



**VEREIN DER  
KOHLENIMPORTEURE**

ANNUAL REPORT

**2006**

## Import Coal Market at a Glance

		2004	2005	2006
<b>World<sup>1</sup></b>				
Hard coal output	Mill. t	4,794	5,158	5,351
Hard coal world trade	Mill. t	758	811	867
thereof hard coal seaborne	Mill. t	685	726	782
Hard coal green-border trade	Mill. t	73	85	85
Coke production	Mill. t	418	456	491 <sup>1</sup>
Coke world trade	Mill. t	37	28	32 <sup>1</sup>
<b>European Union (25)</b>				
Hard coal output	Mill. t	180	170	162
Hard coal imports	Mill. t	211	209	230 <sup>1</sup>
Coke imports	Mill. t	10	9	10 <sup>1</sup>
<b>Germany</b>				
Hard coal consumption	Mill. tce	65.8	62.8	64.0
Hard coal output	Mill. t usable output	25.7	24.7	21.4
Hard coal imports	Mill. t	39.1	36.3	42.2
Coke imports	Mill. t	5.2	3.6	4.3
Import coal sales	Mill. t	44.3	39.9	46.5
thereof power plants	Mill. t	30.9	28.6	31.9
Iron and steel industry	Mill. t	11.6	9.9	13.4
Heating market	Mill. t	1.8	1.4	1.2
<b>Prices</b>				
Steam coal marker price CIF NWE	US\$/tce	84	71	74
Border-crossing price steam coal	€/tce	55	65	62
CO <sub>2</sub> certificate price (mean value)	€/t CO <sub>2</sub>	-	20	18
Exchange rate	€/US\$	0.80	0.80	0.80
<sup>1</sup> Provisional figures				

## Summary

*In 2006, a new high record mark was reached for Germany with the import of some 46.5 million t steam coal, coking coal and coke. 45 million t were consumed. Import coal therefore covered approximately 64% of German hard coal requirements of about 70 million t in 2006. The steel industry was a major reason for the rise in consumption of import coal in 2006. Despite the short supplies of steam coal and ship capacities, there were no problems in obtaining supplies from the world market.*

*Thanks to the import of coal from the world markets, the German economy was able to save about €3.5 billion in comparison with using output from domestic coal.*

*The world market for hard coal rose by a total of about 7%, reaching a mark of 867 million t. Seaborne hard coal trade rose by 56 million t, reaching 782 million t. The pool of countries active on the world market for steam coal and coking coal became broader.*

*The border-crossing price for steam coal sank by 5% from €65/tce in 2005 to about €62/tce in 2006. The competitive position of imported coal improved in comparison with the other fossil energy sources oil and gas.*

*Import coal once again proved to be a solid part of the Germany energy mix in 2006, while the supply structure, especially for steam coal, became broader. Colombia, Russia and Indonesia have established themselves with German consumers as capable suppliers alongside South Africa and Poland, formerly the major supplier countries for the German market.*

*Supplies of coking coal to German steel mills come from Australia, Canada and the USA, politically very stable countries.*

*The advantages of import coal:*

- Well-structured geo-political supply
- Constant expansion of supply sources
- Prices which continue to be low
- Low risks during transport and storage

*2006 saw an intensification in the discussion of the causes of global warming, a debate which is becoming increasingly emotional. But the degree to which the emissions of greenhouse gases (CH<sub>4</sub>, CO<sub>2</sub>, etc.) caused by humans is responsible for the warming of the atmosphere has still not been clarified. Nevertheless, the coal industry is contributing billions to meet the requirements of intensified climate protection by developing and constructing more efficient coal-fired power plants and by conducting massive development work in projects to achieve coal combustion which is largely free of CO<sub>2</sub>.*

*Despite all of the efforts being made on a national level, one must keep in mind that Germany, which has a good 1% of the world population and about 3% of the world's greenhouse gas emissions, can have only a very limited, even if exemplary, effect. It is therefore absolutely essential to integrate the large producers USA, China and threshold and large developing countries into these efforts by means of international treaties.*

*The value triangle for the German energy production comprising*

- Supply security
- Economic efficiency
- Environmental compatibility

*is rapidly losing its balance at the cost of economic efficiency, putting Germany at a disadvantage as a business location.*

*We expect slightly lower import quantities in 2007. Presuming that the steel industry continues to do good business, the procurement of coking coal and coke will remain stable, while that of steam coal will decline slightly due to the mild winter of 2006/2007.*

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## GENERAL GLOBAL

### ECONOMIC CONDITIONS

#### Economic Growth

The world economy continued to enjoy a positive, robust development in 2006, the third year of an upswing in the world economy with growth rates just under 4%. The foundation for the economic expansion in 2006 became broader because the euro zone as well as the economies of East Asia and the United States also recorded a stronger rise in gross domestic product.

World trade once again grew substantially by 8.9% (2005: +7.4%) in 2006 and was a pillar of the world economy.

	2004	2005	2006
World production growth rates %	3.8	3.4	3.9
World trade growth rates %	10.6	7.4	8.9

The positive development was all the more remarkable in view of the fact that high prices for oil and gas had a rather dampening effect on the economy and led to higher inflation

rates. Interest rates also rose, but in an historical comparison remained at a relatively low level.

A slight weakening of the world economy is predicted for 2007 because the economy in the United States will cool down slightly. However, East Asia and Europe are expected to continue their stable development so that overall the world economy should continue to grow at a high level.

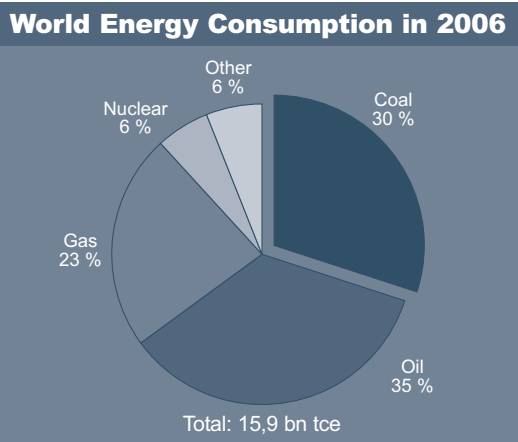
#### Energy Consumption

The world energy consumption continued to rise in 2006. The growth rate was 2.3% (2005: +3.2%). The Pacific region remains the area with the most rapid growth. Besides the increase in its own energy production, the area is making increasing use of the supplies on the world market.

Primary Energy Consumption in billion tce				
	2000	2005	2006	Growth 2005/2006
Coal	3.120	4.620	4.785	165
Natural gas	3.180	3.600	3.710	110
Petroleum	5.110	5.520	5.572	52
Nuclear energy	0.840	0.910	0.920	10
Hydroelectric/ Other	0.882	0.940	0.960	20
<b>Total</b>	<b>13.132</b>	<b>15.590</b>	<b>15.947</b>	<b>357</b>

Source: BP, own estimate for 2006

Coal achieved a world market share of 30% in 2006. The IEA predicts long-term an average annual increase in primary energy consumption of 1.6%. Fossil energy sources will be required to provide 83% of the growth until 2030.



Sources: BP Statistical Review of World Energy, own calculations

Coal consumption is forecasted at a growth rate of 1.8%. Despite an annual growth rate of 6.6%, renewable energy sources will achieve a meagre share of just under 2% of the total consumption; together with biomass and hydroelectric power, their share will be just under 14% in 2030.

## Hard Coal Output

Worldwide hard coal output rose again in 2006, increasing by 193 million t to 5.351 billion t (4.45 billion tce). The total output breaks down into about 0.7 billion t coking coal and 4.650 billion t steam coal.

The Pacific region continued to be the growth region with the greatest dynamics:

### Output of Important Countries in the Pacific Region in Million t

Producing countries	2004	2005	2006 <sup>1)</sup>	Difference
	Mill. t	Mill. t	Mill. t	2005/2006
China	1,992	2,190	2,326	+136
India	348	370	390	+20
Australia	297	306	302	-4
Indonesia	135	153	205	+52
Vietnam	28	34	44	+10
<b>Total</b>	<b>2,800</b>	<b>3,053</b>	<b>3,267</b>	<b>+214</b>

<sup>1)</sup>Some figures provisional

### World Energy Consumption Reference Scenario

	1980	2004	2010	2015	2030	2004-2020/30 <sup>1)</sup>
	Mill. tce	Mill. tce	Mill. tce	Mill. tce	Mill. tce	%
Coal	2,552	3,965	4,796	5,242	6,351	1.8 %
Oil	4,443	5,634	6,243	6,793	7,972	1.3 %
Gas	1,769	3,292	3,841	4,314	5,533	2.0 %
Nuclear energy	266	1,021	1,108	1,158	1,231	0.7 %
Hydroelectric power	212	346	400	453	584	2.0 %
Biomass and waste	1,094	1,681	1,835	1,966	2,352	1.3 %
Other renewable energy sources	47	82	141	195	423	6.6 %
<b>Total</b>	<b>10,383</b>	<b>16,021</b>	<b>18,364</b>	<b>20,121</b>	<b>24,446</b>	<b>1.6 %</b>

<sup>1)</sup>Average annual growth rate

Source IEA, Energy Outlook 2006

Besides those mentioned above, other countries in the Asian region mining coal are Bangladesh, Thailand, New Zealand, North Korea and Mongolia. There is also a smaller output of Russian coal in the Asian part of the country. The attention of coal investors has been drawn to Mongolia in particular in recent years because China, a large market, is right at its front door, but in the long term exports via North Chinese harbours would also be possible.

China contributed to total growth by increasing output by 136 million t.

India – the world's third-largest producer – increased its output and has ambitious plans for expansion so that sufficient coal can be provided for the production of electric power.

At this time, about 1.6 billion people in the world do not have access to electric power.

The following table (basis 2005) clearly shows how far India and the world as a whole lag behind in the consumption of electric power and consequently in the consumption of primary energy:

The table also shows how much of a lead China has over India in the production of energy.

Production stagnated in Australia. The future speed of output expansion will be dependent on the development of the infrastructure.

In North America, production stagnated in both the USA and Canada. The slowdown on the world coking coal market in 2006 led to delays in projects and the throttling of output in Canada.

In South America, Colombia increased its output while Venezuela remained constant. In Chile, invitations have been issued to submit tenders for the development of coal reserves.

Within the CIS, Kazakhstan, Russia and Ukraine increased their output. An expansion in output can also be presumed for the coming years with the intention of replacing gas as a fuel in power plants.

In the European region (EU 27), output fell from about 170 million t to about 162 million t in 2006.

In Africa, South Africa increased its production slightly. New coal projects are under examination in Mozambique, Botswana and Zimbabwe. The greatest progress has been made in the CVRD coking coal export project in Mozambique.

Worldwide, it can be seen that in the middle term the expansion of the supplies of exportable steam coal must be encouraged for the development of the steam coal trade with high growth rates so that no shortages occur.

### Population with/without Access to Electric Power

	China		India		World	
	Million	Percent	Million	Percent	Million	Percent
Population with access to electric power	1,302	99.4 %	607.6	55.5 %	4,875	75.6 %
Population without access to electric power	8.5	0.6 %	487.2	44.5 %	1,577	24.4 %
<b>Total</b>	<b>1,310.5</b>	<b>100 %</b>	<b>1,094.8</b>	<b>100 %</b>	<b>6,452</b>	<b>100 %</b>

But higher world market prices could also prompt additional projects providing supplies for export.

The IEA predicts an increase in hard coal production from 5.35 billion t in 2006 to 7.7 billion t (t = t) in 2030 (+44%).

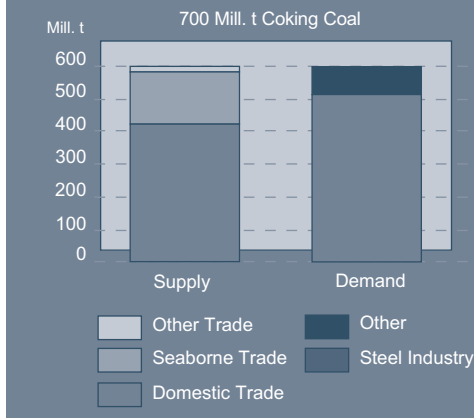
### The 10 Largest Coal Producers in the World

Company	2005		2006	
	Metric Tonnes		Metric Tonnes	
Coal India	324	343	324	343
Peabody <sup>1)</sup>	225	232	225	232
Shenhua	178	203	178	203
Rio Tinto	162	154	162	154
Arch <sup>1)</sup>	139	127	139	127
Anglo	95	98	95	98
China coal	72	91	72	91
Suek	85	90	85	90
BHPB	87	86	87	86
Xstrata	70	77	70	77

<sup>1)</sup>Sales figures

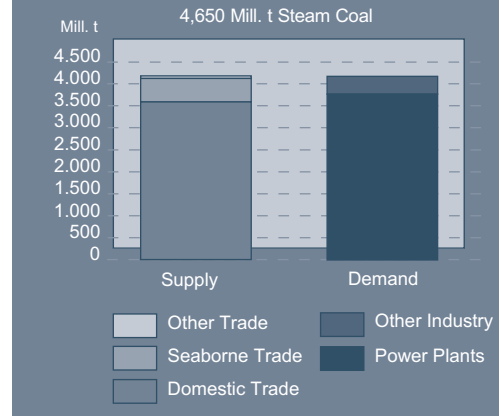
Source: The McCloskey Group

### Structure of the Coking Coal Market



Sources: several evaluation databases, estimate (China)

### Structure of the Steam Coal Market



Sources: several evaluation databases, estimate (China)

## Hard Coal World Market

### General Market Tendencies

Following a weak first half of 2006, the hard coal world market once again displayed strong growth of just under 7%. The international coal trade was supported by the strong world economy. World trade in coal developed as shown below:

	2005 Mill. t	2006 Mill. t	Growth Mill. t
Seaborne trade	726	782	+56
Green border trade	85	85	-
<b>Total</b>	<b>811</b>	<b>867</b>	<b>+56</b>



There was an observable difference in the development of seaborne trade for the two principal markets steam coal and coking coal:

<b>Seaborne World Trade in Coal</b>			
	<b>2005</b>	<b>2006</b>	<b>Increase/ Decrease</b>
	Mill. t	Mill. t	Mill. t
Steam coal	538	595	+57
Coking coal	188	187	-1
<b>Total</b>	<b>726</b>	<b>782</b>	<b>+56</b>

The share of all world trade in production comes to about 16%, the share of seaborne trade to about 15%.

Domestic trade in 2006 remained constant in comparison with 2005. In addition to the traditional supply relationships, domestic trade among the countries of “Greater China”, namely Vietnam, Mongolia and North Korea, with China developed greater momentum.

<b>Green Border Trade – World Market in Million t</b>		
	<b>2005</b>	<b>2006<sup>1)</sup></b>
	Mill. t	Mill. t
USA – Canada	17.6	18.0
USA – Mexico	0.9	0.5
Canada – USA	2.9	1.7
Mongolia – China	2.5	2.3
North Korea – China	2.8	2.5
Vietnam – China <sup>1)</sup>	3.0	6.0
Poland – EU countries	8.2	7.0
CR – EU countries	4.0	6.5
Russia – CIS countries (Ukraine)	10.5	6.5
Russia – By land outside of the CIS	5.0	6.0
Kazakhstan – Russia	24.0	24.0
Other (within the EU)	3.6	4.0
<b>Total</b>	<b>85.0</b>	<b>85.0</b>

<sup>1)</sup>Estimated, share by land in total export

In the long term, Mongolia in particular could become an important supplier for Northern China; Vietnam’s potential is difficult to assess, while North Korea’s chances to expand exports beyond their present volume are slight indeed.

The seaborne world trade in hard coal is growing approximately at the same rate as the world production in hard coal, although it has even been a little faster in recent years.

<b>World Output/World Trade</b>			
	<b>2000</b>	<b>2006</b>	<b>Growth</b>
	Mill. t	Mill. t	%
World Output	3,800	5,351	+41
World Trade	530	782	+48
Share of World Trade in Production	13.9 %	14.6 %	

The seaborne trade volume breaks down into a coking coal market and a steam coal market. The steam coal market in turn comprises Pacific and Atlantic partial markets, which are characterised by differing supplier structures. The exchange volume between the partial markets amounts to about 7% or approx. 39 million t of the steam coal market. 13% of the global steam coal production goes to the consumers via seaborne trade.

The coking coal market, in contrast, is a uniform world market due to the low number of supplier countries on the one hand and, on the other hand, the worldwide distribution of demand. About 27% of worldwide production, a significantly greater share than for steam coal, goes to seaborne trade. Differences in development were observed on the partial markets of coal world trade. The following comments refer only to the seaborne hard coal trade.

### The 10 Largest Hard Coal Import Countries in Million t

	2005 Mill. t	2006 Mill. t
Japan	181	177
South Korea	75	78
Taiwan	61	62
Great Britain	44	50
Germany	36	42
India	40	45
China	26	38
USA	27	33
Spain	25	27
Italy	25	26
<b>Total</b>	<b>540</b>	<b>578</b>
Share of world market (in relation to seaborne traffic)	75 %	74 %
<b>EU 25</b>	<b>209</b>	<b>230</b>
Share of world market	29 %	28 %

### Steam Coal Market

#### Volume Development

#### Atlantic Region

The Atlantic region covers the east coast of America, Europe, including the countries adjoining the Mediterranean, and the African west coast.

In the Atlantic region, the demand for import coal rose by 20 million t to 242 million t in 2006, so the demand in the Atlantic region continued to grow. The USA, the UK and Germany increased their procurements. Increases and decreases among the other countries more or less balanced each

### Hard Coal Seaborne Trade 2006: 782 Million t



other out. Of the supplier countries, Russia and Colombia benefited most from the good demand situation, but Indonesia was also able to place greater volume. South Africa and Poland reduced their export volumes slightly. However, South Africa continues to hold a market share of 27% on the Atlantic steam coal market and remains a major supplier. The supply shares of the USA and Venezuela stagnated. Spitzbergen, the smallest participant on the market, has recovered from the mine fire and was once again able to make full use of its production capacity.

#### Pacific Region

The Pacific region continues to demonstrate the most dynamic development in demand for steam coal. The demand for import coal rose by 37 million t to 353 million t in 2006.

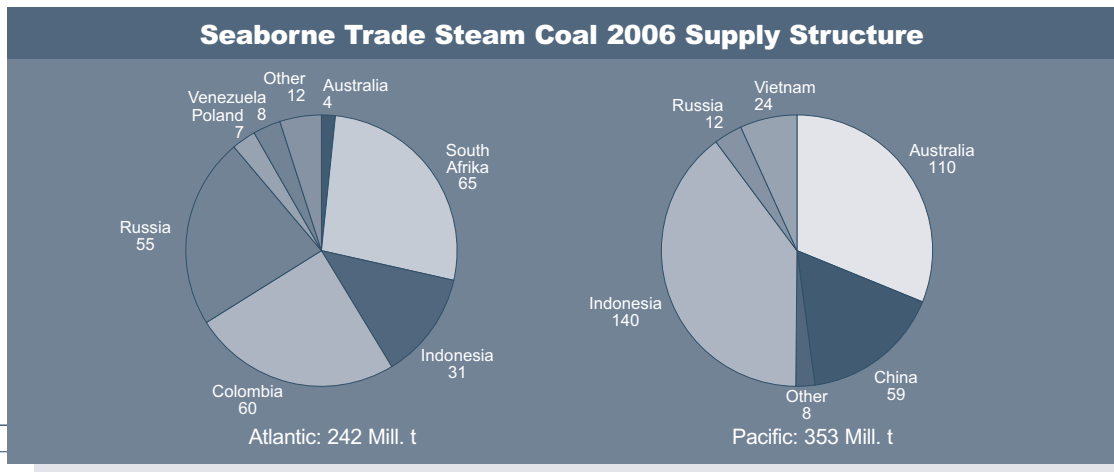
All of the major Asian industrialised countries increased their

procurements. China's influence on the import market is becoming increasingly great. China reduced its exports of steam coal by 8 million t while at the same time increasing its imports by 15 million t, thus influencing the Pacific market on balance in the annual comparison by 23 million t. India resorted increasingly to world market coal as well to satisfy its high demand for electric power. Once again, the increase in demand was basically covered by Indonesia and Vietnam. But Australia and Russia were also able to increase their export volumes to the Pacific market. Canada, South Africa and Colombia provided only small quantities to supplies of the Pacific region.

#### Quantity Exchange

##### Between Pacific and Atlantic Markets

Indonesia and Australia supplied 35 million t to the Atlantic market, a share of about 15% of the supplies to this region. Among the Atlantic suppliers, South Africa and Colombia (Pacific side of South America) sent smaller quantities to the Pacific region. The overall volume is estimated to be about 4 million t, corresponding to about 1.5% of the total steam coal market demand in the Pacific region.



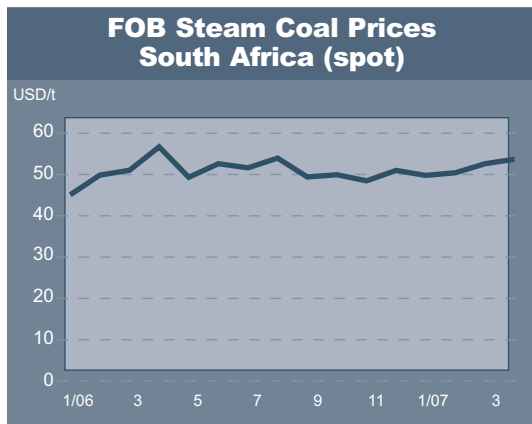
## Quantity Exchange Between Pacific and Atlantic Steam Coal Suppliers

Steam Coal	Total Import Volume		Pacific Exports to the Partial Markets		Atlantic Exports to the Partial Markets	
	Mill. t	%	Mill. t	%	Mill. t	%
Pacific market	353	100	349	98.8	4	1.2
Atlantic market	242	100	35	12.8	207	87.2
<b>Total</b>	<b>595</b>	<b>100</b>	<b>384</b>	<b>59.3</b>	<b>211</b>	<b>40.7</b>

### Prices

The steam coal price MICS cif ARA NWE (6,000 kcal/kg NAR) for spot quantities came to an average of US\$63/t or, converted, to US\$74/tce (tce = 7,000 kcal/kg) in 2006. In the previous year, the price was US\$71/tce, a rise of about 4% in 2006. The cif ARA price in euros came to €59/tce, meaning that the price was largely stable so that the world market coal was able to defend well its competitive position with respect to oil and especially gas.

The cif prices continue to be marked by high sea freights. The Atlantic and Pacific fob steam coal prices followed a similar trend, although there was a certain time delay.



Source: McCloskey

### Steam Coal Quotations

Prices for steam coal are increasingly determined on coal exchanges, where the number of participants is rising. The published exchange figures are frequently used as benchmarks for contract conclusions. There is still a lack of transparency concerning the collection of market data and the methods used to determine the price index.

Besides the steam coal quotations, exchanges for trading emission certificates have become established in the European region.

### Coking Coal Market

#### Quantities

Crude steel production around the world rose by 88 million t from 1.129 billion t to 1.217 billion t in 2006 (+7.8%). China alone had a share of 60% of the growth in this sector. The pig iron production decisive for the consumption of coking coal, PCI coal and coke increased by 78 million t from 790 million t to 868 million t. The share of crude

steel production based on the pig iron melted in the blast furnace process continued to rise because the growth in crude steel production, above all in China, was largely based on this process due to the lack of adequate supplies of scrap.

### The 10 Largest Steel Producers in the World

Country	2004	2005	2006
	Mill. t	Mill. t	Mill. t
China	272.5	349.4	421.5
Japan	112.7	112.5	116.2
USA	98.9	93.9	98.5
Russia	65.6	66.1	70.8
South Korea	47.5	47.7	48.4
Germany	46.4	44.5	47.3
Ukraine	38.7	38.7	40.8
India	32.6	38.1	42.8
Brazil	32.9	31.6	30.9
Italy	28.4	29.1	31.6

Source: IISI

About 310 – 330 million t of classified blast furnace coke is required for the production of 868 million t of pig iron. Added to this is about 70 million t of coke breeze and other industrial demand (foundries/lime works) of about 90 million t. A total of 470 – 490 million t is required from coke production to cover the industrial demand in the world. However, the steel-producing industry is working hard on a reduction of its specific coke consumption quanti-

ties and is also attempting to find a substitute by making increased use of lower-cost PCI coal.

A little more than 50% of the coke production in 2006 came from China at an estimated 283 million t. About 370 – 400 million t of coking coal is required for this. China is by and large self-sufficient in coking coal so that this enormous demand had practically no effects on the world market.

As a consequence of the shortages which appeared during the boom years 2003/2004, many companies which are dependent on the world market stored up stocks of coking coal in 2004/2005. These inventories were reduced to their normal levels when price pressures were relieved in 2005 and 2006. Consequently, the coking coal market did not grow any further in 2006.

### Market Share of Coking Coal

	2005		2006 <sup>1)</sup>	
	Mill. t	% Share	Mill. t	% Share
Australia	124	66	123	66
China	5	3	4	2
USA	22	12	22	12
Canada	26	13	25	13
Russia	8	4	9	5
Miscellaneous	3	2	4	2
<b>Total</b>	<b>188</b>	<b>100</b>	<b>187</b>	<b>100</b>

<sup>1)</sup>Provisional figures

There was virtually no change in the supplier structure in 2006.

Overall, there were no supply bottlenecks on the coking coal market in 2006. The demand for coke which is covered from the world market rose in 2006 in comparison with 2005.

### Coke World Market in Million t

	2004	2005	2006
Total market	37	28	32
% of world coke production	9 %	6 %	6 %
Thereof by land	7	6	6
Thereof by sea	30	22	26

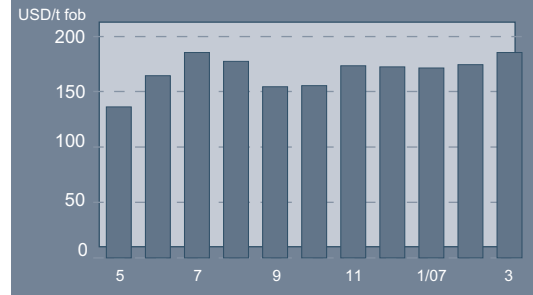
Source: Own provisional estimates

### Prices

Due to a lack of quality parameters suitable for an exchange, prices for coking coal are not determined on the coal exchange. This is still done traditionally by means of direct agreement between producers and consumers. The contract price for hard coking coal agreed between Australian suppliers and the Japanese steel industry for the current Japanese fiscal year (April/March) serves as a benchmark. In 2006, the prices for coking coal fell further below the top prices of the boom phase. The chart below shows the price development of the most recent rounds of negotiation for the most important coking coal qualities.

It is remarkable that all of the qualities are maintaining a high level. The high prices for hard coking coal have led to a shift in demand towards semi-soft coking coal and low-volatile PCI coal, which has a stabilising effect on the price. The coke prices have stabilised in recent months.

### Chinas Export Coke Prices (12-12,5% Ash) spot US\$/t fob



Source: China Coal Report

### Price Change of Contract Prices

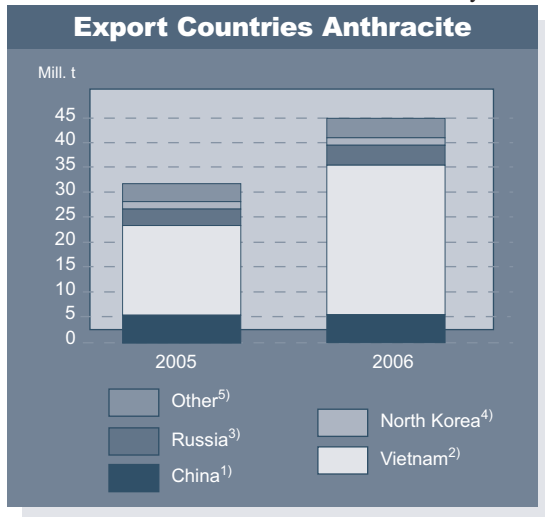
End of March	US\$/t fob Australia				Change		
	2004	2005	2006	2007	2005 %	2006 %	2007 %
Hard coking coal							
Premium	57.5	125	116	98	117.4 %	- 7.2 %	- 15.5 %
Weak	55.5	125	105	85	125.2 %	- 16.0 %	- 19.0 %
Semi-soft coking coal	40	75-80	53-58	65	93.8 %	- 28.4 %	17.1 %
PCI	45-46	99-101	63-67.5	65-67.5	119.8 %	- 34.8 %	1.5 %

Source: Macquarie Research Commodities

## Special Markets

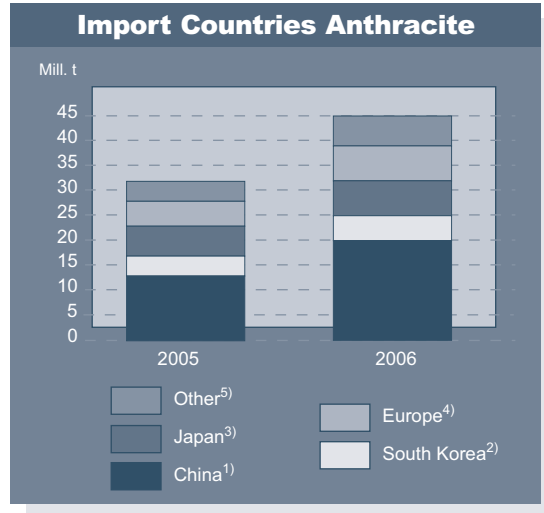
### Anthracite Coal World Market

The anthracite quantities are included in the global overviews for steam coal. In 2006, the anthracite coal world market basically grew again only because of higher Vietnamese quantities for the import steam coal in China. The demand from the steel industry rose slightly for PCI coal. Vietnam exported 13 million t more in 2006, a part of which was sent to China by land.



Sources: several databases

The export volume amounted to 45 million t.



Sources: several databases

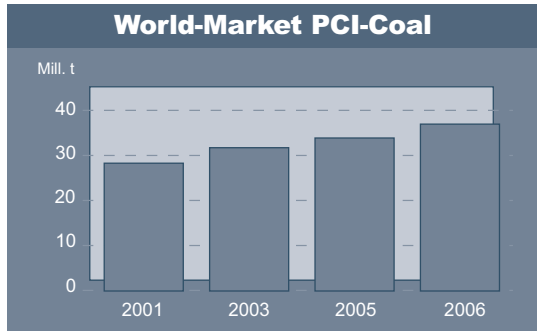
Largest importer is China with 20 million t.

### PCI Coal World Market

Since PCI coal – above all high volatile – is shown in part as steam coal in export statistics, exact information about the world trade quantities can only be approximate. They are estimated to have been about 36 million t in 2006, thereof 16 million t low volatile and about 20 million t high volatile PCI coal.

Australia, Canada, Russia and Vietnam are among the suppliers for low volatile PCI coal. High volatile PC coal is supplied by Australia, Indonesia and Venezuela, among others. The demand for low volatile PCI coal is rising steadily because it has the highest substitution rate for blast furnace coke.

In view of the current world pig iron production of about 900 million t, the potential for PCI coal can be estimated at about 80 – 100 kg/t pig iron and is therefore currently being exploited on the average by only 40 kg/t pig iron or 40% – 50%.



Source: McCloskey

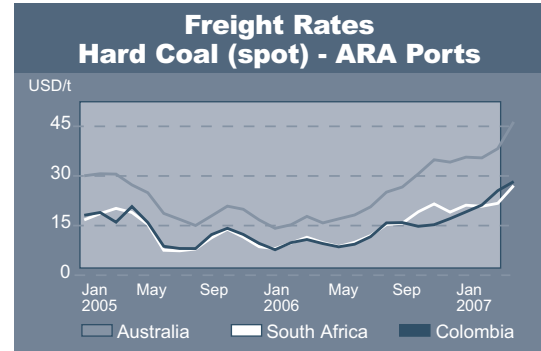
#### Freight Rates

Freight rates hovered at a high level in the first half of 2006 and in the comparison over several years, with the benchmark freight Richards Bay – ARA staying at  $\pm$ US\$15/t for capsize ships. In general, the tendency for the market is viewed to be falling in view of the continued expansion of the bulk carrier fleet. But from the middle of 2006 on, the freight rates rose steadily and came close to the peak values from the beginning of 2004 and 2005.

The high prices are caused by a shortage in capacities resulting from demurrage situations (waiting times), above all in Australia, but also in other ports. Furthermore, the transport service required per tonne has increased. For example, the distance travelled per “t” increased by 7% (tonne/mile performance).

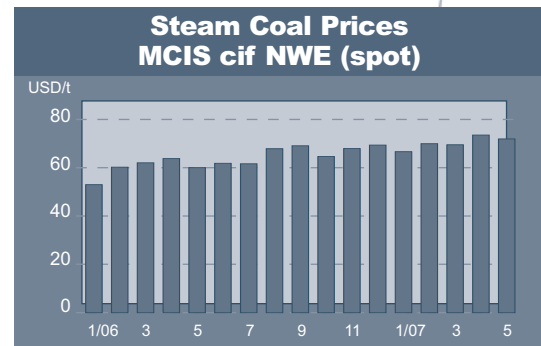
This results from structural shifts for sea transport of both iron ore and coal, leading to longer sea routes between export country and import country.

Intensive work is going on to eliminate the above-mentioned demurrage situations in the Australian ports, but an improvement cannot be expected before the end of 2007/beginning of 2008.



Source: Frachtcontor Junge

As a consequence of the high freights, the cif ARA prices for import coal rose correspondingly and remained at a high level of US\$/t.



Source: McCloskey

#### US Dollar Exchange Rate

The US dollar, the lead currency for the raw material and energy market, continued to fall slightly in value in comparison with the euro in 2006. The strong euro had the effect of alleviating the consequences of the price increase in US dollars for the European consumers.



## Energy Policies

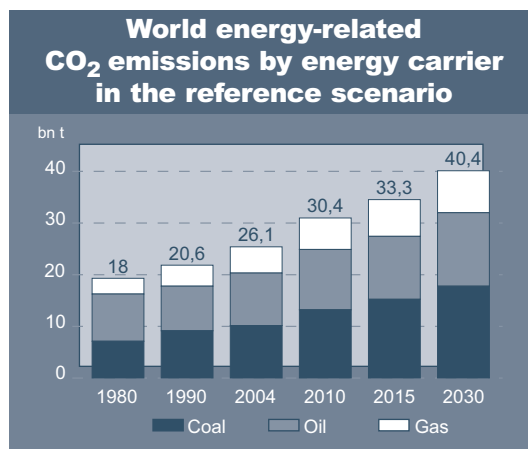
### Environmental Policies

International energy policies continue to be dominated by the discussion about the global warming of the Earth. Despite the Kyoto Protocol and large international conferences, CO<sub>2</sub> emissions continue to rise because large producers such as the USA and China have not been willing to commit to reduction targets.

In 2006, the worldwide energy-related CO<sub>2</sub> emissions amounted to about 28 billion t. About 4.1 billion (14.6%) of this was caused by the EU 25, and about 880 million t (3.1%) by Germany. The IEA assumes an average annual increase in global CO<sub>2</sub> emissions of 1.7% until 2030 in its World Energy Outlook 2006.

This results in the development shown below (according to IEA):

The structure of the increase in CO<sub>2</sub> emissions is shown in the following graph:



Source: IEA

A reduction of the EU 25 quantity by 30%, for example, equalling 1.2 billion t by 2030 would have the effect of reducing the global situation by 3%, compensating for the CO<sub>2</sub> world growth rates of about 2 years and thus postponing further climatic warming by only 2 years.

### World Energy-Related CO<sub>2</sub> Emissions per Sector in the Reference Scenario

	1990 Mill. t	2004 Mill. t	2010 Mill. t	2015 Mill. t	2030 Mill. t	2004-2020/30 <sup>1)</sup> %
Power generation	6,955	10,587	12,818	14,209	17,680	2.0 %
Industry	4,474	4,742	5,679	6,213	7,255	1.6 %
Transport	3,885	5,289	5,900	6,543	8,246	1.7 %
Private households <sup>2)</sup>	3,353	3,297	3,573	3,815	4,298	1.0 %
Other <sup>3)</sup>	1,796	2,165	2,396	2,552	2,942	1.2 %
<b>Total</b>	<b>20,463</b>	<b>26,080</b>	<b>30,366</b>	<b>33,332</b>	<b>40,421</b>	<b>1.7 %</b>

<sup>1)</sup> Average annual growth rate, <sup>2)</sup> incl. agriculture and public sector,

<sup>3)</sup> incl. international maritime navigation, other conversions and non-energy consumption

This example shows that only a global approach based on international treaties can really help effectively and that the funds for climate protection must go to where they will realise the greatest effects in reduction.

The EU must therefore aim its efforts above all at concluding internationally binding agreements with the great sources of emissions, including the USA, China and others.

### Technology

The energy generating industry has launched a worldwide offensive in technology to make the conversion of coal into electric power more environmentally friendly. There are 3 phases:

#### Clean Coal comes in three stages

##### Clean coal I

Retrofit and new-built of power stations in line with recent cognitions

##### Clean coal II

Research and development for increase in efficiency to > 50 %

##### Clean coal III

CO<sub>2</sub> capture and storage

The safest method, and the one which is the most economical and will have the quickest effect, is the optimisation of the current hard coal-fired power plant technology to efficiencies of as much as 45% - 50%.

In the USA, Australia and other countries as well as in the EU, government funds are being invested in the further development of power plant technology so that rapid progress can be made. But private industry is also investing major sums in the development of new technologies.

## EUROPEAN UNION

### Economic Growth

In 2006, the EU 25 countries all experienced a positive development, and there was a broad upswing for all member states in the economic union:

Economic Growth	
Member states	Percent
Countries Euro Zone (EU 12)	2.7
EU 15 (incl. Denmark, Sweden, Great Britain)	2.7
New members (EU 10)	5.3
EU 25	2.8

This was Europe's first significant contribution to the positive development of the world economy in quite a long time. Europe, together with the Asian and American growth zones, thus stabilised the positive economic development globally of recent years.

The outlook for 2007 and 2008 is also good. The high prices for energy and the weak dollar have put a damper on developments, but not brought them to a halt.

In 2007, Bulgaria and Romania joined the EU, bringing the total number of member states to 27.

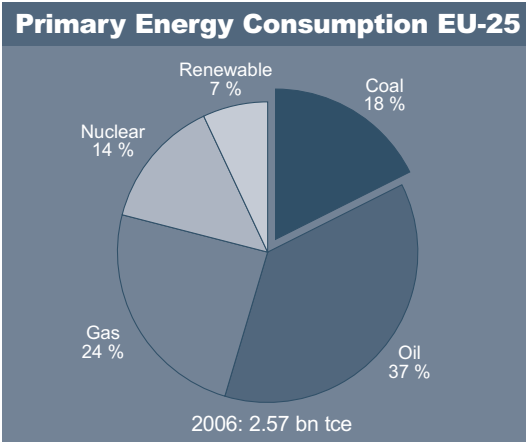
## Energy Consumption

The positive economic development in 2006 led to a slight rise in energy consumption in the EU 25. The structure of the primary energy consumption essentially remained unchanged.

Energy consumption for 2006 is estimated as shown below according to the provisional information available:

EU Energy Consumption			
	2005 Mill. t	2006 Mill. t	Growth %
EU 15	2,200	2,230	+ 1.4 %
EU 10	330	340	+ 3.0 %
<b>EU 25</b>	<b>2,530</b>	<b>2,570</b>	<b>+ 1.6 %</b>

Economic growth – especially in manufacturing industrial consumption – of necessity means an increase in the consumption of energy. In the more highly advanced EU 15 states, the growth in gross national product can be achieved by a low factor of rising energy consumption, while in the EU 10 states growth in the gross national product is more heavily dependent on additional energy consumption.



Sources: Several databases, own calculations

Success in reducing CO<sub>2</sub> varies widely within the EU 15. While the industrial heavyweights in the EU, Germany and Great Britain, largely achieve their goals, most of the other countries fall short, in part by a large margin, and the lethargy of the EU Commission in pushing delinquent countries to achieve their goals is incomprehensible.

### EU 25 Climate Balance: 1990 - 2005

	Mill. t CO <sub>2</sub> -Equivalent		Change	
	1990	2005	Mill. t	%
EU 15 (excluding Germany and Great Britain)	2,266	2,558	+292	+12
Germany and Great Britain	1,995	1,652	-343	-17
<b>EU 15</b>	<b>4,261</b>	<b>4,210</b>	<b>-51</b>	<b>-1</b>
EU 10	1,000	758	-242	-24
<b>EU 25</b>	<b>5,261</b>	<b>4,968</b>	<b>-293</b>	<b>-5,6</b>

Source: DIW Berlin No. 35/2006

The table demonstrates that without the contributions of Great Britain, Germany and the EU 10 countries, the EU would fall way short of its targets.

However, the successes in reducing emissions in Germany are largely a consequence of the economic transitional situation in eastern Germany. Great Britain profited from the decline in hard coal mining of 70 million t during the period 1990 – 2005, and the EU10 countries recorded a drop in emissions due to the collapse of many industrial structures in Eastern Europe; in other words, a major portion of the reduction successes are “one-time effects” which cannot be repeated. On the contrary, the EU 10 states, following their consolidation, will presumably begin a stronger growth phase with the concomitant rise in energy requirements.

In view of this background, one must question whether the EU reduction targets for 2012 and 2020 are at all realistic. The reduction of greenhouse gases must aim more rigorously at traffic and heating markets as well and not be restricted to the energy producing industry.

### Hard Coal Market (EU 25)

There were further reductions in the output of European hard coal production in 2006. Output was reduced in

- Germany – by 4 million t
- Poland – by 3 million t
- Great Britain – by 1 million t

a total reduction in output of 8 million t. In the long term, further reductions in output are planned for Germany, but they can also be expected in Poland and Spain.

In Great Britain, however, an old mine which still has reserves has been recommissioned. In France, a deposit in the southern region of the country is being examined to determine whether mining operations would be profitable.

Overall, there was a slight rise in hard coal consumption in the EU 25:

<b>Hard Coal Consumption of the EU</b>		
	<b>2005</b>	<b>2006</b>
	million t (t=t)	million t (t=t)
EU 25 Output	170	162
EU 25 Coal Imports	209	230 <sup>1)</sup>
EU 25 Coke Imports	9	10 <sup>1)</sup>
<b>Total</b>	<b>388</b>	<b>402<sup>1)</sup></b>

<sup>1)</sup>Provisional figures

The strong steel business and high gas prices favoured the use of hard coal.

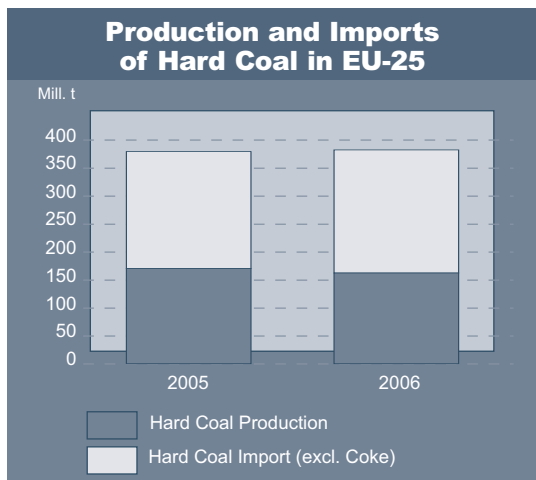
In addition to hard coal consumption, about 374 million t of lignite (approx. 120 million t tce) were produced in the EU 25. The coal consumption in the EU is estimated to break down as follows:

<b>Coal Consumption of the EU</b>		
	<b>2005</b>	<b>2006</b>
	Million tce	Million tce
EU 25 Output	170	162
EU 25 Coal Imports	209	230
EU 25 Lignite	120	120
<b>Total</b>	<b>499</b>	<b>512</b>

The hard coal consumption in the EU is distributed among the following sectors:

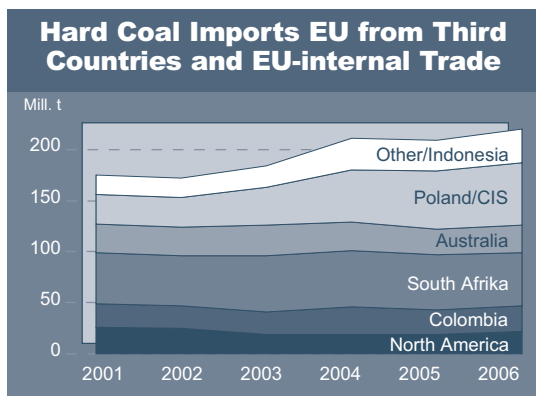
<b>Distribution of Hard Coal Consumption in the EU</b>		
	<b>2005</b>	<b>2006</b>
	%	%
Power plants	65 %	66 %
Steel mills/Coking plants	20 %	21 %
Heating market	15 %	13 %
<b>Total</b>	<b>100 %</b>	<b>100 %</b>

Coke imports rose slightly due to the higher demand of steel mills and foundries.



Source: Own calculations

The structure of the hard coal imports has changed as a consequence of the higher share of supplies from Russia and Indonesia:



Sources: EUROSTAT, databases of Coal Producing Countries

Poland is the most significant producer in the EU 25. From 2007, Romania's hard coal production of about 2.5 million t will be added.

### Hard Coal Output in the EU

	2005		2006	
	Mill. t (t = t)	%-Share	Mill. t (t = t)	%-Share
Germany	28	16	24	15
Spain	12	7	11	7
Great Britain	20	12	19	12
Poland	97	57	94	58
Czech Republic	13	8	14	8
<b>Total</b>	<b>170</b>	<b>100</b>	<b>162</b>	<b>100</b>

### Infrastructure

The infrastructure for Europe is being steadily expanded as import volumes rise. Railway lines to the ARA ports are also being improved.

### Coal Handling in Northwest European Ports in Million t

Ports	2004	2005	2006
	Mill. t	Mill. t	Mill. t
Hamburg	5.1	4.7	4.9
Bremen	1.6	1.3	1.9
Wilhelmshaven	1.7	1.6	1.3
Amsterdam	20.1	19.0	19.6
Rotterdam	25.3	26.4	27.6
Zeeland Seaports	4.0	4.1	3.2
Antwerp	9.7	9.4	9.4
Ghent	4.5	2.8	2.7
Zeebrugge	0.0	0.0	0.1
Duinkerken	8.5	8.8	10.2
Le Havre	2.2	2.9	1.8
<b>Total</b>	<b>82.7</b>	<b>81.0</b>	<b>82.7</b>

Source: Port of Rotterdam

## Energy Policies

Trade with emissions certificates began in 2005. The industry now has had two years of experience with these certificates. Nevertheless, this is too short a period to assess whether any kind of steering effects have been achieved. As the specifications of the NAPs (national allocation plan) for the 2nd period from 2008 – 2012 show, the planned allocations are carefully reviewed by the EU and are nearly always reduced. Obviously, the Commission is of the opinion that the allocations for the 1st phase were overall too high.

Nor has the investment climate for hard coal power plant operators been improved by longer-term – i.e., going beyond 2012 – commitments for allocation quantities. On the other hand, more room has been provided for CDM and JI measures so that additional CO<sub>2</sub> certificates can be acquired abroad.

The EU Commission submitted its green book on European energy policies at the turn of 2006. The document calls for a reduction in greenhouse gases in industrialised countries of 30% in comparison with 1990 by the year 2020. This target is to be implemented in international negotiations.

Independently of this goal, the EU countries should in any case set an example and reduce 20% of their greenhouse emissions in comparison with 1990 by 2020. The previous Community target was for a reduction of 8% by 2012. This would mean a reduction by an additional 12% or 600 million t CO<sub>2</sub>/annually for the period 2012 – 2020, while at the same time pursuing the Lisbon goal of creating greater growth dynamics in Europe. In principle, the EU governments have agreed to these objectives. It remains to be seen what shape the burden sharing within the EU 25/27 and, above all, the conflict with the new fast-growing EU countries, who require higher

energy consumption for the improvement of their living conditions, will take.

As long as no progress is made in organising worldwide efforts through international negotiations, the high burdens placed on the EU populations for the improvement of the world climate will have very little effect on the global situation.

## GERMANY

### Economic Growth

The gross national product rose by 2.8% in 2006. While domestic demand showed a slight rise, the improvement in growth rate once again came primarily from exports. But there were also greater investments in equipment and construction in the country. Despite the imminent rise in value-added tax at the turn of 2006/2007 and a decline in unemployment, private expenditures for consumption in 2006 rose by only a moderate amount.

Continued growth of 2.4% is projected for 2007. Unemployment remains high at 10%.

### Primary Energy Consumption

Primary energy consumption in 2006 rose by 1.2% or about 6 million tce to 493.6 million tce. The energy productivity of the national economy – the ratio of real gross national

product to use of primary energy – improved last year by 1.4%, or by 0.8% when adjusted for temperature and stocks. The high energy prices brought about further optimisation of the use of energy in all consumption sectors.

The increase in primary energy consumption was a consequence of the economic cycle. The demand for primary energy was dampened by high energy prices and a very mild 4th quarter 2006 which compensated for the cold 1st quarter 2006. Adjusted for temperature effects, the primary energy consumption presumably rose by 2.5%, above all a consequence of economic developments.

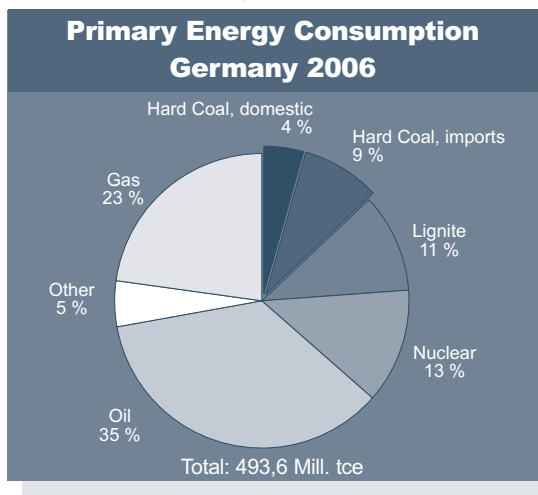
Petroleum consumption rose only slightly by 0.4 million t. Greater use in industry and power plants caused natural gas consumption to rise by 1.7 million tce, above all in plants with combined heat and power generation.

Nuclear energy also rose and increased its contribution by 1.6 million tce to 62.3 million tce, thereby providing 26.3% of the German electric power generation.

There was a slight fall for lignite due to decreased use in power plants (-0.8 million tce). But at 54.2 million tce, it remains the most important domestic source of primary energy.

Renewable energy sources (wind, hydroelectric, biomass, solar) contributed 5.3% or 26.2 million tce to coverage of primary energy requirements in 2006, growing by 15% (+3.4 million tce). This increase came primarily from biomass and wind energy.

Hard coal consumption rose slightly by 1.7% or 1.2 million tce to 64 million tce. Consumption increased in both of the major consumption sectors, electric power generation and the steel industry.



Source: *Arbeitsgemeinschaft Energiebilanzen*

#### Power Generation and Steel Production

Gross electric power generation rose by 2.5% to 636 TWh. Power consumption amounted to about 616 TWh, and an additional 20 TWh were exported, the highest export surplus ever achieved. Overall, the border-crossing trade volume of 112 TWh or about 18% of the gross power generation reached a level which was approximately as high as in 2005.

Wind energy, which is heavily subsidised, expanded its capacity by 2,200 MW to 20,600 MW. Power generation

from wind energy rose by 12% to 30.5 TWh. This corresponds to about 1,500 – 1,600 full capacity hours a year or 18% use of capacity in relation to the number of hours in the year.

<b>The Energy Mix of the Gross Power Generation</b>			
<b>Energy source</b>	<b>2005</b>	<b>2006</b>	<b>Difference</b>
	TWh	TWh	TWh
Lignite	154	152	-2
Hard coal	134	136	+2
Nuclear energy	163	167	+4
Natural gas	71	74	+3
Miscellaneous	54	58	+4
Hydroelectric/Wind	44	49	+5
<b>Total</b>	<b>620</b>	<b>636</b>	<b>+16</b>

Source: DIW

Crude steel production rose by 6.3% to 47.3 million t/a. The pig iron production decisive for the consumption of coke and PCI coal rose by just under 6% to 30.4 million t.

### CO<sub>2</sub> Emissions

Parallel to the upward development of the economy in 2006, total CO<sub>2</sub> emissions rose again by about 6 million t CO<sub>2</sub> or 0.7% in comparison with 2005.

<b>CO<sub>2</sub> Emissions from Energy and Processes in Germany, Classified According to Energy Sources</b>					
<b>Energy source</b>	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2006</b>	<b>Difference 1990-2006</b>
	Mill. t	Mill. t	Mill. t	Mill. t	Mill. t
Hard coal	159.6	147.3	145.9	147.1	-12.5
Lignite	343.8	172.6	181.9	179.3	-164.5
Liquid fuels	310.7	308.7	277.9	278.6	-32.1
Gas fuels	114.7	138.0	171.6	174.3	+59.6
Other energy sources	19.4	13.7	17.9	18.1	-1.3
<b>Energy-induced emissions</b>	<b>948.2</b>	<b>780.3</b>	<b>795.2</b>	<b>797.4</b>	<b>-150.8</b>
Other process-induced emissions	84.2	82.8	77.7	81.5	-2.7
<b>Total</b>	<b>1,032.4</b>	<b>863.1</b>	<b>872.9</b>	<b>878.9</b>	<b>-153.5</b>

Source: Ziesing/DIW Wochenbericht

In comparison with 1990, this represents a decline in CO<sub>2</sub> emissions of 15%. The target figure is 21% in 2012. As a consequence of the production growth, which is highly satisfactory from an economic standpoint, the emissions caused by processes rose especially sharply for crude steel (+6%), concrete/cement/plaster (+8.3%) and glass (+5.8%). They rose by 4 million t CO<sub>2</sub> or almost 5%. The emissions from energy generation rose only by 0.3% or 2 million t CO<sub>2</sub>.

If the target of -21% or -217 million t CO<sub>2</sub> in comparison with 1990 is to be achieved, there must be a further reduction of 64 million t CO<sub>2</sub> in the years 2007 – 2012.

The situation is shown below:

<b>Reduction of CO<sub>2</sub> by 2012</b>		
<b>Year</b>	<b>Values</b>	<b>Changes</b>
	Million t CO <sub>2</sub>	Million t CO <sub>2</sub>
1990	1,032	
2006	879	1990 - 2006: -153 (-15 %)
2012 (target: -21%)	815	1990 - 2012: -217 (-21 %)

However, the growth in emission intensity slows down over this period.



## Reduction Rates of the Emission Intensity<sup>1)</sup> in Percent

Year	Reduction Rates
1990 - 1995	4.2 %
1996 - 2000	2.3 %
2001 - 2006	1.3 %

<sup>1)</sup> Ratio of the CO<sub>2</sub> emissions adjusted for temperature to the real gross domestic product.

Following the great successes in reducing emissions due to the modernisation of the East German energy industry and the shut-down of large sections of the East German lignite production, the reduction

results in the following years have been lower.

A great effort will be required to achieve the target of -21% by 2012 while maintaining a positive economic development.

### Greenhouse Gases (Total)

CO<sub>2</sub> is the dominant greenhouse gas in Germany at 87%, but the other greenhouse gases cannot be ignored: Figures are only available up to 2005, but a rise in other greenhouse gases can also be expected. But with a total reduction of 18.4%, Germany is continuing to maintain a positive trend and should overall achieve its target of -21% for all greenhouse gases in 2012.

## Development of the Greenhouse Gas Emissions in Germany in Million t CO<sub>2</sub>-Equivalent from 1990 to 2005 According to Greenhouse Gases

	Base year (1990/1995) <sup>1)</sup>	1995	2000	2001	2002	2003	2004 <sup>2)</sup>	2005 <sup>2)</sup>
	Mill. t	Mill. t	Mill. t	Mill. t	Mill. t	Mill. t	Mill. t	Mill. t
Total CO <sub>2</sub> emissions <sup>3)</sup>	1,032.3	921.2	883.1	901.2	886.3	901.1	896.8	872.9
Methane (CH <sub>4</sub> )	99.3	81.0	64.3	61.6	58.7	56.2	52.3	50.7
Laughing gas (N <sub>2</sub> O)	84.8	77.9	59.7	60.7	60.1	62.7	64.9	66.5
HFC	6.6	6.6	6.5	7.9	8.6	8.4	8.7	9.4
PFC	1.7	1.7	0.8	0.7	0.8	0.9	0.8	0.7
SF <sub>6</sub>	7.2	7.2	5.4	5.2	4.4	4.5	4.5	4.7
<b>Total non-CO<sub>2</sub> emissions</b>	<b>199.6</b>	<b>174.5</b>	<b>136.7</b>	<b>136.1</b>	<b>132.5</b>	<b>132.7</b>	<b>131.3</b>	<b>132.1</b>
<b>Total greenhouse gas emissions<sup>3)</sup></b>	<b>1,231.9</b>	<b>1,095.7</b>	<b>1,019.7</b>	<b>1,037.3</b>	<b>1,018.7</b>	<b>1,033.8</b>	<b>1,028.0</b>	<b>1,005.0</b>
<b>For information only: Total with CO<sub>2</sub> emissions adjusted for temperature</b>	<b>1,253.2</b>	<b>1,099.1</b>	<b>1,043.5</b>	<b>1,044.9</b>	<b>1,035.7</b>	<b>1,042.5</b>	<b>1,032.9</b>	<b>1,012.1</b>

<sup>1)</sup> Base year: 1990 for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O; 1995 for HFC, PFC B21 and SF<sub>6</sub>

<sup>2)</sup> Provisional information

<sup>3)</sup> Excluding changes in land use and forestry

Source: Ziesing, DIW

## Hard Coal Market (Germany)

The primary energy consumption of hard coal in 2006 amounted to about 64 million tce, an increase of 1.2 million tce.

The hard coal consumption was covered as shown below:

<b>Cover of Hard Coal Consumption in Germany</b>			
	<b>2005</b>	<b>2006</b>	<b>Growth</b>
	Mill. tce	Mill. tce	Mill. tce
Import coal	37.8	42.6	+4.8
Domestic production	25.8	21.4	-4.4
Stock increase/decrease	- 0.8	-	+0.8
<b>Total</b>	<b>62.8</b>	<b>64.0</b>	<b>+ 1.2</b>

The consumption of import coal rose by 4.8 million tce. This is essentially a consequence of the planned cutbacks in German output, but was also caused by additional consumption due to the economic upswing.

Hard coal sales in t=t (incl. inventory changes) for consumers developed as shown below:

<b>Hard Coal Sales Total in Germany</b>		
<b>Utilisation</b>	<b>2005</b>	<b>2006</b>
	Million t (t=t)	Million t (t=t)
Power plants	53.1	50.8
Steel industry	13.5	17.1
Heating market	1.6	1.6
<b>Total</b>	<b>68.2</b>	<b>69.5</b>

Imports in 2006 contributed about 67% to the high-quality supplies to the German market. Without the import and supplies of high-quality import coal, the DSK-Kokerei Prosper, for example, would not be able to produce coke in the quality required for the steel mills because the German coking coal does not meet all of the requirements in terms of quality.

Hard coal imports played a role in covering the coal and coke consumption of the German industry sectors as shown below:

<b>Utilisation of Import Coal</b>				
<b>Utilisation</b>	<b>2005</b>		<b>2006</b>	
	<b>Quantity</b>	<b>Share in total sales</b>	<b>Quantity</b>	<b>Share in total sales</b>
	Million t	%	Million t	%
Power plants	28.6	54 %	30.4	60 %
Steel industry	9.9	73 %	13.4	78 %
Heating market	1.4	88 %	1.2	75 %
<b>Total</b>	<b>39.9</b>	<b>59 %</b>	<b>45.0</b>	<b>67 %</b>

This means an increase in the share of import coal used by power plants and the steel industry.

It must be pointed out that the import figure is estimated to be 1.5 million t higher than consumption. The volume in excess of consumption goes to the consumer stocks.

Broken down according to quality, the imports in 2006 give the following picture:

<b>Imports According to Qualities</b>		
<b>Products</b>	<b>2005</b>	<b>2006</b>
	Million t (t=t)	Million t (t=t)
Steam coal	28.8	32.7
Anthracite	0.4	0.4
Coking coal	7.1	9.1
Coke	3.6	4.3
<b>Total</b>	<b>39.9</b>	<b>46.5</b>

The steam coal was dominated by:

- South Africa 8.5 million t
- Russia 8.2 million t
- Poland 7.2 million t
- Colombia 4.0 million t

For the first time, Indonesia also made a noteworthy contribution to imports at 1.5 million t and could in the long term become a fifth pillar. This broadened further the procurement structure of the German coal-fired power plants.

The most important suppliers for coking coal were:

- Australia 4.6 million t
- USA 1.8 million t
- Canada 1.6 million t

and for coke:

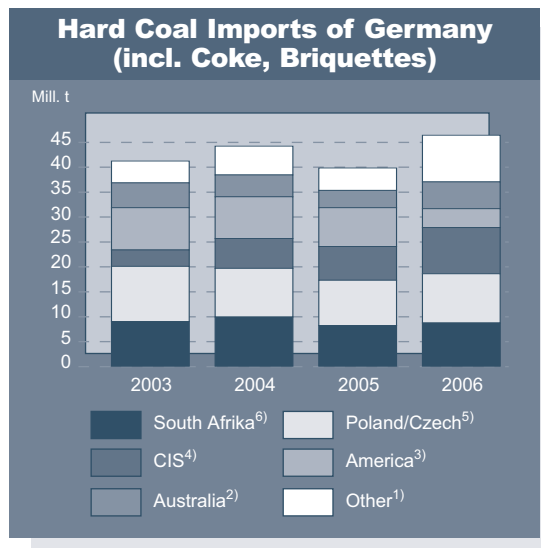
- Poland 1.6 million t
- China 0.9 million t

Following the stabilisation of the prices on the international markets for coking coal and coke, nothing more is being heard about the expansion plans for the German coking plants. The expansion of the coking plant

Prosper was cancelled in the previous year, and now the expansion of the coking plant Huckling located on the Rhine Line has been put on ice for the moment.

The Rogesa, on the other hand, is modernising the Central Coking Plant Saar (ZKS). It is supposed to be in operation again in 2010 with a production level of 1.3 million t/a. The interim period is being bridged with coke imports from France.

The coking coal mine Donar planned by DSK will have to face global competition from a number of new coking coal projects for the world market in Australia, Canada, Russia and Mozambique if it is to be operated on a strictly private basis. In view of the planned discontinuation of mining of German hard coal, it is questionable whether production will actually commence in Germany.



Sources: Statistisches Bundesamt, own calculations

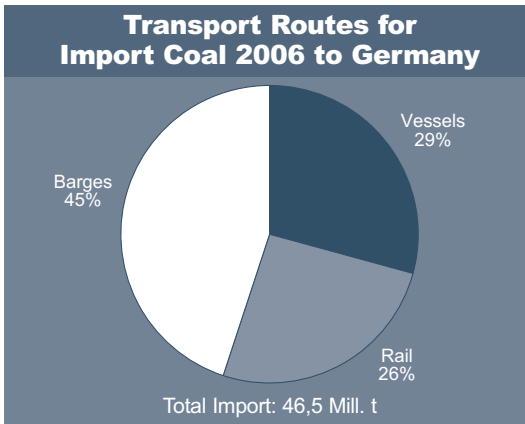
## Transport Routes for Import Coal

The some 46.5 million t of import coal were imported as shown below:

Transport Routes for Import Coal in Germany		
Transport Route	2005 Mill. t	2006 <sup>1)</sup> Mill. t
German ports	12.3	13.6
Rail	9.1	12.0
Domestic ships from ARA ports	18.6	20.9
<b>Total</b>	<b>40.0</b>	<b>46.5</b>

<sup>1)</sup>Provisional figures

About 4.2 million t were transported further from German ports/inland ports by rail, 4.9 million t were imported from the ARA territory and 4.5 million t from Poland/Czech Republic. The figures are in part estimates.



Sources: Statistisches Bundesamt, DB, own calculations

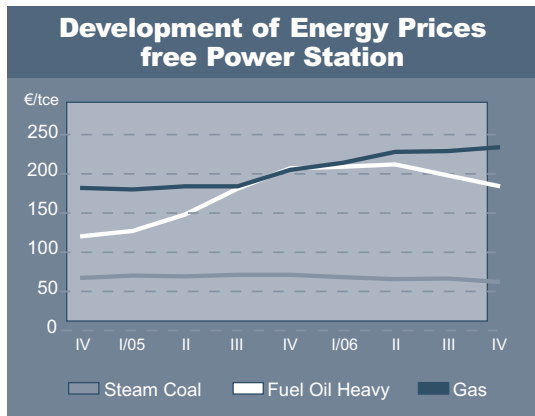
## Development of Energy Prices

The HS price in 2006 averaged €203/tce and fluctuated at a high level in a range from €178 - €217/tce. The mean increase in comparison with 2005 was €55/tce. The natural gas price also continued to rise and averaged €231/tce. It fluctuated in a range of €208 - €238/tce. In comparison with the two energy sources mentioned above, the competitive position of import steam coal improved at about €62/tce.

Development of Energy Prices				
	2004	2005	2006	2004/ 2006 Price Difference
	€/tce	€/tce	€/tce	
Heavy fuel oil (HS)	117	166	203	+86
Natural gas/ Power plants <sup>1)</sup>	176	188	231	+55
Border- crossing price/ Import coal	55	65	62 <sup>1)</sup>	+7

<sup>1)</sup>Provisional figures

The difference to HS amounted to €141/tce, to natural gas €169/tce. The border-crossing prices for import steam coal (BAFA price, K-Bogen) fell between 2005 and 2006 by about 5% or a good €3/t.



Sources: Statistik der Kohlenwirtschaft: Gas preliminary, BAFA, own calculations

The border-crossing prices for coke fell by a significant amount of 20% - 35%.

Third-country Imports	
	€/t
<b>2005</b>	246.0
<b>2006</b>	161.0
<b>Difference</b>	85.0 (-35 %)

EU Imports	
	€/t
<b>2005</b>	221.0
<b>2006</b>	171.0
<b>Difference</b>	50.0 (-23 %)

The overheating which appeared on the coke world market in the years 2004/2005 has continued to cool down. Coke should fluctuate in the range of €250 – €260/t on the

basis of German output costs and in the maximum range of €160 – €170/t (energy generation of German steel mills) on the basis of the current world market prices for coking coal.

The two qualities mentioned above – steam coal and coke – follow the short-term market tendencies in their price behaviour. Coking coal is generally negotiated in annual agreements and price increases/decreases always appear in the border-crossing prices with a certain time delay. This is the explanation for the rise of coking coal prices in 2006 as well. However, a decline in prices is to be expected for 2007 due to the low contract prices of the negotiations 2006/2007 and 2007/2008.

Contract benchmark prices for hard coking coal in the most recent negotiations (2006/2007) and the border-crossing prices for coking coal from third countries developed as shown in the tables. They demonstrate that the border-crossing prices follow the contract prices after a certain time delay.

Contract Benchmark Prices Hard Coking Coal	
	US\$/t "fob"
<b>2004/2005<sup>1)</sup></b>	125.0
<b>2005/2006<sup>1)</sup></b>	115.0
<b>2006/2007<sup>1)</sup></b>	95.0

<sup>1)</sup> April – March = Japanese fiscal year

Third Countries Border-crossing Price	
	€/t <sup>1)</sup>
<b>2004</b>	62.0
<b>2005</b>	95.0
<b>2006</b>	108.0

<sup>1)</sup> Average values covering all coking coal qualities

## Energy Policies

German energy policies are increasingly losing sight of the target balance comprising

- Economic efficiency
- Supply security
- Environmental compatibility

As the German population made up a little more than 1% of the world population and just under 3% of the world greenhouse gas emissions in 2006, the influence of the German climate policies on world climate is marginal. Decisive progress will be made only if the large producers USA, China, India and other countries can be integrated into the reduction efforts through international negotiations. For example, a 50% reduction in German greenhouse gas emissions over a time period of 20 – 30 years would affect the amount of world greenhouse gas emissions by only a little more than 1%.

### Coal Policies

The planned IPO of RAG has caused new movement in coal policies and triggered a discussion of basic principles. Since the states NRW and Saarland basically no longer wish to participate in the subsidisation of the German hard coal mining industry, clarification of the long-term development of the subsidy volume and the attendant output policy is needed. The previous model provided for a reduction of output to 16 million t by 2012, but did not have a concept for the more distant future.

The key point paper of the coal policy discussions between the Federal government, NRW, Saarland, RAG AG and IG BCE of February 2007 agreed in principle to adjust the output capacity by 2012 to about 12 million t and to issue a grant notification for the period 2009 –

2012. Hard coal mining is to be discontinued in a socially acceptable manner by 2018.

In 2012 – i.e., in 5 years – the decision to discontinue operations will be reviewed against the background of the world market conditions and tendencies observed at that time and will be revised as necessary. This is an acceptable revision clause. It allows for consideration of any changes in the world market situation in 5 years' time.

At this time, the difference between the production costs at RAG and the border-crossing price for steam coal is substantial. We must wait and see how this relation changes in the 5 years between now and 2012.

### Projected Development of Output<sup>1)</sup>

Year	Mill. t	
2006	21.6	
2007	21.0	
06/2008	19.0	(Shut-down Walsum)
12/2009	17.0	(Shut-down Lippe)
2010	16.0	TBA
2011	14.0	TBA
2012	12.0	TBA
2013	10.0	
2014	10.0	
2015	8.0	
2016	6.0	
2017	4.0	
2018	2.0	

<sup>1)</sup> Own estimate

The agreement on basic principles for coal policies from February 2007 thus stipulates clear prospects unfortunately, they are negative for German coal. But it gives all of the involved parties – including the German coal consumers – a secure basis for planning, and all of the involved parties have adequate opportunity to secure their coal sup-

plies long-term from import coal. The German steel industry has by and large already completed this process successfully. Japan and a number of other Southeast Asian countries obtain 100% of their coal supplies from the world market.

The competitive situation for German steam coal has continued to worsen. The estimated average costs of €170 – €180/tce mean a further increase in the difference to the border-crossing price of about €62/tce, which is now €110 – €120/tce.

For coking coal, on the other hand, the difference to the world market prices has shrunk, but it still amounts to €50 – €60/t. This difference will presumably increase again in 2007. It must also be taken into account that only a small portion of the German domestic output is in coking coal.

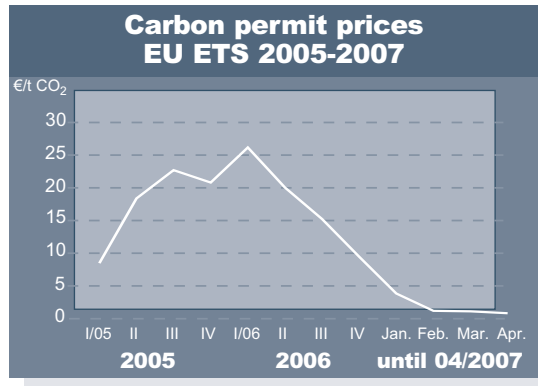
#### Trade in CO<sub>2</sub> Certificates

Emission certificate trade began in 2005. The first period from 2005 to 2007 was based on the 1st National Allocation Plan (NAP), which allowed plants obligated to emission certificate trade a total of 482 million t/CO<sub>2</sub>.

Trade in emission certificates was very slow in generating any momentum because many EU countries did not realise the technical requirements

for the trade in due time and the Commission tolerated this.

The prices for CO<sub>2</sub> certificates developed as shown below:



Source: EEX

Initially the prices climbed to the vicinity of €30/t CO<sub>2</sub>, then fell precipitously after the announcement of the CO<sub>2</sub> households of the individual EU countries. A very low consumption level is foreseen for 2007, in part a consequence of the mild winter. In addition, the certificates of the 1st trading period cannot be rolled over to the 2nd trade period, which also acts to keep prices down.

For the new trading period 2008 – 2012, the EU reduced the 2nd NAP submitted by Germany by 12 million t from 465 million t to 453 million t. Germany will consequently exceed the Kyoto target of -21% in 2012 and must now reduce CO<sub>2</sub> by -23.3%. Moreover, the Federal government gave in on other important elements. There is no longer a grandfather clause for new plants for 14 years after 2012, and the granting of the certificates will be converted to a benchmark system. The negative effect of this on the general conditions for investments is substantial. A positive point is that the additional acquisition or import of CO<sub>2</sub> certificates of up to 20% of the reduction requirements is possible.

The question as to whether the demands for the alleviation of the worldwide problem of global warming being made on Germany with its minimal influence are not excessive, making Germany as a business location more expensive and weakening its position, is justified. The desired entry of new competitors has been made more difficult rather than easier.

### Renewable Energy Sources

The share of renewable energy sources, including hydroelectric power, rose to about 12% of the gross power production, 4.4% of it from hydroelectric plants and 7.6% through the subsidisation of energy sources.

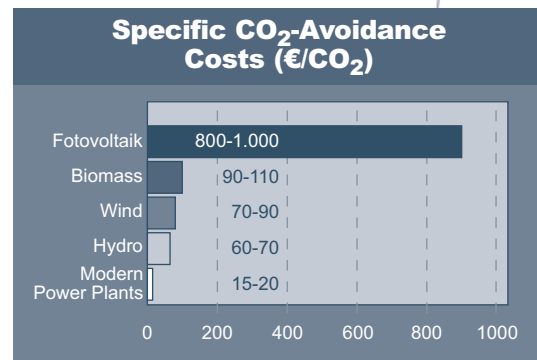
<b>Power Generation from Renewable Energy Sources (Provisional Figures)</b>			
<b>Type</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	Billion KWh	Billion KWh	Billion KWh
Wind power	25.5	27.2	30.5
Hydroelectric power	21.2	21.5	21.6
Biomass and waste (only estimated, renewable share)	7.3	13.5	18.6
Solar radiation energy	0.5	1.3	2.0
<b>Total</b>	<b>54.5</b>	<b>63.5</b>	<b>72.7</b>

Source: VDEW, BMU

The support of renewable energy sources is moving further and further away from a startup financing for new technologies and in the direction of permanent subsidisation by consumers which is increasing in volume. The highly subsidised domestic energy production – especially wind energy and domestic coal in terms of subsidy volume – was far removed from competitiveness by international standards. The subsidy volume for solar energy at over 50 eurocents/KWh for the generation of 2 TWh/a is nothing less than grotesque.

As wind energy is not generated on the basis of demand, increasingly large quantities must be redirected to other countries (Netherlands/Poland) at the lowest prices. There is a difference between the feed-in compensation of about 9.0 eurocents/KWh and a wholesale price of 4.0 – 4.5 eurocents/KWh, resulting in a subsidy of 4.5 – 5.0 eurocents/KWh, the equivalent of € 135 – € 150/t TCE, making the subsidies for wind energy higher than those for German domestic coal. When wind power is redirected into the network in Germany and abroad during low-demand phases, wind energy realises revenues of only 2.0 – 2.5 eurocents/KWh.

The specific costs for the avoidance of CO<sub>2</sub> are shown in the table below:

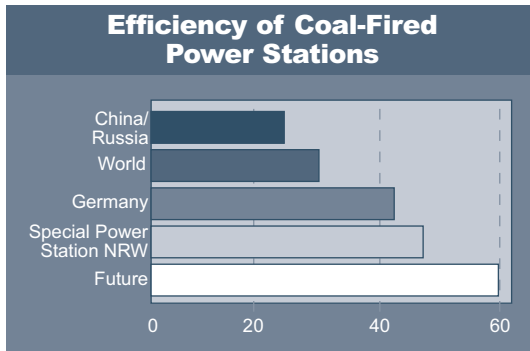


Source: VGB 2004

This means that the conversion to modern coal-fired power plants causes the lowest costs for preventing CO<sub>2</sub> emission and does so more efficiently, strengthening Germany as a business location in global competition. This is a measure with a great reduction effect which can also be realised in the short term.

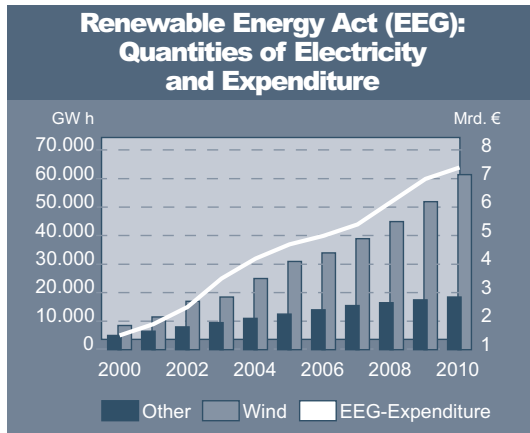


The chart below shows the possible tendencies for the efficiency of hard coal-fired power plants:



Source: GVST

The VDN projects the following EEG (Renewable Energy Act) expenditures in power generation:



Source: VDN (EEG-Mittelfristprognose 2000 - 2010)

The very comfortable subsidies also take away a major incentive for renewable energies to become more competitive. The Federal government has announced a review of the compatibility

of the subsidy instruments for 2007. In principle, the trade in CO<sub>2</sub> certificates makes all other instruments such as subsidisation of power-heat coupling and EEG superfluous because the trade system is intended to lead to an economic optimisation of the costs for preventing CO<sub>2</sub> emissions.

### Outlook for Hard Coal Power Generation

A number of hard coal-fired power plant projects are currently in the planning stages. The table below provides an overview (as per 02/2007):

Number	Construction Site	Operator	Capacity (MW)
1	Berlin	Vattenfall	500-800
2	Bremen	Swb	800
3	Brunsbüttel	Electrabel	800
4	Brunsbüttel	Iberdroea/Südweststrom	800
5	Datteln	E.on	1050
6	Duisburg-Walsum	Steag	750
7	Düsseldorf	SW Düsseldorf	400
8	Ensdorf	RWE	1600
9	Hamm (Westphalia)	RWE	1500
10	Hanau (Staudinger)	E.on/Stadtwerke Hannover	1100
11	Herne	Steag	750
12	Karlsruhe	EnBW	910
13	Cologne-Niehl	RheinEnergie	700-800
14	Krefeld	Trianel	750
15	Lubmin	Dong	1600
16	Lünen	Trianel	750
17	Lünen	Steag	750
18	Mainz	KMW	750
19	Moorburg	Vattenfall	1640

Some of the projects are in competition with one another or are in a preliminary stage. The great interest in hard coal-fired power plants arises against the background of high gas prices, a lack of availability of gas volume for long-term contracts and the decision to discontinue nuclear power. The planned “natural gas OPEC” will tend to maintain the high level of the gas price.

## PROSPECTS FOR THE WORLD COAL MARKET

### World Trade

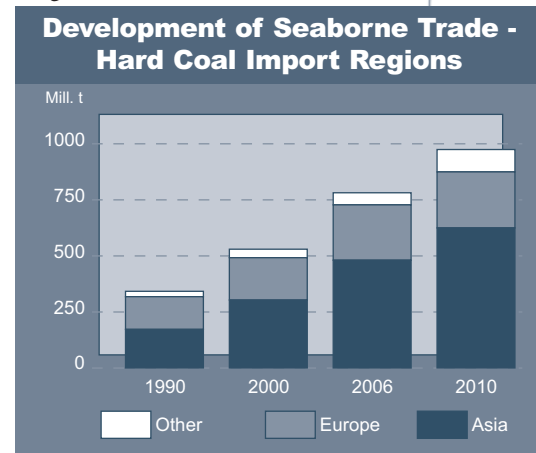
The strong growth phase for the world economy and world trade continues and will presumably do so throughout 2007, the fifth year in succession for the upswing. Comparably strong growth periods are in the distant past. The world economy is expected to grow by 4% – 5%, world trade by 7% – 8%.

Energy and raw material markets will also continue to grow in 2007. High growth dynamics – above all from China – are expected in Asia. But Europe and North America also display a robust development. The estimates for the most important bulk commodities are shown here:

<b>Bulk-Commodities</b>			
<b>Raw Materials</b>	<b>2006</b>	<b>2007</b>	<b>Growth</b>
	Mill. t	Mill. t	%
Iron ore	721	762	+6 %
Coal (seaborne)	782	820	+5 %
• Steam coal	595	625	+5 %
• Coking coal	187	195	+4 %

Growth on the bulk commodities market as a whole is predicted to be 3% in 2007. The average rate over the last 7 years, however, was 5%. This would be an increase in bulk tonnage of about 130 – 140 million t/a.

The bulk carrier fleet grew by a good 7% (= 24 million dwt) to 373 million dwt in 2006. Similar growth rates are predicted for 2007 and the following years. Due to the demurrage situations in a number of coal and iron ore ports and to the longer transport routes, the large increase in capacity has not led to a decline in freight rates.



Sources: Several databases, own calculations

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## Coal World Market Overall

The seaborne coal world trade will remain on a course of growth over the coming years, above all as a consequence of the high demand for steam coal in the Asian region.

The two largest hard coal producers, China and the USA, influence an increasingly large share of world coal trade by their imports and exports. In 2006, the volume of imports/exports of these two countries came to 157 million t or about 21% of seaborne trade. Both of these countries are today swing suppliers for the hard coal world market.

The growth in the steam coal trade will be parallel to the tendency of slightly falling calorific values, especially for exports from Indonesia. All in all, we expect growth rates of 4%; other estimates speak of 6% in the coming years so that the seaborne hard coal world market will surely pass the billion-tonne threshold in 2012 at the latest.

## Steam Coal Market

### Demand

The demand for electric power is unabated on the Asian market and is recording high growth rates in many countries.

Large parts of the Asian, African and South American populations still have no access to electricity.

In Europe, import coal is replacing the decline in domestic output, but it is also viewed increasingly as a low-price alternative to natural gas.

### Supply

The Pacific suppliers – above all Indonesia – are continuing to increase their supplies. The programme for the expansion of ports and infrastructure in Australia will presumably bear fruit in 2007/2008. China is continuing to reduce its export supplies because of high domestic prices, but remains an important exporter. It is difficult to assess Vietnam's potential. However, exports have been increased rapidly. The Vietnamese government is concerned about the high export volume and is considering the possibility of curbing it.

Russia is also increasing its Pacific exports and expanding loading capacities in the Far East.

In the Atlantic region, Colombia and Russia in particular are increasing their exports; South Africa is currently stagnating, but will supposedly again raise exports in the coming years. The seaborne exports by Poland continue to decline. Indonesia will probably increase its market share on the Atlantic market. The smaller steam coal producers -

Venezuela, USA and Spitzbergen - round off the available pool. The USA has a large export potential, but even the currently high world market price level is evidently not attractive enough in comparison with domestic sales.

## Coking Coal Market

### Demand

Further growth in crude steel production is expected once again for 2007. As in previous years, China is the driving force, but production is also rising in India, South America and Eastern Europe. Now that stock surpluses were reduced in 2006, the demand for coking coal in all qualities will presumably rise again.

### Growth in Crude Steel Production

	2005		2006		2007	
	Mill. t	%	Mill. t	%	Mill. t	%
China	356	+24	425	+19	490	+15
World except China	773	-1	792	+3	806	+2
<b>Total</b>	<b>1,129</b>	<b>+6</b>	<b>1,217</b>	<b>+6</b>	<b>1,296</b>	<b>+6,8</b>

So far, China has been able to cover its additional demand for coking coal from its own production so that the Chinese demand, in contrast to iron ore, has not become relevant for the world market.

### Supply

Australia, the USA and Canada continue to be the major suppliers to the global market. However, the slightly lower world market prices for coking coal are causing serious problems for some US and Canadian mines. In a few years (2010/2011), the first coking coal supplies from the CVRD coking coal project in Mozambique could augment the market. Overall, however, supplies are adequate. Russia, Poland, New Zealand supply smaller volumes of coking coal, while Indonesia, Venezuela, Vietnam and South Africa are sources of PCI coal.

## Infrastructure of the Hard Coal World Trade

Owing to the rapid growth in recent years of bulk quantities as a whole as well as of coal, bottlenecks have occurred in the infrastructure. Delays have occurred in both the loading and discharging ports, the domestic railways and in seaborne transport. However, the chance to exploit market opportunities due to a rising demand in coal triggered a worldwide expansion – even though it was late – of the infrastructure across all of the links of the transport chain 2 years ago. Expansion projects along the entire coal chain have been launched by almost all of the major countries involved in world coal

trade. Nevertheless, the expansion of the infrastructure still lags behind the requirements of the market, and it will presumably be several years until it has achieved adequate dimensions and be available in good time. But an increase in exports is assured in any case.

## Market Concentration

The tendency toward market concentration continues in all of the producing countries. The Chinese, for example, are striving to create large hard coal companies with over 100 million t output for the long term. 5 – 6 companies are also handling the lion's share of production and export in Indonesia.

However, the improvement in world market prices is also luring new companies into the coal export business, thereby expanding the pool of suppliers.

In the case of coking coal – above all, hard coking coal – Australia has created a strongly dominant position with almost 66% market share, which in turn is in the hands of just a few produ-

cers. However, another player – CVRD – has stepped onto the coking coal scene. CVRD is developing into another market participant through projects in Mozambique and Venezuela as well as the entry into Australian coal mining.

The competition in the area of steam coal continues to be broader, and in recent years Russia and Indonesia have strengthened their positions on markets alongside the traditional suppliers Australia, South Africa and Colombia.

As a consequence of high oil and gas prices, known deposits in many countries are being reassessed and the possibility of mining the reserves is being examined (e.g., in Eastern Canada, Chile, Zimbabwe). This could lead to some increase in supplies in the long term.

## Coal Gasification and Liquefaction

Due to high oil and gas prices, coal liquefaction projects (CTL = coal to liquids) are being considered in Australia, China and the USA on the basis of low-cost coal deposits. This could lead to the development of a new sales market for coal with low extraction costs in 10 – 15 years.

## COUNTRY REPORTS 2006

### POLAND

#### Production

Total output in 2006 fell by 2.7 million t to about 94 million t, continuing the steady decline in Polish output. The output reduction was at the expense – above all – of the seaborne exports (-5.6 million t), while the domestic sales remained largely stable in 2006. The principal cut-back was at the Kompania Weglowa (-2.2 million t). The mine was closed in part due to the exhaustion of the deposits and in part due to lack of profitability.

The coking coal group Jastrzebska, on the other hand, was able to increase its output and exports and is also profitable because of the high earnings from coking coal. The planned privatisation of the Polish state-owned mines has not been carried out, and there is strong resistance to this intention among the workers. There are also no serious potential buyers for the steam coal mine. The costs of the Polish mines have risen due to substantial pay rises and are estimated to have averaged US\$60/t in 2006. It was not possible to improve the productivity of the mines to the same degree. This immediately calls to mind the development of the German mining industry in which pay rises outpaced the productivity progress for decades.

The high oil and gas prices have stabilised the use of coal on the heating market in Poland.

Nevertheless, long-term expectations are for a further decline in output to 77 – 78 million t in 2010 and 70 million t in 2020. In the middle term, greater investments

will be required in the opening of new reserves – above all for coking coal – if this output policy is to be maintained. But funds for this have not been available.

#### **The Largest Hard Coal Producers in Poland**

Company	Number of Mines		Output		Exports	
	2005	2006	Mill. t		Mill. t	
Kompania Weglowa SA	18	17	52.6	50.4	15.1	10.7
Katowicka Group Kapitalowa	7	7	17.7	17.0	1.6	1.4
Jastrzebska Spolka Weglowa SA	5	5	12.8	13.3	2.3	2.9
Independent mines	4	4	14.0	13.7	0.5	0.8
<b>Total</b>	<b>34</b>	<b>33</b>	<b>97.1</b>	<b>94.4</b>	<b>19.5</b>	<b>15.8</b>

#### Infrastructure

In 2006 there were no changes in the transport infrastructure, which is now rather too large for the declining export volume. The export logistics in Poland are well developed. Loading ports include Gdansk, Swinoujscie, Szczecin and Gdynia. While Gdansk is able to load capesize freighters, Swinoujscie and Gdynia are accessible only for panamax ships, and only handysize vessels can access Szczecin. Rail transport has also become increasingly important for coking coal and ballast coal exports, above all for Germany. Both Polish and German

freight companies are active in this sector. Inland shipping (Oder) is of no major significance for export (about 1.5 million t = 8% of total exports).

### Export

The export of hard coal sank from 19.5 million t in 2005 to 16 million t in 2006.

Weglokoks exported 15.3 million t of this volume; smaller quantities were exported via other distribution channels, above all to the neighbouring countries.

Exports in 2006 break down as shown below (in million t):

<b>Export</b>			
	<b>Coking Coal</b>	<b>Steam Coal</b>	<b>Total</b>
	Mill. t	Mill. t	Mill. t
Seaborne	0.3	7.0	7.3
Overland	2.7	6.0	8.7
<b>Total</b>	<b>3.0</b>	<b>13.0</b>	<b>16.0</b>

by 3.7 million, the coking coal exports rose by just under 0.5 million t in 2006.

The largest customers for Polish coal – excluding coke – were neighbouring countries such as Germany (7.3 million t), the Czech Republic (1.6 million t), Slovakia (1.0 million t) and Austria (1.2 million t). 1 million t were exported to Great Britain.

Coke exports came to 6.3 million t in 2006.

Poland imported smaller quantities (4 million t) of coal from Russia and the Czech Republic. The volume from Russia could tend to increase.

<b>Key Figures Poland</b>			
	<b>2004</b>	<b>2005</b>	<b>2006</b>
	Mill. t	Mill. t	Mill. t
Hard coal output	99	97	94
Hard coal exports	21	19	16
• Steam coal	18	16	13
• Coking coal	3	3	3
Coke exports	5	4,5	6,3
Hard coal imports	3	3	4
	1,000 t	1,000 t	1,000 t
Imports Germany	8.954	8.211	8.967
• Steam coal	7.085	6.889	7.175
• Coking coal	40	147	155
• Coke	1.829	1.175	1.637
Export rate in % (Coke converted into coal terms)	28	25	26

## CZECH REPUBLIC

### Production

Coal year 2006 was once again a stable one for the Czech Republic. Hard coal output rose slightly and reached 13.4 million t.

Coke production of the Czech mining companies amounted to 3.4 million t, utilising 3.3 million t of Czech coking coal and about 1 million t of coking coal imports from Poland.

Lignite production, as in the previous year, came to about 48.7 million t.

The Czech hard coal production previously came from two companies. In 2006, OKD took over CMD.

### Hard Coal Producers in the Czech Republic

Company	2005 Mill. t	2006 Mill. t
OKD, Ostravasko-Karvinske-Doly	10,8	} 13,4
CMD, Ceskomoravske Doly	2,4	
<b>Total</b>	<b>13,2</b>	<b>13,4</b>

#### Infrastructure

Czech coal and coke exports were transported overland and on the Danube (Bratislava).

#### Export/Import

The export of hard coal increased and rose to 5.0 million t. Coke export came to 1 million t.

Austria was the overall largest buyer, taking some 2 million t, followed by Germany at about 0.9 million t. Imports of coal rose from 1.2 million t to 1.8 million t. Coke imports from Poland also rose slightly.

### Key Figures Czech Republic

	2004 Mill. t	2005 Mill. t	2006 Mill. t
Hard coal output	13	13	13
Hard coal exports	4	4	5
Coke exports	1	1	1
	1,000 t	1,000 t	1,000 t
Imports Germany	889	880	931
• Steam coal	469	522	530
• Coke	420	358	401
Export rate in % (Coke converted into coal terms)	41	41	49

### RUSSIA/UKRAINE/KAZAKHSTAN

The countries of the former Soviet Union with major coal production are shown below:

Coal Production			
	2005 Mill. t	2006 Mill. t	Growth Mill. t
• Russia	300	309	+9
• Ukraine	78	80	+2
• Kazakhstan	86	94	+8
<b>Total</b>	<b>464</b>	<b>483</b>	<b>+19</b>

Coal is being reassessed in all of these countries due to the high prices for oil and gas. Above all, its use for the domestic generation of electric power is being expanded.

Only Russia is of any significance for the world market. Ukraine exports about 2 – 3 million t of steam coal and anthracite from its own production and about 2 – 3 million t of coke through the Black Sea ports. Kazakhstan traditionally exports about 24 – 25 million t of steam coal to Russia by rail.

#### RUSSIA

#### Production

Russia was able to further increase production and reached a figure of about 309 million t. Opencast pit output rose by 5 million t to 200 million t, while production from



underground operations increased from 106 million t to 109 million t. The production comprises the following segments:

<b>Production Russia</b>		
	<b>2005</b>	<b>2006</b>
	Mill. t	Mill. t
Coking coal	70	70
Steam coal	230	239
• High volatile coal	96	103
• Low volatile coal	50	52
• Anthracite	9	9
• Lignite	75	75
<b>Total</b>	<b>300</b>	<b>309</b>

The focus of Russian hard coal output is found in the Kemerovo region, reaching 174 million t in 2006, 94 million t from open-cast pits and 80 million t from underground operations. At the beginning of 2007 Gazprom acquired an interest in SUEK, the largest producer. The background for their interest is above all cooperation in electric power generation.

#### Infrastructure

Owing to the high transit fees and handling rates of the Baltic ports, Russia is increasingly directing its exports through Murmansk. Greater use is also being made of the Baltic Sea port Ust-Luga. Nevertheless, it was

necessary to utilise the Tallinn port (Muuga) to a greater degree to satisfy the growing demand.

Shortages in rail cars occurred. It must be kept in mind that the Russian seaborne coal exports in the last 4 years have risen by 33 million t. However, various efforts are being made to eliminate the shortages.

<b>Russian Ports</b>			
	<b>2004</b>	<b>2005</b>	<b>2006</b>
	Mill. t	Mill. t	Mill. t
<b>Baltic Sea Ports and North Russia</b>			
Murmansk	8,9	11,0	11,1
Vysotsk	3,1	3,5	4,0
Rīga	9,4	10,8	10,7
Ventspils	3,9	4,6	3,9
Tallin (Muuga)	2,3	4,4	7,5
St. Petersburg	2,5	2,5	1,9
Ust-Luga	0,5	0,5	3,5
Miscellaneous	0,6	0,6	0,7
<b>Total</b>	<b>31,2</b>	<b>37,9</b>	<b>43,3</b>
<b>South Russia and Ukraine</b>			
Mariupol	2,6	2,0	1,8
Tuapse	3,1	3,0	3,1
Yuzhny	5,0	4,7	4,8
Miscellaneous	3,1	4,1	5,5
<b>Total</b>	<b>13,8</b>	<b>13,8</b>	<b>15,2</b>
<b>Russia Far East</b>			
Vostochny	14,4	14,1	15,4
Vanino	-	0,3	0,5
Miscellaneous	0,8	2,1	2,4
<b>Total</b>	<b>15,2</b>	<b>16,5</b>	<b>18,3</b>
<b>Total</b>	<b>60,2</b>	<b>68,2</b>	<b>76,8</b>

### Export

Coal exports continued to rise in 2006 to 89.9 million t, 6.7 million t of which went over the green border into CIS countries. Exports to other countries amounted to 83.2 million t, 76.8 million t as seaborne exports and 6.4 million t as overland exports. Total exports of 89.9 million t break down into about 14 million t coking coal and PCI coal and 76 million t steam coal and anthracite. The seaborne exports of 76.8 million t break down into 9 million t of coking coal and PCI coal and about 68 million t of steam coal. 18.3 million t of coal were shipped to the Far East, about 5 million t of it coking coal; 59 million t went to the European region, 5 million t of this figure coking coal and PCI coal.

In Europe, Great Britain especially increased its imports of Russian coal, making a major contribution to the export growth for the Russians. But Germany also bought substantially larger quantities of Russian coal.

#### Key Figures Russia

	2004 Mill. t	2005 Mill. t	2006 Mill. t
Coal output	283	300	309
Hard coal exports <sup>1)</sup>	60	68	77
• Steam coal	53	60	68
• Coking coal	7	8	9
	1,000 t	1,000 t	1,000 t
Imports Germany	5,935	6,670	9,302
• Steam coal	5,358	6,055	8,215
• Coking coal	125	480	886
• Coke	452	135	201
Export rate in % (only seaborne)	23	23	25

<sup>1)</sup>only seaborne

### UKRAINE

Coal output in Ukraine recovered in 2006, reaching a figure of about 80 million t. Output is supposed to increase again to 82 million t in 2007. The Ukrainian government is planning massive investments in new coal mines with the aim of reducing dependency on Russian gas supplies by expanding coal output. The target is production of 100 million t in 2011. Time will tell if this target can be realised.

As its own coking coal production is on the decline, Ukraine is dependent on imports of 4 million t of Russian coal. The import of as much as 6 million t from Australia and the USA is also being planned for the middle term. The Metinvest Group wants to expand the seaport Sevastopol for this purpose.

#### Hard Coal Production Ukraine

	2005 Mill. t	2006 Mill. t	Difference Mill. t
Steam coal	45,2	50,1	+4,9
Coking coal	32,7	30,2	-2,5
<b>Total</b>	<b>77,9</b>	<b>80,3</b>	<b>+2,4</b>
Coke	18,8	18,9	+0,1

Coke exports sank to 1 million t due to the weaker demand.

## KAZAKHSTAN

Coal production rose strongly by 9.1% in 2006, reaching a figure of 94.3 million t. A further increase is planned for 2006. The modernisation process continues in the coal industry.

## USA

### Production

Production in the USA fell slightly in 2006 (-2.5%) and is now at the level of about 1 billion t.

Output from the Appalachian coalfields declined further while the coalfields Interior and Western basically remained stable.

The demand for hard coal in the electric power industry was slightly lower. But the generation of electric power in the USA continues to be based to more than 50% on coal, and the tendency is rising.

### **Output Breakdown USA**

	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	Mill. t mt	Mill. t mt	Mill. t mt	Mill. t mt
Appalachia <sup>1)</sup>	353	366	367	348
Interior	132	132	132	132
Western	498	522	530	518
<b>Total</b>	<b>983</b>	<b>1.020</b>	<b>1.029</b>	<b>998</b>
East of Mississippi	436	451	454	436
West of Mississippi	547	569	575	562
<b>Total</b>	<b>983</b>	<b>1.020</b>	<b>1.029</b>	<b>998</b>

<sup>1)</sup>including coal from stockpile processing

As a consequence of high oil prices, extensive examinations by both the government and private companies of coal to liquid (CTL) projects are underway in the USA.

### Infrastructure

The infrastructure of the railways and ports is well developed. Since the private railway companies with their networks hold a monopolistic position in some of the output areas, the freight rates have risen substantially in recent years.

The approx. 1 billion t of coal were transported to consumers via the following routes (rounded-off values):

### **Transport Routes**

	Mill. t	%
Rail	640	64
River navigation	80	8
Lorries	120	12
Conveyor belts	120	12
Great Lakes	10	1
Miscellaneous	30	3
<b>Total</b>	<b>1,000</b>	<b>100</b>

### Export/Import

Exports in 2006 were at the same level as in 2005 and amounted to about 46 million t:

### **Export**

	<b>Coking coal</b>	<b>Steam coal</b>	<b>Total</b>
	Mill. t	Mill. t	Mill. t
Seaborne	20.5	5.8	26.3
Overland (Canada)	5.5	14.2	19.7
<b>Total</b>	<b>26.0</b>	<b>20.0</b>	<b>46.0</b>

There is reason to believe that part of the quantities declared as steam coal were actually used as coking coal. This could be an estimated volume of 2 – 3 million t.

The import-export difference for seaborne coal is becoming smaller and smaller and was practically level in 2006.

### Import-Export Balance USA

	2000 Mill. t	2002 Mill. t	2004 Mill. t	2006 Mill. t
Export (seaborne)	33	21	26	26
Import (seaborne)	11	15	25	30
<b>Difference</b>	<b>-22</b>	<b>-6</b>	<b>-1</b>	<b>+4</b>

The seaborne exports of coking coal went primarily to Europe and South America.

Only 0.5 million t were supplied to the East Asian markets (Japan/South Korea). Imports rose again, breaking through the 30-million-t barrier. The largest suppliers were Colombia and Venezuela, but quantities from Indonesia and Russia also found their way to the US market.

### Key Figures USA

	2004 Mill. t	2005 Mill. t	2006 Mill. t
Hard coal output <sup>1)</sup>	1,020	1,029	998
Hard coal exports	43	45	46
• Steam coal	19	19	20
• Coking coal	24	26	26
Hard coal imports	25	27	30
	1,000 t	1,000 t	1,000 t
Imports Germany	1,558	1,472	2,191
• Steam coal	406	198	339
• Coking coal	1,152	1,274	1,852
Export rate in %	4	4	5

<sup>1)</sup>Excluding lignite

## CANADA

### Production<sup>1)</sup>

Output in Canada in 2006 was about 70 million t, thereof 30 million t coking coal and PCI coal, most of which was exported.

The output of steam coal reached a volume of 40 million t. It breaks down into 4 million t of hard coal, 24 million t of hard brown coal (sub-bituminous) and 12 million t of lignite.

The tendency to a decline in world market prices and the drop in Chinese coking coal imports led to a reserved development of the Canadian mining industry oriented to exports. The mines found themselves caught between falling export earnings on the one hand and worsening use of capacities with the concomitant rising specific costs and general cost rises on the other.

Nevertheless, there are plans to develop additional reserves, above all of PCI coal in western Canada. Even large mining corporations (e.g., Amcoal) are interested in PCI projects.

In eastern Canada, “Xstrata” and “Erdene Gold” are pursuing a project to reopen the Donkin Mine in Cape Breton in northeast Canada (Nova Scotia). The mine allegedly has 200 million t in steam and coking coal reserves.

<sup>1)</sup>Estimated

## Infrastructure

Export coal is delivered to the Westshore Terminal by CP Rail, while CN transports the coal to the Neptune Terminal. The more northerly Ridley Terminal was able to handle significant coal tonnage (2.8 million t) for the first time in a longer period in 2006. The coal came from newly opened mines in north-eastern British Columbia.

Handling capacities are shown below:

Handling Capacities	
Terminal	Capacity Mill. t/a
Neptune Bulk Terminal	8
Westshore Terminal	26
Ridley Terminal	12
<b>Total</b>	<b>46</b>

The port capacity is also prepared for a further expansion of production.

Thunder Bay Terminal is used for domestic loading of Canadian coal headed for the USA on ships that sail the Great Lakes. It has a capacity of 11 – 12 million t. The Thunder Bay Terminal is also used for handling US coal from the Powder River Basin.

## Exports

Exports sank slightly by 0.6 million t to 27.6 million t. A sharper decline of almost 1 million t was recorded in exports to China. Seaborne exports amounted to 25.9 million t, 23.3 million

t of it coking coal and 2.6 million t steam coal. 1.7 million t were loaded for overland transport to the USA. The largest buyers were Japan (8.7 million t) and South Korea (5.0 million t). 7.6 million t went to the European region, including Turkey. The import development of India and China will be of decisive importance for the long-term increase in Canadian exports.

## Key Figures Canada

	2004 Mill. t	2005 Mill. t	2006 Mill. t
Hard coal output <sup>1)</sup>	29	31	34
Hard coal exports	26	28	28
• Steam coal	2	2	3
• Coking coal	24	26	25
	1,000 t	1,000 t	1,000 t
Imports Germany	2,109	1,566	1,608
• Coking coal	2,036	1,566	1,608
Export rate in %	90	90	82

<sup>1)</sup>excl. sub-bituminous, lignite

## COLOMBIA

### Production

Colombia's hard coal output rose by about 5 million t to 63.7 million t in 2006. An even greater increase was hindered by poor weather conditions and a strike at Drummond. Colombian output is supposed to reach about 76 million t by 2010, 69 million t of which is supposed to be exported. Drummond especially is planning a sharp increase in its production to as much as 50 million t. Other estimates range from an output of 84 – 85 million t in 2008 to as much as 102 million t/a in 2010. Coal licences have been granted to newcomers as well as to established companies. The Spanish power plant company Union Fenosa is considering acquiring coal reserves in Colombia as a supply source for its power plants.

### Output/Exports by Company

Exporter	2005 Mill. t	2006 Mill. t
Cerrejon	25.5	27.5
Drummond	22.4	20.8 <sup>1)</sup>
Prodeco (Glencore)		
Carbones De la Jagua	5.4	8.2
Carbones del Caribe	0.2	0.3
Miscellaneous	1.0	4.0
<b>Total</b>	<b>54.5</b>	<b>60.8</b>

<sup>1)</sup>Decline caused by a strike

### Infrastructure

Colombia's infrastructure is to undergo a major expansion so that the planned coal exports can be realised. The Colombian government bought back the railway company Atlantic Rail so it could be handed over to an international syndicate (incl. Glencore and Drummond) which is supposed to expand and maintain the systems. For example, it is planned to increase the route La Loma/Santa Marta (200 km) from its current annual handling capacity of about 25 million t to an annual capacity of 45 million t. There are also plans to expand the ports Cartagena, Bolivar, Santa Marta and Barranquilla. The government has promised to build feeder roads in the areas where rail access is difficult.

### Port Capacities of Colombia

	2005 Mill. t	2006 Mill. t
Puerto Boliva	28.0	28.0
Cienaga (Drummond)	24.0	24.0
Prodeco Puerto	5.0	8.0
Carbosam	6.0	6.0
Rio Cordoba	4.0	4.0
Barranquilla	1.5	1.5
Cartagena	2.0	2.0
<b>Total</b>	<b>70.5</b>	<b>73.5</b>

### Export

Colombian coal goes primarily to the Atlantic market. Of the total exports of 60.8 million t, only about 1.2 million t went to Chile and Peru in the Pacific region. The major portion of the exports were sent to the USA, which increased its imports from 17.6 million t in 2005 to 20.2 million t in 2006. But the European region also bought about 1 million t of coal additionally. The largest importers were Germany (4.0 million t), France (3.3 million t), Portugal (2.9 million t) and Israel (3.3 million t).

### Export Structure of Colombia

	2005 Mill. t	2006 Mill. t
America	23.8	29.5
thereof North America (USA + Canada)	19.8	24.3
thereof South and Central America	4.0	5.2
Europe	30.8	31.3
thereof Mediterranean region	10.4	6.3
thereof Northwest Europe	20.4	25.0
<b>Total</b>	<b>54.6</b>	<b>60.8</b>

Exports might rise even further in 2007. The prerequisite for this is the realisation of the infrastructure measures.

### Key Figures Colombia

	2004 Mill. t	2005 Mill. t	2006 Mill. t
Hard coal output	58.0	60.0	63.7
Hard coal exports	51.0	55.0	61.0
Imports Germany	6.2	4.8	4.0
Export rate in %	88.0	92.0	96.0

## VENEZUELA

### Production

Despite attractive coalfields and short distances to the coast, the Venezuelan coal mining industry cannot get moving. Poor weather conditions once again impaired existing production. The small opencast pit Fila Maestro even closed.

The Brazilian mining corporation CVRD is interested in the Socuy project. The project was delayed by the elections in Venezuela, but the negotiations are supposed to resume now. Allegedly the state wants to become active in the expansion of the necessary coal ports and to finance the work. According to information from the “Zulia State Coal Authority”, the planned infrastructure measures will allow a significant expansion of coal output. The output increases could be achieved by the mines or by the projects Socuy, Mina Norte, Las Carmelitas, Paso Diablo and Cosila. Output in the province Zulia is supposed to be increased to 24 million t by 2012. The potential for this increase is undoubtedly there, but none of the announcements in the past have ever been realised.

### Production/Exports by Company

	2005 Mill. t	2006 Mill. t
Carbones Del Guasare	5.27	5.50
Interamerican Coal	0.52	1.00
Carbones De La Guajira	0.77	0.63
Miscellaneous	0.52	0.62
<b>Total</b>	<b>7.08</b>	<b>7.75</b>

### Infrastructure

Progress in the planning of the infrastructure is very slow. The construction of port facilities and a railway line 80 km long is required for the Socuy project. The project, called “Zona Portuaria Simon Bolivar”, has an initial capacity of 12 million t/a for panamax ships, but conduct of the project is very hesitant; the same is true of the planning of the railway line Socuy/Paso Diablo to the port.

### Exports Through Venezuelan Ports

Port	User	2005 Mill. t	2006 <sup>1</sup> Mill. t
Bulk Wayuu	Carbones Del Guasare	5.61	5.60
El Bajo	Carbones De La Guajira. Interamerican Coal	0.81	1.00
Guanta	Geoconsa	0.13	0.20
La Ceiba	Carbones Del Caribe. Interamerican. Millinton	0.78	0.80
Palmarejo	Xcoal. Caneveca. Millinton. Carbones Del Guasare	0.47	0.40
<b>Total</b>		<b>7.80</b>	<b>8.00</b>

<sup>1</sup>Provisional

About 1.5 million t of Colombian coal were also shipped through the Venezuelan ports.

### Export

Exports moved parallel to the disappointing development of output. The largest buyer at 4.5 million t was the USA. Canada imported 0.5 million t, while South American countries bought 0.7 million t. About 2 million t went to Europe. The export figures for Venezuela also include the Colombian shipments.

#### Key Figures Venezuela

	2004 Mill. t	2005 Mill. t	2006 Mill. t
Hard coal output	8	8	8
Hard coal exports	8	8	8
• Steam coal	8	8	8
• Coking coal	-	-	-
	1,000 t	1,000 t	1,000 t
Imports Germany	16	1	108
• Steam coal	16	1	108
Export rate in %	100	100	100

## REPUBLIC OF SOUTH AFRICA

### Production

The production of usable coal rose by about 2 million t to 247 million t in 2006 and is supposed to increased to 290 million t by 2010 according to information from the Minerals Bureau. 90 million t of this is supposed to go to exports and 200 million t to the domestic market. In 2006 the Spanish utility company Fenosa acquired 70% of the shares of Kangra. Kangra produces 3 million t/a and has an export right of 1.65 million t to RBCT. The interest in the establishment of coal production operations is rising in the neighbouring countries Botswana, Mozambique and Zimbabwe.

The domestic markets in South Africa consumed the following quantities in 2006:

### Consumption of the Domestic Markets

	2005 Mill. t	2006 Mill. t
Power generation	106.0	108.6
Synthetic fuels (Sasol)	41.5	43.8
Industry/Domestic fuel	18.0	18.2
Metallurgical industry	6.5	5.1
<b>Total</b>	<b>172.0</b>	<b>175.7</b>

### Infrastructure

The South African infrastructure – especially the transport by rail – functioned a little better in 2006, but it is still not satisfactory. The expansion of the export terminal Richards Bay which has been approved will also require the railway company (Spoornet) to expand capacity from its current 72 million t to 91 million t/a in the middle term (by 2010).

### Export Rights to Richards Bay Coal Terminal after Expansion

Richards Bay Coal Terminal (RBCT)	Mill. t/a	%
<b>Richards Bay Coal Terminal (RBCT)</b>	<b>72.00</b>	<b>79.13</b>
Ingwe	26.95	29.62
Anglo Coal	19.78	21.74
Xstrata	15.06	16.54
Total	4.09	4.49
Sasol	3.60	3.96
Kangra	1.65	1.82
Eyesizwe	0.87	0.96
<b>South Dunes Coal Terminal</b>	<b>6.00</b>	<b>6.59</b>
<b>Other exporters (incl. BEE)</b>	<b>9.00</b>	<b>9.89</b>
<b>Common Users (incl. BEE)</b>	<b>4.00</b>	<b>4.39</b>
<b>Total</b>	<b>91.00</b>	<b>100.00</b>



The planned capacity was reduced slightly by 1 million t to 91 million t in 2006. The original owners hold 79% of the export allocations.

The export of 69 million t passed through the ports Richards Bay (RBCT), Durban and Maputo.

<b>Exports Through South African Ports</b>			
	<b>2004</b>	<b>2005</b>	<b>2006</b>
	Mill. t	Mill. t	Mill. t
RBCT	65.9	69.2	66.5
Durban	1.1	0.8	1.4
Maputo	0.9	1.1	1.1
<b>Total</b>	<b>67.9</b>	<b>71.1</b>	<b>69.0</b>

While RBCT at 66.5 million t worked significantly below its target capacity of 72.0 million t, the completion of the conversion of the loading facilities enabled Durban to improve its weak handling of 0.8 million t in 2005 a bit and to achieve 1.4 million t again in 2006.

#### Export

South Africa was once again unable to exploit fully its export potential in 2006. Seaborne exports sank by 2 million t to 69 million t.

### **Structure of the Overseas Exports in 2006**

	<b>Total</b>	<b>Europe<sup>1)</sup></b>	<b>Asia</b>	<b>Misc.</b>
	Mill. t	Mill. t	Mill. t	Mill. t
Steam coal	67.0	58.4	4.1	4.5
Anthracite	0.8	0.4	-	0.4
Coking coal	1.2	0.9	-	0.3
<b>Total</b>	<b>69.0</b>	<b>59.7</b>	<b>4.1</b>	<b>5.2</b>

<sup>1)</sup>incl. neighbouring Mediterranean countries

But overland exports to Mozambique also declined. Europe remained the largest market with 59.7 million t; including the supplies to the Mediterranean area (7.2 million t), this market is responsible for about 86% of the South African export turnover. The largest European consumers were Great Britain, Spain and Germany, each with about 8 million t.

### **Key Figures Republic of South Africa**

	<b>2004</b>	<b>2005</b>	<b>2006</b>
	Mill. t	Mill. t	Mill. t
Hard coal output	243	245	247
Hard coal exports <sup>1)</sup>	68	71	69
• Steam coal	66	70	68
• Coking coal	2	1	1
Imports Germany	9.9	8.2	8.7
• Steam coal	9.9	8.2	8.7
Export quota in %	28	29	28

<sup>1)</sup> seaborne only

## AUSTRALIA

### Production

Hard coal production throughout all of the states and territories in Australia declined in 2006, falling by 4 million t in comparison with 2005 to 302 million t. In fact, the production in the two major production states decreased by 5 million t.

### Usable Production of the Major Production States of Australia

	2005 Mill. t	2006 Mill. t
New South Wales	124	122
Queensland	172	169
<b>Total</b>	<b>296</b>	<b>291</b>

There is also lignite production of about 70 million t/a in addition to hard coal production. Domestic consumption of hard coal fell by about 10% from 59.0 million t in 2005 to 53.6 million t in 2006.

Being a leading coal exporter, Australia is becoming increasingly involved in CCT (clean coal technology) and CTL (coal to liquid) projects. 25% of Australian mining is done in underground operations, 75% in open-cast pits. The project list for steam coal as well as for coking coal is long. The scope and speed of the increase in output is not so much a question of financing and reserves; it is being increasingly dictated by the development of the infrastructure. Australia continues to hold a world market share of about 33% of global coal trade and has the largest sustainable expansion potential for steam and coking coal over the next decade.

### Infrastructure

Railway lines and ports in Australia operated at close to capacity in 2006. Nevertheless, handling in the ports increased by 4 million t.

### Coal Loading Ports

Coal Loading Ports	Exports 2005	Exports 2006
	Mill. t	Mill. t
Abbot Point	12,968	11,208
Dalrymple Bay	50,665	51,170
Hay Point	33,496	31,953
Gladstone	42,745	49,508
Brisbane	4,296	3,931
<b>Total Queensland</b>	<b>144,170</b>	<b>147,770</b>
Newcastle	80,327	79,826
Port Kembla	9,208	10,169
<b>Total New South Wales</b>	<b>89,535</b>	<b>89,995</b>
<b>Total</b>	<b>233,705</b>	<b>237,765</b>

Despite this, there is currently still a backlog in export contracts of 8 – 10 million t which has led to the build-up of a queue of up to 70 ships in Newcastle alone.

Almost all of the Australian ports have plans for expansion:

### Expansion Plans Australian Ports

Port	Current Capacity	Short-term Increase	Middle-term Expansion
	Mill. t	Mill. t	Mill. t
Newcastle	89.0	105.0	130.0
Port Kembla	14.0	14.0	14.0
Dalrymple Bay	60.0	68.0	85.0
Hay Point	40.0	44.0	57.0
Gladstone	45.0	68.0	88.0
Abbot Point	15.0	21.0	50.0
Brisbane	5.0	5.0	5.0
Miscellaneous	-	-	30.0
<b>Total</b>	<b>268.0</b>	<b>325.0</b>	<b>459.0</b>

There is hope that the loading bottleneck will have been overcome in 2008. Substantial demurrage costs must still be expected for 2007.

### Export

One of the consequences of the port limitations was that exports could be increased only slightly by 3 million t. The export of hard coking coal declined slightly, while PCI and semi-soft coking coal remained stable. Exports of steam coal grew by 4 million t.

Coal Exports by Qualities			
Coal Quality	2005	2006	Change
	Mill. t	Mill. t	Mill. t
Steam coal (HCC)	81	79	-2
Semi-soft coking coal	43	44	+1
Steam coal	108	112	+4
Anthracite	2	2	0
<b>Total</b>	<b>234</b>	<b>237</b>	<b>+3</b>

Major focus for deliveries of Australian coal according to the various qualities in 2006 is shown below:

Coal Exports According to Markets				
Coal Quality	Exports 2006	thereof	Mill. t	%
	Mill. t			
Coking coal	79	Pacific	51	64.56
		Atlantic	28	35.44
Semi-soft coking coal	44	Pacific	33	75.00
		Atlantic	11	25.00
Steam coal/anthracite	114	Pacific	110	96.49
		Atlantic	4	3.51
<b>Total</b>	<b>237</b>	<b>Pacific</b>	<b>194</b>	<b>81.86</b>
		<b>Atlantic</b>	<b>43</b>	<b>18.14</b>

The hard coking coal is sold all around the world due to its good quality because Australia is far and away the largest provider of this high-quality coal. The sales of the other qualities focus primarily on the Pacific region. Australia's largest buyer is Japan at 24.6 million t.

Key Figures Australia			
	2004	2005	2006
	Mill. t	Mill. t	Mill. t
Hard coal output	297	306	302
Hard coal exports	225	234	237
• Steam coal	108	110	114
• Coking coal	117	124	123
	1,000 t	1,000 t	1,000 t
Imports Germany	4,509	3,549	5,372
• Steam coal	780	434	819
• Coking coal	3,729	3,115	4,553
Export quota in %	76	76	79

## PEOPLE'S REPUBLIC OF CHINA

The Chinese economy grew strongly once again in 2006, achieving a growth in gross national product of 11.5%. Power generation and pig iron production as well as cement manufacture accelerated sharply. Chinese power generation rose by 13.5% or 336 TWh to 2,834 TWh in 2006. Pig iron production (+74 million t) and crude steel production (+69 million t) increased similarly.

Power/Crude Steel/Pig Iron/Coal Production				
		2004	2005	2006
Power generation	TWh	2,194	2,498	2,834
Crude steel production	Mill. t	272	349	418
Pig iron production	Mill. t	258	330	404
Coal production	Mill. t	1,992	2,190	2,326

### Production

In view of the rapid economic growth, coal output also had to continue to rise and increased by 135 million t/a to 2,325 million t in 2006. Coke production also rose further, reaching 281 million t. Coking plant capacity in 2006 is estimated to be 320 million t and is supposed to be expanded further in 2007/2008 (+30 to 40 million t). This means a poor use of coking plant capacities. In part, the refining times in outdated systems are too long and are a reason for poor productivity.

Coal production is being increasingly burdened by levies for reclamation, mine safety and exploration. However, coal output is supposed to be increased even more. At this time, projects with an annual capacity of 800 million t as replacement and additional capacities are underway. Output is supposed to reach 2.6 billion t by 2010. This mark will presumably be exceeded. Optimistic estimates assume as much as 3 billion t.

#### Coal Production in China

	2005 Mill. t	2006 Mill. t	Growth %
State-owned mines	1,070	1,126	+5.1
Provincial mines	305	308	+1.0
Small operators	815	892	+9.4
<b>Total</b>	<b>2,190</b>	<b>2,326</b>	<b>+6.2</b>

The concentration process in the Chinese coal industries continues.

### Infrastructure

Massive work continues to be carried out to expand China's infrastructure rapidly.

For example, the Dagin Line is currently being expanded by 50 million t (Datong Quinhuangdao Port) to 250 million t and will be further expanded to 300 million t in 2010. The capacity of the Shenshuahuang Line (Shanxi-Huanghua Port) is also supposed to be increased from its current 95 million t/a to 200 million t/a. Infrastructure projects are carried out vigorously in China. 1,102 million t were moved by rail in China in 2006.

Port handling in China for coal alone amounted to 407 million t. This figure breaks down as shown here:

- 78 million t export of coal/coke
- 38 million t import of coal
- 291 million t handling of return transport to the country.

Breakdown figures for individual ports for 2006 are not yet available.

#### Coal Loading Ports in China 2005

	Total Handling Mill. t	Thereof Coal Mill. t
Quinhuangdao	169	145
Tianjin (Xingang)	241	69
Qingdao (Tsingtao)	187	8
Rizhao (Shijuso)	56	20
Lianyungang	61	12
Huanghua	68	67
Miscellaneous	38	50
<b>Total</b>	<b>820</b>	<b>371</b>

## Export/Import

Export declined once again in 2006 and has fallen to about 63 million t. All qualities, i.e., steam coal, coking coal and anthracite, are affected by this development.

The largest buyers of steam coal were Japan at 17 million t, South Korea at 15 million t and Taiwan at 13 million t. Virtually no volume was shipped to Europe. Japan at 2 million t and South Korea at 1.5 million t were the largest customers for coking coal. This was also the case for anthracite (Japan 1.9 million t, South Korea 2.6 million t). Coke exports increased by just under 2 million t to 14.5 million t. Imports increased by about 12 million t. However, the development was not homogeneous (in million t):

Coal Imports According to Qualities			
	2005	2006	Change
	Mill.t	Mill.t	Mill. t
Steam coal	6.2	10.8	+4.6
Coking coal	7.2	4.8	-2.4
Anthracite	12.8	22.6	+9.8
<b>Total</b>	<b>26.2</b>	<b>38.2</b>	<b>+12.0</b>

China is largely self-reliant for supplies of coking coal – in contrast to the situation for iron ore and other metals – and recorded

declines in imports at the expense of Canada above all. The steam coal imports – the anthracite (Vietnam) is used primarily for power generation as well – increased by a total of about 14.4 million t.

The difference between export and import developed as shown below (in million t):

Balance Export/Import					
	2003	2004	2005	2006	2007 <sup>1</sup>
	Mill. t	Mill. t	Mill. t	Mill. t	Mill. t
Exports	94	87	72	63	53
Imports	11	19	26	38	50
<b>Difference</b>	<b>83</b>	<b>68</b>	<b>46</b>	<b>25</b>	<b>3</b>

<sup>1</sup> Estimated

The difference could be balanced out or there could even be an import surplus in 2007. The export licences of 80 million t were not utilised completely.

The export figures for the coal exports authorised to conduct exports developed as shown below:

Companies Authorised to Conduct Exports			
	2004	2005	2006
	Mill. t	Mill. t	Mill. t
CNCIEC	42.2	34.0	27.2
Shenhua	27.6	25.6	25.5
Shanxi	12.4	7.6	5.3
Minmetals	3.8	3.9	3.9
<b>Total</b>	<b>86.0</b>	<b>71.1</b>	<b>61.9</b>

The number of coal exporters was reduced from 70 to allegedly 40 companies. Other information indicates that there are 60 approved exporters. Rebates for value-added tax on exports have been completely eliminated. Import

duties, on the other hand, have been reduced. Export duties on coking coal and coke of 5% have even been in effect since 01/11/2006.

In addition, a tax increase for the use of the domestic infrastructure from the production sites to the seaports remains a topic of discussion. Export duties are also being discussed for steam coal exports.

All of these measures have the aim of making exports more expensive and imports cheaper. But the steadily rising domestic prices for coking coal and steam coal also make exports unattractive.

#### Key Figures People's Republic of China

	2004 Mill. t	2005 Mill. t	2006 Mill. t
Hard coal output	1,992	2,190	2,326
Hard coal exports	86.6	71.7	63.2
• Steam coal	80.9	66.4	58.8
thereof anthracite	6.4	5.7	5.2
• Coking coal	5.7	5.3	4.4
Coke exports	15.0	12.8	14.5
Hard coal imports	18.5	26.2	38.2
• Steam coal	3.8	6.2	10.8
• Coking coal	6.8	7.2	4.8
• Anthracite	7.8	12.8	22.6
	1,000 t	1,000 t	1,000 t
Imports Germany	1,733	1,219	920
• Steam coal	347	179	37
• Coke	1,386	1,040	883
Export rate in %	5	4	3

## INDONESIA

### Production

The Indonesian coal mining expanded further in 2006 despite the pessimistic projections and, according to official figures, reached about 180 million t (+27 million t in comparison with the previous year).

In addition, there was an output of 20 – 30 million t not included in official figures, part of which was purchased by large companies.

The total production there presumably came to 200 to 210 million t.

Of the total output, 171 million t were exported and about 32 million t were used for domestic consumption. Other unofficial estimates speak of exports of 155 to 165 million t in 2006.

### The Largest Hard Coal Producers in Indonesia

Company	Output 2006 Mill. t	Exports 2006 Mill. t
PT Adaro	33.7	34.3
PT Kaltim Prima	34.1	25.1
PT Kideco Jaya Agung	18.1	18.9
PT Arutmin	15.8	15.6
PT Berau Coal (KKS)	10.6	10.6
PT Indomico Mandiri	9.2	10.6
<b>Total</b>	<b>121.5</b>	<b>114.5</b>
<b>Indonesia Total</b>	<b>205.0</b>	<b>171.0</b>

The middle-term to long-term tendency of the Indonesian output and with it the exports is in the direction of low calorific values. The Indonesian production of 200 to 210 million t breaks down into

185 – 190 million t in Kalimantan and  
15 – 20 million t in Sumatra.

The production in Sumatra especially is required for domestic consumption because the deposits are located close to the power consumption centre in densely populated Java.

Japanese and Australian companies (Sumitomo/BHP) are commencing and examining coking coal projects in eastern and central Kalimantan. There are also coking coal deposits on Sumatra.

The 5% export tax introduced at the beginning of 2006 has been revoked

#### Infrastructure

Indonesia currently has six deep-water ports on Kalimantan with an annual handling capacity of 100 million t, allowing the loading of freighters of 60,000 to

180,000 DWT. In addition, there are ten more coal terminals nationwide (including Samarinda and Palikpapan) with an annual capacity totalling 60 – 70 million t and a depth which, as a rule, is adequate for Panamax sizes. Handling capacities are also available on Sumatra. Moreover, there are numerous off-shore loading opportunities for smaller ships.

The large number of loading opportunities favoured the strong development of exports. In the long term, further growth is also dependent on an improvement in the infrastructure (construction of railway lines) because as of this point only the coal reserves have been developed which are either in the proximity of the coasts or have a good river connection for further transport to the coast.

#### Export and Port Capacities in Indonesia

	2004 Mill. t	2005 Mill. t	2006 Mill. t
Adang Bay	12	12	13
Baujarmasin	10	6	7
Kotabaru	10	14	15
Pulau Laut	10	22	30
Tanjung Bara	20	28	34
Tarahan	14	2	3
<b>Total</b>	<b>76</b>	<b>84</b>	<b>102</b>
10 additional smaller coal loading ports	50	50	75
20 offshore loading opportunities			
<b>Total Capacity</b>	<b>126</b>	<b>134<sup>1)</sup></b>	<b>177<sup>1)</sup></b>

<sup>1)</sup> Estimated figures

### Export

Indonesia expanded further its leading world market position as steam coal exporter in 2006. Indonesia was more than able to compensate for the decline in Chinese exports. An estimated 2 – 3 million t from Indonesian output went onto the market as PCI coal. The focus of Indonesian exports is on the Pacific market. But the volume to European and American countries is rising steadily:

#### Coal Exports According to Markets

	2004 Mill. t	2005 Mill. t	2006 Mill. t
Pacific	91	110	141
Europe	12	15	25
America	3	4	5
<b>Total</b>	<b>106</b>	<b>129</b>	<b>171</b>

Still, the largest individual buyers are found in Asia. China developed high growth rates and imported 6 million t already in 2006.

#### The Largest Buyers of Indonesian Coal

	2004 Mill. t	2005 Mill. t	2006 Mill. t
Japan	22.7	27.3	32.8
South Korea	11.7	14.4	20.8
Taiwan	17.8	17.9	24.4

Exports will continue to develop upwards. Growth in domestic demand is slow because many power plant projects have been delayed. Focus of exports will remain Kalimantan.

### Key Figures Indonesia

	2004 Mill. t	2005 Mill. t	2006 Mill. t
Hard coal output <sup>1)</sup> (sub-bituminous)	135	153	205
Steam coal exports	105	129	171
	1,000 t	1,000 t	1,000 t
Imports Germany	838	206	1,509
Export rate in %	78	84	87

<sup>1)</sup> Estimated figures

## VIETNAM

### Production

Exact production figures are not available, but based on domestic consumption of about 14 million t and exports of about 29.8 million t, output in 2006 came to about 44 million t.

The output capacities of the Vietnamese mines was estimated as shown below on the basis of information from Vinacom:

Opencast pits	26.5 million t
Underground operations	38.1 million t
<b>Total</b>	<b>64.6 million t</b>

These figures make the rapid increase in exports plausible. The government has since called for a restriction of exports in the future to less than 20 million t annually as a means of securing domestic demand. Output is to be increased further and to reach 80 million t in the long term (by 2025). Production from opencast pits is currently dominant, but it will be necessary to change



over to underground operations more and more as reserves are depleted if these output targets are to be reached.

The currently strong push to increase production and export is supposedly in part reliant on Chinese support.

#### Infrastructure

The coasts on the eastern side of Vietnam are mostly shallow and have in the past allowed access only by ships of less than 10,000 DWT. As a result of dredging work in Campha, larger ships can now be loaded there. So there is also a possibility to handle 65,000-DWT ships with additional loading when at anchor. Hongai Port can handle 10,000-DWT ships at the pier and 30,000-DWT ships at anchor.

According to information from Vinacom, export capacities in the ports amounts to about 34 million t/a:

<b>Export and Port Capacities in Vietnam 2006</b>	
	<b>2006</b> Mill. t
Cam Pha/Cua Ong	15.0
New ports in Cam Pha	10.0
Hon Gai/Nam Cau Trang	3.0
Hon Gai/Dien Vang	1.5
Hon Gai/Troi	1.5
Uong Bi/dien Cong	3.0
<b>Total</b>	<b>34.0</b>

The inland infrastructure, i.e., roads and railway lines, is also being improved with Chinese aid.

#### Export

Vietnam increased its exports from 17.1 million t in 2005 to 29.8 million t in 2006. Primary buyers are the south-western Chinese power plants, some of them in the vicinity of the coast, in the provinces Guanxi and Guangdong, who buy almost 20 million t and who are used to anthracite or low volatile coal from China. In addition to China, Japan (2.2 million t), Thailand and South Korea (0.6 million t) bought quantities. The Vietnamese anthracite coal is also used in part as PCI coal.

The high Vietnamese export of anthracite steam coal is in part low calorific and is profitable only because of the short sea routes to China. This coal would not stand a chance on the normal international steam coal market. Nevertheless, it covers demand which otherwise might have to be covered by purchases on the world market and thus alleviates pressures on this market. Part of the exports also go overland to China.

<b>Key Figures Vietnam</b>			
	<b>2004</b>	<b>2005</b>	<b>2006</b>
	Mill. t	Mill. t	Mill. t
Output	28.0	34.0	44.0 <sup>1)</sup>
Export	11.3	17.1	29.8
thereof China	6.1	9.9	20.1
Export rate in %	40	50	68

<sup>1)</sup>Estimated

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<b>World-Energy Consumption by Source of Energy and Regions</b>							
<b>Source of Energy</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>Mill. Tce 2006</b>
Mineral Oil	5,110	5,130	5,160	5,280	5,460	5,520	5,572
Natural Gas	3,180	3,210	3,310	3,400	3,509	3,600	3,710
Nuclear Energy	840	870	880	867	905	910	920
Hydro Power	882	840	850	875	920	940	960
Hard Coal	2,800	2,900	3,160	3,460	3,700	4,290	4,455
Lignite	320	320	330	330	330	330	330
<b>Total</b>	<b>13,132</b>	<b>13,270</b>	<b>13,690</b>	<b>14,212</b>	<b>14,824</b>	<b>15,590</b>	<b>15,947</b>
<b>Region of Consumption</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>Shares in % 2006</b>
North America	30.1	29.1	28.7	27.9	27.2	26.7	26.2
Asia/Australia	26.9	27.5	28.9	30.0	31.3	32.0	32.5
EU-15/since 2004 EU-25	16.4	16.2	15.5	15.4	16.8	16.5	16.5
CIS	10.5	10.3	10.1	10.0	9.8	9.7	9.6
Remaining World	16.1	16.9	16.8	16.7	14.9	15.1	15.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Coal Consumption (Hard Coal and Lignite)</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>Mill. Tce 2006</b>
<b>Coal Consumption (Hard Coal and Lignite)</b>	<b>3,120</b>	<b>3,220</b>	<b>3,490</b>	<b>3,790</b>	<b>4,030</b>	<b>4,620</b>	<b>4,785</b>
<b>Region of Consumption</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>Shares in % 2006</b>
North America	27.1	26.0	24.8	24.1	24.0	23.7	22.1
Asia/Australia	44.0	45.5	49.1	51.3	52.0	53.0	55.1
EU-15/since 2004 EU-25	9.6	9.6	8.9	8.7	11.1	10.7	10.0
CIS	7.9	7.8	6.9	7.0	6.3	6.1	6.4
Remaining World	11.4	11.1	10.3	8.9	6.6	6.5	6.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Considered were only commercial traded sources of energy.

2006 preliminary figures/partly estimated

Sources: BP Statistical Review of World Energy

### World Hard Coal Production/Foreign Trade<sup>3)</sup>

	2001			2002			2003		
	Production	Export	Import	Production	Export	Import	Production	Export	Import
Germany	31	0	33	29	0	32	29	0	35
France	2	0	15	2	0	18	2	0	19
Great Britain	32	0	36	30	0	29	28	0	31
Spain <sup>1)</sup>	14	0	19	13	0	24	13	0	21
Poland	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-
<b>EU-15/since 2004 EU-25</b>	79	0	175	74	0	172	72	0	180
Poland	103	23	2	102	23	2	100	21	3
Czech Republic	15	4	1	14	4	1	13	4	1
CIS	323	36	1	303	42	1	320	52	1
<b>Mentioned Countries</b>	441	63	4	419	69	4	433	77	5
Canada	34	30	18	30	25	18	27	25	22
USA	1,014	44	18	995	36	15	983	38	22
Colombia	43	37	0	41	36	0	45	44	0
Venezuela	8	8	0	8	8	0	8	8	0
<b>Mentioned Countries</b>	1,099	119	36	1,074	105	33	1,063	115	44
<b>South Africa</b>	222	69	2	219	69	2	238	71	3
<b>Australia</b>	265	194	0	274	204	0	279	215	0
India	312	0	24	310	0	26	320	0	30
China <sup>2)</sup>	1,381	90	3	1,455	84	11	1,722	93	11
Japan	3	0	155	3	0	158	3	0	167
Indonesia	95	67	0	107	76	0	119	89	0
<b>Mentioned Countries</b>	1,791	157	182	1,875	160	195	2,164	182	208
Remaining Countries	111	8	212	113	13	214	117	10	230
<b>World</b>	4,008	610	610	4,048	620	620	4,366	670	670

2006 preliminary figures

<sup>1)</sup> Production incl. "Lignito Negro"

<sup>2)</sup> Production incl. lignite (about 50 Mill. t estimated)

Sources: Statistik der Kohlenwirtschaft, ECE, IEA, statistics of import and export countries, Barlow Jonker, internal calculations



**(Domestic Trade and Seaborne Trade)**

mill. T (t=t)

<b>2004</b>			<b>2005</b>			<b>2006</b>			
Production	Export	Import	Production	Export	Import	Production	Export	Import	
29	0	39	28	0	36	24	0	42	Germany
0	0	20	0	0	20	0	0	21	France
25	0	37	20	0	44	19	0	50	Great Britain
14	0	24	12	0	25	11	0	27	Spain <sup>1)</sup>
99	19	2	97	20	2	94	16	4	Poland
13	4	1	13	4	1	14	5	1	Czech Republic
180	24	211	170	24	209	162	21	230	<b>EU-15/since 2004 EU-25</b>
283	66	26	300	70		309	89	25	Russia
70	26		86	24		94	25		Kazakhstan
80	4	9	78	8	12	80	3	4	Ukraine
433	96	35	464	102	12	483	117	29	<b>Mentioned Countries</b>
29	26	18	31	28	20	34	28	21	Canada
1,020	43	25	1,029	45	27	998	46	30	USA
52	51	0	60	55	0	64	61	0	Colombia
8	8	0	8	8	0	8	8	0	Venezuela
1,109	128	43	1,128	136	47	1,104	143	51	<b>Mentioned Countries</b>
243	68	0	241	75	0	247	69	0	<b>South Africa</b>
297	225	0	306	234	0	302	237	0	<b>Australia</b>
348	0	31	370	0	40	390	0	53	India
1,992	87	19	2,190	72	26	2,326	63	38	China <sup>2)</sup>
0	2	179	0	0	181	0	0	177	Japan
135	105	0	153	129	0	205	171	0	Indonesia
2,475	194	229	2,713	201	247	2,921	234	268	<b>Mentioned Countries</b>
130	21	243	136	39	296	132	46	289	Remaining Countries
4,794	758	758	5,158	811	811	5,351	867	867	<b>World</b>

Table 2

## Seaborne Hard Coal Trade in Million t

Exporting Countries	2001			2002			2003		
	Coking Coal	Steam Coal	Total	Coking Coal	Steam Coal	Total	Coking Coal	Steam Coal	Total
Australia	106	88	194	104	100	204	111	104	215
USA	19	9	28	15	5	20	16	3	19
South Africa	1	68	69	1	68	69	2	70	72
Canada	25	2	27	21	2	23	20	1	21
China	12	78	90	14	70	84	13	81	94
Colombia	0	37	37	0	35	35	0	44	44
Indonesia	0	67	67	0	76	76	0	89	89
Poland	2	13	15	2	19	21	2	12	14
Russia	6	27	33	9	33	42	7	42	49
Venezuela	0	8	8	0	8	8	0	8	8
Other	1	7	8	2	6	8	2	12	14
<b>Total</b>	<b>172</b>	<b>404</b>	<b>576</b>	<b>168</b>	<b>422</b>	<b>590</b>	<b>173</b>	<b>466</b>	<b>639</b>
Importing Countries/ Regions	2001			2002			2003		
	Coking Coal	Steam Coal	Total	Coking Coal	Steam Coal	Total	Coking Coal	Steam Coal	Total
Europe <sup>1)</sup>	52	148	200	49	148	197	51	162	213
- EU-15 / since 2004 EU-25	41	127	168	39	127	166	43	139	182
Asia	102	225	327	102	247	349	105	274	379
- Japan	63	92	155	59	99	158	54	112	166
South Korea	18	49	67	19	51	70	20	52	72
- Taiwan	7	42	49	7	44	51	0	55	55
- Hongkong	0	8	8	0	8	8	0	10	10
India	12	12	24	13	13	26	14	16	30
Latin America	17	8	25	16	9	25	16	10	26
Other (incl. USA)	1	23	24	1	18	19	1	20	21
<b>Total</b>	<b>172</b>	<b>404</b>	<b>576</b>	<b>168</b>	<b>422</b>	<b>590</b>	<b>173</b>	<b>466</b>	<b>639</b>

2006 preliminary figures; excl. land transport

<sup>1)</sup>incl. Mediterranean countries*analysis of several sources*

Mill. t

<b>2004</b>			<b>2005</b>			<b>2006</b>			<b>Exporting Countries</b>
Coking Coal	Steam Coal	Total	Coking Coal	Steam Coal	Total	Coking Coal	Steam Coal	Total	
118	107	225	124	110	234	123	114	237	Australia
20	6	26	22	5	27	22	6	28	USA
1	67	68	1	70	71	1	68	69	South Africa
22	1	23	26	2	28	25	3	28	Canada
6	81	87	5	67	72	4	59	63	China
0	51	51		55	55		61	61	Colombia
0	105	105		129	129		171	171	Indonesia
2	10	12	0	11	11	1	7	8	Poland
10	51	61	8	60	68	9	68	77	Russia
0	9	9		8	8		8	8	Venezuela
1	17	18	2	21	23	2	30	32	Other
<b>180</b>	<b>505</b>	<b>685</b>	<b>188</b>	<b>538</b>	<b>726</b>	<b>187</b>	<b>595</b>	<b>782</b>	<b>Total</b>
<b>2004</b>			<b>2005</b>			<b>2006</b>			<b>Importing Countries/ Regions</b>
Coking Coal	Steam Coal	Total	Coking Coal	Steam Coal	Total	Coking Coal	Steam Coal	Total	
52	166	218	53	170	223	56	191	247	Europe <sup>1)</sup>
48	163	211	46	163	209	47	177	224	- EU-15 / since 2004 EU-25
110	304	414	116	319	435	117	353	470	Asia
56	124	180	55	126	181	63	114	177	- Japan
15	64	79	12	63	75	13	61	74	South Korea
0	61	61		61	61		54	63	- Taiwan
0	12	12	0	15	15	0	12	12	- Hongkong
15	18	33	17	23	40	25	28	53	India
16	11	27	16	17	33	11	11	22	Latin America
2	24	26	3	32	35	3	40	34	Miscellaneous (incl. USA)
<b>180</b>	<b>505</b>	<b>685</b>	<b>188</b>	<b>538</b>	<b>726</b>	<b>187</b>	<b>595</b>	<b>782</b>	<b>Total</b>

Table 3

## Qualities of Coking Coal Traded on the World Market

Exporting Countries/ Qualities	Volatile %	Ash %	Latent Moisture %	Sulphur %	Phosphorus %	Swelling Index FSI
<b>Low Volatile</b>						
Australia/NSW	21 - 24	9.3 - 9.5	1.0	0.38 - 0.40	0.03 - 0.07	6 - 8
Australia/Qld.	17 - 25	7.0 - 9.8	1.0 - 1.5	0.52 - 0.70	0.007 - 0.06	7 - 9
Canada	21 - 24	9.5	0.6	0.30 - 0.60	0.04 - 0.06	6 - 8
USA	18 - 21	5.5 - 7.5	1.0	0.70 - 0.90	no figure	8 - 9
<b>Middle Volatile</b>						
Australia/NSW	27 - 28	7.9 - 8.3	1.5 - 1.8	0.38 - 0.39	0.04 - 0.06	5 - 7
Australia/Qld.	26 - 29	7.0 - 9.0	1.2 - 2.0	0.38 - 0.90	0.03 - 0.055	6 - 9
Canada	25 - 28	8.0	0.9	0.30 - 0.55	0.03 - 0.07	6 - 8
USA	26 - 27	6.8 - 9.0	1.0	0.95 - 1.10	no figure	7 - 9
Poland	23 - 28	7.0 - 8.9	0.7 - 1.5	0.60 - 0.80	no figure	6 - 9
China	25 - 30	9.5 - 10.0	1.3 - 1.5	0.35 - 0.85	0.015	
<b>High Volatile</b>						
Australia/NSW	34 - 40	5.5 - 9.5	2.4 - 3.0	0.35 - 1.30	0.002 - 0.05	4 - 7
Australia/Qld.	30 - 34	6.5 - 8.2	2.0	0.50 - 0.70	0.02 - 0.04	8 - 9
Canada	29 - 35	3.5 - 6.5	1.0	0.55 - 1.20	0.006 - 0.04	6 - 8
USA	30 - 34	6.8 - 7.3	1.9 - 2.5	0.80 - 0.85	no figure	8 - 9
Poland	29 - 33	6.9 - 8.9	0.8 - 1.5	0.60 - 1.00	no figure	5 - 8
<b>Deutschland</b>	26.6 <sup>1)</sup>	7.4 <sup>1)</sup>	1.5 <sup>1)</sup>	1.1 <sup>1)</sup>	0.01 - 0.04	7 - 8

Figures in bandwidths

<sup>1)</sup> Utilization mixture for coking plant

<sup>2)</sup> CSR-value (Coke Strength under Reduction) describing the heating strength of coke after heating up to 1,100° C and following CO<sub>2</sub>-fumigation.  
The CSR-values classified to the coal are only standard values.

Sources: ACR, Coal, companies' information



<b>Coke strength CSR-value<sup>2)</sup></b>	<b>Fluidity max ddpmm</b>	<b>Con- traction max %</b>	<b>Dilatation max. %</b>	<b>Reflection middle %</b>	<b>Macerale reactive %   inert %</b>		<b>Minerals %</b>
50-65 60-75 65-72 60-70	500-2000 34-1400 10-150 30-100	20-30 24-34 20-26 25-28	25-140 35-140 7-27 30-60	1.23-1.29 1.12-1.65 1.22-1.35 1.30-1.40	38-61 61-75 70-75 65-75	36-58 20-34 20-35 20-30	3-4 3-5 5 3
40-60 50-70 50-70 60-70 no figure	200-2000+ 150-7000 150-600 500-7000 no figure	25-35 19-33 21-28 22-18 26-32	0-65 (-)5-240 50-100 50-100 30-120	1.01-1.05 1.00-1.10 1.04-1.14 1.10-1.50 no figure	50-53 58-77 70-76 72-78 no figure	43-44 20-38 20-24 18-24 no figure	4-6 3-4 5 4 no figure
35-55 65-75 50-60 60-70 no figure	100-4000 950-1000+ 600-30000 18000-26847 no figure	27-45 23-24 22-31 26-33 no figure	(-)10-60 35-160 50-148 150-217 no figure	0.69-0.83 0.95-1.03 1.00-0.95 1.00-1.10 no figure	67-84 61-79 76-81 75-78 no figure	11-28 18-36 17-19 18-21 no figure	2-5 3-4 2-4 4 no figure
50-65	30-3000	27-28	108-170	1,15-1,45	60-80	15-35	5

Table 4

### Qualities of Steam Coal Traded on the World Market

Exporting Countries	Volatile %	Ash %	Moisture %	Sulphur %	F. Carbon %	Grinding Index HGI	Calorific Value kcal/kg
<b>Atlantic Supplier</b>							
USA (east coast)	17 - 39	5 - 15	5 - 12	0.5 - 3.0	39 - 70	31 - 96	6000 - 7200
South Africa	16 - 31	8 - 15	6 - 10	0.5 - 1.7	51 - 61	43 - 65	5400 - 6700
Colombia	30 - 39	4 - 15	7 - 16	0.5 - 1.0	36 - 55	43 - 60	5000 - 6500
Venezuela	34 - 40	6 - 8	5 - 8	0.6	47 - 58	45 - 50	6500 - 7200
Poland	25 - 31	8 - 16	7 - 11	0.6 - 1.0	44 - 56	45 - 50	5700 - 6900
Czech Republic	25 - 27	6 - 8	7 - 9	0.4 - 0.5	58 - 60	60 - 70	6700 - 7100
Russia	27 - 34	11 - 15	8 - 12	0.3 - 0.6	47 - 58	55 - 67	6000 - 6200
<b>Pacific Supplier</b>							
Australia	25 - 30	8 - 15	7 - 8	0.3 - 1.0	47 - 60	45 - 79	5900 - 6900
Indonesia	37 - 47	1 - 16	9 - 22	0.1 - 0.9	30 - 50	44 - 53	3700 - 6500
China	27 - 31	7 - 13	8 - 13	0.3 - 0.9	50 - 60	50 - 54	5900 - 6300
Russia (east coast)	17 - 33	11 - 20	8 - 10	0.3 - 0.5	47 - 64	70 - 80	5500 - 6800
Vietnam / Anthr.	5 - 6	15 - 33	9 - 11	0.85 - 0.95	58 - 83	35	5100 - 6800
<b>Germany</b>	19 - 33	6 - 7	8 - 9	0.7 - 1.4	58 - 65	60 - 90	6600 - 7100
Indication in gross bandwidths							

Sources: see table 4

## Hard Coal Export of Poland

1,000 t

Importing Countries	2000	2001	2002	2003	2004	2005	2006
Germany	6,794	7,390	6,910	7,020	7,170	7,022	7,330
France	1,408	1,190	1,312	1,013	819	1,227	762
Belgium	375	580	455	2	500	649	291
The Netherlands	531	490	1	2	191	270	320
Italy	913	230	601	0	94	540	248
Great Britain	1,044	1,280	2,243	2,031	1,365	1,614	1,008
Ireland	196	250	253	263	276	287	235
Denmark	2,214	2,100	2,154	860	1,088	821	523
Spain	389	150	233	16	134	111	150
Portugal	5	-	345	0	0	221	0
Finland	1,892	2,010	1,698	2,081	1,626	653	513
Austria	1,812	2,100	1,573	1,346	1,328	1,155	1,233
Sweden	640	300	355	567	327	172	283
Czech Republic	-	-	-	-	1,227	1,146	1,642
Slovakia	-	-	-	-	1,147	802	1,030
Hungary	-	-	-	-	183	380	249
Other	-	-	-	-	53	50	72
<b>EU-15/since 2004 EU-25</b>	<b>18,213</b>	<b>18,070</b>	<b>18,133</b>	<b>15,201</b>	<b>17,528</b>	<b>17,120</b>	<b>15,889</b>
CIS	1,600	1,400	822	1,176	0	13	36
Czech Republic	1,077	1,200	1,181	1,174	-	-	-
Slovakia	955	800	482	588	-	-	-
Hungary	545	270	166	315	-	-	-
Bulgaria	300	190	-	0	0	0	0
Romania	62	0	-	0	0	0	0
Brazil	143	-	282	0	0	0	70
Other countries	824	1,370	1,733	2,300	3,062	1,438	620
<b>Export in total</b>	<b>23,719</b>	<b>23,300</b>	<b>22,799</b>	<b>20,754</b>	<b>20,590</b>	<b>18,571</b>	<b>16,509</b>

2006 preliminary figures

Sources: McCloskey, WEGLOKOKS, since 1998 Germany: Federal Statistical Office, own calculations

<b>Hard Coal Export of USA</b>								1,000 t
<b>Importing Countries</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	
Germany	885	828	868	1,283	1,540	606	2,191	
France	2,761	2,087	1,184	975	787	1,146	1,474	
Belgium/Luxembourg	2,622	2,579	2,147	1,637	1,545	1,881	1,965	
The Netherlands	2,378	1,910	1,480	1,798	1,622	4,247	1,191	
Italy	3,362	4,905	2,790	2,373	1,908	2,226	2,975	
Great Britain	2,977	2,437	1,707	1,337	1,793	1,599	2,337	
Ireland	456	344	632	216	0	0	0	
Denmark	70	0	-	261	67	66	348	
Spain	2,433	1,491	1,734	1,605	1,380	1,685	1,479	
Portugal	541	601	115	406	405	143	267	
Finland	288	140	147	449	426	259	661	
Sweden	642	565	393	346	570	535	426	
Other						239	30	
<b>EU-15/since 2004 EU-25</b>	<b>19,415</b>	<b>17,887</b>	<b>13,197</b>	<b>12,686</b>	<b>12,043</b>	<b>14,632</b>	<b>15,344</b>	
Israel	56	0	119	0	0	0	0	
Turkey	1,640	803	524	991	1,179	1,708	1,120	
Romania	443	0	-	0	256	1,391	1,002	
Other Europe <sup>1)</sup>	2,905	1,416	1,129	1,423	225	1,495	286	
<b>Europe</b>	<b>24,459</b>	<b>20,106</b>	<b>14,969</b>	<b>15,100</b>	<b>13,703</b>	<b>19,226</b>	<b>17,752</b>	
Canada	16,110	15,995	14,443	18,212	15,722	17,577	18,695	
Mexico	727	723	754	1,078	929	906	454	
Argentina	185	168	172	218	265	218	317	
Brazil	4,115	4,131	3,171	3,186	3,942	3,792	4,113	
Japan	4,033	1,878	1,137	5	4,014	1,888	301	
South Korea	1,578	691	211	176	112	1,304	515	
Taiwan	350	135	0	2	449	0	2	
Other countries	501	273	69	190	3,829	0	3,852	
<b>Export in total</b>	<b>52,058</b>	<b>44,100</b>	<b>34,926</b>	<b>38,167</b>	<b>42,965</b>	<b>44,911</b>	<b>46,001</b>	
<sup>1)</sup> incl. Mediterranean countries								
							2006 preliminary figures	

Source: U.S. Department of Commerce

## Hard Coal Export of Canada

1,000 t

Importing Countries	2000	2001	2002	2003	2004	2005	2006
Germany	846	1,214	1,046	1,295	2,123	1,757	1,608
France	585	503	259	324	388	529	372
Belgium/Luxembourg	525	570	228	309	293	0	0
The Netherlands	408	265	1,037	1,250	1,139	807	1,194
Italy	1,184	1,096	705	994	892	1,469	1,178
Great Britain	1,174	2,016	1,138	1,078	1,064	1,677	1,418
Denmark	-	-	-	0	0	0	0
Spain	338	173	332	392	113	344	175
Portugal	231	-	0	0	0	0	0
Finland	-	302	147	197	200	516	493
Sweden	175	-	0	0	0	0	0
<b>EU-15/since 2004 EU-25</b>	<b>5,466</b>	<b>6,139</b>	<b>4,892</b>	<b>6,022</b>	<b>6,212</b>	<b>7,099</b>	<b>6,438</b>
Other Europe <sup>1)</sup>	1,302	1,233	1,280	685	1,707	1,170	1,152
<b>Europe</b>	<b>6,768</b>	<b>7,372</b>	<b>6,172</b>	<b>6,524</b>	<b>7,919</b>	<b>8,269</b>	<b>7590</b>
Japan	13,330	10,718	9,388	7,753	5,384	7,499	8,676
South Korea	5,257	5,287	4,393	3,659	0	5,014	4,975
Taiwan	1,324	1,142	1,078	1,077	991	1,276	1,221
Brazil	1,474	1,807	1,173	1,642	1,483	1,718	1,584
USA	1,631	2,045	1,796	1,789	2,497	1,709	1,748
Chile	998	1,027	401	349	322	549	721
Mexico	385	490	257	467	1,395	406	274
Other countries	568	257	327	1,716	5,950	1,490	774
<b>Export in Total</b>	<b>31,735</b>	<b>30,145</b>	<b>24,985</b>	<b>24,976</b>	<b>25,941</b>	<b>27,930</b>	<b>27,563</b>

<sup>1)</sup> incl. Mediterranean countries 2006 preliminary figures

Sources: McCloskey's Coal Information Services

## Hard Coal Export of Colombia

1,000 t

Importing Countries	2000	2001	2002	2003	2004	2005	2006
Germany	4,628	5,797	5,932	5,918	4,719	4,256	3,997
France	1,500	1,480	2,098	2,686	4,348	2,228	3,030
Belgium/Luxembourg	150	160	604	147	134	510	40
The Netherlands	3,372	2,503	2,158	1,435	3,765	4,597	6,133
Italy	1,700	1,300	2,205	2,074	2,441	2,589	1,880
Great Britain	5,700	6,000	2,189	2,344	2,853	2,133	2,230
Ireland	1,000	750	482	271	1,152	893	1,080
Denmark	820	280	1,071	2,715	1,388	1,252	1,990
Greece	-	120	0	0	0	0	70
Spain	910	680	1,410	1,662	1,290	1,988	1,500
Portugal	2,700	1,450	1,678	1,812	2,550	2,521	2,930
Finland	-	-	134	59	0	0	160
Sweden	165	170	83	41	184	0	
Slovenia	-	-	-	-	782	426	
<b>EU-15/since 2004 EU-25</b>	<b>22,645</b>	<b>20,690</b>	<b>20,044</b>	<b>21,164</b>	<b>25,606</b>	<b>23,393</b>	<b>25,040</b>
Israel	1,650	2,500	3,051	2,690	2,838	4,722	3,371
Other Europe <sup>1)</sup>	560	500	331	2,849	2,851	2,703	2,901
<b>Europe</b>	<b>24,855</b>	<b>23,690</b>	<b>23,426</b>	<b>26,703</b>	<b>31,295</b>	<b>30,818</b>	<b>31,312</b>
Japan	-	0	0	31	0	0	27
Hongkong	-	-	0	0	0	0	
USA	6,930	9,500	6,781	11,989	13,342	17,641	22,380
Canada	1,590	2,400	1,998	1,514	1,671	2,132	1,940
Brazil	150	150	124	244	442	285	268
Other Countries	1,275	1,360	3,074	3,876	4,440	3,708	4,946
<b>Export in total</b>	<b>34,800</b>	<b>37,100</b>	<b>35,403</b>	<b>44,357</b>	<b>51,190</b>	<b>54,584</b>	<b>60,873</b>

<sup>1)</sup> incl. Mediterranean countries, Turkey

2006 preliminary figures

Sources: IEA, Intercor, The McCloskey Group, internal calculations

## Hard Coal Export of South Africa

1,000 t

Importing Countries	2000	2001	2002	2003	2004	2005	2006
Germany	6,345	4,581	4,980	8,962	9,876	9,453	8,668
France	6,054	4,204	4,624	4,140	8,760	5,473	4,267
Belgium/Luxembourg	2,227	1,992	1,733	2,159	2,456	1,677	1,512
The Netherlands <sup>1)</sup>	5,328	9,939	11,174	11,439	3,116	7,713	13,208
Italy	4,176	5,067	4,117	4,503	4,758	5,286	4,616
Great Britain	3,062	8,872	8,106	8,443	10,210	11,837	8,431
Ireland	588	526	389	566	510	788	389
Denmark	1,880	1,430	1,680	2,590	1,430	1,651	2,300
Greece	380	280	140	0	0	132	0
Spain	9,501	7,948	9,982	8,882	9,700	8,836	7,585
Portugal	3,290	1,920	2,240	2,340	1,750	1,561	1,000
Finland	60	-	60	300	0	0	120
Other						441	200
<b>EU-15/since 2004 EU-25</b>	<b>42,891</b>	<b>46,759</b>	<b>49,225</b>	<b>54,324</b>	<b>52,556</b>	<b>54,848</b>	<b>52,296</b>
Israel	5,590	6,048	5,396	5,220	6,910	5,123	4,780
Morocco	2,330	3,197	3,270	2,130	1,780	2,835	0
Turkey	1,226	1,074	994	1,647	1,550	1,302	1,913
Japan	1,952	1,288	863	320	0	140	0
South Korea	2,940	500	140	120	0	130	0
Taiwan	3,660	2,000	1,656	1,576	1,390	411	70
Hongkong	560	360	210	0	0	0	0
India	5,040	2,874	3,854	3,000	738	3,904	2,469
China	130	470	620	260	60	0	0
USA	44	645	330	130	40	126	0
Brazil	1,903	1,417	1,058	780	760	654	924
Other countries	1,643	2,578	1,584	1,475	2,136	5,089 <sup>2)</sup>	6,514
<b>Export in Total</b>	<b>69,909</b>	<b>69,210</b>	<b>69,200</b>	<b>70,982</b>	<b>67,920</b>	<b>74,562</b>	<b>68,966</b>

<sup>1)</sup> till 2003 incl. Sales for other countries <sup>2)</sup> incl. 3.5 million t railway transported export 2006 preliminary figures

Sources: IEA, South African Mineral Bureau, South African Coal Report, own calculations

## Hard Coal Export of Australia

1,000 t

Importing Countries	2000	2001	2002	2003	2004	2005	2006
Germany	2,691	2,672	1,394	5,022	4,357	4,445	5,372
France	4,174	4,471	4,989	4,736	4,639	4,033	4,542
Belgium/Luxembourg	2,261	2,611	1,814	1,182	1,790	1,906	1,580
The Netherlands	4,744	4,089	5,971	2,202	3,622	3,704	3,945
Italy	3,342	2,875	2,190	2,734	2,533	2,286	2,234
Great Britain	6,987	6,991	4,886	5,777	5,477	5,034	4,568
Denmark	142	160	317	909	156	130	308
Spain	3,212	3,903	3,888	3,688	3,321	3,508	2,968
Portugal	0	532	705	797	0	0	0
Sweden	1,075	1,164	1,048	1,193	1,323	1,261	1,220
Other							0
<b>EU-15<sup>1)</sup>/since 2004 EU-25</b>	<b>29,022</b>	<b>30,405</b>	<b>27,202</b>	<b>28,240</b>	<b>27,218</b>	<b>26,307</b>	<b>26,737</b>
Israel	2,623	1,971	1,806	2,130	987	849	300
Turkey	1,506	1,398	993	1,381	758	815	1,118
Romania	-	220	150	487	45	0	
Other Europe <sup>2)</sup>	218	777	1,415	1,289	1,867	1,246	3,140
<b>Europe</b>	<b>33,369</b>	<b>34,771</b>	<b>31,566</b>	<b>33,527</b>	<b>30,875</b>	<b>29,217</b>	<b>31,295</b>
Japan	86,624	91,662	91,636	95,271	101,896	104,812	103,305
South Korea	21,810	24,964	21,385	22,488	30,061	30,158	23,574
Taiwan	16,308	15,557	14,815	13,968	18,828	21,868	22,655
Hongkong	419	217	585	619	1,038	0	91
India	13,057	13,067	14,069	12,829	16,556	18,985	18,904
China	1,183	879	4,691	5,222	6,271	5,468	7,449
Brazil	4,988	4,570	3,757	4,887	3,143	3,454	2,929
Chile	1,763	710	1,404	1,215	1,605	984	1,022
Other Countries	7,233	7,976	19,484	24,971	14,775	18,724	26,171
<b>Export in Total</b>	<b>186,754</b>	<b>194,373</b>	<b>203,392</b>	<b>214,997</b>	<b>225,048</b>	<b>233,069</b>	<b>237,395</b>
<p><sup>1)</sup> incl. other countries      <sup>2)</sup> incl. Mediterranean countries      2006 preliminary figures</p>							

Sources: IEA, Australian Coal Report, Joint Coal Board, Queensland Coal Board



Hard Coal Export of Indonesia								1,000 t
Importing Countries	2000	2001	2002	2003	2004	2005	2006	
Germany	150	400	400	405	492	132	1,509	
The Netherlands	1,630	2,100	1,500	1,881	1,106	2,139	3,704	
Italy	1,600	1,600	2,500	4,580	5,198	6,285	8,626	
Great Britain	40	0	0	531	1,080	1,302	1,822	
Ireland	320	300	400	0	0	602	609	
Denmark	-	-	200	8	0	0	-	
Spain	2,800	2,400	2,700	3,004	2,776	3,317	4,033	
Slovenia	-	-	-	-	623	634	1,562	
Other					1,106	770	2,835	
<b>EU-15 <sup>1)</sup>/since 2004 EU-25</b>	<b>6,540</b>	<b>7,500</b>	<b>9,000</b>	<b>10,409</b>	<b>12,381</b>	<b>15,181</b>	<b>24,700</b>	
USA	650	710	900	1,914	1,960	2,050	2,646	
Chile	1,000	1,000	1,000	271	839	1,368	1,733	
Japan	14,000	15,500	18,000	20,486	22,700	27,313	32,842	
Südkorea	5,000	6,000	7,000	7,857	11,741	14,377	20,780	
Hongkong	2,900	4,700	4,600	6,814	7,439	9,409	10,514	
Taiwan	13,700	14,500	14,500	15,798	17,769	17,896	24,397	
Malaysia	2,500	3,000	4,000	5,199	6,113	7,400	7,324	
Philippines	3,000	3,500	4,000	3,091	3,603	3,906	4,113	
Thailand	3,000	3,000	4,000	4,338	4,787	6,404	7,800	
India	3,500	4,000	5,000	7,846	10,674	16,255	19,822	
China	-	700	2,000	534	1,473	2,503	6,219	
Other countries	2,507	2,390	2,320	4,477	4,386	4,981	8,049	
<b>Export in Total</b>	<b>58,297</b>	<b>66,500</b>	<b>76,320</b>	<b>89,034</b>	<b>105,865</b>	<b>129,043</b>	<b>170,939</b>	

<sup>1)</sup> incl. other countries                      2006 preliminary figures

Sources: IEA, Coal Manual, Indonesian Coal & Power, International Coal Report, internal calculations

## Hard Coal Export of China

1,000 t

Importing Countries	2000	2001	2002	2003	2004	2005	2006
Germany	70	244	264	257	347	75	37
France	450	512	820	556	240	8	0
Belgium/Luxembourg	110	400	736	82	127	282	189
The Netherlands	145	100	368	240	313	141	245
Italy	385	324	201	380	185	0	0
Great Britain	100	391	68	84	172	54	34
Spain	145	0	71	319	0	332	292
Greece	-	0	0	0	136	0	0
<b>EU-15<sup>1)</sup>/since 2004 EU-25</b>	<b>1,405</b>	<b>1,971</b>	<b>2,528</b>	<b>1,918</b>	<b>1,520</b>	<b>892</b>	<b>760</b>
Japan	17,000	26,557	27,662	31,255	28,471	23,175	20,586
South Korea	23,000	29,380	25,387	29,722	24,798	21,206	18,779
Taiwan	11,000	15,753	14,249	16,040	19,855	16,230	13,258
Hongkong	2,300	3,494	2,964	2,118	1,123	944	855
India	1,900	3,401	2,323	2,363	3,084	3,855	5,001
Malaysia	240	368	389	102	65	46	36
Thailand	-	141	262	69	249	0	28
North Korea	170	420	258	468	407	147	576
Philippines	1,800	3,812	2,879	2,908	2,928	1,916	1,035
Brazil	-	1,990	1,989	2,489	548	278	191
Other countries	185	2,713	2,651	4,187	3,512	2,986	2,090
<b>Export in Total</b>	<b>59,000</b>	<b>90,000</b>	<b>83,541</b>	<b>93,639</b>	<b>86,560</b>	<b>71,675</b>	<b>63,232</b>

2006 preliminary figures

Sources: The McCloskey Group, Coal Americas

## Hard Coal Export of Russia

1,000 t

Importing Countries	2000	2001	2002	2003	2004	2005	2006
Germany	937	2,065	1,870	2,600	5,460	6,620	9,300
Belgium/Luxembourg	691	750	900	400	900	1,000	700
Italy	250	950	1,600	1,660	2,400	1,800	1,300
Great Britain	2,268	3,900	4,400	5,200	9,820	18,000	19,500
Spain	1,239	1,600	2,200	1,960	3,130	4,200	3,000
Finland	2,223	2,600	2,000	5,900	5,430	2,400	3,700
Poland					2300	2,500	2,700
							10100
<b>EU-15<sup>1)</sup>/since 2004 EU-25</b>	<b>7,700</b>	<b>12,000</b>	<b>14,000</b>	<b>21,100</b>	<b>32,000</b>	<b>37,000</b>	<b>50,300</b>
Turkey	6,195	4,000	4,000	5,000	6,500	7,000	6,500
Romania	1,596	1,400	1,500	1,700	2,500	3,000	1,700
Japan	5,651	5,700	6,300	7,600	9,280	10,700	11,000
South Korea	1,993	2,000	3,000	3,500	5,140	3,300	5,000
Taiwan	730	1,500	1,900	2,000	1,380	1,200	1,200
China	0	0	1,150	2,000	570	800	1,000
Other countries <sup>2)</sup>	735	6,400	8,150	6,500	2,830	5,200	100
<b>Export in Total<sup>3)</sup></b>	<b>24,600</b>	<b>33,000</b>	<b>40,000</b>	<b>49,400</b>	<b>60,200</b>	<b>68,200</b>	<b>76,800</b>

<sup>1)</sup> incl. other EU-countries  
<sup>2)</sup> 2001-2004 exports via Cyprus/Libanon; the quantities were partially exported in other not known countries  
<sup>3)</sup> only hard coal exports (seaborne trade) in countries outside of the former UdSSR  
2006 preliminary figures

Sources: Coal Information, internal calculations, partly estimates, The Federal Statistic Office of Germany

## Hard Coal Import of EU-Countries: Import and Green Border Trade 1,000 t

	2000	2001	2002	2003	2004	2005	2006
Germany	28,000	33,400	33,070	35,360	39,080	36,300	42,000
France	17,500	14,450	15,130	18,500	19,300	20,500	20,700
Italy	19,006	19,540	18,800	21,190	25,500	24,500	26,000
The Netherlands	18,400	16,000	13,300	13,800	14,000	13,000	12,000
Belgium	11,425	11,070	8,900	9,500	11,100	10,000	9,000
Luxembourg	177	220	125	150	150	150	150
Great Britain	21,752	35,540	28,700	31,490	36,110	43,800	49,000
Ireland	3,033	3,750	2,000	2,100	2,300	2,500	3,000
Denmark	6,413	6,950	7,000	9,030	7,120	5,200	7,000
Greece	691	660	1,300	850	800	700	800
Spain	21,600	18,940	24,500	21,480	24,300	24,700	27,000
Portugal	6,365	4,810	4,300	5,000	5,500	5,300	5,700
Finland	3,721	4,200	5,700	9,070	7,650	4,500	7,000
Austria	3,796	3,280	4,000	4,000	3,900	4,100	4,000
Sweden	3,121	2,990	2,800	3,000	3,000	2,700	3,000
Poland				2,000	2,000	2,000	4,000
Czech Republic				1,000	1,000	1,000	1,900
Hungary				600	600	500	1,500
Slovakia				6,500	6,000	5,600	5,000
Slovenia				500	500	500	600
Latvia				200	200	200	300
Lithuania				500	500	500	700
Estonia				500	500	500	100
Cyprus				-	-	-	-
Malta				-	-	-	-
<b>EU-15/since 2004 EU-25</b>	<b>165,000</b>	<b>175,800</b>	<b>169,625</b>	<b>196,320</b>	<b>211,110</b>	<b>208,750</b>	<b>230,450</b>
Thereof domestic trade (Poland and Czech Republic)						25,000	19,000
<b>Coke</b>	12,130	8,350	11,750	13,000	10,000	9,000	10,000
2006 preliminary figures							

Sources: McCloskey, internal calculations

### Coal Consumption in the EU-Countries in Million t

	Hard Coal		Therefrom Hard Coal Import <sup>1)</sup> in t=t		Lignite <sup>2)</sup>	
	2005	2006	2005	2006	2005	2006
Germany	64.0	66.0	36.3	42.0	178.0	176.3
France	20.5	20.7	20.5	20.7		
Italy	25.6	26.0	24.5	25.8		
The Netherlands	13.0	12.0	13.0	11.9		
Belgium	10.0	9.0	10.0	8.9		
Luxembourg	0.2	0.2	0.2	0.2		
Great Britain	63.8	68.0	43.8	49.0		
Ireland	2.5	3.0	2.5	2.9		
Denmark	5.5	8.5	5.2	8.4		
Greece	0.7	0.8	0.7	0.8	69.1	64.2
Spain	38.4	38.0	24.7	26.8	7.5	7.0
Portugal	5.3	5.7	5.3	5.7		
Finland	5.2	7.0	4.5	6.8		
Austria	4.1	4.0	4.1	4.0		
Sweden	2.7	2.4	2.7	2.4		
<b>EU-15</b>	<b>261.5</b>	<b>271.3</b>	<b>198.0</b>	<b>216.3</b>	<b>254.6</b>	<b>247.5</b>
Poland	79.0	82.0	2.0	4.0	61.9	61.3
Czech Republic	10.0	10.0	1.0	2.0	49.0	48.7
Hungary	0.5	1.5	0.5	1.5	9.6	9.6
Slovakia	5.6	5.0	5.6	4.9	2.5	2.1
Slovenia	0.5	0.0	0.5	0.0	4.6	4.6
Latvia	0.2	0.0	0.2	0.0		
Lithuania	0.0	0.0	0.5	0.0		
Estonia	3.0	0.0	0.5	0.0		
Cyprus						
Malta		1.8		1.8		
	<b>360.3</b>	<b>371.6</b>	<b>208.8</b>	<b>230.5</b>	<b>382.2</b>	<b>373.8</b>

<sup>1)</sup> Million t (without coke)      <sup>2)</sup> incl. Peat

Sources: Arbeitsgemeinschaft Energiebilanzen, internal calculations, estimations

## Primary Energy Consumption in Germany

Energy Resources	2000	2001	2002	2003	2004	2005	Mill. tce
							2006
Hard Coal	68.5	65.8	64.3	68.7	65.8	62.8	64.0
therefrom Import Coal	(30,5)	(36,5)	(35,7)	(37)	(40)	(37,8)	(42,5)
Lignite	52.8	55.6	56.6	55.9	56.2	54.5	53.7
Mineral Oil	187.7	190.3	183.2	180.2	177.9	175.8	176.2
Natural Gas	102.2	106.6	106.2	110.0	110.4	110.9	112.6
Nuclear Energy	63.1	63.7	61.4	61.5	62.2	60.7	62.3
Hydro and Wind Power	3.6	4.2	4.9	4.6	5.6	5.9	6.4
Foreign Trade Balance Electricity	0.4	0.3	0.1	-1.0	-0.9	-1.0	-2.4
Other Energy Resources	11.7	12.3	12.7	13.2	15.1	18.0	20.8
<b>Total</b>	<b>490.0</b>	<b>498.8</b>	<b>489.4</b>	<b>493.1</b>	<b>492.3</b>	<b>487.6</b>	<b>493.6</b>
Energy Resources	2000	2001	2002	2003	2004	2005	shares in %
Hard Coal	14.0	13.2	13.1	13.9	13.4	12.9	13.0
therefrom Import Coal	(6,2)	(7,3)	(7,3)	(7,5)	(8,1)	(7,8)	(8,6)
Lignite	10.8	11.1	11.6	11.3	11.4	11.2	10.9
Mineral Oil	38.3	38.2	37.4	36.6	36.2	36.1	35.7
Natural Gas	20.9	21.4	21.7	22.3	22.4	22.7	22.8
Nuclear Energy	12.9	12.8	12.6	12.5	12.6	12.4	12.6
Hydro and Wind Power	0.7	0.8	1.0	0.9	1.1	1.2	1.3
Foreign Trade Balance Electricity	0.0	0.1	0.0	-0.2	-0.2	-0.2	-0.5
Other Energy Resources	2.4	2.4	2.6	2.7	3.1	3.7	4.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

since 2000 preliminary

Sources: Arbeitsgemeinschaft Energiebilanzen, Statistisches Bundesamt, internal calculations

Coal Handling in German Ports								1,000 t
	2000	2001	2002	2003	2004	2005	2006	
<b>North Sea Ports</b>								
Hamburg	2,555	3,607	4,301	4,794	4,944	4,636	4,963	
Wedel - Schulau	730	944	707	700	700	600	871	
Bützfleth	7	21	27	43	12	19	13	
Wilhelmshaven	1,591	1,844	890	1,453	1,672	1,520	1,332	
Bremen	1,617	1,418	1,547	1,464	1,505	1,216	1,715	
Brunsbüttel	441	666	655	387	393	273	622	
Nordenham	554	1,867	1,703	1,439	2,058	1,915	2,129	
Papenburg	142	164	170	260	289	214	170	
Remaining North Sea Ports S.H.	67	70	62	67	126	37	70	
Remaining North Sea Ports N.S.	9	4	7	2	-	-	-	
<b>Total</b>	<b>7,713</b>	<b>10,605</b>	<b>10,069</b>	<b>10,609</b>	<b>11,699</b>	<b>10,430</b>	<b>11,885</b>	
<b>Baltic Sea Ports</b>								
Rostock	960	976	993	1,145	1,187	1,145	1,251	
Wismar	51	40	41	41	42	33	30	
Stralsund	6	4	2	2	1	3	0	
Lübeck	3	-	-	3	-	-	-	
Flensburg	262	399	261	358	343	325	275	
Kiel				113	418	402	193	
Remaining Baltic Sea Ports	4	4	4	7	4	2	3	
<b>Total</b>	<b>1,286</b>	<b>1,423</b>	<b>1,301</b>	<b>1,669</b>	<b>1,995</b>	<b>1,910</b>	<b>1,752</b>	
<b>Turnover in Total</b>	<b>8,999</b>	<b>12,028</b>	<b>11,370</b>	<b>12,278</b>	<b>13,694</b>	<b>12,340</b>	<b>13,637</b>	

Source: Statistisches Bundesamt

## Imports of Hard Coal, Coke and Briquettes to Germany

Countries	2003					2004				
	Steam Coal	Coking Coal	Anthracite	Coke	Total <sup>1)</sup>	Steam Coal	Coking Coal	Anthracite	Coke	Total <sup>1)</sup>
Poland	6,780	130	0	2,886	9,801	7,085	40	-	1,828	8,954
Czech Republic	865	0	0	448	1,313	469	-	-	384	857
Spain	-	-	-	515	515	-	-	-	416	416
France	-	-	-	161	161	-	-	-	449	449
<b>EU-15/since 2004 EU-25</b>	<b>7,645</b>	<b>130</b>	<b>0</b>	<b>4,010</b>	<b>11,790</b>	<b>7,554</b>	<b>40</b>	<b>0</b>	<b>3,077</b>	<b>10,676</b>
CIS	2,526	7	149	536	3,218	5,288	125	126	471	6,011
Norway	644	0	0	0	644	1,387	-	-	-	1,387
USA	381	900	2	-	1,283	778	763	-	-	1,541
Canada	0	1,290	0	5	1,295	73	2,050	-	-	2,123
Colombia	5,900	0	-	-	5,918	4,719	-	-	-	4,719
South Africa	8,950	12	0	0	8,962	9,860	16	-	-	9,876
Australia	1,934	3,070	18	-	5,022	440	3,915	2	-	4,357
China	178	7	79	1,218	1,482	239	-	108	1,472	1,819
Indonesia	405	0	0	0	405	814	-	-	24	838
Venezuela	131	0	0	0	131	16	-	-	-	16
Other Third Countries	719	70	177	71	1,050	336	347	72	130	888
<b>Third Countries</b>	<b>21,768</b>	<b>5,356</b>	<b>425</b>	<b>1,830</b>	<b>29,410</b>	<b>23,950</b>	<b>7,216</b>	<b>308</b>	<b>2,097</b>	<b>33,575</b>
<b>Total</b>	<b>29,413</b>	<b>5,486</b>	<b>425</b>	<b>5,840</b>	<b>41,200</b>	<b>31,504</b>	<b>7,256</b>	<b>308</b>	<b>5,174</b>	<b>44,251</b>

2006 preliminary figures

<sup>1)</sup> incl. briquettes

Sources: Statistisches Bundesamt, BAFA, internal calculations



1.000 t

2005					2006					Countries
Steam Coal	Coking Coal	Anthracite	Coke	Total <sup>1)</sup>	Steam Coal	Coking Coal	Anthracite	Coke	Total <sup>1)</sup>	
6,875	147	14	1,175	8,211	7,158	155	17	1,637	8,967	Poland
522			354	880	525		1	405	931	Czech Republic
			144	144				701	701	Spain
			207	207				279	279	France
7,397	147	14	1,880	9,442	7,683	155	18	3,022	10,878	<b>EU-15/since 2004 EU-25</b>
5,855	480	286	135	6,756	8,215	548	338	201	9,302	CIS
905	323			1,228	1,138	133			1,271	Norway
198	1,274			1,472	338	1,852			2,190	USA
	1,566			1,566	0	1,608			1,608	Canada
4,750	7			4,757	3,997				3,997	Colombia
8,230	5	4		8,239	8,505	161	2		8,668	South Africa
434	3,115			3,549	819	4,553		0	5,372	Australia
160		19	1,040	1,219	8	27	2	883	920	China
206				206	1,509				1,509	Indonesia
1				1	108				108	Venezuela
623	165	112	560	1,465	388	24	65	200	677	Remaining Third Countries
21,362	6,935	421	1,735	30,458	25,025	8,906	407	1,284	35,622	<b>Third Countries</b>
<b>28,759</b>	<b>7,082</b>	<b>435</b>	<b>3,615</b>	<b>39,900</b>	<b>32,708</b>	<b>9,061</b>	<b>425</b>	<b>4,306</b>	<b>46,500</b>	<b>Total*</b>

\* Due to changes in stock the imports are higher than the consumption – 45 million t (=42.6 million tce)

<b>Hard Coal Sales in Germany</b>								1,000 t
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	
<b>Total Sales<sup>1)</sup> in Hard Coal, Coke and Briquettes</b>								
Power Stations	51,903	52,522	49,630	51,618	55,319	53,100	50,800	
Iron and Steel Industry	15,786	14,634	14,666	14,588	14,836	13,500	17,100	
Heating Market/Other <sup>2)</sup>	3,735	3,605	2,954	2,155	1,882	1,600	1,600	
<b>Total</b>	<b>71,424</b>	<b>70,761</b>	<b>67,250</b>	<b>68,361</b>	<b>72,037</b>	<b>68,200</b>	<b>69,500</b>	
<sup>1)</sup> Domestic Sales <sup>2)</sup> incl. Consumption of Mines, Benefits <i>Sources: Statistik der Kohlenwirtschaft, internal calculations</i>								
<b>Therefrom Import Coal</b>								
Power Stations <sup>3)</sup>	21,544	26,647	26,100	27,900	30,900	28,600	30,400	
Iron and Steel Industry	9,700	10,100	10,300	11,300	11,600	9,900	13,400	
Heating Market	2,616	2,715	2,767	2,000	1,800	1,400	1,200	
<b>Total Imports</b>	<b>33,860</b>	<b>39,462</b>	<b>39,167</b>	<b>41,200</b>	<b>44,300</b>	<b>39,900</b>	<b>45,000</b>	
<sup>3)</sup> Imports of power plants accord. to K-Bogen (BAFA, Referat 431), own calculations								

*Sources: BAFA, Statistik der Kohlenwirtschaft, internal calculations/partly estimations*

## Consumption, Import/Export and Power Generation in Germany

	2000	2001	2002	2003	2004	2005	2006
<b>Gross Electricity Consumption</b> in billion kWh	578.1	584.8	587.4	599.5	608.6	610.5	615.8
<b>Electricity Foreign Trade</b> in billion kWh							
Exports	42.1	44.8	45.5	53.8	51.5	61.9	66.0
Imports	45.1	43.5	46.2	45.8	44.2	53.4	46.0
Balance	3.0	-1.3	0.7	-8.0	-7.3	-8.5	-20.0
<b>Gross Electricity Generation</b> in billion kWh	575.1	586.1	586.7	607.5	616.0	619.0	635.8
<b>Utilization of Energy Resources for Power Generation</b> in million tce							
Hard Coal therefrom Import Coal <sup>1)</sup>	43.3 (19,0)	42.0 (23,6)	40.9 (23,0)	44.3 (24,6)	42.5 (26,2)	42.0 (25,7)	42.6 (26,1)
Lignite	48.4	51.4	52.7	52.5	52.4	51.5	50.8
Natural Gas	13.3	13.6	13.8	14.0	14.0	15.9	16.5
Fuel Oil	2.2	2.4	2.2	2.5	2.4	2.7	2.5
Nuclear Energy	63.1	63.7	61.3	61.5	62.2	60.8	62.5
Hydro / Wind Power	5.1	5.0	5.7	5.4	6.6	6.8	7.3
Other	6.6	6.2	6.4	6.5	8.4	10.3	12.2
<b>Total</b>	<b>182.0</b>	<b>184.3</b>	<b>183.0</b>	<b>186.7</b>	<b>188.5</b>	<b>190.0</b>	<b>194.4</b>
<sup>1)</sup> Sales to power stations							

Sources: VDEW, Statistik der Kohlenwirtschaft, BAFA, AG Energiebilanzen, DIW, own calculations

## European/International Price Quotations

	2000	2001	2002	2003	2004	2005	2006	
<b>Crude Oil Prices</b>								
USD/Barrel Brent	28.40	24.40	25.00	29.00	38.00	55.00	65.16	
USD/t SKE	146.00	125.00	128.00	150.00	195.00	283.00	335.00	
<i>Source: MWV</i>								
<b>Natural Gas Prices: Free German Border</b>								
€/tce	93.00	123.00	105.00	111.00	105.00	142.00	191.00	
<i>Source: Statistik der Kohlenwirtschaft</i>								
<b>Steam Coal Marker Prices 1 %S, CIF NW Europa</b>								
USD/t SKE	42.00	46.00	37.00	50.00	83.90	71.25	74.41	
€/tce	45.50	51.50	39.10	44.20	67.44	57.27	59.23	
<i>Source: McCloskey</i>								
<b>Sea Freight Rates Capesize Units - Port of Destination ARA ( Amsterdam, Rotterdam, Antwerp)</b>								
South Africa	USD/t	9.70	6.70	6.50	14.60	20.60	15.75	15.94
USA/East Coast	USD/t	7.30	5.40	5.30	11.90	19.60	16.60	14.87
Australia/NSW	USD/t	14.50	10.50	9.50	20.50	31.00	24.00	24.07
Colombiaen	USD/t	7.30	5.30	5.40	12.10	20.10	16.10	14.89
<i>Sources: Frachtcontor Junge, internal calculations</i>								
<b>EU: Price Development for Imported Hard Coal from non-EEC Countries</b>								
					2004	2005	1. HY 2006	
					EU-15	EU-25	EU-25	
Steam Coal €/tce	41.00	52.00	45.50	39.80	56.20	55.98	61.86	59.56
Coking Coal €/t	51.00	60.00	59.00	53.50	61.66	61.20	91.03	105.34
<p>Steam Coal: Utilization in power plants; weighted average of cross border price in the EU-countries            Coking Coal: Indicative CIF-price, own calculations for determination of the annual values.</p>								
<i>Source: EU-commission</i>								

## Germany - Energy Prices/Exchange Rates

	2000	2001	2002	2003	2004	2005	2006
<b>Exchange Rates</b>							
EUR0 /1 USD	1.0827	1.1166	1.0575	0.8840	0.8039	0.8038	0.7965
<i>Source: Deutsche Bundesbank</i>							
<b>Cross Border Price for Coking Coal and Coke - €/t</b>							
Imported Coking Coal	46.74	54.53	59.49	56.47	63.50	95.25	105.88
Imported Coke	77.91	91.42	87.32	102.15	214.35	230.30	166.79
<i>Sources: Coking Coal - 2002 BAFA, Referat 432; since 2003 Statistisches Bundesamt Coke: Statistisches Bundesamt</i>							
<b>Cross Border Price for Steam Coal in €/tce: Utilization in Power Plants</b>							
		1. quarter	2. quarter	3. quarter	4. quarter	Annual Value	
2000		36.90	39.22	43.13	47.76	42.08	
2001		50.17	54.08	55.26	53.47	53.18	
2002		50.76	47.33	40.31	39.41	44.57	
2003		38.42	37.83	40.43	42.27	39.87	
2004		48.68	55.44	58.76	61.81	55.36	
2005		64.81	64.01	65.59	65.80	65.02	
2006		63.03	61.61	59.75	62.54	61.76	
<i>Source: BAFA Referat 431 (cross border prices=cif price ARA + freight German border)</i>							
<b>Energy Prices free power station €/tce</b>							
	2000	2001	2002	2003	2004	2005	2006
<b>Sources of Energy</b>							
Natural Gas	129.00	159.00	151.00	167.00	176.00	206.00	231.00
Heating Oil, Heavy	125.00	108.00	115.00	124.00	117.00	166.00	203.00
Steam Coal	47.00	58.00	50.00	45.00	60.00	70.00	67.00
<i>Sources: BAFA, Statistik der Kohlenwirtschaft, own calculations, natural gas 2006 preliminary</i>							

## Hard Coal Market in Germany

### Quantities and Prices 1957 - 2006

Quantities								Prices							
Imports of Hard Coal, Coke and Briquettes t=t				Domestic Mining <sup>1)</sup> of Hard Coal t v.F.				Steam Coal from non-EEC Countries <sup>2)</sup>				Domestic Industry Coal <sup>3)</sup>			
Year	Mill. t	Year	Mill. t	Year	Mill. t	Year	Mill. t	Year	€/tce <sup>4)</sup>	Year	€/tce	Year	€/tce	Year	€/tce
1957	18.9	1982	11.5	1957	149.4	1982	88.4	1957	40	1982	86	1957	29	1982	121
1958	13.9	1983	9.8	1958	148.8	1983	81.7	1958	37	1983	75	1958	29	1983	125
1959	7.5	1984	9.6	1959	141.7	1984	78.9	1959	34	1984	72	1959	29	1984	130
1960	7.3	1985	10.7	1960	142.3	1985	81.8	1960	33	1985	81	1960	29	1985	130
1961	7.3	1986	10.9	1961	142.7	1986	80.3	1961	31	1986	60	1961	29	1986	130
1962	8.0	1987	8.8	1962	141.1	1987	75.8	1962	30	1987	46	1962	30	1987	132
1963	8.7	1988	8.1	1963	142.1	1988	72.9	1963	30	1988	42	1963	30	1988	134
1964	7.7	1989	7.3	1964	142.2	1989	71.0	1964	30	1989	49	1964	31	1989	137
1965	8.0	1990	11.7	1965	135.1	1990	69.8	1965	29	1990	49	1965	32	1990	138
1966	7.5	1991	16.8	1966	126.0	1991	66.1	1966	29	1991	46	1966	32	1991	139
1967	7.4	1992	17.3	1967	112.0	1992	65.5	1967	29	1992	42	1967	32	1992	147
1968	6.2	1993	15.2	1968	112.0	1993	57.9	1968	28	1993	37	1968	30	1993	148
1969	7.5	1994	18.1	1969	111.6	1994	52.0	1969	27	1994	36	1969	31	1994	149
1970	9.7	1995	17.7	1970	111.3	1995	53.1	1970	31	1995	39	1970	37	1995	149
1971	7.8	1996	20.3	1971	110.8	1996	47.9	1971	32	1996	38	1971	41	1996	149
1972	7.9	1997	24.3	1972	102.5	1997	45.8	1972	31	1997	42	1972	43	1997	149
1973	8.4	1998	30.2	1973	97.3	1998	40.7	1973	31	1998	37	1973	46	1998	149
1974	7.1	1999	30.3	1974	94.9	1999	39.2	1974	42	1999	34	1974	56	1999	149
1975	7.5	2000	33.9	1975	92.4	2000	33.3	1975	42	2000	42	1975	67	2000	149
1976	7.2	2001	39.5	1976	89.3	2001	27.1	1976	46	2001	53	1976	76	2001	149
1977	7.3	2002	39.2	1977	84.5	2002	26.1	1977	43	2002	45	1977	76	2002	160
1978	7.5	2003	41.3	1978	83.5	2003	25.7	1978	43	2003	40	1978	84	2003	160
1979	8.9	2004	44.3	1979	85.8	2004	25.7	1979	46	2004	55	1979	87	2004	160
1980	10.2	2005	39.9	1980	86.6	2005	24.7	1980	56	2005	65	1980	100	2005	160
1981	11.3	2006	46.5	1981	87.9	2006	20.7	1981	84	2006	62	1981	113	2006	170

2006 preliminary figures; since 1991 incl. new federal states, €-values are rounded

<sup>1)</sup> Excl. small mines

<sup>2)</sup> Price free German border (BAFA Ref. 432), since 1996: BAFA Ref. 431

<sup>3)</sup> Estimated cost-covering price

<sup>4)</sup> Cross border value 1957 - 1973 in € / t=t

Sources: Statistisches Bundesamt, Statistik der Kohlenwirtschaft, BAFA, RAG, own calculations

## Glossar

<b>ARA</b>	Amsterdam-Rotterdam-Antwerp	<b>IISI</b>	International Iron and Steel Institute
<b>BAFA</b>	Bundesamt für Wirtschaft und Ausfuhrkontrolle	<b>HS</b>	fuel oil heavy
<b>BEE</b>	Black Economic Empowerment	<b>kWh</b>	kilowatt hour
<b>capsize</b>	definition for bulk-carrier > 150,000 DWT	<b>LNG</b>	liquefied natural gas
<b>CHP</b>	combined heat and power	<b>NAR</b>	coal trade: net as received
<b>cif</b>	INCOTERM: cost-insurance-freight	<b>mt</b>	metric ton
<b>CIS</b>	formerly Soviet Union	<b>Panamax</b>	definition for bulk-carrier 50,000 - 90,000 DWT
<b>DIW</b>	Deutsches Institut für Wirtschaftsforschung	<b>PCI-coal</b>	metallurgical area: pulverized coal injection
<b>ECE</b>	Economic Commission for Europe	<b>sintering coal</b>	low-volatile coal, used in sintering plants
<b>EEG</b>	Erneuerbare-Energien-Gesetz	<b>spotmarkt</b>	short-term market
<b>EEX</b>	Energy Exchange, Leipzig	<b>st</b>	short ton
<b>fob</b>	INCOTERM: free on bord	<b>t</b>	ton
<b>GVSt</b>	Gesamtverband Steinkohle	<b>t/a</b>	ton per annum
<b>IEA</b>	International Energy Agency	<b>VDEW</b>	Verband der Elektrizitätswirtschaft
		<b>VDN</b>	Verband der Netzbetreiber
		<b>WCI</b>	World Coal Institute

## Institutionen / Links

### **AGEB (Arbeitsgemeinschaft Energiebilanzen)**

[www.ag-energiebilanzen.de](http://www.ag-energiebilanzen.de)

### **American Coal Council**

[www.americancoalcouncil.org](http://www.americancoalcouncil.org)

### **Australian Bureau of Agriculture and Resource Economics**

[www.abareconomic.com](http://www.abareconomic.com)

### **Australian Coal Association**

[www.australiancoal.com](http://www.australiancoal.com)

### **Australian Institute of Energy**

[www.aie.org.au](http://www.aie.org.au)

### **Chamber of Mines of South Africa**

[www.bullion.org.za](http://www.bullion.org.za)

### **Coal International**

[www.coalinternational.co.uk](http://www.coalinternational.co.uk)

### **DEBRIV (Bundesverband Braunkohle)**

[www.braunkohle.de](http://www.braunkohle.de)

### **EIA (Energy Information Administration)**

[www.eia.doe.gov](http://www.eia.doe.gov)

### **Euracoal**

[www.euracoal.org](http://www.euracoal.org)

### **GVSt**

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[www.iea.org](http://www.iea.org)

### **National Mining Association**

[www.infomine.com](http://www.infomine.com)

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<b>Imperial Reederei GmbH</b> Dr.-Hammacher-Str. 49, 47119 Duisburg	(0203)	5794-0	5794-229	www.imperial-reederei.de
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<b>L.B.H. Group International Agencies and Services B.V.</b> Rijsdijk 13, 3161 HK Rhooen, Nederlande	(0031(0) 10)	5065000	5013400	www.lbh.nl
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Holger Eichentopf

SSM Coal & Coke GmbH, Duisburg

Bert Lagendijk

L.B.H. Group, NL - Rhooen

Management:

Dr. Wolfgang Ritschel

---

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**Verein der Kohlenimporteure e.V.**

20095 Hamburg, Ferdinandstraße 35

Phone: +49 (0) 40 32 74 84

Fax: +49 (0) 40 32 67 72

e-mail: Verein-Kohlenimporteure@t-online.de

**Internet: [www.verein-kohlenimporteure.de](http://www.verein-kohlenimporteure.de)**

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