ash and sulphur content. With coking coal now becoming so scarce, the technicians at the coking plants are more flexible with their "acceptable" specifications.

– The price of these coals on the spot market has reached up to $ 150 per metric tonne FOB US port. This is four to five times the price the same coals generated when delivered to US power plants.

In order to cover the increasing domestic demand in the US, two solutions have been used:

– Increasing imports from Colombia and Venezuela through the US Gulf: this represented more than 6 million metric tonnes in 2003.

– Decreasing the stock levels, mainly at the stockyards of the power plants: this represented more than 25 million metric tonnes between 2002 and 2003.

To summarizing the US situation, it seems clear that US coal production will not significantly increase and will remain in the country to cover domestic demand. Higher stock levels will need to be restored in view of a possible hot summer. This means that exports (excepting those to Canada) are likely to be limited to coking coal to Europe, South America and possibly the Far East if the freight levels are appropriate.

2.2.6. Indonesia

Out of nearly 5.5 billion metric tonnes of recoverable coal reserves in Indonesia, close to 60 % are lignite, 25 % are sub-bituminous and 15 % are bituminous coals.

Since 2000, hard coal exports have increased by 50 % to around 86 million metric tonnes in 2003, with domestic consumption close to 30 million metric tonnes. There are plans to significantly increase hard coal production over the next 5 years, with the new quantities being mostly destined for export.

Currently some 80 % of the exports find a home within the Far East and India, but for quite a number of years Indonesian coal has been exported to Europe : mainly to Italy, Spain and Netherlands. It has also been exported to the USA and Israel.

Rio Tinto and BP used to run a joint-venture in Kaltim Prima Coal, but they decided to divest in July 2003. The only member of the "BIG 4"coal companies present in Indonesia is BHP Billiton with PT Arutmin.

2.2.7. Russia

With around 155 billion metric tonnes of recoverable coal reserves, Russia ranks second worldwide after USA (around 250 billion metric tonnes). However, at around 240 million metric tonnes, production was less than 25 % of that of the US in 2003.

Recent developments in the coal mining industry, with the support from the World Bank since 1996, have allowed a transition from a monopoly situation in the hands of Rosugol to a situation where independent producers control more than 75 % of domestic coal production.

Current prospects indicate that coal production could double by 2020, but internal transport will have to be adapted for domestic distribution and exports.

3. EU 25 HARD COAL AND COKE PRODUCTION AND CONSUMPTION (IN MILLION TONNES)

	2002 actual	2003 actual	2003/2002 (%)*
HARD COAL			
Resources			
- Production	190.3	185.1	-2.7
- Recoveries	1.8	1.4	-22.0
- Imports from third countries	168.1	177.8	+5.8
Total	**360.3**	**364.4**	**+1.1**
Deliveries			
- To coking plants	61.2	60.4	-1.3
- To power stations*	235.2	239.6	+1.8
- To others	50.2	47.9	-4.4
- Exports to third countries	10.4	8,3	-20.2
Total	**357.0**	**356.2**	**-0.2**
COKE			
Resources			
- Production	45.8	47.7	+4.1
- Imports from third countries	8.5	8.2	-2.9
Total	**54.3**	**55.9**	**+3.0**
Deliveries			
- To steel industry	44.8	44.5	-0.7
- Other deliveries within the Community	6.3	5.4	-13.5
- Exports to third countries	1.2	1.5	+26.0
Total	**52.3**	**51.4**	**-1.6**
LIGNITE			
Resources			
- Production and imports	393.4	389.8	-0.9
Deliveries			
- To power stations	368.8	364.7	-1.1
- To briquetting plants	14.3	14.0	-2.0
- Others (incl. exports to third countries)	9.0	8.4	-7.0
Total	**392.2**	**387.1**	**-1.3**

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

* Including industrial and pithead power stations

Figure 12.
Hard coal production in the enlarged EU: 1973-2003

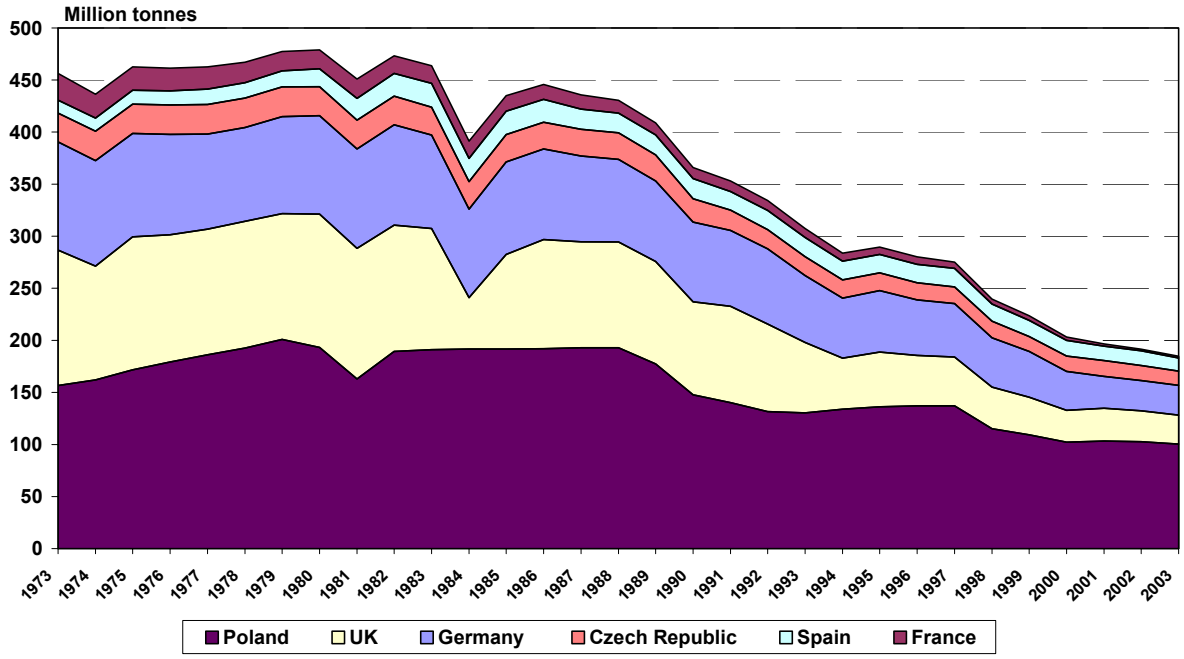


Figure 13.
Indigenous hard coal production in 2003, share by Member State

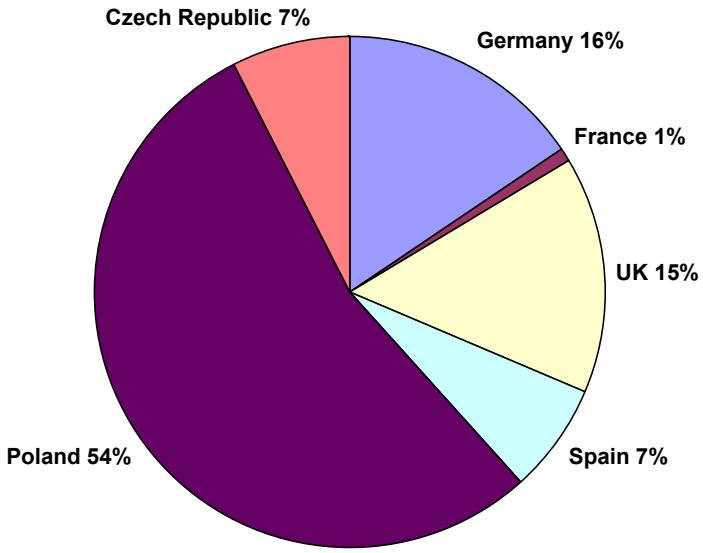
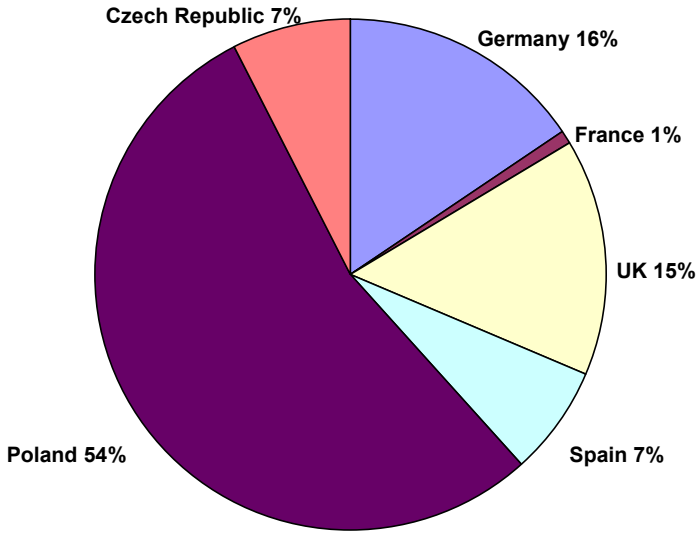


Figure 13
Indigenous hard coal production in 2003, share by Member State



At a policy level, it is clearly important to diversify the EU's energy mix, taking into account the individual situations of each Member State, and attention needs to be given to promoting cleaner energy, particularly renewables. But with the announced phase out of nuclear in a number of Member States, it is clear that coal, gas and oil will continue to play an active role in covering the energy needs, albeit with increasing efforts being made to reduce their negative environment impact.

The share of indigenous coal will decrease in some Member states, as a significant proportion of the hard coal produced by them is uncompetitive compared to the coal traded on the international market. This is due to the fact that:

– Many of their deposits have already been worked intensively and extensively for years. The reserves nearest the surface have been depleted and mining can continue only by extracting coal from ever greater depths: at over 1,300 metres in some cases. This clearly requires a more sophisticated and hence more costly, mining infrastructure compared to the large opencast sites prevalent in the main coal exporting countries.

– The deposits are often of poor quality and are results of very complex, and irregular, geological structures. In addition, the density of the reserves is often very low compared with deposits elsewhere in the world.

– The social and environmental costs are also higher than in countries supplying the international market due to, inter alia, the significant historical liabilities resulting from the contraction of the industry and the increasing environmental constraints imposed on underground and opencast mining operations which are often situated near to urban areas.

No matter how good the miners and the technology in these Member states may be, the high costs of production therefore continue to make a significant proportion of

indigenous coal in the EU uncompetitive compared with internationally traded coal, even in a period of high international spot prices.

In other Member states, especially in Poland and Czech Republic, the indigenous coal industry appears to be competitive or close to competitive. Indeed, none of these two states needs to grant operating aid to its coal mines. They limit their aid to aid for coping with inherited liabilities.

Figure 14
Production, imports and gross inland consumption of hard coal: EU-25

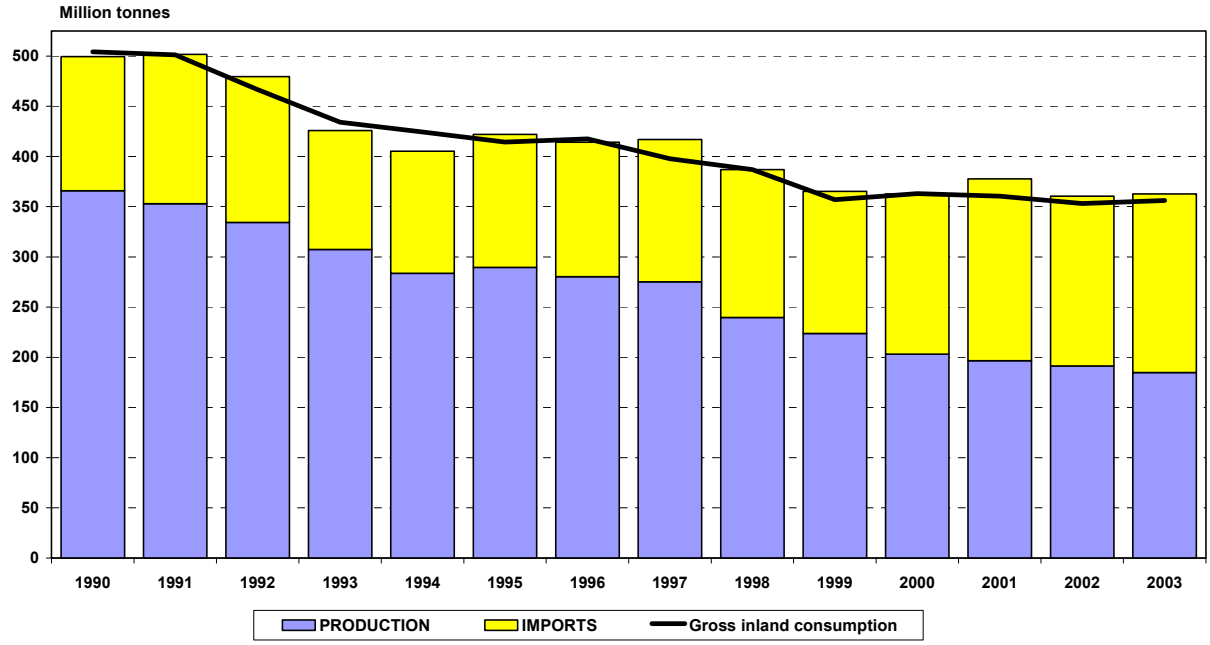
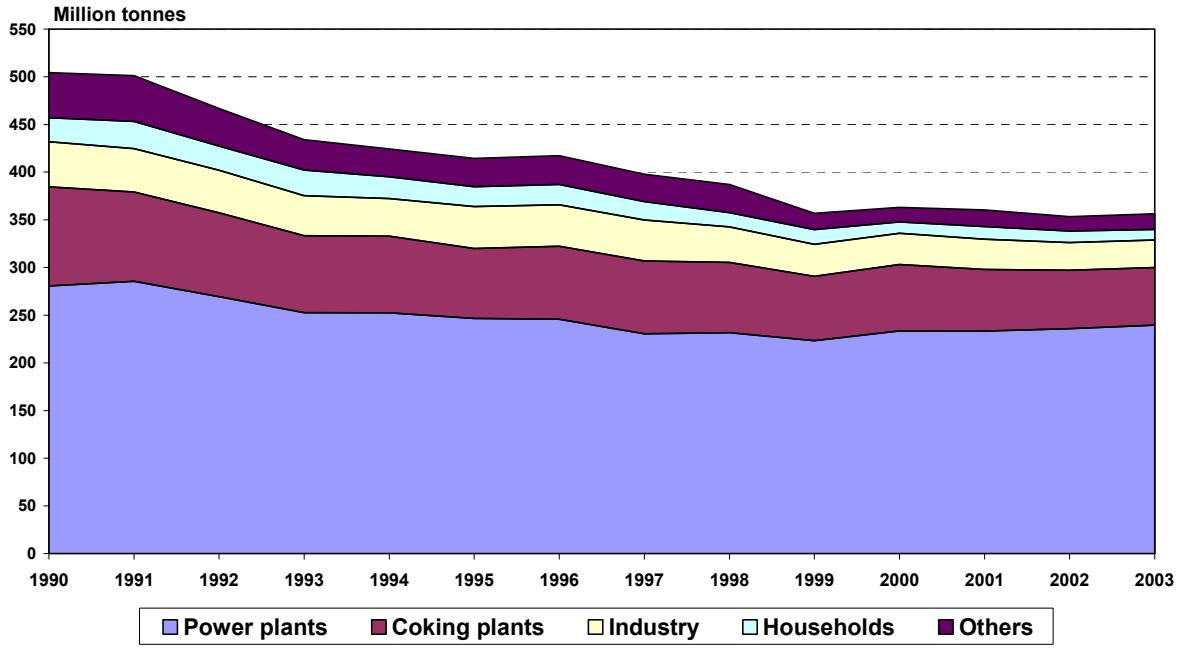


Figure 15.
Gross inland consumption of hard coal by sector in EU-25



3.1. Austria

Austria maintains a fairly stable pattern as far as steam and coking coal consumption are concerned. Imports of steam coal remain at around 1.8 million metric tonnes, mainly from Poland (which increased slightly from 1.3 million metric tonnes in 2002 to 1.5 million metric tonnes in 2003). The balance came from the Czech Republic.

Coking coal imports remain roughly stable at 2.2 million metric tonnes, with over one third of this originating from Poland and the balance from Czech Republic.

The Austrian steel industry requires further quantities of metallurgical coke to cover its total needs. Local production amounts to 1.4 million metric tonnes and another 0.8 million metric tonnes is imported from Poland (0.5 Million metric tonnes) and the Czech Republic.

3.2. Belgium

Coal consumption has slightly decreased due to the closure of coke oven capacities and the incorporation of biomass for electricity generation.

In the electricity generating sector, up to 10 % of olive pits and woodchips are currently being mixed with coal in order to produce “green” electricity. This has opened the way to burning coal with wider specifications: volatile matter, sulphur, etc.

However, this has not significantly affected total coal imports, which remain close to 10 million metric tonnes. South Africa remains the largest supplier of steam coal, followed in 2002 by Australia. However, in 2003, Russia took second place.

Taking into account the share of coal in electricity generation (around 12 %), the planned phase-out of nuclear announced for 2014, the development of wind farms and the necessity to increase renewables in the electricity generating pattern, it is clear that coal fired generation is unlikely to decline any further. One reason is that coal-fired generation is necessary to secure an adequate burning of biomass products which cannot be burnt on their own.

As far as coking coal is concerned, only two main players remain active.

The first is the Arcelor group, whose industrial strategy is elaborated not only at European level, but also worldwide.

Duferco is the second big player in the field and its recent investments in various Belgian steel making sites tend to demonstrate their intention to maintain an important level of activity in Belgium.

3.3. Cyprus

Cyprus does not use coal for power generation or steel making. Only limited quantities of steam coal and coal are used for industrial purposes.

3.4. Czech Republic

Amongst the 10 new Member States of the EU, the Czech Republic and Poland are by far the most important players in the coal sector.

Coking coal production remains at a level slightly inferior to 8 million metric tonnes, while steam coal production was reduced by more than 1 million metric tonnes in 2003 to 5.8 million MT.

The quality of coking coal is very complementary with that of Poland, so coal exchanges are frequent. Austria, Germany and Hungary are also regular recipients of Czech coal.

A similar pattern applies to metallurgical (and foundry) cokes and steam coal.

3.5. Denmark

Denmark does not have a steel making industry. It has also ruled out the nuclear option for electricity generation.

In the early nineties, as there was no hydroelectricity potential, coal became nearly the only fuel for electricity generation. At that time, around 95 % of the electricity generated in Denmark was based on imported coal imports. Two electricity producing groups supplied the country: ELSAM in the West (Jutland) and ELKRAFT in the East (Sjaeland-Copenhagen). They were operating very efficient power plants equipped with scrubbers able to reduce drastically the sulphur and nitrogen emissions. Total coal consumption exceeded 15 million metric tonnes.

In 2003, coal burn amounted to around 9 million metric tonnes, representing a slight increase over 2002 due mainly to the fact that Unit 5 at Aesnes was switched from Orimulsion (bituminous sand from BITOR- Venezuela) to coal. This installation was then stopped for maintenance in April 2004 for a period of 6 months.

While coal purchases by the two companies continue to be carried out separately, there have been suggestions that they could merge in a not too distant future.

The main competitor to coal, apart from the wind farms which are developing rapidly offshore, is gas. But price of gas is based on oil prices, which contribute to make gas more expensive than coal.

Coal burn is also supporting the utilization of biomass, like woodchips and straw.

3.6. Estonia

Around 59,000 metric tonnes of hard coal is imported from Russia and Kazakhstan, of which around half is used for heating purposes. Some 95 % of electricity production is secured by oil shale (see below).

3.7. Finland

In 2003, Finland suffered from very low hydro electricity levels and therefore had to turn to the international coal market to compensate. Russia has taken first place as

the traditional supplier, although Poland still considers Finland as its privileged customer due to close proximity.

The Government decided that the minimum level of coal stocks, which had been close to one year's worth of supply, could be reduced. This explains why imports were lower in 2002.

For coking coal, Poland remains the main supplier, followed by Australia. USA and Canada are also traditional shippers, together with Russia.

3.8. France

In April 2004, the last steam coal mine, La Houve in Lorraine, was closed.

In 2003, imports at 16.1 million metric tonnes were about 1 million metric tonnes lower than previous year. Consumption in the power plants increased, however, by slightly less than 1 million metric tonnes to 9.2 million metric tonnes. The difference has been covered by a reduction in stocks of close to 2 million metric tonnes.

Coking coal deliveries for coke making in integrated mills has remained stable at around 6.5 million metric tonnes. However, it is interesting to observe that the Carling coking plant, which was part of the HBL/Charbonnages de France, was supposed to close down definitely at the end of 2003. Due to the scarcity of metallurgical coke, the plant has been purchased by the German group ROGESA in order to supply coke to the nearby blast furnace.

3.9. Germany

Hard coal production remains steady at close to 29 million metric tonnes between 2002 and 2003. Some 22 million metric tonnes went to the power generating sector and balance to the steel industry.

With the agreement reached between the industry and the German Government on state aid, further mine closures will take place and production will be reduced to less than 20 million metric tonnes.

Coal imports will continue to grow due to the reduction in indigenous coal production and the increase in energy demand.

The main suppliers of steam coal remain Poland and South Africa (over 6 million metric tonnes each), but Colombia and Russia are important as well with more than 2 million metric tonnes each. For coking coal, Australia is the largest supplier followed by Canada and USA. In 2003, Poland supplied 2.8 million metric tonnes of metallurgical coke, representing around 50 % of metallurgical coke imports, with the balance coming mainly from China, Czech Republic and Russia.

3.10. Greece

Hard coal is not used for power generation (See Lignite section 4.4)

3.11. Hungary

The last hard coal mine closed in 2003.

Hard coal is imported for coke making in the integrated steel industry, with the main supplier being the Czech Republic followed by Poland and Russia. Metallurgical coke is also imported, mainly from Poland and Russia.

3.12. Ireland

The Electricity Supply Board power plant in Moneypoint continues to burn around 2.4 million metric tonnes of steam coal per year, with the balance of 400,000 metric tonnes of coal consumed in Ireland destined for home heating and industry.

Originally, most of the coal came from the USA. However, due to environmental considerations, supplies are now mostly coming from Colombia, Australia and Indonesia. South Africa, Poland and USA continue to be smaller suppliers.

3.13. Italy

Traditionally, Italian power generation has been based on oil. This accounted for around 78 % in 1970. This percentage was reduced to around 40 % in 2002, with gas increasing its share from 9 to 32 % over the same period. Hydro-electricity now accounts for 18 %, which leaves less than 7 % for coal and 3 % for renewables. Italy closed its 4 nuclear reactors in 1987.

Coal now is an important developing source of energy, with great scope for expansion.

Steam coal imports are expected to jump from 14 million metric tonnes in 2002 to 16.2 million metric tonnes in 2004. Indonesia and South Africa are by far the largest suppliers, with around 5 million metric tonnes each, with Colombia, Australia, Venezuela and China also providing tonnages.

Coking coal imports remain at a level slightly below 5 million metric tonnes. Almost 50 % originates from the USA, one third from Australia and the balance mainly from Canada.

Metallurgical coke has also been a critical factor as explained earlier. Italy used to receive around 1.1 million metric tonnes of coke from China (representing some 25 % of total coke deliveries to EU-15). However, in early 2004, Italy was not receiving the contracted quantities. Despite the agreement reached at European level, uncertainties remain and it is likely that some blast furnaces will have to continue to work at a reduced capacity.

3.14. Netherlands

The Netherlands is a natural gateway to Europe and more than 17 million metric tonnes of steam coal are received in Dutch ports. Nearly 50 % of this is for onward transportation to other EU destinations, mainly Germany.

Consumption in power stations remains steady at around 9 million metric tonnes, with one third coming from South Africa and around 20 % from Indonesia. Other sizeable suppliers include Colombia and Australia.

Coking coal consumption is also steady at around 3 million metric tonnes and there are around 1.3 million metric tonnes of PCI coal. The largest suppliers are USA, Canada and Australia.

Nearly two thirds of coke imports come from China, with Poland as the second supplier.

3.15. Poland

Poland remains the largest European coal producer, with production of slightly over 100 million metric tonnes in 2003.

Over 85 % of coking coal production (around 16 million metric tonnes in 2003) is used for coke making in the integrated steel plants.

In 2003, LNM /ISPAT Group from India took over PHS, the main Polish steel making group. The new company, Ispat Polska Stal (IPS), produced 9.1 million metric tonnes in 2003, representing some 70 % of Polish steel output. Further discussions are ongoing with Polish Government for the integration of Huta Czestochowa (0.7 million metric tonnes of crude steel).

In early 2003, the Polish government issued a restructuring plan for the coal mining industry covering the period 2003-2006. This plan provided for the closure of 4 mines and a reduction of 14 million metric tonnes of production, down to 88 million metric tonnes. Employment would also be reduced by 25,000 people, down to a level of 111,000. However, with the current situation on the international markets, it is being suggested that this closure process may be slowed down slightly, so that production would still be around 95 million metric tonnes in 2006 and employment at 117,000.

As far as coal exports are concerned, some reduction is likely from the 20 million metric tonnes seen in 2003. For 2004, exports may reach some 18 million metric tonnes.

Metallurgical coke production remains at around 10 million metric tonnes, of which around 5 million metric tonnes are exported. Some 4 million metric tonnes of exports are destined for other EU-25 countries: mainly Germany, meaning that real exports to third countries are now close to 1 million metric tonnes.

3.16. Portugal

Steam coal demand for power generation exceeds 5 million metric tonnes. This is sourced by imports, mainly from Colombia and South Africa. The USA is also a supplier.

3.17. Slovakia

Hard coal is no longer produced in Slovakia. However there is sub-bituminous coal and lignite production.

Consumption of steam coal for power generation and industry amounted to around 2.3 million metric tonnes in 2003 and some increase is planned for 2004. The main suppliers include Russia, Poland, Czech Republic and Ukraine.

In the steel sector, the investment by US Steel in November 2000 has permitted a decisive development not only for the Slovakian steel industry, but also for all the eastern Slovakian economy. Steel production amounts to 4.5 million metric tonnes of crude steel (around 93 % produced in Blast Oxygen Furnaces).

Around 2.4 million metric tonnes of coking coal are imported: more than half which comes from the Czech Republic. Ukraine is an important supplier as well.

Slovakia currently imports over 300,000 metric tonnes of metallurgical coke from Poland and the Czech Republic.

3.18. Spain

Domestic coal production continues to decline. It is expected to reach around 12.5 million metric tonnes in 2004.

Coal imports fell by 15 % between 2002 and 2003. The main reason for this decline is the improved output from the hydro-electricity sector which has now returned to its more usual levels. Coal imports are forecast to remain at around 18 million metric tonnes in 2004. 50 % still come from South Africa and 15 % from Indonesia. Other large suppliers include Australia, Russia and Colombia.

Coking coal imports dropped slightly in 2003 to 3.3 million metric tonnes, with the largest supplier being Australia, followed by USA.

3.19. Sweden

Steam coal consumption remained stable in 2003 at around 1.6 million metric tonnes, of which around 0.7 million metric tonnes is used in power generation. The balance is used by industry. Poland remains the main supplier (50 %).

Close to 1.9 million metric tonnes of coking coal is imported for coke making, of which nearly 60 % comes from Australia, with the balance coming from the USA, Venezuela and Russia.

Apart from its own production of metallurgical coke, Sweden imported nearly 300,000 metric tonnes from China in 2003.

3.20. United Kingdom

In 2003, imports into the UK exceeded domestic coal production. At the same time, inland consumption of coal increased sharply by more than 4 million metric tonnes to

63 million metric tonnes. The extra quantities went into the power generating sector to cover the higher demand for electricity.

The forecasts for 2004 are for consumption to fall back to 58 million metric tonnes and, at the same time, domestic coal production to decrease by a further 1.75 million metric tonnes, a similar decrease to the preceding year.

The main external supplier of coal is South Africa, with a share of close to 40 % of imports. Australia and Russian Federation account for around 5 million metric tonnes each, while Colombia continues to provide more than 10 % of imports (slightly more than 3 million metric tonnes).

Coking coal demand fell slightly, in line with the reduction in steel production. For 2004, a reduction of 500,000 metric tonnes is expected, down to 3.1 million metric tonnes.

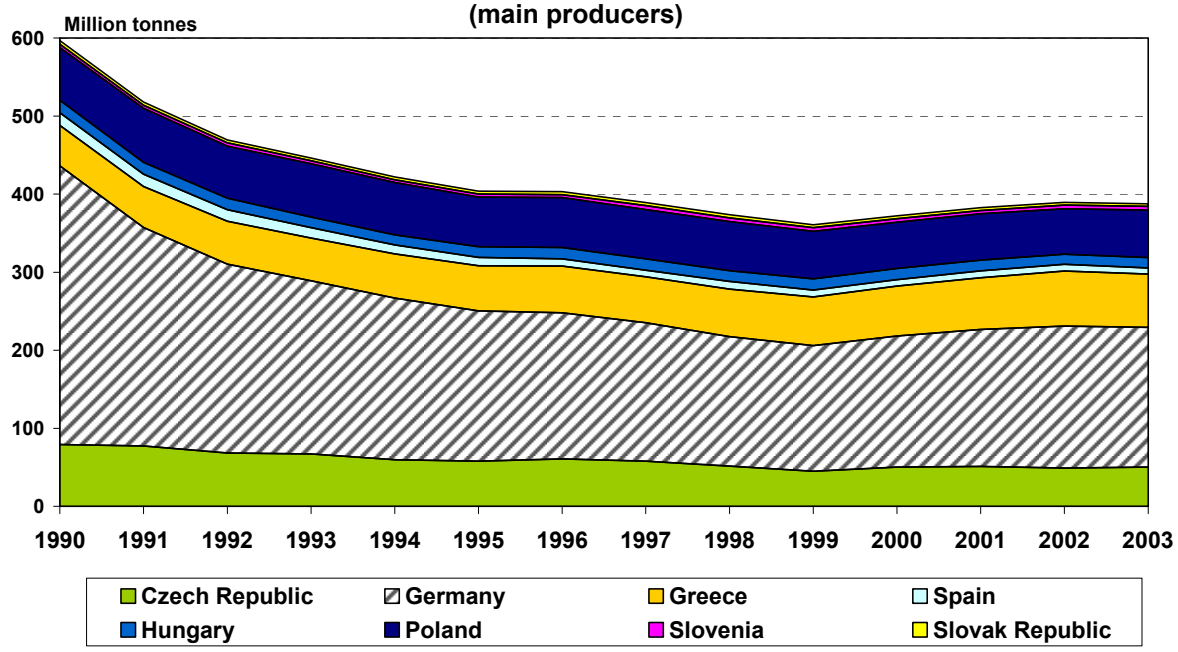
China supplied 470,000 metric tonnes of metallurgical coke in 2003, representing more than 50% of the quantities imported. This is forecast to be repeated in 2004.

4. EU-25 – LIGNITE PRODUCTION AND CONSUMPTION

Lignite remains a basic fuel destined to cover local needs, principally power stations and some industries, in the vicinity of the huge open cast mines from where it is extracted. Germany is by far the largest producer in the EU-15, followed by Greece, Spain and Austria.

With the accession of the new countries, production increased by 50 % from 260 million metric tonnes to over 392 million metric tonnes.

Figure 16.
Trend in EU-25 sub-bituminous coal and lignite production (main producers)



4.1. Austria

Lignite production was reduced from 1.4 million metric tonnes in 2002 to 1.2 million metric tonnes in 2003. The total closure of lignite production has been decided and will be enacted in late 2004/2005.

4.2. Czech Republic

Over 50 % of electricity generation is generated by solid fuels. In 2003, the breakdown was slightly less than 18% each for gas and oil, and 15% for nuclear. When the 2 new blocks of the Temelin nuclear power plants will start operation in 2004 and 2005, the share of nuclear will increase.

The main solid fuel used is lignite, of which 95 % is extracted from opencast mines.

Of a total of over 50 million metric tonnes produced in 2003 (a slight increase over the previous year's 48.9 million), more than 40 million was used for electricity generation. The balance is used for industrial applications and domestic heating.

4.3. Germany

Lignite is by far the largest source of solid fuel used for domestic power generation.

In the context of the planned phase-out of nuclear and the restructuring of the former highly polluting east German lignite industry, remarkable achievements have been realized in Germany in terms of efficient and economic mining.

In terms of environmental considerations, impressive emission reductions have taken place over the last 12 years in the former east German lignite operations. CO2 emissions have been reduced by 50 %, nitrogen oxide emissions divided by 4 and dust and SO2 emissions practically eliminated. This is the result of the closure of some power plant and the retrofitting of some others, as well as the construction of new high efficiency plants.

Lignite production now remains fairly stable around 180 million metric tonnes and the forecasts for 2004 confirm this amount. Of this, close to 170 million metric tonnes go into power generation and the balance goes to local industry, generally as processed products.

4.4. Greece

Lignite production exceeds 70 million metric tonnes per year and economically recoverable reserves amount to close to 45 years at the current rate of mining.

Apart from a small independent producer (accounting for less than half a million metric tonnes), all lignite production is owned and operated by Public Power Corporation (PPC). All lignite production is produced from opencast operations.

In April 2004, the Commission warned Greece that the exclusive right granted to state-owned power supplier PPC for the mining of lignite may be in breach of European competition rules and in particular of Article 86 of the EU Treaty stipulating that Member States "shall neither enact nor maintain in force any measures contrary to the rules of the Treaty".

Lignite accounts for about 65 % of electricity generated. The balance is shared mainly by natural gas (several further projects being studied) and hydro-electricity. Oil is obviously used for power generation on small islands (less than 5 %).

4.5. Hungary

Lignite production amounts to around 13 million metric tonnes, of which 4 million is produced in underground operations and the rest in opencast sites. Lignite accounts for around 25 % of the electricity generated in Hungary, with the balance shared equally between nuclear and Gas.

Over 96 % of the lignite produced goes to power generation, with the balance going mainly to domestic heating.

4.6. Poland

Polish lignite production increased from around 58 million metric tonnes in 2002 to close to 65 million metric tonnes in 2004, all of which was used for power generation. The main plant, Belchatow, is the largest consumer of lignite from the adjacent opencast mine (mine capacity is 38 million metric tonnes, but running at 35 million metric tonnes due to environmental concerns). A new project has been approved for the modernization of the power plant and gradual replacement of the opencast mine. The new mine will be the Sczercow Open Pit mine.

Start-up is expected by 2007/2008, with production overlapping with Belchatow for some eight years as the latter progressively downsizes. This means that production from the two mines may peak at up to 45 million metric tonnes. The on-site power station produces 4400 MW and a further 830 MW will be added, the combined total representing close to 25 % of the country's total electricity requirements. The other 2 lignite basins, Adamov and Turow, jointly add another 15 % of electricity production, which brings the total share of lignite for electricity generation up to close to 40 %.

4.7. Slovakia

Brown coal and lignite production decreased from 3.4 million metric tonnes in 2002 to around 3 million metric tonnes in 2003. The same figure is anticipated for 2004.

4.8. Spain

Spain continues to maintain production of around 8 million metric tonnes of lignite, all of which is delivered to local power stations.

5. EU-25 PEAT AND OIL SHALE PRODUCTION

5.1. Ireland

Ireland continues to produce around 4 million metric tonnes of peat, which is mainly used for power generation (75 %). Some old installations have been modernized in order to continue to take advantage of this low energy product.

5.2. Finland

A similar situation appears in Finland, where close to 10 million metric tonnes of peat are still used for power generation.

5.3. Estonia

Estonia uses around 400 000 metric tonnes of peat for power production, mainly to generate heat.

Estonia has also mined oil shale since 1920 in the North East region (Ida-Virumaa) close to the Russian border. Oil shale is present in many places around the world, but only in Estonia has it been continuously studied, recovered and processed. Recoverable reserves are huge at over 1.5 billion metric tonnes.

Today, oil shale accounts for more than 60 % of Estonia's primary energy supply, followed by gas with 13 %, and wood and peat with 12 %. Imported coal is hardly used.

In the late 1940ies, Estonia produced more than 30 million metric tonnes of oil shale per year. Production is now stabilized at around 12 to 14 million metric tonnes per year. Some 74 % is used for electricity generation, 8 % for heating and 18 % for industrial processes.

Over the years, Estonia has developed a process for the beneficiation of oil shale with a low, but economically acceptable calorific value of 8.7 MJ/kg (around 2100 Kcal/kg). In the early 1970ies, 2 large units of around 1600 MW each were commissioned for electricity generation, based upon pulverized oil shale with an efficiency of 28 %.

Oil shale production is responsible for an enormous percentage of Estonian electricity production, but is faced with adverse conditions: low calorific value, low efficiency and enormous heaps of waste containing noxious material. In addition, oil shale has the highest CO2 emission rates of fossil fuels.

On 2003 and 2004 two new energy blocks using Circulating Fluidised Bed technology were installed with the total capacity of 430 MW, instead of the Pulverised Coal technology used in the old units. The purpose of the renovation is to make the production of electricity from oil shale more efficient and environmentally friendly. The expected result is a decrease in fuel cost per block of approximately 20% annually. Waste products entering the atmosphere will also be substantially decreased. Test runs of the units have started successfully. In addition, all operating

energy blocks of Eesti power plant are now equipped with modern electric filters. These electric filters made it possible to reduce substantially the emissions of fly ash.

6. STATE AID TO THE INDIGENOUS HARD COAL AND LIGNITE INDUSTRY

Due to unfavourable geological conditions, a part of EU indigenous coal production is not competitive with imported coal. After the expiry of the ECSC Treaty on 23 July 2002, the Council adopted a Regulation on State aid to the coal industry[13] to provide a framework within which State aid to the coal industry could be considered from 24 July 2002 onwards.

This framework is based on a minimal production of coal, which will help to maintain a proportion of indigenous primary energy sources, in order to strengthen the EU energy security of supply. State aid to the coal industry will also support the restructuring of this sector, taking into account the social and regional repercussions resulting from the reduction in activity. Therefore, Member states notify the state aid that they wish to grant to the coal industry on an annual basis for consideration and eventual approval by the European Commission. In order to be able to grant aid for the reduction of activity or production aid for accessing coal reserves, Member States must submit beforehand a long-term restructuring plan of the coal industry.

Different kinds of aid may be considered compatible with the common market:

Aid	Conditions
Aid for the reduction of activity (Article 4)	- closure plan (notification 31 October 2002 at the latest, 31 August 2004 for the new Member states) ; - aid may not exceed difference between production costs and revenue ; - aid may not cause lower prices than those for coal from third countries ; - aid may not cause distortion of competition.
Aid for accessing coal reserves (Article 5) :	
1) aid for initial investment :	- operating plan to ensure economic viability (notification 31 December 2002 at the latest, 31 August 2004 for the new Member states) ; - not more than 30% of the total costs.
2) current production aid :	- part of a plan for accessing coal reserves (notification 31 October 2002 at the latest, 31 August 2004 for the new Member states) ; - aid granted to production units which afford the best economic prospects.

[13] Council Regulation N° 1407/2002 of 23 July 2002, OJ L 205 of 02.082002, p. 1

Aid to cover exceptional costs (Article 7) :	- costs arising from rationalisation and restructuring.

The overall amount of aid to the coal industry granted under Articles 4 and 5 of the Regulation has to follow a downward trend so as to result in a significant reduction.

During 2002, some € 5.6 billion was granted to the hard coal sector. Aid to current production has continued to decrease steadily in line with the agreements on the reduction of volumes of aid to the coal industry until 2005. The table below provides an overview of aid authorised to the coal industry from 2001 to December 2004 inclusive.

Figure 17

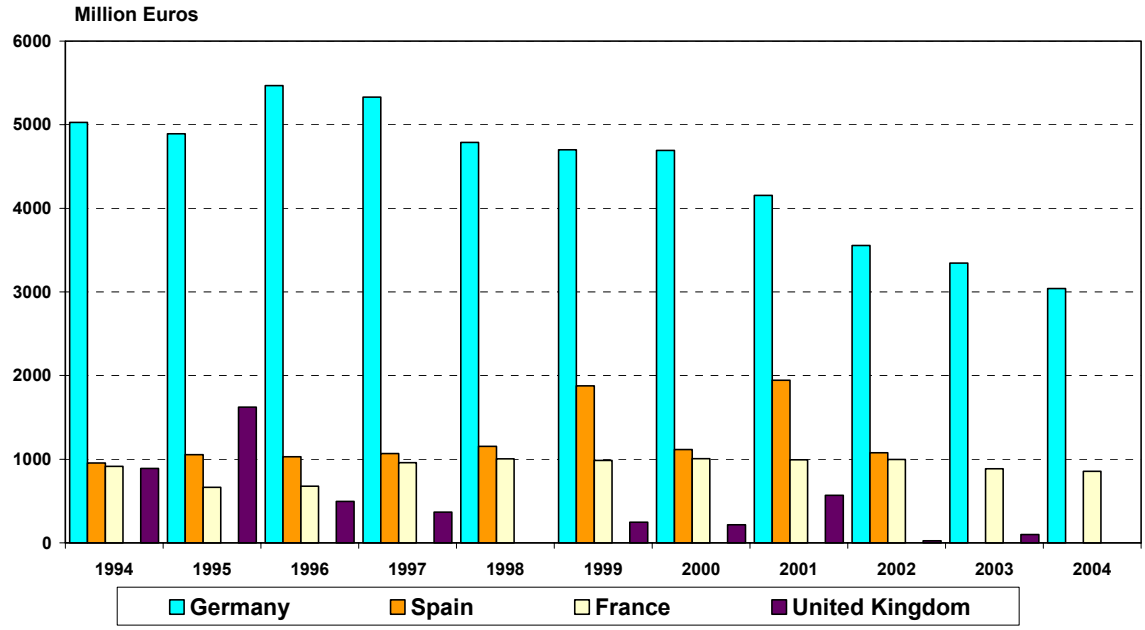
State aid 2001-2004 (in millions €) authorized by end July 2005

EUR million	2001	2002	2003	2004
Germany				
- production aid	2,755.3	2,404.7	2,575.0	2,483.2
- aid not related to production	1,400.9	1,152.4	769.9	557.4
Spain				
- production aid	659.5	609.1	(1)	(1)
- aid not related to production	1,283.6	469.4	(1)	(1)
France				
- production aid	350.6	303.4	169.7	86,6
- aid not related to production	642.3	692.4	714.7	801,3
United Kingdom				
- production aid	105.7	23.5	(2) 86.1	0.0
- aid not related to production	462.3	1.3	14.4	0.0
Czech Republic				
- production aid				0
- aid not related to production				(1)
Poland				
- production aid				0
- aid not related to production				888
Hungary				
- production aid				49
- aid not related to production				0
Slovakia				
- production aid				0
- aid not related to production				1
EU TOTAL				
- production aid	3,871,1	3,340.7	2,831.4	2,645.8
- aid not related to production	3,789,2	2,315.5	1,499.0	2,249.7
TOTAL AID	**7,660.3**	**5,656.2**	**4,334.4**	**4,994.5**
Production aid in € per tonne	**49.56**	**45.03**		

(1) Aid not yet authorised. Refers to section 6.3

(2) Investment aid for UK approved in 2003 to be allocated between 2003 and 2005

Figure 18.
Trend in the aid authorised by Member state from 1994 to 2004



6.1. France

On 21 January 2004, the Commission authorised France[14] to grant aid of € 884.4 million for 2003 to cover the costs of closing its last two operating mines. On 19 January 2005, the Commission approved aid to cover the cost of the closure of the last mines in April 2004.

6.2. Germany

The German hard coal industry, mainly based in the region Nordrhein-Westfalen, is uncompetitive against internationally-traded coal. Due to geological circumstances, production costs are very high and over many years significant amounts of State aid have been granted to the main hard coal producer RAG AG.

On 7 May 2003 the Commission authorised both the restructuring plan of the German coal industry and aid to the German coal industry for the year 2003[15].

The restructuring plan contains detailed data for the period 2003 to 2005 and provides for a gradual reduction of the financial aid measures to the German coalmining industry from € 3.3 billion in 2003 to € 2.7 billion in the year 2005. The reduction in State aid will lead to a permanent reduction in coal production. Production will be reduced from 26.45 million tonnes in 2003 to 22.45 million tonnes in 2007. In order to achieve this goal, two production units will be closed in 2006 and 2007.

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14 Commission decision of 21 January 2004, C (2004) 35
15 Commission decision of 07 May 2003, C (2003) 1295

The total amount of the approved aid for the year 2003 was € 3,345.5 million. This aid can be divided into:

– Aid for the reduction of activity, € 390.6 million ;

– Production aid of € 2,185 million ;

– Aid to cover exceptional costs of € 769.9 million.

In November 2003 the German government announced further long-term plans up to 2012, with a production target of some 16 million tonnes by that date. However Council Regulation (EC) No 1407/2002 only applies until 31 December 2010.

By decision of 19 May 2004[16] the Commission approved the aid for 2004, amounting to € 3.0 billion. This amount is in accordance with the amounts laid down in the approved restructuring plan and was split as follows:

– Aid for the reduction of activity, € 413.9 million ;

– Production aid of € 2,069.3 million ;

– Aid to cover exceptional costs of € 557.4 million.

6.3. Spain

On 2nd July 2002, the Commission authorised[17] Spain to grant, for the period from 1 January 2002 to 23 July 2002, aid totalling €642,216,880, split as follows:

– operating aid of € 162,840,571 ;

– aid for the reduction of activity of € 202,230,309 ;

– and aid for historical liabilities of € 277,146,000.

On 21 January 2003, the Commission authorised aid of € 3 million in respect of private coal mining companies in the Principality of Asturias for research and technological development, environmental protection and mining training for the period from 23 July 2002 to 31 December 2004[18].

On 19 February 2003 the Commission authorised aid for the second half of 2002[19] of € 425,013,213 and additional aid totalling €11,286,002 covering 2001 and the period from 1 January to 23 July 2002. The aid is split as follows:

– Aid for the reduction of activity, € 127,718,522 ;

– Production aid of € 116,314,693 ;

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16 Commission decision C (2004) 1819
17 Commission decision 2002/826/ECSC of 02 July 2002, OJL 296 of 30 October 2002
18 Commission decision of 21 January 2003 C (2003) 244
19 Commission decision of 19 February 2003 C (2003) 521

– Aid to cover exceptional costs of € 192,266,000.

On 19 February 2003, the Commission also authorised aid of €1,629,130,000 to cover the outsourcing of activities related to the restructuring process in respect of the coalmining company of Hunosa for the years 1999 and 2001[20].

On 19 February 2003, the Commission also opened the procedure provided for in Article 88(2) of the EC Treaty to the aid to cover exceptional costs of the restructuring process, for research and development, environmental protection, mining training en mining safety in respect of private coal mining companies in the Autonomous Community of Castile-Leon for the years 2001 and 2002[21]. The Commission has investigated the possible risk of unlawful accumulation between the aid granted by the Spanish central authorities and the aid granted by the Community of Castile-Leon.

On 30 March 2004[22], the Commission partly closed the procedure by taking a positive decision concerning the aid for research and development, environmental protection, mining training and mining safety. On 30 March 2004[23], the Commission approved an aid scheme for Research and Development, environmental aid and training aid to coalmining companies for the years 2003 - 2006 in the Autonomous Community of Castile-Leon.

On 19 February 2003 the Commission also decided to reopen the procedure against the Spanish coalmining company González y Diez S.A. in order to replace the Decision 2002/827/ECSC of 2 July 2002 by a new decision[24]. By Decision 2002/827/ECSC the Commission ordered Spain to recover the aid for the years 1998 and 2000 and did not authorise aid for the year 2001. The Commission considered that, after the expiry of the ECSC Treaty on 23 July 2002, the procedural rules that are now applicable offer better opportunities to guarantee the rights of Member States, the concerned company and third parties. On 5 November 2003, the Commission closed the procedure and decided that the aid for 1998 and 2000 has partly been abused and that the aid for 2001 can only partly be authorised[25].The Commission ordered Spain to recover the abused aid for 1998 and 2000 and part of the aid for 2001.

Concerning the aid for 2003 and the long-term restructuring plan, Spain has notified a restructuring plan for the period 2003 to 2005. The proposed total amount of aid for 2003 is approximately € 1.6 billion. The plan is designed to support Spanish coalmining companies, taking account of the fact that the restructuring of the coal sector will continue, i.e. a smaller volume produced with aid and smaller workforces, permitting a reduction in production costs. The proposed reduction in aid to cover operating deficits is 4% annually.

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20 Commission decision of 19 February 2003 C (2003) 526
21 Commission decision of 19 February 2003 C (2003) 525
22 Commission decision of 30 March 2004 C (2004) 927
23 Commission decision of 30 March 2004 C (2004) 931
24 Commission decision of 19 February 2003 C (2003) 524
25 Commission decision of 05 November 2003 C (2003) 3910

By decision of 30 March 2004[26] the Commission decided to initiate the procedure as referred to in Article 88(2) EC Treaty. The Commission has to investigate which part of the total amount of aid is linked to the reduction of activity and which part to accessing coal reserves, which criteria have to be fulfilled by the production units, whether the conditions laid down in previous Commission decisions will be respected.

6.4. United Kingdom

In its decisions of 21 January 2003 and 5 March 2003, the Commission authorised aid for the year 2002[27], which marked the end of the UK coal operating aid scheme, under which the Government paid out just over £160m to eligible coal producers. The scheme helped mines which had a viable future to continue, and most of those are still operating.

On 28 May 2003, the Commission authorised aid of €14.4 million (£10 million) in respect of redundancy payments arising from the closure of the Selby Complex owned by UK Coal[28].

The UK does not grant production aid anymore. On 25 June 2003, the Commission authorised an aid scheme to cover initial investment costs to the United Kingdom coal industry for the period 2003 - 2005[29]. The aid scheme is designed to support commercially realistic investment projects that maintain access to reserves at mines with a viable future and create or safeguard jobs in socially and economically disadvantaged areas. Following this approval, the UK government launched Coal Investment Aid. Slightly less money is available under this programme than under the Operating Aid Scheme with €86.1 million (£60 million) over 3 years. The investment aid must not exceed 30% of the total costs of the relevant investment project which will enable a production unit to become competitive in relation to the prices for coal of a similar quality from third countries.

6.5. New Member States

The Commission has approved restructuring plans for Poland and Hungary in June 2005. The restructuring plan for Slovakia is under examination. The Czech Republic has put into place its aid scheme before accession; it is treated as an existing aid.

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[26] Commission decision of 30 March 2004 C (2004) 1002, OJ 15 July 2004, C 182, p. 3
[27] Commission decisions of 21 January 2003 C (2003) 242 and 5 March 2003 C (2003) 661
[28] Commission decision of 27 May 2003 C (2003) 1668
[29] Commission decision of 24 June 2003 C (2003) 1908

7. CONCLUSIONS

Since the mid-eighties, the very competitive international market has seen prices for coal relatively stable compared to those for other fossil fuels. The Community state aid framework established from 1993 to 2002 noted in its preamble that "*the world market in coal is stable with abundant supplies from a wide variety of geographical sources, with the result that even in the long term and with increased demand for coal the risk of persistent interruption of supply, although it cannot be ruled out totally, is nevertheless minimal*"[30]. Likewise the Commission's Green Paper on a European Strategy for the security of energy supply[31] underlined that the "*characteristics of the world coal market (geographical and geopolitical spread of supply and absence of price tensions) are reassuring in view of (the EU's) growing external dependence*". Until mid 2003, this remained true as steam coal prices into the EU, for example, on a five year running average fell from $43 per tonne in 1987 to $37 per tonne in 2001, and fluctuated within a band of some plus or minus 5 US dollars per tonne.

As noted at the beginning of this report, the second half of 2003 and the whole of 2004 saw a totally unexpected and profound change to the traditional situation on the international coal market. Spot prices for steam coal in South African ports, for example, increased from around $26 per tonne in the early part of 2003 to $42 per tonne at the start of 2004 and $65 per tonne by the middle of 2004. At the same time, freight rates on the South Africa-Rotterdam route more than doubled from around $10 per tonne in February 2003 to around $26/tonne at the start of 2004, before falling back to around $14/tonne in May 2004 and firming back up to $22 per tonne at the end of the year. These fluctuations meant that delivered spot prices of South African steam coal into European ports increased from around $36 per tonne in early 2003 to over $80 per tonne in the summer of 2004, before falling back to around $74 per tonne at the end of 2004.

A number of factors coincided to cause this, chief among which were:

– China's unexpected and dramatic increase in domestic demand for raw materials for its steel-making industry (iron ore, coking coal and scrap) during the second half of 2003 resulted in a sharp escalation in global seaborne freight rates. This combined with firm demand for hard coal from Japan and Korea, and some congestion in Australian ports, leading to a heightened demand for dry bulk carriers from September 2003 onwards.

– The higher freight rates meant that it was increasingly challenging for Australian coal to be sold competitively into the Atlantic market. This effectively permitted the traditional suppliers onto the Atlantic market to increase their export prices.

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30 Commission decision 3632/93/ECSC of 28 December 1993 establishing Community rules for State aid to the coal industry. OJ L 329 of 30.12.199, p. 12

31 COM (2000) 769 final of 29.11.2000

– And the weakening US dollar which put cost pressure on the producers and led to further price increases in US dollar terms.

While the coal has been available over this period, the transportation system has been unable to get all of the coal needed to efficiently supply the markets. While many analysts expect the freight market to return to equilibrium by the end of 2005 as sufficient number of new maritime vessels are brought onto the market and older vessels are used longer instead of being sent for scrapping, this situation will continue to need monitoring for security of energy supply reasons.

The vast global reserves of coal, as well as the relatively low level of investments and short period of time necessary to expand production in the main coal exporting countries, should continue to ensure a balance over the medium term between the demand for coal and the supply, although the equilibrium price, both in dollar and Euro terms, is likely to be higher than it has been previously. However, this should not bring into question the restructuring of the coal industry that continues to be necessary in a number of EU Member States.

ANNEX: DATA TABLES

The data in this section has been provided by the Member states up to August 2004. Where data has not been available, clearly indicated estimations have been made by the Commission services.

Note that the data may differ from that of Eurostat.

TABLES CONTENTS

GENERAL DIRECTORATE FOR ENERGY AND TRANSPORT
COAL AND OIL

Table 1
Supplies and requirements of hard coal in 2002 (part 1)

(In thousands of metric tons)

22-déc-04

Member state	Austria	Belgium	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy
1. PRODUCTION (t=t)				14467				1483	29209				163
of which :													
A.- Underground				14467				1483	29209				
B.- Opencast													
2. RECOVERIES		173						437	145				628
3. RECEIPTS FROM OTHER EU COUNTRIES	5	179		2	12		8	761	2526			38	
4. TOTAL IMPORTS FROM THIRD COUNTRIES	1742	9186	54	23	3986	59	4099	16379	23698		611	2438	18618
of which :													
A.- USA	2	1840					223	1890	338		29	232	2935
B.- CANADA		321					147	403	1123				725
C.- AUSTRALIA	34	2576			250		405	4589	3387			511	2416
D.- SOUTH AFRICA	0	2798			1214		66	4869	6798			300	3871
E.- RUSSIAN FEDERATION		969	54	21	1085	58	2636	288	1998		34		1396
F.- CHINA		230						652	447				587
G.- COLOMBIA		314			791		134	1611	2823			868	1950
H.- INDONESIA					150		200	663	381			464	3375
I.- VENEZUELA		120						768	62				1279
J.- OTHERS	1706	18		2	496	1	288	646	6341		548	63	84
5. TOTAL AVAILABILITIES (1+2+3+4)	**1747**	**9538**	**54**	**14492**	**3998**	**59**	**4107**	**19060**	**55578**		**611**	**2476**	**19409**
6. GROSS INLAND CONSUMPTION*	4032	9214	54	10210	6968	59	5358	19377	62338		836	2715	19963
A.- POWER STATIONS (public & mine)	1805	3974		3795	6592	4	4983	8337	46350		38	2366	12855
B.- COKING PLANTS - coal input	1864	3725		4601				6405	8921		551		5541
COKING PLANTS - coke output*													
C.- IRON AND STEEL INDUSTRY	28	1109		768				2506	2295				990
D.- OTHER INDUSTRIES	256		54	721	254	15	371	1570	3304		115	61	464
(of which POWER STATIONS)				100		2		345	3280			31	
E.- DOMESTIC HEATING	79	304		298	122	30	4	470	1173		131	288	
F.- MISCELLANEOUS (TOTAL OF (i) TO (iii))		102		27		10		89	295		1		113
i. ISSUE TO WORKERS									2				
ii. PATENT FUEL PLANTS		11						68			1		
iii. OTHERS		91		27		10		21	293				113
7. DELIVERIES TO OTHER ECSC COUNTRIES	0	1898		2630	7			109	116			5	
8. EXPORTS TO THIRD COUNTRIES	0	73		3060	1			14	2		1		
9. TOTAL DELIVERIES (6+7+8)	**4032**	**11185**	**54**	**15900**	**6976**	**59**	**5358**	**19500**	**62456**		**837**	**2720**	**19963**

Supplies and requirements of hard coal in 2002 (part 2)

(In thousands of metric tons)

Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Slovakia	Slovenia	Spain	Sweden	United Kingdom	EUR-25	Member state
					102065				13390		29540	190317	1. PRODUCTION (t=t)
													of which :
					102065				8370		16392	171986	A.- Underground
									5020		13148	18168	B.- Opencast
											450	1833	2. RECOVERIES
		72		50		72			137	29	367	4258	3. RECEIPTS FROM OTHER EU COUNTRIES
	216	55		21627	2710	5261	4102		24133	2362	26723	168082	4. TOTAL IMPORTS FROM THIRD COUNTRIES
													of which :
				2350		115			1904	319	1566	13743	A.- USA
				1639					332		750	5440	B.- CANADA
				2833		838			3709	1037	5093	27678	C.- AUSTRALIA
		55		7396		2281			10765		9876	50289	D.- SOUTH AFRICA
	215			494	1581		1630		2338	250	4368	19415	E.- RUSSIAN FEDERATION
				417	2				71		288	2694	F.- CHINA
				498	2	1422			1622	83	3547	15665	G.- COLOMBIA
				2940	0	605			3152			11930	H.- INDONESIA
				2479					65	381		5154	I.- VENEZUELA
	1			581	1125		2472		175	292	1235	16074	J.- OTHERS
	216	**127**		**21677**	**104775**	**5333**	**4102**		**37660**	**2391**	**57080**	**360232**	**5. TOTAL AVAILABILITIES (1+2+3+4)**
	211	127		13411	81904	5668	5670		37532	3298	57641	346586	6. GROSS INLAND CONSUMPTION*
	13			9110	41195	5401	1035		31925	543	45175	225495	A.- POWER STATIONS (public & mine)
				2980	12373		2350		3535	1812	6534	61192	B.- COKING PLANTS - coal input
													COKING PLANTS - coke output*
		47		1247			1062		689	487		11228	C.- IRON AND STEEL INDUSTRY
	4	80		42	14390	267	1063		1061	450	3619	28161	D.- OTHER INDUSTRIES
					4120				307	4	1537	9726	(of which POWER STATIONS)
	30			7	6945		160		322	6	1804	12173	E.- DOMESTIC HEATING
	164			25	7001						509	8336	F.- MISCELLANEOUS (TOTAL OF (i) TO (iii))
					1560							1562	i. ISSUE TO WORKERS
											436	516	ii. PATENT FUEL PLANTS
	164			25	5441						73	6258	iii. OTHERS
				8223	16010		0			2	445	29445	7. DELIVERIES TO OTHER EU COUNTRIES
				345	6861		0				92	10449	8. EXPORTS TO THIRD COUNTRIES
	211	**127**		**21979**	**104776**	**5668**	**5670**		**37532**	**3300**	**58178**	**357035**	**9. TOTAL DELIVERIES (6+8)**

EUROPEAN COMMISSION
GENERAL DIRECTORATE FOR ENERGY AND TRANSPORT
COAL AND OIL

Table 2
Supplies and requirements of hard coal in 2003 (part 1)

22-déc-04 (In thousands of metric tons)

Member state	Austria	Belgium	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy
1. PRODUCTION (t=t)				13.643				1.730	28.753				250
of which :													
A.- Underground				13.643				1.730	28.753				
B.- Opencast													
2. RECOVERIES		135						504					318
3. RECEIPTS FROM OTHER EU COUNTRIES	3	186					8	510	63			40	
4. TOTAL IMPORTS FROM THIRD COUNTRIES	1.794	9.851	53	79	8.633	57	8.037	15.431	27.603		708	2.600	20.529
of which :													
A.- USA	1	1.919			245		266	2.109			6	200	2.467
B.- CANADA	1	368					156	250					848
C.- AUSTRALIA	3	2.525			569		525	4.527	5.007		32	500	2.875
D.- SOUTH AFRICA		3.847			2.971		412	4.003	8.152			300	4.767
E.- RUSSIAN FEDERATION		1.017	53	49	979	57	5.594	325	2.615		218		1.015
F.- CHINA		117			394		528	394					591
G.- COLOMBIA		9			2.681		59	2.322	3.969			900	2.455
H.- INDONESIA					147		262	684				500	5.006
I.- VENEZUELA		29						427					484
J.- OTHERS	1.788	20		30	647		235	390	7.860		452	200	21
5. TOTAL AVAILABILITIES (1+2+3+4)	**1.797**	**10.172**	**53**	**13.722**	**8.633**	**57**	**8.045**	**18.175**	**56.419**		**708**	**2.640**	**21.097**
6. GROSS INLAND CONSUMPTION*	3.955	8.199	53	9.275	9.543	44		20.568	64.559		1.134	2.720	21.079
A.- POWER STATIONS (public & mine)	1.767	3.666		3.298	9.203	4		9.251	48.190		148	2.400	13.975
B.- COKING PLANTS - coal input	1.859	3.317		4.626				6.460	9.525		764		5.173
COKING PLANTS - coke output*													
C.- IRON AND STEEL INDUSTRY		700		458				2.439	2.359				1.185
D.- OTHER INDUSTRIES	255	261	53	610	212	11		1.873	3.454		74	60	746
(of which POWER STATIONS)				87		2		662	3.427			30	
E.- DOMESTIC HEATING	73	244		259	128	19		477	798		145	260	
F.- MISCELLANEOUS (TOTAL FROM (i) TO (iii))		11		23		10		68	233		3		
i. ISSUE TO WORKERS									114				
ii. PATENT FUEL PLANTS		9						43	113		3		
iii. OTHERS		2		23		10		25	6				
7. DELIVERIES TO OTHER EU COUNTRIES	0	938		2.519	75			79	101				
8. EXPORTS TO THIRD COUNTRIES	0	25		3.150	76			5	2				
9. TOTAL DELIVERIES (6+7+8)	**3.955**	**9.162**	**53**	**14.944**	**9.694**	**44**		**20.652**	**64.662**		**1.134**	**2.720**	**21.079**

Supplies and requirements of hard coal in 2003 (part 2)

(In thousands of metric tons)

Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Slovakia	Slovenia	Spain	Sweden	United Kingdom	EUR-25	Member state
					100.410				12.584		27.758	185.128,10	1. PRODUCTION (t=t)
													of which :
					100.410				8.002		15.632	168.170,10	A.- Underground
									4.582		12.126	16.708,00	B.- Opencast
											472	1.429,00	2. RECOVERIES
		61		59		157	4.945		160	30	368	6.589,29	3. RECEIPTS FROM OTHER EU COUNTRIES
	284	45		21.220	2.429	5.046			21.015	2.505	29.912	177.831,04	4. TOTAL IMPORTS FROM THIRD COUNTRIES
													of which :
	8			1.240		354			1.398	346	1.154	11.713,03	A.- USA
				1.055					200		839	3.717,27	B.- CANADA
				2.400		668			3.748	1.172	5.665	30.216,10	C.- AUSTRALIA
		45		8.200	7	2.079			8.961		12.193	55.936,70	D.- SOUTH AFRICA
	276			270	1.729				1.610	155	5.271	21.233,03	E.- RUSSIAN FEDERATION
				260	2				146		210	2.641,50	F.- CHINA
				4.625		1.945			1.370		3.398	23.733,00	G.- COLOMBIA
				1.960					3.197			11.756,00	H.- INDONESIA
				860						346	41	2.187,00	I.- VENEZUELA
	0			350	692				385	486	1.141	14.697,40	J.- OTHERS
	284	**106**		**21.279**	**102.839**	**5.203**	**4.945**		**33.759**	**2.535**	**58.510**	**364.388,14**	**5. TOTAL AVAILABILITIES (1+2+3+4)**
		106		13.795	82.817	5.203	4.945		33.516	3.386	63.000	347.896,68	6. GROSS INLAND CONSUMPTION*
				9.365	40.832	5.072	1.030		29.085	680	51.450	229.417,16	A.- POWER STATIONS (public & mine)
				3.043	13.898				3.320	1.809	6.600	60.394,10	B.- COKING PLANTS - coal input
													COKING PLANTS - coke output*
		42		1.292			1.819		513	471		11.278,42	C.- IRON AND STEEL INDUSTRY
		64		64	14.263	131	1.821		248	419	3.140	27.760,14	D.- OTHER INDUSTRIES
					3.920				211	5	1.800	10.143,91	(of which POWER STATIONS)
				7	6.750		274		300	7	1.333	11.073,89	E.- DOMESTIC HEATING
				24	7.074				50		477	7.972,97	F.- MISCELLANEOUS (TOTAL FROM (i) TO (iii))
					1.620							1.734,00	i. ISSUE TO WORKERS
											400	568,00	ii. PATENT FUEL PLANTS
				24	5.454				50		77	5.670,97	iii. OTHERS
				7.168	15.417				51	1	458	26.807,11	7. DELIVERIES TO OTHER EU COUNTRIES
				385	4.605		0		5	1	84	8.338,16	8. EXPORTS TO THIRD COUNTRIES
		106		**21.348**	**102.839**	**5.203**	**4.945**		**33.572**	**3.388**	**63.542**	**356.234,83**	**9. TOTAL DELIVERIES (6+7+8)**

EUROPEAN COMMISSION
GENERAL DIRECTORATE FOR ENERGY AND TRANSPORT
COAL AND OIL

Table 3
Supplies and requirements of coke in 2002

(In thousands of metric tons)

07-janv-05

Member state	Austria	Belgium	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Hungary	Italy	Netherlands	Poland	Portugal	Slovakia	Spain	Sweden	United Kingdom	EUR-25
1. PRODUCTION (t=t)	1.395	2.966		3.537			912	4.552	7.226	427	4.065	2.127	8.750		1.805	2.416	1.074	4.559	45.811
3. RECEIPTS FROM OTHER EU COUNTRIES	62	50		6	1			350			40	66	0	7		13	112	194	901
4. TOTAL IMPORTS FROM THIRD COUNTRIES	355	559	179	57	37		462	856	3.946	172	630	501	34	12	66	133	442	49	8.490
of which :																			
A.- USA	2	24	157						476			37							696
B.- CANADA	3	9							2							46			60
C.- AUSTRALIA									1.132										1.132
D.- SOUTH AFRICA		131										17	0						148
E.- RUSSIAN FEDERATION		131						22	654	99	2	30		12		29			979
F.- CHINA		50			37		5	683	1.112		580	417				58	440	48	3.430
G.- COLOMBIA									79										79
H.- INDONESIA																		1	1
I.- VENEZUELA																			
J.- OTHERS	350	214	22	57			457	151	491	73	48		34		66		2		1.964
5. TOTAL AVAILABILITIES (1+3+4)	**1.812**	**3.575**	**179**	**3.600**	**38**		**1.374**	**5.758**	**11.172**	**599**	**4.735**	**2.694**	**8.784**	**19**	**1.871**	**2.562**	**1.628**	**4.802**	**54.301**
6. GROSS INLAND CONSUMPTION*	2.219	3.251	179	3.122	36	1	1.366	5.811	13.850	757	3.587	2.092	4.782	19	1.814	1.941	1.539	4.733	51.100
A.- POWER STATIONS (public & mine)																			
B.- COKING PLANTS - coal input																			
COKING PLANTS - coke output*																			
C.- IRON AND STEEL INDUSTRY	1.995	3.197		2.869			1.198	4.902	12.371	723	3.587	1.886	3.450		1.373	1.500	1.449	4.343	44.843
D.- OTHER INDUSTRIES	83	47	179	96	36	1	168	753	1.267	25		206	752	19	70	441	67	212	4.423
E.- DOMESTIC HEATING	141	2		80				39	204	2			490					178	1.136
F.- MISCELLANEOUS (TOTAL FROM (i) TO (iii))		5		77				117	8	7			90		371		23		698
i. ISSUE TO WORKERS									8										8
ii. PATENT FUEL PLANTS																			
iii. OTHERS		5		77				117		7			90		371		23		690
7. DELIVERIES TO OTHER EU COUNTRIES	0	142		-742				336	17		80	681	3.213			499	23	162	4.411
8. EXPORTS TO THIRD COUNTRIES	0			-204			2	21	5	62	48	13	789		162	116		155	1.170
9. TOTAL DELIVERIES (6+7+8)	**2.220**	**3.393**	**179**	**2.176**	**36**	**1**	**1.368**	**6.168**	**13.872**	**819**	**3.715**	**2.786**	**8.784**	**19**	**1.976**	**2.556**	**1.562**	**5.050**	**52.269**

EUROPEAN COMMISSION

GENERAL DIRECTORATE FOR ENERGY AND TRANSPORT

COAL AND OIL

P

Table 4
Supplies and requirements of coke in 2003

(In thousands of metric tons)

07-janv-05

Member state	Austria	Belgium	Cyprus	Czech Republic*	Denmark	Estonia	Finland	France	Germany	Hungary	Italy	Netherlands	Poland	Portugal	Slovakia	Spain	Sweden	United Kingdom	EUR-25
1. PRODUCTION (t=t)	1.395	2.803		3.556			800	4.601	7.827	585	3.827	2.150	10.112		1.874	2.483	1.060	4.600	47.673
3. RECEIPTS FROM OTHER EU COUNTRIES	54	56		6				235	631		1	210	2	13		21	93	156	1.478
4. TOTAL IMPORTS FROM THIRD COUNTRIES	277	188	113	60	31		496	1.119	2.561	97	1.536	412	26			165	344	822	8.247
of which :																61			61
A.- USA	3	23									62	48							136
B.- CANADA	5								2			2							9
C.- AUSTRALIA											86								86
D.- SOUTH AFRICA								1											1
E.- RUSSIAN FEDERATION	1	27						31	35	83	6	65				67			315
F.- CHINA		137			31			909			1.118	277	12			37	295	470	3.286
G.- COLOMBIA									1										1
H.- INDONESIA																			
I.- VENEZUELA																			
J.- OTHERS	267	1	113	60			496	178	2.523	14	264	20	14				49	352	4.352
5. TOTAL AVAILABILITIES (1+3+4)	**1.726**	**3.047**	**113**	**3.622**	**31**		**1.296**	**5.955**	**11.019**	**682**	**5.364**	**2.772**	**10.139**	**13**	**1.874**	**2.669**	**1.497**	**5.578**	**55.920**
6. GROSS INLAND CONSUMPTION	2.222	3.430	113	3.122	33	1		5.541	13.348	759	5.237	2.212	5.187	13		1.844	1.585	5.293	49.940
A.- POWER STATIONS (public & mine)																			
B.- COKING PLANTS - coal input																			
COKING PLANTS - coke output																			
C.- IRON AND STEEL INDUSTRY	2.024	3.228		2.869				4.668	12.230	741	4.928	2.002	3.752			1.500	1.495	5.088	44.525
D.- OTHER INDUSTRIES	78		113	96	33	1		721	1.011	13	309	210	800	13		344	69	106	3.917
E.- DOMESTIC HEATING	120	5		80				29	101	2			530					99	966
F.- MISCELLANEOUS (TOTAL FROM (i) TO (iii))		197		77				123	6	3			105				21		532
i. ISSUE TO WORKERS									6										6
ii. PATENT FUEL PLANTS																			
iii. OTHERS		197		77				123		3			105				21		526
7. DELIVERIES TO OTHER EU COUNTRIES		65		-782				400	1	2	120	540	3.950			679	23	121	5.119
8. EXPORTS TO THIRD COUNTRIES	0			-162				17		64	45	110	1.029		104	161		106	1.474
9. TOTAL DELIVERIES (6+7+8)	**2.222**	**3.495**	**113**	**2.178**	**33**	**1**		**5.958**	**13.349**	**825**	**5.402**	**2.862**	**10.166**	**13**	**104**	**2.684**	**1.608**	**5.520**	**51.415**

EUROPEAN COMMISSION
GENERAL DIRECTORATE FOR ENERGY AND TRANSPORT
COAL AND OIL

Table 5

Supplies and requirements of brown coal in 2002

(In thousands of metric tonnes)

07-janv-05

Member state	Austria	Belgium	Czech Republic	France	Germany	Greece*	Hungary	Italy	Lithuania	Luxembourg	Netherlands	Poland	Slovakia	Slovenia	Spain	Sweden	EUR-25
1. PRODUCTION (t=t)	1412		48892	148	181745	70200	13027					58210	3401	4687	8726		390448
of which :																	
A.- Underground			501	148	88		4098						3401	4687			12923
B.- Opencast	1412		48391		181657	70200	8929					58210			8726		377525
2. RECOVERIES														569			569
3. RECEIPTS FROM OTHER EU COUNTRIES	63	199		23				10		8	52						355
4. TOTAL IMPORTS FROM THIRD COUNTRIES	8				848		262		0				714	534		7	2373
of which :																	
A.- AUSTRALIA																7	7
B.- RUSSIAN FEDERATION							44		0								44
C.- INDONESIA														534			534
D.- OTHERS	8				848		218						714				1788
5. TOTAL AVAILABILITIES (1+2+3+4)	**1483**	**199**	**48892**	**171**	**182593**	**70200**	**13289**	**10**	**0**	**8**	**52**	**58210**	**4115**	**5790**	**8726**	**7**	393390
6. GROSS INLAND CONSUMPTION*	1245	186	46906	184	182455	70200	13218	10	1	8	52	58210	4112	5693	8726	6	391212
A.- POWER STATIONS (public & mine)	1008		36561		168216	70200	12715					58210	2945	5466	8726		364047
B.- INDUSTRY	166	186	8298	183	457		30	9		6	29		667	113			10144
(of which POWER STATIONS)			4122										667				4789
C.- DOMESTIC HEATING	71		877	1			382			2				29			1362
D.- MISCELLANEOUS (TOTAL FROM (i) TO (iii))			1170		13782		91	1			23		500	85		6	15658
i. ISSUE TO WORKERS							5										5
ii. PATENT FUEL PLANTS			550		13778		2										14330
iii. OTHERS			620		4		84	1						85		6	800
7. DELIVERIES TO OTHER ECSC COUNTRIES			827		1											1	829
8. EXPORTS TO THIRD COUNTRIES	0		944										5	1			950
9. TOTAL DELIVERIES (6+7+8)	**1245**	**186**	**48677**	**184**	**182456**	**70200**	**13218**	**10**	**1**	**8**	**52**	**58210**	**4117**	**5694**	**8726**	**7**	392161

EUROPEAN COMMISSION
GENERAL DIRECTORATE FOR ENERGY AND TRANSPORT
COAL AND OIL

Table 6

Supplies and requirements of brown coal in 2003

(In thousands of metric tonnes)

07-janv-05

Member state	Austria	Belgium	Czech Republic**	France	Germany	Greece*	Hungary	Italy	Lithuania	Luxembourg	Netherlands	Poland	Slovakia	Slovenia**	Spain	Sweden	EUR-25
1. PRODUCTION (t=t)	1152		50262	9	179085	68200	13195					60887	3076	4829	8001		388696
of which :																	
A.- Underground			470	9			3430						3076	4829			11814
B.- Opencast	1152		49792		179085	68200	9765					60887			8001		376882
2. RECOVERIES																	
3. RECEIPTS FROM OTHER EU COUNTRIES	69	189		42	23			8		8	41						380
4. TOTAL IMPORTS FROM THIRD COUNTRIES	6						317		0				807				1130
of which :																	
A.- AUSTRALIA																	
B.- RUSSIAN FEDERATION							36		0								36
C.- INDONESIA																	
D.- OTHERS	6						281										287
5. TOTAL AVAILABILITIES (1+2+3+4)	**1226**	**189**	**50262**	**51**	**179108**	**68200**	**13512**	**8**	**0**	**8**	**41**	**60887**	**3883**	**4829**	**8001**		389826
6. GROSS INLAND CONSUMPTION*	1175	189	46906	51	179334	68200	13557	8		8	41	60887	2960	4829	8001		386146
A.- POWER STATIONS (public & mine)	1000		36561		165259	68200	13031					60887	2960	4636	8001		360536
B.- INDUSTRY	100	189	8298	51	602		34	7		6	30			96			9413
(of which POWER STATIONS)			4122														4122
C.- DOMESTIC HEATING	75		877				412	1		2				25			1391
D.- MISCELLANEOUS (TOTAL FROM (i) TO (iii))			1170		13473		80				11			72			14806
i. ISSUE TO WORKERS							5										5
ii. PATENT FUEL PLANTS			550		13470		26										14046
iii. OTHERS			620		3		49				11			72			755
7. DELIVERIES TO OTHER ECSC COUNTRIES	0		174		1		1										176
8. EXPORTS TO THIRD COUNTRIES	0		909				13						1				923
9. TOTAL DELIVERIES (6+7+8)	**1175**	**189**	**47989**	**51**	**179335**	**68200**	**13571**	**8**		**8**	**41**	**60887**	**2961**	**4829**	**8001**		387069