

Press Release No. 01/2015

Hard Coal Market 2014: Despite the energy turnaround, hard coal imports to Germany rise by more than 6%, although hard coal-fired power generation declines

The German Coal Importer Association (VDKi) has prepared the initial consolidated estimates for the global, European and German hard coal market for all of 2014. Although the growth of production globally stagnated with around 7.2bn tonnes, the seaborne trade growth increased by 5% compared to 2013. Hard coal imports to Germany reached an all-time high at 56m tonnes.

1. World output

The VDKi estimates that global hard coal production last year (7.2bn tonnes) remained at the level of 2013. The most important factors:

- Slowing economic growth and weakened growth in the demand for electric power in Asia, especially in China;
- Newly introduced regulations implemented in China, prompted by environmental protection concerns, prohibiting the burning of low-calorific coal with high ash and sulphur content, especially in densely populated urban areas;
- Accelerating replacement of coal in the USA with low-priced shale gas for power generation and environmental protection regulations for power plants, which caused early closures;
- Reduction of overcapacities in the form of mine shutdowns, temporarily shut down of mines or cutbacks in production in hard coal mining owing to low world market prices and the cancellation or slower development of new coal projects, e.g. in Australia or the USA;
- Regulatory interventions in coal mining, e.g. in Indonesia.

However, there were differences in the way the industry developed in the various countries.

- For the first time since 1998, **China** produced less coal, a decline of 2.5%. With a total output of 3.87bn tonnes about 90m to 100m tonnes less hard coal was extracted. Moreover, hard coal imports to China fell by 36m tonnes (11%) to 292m tonnes. Coal quality requirements concerning ash and sulphur content in coal used for power generation as well as calorific values were introduced to reduce air pollution in 2014. Inner Mongolia alone, China's second-largest coal region, therefore reduced output compared to 2013 by 86m tonnes (almost 12%) to 908m

Verein der Kohlenimporteure e.V. · Ferdinandstrasse 35 · 20095 Hamburg

Phone +49 (0)40 32 74 84 Fax +49 (0)40 32 67 72

Internet: <http://www.kohlenimporteure.de> · Email: info@kohlenimporteure.de

HypoVereinsbank AG, Hamburg (Sort code 200 300 00) Account No. 408468 · Registration: Hamburg Local Court, VR7021
Managing Director: Dr Erich Schmitz, Lawyer; CEO: Dr Wolfgang Cieslik

tonnes in 2014, while the two other coal regions (Shanxi and Shaanxi) increased production by 1.5% and 3.6% to 977m tonnes and 511m tonnes, respectively.

- **India** will probably not reach its hard coal production target. The largest state mining company, Coal India Ltd. (CIL), reported that output in the 11 months from April 2013 to February 2014 (the fiscal year in India starts on 1st of April and ends 31st of March the following year) of 437m tonnes was about 3% below the target of 450m tonnes for this period.
- In the **USA**, output in many mines was throttled, especially in 2013, while other mines were shut down completely. The greater use of coal in place of gas for power generation resulted solely from the cold weather conditions in January and February 2014 and the explosion in gas prices which resulted. The U.S. Energy Information Administration (EIA) estimates that coal production in 2014 rose again slightly by 17,2m tonnes to 904 m tonnes in comparison with 2013, and coal consumption for power generation fell only slightly by 6,4m tonnes (0.8%) over the previous year.
- In **Australia**, only a few mines were closed while new projects were postponed; however, cost cutbacks and, in some cases, production increases using the same level of personnel and equipment were initiated everywhere. Estimates by the Australian Ministry of Industry (Resources and Energy Quarterly, December 2014) indicate that there was an increase in coking coal production of 4.7% to 189m tonnes and in steam coal production of 2.1% to 250m tonnes.
- In **Indonesia**, production of hard, including low-calorific (sub-bituminous) coal, declined in 2014 for the first time in many years by 3.5% to about 407m tonnes. The most important reasons for this decline are the increase in royalties for certain mining companies, the low price level (which prompted some mining companies to reduce output) and the introduction of an export licence system in October 2014. Many companies exporting hard coal were unable to obtain the licence early enough because of bureaucratic requirements and were therefore not able to export coal. A contrary effect came from the devaluation of the Indonesian rupiah in relation to the US dollar and falling diesel prices that favoured production because the largest expenditures for coal production must be paid in domestic currency.
- Other countries such as **South Africa**, **Colombia** and especially **Russia** were also able to compensate for declining world market prices by the devaluation of the domestic currency against the US dollar and could even increase their competitiveness because they paid their major expenditures for coal production in domestic currency while receiving payment for the exported coal in US dollars. As a consequence, the following countries increased their output in 2014 over the comparable period of the previous year:
 - South Africa to presumably 265m tonnes (= +3.6%),
 - Colombia to 75m tonnes (= about +2%) and
 - Russia to 356m tonnes (= +2.6%)

According to a report from Germany Trade & Invest of 09/03/2015 (www.gtai.de), Russian coal exporters enjoyed substantial financial advantages from the devaluation of the ruble because the industry's own costs on a US dollar basis

declined by 50% in 2014 while revenues from coal exports in rubles rose by 30%. Furthermore, a Citibank study showing that own costs in coal mining in Russia are lower than anywhere else except in Indonesia was cited.

2. Seaborne world coal trade: growth +5% (see Figure 1 + 2)

According to VDKi calculations, seaborne hard coal trade once again rose by 1.2bn tonnes (5%) in 2014 over 2013, thereof about 900m tonnes in steam coal and about 300m tonnes in coking coal. The cooling-off of the economy in China was the primary reason for the lower growth in comparison with the previous years.

However, significant shifts are also becoming apparent within the exporting countries:

- Although **China** imported in total about 13m tonnes less coking coal and 23m tonnes less steam coal (including lignite and anthracite) from the world market as a way to protect the oversupply of the domestic market, the VDKi estimates show that **Australia's** hard coal exports in 2014 rose both in total and to China. Worldwide, Australia exported about 386m tonnes, almost 8% more than in 2013, thereof 201m tonnes of steam coal and 185m tonnes of coking coal. Australia's coking coal exports to China also increased by 0.8m tonnes to over 46m tonnes. As a consequence of the slight increase in coking coal exports and the simultaneous reduction in exports from the USA and Canada to China, Australia was able to increase its market share in this country. Australia was also able to increase its steam coal exports to China by 10% to 47m tonnes. Australia increased volumes over the previous year in its exports to India (+12m tonnes to a total of 46m tonnes), South Korea (+5m tonnes to about 55m tonnes) and Taiwan (+2.7m tonnes to about 30m tonnes).
- **In Russia, coal** exports increased by 6m tonnes (4%) to 132m tonnes, in **South Africa** by 3m tonnes to 76.4m tonnes (whereby India alone increased its imports from South Africa by almost 10m tonnes to about 30m tonnes) and in **Colombia** exports rose by about 1.3m tonnes to 74.9m tonnes.
- Preliminary estimates by the VDKi show that in 2014 **Indonesia** increased its hard coal exports (excluding lignite) by about 10m tonnes to 359m tonnes. Measured against the previous years, however, growth was substantially slower.
- Total exports of hard coal from the **USA** fell for the first time since 2010 back under 91m tonnes and amounted to 88m tonnes, according to information from the Energy Information Administration (EIA). Exports of hard coal to the EU 28 fell by 15% from 46m tonnes in 2013 to 39.2m tonnes in 2014. The primary cause is the low price level, which for many mines was too low and for some mines did not even cover production costs.

3. Europe and Germany: Lower coal imports to the UK and France, higher imports to Spain and Germany

3.1 Europe (see Figure 3)

The picture among the various member states of the European Union with respect to steam coal imports in comparison with 2013 was varied: imports to the United Kingdom declined to 32m tonnes (-17%) and imports to France fell to 9m tonnes (-30%), while Italy was able to hold its imports (16m tonnes) at the level of the previous year. In contrast, Spain (presumably 13m tonnes) and Germany (approximately 42m tonnes) imported 18% and 6% more hard coal, respectively, than in the year before.

The reasons for this development:

- The continued weakness of the economies in the EU, with the exception of Germany and Spain, where the economy is showing signs of recovery;
- Decrease in the full load utilization hours of coal-fired power plants owing to greater power generation from renewable energy sources;
- The low power wholesale prices; power plants can no longer be operated profitably and thus are not being used.

Hard coal-fired power generation was favoured by the continuing advantage of the so-called clean dark spread (costs for coal, freight and CO₂ certificates) over the so-called clean spark spread (costs for gas, transport and CO₂ certificates) in 2014 despite the price pressure on gas. This situation has supported coal-fired power generation and favoured the continued replacement of gas-fired power generation in Europe. Electric power was exported primarily to countries, which rely strongly on gas for power generation, like the United Kingdom and especially since coal-fired power generation has been made more expensive by UK legislation or The Netherlands or to countries which do not have adequate power plant capacities available, such as currently is the case in Belgium. The example of Belgium makes it clear how essential sufficient capacities on the power market are: Germany should take steps as soon as possible to ensure security of supply from hard coal-fired power generation capacities available at all times by creating a power market design in conformity with market requirements which does not discriminate against hard coal-fired power plants, requests the VDKi.

Power exports to other countries rise again by 3%

The export balance (export less import) in Germany increased to 35.5 TWh, a plus of 1.7 TWh over 2013. The exported power volume, which increased 3% in comparison to the previous year stems primarily from hard coal-fired power plants because nuclear power plants and lignite-fired power plants are operating in the base load range. While on this subject, the VDKi wants to clarify a misunderstanding which is often heard: There are claims that hard coal-fired power plants (must) export power at dumping prices because of the high feed-in of power from renewable sources in Germany when weather conditions are favourable. That is not correct. Hard coal-fired power plants are highly flexible. They are the “swing suppliers” in power generation, assuring the security in terms of electricity production decisively so far. They produce power for export only if

and when the power wholesale market or a buyer offers a price which is higher than the marginal costs (especially fuel costs and costs for CO₂ certificates) of the specific power plant. Power prices in neighbouring countries, especially in the UK, Belgium and The Netherlands, are frequently several Euros per MWh higher than on the German power wholesale market, featuring as it does prices influenced (contrary to market conditions) by the priority feed-in of renewable energies and variable costs of €0, which means that the import of German power by our foreign neighbours is profitable.

In total, however, the gross power generation in Germany in 2014 declined by 3% to 614 TWh, caused especially by the mild winter of 2014, according to the Federal Association of the Energy and Water Industry (BDEW). About 68% of this power, just as last year, comes from conventional energy sources. The share of hard coal in the energy mix in Germany amounted to just under 18% in 2014. All of this has happened against the backdrop of the growing share of renewable energies; their share of gross power generation for 2014 reached 27.8%.

3.2 Germany

Hard coal imports to Germany reach a historical high point at 56m tonnes (see Figure 4)

Estimates of the VDKi show that **hard coal imports to Germany** in 2014 developed as shown below:

- Total **hard coal imports** to Germany increased in the past year by about 3.3m tonnes (6.3%) to an historical high point of more than 56m tonnes. This is the highest level of hard coal imports to Germany since the establishment of the European Community for Coal and Steel in 1957.
- In comparison with 2013, imports of steam coal increased by about 5% to 41.9m tonnes while imports of coking coal rose by 15% to 11.7m tonnes for the iron and steel industry. Solely the import of coke declined by about 6% to 2.4m tonnes.
- Especially in Q3 and Q4 significant volumes of 7.8m and 10.5m tonnes of steam coal were imported to Germany. (see Figure 5).
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The Arbeitsgemeinschaft Energiebilanzen (AGEB) estimates the **consumption** of hard coal in 2014 in comparison with the previous year as shown below (see Figure 6):

- Hard coal consumption for power generation declined by 11.7% to 36.9m TCE (or about 43m tonnes regarding the calorific value of 6000 kcal).
- Hard coal consumption for the steel industry rose, especially during the first half of 2014, by 1.1% to 17.8m TCE (or about 20.7m tonnes) because of a slight improvement in the economic situation.
- Hard coal consumption for heating market declined by 6.3% to 1.5m TCE (or 1.75m tonnes) because of mild weather conditions.

Russia, South Africa, Canada, Australia and Poland increased their exports to Germany by between 1.5% and more than 100% (South Africa). Exports from the USA and Colombia to Germany fell by 7.8% to 11.1m tonnes and by 26.2% to 7.4m tonnes, respectively, in 2014. Russia was again the most important coal exporter, followed by the USA, in 2014. Owing to the current oversupply on the coal market and the privately organised mining operations in Russia, the VDKi does not consider this to be a problem with regard to supply security. Even if supplies from Russia were cut off completely tomorrow, this volume could be procured inherently (unlike natural gas) from other countries (see Figure 7).

The **world market prices** continued to slump (with only a few short interruptions in 2014), especially in Q4 2014 and at the beginning of 2015. The CIF ARA prices reached their lowest point for the moment in the middle of the year, posting a little over US\$72 per tonne. After a minor recovery, prices started giving way again in September. At the end of December 2014, a tonne of hard coal CIF ARA cost only about US\$71, and in January 2015, the price fell below US\$60/tonne, a drop of 28% over January 2014 (see Figure 8). The steep drop in freight rates end of 2014/beginning of 2015 contributed to this development. An increasingly weaker euro in comparison with the US dollar led to price disadvantages in the euro zone. The average border-crossing price free German border (BAFA price) in Q4 2014 came to €73.41/TCE while the weighted average price for the year was €72.94/TCE (see Figure 9).

Hamburg, 19/03/2015

Responsible pursuant to the German Press Act: Verein der Kohlenimporteure e.V.,
Dr Erich Schmitz, Managing Director

Attachments: Figures 1-9