



EURACOAL Market Report 2/2011

December 2011

WORLD MARKET

The tables in the present Market Report reflect the confirmed figures for the first six months of 2011, whilst the texts give some estimates for the first nine months.

According to first estimates, global coal trade increased in the first three quarters of 2011 compared with the same period in 2010 by some 3%, totalling about 650-670 Mt. A number of events early in the year caused shocks in the market resulting in some high and volatile prices, but as the year progressed, demand has slackened and supply has stabilised. Stocks in Europe are healthy; therefore, Europe will be able to cope even with an extremely cold winter if necessary. China as well filled up its stocks in the southern ports.

WORLD COAL TRADE

	2011 (1-6)	2010 (1-6)	Difference
Mt=t			
Steam coal	310	321	- 11
Coking coal	108	121	- 13
Total	418	442	- 24

STEAM COAL

Global seaborne steam coal trade in the first nine months of 2011 is estimated at 490 Mt (+ 42 Mt). Major export increases were observed from Australia (+ 19 Mt) and Indonesia (+ 15 Mt) on the Pacific market and from the USA (+ 11 Mt) on the Atlantic market. It is to be noted that Australian steam coal is mainly not extracted in the north and is therefore not supplied via Queensland, which was most affected by the floods. Australian and Indonesian steam coal are almost entirely being shipped to Asian markets, with Indonesia acting also as swing-supplier for India where its sub-bituminous coals are especially in demand. US coal on the Atlantic market is mainly shipped to Europe, partly replacing South African coal which is increasingly moving eastwards.

In the first half of 2011 Chinese imports were down in response to high prices, and Japanese imports were badly affected by the earthquake and tsunami. The disaster affected six coal-fired power stations and imports will be down by several million tonnes this year. However, there is continuing growth in India and Korea, and China plays the market dependent on prices not remaining too high. Europe is also increasing imports in 2011 with the UK returning to the market after drawing down stocks last year and Germany seeing increased demand as a result of reduced nuclear generation.

COKING COAL

Global seaborne coking coal trade in the first nine months of 2011 is estimated at 160 Mt with Australia having exported 14 Mt less due to the floods in Queensland. Ports and railway still have not fully recovered from the floods. The USA increased its exports by 7 Mt, going mainly to Europe and especially Germany, where the steel industry is again demanding more coking coal. Total coking coal trade fell by some 5 Mt in the first three quarters 2011.

HARD COAL PRICES

Steam coal prices peaked at the beginning of 2011 first with winter demand in Europe and then with the Australian floods. Prices fell back once it was realised that the effect of the floods was more acute on coking than on steam coal, where there are more alternative suppliers. Prices again moved up on initial news of the Japanese earthquake and tsunami. Once it was realised that Japanese coal demand was also affected because of damage to coal power stations and unloading facilities, Asian prices fell back. European prices, however, remained strong because of German nuclear stations being taken off line and a tighter liquefied natural gas market, where supplies were being diverted to Japan.

The general weakness of the Atlantic market vis-à-vis the Pacific was illustrated by the fact that fob spot prices from Newcastle (Australia) were higher than prices delivered to North West Europe again early in 2011 following the floods in Australia but then reversed after the Japanese earthquake and tsunami. In the last quarter of 2011 prices have fallen back in both the Asian and Atlantic markets; slacker demand in Europe and India has sent the market into oversupply, and buyers have been holding back in the hope of still lower prices.

For many years, pricing for coking coal was largely determined in annual contract negotiations and has been strongly influenced by the resulting benchmark prices which emerged during the annual negotiating round. From 2010 this practice changed, with the major suppliers leading a move to quarterly price settlements from April 2010. At the same time, with an increasing spot market in coking coal, monthly price indices are now quoted.

The impact of the Australian floods in early 2011 was felt most keenly in coking prices because of Australian dominance of the sector, with spot prices for prime coking coal in early 2011 reaching levels of around \$325/tonne. Since then, there has been

significant softening in prices with spot levels of around \$240/tonne towards the end of the year.

Average hard coking coal contract prices

	US\$/tonne fob
2005/06	125
2006/07	115
2007/08	95
2008/09	300
2009/10	130
April – June 2010	200
July-September 2010	225
October – December 2010	209
January – March 2011	225
April – June 2011	280-300

Source: VDKI
Source quarterly prices: Merrill Lynch

Coke prices from China still remain at around 500 US\$/t, at historic peaks, but there are currently very few sales.

FREIGHT RATES

For the time being freight rates remain low, trading in a relatively narrow range around \$10.00 per tonne for the South Africa to Rotterdam route. Vessel supply has continued to expand, with the dry bulk fleet expected to grow by around 13% in 2011.

EUROPEAN MARKET

	2011 (1-6)	2010 (1-6)
	Mt = t	Mt = t
Domestic hard coal production	64.9	59.7
Hard coal imports**	91.4	84.0
Lignite production	210.1	197.5
Total	366.4	341.2

** including coke

HARD COAL

	2011 (1-6)	2010 (1-6)
	Mt = t	Mt = t
Bulgaria	1.2	1.0
Czech Republic	5.9	5.6
Germany	6.3	6.8
Poland	37.4	32.4
Romania	1.1	1.1
Spain	3.5	4.5
United Kingdom	9.5	8.3
Total	64.9	59.7

German hard coal consumption January-September 2011 reached 42.3 Mtce against 42.1 Mtce for the same period in 2010. Whilst the consumption at power stations decreased by 1.8%, coal use by the steel industry increased by 4.7% and the heat market consumed 9.1% more coal. The gross electricity production of public utilities reached 76.7 TWh for the first three quarters 2011 (-0.4%) and gross electricity production of industrial plants decreased by 20%.

There are currently 5 hard coal mines still in operation that produced 9.4 Mtce during the first three quarters of 2011 (-7.8%). Imports slightly increased by 0.3% reaching 33.6 Mtce and exports remained stable at 0.2 Mtce. The total number of employees decreased as planned by 13.2% representing 21,788 employees at the end of September 2011.

Germany is estimated to import some 45-48 Mt of hard coal for the entire year 2011. For the first time Germany, which always exported its electricity surplus, had to import electricity. The mine closures and the phasing-out of nuclear could even increase Germany's import dependence. Steam coal imports could therefore rise especially during the winter months, when France won't have any surplus electricity to export. Germany further intends to import electricity from the new nuclear power plant which is being built in the Czech Republic.

In **Poland**, hard coal production in the first three quarters of 2011 reached 56 Mt, representing a slight decrease of some 0.5 Mt compared to the same period in 2010. Steam coal production compared to the same period in 2010 decreased by 0.06 %, totalling 47.5 Mt whilst coking coal production decreased by 2.4 %, totalling 8.5 Mt. Total hard coal stocks at the end of September 2011 were 1.8 Mt, which is a decrease of more than 3 Mt compared to the same period in 2010.

Domestic coal sales experienced an increase of 13.1% whilst exports to the EU and beyond dropped by 48.5%. Some 1.8 Mt were sold to Germany.

In the **United Kingdom** production in the first eight months of 2011 went up by 7.3%, imports increased by about 20%. Demand did not significantly change but there was a stock change to observe: power generators started to stock up their coal reserves

again. Even though the demand for coal from power generators decreased by 1%, the total share of coal increased in the market from 27% to 29%. Due to high gas prices, the share of gas decreased from 50% to 41%. Gas nevertheless remains the first choice fuel for power generation in the UK. The share of renewables increased by 3%.

The Government proposed a reform of the electricity market in July 2011 to promote investment in low carbon generation: an emissions performance standard (EPS) will become mandatory for new power plants (which will prevent coal without CCS but not unabated gas), there will be capacity payments to ensure back up generation for intermittent renewables. Feed in tariffs will support low carbon technologies and the carbon floor price will be a way to maintain a high carbon price. The intermediate targeted price will be of £30/t CO₂ in 2020 and the targeted price in 2030 shall reach £70/t CO₂. These measures would inevitably stop all future coal-fired power plant constructions except those with CCS.

The first CCS project in the UK at Longannet had been cancelled, but Government was still committed to four projects. On the other hand consumer organisations start to voice their concerns about rising power prices due to the growing share of renewables.

Italy will increase its coal imports in 2011 by some 7%, importing about 17 Mt of steam coal and 7 Mt of coking coal and PCI. After Italian voters rejected a return to nuclear through a referendum earlier this year, the Italian steam coal market is expected to grow over the years to come.

As Italy currently depends on gas for electricity generation (more than 60%) and because renewables are still too expensive, coal should become the fuel for the near future to boost Italy's power generation and to contribute to the country's security of power supply. This is also being observed in the diverse coal-fired power plant projects which aim at reaching maximum efficiency, using most modern technologies and CCS.

The **Netherlands** imported some 1.7 Mt of steam coal and 4.3 Mt of coking coal in the first half of 2011, keeping imports at a stable level. The C.GEN projects are still in the permitting process, the Killingholme project should nevertheless be accelerated. All other power generators seem to slow down their intentions and projects to invest into CCS.

The **Belgian** Ministry of Economy finally confirmed 2009 figures. It is therefore not anymore possible to rely on the Ministry's sources. For 2011 estimates for coal burn at the two remaining coal-fired power plants reach some 1.5 Mt. The steel industry encountered major problems in the Liège area where the last blast furnace was closed recently. The coking plant nevertheless remains in operation and shows rather good results. In total some 0.7-0.8 Mt of coking coal will be used in Liège and some 1.8 in Ghent. This shows a total coal use of some 4 Mt, against about 2 Mt indicated by the Ministry. Even if the figures given by the private sector are not approved by

the Belgian Ministry, they seem give a more realistic picture than the figures used up to now.

In **Spain**, total coal output in 2010 reached 8.4 Mt, of which almost 6 Mt was hard coal, mined in Asturias, Castilla y Leon, Ciudad Real and Cordoba and 2.4 Mt was back lignite from Aragon. Coal production decreased significantly, even though domestic coal prices at certain times fell below international coal prices.

In addition, electricity demand fell and output from many power stations that consume a mix of domestic and imported coal was displaced by cheaper gas (CCGT), which led to domestic coal supply cancellations by the power generators. Much renewables capacity, especially wind farms, has been constructed over the last years and its highly subsidised output will also displace conventional generation.

As already reported in previous meetings, the Spanish government adopted a Royal Decree that introduces a public service obligation in the Spanish electricity pool to boost indigenous coal consumption. On 10 January 2011, a hearing took place in the ECJ and the resolution by the President of the Court was in favour of the European Commission's decision, the Spanish government and Carbuni3n. Nevertheless, implementation of the Royal Decree is running slowly.

LIGNITE

	2011 (1-6)	2010 (1-6)
	Mt = t	Mt = t
Bulgaria	16.2	11.7
Czech Republic	23.2	21.4
Germany	87.0	85.4
Greece	27.9	28.0
Hungary	4.7	4.5
Poland	30.2	27.8
Romania	15.9	13.7
Slovak Republic	2.5	2.5
Slovenia	2.5	2.5
Total	210.1	197.5

In **Germany**, the slightly better economic development could not compensate the effects of the mild weather, which is why the energy consumption decreased by approx 4% during the first nine months of 2011, according to AGEB (Arbeitsgemeinschaft Energiebilanzen), compared to last year. In total by the end of September, approx. 10 240 PJ i.e. 349 Mtce were utilised.

In line with this trend, mineral oil consumption decreased by some 3%. Deliveries of light heating oil, down by about 18 %, were the major influence on this trend. The AGEB assumes that many consumers of heating oil covered their needs with their reserves because of high prices, reserves that will only be rebuilt in the course of the year. Consumption of natural gas decreased in all consuming sectors, reaching in total minus 9%. Due to the phasing-out decision for nuclear power plants, nuclear plants decreased power production by almost 21%. Hydro-electric power generation (without pump storage) decreased by 3%, whilst wind generation increased by about 16%, photovoltaic by nearly 60 %.

Lignite consumption increased over the previous year (2.7 %), because deliveries to public power stations were higher. The production of lignite products benefitted from the good competitive situation and the upward economic trend. Lignite extraction for the entire year 2011 is expected to reach 175 Mt against 169 Mt in 2010. Deliveries to power plants are expected to reach 160 Mt, representing 92% of the total output generating 610 bn kWh.

In the **Czech Republic** total hard coal production for the first three quarters reached 8.7 Mt. Coking coal production went down by 15% whilst steam coal production increased by 35%. Brown coal and lignite production reached 34 Mt (+7%).

The Government is currently working on a new energy policy, which will be pro-nuclear. The new blocks at CEZ's nuclear power plant Temelin will therefore certainly be completed. The electricity will mainly be exported to southern Germany. There is no reliable information up to now regarding coal use in the new energy scenario.

In **Bulgaria**, coal is the only indigenous energy source but at the same time also the major source of GHG emissions in the country. Environmental restrictions will therefore be applied in future to coal mining and utilisation activities. Mini Maritsa Iztok EAD and the private company Vagledobiv Bobov Dol EOOD, which produced 1 Mt in 2010, have to make tremendous efforts to keep coal production stable. As an example of these restrictions, one unit of the Bobov Dol thermal plant will have to be closed at the end of 2011, which will have a negative impact on mining. Nevertheless, in the first four months of 2011, Mini Maritsa Iztok EAD should extract 10.1 Mt of lignite, which is almost 2.6 Mt more than in the same period last year.

In its 2011 investment programme, Mini Maritsa Iztok EAD aims to replace some heavy mining equipment. Furthermore, the company has to build new reloading points in order to ensure the supply of lignite to the newly-constructed 670-MW power plant AES Galabovo and to Brikel EAD, as well as to Maritsa East 2 TPP EAD. In June 2011, Bulgaria adopted a new Energy Strategy to 2020 which aims at developing a high-tech, secure and reliable energy system for Bulgaria, respecting security of supply and competitiveness, but also economic growth and environmental aspects.

In **Greece** energy production in the interconnected system (excluding the islands which are not connected to the peninsula) increased to 51.4 TWh, compared with 47.9 TWh in 2009. The energy mix for power generation looks as follows: lignite still accounts for 57.3%, natural gas for 21.6% against 15.6% hydro and some 5% wind, oil, biomass and others. Lignite production in 2010 dramatically decreased compared to 2009, but is expected to recover in 2011, to reach some 60 Mt. The future of lignite mining and utilisation for power generation depends on the emissions targets set by the Greek government. Lignite-fired power plant operators will not be able to afford CO₂ certificates and will probably be forced to shut down some units, or dramatically increase electricity prices, which would not be acceptable to consumers.

World Market Price evolution (Coal, Coke, Freight, Crude Oil)
MCIS Steam Coal Marker Price (7000kcal/kg)

		Jan	Feb	March	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
cif-NW Europe													
Steam Coal	2010	109.90	91.23	86.80	87.97	105.79	106.00	108.87	110.53	106.61	112.09	122.96	137.12
(US\$ / tce)	2011	150.28	142.50	140.78	147.96	148.00	142.30	142.45	147.21				
Steam Coal													
	2010	77.01	66.66	60.82	65.62	84.19	86.82	85.26	85.73	81.59	80.65	90.01	103.72
(EUR / tce)	2011	112.48	104.41	100.56	102.45	103.14	98.90	99.87	102.63				

Source: VDKI, Mc Closkey

fob-China
Coke (12.5%)

USD / t	2010	395	418	435	459	499	481	392	441	434.5	438.5	465	475
	2011	545	560	537	521	520	516	495					

Source: China Coal Report

Freight Rates (USD /t)

R Bay/Rotterdam	2010	14.24	12.20	12.28	12.41	14.78	13.36	8.60	10.24	11.84	14.19	13.40	11.11
(Capesize)	2011	9.25	8.71	9.38	9.61	9.79	10.79	10.03	10.04				
Newcastle/Rotterdam	2010	24.53	21.91	22.39	22.23	26.26	25.24	15.20	17.59	21.54	25.18	23.53	19.48
(Capesize)	2011	16.56	15.95	17.98	17.49	17.18	17.84	18.05	18.58				
Bolivar/Rotterdam	2010	15.78	14.61	14.66	13.54	18.74	16.03	9.79	12.94	14.71	17.66	15.38	12.81
(Capesize)	2011	9.19	8.54	10.13	10.17	9.60	10.91	11.10	11.72				

Source: VDKI, Frachtcontor Junge & Co.

Currency Rates

EUR/USD	2010	0.70	0.73	0.74	0.75	0.80	0.82	0.78	0.78	0.77	0.72	0.73	0.76
	2011	0.75	0.73	0.71	0.69	0.70	0.70	0.70	0.70				
ZAR/USD	2010	7.46	7.67	7.41	7.36	7.65	7.65	7.55	7.30	7.14	6.92	6.98	6.82
	2011	6.93	7.19	6.92	6.73	6.86	6.80	6.80	7.08				
AUD/USD	2010	1.09	1.13	1.10	1.08	1.15	1.17	1.14	1.11	1.07	1.02	1.01	1.01
	2011	1.01	0.99	0.99	0.95	0.94	0.94	0.93	0.95				

Source: Exchange rates download center

Crude Oil (USD/Barrel)

Crude Oil	2010	76.01	72.99	77.21	82.33	74.48	72.95	72.51	74.15	74.63	79.86	82.83	88.56
	2011	92.83	100.29	109.84	118.09	109.94	109.04	111.62	106.32				

Source: OPEC Basket Prices

WORLD SEABORNE COAL TRADE - STEAM COAL			
Exporting Countries	2011 (1-6) Mt	2010 (1-6) Mt	Diff. 2010/11 Mt
PACIFIC			
Australia	67	64	3
China	6	10	-4
Indonesia	93	103	-10
Vietnam	9	12	-3
Others	0	10	-10
SUB-TOTAL	175	199	-24
ATLANTIC			
Colombia	37	34	3
Russia	47	40	7
South Africa	30	32	-2
Venezuela	2	2	0
USA	15	6	9
Others	4	8	-4
SUB-TOTAL	135	122	13
TOTAL	310	321	-11
incl. Anthracite and PCI-Coal			
Source: VDKI, preliminary figures			

WORLD SEABORNE COAL TRADE - COKING COAL			(inc. PCI-Coal)
Exporting Countries	2011 (1-6) Mt	2010 (1-6) Mt	Diff. 2010/11 Mt
Australia	60	77	- 17
Canada	13	13	0
China	3	1	2
Russia	3	4	- 1
USA	29	26	3
Mongolia	0	0	0
TOTAL	108	121	- 13
Source: VDKI provis. Figures			

EU CRUDE STEEL PRODUCTION			
COUNTRY	2011 (1-6) Mt	2010 (1-6) Mt	Difference 2009/10 Mt
Austria	3.9	3.5	0.4
Belgium	4.5	4.1	0.4
Bulgaria	0.5	0.4	0.1
Czech Republic	2.9	2.7	0.2
Finland	2.2	1.9	0.3
France	8.1	8.2	- 0.1
Germany	23.2	22.7	0.5
Greece	1.0	0.9	0.1
Hungary	0.8	0.8	0
Italy	14.8	13.5	1.3
Luxembourg	1.4	1.4	0
Netherlands	3.5	3.1	0.4
Poland	4.3	4.1	0.2
Romania	1.9	1.7	0.2
Slovakia	2.3	2.4	- 0.1
Slovenia	0.3	0.3	0
Spain	8.8	8.9	0.1
Sweden	2.8	2.5	0.3
United Kingdom	5.0	5.1	- 0.1
Others	1.0	1.0	0
EU-27	93.2	89.2	4.4
Source: IISI			

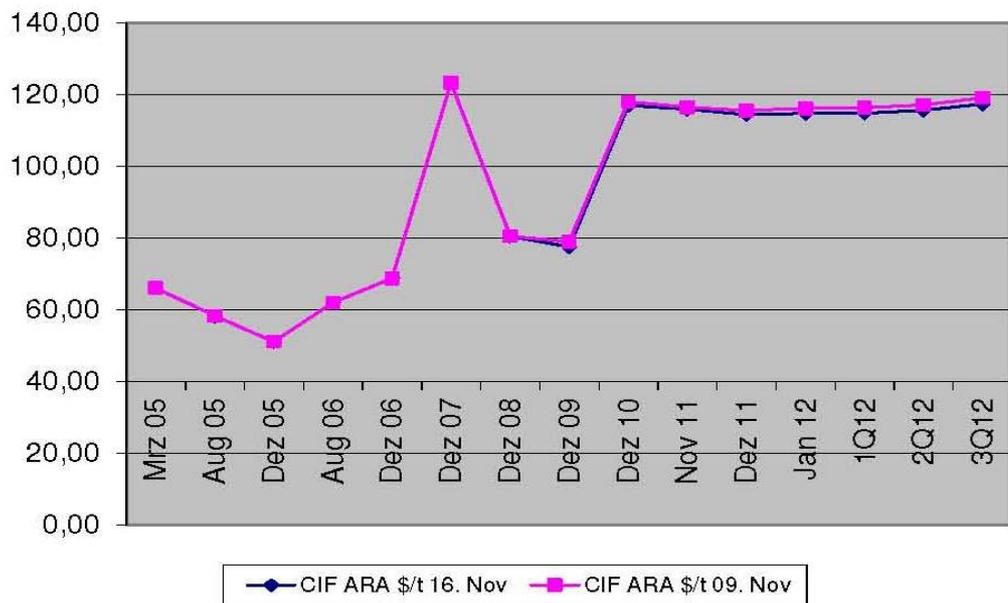
COUNTRY	EU Hard coal production		EU Hard coal sales		EU Coke production **	
	1-6 2011 Mt	1-6 2010 Mt	1-6 2011 Mt	1-6 2010 Mt	1-6 2011 Mt	1-6 2010 Mt
Bulgaria *	1.2	1.0	1.2	1.0	0	0
Czech Republic	5.9	5.6	5.7	5.5	1.3	1.3
Germany	6.3	6.8	6.4	7.4	4.1	1.0
Poland	37.4	32.4	38.5	34.1	6.0	5.2
Romania	1.1	1.1	1.0	1.1	0	0.4
Spain	3.5	4.5	4.2	2.6	0.5	0.8
United Kingdom	9.5	8.3	9.5	8.3	2.1	2.2
EU-27	64.9	59.7	66.5	60.0	14.0	10.9

* brown and black coal

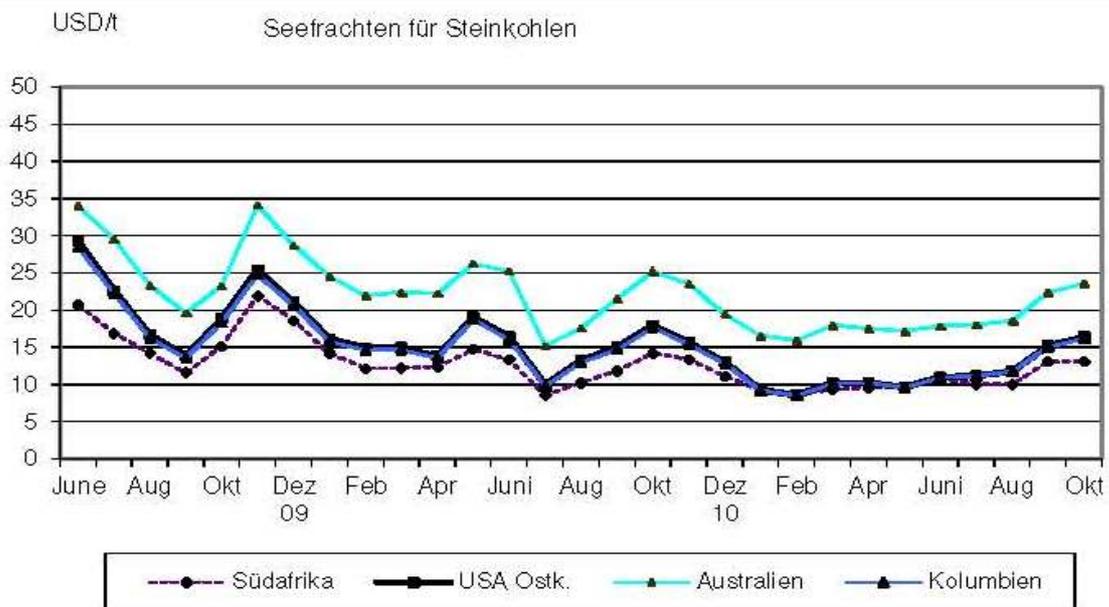
** only hard coal producing countries

COUNTRY	EU Lignite production		EU Consumpt. Public power plants	
	1-6 2011 Mt	1-6 2010 Mt	1-6 2011 Mt	1-6 2010 Mt
Bulgaria	16.2	11.7	15.4	11.3
Czech Republic	23.2	21.4	19.6	17.7
Germany	87.0	85.4	77.9	77.1
Greece	27.9	28.0	28.3	27.6
Hungary	4.7	4.5	4.7	4.4
Poland	30.2	27.8	29.8	27.7
Romania	15.9	13.7	16.4	13.3
Slovakia	2.5	2.5	2.5	2.5
Slovenia	2.5	2.5	2.3	2.2
EU-27	210.1	197.5	196.9	183.8

COUNTRY	EU Coking coal imports		EU Steam coal imports		EU Total coal imports	
	1-6 2011 Mt	1-6 2010 Mt	1-6 2011 Mt	1-6 2010 Mt	1-6 2011 Mt	1-6 2010 Mt
Austria					1.8	1.8
Belgium		1.1		1.8	3.0	2.9
Bulgaria	0	0	1.9	0	1.9	0
Czech Republic	0.5	0.4	0.7	0.3	1.2	0.7
Denmark		0		1.9	2.0	1.9
Finland		0.6		2.1	3.3	2.7
France		2.4		5.8	7.0	8.2
Germany	5.4	4.6	15.7	15.9	21.1	20.5
Greece					0.2	0.2
Hungary					0.9	0.9
Ireland					1.5	1.5
Italy	3.5	2.5	8.5	8.0	12.0	10.5
Netherlands	1.7	1.7	4.3	4.2	6.0	5.9
Poland		1.5		4.4	7.4	5.9
Portugal				1.2	1.4	1.2
Romania					0	0.6
Slovakia					1.5	1.5
Slovenia					0.2	0.2
Spain	1.2	0.6	2.1	2.1	3.3	2.7
Sweden		0.9		0.7	1.3	1.6
United Kingdom	2.5	3.2	12.3	9.8	14.8	13.0
EU-27					91.8	84.4



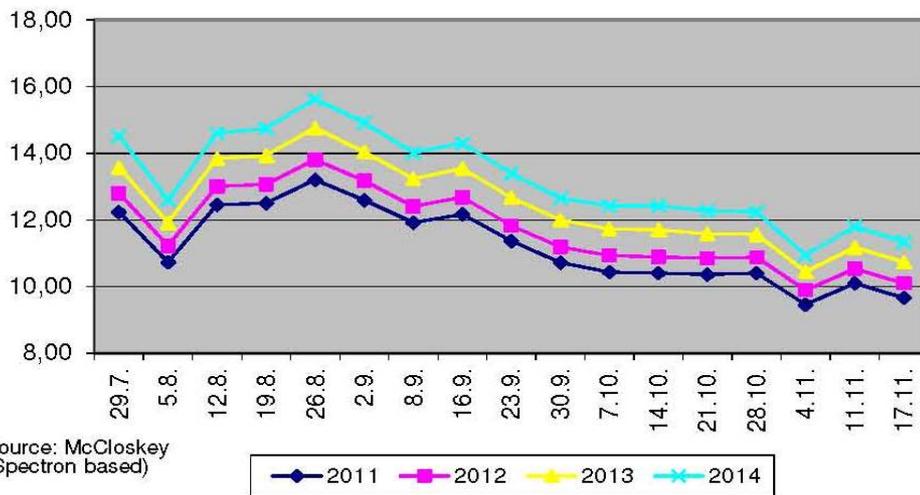
source: VDKI



Capesize-Einheiten nach Empfangshäfen ARA / Quelle: Frachtcontor Junge Co., eigene Berechnungen 2004

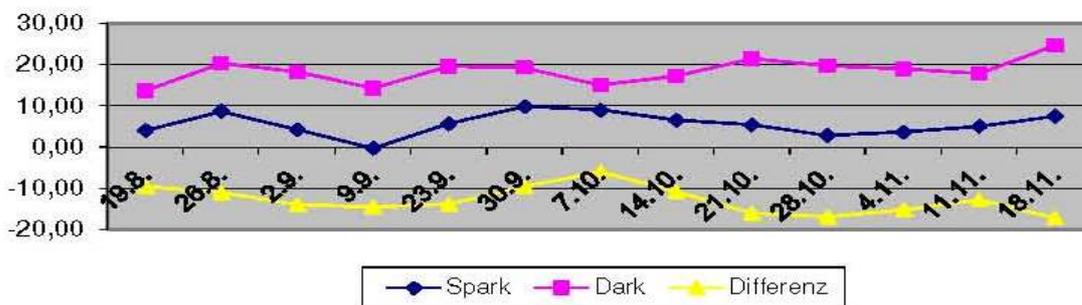
source: VDKI

European Carbon Permit Prices 2011-2014
EU ETS
(€/t of CO₂) Forward Market 2011



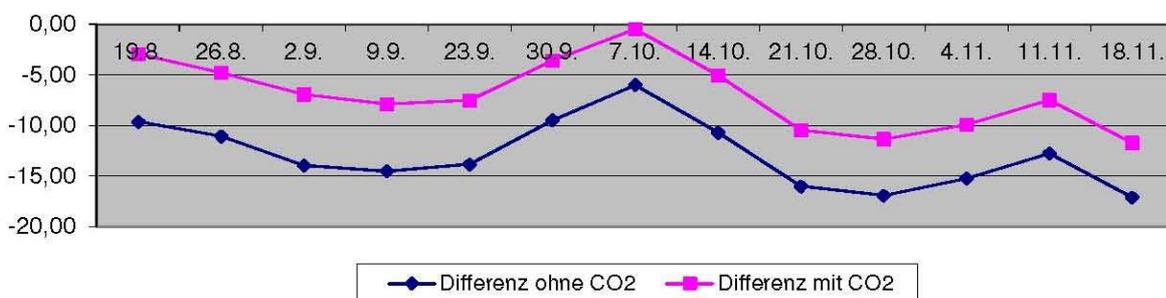
source: VDKI

Wöchentliche Durchschnittsmargen Gas - Kohle und Differenzen 2011 in €/MWh



Difference: Spark - Dark; plus difference: advantage for gas/minus difference advantage for coal

Margendifferenz Spark / Dark mit und ohne CO₂-Zertifikate-Preis - 2011 in €/MWh



Source: VDKI