



EURACOAL Market Report 1/2013

April 2013

WORLD COAL MARKET DEVELOPMENTS

Coal prices to NW Europe have stayed mostly below 100 US\$/t, making imported coal very competitive on the market, which is of course good news for coal burn in general but bad news for indigenous EU coal producers which have had to compete with these low prices. Even US and Australian companies had difficulties maintaining production at such low prices. Sea freight rates remained extremely low as well, making it difficult for shippers to survive. At certain times, loaded coal at Richards Bay was more expensive than delivered coal at ARA ports. Even though the RB-ARA route has become less significant (South Africa now ships its coal East and rarely to Europe), the price remains an important indicator. Analysts expect a recovery of the coal price in the years to come, but their optimism may be misplaced.

Coking coal spot prices fell dramatically since 2011, due to fewer orders from China and a recovery of output following floods in Queensland. Chinese coke prices significantly dropped to some 315 US\$/t which is not the result of lower coke prices but due to the Chinese government who removed the export tax on coke.

WORLD COAL PRODUCTION AND SEABORNE TRADE

General data on the global world coal market are already available, details will follow later. Global hard coal production is expected to exceed 7 bn t, totalling some 7.2 bn t with a significant production increase from Australia, which is not a real increase but a recovery from the floods in 2011. China as well is expected to have increased production by some 3.8%, as well as Indonesia, Colombia, Russia and South Africa who increased output.

US mines recorded a sharp decrease in sales on the domestic market and several mine closures, due to the shale-gas boom and the very low world market prices for coal. Currently there are millions of tons of coal being stocked by the mines, hoping to sell it at a higher price.

Global seaborne hard coal trade is expected to exceed 1 bn t, reaching some 1026 Mt (est.) with coking coal exports staying rather stable at around 242 Mt compared to 239 Mt in 2011, whilst steam coal exports increased from 739 Mt in 2011 to an estimate of 784 Mt. Looking at trade flows, Australia is certainly the biggest exporter of all coal types, dominating the market, followed by Indonesia and Russia.

EUROPEAN COAL MARKET

	2012 (1-12)	2011 (1-12)
	Mt	Mt
Domestic hard coal production	128.2	129.5
Hard coal imports	210.9	198.4
Lignite production	433.2	425.0
Total	772.3	752.9

EU hard coal production in 2012 stayed practically the same, whilst the lignite industry enjoyed an increase in output of more than 8 Mt as well as hard coal imports which increased by 12 Mt.

Figures show, that against all EU measures to limit coal consumption in the EU, consumption went up by 19 Mt.

HARD COAL

Producing country	2012 (1-12)	2011 (1-12)
	Mt	Mt
Bulgaria	2.3	2.4
Czech Republic	11.4	11.3
Germany	11.6	13.0
Poland	78.1	75.7
Romania	1.9	2.2
Spain	6.1	6.6
United Kingdom	16.8	18.3
Total	128.2	129.5

Poland produces some 90% of its electricity from coal and lignite and the overall economic situation is not too bad. Hard coal output in 2012 reached 78.1 Mt, steam coal output increased by 2.8% and coking coal output by 4.1%. Hard coal sales were lower than last year, due to lower coal prices and this has had an effect on coal stocks which grew sharply. Electricity prices will likely fall further in 2013 with imports of cheap electricity from neighbouring countries and increased output from subsidised wind turbines. Low electricity prices and uncertainties surrounding the EU ETS stopped virtually all investments, which means that the old power plant fleet will continue in operation and that there could be blackouts on very cold winter days due to lack of capacity.

German hard coal production in 2012 totalled 11.6 Mt, with sales to power plants of some 9.8 Mt. At the end of June, the hard coal mine Saar was closed, marking the end of coal mining in the Saar region. West mine was closed at the end of December. There now remain three mines in operation: Prosper-Haniel, Auguste Viktoria and Ibbenbüren. Connected to these mine closures is the movement of manpower from the Ruhr and Saar regions to Ibbenbüren and employees have shown a lot of flexibility in order to keep their jobs. Despite the mine closure plan in

Germany, RAG has some 1 000 apprentices in electro-technical, mechanical engineering, commercial functions and other vocational training which is very important to the industry because such training reduces accident rates, amongst other benefits.

As the German case shows, it is sometimes difficult to understand political developments which affect the energy sector: the phase-out of nuclear, the massive expansion of photovoltaics and the high oil and gas prices. In 2011, 20.3 GW of generation capacity was still nuclear and 20.2 GW was lignite. By the end of 2012, only 12 GW of nuclear remained and 20.8 GW of lignite, which means that lignite has become the reliable base-load energy source. Compared to 2010, nuclear decreased its share in electricity production by 42 TWh, whilst renewables increased their share by 32 TWh and lignite by 12 TWh. At the beginning of 2012, the installed capacity of renewables was 25.3 GW, but had increased to 32 GW by the end of 2012. In other words: Germany has a high feed-in of PV on bright summer days (between 10h-16h) of some 15-20 GW, representing twenty large nuclear power plants. This can create a large power surplus, but also requires significant back-up capacities for periods when there is no sunshine. Last year, Germany exported more electricity than ever before but at a very low wholesale price.

The **United Kingdom** did not see its economy recover, neither in 2011 nor in 2012. The government continues to implement its major electricity market reforms, compromising coal burn. Nevertheless, due to very high gas prices, electricity generation from coal increased by 40% in 2012 and the EU ETS carbon price had only little impact on coal's competitiveness. This reality clearly shows that hard coal should maintain an important role in the UK energy mix. Currently, there are some 28 GW of coal-fired plants, of which 8 GW will have to close by 2015, as they will no longer meet EU requirements and it is very unlikely that they will be replaced by new coal-fired units, given that the on-going electricity market reform will penalise any new coal burn. The government also announced the introduction of a carbon-price support mechanism, this being nothing more than another levy on coal. Altogether, the government wants carbon prices to increase to £30/tCO₂ in the coming years and to reach £70/tCO₂ by 2030, thus forcing fuel switching to gas and driving coal to a marginal role. When the government announced its support to burn biomass, the coal industry thought that this would be favourable for coal, since the two fuels are generally co-fired together. But the government now intends that this support be for biomass used alone.

The high coal burn should in principle have a positive impact on indigenous coal production but it does not: the very low import prices, difficult geological conditions at several mines and the high costs for diesel (needed for surface mining) are responsible for financial difficulties at UK mines which struggle to cope with rising production costs.

In **Spain** the government had cut aid to the coal industry in 2012 by 63%. In 2011, aid was €301 million and in 2012 this was cut to €111 million. The cut provoked a general strike in all sectors; miners walked from the mining regions to Madrid where they received massive public support. Nevertheless, the subsidies budget was not modified and the workers had to return to work. The strike affected coal output and will accelerate the restructuring of the sector. In 2012, coal output totalled 6.1 Mt. The share of coal for power generation increased to 21.9%.

CARBUNIÓN is still fighting against Council Decision 787/2010/EU according to which formerly subsidised mines have to pay back the entire amount of subsidies received, if they wish to continue to operate beyond 2018. CARBUNIÓN considers that those

mines that will be competitive by 2018 should not be forced to close or to pay back subsidies which would commercially kill them.

In the **Czech Republic** hard coal output slightly increased in 2012 to reach 11.4 Mt. The government's new energy policy will only be approved after an environmental impact assessment. It is expected that coal use will shrink from today's 60% share of power generation to some 20% in 2040.

In **Austria** coal consumption slightly fell to 3.2 Mt of which around half is delivered to the three coal-fired power plants, one owned by EVN, and the other half to steel mills. Coal is imported mainly from Poland, the Czech Republic and Russia.

LIGNITE

Producing country	2012 (1-12)	2011 (1-12)
	Mt = t	Mt = t
Bulgaria	31.0	34.5
Czech Republic	43.5	46.6
Germany	185.4	176.5
Greece	62.8	56.8
Hungary	9.2	9.5
Poland	64.2	62.8
Romania	30.2	31.4
Slovak Republic	2.4	2.4
Slovenia	4.5	4.5
Total	433.2	425.0

In **Germany** lignite did rather well in 2012. Output totalled 185.4 Mt of which some 166 Mt was supplied to power plants, generating 158 TWh of electricity, including from new units at BoA 2 and 3 near Cologne and Boxberg R near Cottbus. Generally speaking, the German power market is undergoing drastic changes and even though politicians call for further renewables expansion, back-up capacities will be needed, either in the form of additional conventional power plants or new storage capacities. But investment uncertainty is so high that nobody is willing to take the risk of investing in conventional capacities. A solution will have to be found to ensure Germany's supply security and one option would be capacity payments. On 22 September there will be a national election in Germany and time will tell if the next government makes any changes to these energy-sector policy developments.

2012 was another hard year for **Greece**, and 2013 could be even worse. Salaries were cut by almost 50%, pensions were decreased, as required to obtain further financial support from the EU. The trade deficit is steadily improving, but unemployment and taxes are still increasing. The government wants to make additional reforms to enhance economic activities, but analysts do not expect that there will be an economic recovery in 2013.

Lignite deposits in Greece are estimated at 2 623 Mt and output in 2012 reached 62.8 Mt. Lignite input into the interconnected electricity system is estimated at 50.6%, a decrease of 2.5% due to the economic downturn.

Poland Lignite has remained profitable: production increased by 3% with Bełchatów being the most successful mine. In September 2011 Polska Grupa Energetyczna (PGE) started a new power unit of 858 MW in the lignite-fired Belchatow Power Plant. It is the biggest and the most modern power unit in Poland with an efficiency of 42 %. The total cost of the construction exceeded 1 billion euro.

The new power unit is "capture ready". A Carbon Capture Plant (> 250 MW and CO₂ capture efficiency >80%) will be integrated with the new power unit. Based on technology of advanced amines (AAP - Advanced Amine Process) the installation would trap about 1.8 million tonnes of CO₂ per year.

PGE announced in October the short list of possible locations for a new nuclear power plant in Poland. All three locations are situated on the coast of the Baltic Sea.

In the **Czech Republic** lignite production reached 43.5 Mt. A positive message from the Czech industry is the modernisation of Prunéřov power plant operated by ČEZ. Five blocks of 210 MW will be replaced by three blocks of 250 MW.

The government's new energy policy will only be approved after an environmental impact assessment. It is expected that coal use will shrink from today's 60% share in power generation to some 20% in 2040. The mining limits which were set in 1991 will not be modified and one opencast mine (Czechoslovakian Army) has already reached its limits. Two hundred employees lost their jobs in December and one excavator had to be decommissioned. Further reductions are expected during the first quarter of 2013, when output is expected to fall from 4.0 Mt to 2.5 Mt. Another concern for the Czech coal industry is a revision of the mining law which would see the repeal of land expropriation clauses related to mining activities. Other changes are awaited.

In **Bulgaria** economic activity remained weak in 2012, but is expected to recover slightly in 2013/14. In March 2012, the Bulgarian government decided to abandon its plan to build a new nuclear power plant (NPP) at Belen and will build an additional reactor at NPP Kozludy instead. In addition, the government agreed to launch a national referendum at the end of January to ask citizens whether they wanted Bulgaria to further develop nuclear power.

In mid-November, Bulgaria and Russia signed an agreement to extend the Bulgarian section of the proposed South Stream gas pipeline, which will supply Russian gas to Europe via the Black Sea. The project is owned by a consortium of which Gazprom owns 50%. The other 50% is divided between the Italian Eni, the German Wintershall and the French EDF. The 2 300 km long pipeline is designed to supply some 63 billion cubic metres of gas per year. In addition, an environmental impact assessment of the Nabucco gas pipeline was launched in October 2012. This 3 900 km pipeline will supply gas from the Caspian region and the Middle East to Europe to provide an alternative gas supply for Europe.

Even if energy supply through gas plays an important role for Bulgaria, indigenous coal remains a major energy source for industry and households.

Lignite production in **Hungary** stayed stable at 9.2 Mt. Estimated power consumption fell by 1.3% and imports stayed stable. There are many old, inefficient power plants which are used to full capacity, as there are almost no new investments. Mátra produced some 8.4 Mt of lignite and accounted for a 20% share of power generation. Lignite supply to households increased from 200 000 to 320 000 tonnes, because it is a cheap and affordable fuel for people to use to keep warm.

In the long term, nuclear will continue to play a major role and access to gas will be improved. To secure energy supply, Hungary wants to focus more on indigenous

lignite and there is even a concept to build a new coal-fired power plant, if CCS can be applied, although there is as yet no concrete proposal.

In **Slovakia** the new Energy Policy for the next five years is still under development. Transposition of the IED and ETS is nearly finished, with a new air protection act and a new emissions trading act already in place. There are also some new amendments with regard to previously approved RES legislation, following an enormous increase in output from these sources.

ENEL continues the construction of two nuclear blocks at EMO (each 440 MW) where work first began in 1985, but was subsequently halted. HBP and ENEL have continued to fulfill their agreement regarding the modernisation of ENO Blocks A and B, with further work planned for the two 110 MW units Block B1 and B2. The new E.ON Malženice CCGT plant, with a total installed capacity of 430 MWe, has re-started operation after a serious failure in 2011.

HBP's lignite production decreased by 1.8% in 2012, but the country's total stayed at 2.4 Mt. Bana Dolina company should have been closed in 2007, according to the government plan, but the lifespan of the mine was prolonged to 2012 and now to 2015, with an annual production of about 150 000-170 000 tonnes. HBP continued extraction from the new underground field – XI. Mining Field in the Nováky Lignite Deposit of the Nováky Licensed Mining Area – and some exploration works in the Handlova and Cigelná mining areas were undertaken.

In **Slovenia** the new 600 MW Šoštanj power plant (TEŠ Unit 6), under construction in the Šalek valley near Velenje is partly financed by loans from the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD) – €440 million and €200 million respectively. It will replace the oldest units at Šoštanj to reduce CO₂ emissions by 35%. However, the main contractor, Alstom, stopped work and would not restart until the Slovenian government confirmed its loan guarantees. At the end of 2012, the EIB signed off the second instalment of its loan and Premogovnik then had to await a decision of the Slovenian parliament. This shows that investments in coal-related projects attract much scrutiny and are heavily opposed by some politicians and NGOs. Only with fully supportive national governments will companies be able to secure international bank loans for new coal projects.

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	2011	150.28	142.50	140.78	147.96	148.00	142.30	142.45	147.21	146.34	138.51	137.17	130.19
(US\$ / tce)	2012	128.28	118.65	113.47	114.56	102.87	102.87	104.87	109.05	107.57	101.36	99.54	106.73
Steam Coal	2011	112.48	104.41	100.56	102.45	103.14	98.90	99.87	102.63	106.27	101.06	99.28	98.79
(EUR / tce)	2012	99.40	89.72	85.95	87.04	80.43	82.12	85.34	87.95	83.97	78.13	77.39	75.31
Source: VDKI, McCloskey													
Freight Rates (USD /t)													
R Bay/Rotterdam	2011	9.25	8.71	9.38	9.61	9.79	10.79	10.03	10.04	13.10	13.13	12.43	12.78
(Capesize)	2012	10.18	8.86	8.65	8.95	8.52	6.35	6.28	5.98	6.53	9.09	10.41	7.75
Newcastle/Rotterdam	2011	16.56	15.95	17.98	17.49	17.18	17.84	18.05	18.58	22.39	23.57	23.69	24.55
(Capesize)	2012	18.31	14.95	14.88	15.48	15.08	12.60	13.10	12.74	13.65	16.80	19.14	13.83
Bolivar/Rotterdam	2011	9.19	8.54	10.13	10.17	9.60	10.91	11.10	11.72	15.05	16.17	15.37	15.48
(Capesize)	2012	10.85	10.01	9.05	9.65	9.70	8.38	8.73	8.06	9.06	10.83	12.04	9.17
Source: VDKI, Frachtcontor Junge & Co.													
Currency Rates													
EUR/USD	2011	0.75	0.73	0.71	0.69	0.70	0.70	0.70	0.70	0.73	0.73	0.74	0.76
	2012	0.76	0.76	0.76	0.76	0.78	0.80	0.81	0.81	0.78	0.77	0.78	0.76
ZAR/USD	2011	6.93	7.19	6.92	6.73	6.86	6.80	6.80	7.08	7.56	7.97	8.16	8.18
	2012	8.01	7.64	7.60	7.83	8.16	8.40	8.25	8.26	8.27	8.67	8.81	8.62
AUD/USD	2011	1.01	0.99	0.99	0.95	0.94	0.94	0.93	0.95	0.98	0.99	1.00	0.99
	2012	1.04	1.07	1.05	1.04	1.00	1.00	1.03	1.05	1.04	1.03	1.04	1.05
Crude Oil (USD/Barrel)													
Crude Oil	2011	92.83	100.29	109.84	118.09	109.94	109.04	111.62	106.32	107.61	106.29	110.08	107.34
	2012	111.76	117.48	122.97	118.18	108.07	93.98	99.55	109.52	110.67	108.36	106.86	106.55
Source: OPEC Basket Prices													

EU CRUDE STEEL PRODUCTION		
COUNTRY	2012 (1-12) Mt	2011 (1-12) Mt
Austria	7.5	7.5
Belgium	7.4	8.1
Bulgaria	0.6	0.8
Czech Republic	5.1	5.6
Finland	3.1	4.0
France	15.6	15.8
Germany	42.7	44.3
Greece	1.3	2.0
Hungary	1.6	1.7
Italy	27.3	28.7
Luxembourg	2.3	2.6
Netherlands	6.9	6.9
Poland	8.4	8.8
Romania	3.8	3.8
Slovakia	4.4	4.2
Slovenia	0.6	0.6
Spain	13.7	15.6
Sweden	4.4	4.9
United Kingdom	9.9	9.5
Others	2.8	2.0
EU-27	169.4	177.4
Source: World Steel Association		

TABLE 3

EU Hard coal and lignite production and consumption

	EU Hard coal production		Consumption of indig. hard coal for power generation**	
COUNTRY	1-12 2012 Mt	1-12 2011 Mt	1-12 2012 Mt	1-12 2011 Mt
Bulgaria *	2.3	2.4	2.1	2.2
Czech Republic	11.4	11.3	3.3	3.5
Germany	11.6	13.0	9.8	11.3
Poland	78.1	75.7	52.0	73.2
Romania	1.9	2.2	1.9	2.2
Spain	6.1	6.6	6.5	9.6
United Kingdom	16.8	18.3	15.2	16.5
EU-27	128.2	129.5	90.8	118.5

* brown and black coal

** only hard coal producing countries

	Lignite production		Lignite consumption for power generation	
COUNTRY	1-12 2012 Mt	1-12 2011 Mt	1-12 2012 Mt	1-12 2011 Mt
Bulgaria	31.0	34.5	30.4	33.7
Czech Republic	43.5	46.6	39.0	41.0
Germany	185.4	176.5	166.3	157.4
Greece	62.8	56.8	61.9	59.4
Hungary	9.2	9.5	9.0	9.3
Poland	64.2	62.8	63.2	61.8
Romania	30.2	31.4	30.2	31.4
Slovakia	2.4	2.4	2.4	2.4
Slovenia	4.5	4.5	4.4	4.3
EU-27	433.2	425.0	406.8	400.7

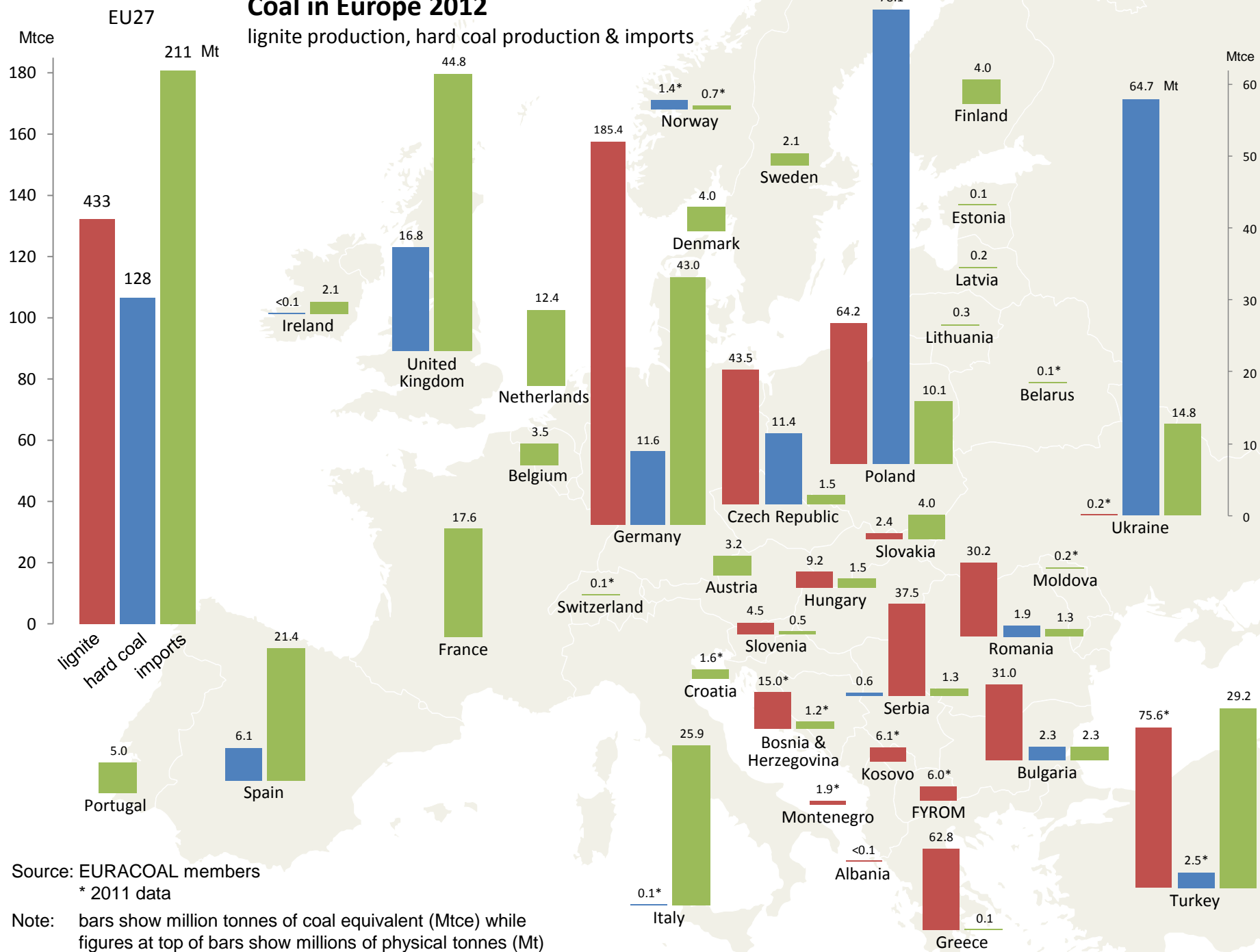
TABLE 4

EU Hard coal imports

	EU Coking coal imports		EU Steam coal imports		EU Total coal imports	
COUNTRY	1-12 2012	1-12 2011	1-12 2012	1-12 2011	1-12 2012	1-12 2011
	Mt	Mt	Mt	Mt	Mt	Mt
Austria	1.1	2.0	2.1	1.8	3.2	3.8
Belgium					3.5	4.0
Bulgaria	0	0	2.3	3.3	2.3	3.3
Czech Republic	0.8	1.2	0.7	1.2	1.5	2.4
Denmark					4.0	6.1
Finland	1.2	1.3	2.8	5.7	4.0	7.0
France		5.3		10.0	17.6	15.3
Germany	9.6	10.0	33.4	32.9	43.0	42.9
Greece					0.1	0.6
Hungary	1.4	1.4	0.1	0.1	1.5	1.5
Ireland					2.1	1.9
Italy	7.0	7.0	19.0	16.9	25.9	24.0
Netherlands	3.5	3.1	8.9	8.6	12.4	11.7
Poland		2.8		12.7	10.1	15.5
Portugal				3.6	5.0	3.6
Romania		1.1		0.1	1.3	1.2
Slovakia					4.0	3.4
Slovenia					0.5	0.5
Spain	2.2	2.5	19.2	12.8	21.4	15.3
Sweden	1.5	1.9	0.6	0.8	2.1	2.7
United Kingdom	5.0	5.4	39.8	26.3	44.8	31.7
Others					0.6	0.6
EU-27					210.9	199.0

Coal in Europe 2012

lignite production, hard coal production & imports



Source: EURACOAL members

* 2011 data

Note: bars show million tonnes of coal equivalent (Mtpce) while figures at top of bars show millions of physical tonnes (Mt)