



VEREIN DER KOHLENIMPORTEURE E.V.
Hamburg

PRESS CONFERENCE in Düsseldorf on 17 July 2014
Presentation by Dr Wolfgang Cieslik

(Oral comments are authoritative)

There are 3 main points we would like to discuss with you during today's press conference:

1. Current discussion regarding security of energy supply in view of the tensions between Ukraine and Russia.
2. As every year, we have an overview of developments on the coal markets in 2013, both
 - internationally and
 - nationally, along with the initial outlook for 2014.
3. Third, we want to examine the latest developments in energy policies which are relevant for the role played by hard coal-fired power plants.

As always, the material you will find on the table contains related information concerning this press conference. Moreover, our Annual Report 2014 - Facts and Trends 2013/2014 has also come right off the press.

About Point 1: Security of energy supply

As you are aware, the conference of the G7 energy ministers in advance of the G7 summit on 04-05/06/2014 issued a joint statement entitled "Energy Initiative for Energy Security" and declared in this statement that fossil fuels will continue to constitute a major element of the energy mix. As part of the efforts to reduce emissions produced by fossil fuels, technologies with low CO₂ levels such as CO₂ capture and storage (CCS) or nuclear energy should be encouraged, including as well the technologies which, as energy resources, are capable of covering the base load. Coal is, and will remain, one of these.

Acting on behalf of the Council at the end of May 2014, the EU Commission submitted an "extensive strategy aimed at strengthening supply security" in response to the current geopolitical environment, the tensions between Ukraine and Russia and the dependency of the EU on imports affected by the situation. Among other elements, the necessity of coordinating decisions of national energy policies is emphasised in the strategy. Moreover, it calls for a diversification of the supplier countries and supply

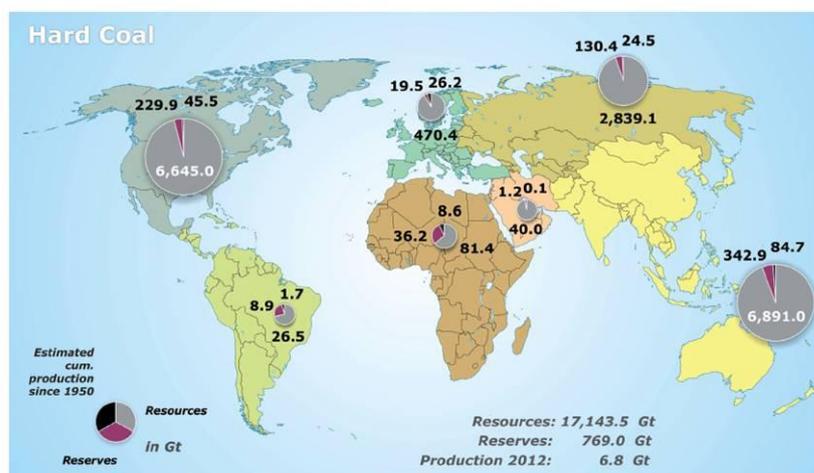
channels for gas as well as an increase in domestic energy production, including the sustained production of fossil fuels.

Why are we starting with these decisions?

Simply because these communiqués express how important - beside gas - coal is for the security of energy supplies (or, putting it more precisely, for securing electric power supply) in Europe as well as elsewhere; as Maria van der Hoeven, Executive Director of the International Energy Agency (IEA), clearly and unequivocally stated during the presentation of the “World Energy Investment Outlook” on 03/06/2014: “Like it or not, coal is here to stay for a long time to come.” Germany would also be well advised not to declare coal to be the second technology (following the phase-out of nuclear power) which must be eliminated or to defame its use in other ways. A look at the global facts for coal reveals its indisputable merits:

Global potential of hard coal 2012: regional deposits are widely spread over the world....

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1

- In the most recent energy study from the German Federal Institute for Geosciences and Natural Resources (BGR) entitled “Reserves, Resources and Availability of Energy Sources” in December 2013, the institute declared that coal was still the **most important energy source** because it is far and away the largest global total resource (that means reserves plus resources) among the fossil energy sources.

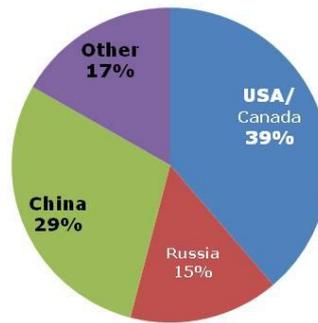
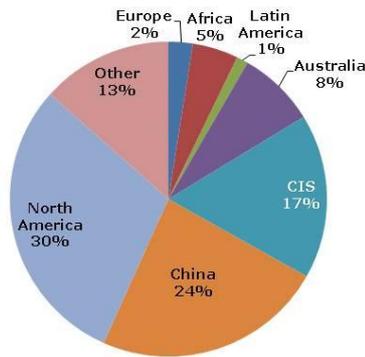
- The share of hard coal in global primary energy consumption came to 28.1% in 2012 and to 30.1% in 2013, the highest share since 1970. Hard coal is the second-most important energy source (32.9%) after oil.
- In 2011, coal contributed about 41% to worldwide power generation, more than any other energy source. This share will surely have risen further until 2013.

... and secure hard coal supplies at least for the next 100 – 110 years



Global hard coal reserves: 769 bn t

Global hard coal resources: 17.143 bn t



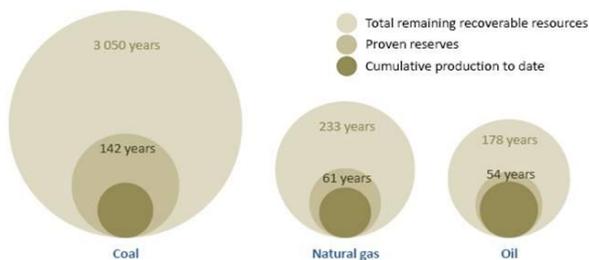
Ratio reserves to resources: 1 : 22.3

Source: BGR: Reserves Resources and Availability of energy raw materials, December 2013

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- Hard coal is also broadly available across many regions; from a geological perspective, the reserves and resources of hard coal can cover recognisable demand for many decades.

Including lignite there is a sufficient supply for over 140 years



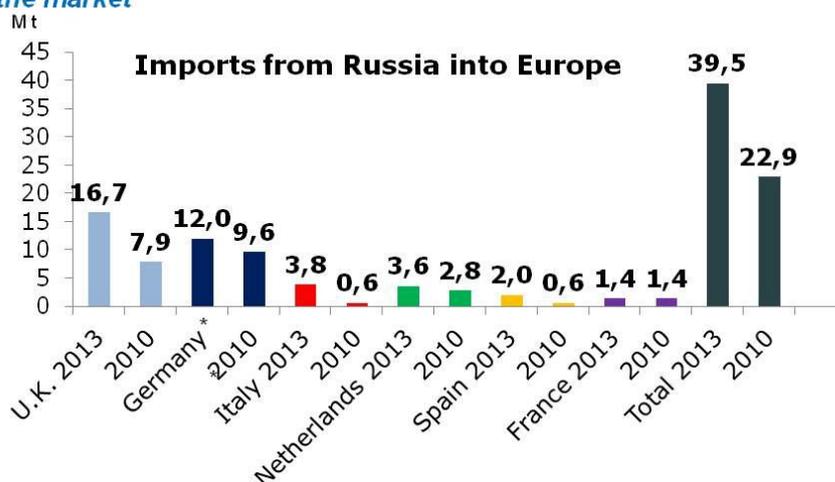
The world's remaining energy resources will not constrain the projected energy demand growth to 2035 & beyond, but large-scale of investment is required

- According to our calculations based on today's prices and costs, there are sufficient resources for about 110 years; the IEA calculations, including lignite, indicate there is enough for 142 years. Total coal reserves which can be mined would suffice for more than 3,000 years.
- The BGR also determined that coal's share of about 56% of reserves and about 89% of resources of all fossil primary energy sources means that it has the greatest potential of all of the non-renewable energy sources.
- Moreover, most of the supplier countries are in areas which are free of conflicts and tensions, and the transport channels across both Pacific and Atlantic Oceans are broadly diversified; there is also global competition among the worldwide fleets of Capesize, Panamax, Aframax or Handysize ships.

A secure supply of electric power is of the very highest priority for Germany in its position as a site of industry. Power generation from hard coal which is available at any time and the "power storage" in the form of coal stockpiles next to the power plants are guarantors for the security of power supply even during times of crisis.

Steam coal imports from Russia could be replaced from other sources (Atlantic/Pacific market) without greater disruptions of the market

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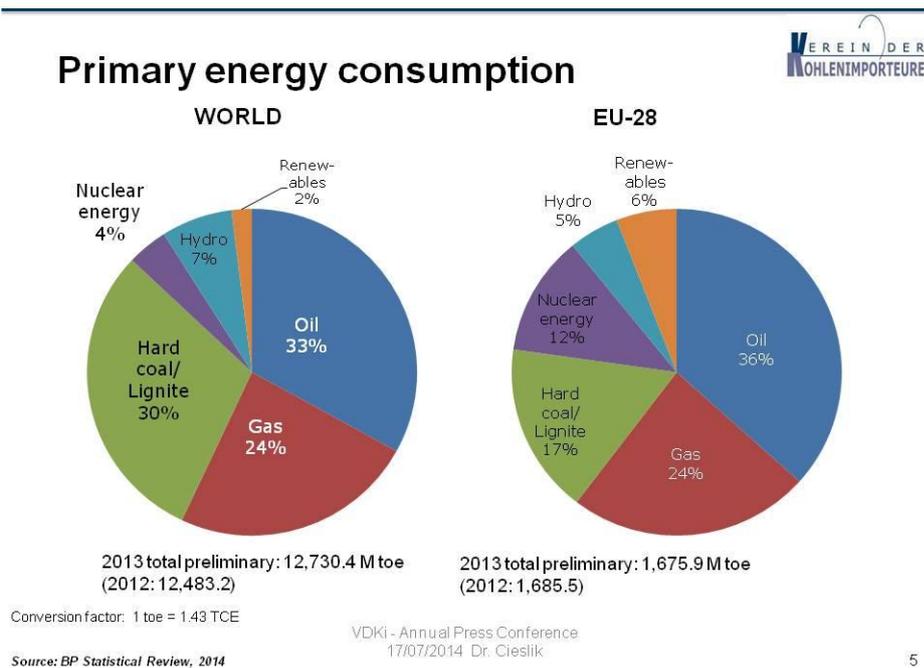
Even if Russia (theoretically speaking) were to forbid the export of coal tomorrow, this volume could be compensated by other producing countries practically overnight. According to the BGR, the USA reduced coal output by 70m tonnes (7.6%) in 2012 because of the increased supply of domestic shale gas at low prices. This is more than

the entire German annual consumption of hard coal of about 56m tonnes and more than 1.5 times the steam coal imports from Russia by the most important European import countries in 2013.

All in all, we can state that coal, with respect to the security of supplies of primary energy sources, is the source which cannot be “politically misused” worldwide because it is found in large quantities in many countries around the globe and is available at all times.

Moreover, modern hard coal-fired power plants with high efficiency are resource saving and environmental friendly especially as combined heat and power plant with fuel utilization up to 70%.

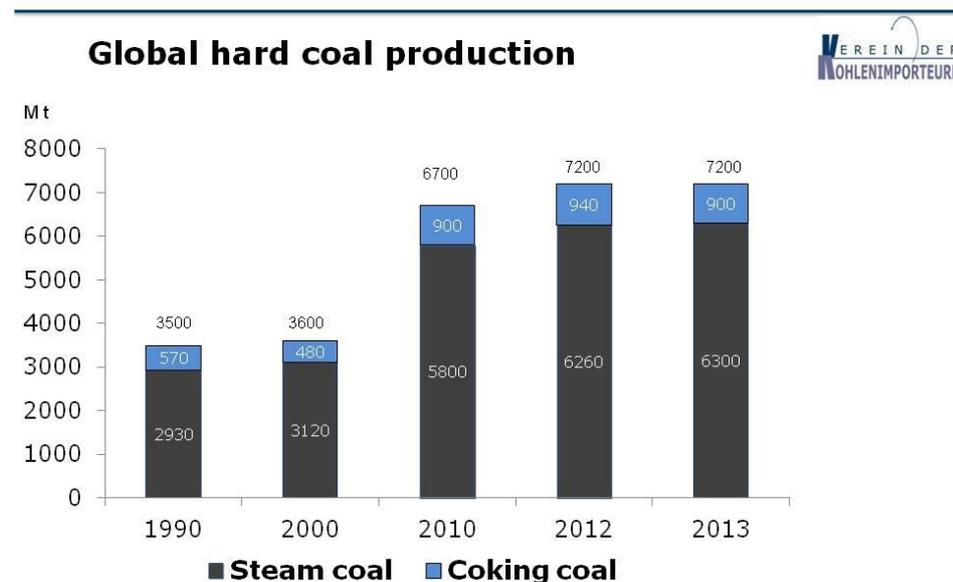
World hard coal market - 2013



According to initial estimates by BP in its “Statistical Review 2014”, global energy consumption of 12.7bn TOE (= tonne oil equivalent = 1 tonne OE = oil equivalent = 1.43 TCE) in 2013 rose by a little less than 2.3% in comparison with 2012 (12.5bn TOE). The background to this development is the low or non-existent growth in many OECD countries such as in Europe and Japan (with the exception of the USA). Coal consumption continued to increase in China (+4.4%) and India (+3.8%), on the other hand. In the OECD countries as a whole, demand again rose slightly by +0.9% for the

first time in five years. In contrast, the consumption of primary energy in the EU 27 dipped slightly by 0.6%.

While increases in global demand for oil and gas of 1.4% each were very slight, (hard) coal consumption globally once again posted the strongest increase. In comparison with 2012, there was growth of 3%. The decline in coal consumption in the USA by 11.9% in 2012 was in contrast to growth of 4.3% in 2013. Coal consumption in China increased by 3.7%, the lowest rate of growth since 2008. As of today, China is responsible for half of the worldwide coal consumption. Coal provided 30.1% of the coverage of worldwide energy consumption. In terms of the average growth rates of 3.5% over the past five years, coal is and remains the Number 1 source of primary energy in the 21st century and has been the second-most important source of primary energy in the world since 2012, surpassed only by oil. In Europe, however, estimates by the EU Commission show that primary energy consumption overall declined by 140m TCE to 2.12bn TCE, which will undoubtedly have a proportionate impact on coal consumption.





Source: VDKi, own calculations

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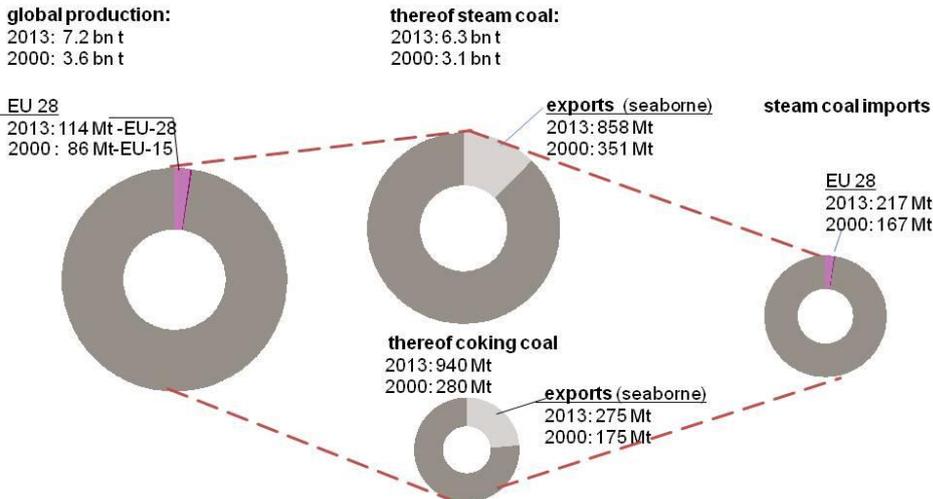
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Worldwide production stabilised in 2013 and, according to our preliminary calculations, again exceeded 7.2bn tonnes. This figure breaks down into about 6.3bn tonnes of steam coal and 0.9bn tonnes of coking coal. The slightly lower coking coal output was compensated by increased steam coal output or the use of coking coal without being washed as steam coal. BP also estimates that coal output (including lignite) grew worldwide by no more than 0.8%, the weakest growth since 2002.

The increasing demand for hard coal in the past 13 years was easily supplied by doubling the seaborne trade.



Global hard coal market 2013/2000



Source: VDKi

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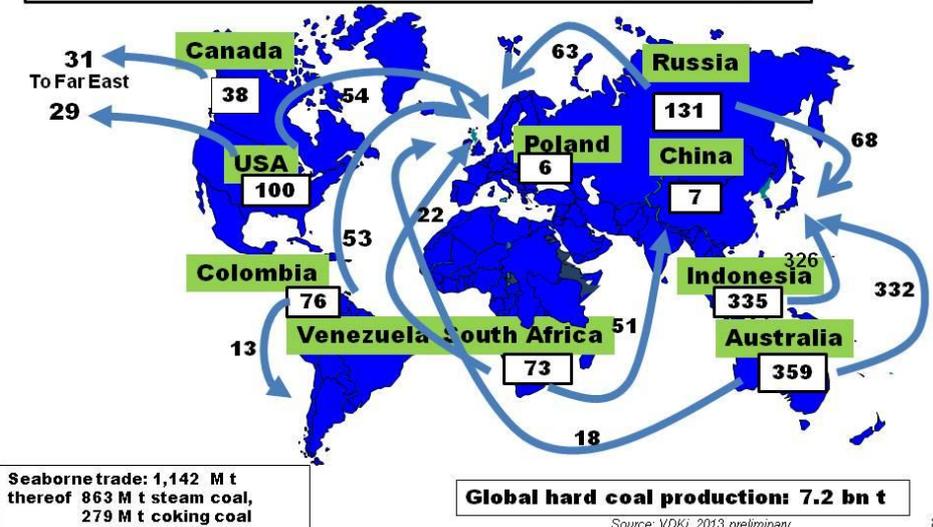
7

Between 2000 and 2013, worldwide production of hard coal doubled from 3.6bn tonnes to 7.2bn tonnes, thereof steam coal grew by more than 100% (from 3.1bn tonnes to 6.3bn tonnes) and coking coal by more than 300% (from 280m tonnes to 900m tonnes). This impressive development should also be mentioned within the context of security of energy supply.

Global trade increased, production has been stagnating



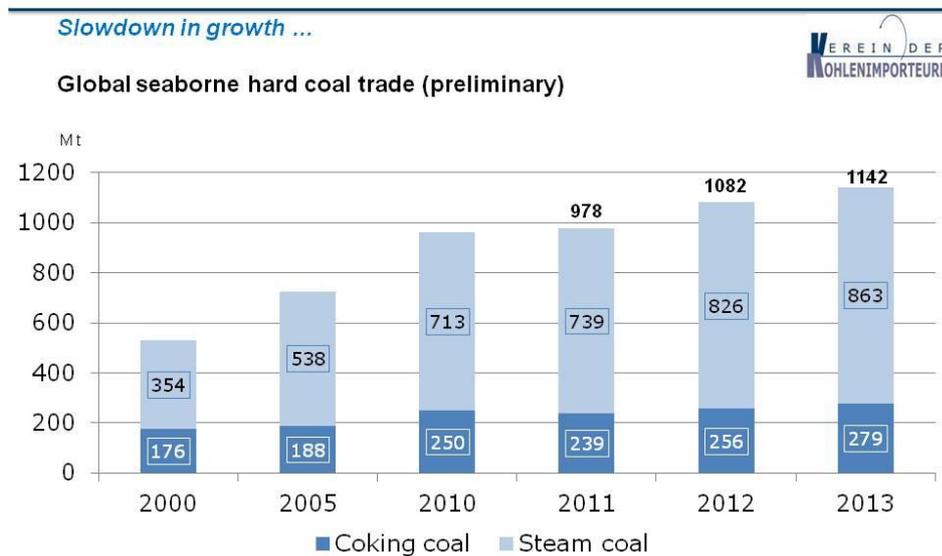
Main trade flows in seaborne hard coal trade 2013 in M t
steam coal + 4.5%, coking coal + 9%, total +5.5% (2012/2013)



Source: VDKi, 2013 preliminary

8

World trade in hard coal totalling 1,237m tonnes in 2013 represented an increase of 73m tonnes (about 6%) in comparison with the previous year. The following developments were observed in seaborne trade and internal trade:



Source: VDKi

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9

Seaborne trade increased by 60m tonnes to 1,142m tonnes (5.5%) while internal trade rose by 13m tonnes to 95m tonnes (+16%).

Seaborne trade breaks down into steam coal and coking coal trade:

- The steam coal market grew by 37m tonnes to 863m tonnes (4%);
- The coking coal market grew by 23m tonnes to 279m tonnes (9%).

The stable development of the seaborne world coal market is further evidence that today the largest producing and import nations are all to be found in the region of Southern Asia. Above all, China, India and Japan increased their procurements of steam coal and coking coal on the world market by 76m tonnes (13%) and had a decisive effect on total demand of 676m tonnes. But imports in the EU 28 also increased in total by 3m tonnes (+1.4%) to 216m tonnes in 2013. In other respects, the demand for seaborne trade in coal on the Atlantic market was distinctly more moderate.

It declined by almost 40m tonnes (17%) to 187m tonnes. The market share of the Atlantic market in the total seaborne coal market amounts to only 22% (previous year: 27%).

Outlook 2014 - international

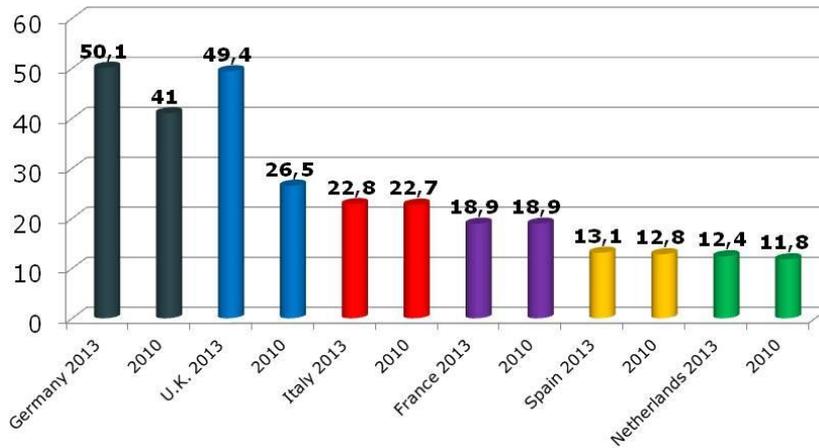
The **forecasts for world economic developments** in 2014 show an upswing. Growth of 2.2% in the OECD countries as a group and of 3.6% worldwide is expected in 2014.

Projections from the IEA show that the **demand for coal** will grow **worldwide** by an average of **2.3% p.a.** over the coming years. The pace of growth will slow down significantly from annual growth of 5.3% p.a. in the period from 2005 to 2010, but will nevertheless still reach 2.3% in the period from 2012 to 2018. The lion's share of this growth will be in the non-OECD countries, whereby China alone will be the source of more than 60% of this future additional demand.

Preliminary calculations by the VDKi for the first four months of 2014 indicate that the seaborne world market rose by just under 3% (10m tonnes) in comparison with the same period last year. Indonesia (+5m tonnes), Australia (+13m tonnes) and South Africa increased exports particularly strongly, while the USA (-5m tonnes), Venezuela (-2.4m tonnes) and Russia (-1m tonnes) cut back their exports.

Demand for electric energy continues to grow on the Asian market, but, **for one**, the pace is no longer as frantic as in previous years, and, **for another**, it is no longer being covered exclusively by the use of coal to generate power. Large hydroelectric plants as well as wind farms and solar parks have been installed in China, and emphasis in the future will be on the use of gas for power generation in densely populated urban areas on the east coast as a means of reducing air pollution from industry and old power plants which do not have flue-gas cleaning equipment.

...but increased in EU-28 between 2010 and 2013.
EU-28 – Hard coal imports of selected countries 2013 : 2010 in M t

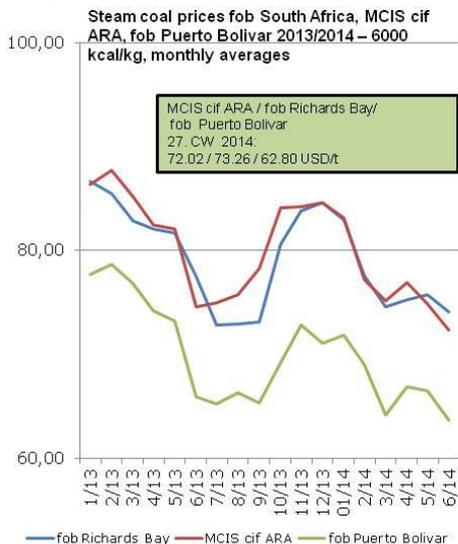


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10

Europe currently has large surpluses. The effect is heightened by the continued expansion of renewable energies in Germany, Spain, Italy and the UK, reducing the hours of full load operating everywhere and consequently the coal demand for hard coal-fired power plants. The mild winter and the ever smaller gap for coal-fired power generation between the clean dark spread and clean spark spread will presumably lead to lower coal imports to Europe.

Coal prices in free fall: A sufficient supplied market meets a moderate demand and shale gas further displaces coal for power generation in USA



	Development of (spot-) prices in US\$/t of important supplying countries ¹⁾ - 6000 kcal/kg		
	01.01.2013	31.12.2013	01.07.2014
Atlantic suppliers:			
Richards Bay fob	89	85	73
Bolivar fob	80	69	63
Russia (Baltic) fob	84	78	67
Pacific suppliers:			
Newcastle fob	92	85	70
South China cfr	96	94	78
Russia (Far East) fob	94	90	72

Sources: McCloskey and other

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11

Price developments: A surplus in supply meets moderate demand

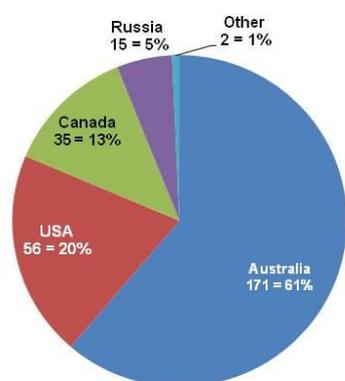
Developments in which a worldwide surplus in the supply of coal runs into demand which is not growing fast enough began in 2011, and the trend continued in 2013. Prices remained under pressure in 2013 as a result. From October 2013 to today alone, prices for steam coal fell from US\$89/tonne to US\$72/tonne, about 20%.

Where is this surplus supply of steam and coking coal coming from?

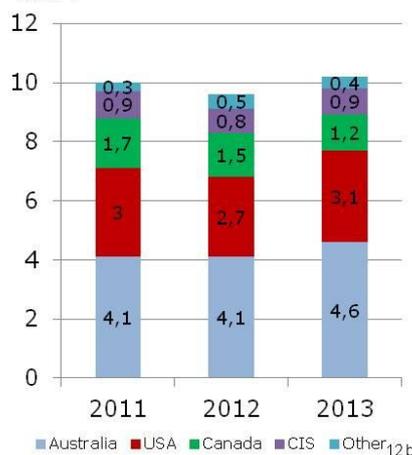
The high coal prices of the last ten years caused exploration activities to intensify; new coal projects began operation or existing production facilities in many countries were expanded. Since demand was rising rapidly at the same time, supply and demand proceeded in step, and demand in the Asian region was even greater than supply. Additionally US exports have also increased substantially since 2012 because of the described difficulties in selling on the domestic market, but demand has not risen significantly at the same time. It led to mine closures in the USA and Australia in 2012 and 2013, but there has been no noticeable slowing of the downward spiral for prices as a consequence of such actions.

Coking coal and coke

Shares of coking coal in seaborne trade
2013 = 279 M t



German coking coal imports by origin
in M t



12 a

■ Australia ■ USA ■ Canada ■ CIS ■ Other_{12b}

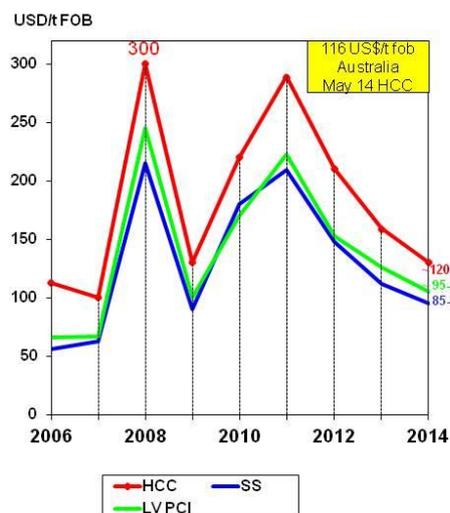
Worldwide crude steel production in 2013 reached the level of 1,607 million tonnes, a new record. The increase by 3.5% (59m tonnes) occurred mainly in Asia (+6%) and in the Middle East (+2.5%). Crude steel production in Europe, North and South America, Russia and Korea declined by between 1.8% and 4.4%. The pig iron production decisive for the consumption of coking coal, PCI coal and coke increased by 52m tonnes (about 5%) to 1,164m tonnes.

With the exception of Australia, there have not been any fundamental changes in the supplier structure on the seaborne coking coal world market, which grew by 23m tonnes to a total of 279m tonnes in 2013. Australia's market share increased by 8 percentage points and has now reached the mark of 61%. The USA again lost market share to Australia and now holds a share of 20%.

Worldwide coke production in 2013 rose by 36m tonnes (5.4%) to 685m tonnes. The coke world market, however, of 17m tonnes and a share in worldwide coke production of 2.5% is only a very small market.

Prices

Coking coal market and Bulk carriers: Both are characterized by overcapacities
Coking coal prices



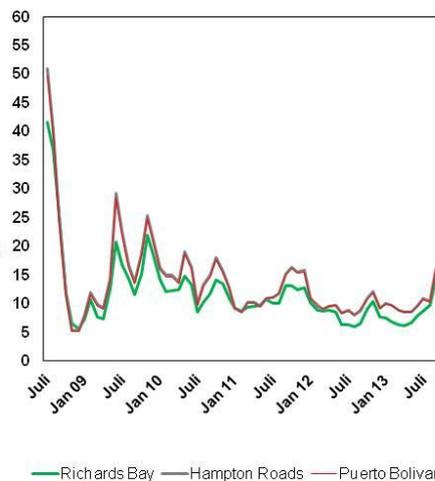
Source: VDKi
- own calculation

13 a

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**Spot freight rates
(capsize) -> ARA ports in USD/t**

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13 b

The slump in coking coal prices continued in 2013. Both coking coal and coke prices declined in 2013 because of the general slump in demand accompanied by a simultaneous expansion in supply.

While prices between US\$160 and US\$165/tonne were still being paid for coking coal at the beginning of 2013, this level had decreased to less than US\$135/tonne by the middle of 2013. Prices recovered for a short time after this, but then fell back to US\$138/tonne at the end of 2013. This development continues to hold sway in 2014; as of the middle of May 2014, spot prices for HCC quality had fallen to US\$116/tonne.

When the export tax expired per 01/01/2013, the price for a tonne of coke ex China fell precipitously from about US\$400/tonne to US\$275/tonne before swinging back and forth between US\$245/tonne and US\$255/tonne during the further course of the second half of 2013.

In 2013, the import of coking coal to Germany increased to 10.2m tonnes, 6% more than in 2012 (9.6m tonnes). Primary supplier countries for Germany are Australia and North America.

Freight rates

Freight rates continue to remain at a low level because of the ongoing overcapacities of bulk goods carriers. They ranged - ignoring seasonal short-term changes - between US\$8 and US\$15/tonne for the route South Africa-ARA during the past year.

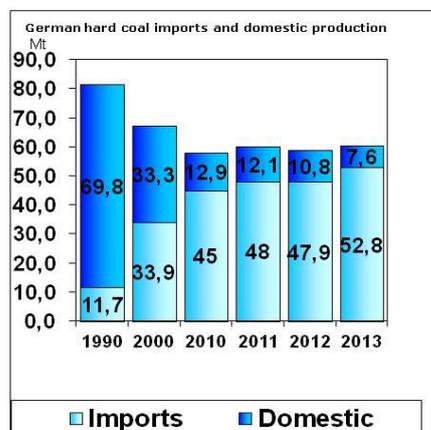
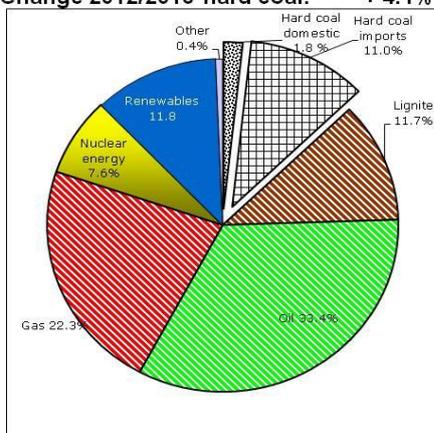
Germany

Declining German hard coal production ...

Primary energy consumption Germany 2013: 474.5 MTCE

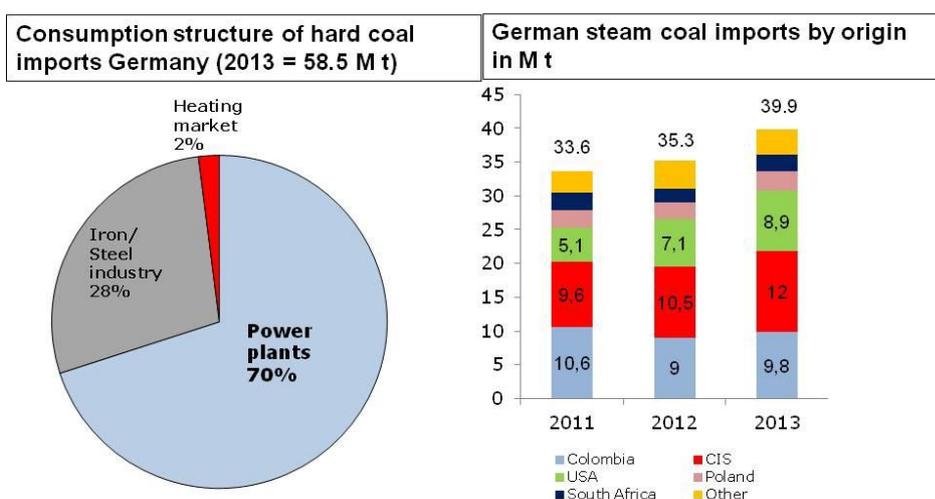
Change 2012/2013 PEC total: + 2.5 %

Change 2012/2013 hard coal: + 4.1%



In 2013, the demand for primary energy was about 475m TCE. This represents a rise by 9m TCE (2.5%) to a new high of the past five years. The demand for domestic German and imported hard coal, on the other hand, rose by 2.4m TCE (4.1%) to almost 61m TCE in 2013. About 86% of the demand for hard coal was covered by imports; domestic coal today covers only about 14%. Total imports of hard coal and coke came to 52.8m tonnes in 2013, an increase by 4.9m tonnes (10%) over 2012.

...meets increased demand for power generation from hard coal for export



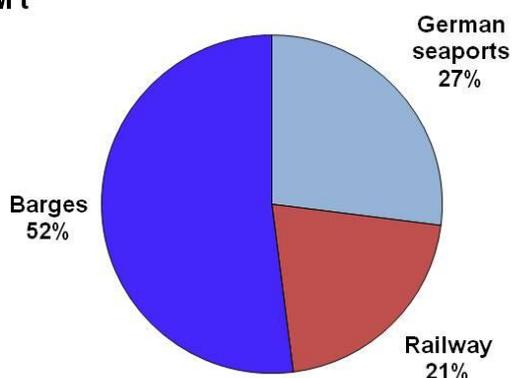
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15

Most of the hard coal sales go to power plants as the dominant buyers (71%; previous year 66%) and the iron and steel industry (26%; previous year 30%); the heating market (4%) plays only a subordinate role. One observation regarding steam coal is that Russia, Colombia and the USA basically cover the import demand, while the role played by South Africa is less significant.

Considering all of the products - steam coal, coking coal, coke - Russia, the USA and Colombia were Germany's most important partners in 2013. The USA in particular strongly increased exports to Germany because of the declining domestic demand and was forced at times to grant high discounts on the current world market price for coal with high sulphur content. Rising gas prices in the USA and the harsh winter 2013/2014 have brought about changes in this situation in that it has become possible to sell larger quantities again at better prices to power plants on the domestic market.

**Transport routes of imported coal
in Germany
2013 = 52.8 M t**



Quelle: VDKI, destatis

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16

The approximately 53m tonnes of imported coal were supplied to end consumers via

- inland waterway vessels (52%),
- German seaports (27%),
- rail (21%).

Inland navigation is of enormous importance for logistics, transporting almost 27.5m tonnes of hard coal. This corresponds to about 11,000 ship transports a year and clearly highlights the importance of coal imports for German inland navigation and vice-versa. Poorly maintained locks or the failure to dredge navigation channels hinder the deliveries to power plants and to the iron and steel industry. This is the grounds for our appeal to provide the necessary funds for maintenance and expansion of the canals in sufficient scope in the federal or state budgets.

One price element in the steam coal business is related to the prices for CO₂ certificates, even though they have lost some of their importance because of their level. Despite the withdrawal of 900 million certificates by the EU Commission for the new trading period from 2013 to 2020, prices for the trading years to 2016 are fluctuating between €5 and €7/tonne CO₂.

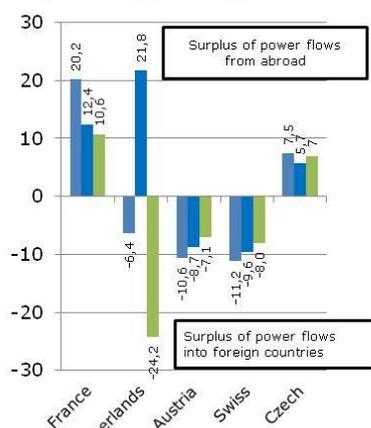
Share of power generation using hard coal rises to 19.5% - balance of power exchange in 2013 reaches a new record mark of 34 TWh

Germany's balance of cross border exchanges of power by partner countries

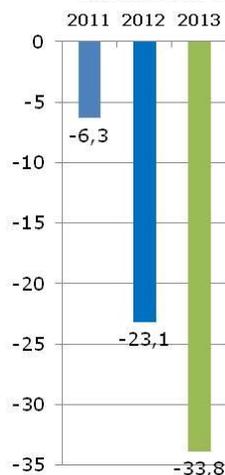


Power flows in bn kWh

■ 2011 ■ 2012 ■ 2013



Balance in total



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Source: Figures: BDEW/AGEB

17

Power generation from hard coal-fired power plants rose substantially in 2013 thanks to the favourable price situation in comparison with gas and the very low CO₂ certificate prices in European emission trading. Hard coal-fired power plants supplied 124 TWh of electric power, about 8 TWh (approximately 6.5%) more than in the past year, giving hard coal a share of more than 19% in the energy mix in 2013. On the other side, substantially less natural gas was utilised for power generation and room heating (-12.6%). The share of gas as an energy source for power generation declined from 12.1% to 10.5%. The primary reason for the increase in power generation is the greater exports to neighbouring countries and to England via the Netherlands because higher wholesale prices can be realised there. However, the consumers of German power abroad do not pay an EEG levy, so Germany is indirectly subsidising industry power abroad.

The price advantage of coal over gas in the clean dark spread in recent years has fluctuated between €15 and €25 per MWh. However, this difference favouring hard coal must not be allowed to obscure the fact that the revenues from power generation are inadequate for profitability because of the artificially low prices on the EEX and their unfair competitive advantage created by the priority feed-in of renewable energies,

especially from photovoltaics which have marginal costs of zero and are compensated separately pursuant to the EEG. A hard coal-fired power plant which is about ten years old has generation costs in the neighbourhood of €50/MWh; a plant which is 30 years old has costs of about €60/MWh. Both power plants receive as little as €35/MWh for the base load power during the front year.



Outlook 2014 Hard coal imports into Germany 2013/2014

	2013 M t (preliminary)	2014 Outlook M t
Steam coal	39.9	37.0
Coking coal	10.2	11.0
Coke	2.7	3.0
Total	52.8	51.0

Source: VDKI

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18

Outlook 2014 - Germany

According to information from the German Steel Federation, steel production in Germany rose by 4% during the first half of 2014 in comparison with the previous year. This indicates a stable upward trend, although the world market as a whole is characterised by overcapacities. The prices for coking coal and coke have consequently continued to fall. The spot price for HCC quality FOB is currently about US\$115/tonne.

We are cautious when it comes to steam coal. Although our provisional calculations show that imports of steam coal have risen by 3.3% and imports for coking coal are in a slight decline, we expect imports for the whole year to tend more in the direction of stagnation or slight decline. During the first four months of 2014, power generation from hard coal-fired power plants fell by 16%. The sunny and windy weather of the year so far has favoured power generation from renewable energies to the detriment of hard coal.

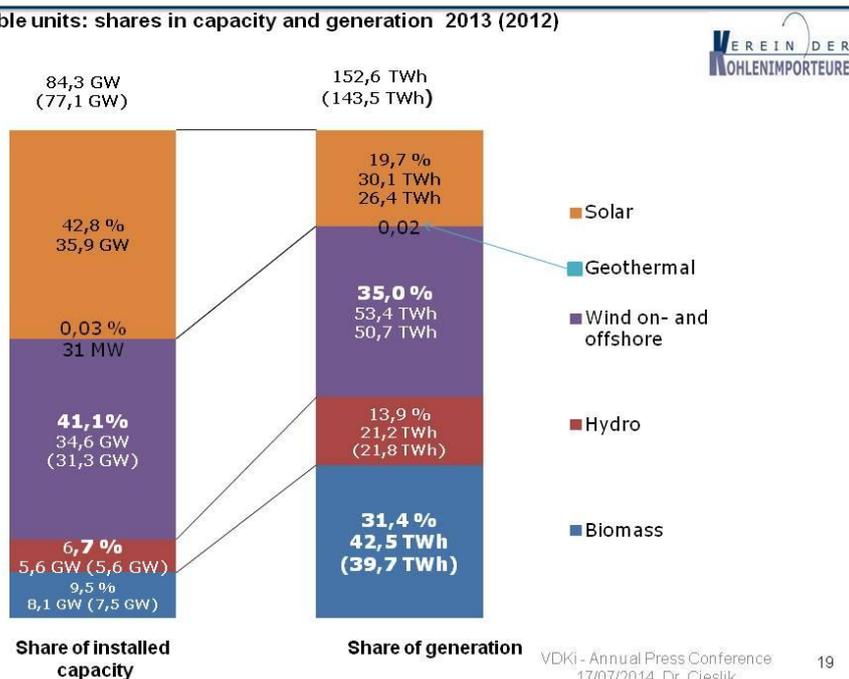
About Point 3: Energy policies

Let us now turn to some of the issues related to energy policies.

Three years ago, the coalition of CDU/CSU/FDP governing at that time called for an acceleration of the energy turnaround. During the realisation of this project, which in the long term ultimately aims at a complete restructuring of the entire system for energy supply, the supply of electricity continues to be at the centre of attention.

Consequently, energy and environmental policies in Germany remained focused on the “energy turnaround” during the general election for the German parliament (*Bundestag*) of 2013. The expansion of renewable energies has progressed to the same degree as the increase in the subsidies in the form of the EEG levy.

Renewable units: shares in capacity and generation 2013 (2012)



For the first time ever, more than one-fourth of the total gross electricity consumption was provided from renewable energy sources (152 billion kWh, over 25%). As of the end of the year, 34,660 MW in wind energy output, representing 35% of the power consumption generated by renewable energies, had been installed in Germany. Installations of photovoltaic systems with a total output of 36,000 MW represent almost 43% of the total installed output of renewable energies. But their contribution to renewable power generation is less than 20%; this causes both a decline in wholesale

trade prices for power on the EEX and a detrimental decline in the full-load operating hours of hard coal-fired power plants.

In their annual assessment, the “Five Wise Men” noted that the “large-scale project” of the energy turnaround is currently being conducted “without a coherent overall concept”. The key national concern of major proportions for this Council of Economic Experts is the “question as to how the costs for the further construction of renewable energies can be minimised and how the future electric power market design can be defined so that the capacity of construction and maintenance of conventional power plants can be assured as well”.

The EEG levy rose by 1.685 eurocents/kWh to 5.277 eurocents/kWh in 2013, and the total burden on electricity prices increased by €6.2bn to more than €20bn. The levy has been increased to 6.24 eurocents/kWh for 2014, a total charge of €23.59bn. Calls for a cap on the levy are becoming louder.

The bill for the reform of the EEG was adopted by the Bundestag and Bundesrat shortly before the parliamentary summer break. The coalition concept featuring an expansion corridor for renewable energies, the step-by-step reduction in subsidies, the integration into the domestic and European power market and the obligatory direct marketing and tender procedures for new renewable energies from 2017 on to provide better control are steps in the right direction. But it is uncertain whether this will be adequate, and it remains to be seen whether the many interested parties will once again dilute the concept during the further course of parliamentary procedures. For our part, however, it is absolutely clear that the positive declaration in the coalition agreement that **conventional power plants will be “indispensable as a part of the national energy mix for the foreseeable future”** has not yet been realised in any concrete political action. The subject of capacity markets, which the German Federal Economics Minister intends to address once the EEG reform has been concluded, is being hotly debated by politicians and academics, and the hurdles established by the EU Commission in its guidelines are also very high.

We believe that a regulatory framework which will ensure profitable operation of hard coal-fired power plants in the long term as well is urgently required to

secure the power supply and the affordability of electric power and to ensure successful realisation of the energy turnaround.



Development of fuel, CO₂ and electricity prices 2005 - 2013



¹⁾ CO₂ price towards 0, as not any banking, and transfer of allowances, to the following period possible.

²⁾ estimated assumed efficiency for the calculation of fuel costs and CO₂ prices: 38%

Sources: AG Energiebilanzen e.V., VIK, own calculations; status: 20/02/2014

VDKI - Annual Press Conference
17/07/2014, Dr. Cieslik

DEBRIV
Bundesverband Braunkohle

³⁾ estimation VDKI

20

At this time, power plants are unable to generate enough revenues to cover expenses. The contribution margins are becoming increasingly slim and not sufficient to cover the full costs. The consequence is that all of the energy provider companies in Germany which use coal for power generation are suffering substantial distress from the economic impact of the energy turnaround although they are the ones who make it at all possible to balance the fluctuating feed-in from renewable energy sources.

That is why many utility companies had applied to the German Federal Network Agency for the operational shut-down of power plants in a magnitude of 7,740 MW (4,550 MW from hard coal-fired plants) as of 24/06/2014. There are plans to mothball even more plants and to cut back on personnel overall. Moreover, energy-intensive industries in Germany are also burdened to a substantial degree by the growing government charges and the compromise reached with the EU Commission for an increased EEG levy in the future. The risk that energy-intensive industries will take advantage of reinvestment opportunities as a time to leave Germany is becoming manifest.

The political establishment must act **immediately** to prevent a situation — in the near future - in which the conventional capacities required to ensure the power supply are

lacking because of the shut-down of plants. If politicians are not willing to believe us, perhaps they will give more credence to the International Energy Agency.

During its presentation of the IEA World Energy Investment Outlook at the beginning of last month (03 June), the Agency issued a message in words to the following effect:

- Over the past decade, four-fifths of European investments in new power generating capacities have been devoted to renewable energies, of which 60% has gone to wind farms and PV systems.
- Europe needs investments of US\$2.2 trillion by 2035 for the replacement of ageing or obsolete infrastructure and the achievement of climate protection targets.
- Output of 100,000 MW in new thermal power plants will be required **before 2025** if the security of power supply is to be guaranteed.
- But these investments are not being made in the current market conditions; according to the IEA, wholesale trade prices for electricity are 20% (or US\$20/MWh) below the full costs. Let us modify this: in Germany, the prices are US\$30 to US\$40/MWh below the full costs.

Messages of this nature should be a wake-up call for politicians and encourage them to take the appropriate political action. We will have to work indefinitely with 2 systems as we strive to secure the supply of electric power.

First: We currently have 86 GW of conventional power plant output which is available for more than 90% of the year. Of this capacity, 9 nuclear power plants with output of 12 GW produce 15.4% of the total gross power generation. This output will gradually go offline between now and 2022.

Second: Alongside the conventional system, renewable energies are being expanded especially strongly and had exceeded the mark of 80 GW by the end of 2013. But demand for power in Germany generally fluctuates between 40 and 80 GW.

Since power generated by PV systems and wind farms is available only when the sun shines or the wind blows, power generation which can be called up at any time such as that from hard coal-fired power plants is indispensable to ensure the supply of power.

We know this, you know this, the business world knows this, the relevant institutes and associations in the energy sector know this. Ultimately, politicians and the ministries know it as well. But they are not acting on the basis of what is required by laws of physics or what would be necessary for reasons of energy business; their actions are governed by political opportunities. This is a major source of concern to us.

Ladies and gentlemen,

The coming months could determine the fate of long-term power generation using hard coal in Germany. If it is not possible to gain control of the risks now, we will all be facing enormous problems. The utilities and the network operators will no longer be up to the task of securing the supply of power. We are appealing to the German government and everyone in positions of political responsibility to establish conditions to secure reasonable compensation for the provision of hard coal-fired power plants which are available at any time as long as these plants make the key contribution to securing renewable energy generation and consequently to the success of the energy turnaround.