



# Annual Report 2012

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## Message from the President Dr.-Ing. Hartmuth Zeiß



Dr.-Ing. Hartmuth Zeiß  
President of EURACOAL

2012 was another good year for coal. It was the No. 1 fuel for power generation in the European Union and remained our most economic and secure source of electricity. The men and women who work in our industry – almost one quarter of a million – can be proud of the contribution that they make to society. Reliable energy is fundamental to our modern society. Sadly, energy supply is taken for granted, except in times of crisis. EURACOAL members developed well-crafted positions to promote a rational debate in Brussels. Our pragmatic solutions to the climate and energy challenge would allow a balanced and affordable energy mix, reducing energy supply risks. Yet, all too many policy makers turn a blind eye towards coal, preferring to imagine a green revolution.

More than climate and energy policy, the euro crisis continued to dominate EU politics during 2012 – politicians everywhere struggled to find durable measures to restore economic growth. Austerity measures proved to be unpopular, especially given that energy prices remained stubbornly high. The boost given to the US economy by cheap shale gas is not likely to be mirrored in the European Union, with important Member States against its exploitation. Instead, the concept of “green growth” is promoted, nowhere more so than in Germany where “Energiewende” has joined a handful of German words – from angst to zeitgeist – to become part of the English language. The costs of the German energy transition, already high, are likely to become higher still because the unit costs of electricity are not falling, but rising as more wind and more PV are commissioned. Thankfully, Germany still has the capacity to generate almost half of its electricity needs from coal and lignite. Following the closure of 8 GW of nuclear plants in 2012 and with gas prices so high and subsidised renewables increasingly distorting the merit order such that even the newest CCGT plants are lying idle, coal and lignite have enjoyed the coveted base-load market. In 2012, coal and lignite production grew by 4% in Germany with the opening of large new generation units at Boxberg and Neurath.

Elsewhere in Europe, we witnessed a similar situation: coal was preferred over costly gas; the costs of new nuclear escalated; and the cost burden of renewables became clearer. However, this good news was not universal. Imported coal did particularly well: the relatively high coal prices enjoyed from 2007 to 2011 are history and domestic producers are finding it harder to compete. In Poland, domestic coal stocks rose sharply and yet the country continued to import coal. In Greece, lignite has displaced expensive natural gas for power generation and, in Hungary, households have turned to solid fuels for heating.

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## UNFCCC COP-18 at Doha, Qatar

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At the 18th Conference of the Parties there was no great progress, despite a record-breaking 36-hour final session in Doha. Since the first United Nations Framework Convention on Climate Change (UNFCCC) was held in Rio de Janeiro in 1992, CO<sub>2</sub> emissions have increased by more than 40%. Neither the Kyoto Protocol nor EU climate policy have had any discernible impact on this trend. Moreover, Canada has withdrawn from the 1997 Kyoto Protocol and many other parties are not willing to bear the burdens of further emission cuts under any post-Kyoto agreement.

The Doha conference was always portrayed as a transition, to make progress towards a new legally binding instrument, as agreed in Durban in 2011. Perhaps the biggest achievement was that all countries would be involved in the negotiations on the same footing: there would be no distinction between developed (or industrialised) and developing countries.

Extreme weather events continue to be linked to climate change. Few now question the science of climate change, but all agree that action to date has had little or no impact on rising emissions. The Intergovernmental Panel on Climate Change (IPCC) argues that a 2°C temperature rise will be exceeded if CO<sub>2</sub> emissions do not peak within this decade.

The fact remains that climate change is occurring and that adaptation to its impacts will be required. Hence, those countries most at risk are looking for assistance. The concept of “loss and damage from climate change” was debated in Doha, with financial aid and technical support for the most vulnerable countries. The term “compensation” was not used because that would imply legal liability.

Climate finance was also on the agenda. Industrial nations had previously pledged to secure \$100 billion by 2020 in public and private finance to help poor countries. Only a few – including the UK, Norway and the European Commission – have made concrete pledges. This transfer of wealth in difficult economic times will continue to be a sticking point in negotiations.

On the Kyoto Protocol, the EU, Norway, Switzerland, Australia, Belarus, Kazakhstan and Ukraine agreed new targets. A second Kyoto commitment period – lasting 8 years to 2020 – was agreed in the hope that a new agreement will be negotiated by 2015. It would come into force by 2020. Poland, Russia and certain FSU countries were wary of giving up their surplus assigned amount units (AAUs) – the so-called “hot air” from the collapse of heavy industries in these countries during the 1990s. In the end, a deal was done within the EU delegation whereby Poland will not have to cancel its unused AAUs, but will have to limit how it uses them.

The next three years of negotiations will be the hardest in the 20-year history of climate talks. The world has changed enormously since 1992, when the UNFCCC treaty was signed, and even since the 1997 Kyoto Protocol. China was classed then as a “developing country”, and although it still has about 60 million people officially living in poverty, it is also an emerging economic world power and has surpassed the US as the world’s biggest CO<sub>2</sub> emitter. Thus, hanging on to its developing country status and preserving the classification of 1997 will continue to block progress towards a global consensus.

Whilst Poland will host COP-19 at the end of 2013 in Warsaw, it continues to attract criticism for its pro-coal position on climate and energy. It is questionable how much longer other Member States can continue to hide behind Poland and whether they should not rather explicitly support a more balanced approach to climate and energy policy in the EU, one that recognises the global nature of the climate challenge. This challenge cannot be solved by the EU acting alone. Part of the solution lies in affordable clean coal technologies – an area where the EU can and, indeed, must show global leadership.

## Message from the President

Against this backdrop of rising coal use, EU climate and energy policy faces deep challenges. The agreed 20-20-20 targets for GHG emission reductions and renewables are likely to be met by 2020, but any future targets will be much more difficult to deliver. This is because all of the low-carbon options now look to be more expensive than hoped. Natural gas is increasingly imported, with expensive LNG meeting marginal demand. Pipeline gas supplies are resolutely linked to oil prices – yet gas competes against coal, not oil. For many reasons, the capital cost of nuclear far exceeds estimates made just a few years ago. Renewable energy sources are becoming more expensive, not less, possibly because most subsidy schemes have not sufficiently encouraged economic efficiency. Carbon dioxide capture and storage (CCS) has not developed as quickly in the EU as ministers had hoped back in 2007 when they agreed to support 10-12 demonstration projects. The economic crisis saw Member States rein in their spending and CCS projects suffered, despite money on the table from the EU. Like other low-carbon technologies, CCS is expensive, but the EU must move ahead quickly with the promised demonstration of this important technology. If we don't, then we have little to offer the rest of the world as it turns increasingly to coal for competitive electricity generation. Taking such a pragmatic approach could also contribute to ending the stalemate of current UNFCCC negotiations (Box 1, page 4).

Throughout 2012, debate in Brussels focussed on short-term measures to prop up the carbon market. The EU Emissions Trading Scheme is the EU's flagship climate policy instrument, but is now criticised for being ineffective – because it is not stimulating new investment in low-carbon technologies. EURACOAL actively spoke up to preserve the principles of carbon trading. The EU Emissions Trading Scheme was designed as a market-based instrument that delivers agreed targets. Many now say it is not delivering a high enough carbon price, but this was never its objective. Indeed, the politically agreed CO<sub>2</sub> reduction targets will be met at a low carbon price which is a good outcome. EURACOAL claims the moral high ground because a market-based system must remain just that: policy makers set a target and the market delivers that target. Carbon prices are low today because many parts of the EU economy are in recession and demand for allowances has slumped. I draw a link here between the cost of natural gas in Europe, the state of the carbon market and the position of certain stakeholders. There is a view that higher carbon prices are the only way to encourage fuel switching from coal to gas. Fuel switching reduces emissions in the short term, but not by enough to meet the emissions reductions proposed for 2050 (i.e. the complete decarbonisation of the electricity sector). EURACOAL does not believe that the carbon market needs to be manipulated in favour of gas. If the gas industry wants a greater market share, then it should work through the market and reduce the price of its commodity and not take refuge with regulation. Indeed, it would be an odd situation if the EU ETS became a crutch for the prosperous gas sector. Aside from that, we do agree that support is needed for new low-carbon technologies. Fairer and broader support mechanisms would see a range of new technologies enter the market, including CCS.



1 – Związek Pracodawców Górnictwa Węgla Kamiennego (Polish Hard Coal Mining Employers' Association) honours EURACOAL with "Oskardy" award - Presented by ZPGWK President, Dr. Mirosław Kugiel, at Bytom Opera, Poland and awarded to EURACOAL "for versatile and creative activities for the development and shaping of the modern image of the coal industry"

## Commissioner for Energy on coal and CCS

Commissioner Günther Oettinger addressed MEPs at a dinner debate on 30 May in the European Parliament where he referred to the Energy Roadmap 2050 and made comments in relation to coal:

“We need CCS for new power plants in 2030 at the latest [with successful CCS projects in this decade].”

“We need to work for CCS more urgently.”

“With CCS even coal can become a low-carbon source!”

“Without CCS, coal- and also gas-fired power plants will not be compatible in the long run with our climate objectives, yet these energy sources are of crucial importance for many Member States.”

“Can we deprive these Member States of using their domestic energy resources? How will they cope with the transition of the energy system unless clean coal technologies are in place?”

“CCS is therefore a much needed option, not only for power generation, but also for heavy industries, and some say, even for climate policy in general.”

“Just think about the world demand for coal, and the worldwide markets for CCS that will open up.”

Commission européenne  
European Commission

## Message from the President

The publication in December 2011 of the Energy Roadmap 2050 by DG Energy was a significant development. EURACOAL discussed this roadmap internally and agreed a response: a short position paper and a longer piece in our Annual Report 2011, both of which were widely circulated to stakeholders. The roadmap framed debate throughout 2012 (Box 2, page 6). We welcomed the Commission's technology neutral approach to decarbonise the energy system, with energy mixes largely determined by Member States, providing EU targets are met. These positive messages mean that Member States are free to follow a path that includes coal in their fuel mix, and that CCS can have a role in the longer term. EURACOAL will continue to push for fair market conditions in which coal and lignite can compete on their major strengths of competitiveness and reliable supply.

To encapsulate our thinking on the future, EURACOAL re-launched A Strategy for Clean Coal in 2012 during the 3rd European Coal Days (Box 3, page 8). In our vision, energy efficiency at power plants plays a much more important role than in most political debates and scenarios, with CO<sub>2</sub> capture and storage being a long-term objective. The three steps that we propose are pragmatic and achievable, covering energy efficiency at coal-fired power plants, the next generation of coal-fired power plants and finally the demonstration and deployment of CCS. The first of these steps can be taken today and it is mystifying why policy makers ignore the potential of replacing old and less efficient power plants across Europe with new state-of-the-art plants that can reduce emissions by up to 40%. In contrast, the Commission links the future of coal so tightly with the deployment of CCS that we risk becoming trapped by unrealistic policies, effectively locking in old assets and preventing investment in rejuvenating our capital stock.

**2 – 3rd European Coal Days: dinner debate “Coal: the global picture”** - Former President of the European Parliament and Vice Chair of the European Energy Forum, Prof. Jerzy Buzek (left) chaired a dinner debate in the European Parliament at which EURACOAL President Dr. Zeiß (centre) presented his vision for coal in the EU whilst Mr. Alastair Grant (right), Senior Advisor to PT Adaro Energy, gave his personal account of how coal mining in Indonesia had transformed people's lives for the better.



# A strategy for clean coal – three steps to a sustainable future

Coal – the world’s most abundant fossil fuel – is secure and competitively priced. It offers cost stability, especially for power generation. Today, the use of coal is growing faster than any other energy source, nowhere more so than in industrialising countries. In the EU, 27% of our electricity comes from coal: locally mined coal and lignite, plus imported coal from many countries. Coal mining in the EU cushions our growing dependence on imported fuels, provides 220 000 jobs and generates much-needed wealth by supplying fuel worth € 27 billion annually. Looking to the future, coal will remain indispensable as global energy demand rises. In response, the EU must show leadership in the sustainable use of coal and EURACOAL proposes a three-step strategy:

1. Introduce state-of-the-art technology across the EU coal-fired generation sector to boost efficiency and reduce emissions.
2. Develop the next generation of high-efficiency flexible technologies for coal-fired electricity generation.
3. Demonstrate and deploy CO<sub>2</sub> capture and storage at coal-fired power stations.

## EFFICIENT CLEAN COAL – MORE ELECTRICITY FROM LESS COAL:

- CO<sub>2</sub> emissions are lowered by up to 40%.
- Less coal is needed to produce each unit of electricity.
- A single power station can meet the needs of more people.
- Coal reserves will last longer.

## FLEXIBLE CLEAN COAL – COMPLEMENTING RENEWABLES:

- Whatever the weather, coal-fired power is there to keep the lights on 24/7.
- Flexible coal-fired power plants provide essential grid services and backup capacities for renewables: “clean coal” is also “smart coal”.

## CO<sub>2</sub> CAPTURE AND STORAGE – TOMORROW’S TECHNOLOGY PROVEN TODAY:

- The technologies to capture and store CO<sub>2</sub> are proven at large scale.
- Demonstration at coal- and gas-fired power plants is the next step.
- CCS will cap carbon prices at affordable levels.
- CCS is a “must have” if the rise of global CO<sub>2</sub> emissions is to be stopped.

## NEXT STEPS FOR POLICY MAKERS:

- have belief in markets, not dirigiste central planning;
- encourage what is possible today – power plant modernisation and renewal;
- prepare for what will be possible tomorrow – R&D;
- plan for the day after tomorrow – the deployment of CO<sub>2</sub> capture and storage;
- set clear long-term targets and refrain from making short-term interventions; and
- invest in CO<sub>2</sub> transport infrastructure so that CCS can deliver its potential.

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## Message from the President

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Horizon 2020, the next EU framework programme for research and development, has an important role to play in supporting R&D for tomorrow's coal-fired power plants. EURACOAL and other associations in Brussels worked hard to persuade MEPs of the need to amend the Commission's proposals which largely ignored fossil fuels. For the day after tomorrow, we need CCS and a new impetus is needed. EURACOAL presented an "infrastructure-first" approach to the Director-General for Energy in the summer and to parliamentarians in the autumn. CCS is a topic that we are sure to return to in 2013 because it is so important for the future of all fossil fuels: coal, oil and gas. A new Commission communication is scheduled and will be a focus for debate.

Our 8th Coal Dialogue with the European Commission in May was a unique opportunity to share our views and opinions with key staff at DG Energy and DG Climate Action. In October, I was honoured to represent EURACOAL at the EC Berlin Fossil Fuels Forum plenary meeting. This forum has provided the fossil fuel industry with a platform to discuss matters of importance with the Commission and we hope that it will continue in the future.

I am especially grateful to MEPs Dr. Christian Ehler, Mr. Bogdan Marcinkiewicz and Mr. Salvador Garriga Polledo who hosted EURACOAL at events in 2012, notably the 3rd European Coal Days in November. We were very pleased that the President of the European Economic and Social Committee, Mr. Steffan Nielson, was on hand to welcome coal industry colleagues from around the world to a special debate focusing on issues in the Czech Republic, Poland and Spain. An evening debate in the European Parliament, chaired by former President, Mr. Jerzy Buzek MEP, provided EURACOAL members an opportunity to exchange views with MEPs – after I had set the scene with a short presentation.

Our visible presence in Brussels helped when we needed to explain our positions on some quite complex issues. Without the co-operation of MEPs and indeed Commission officials, our job would be impossible. Coal is all too often demonised by NGOs who focus only on CO<sub>2</sub> and climate change issues. We need to refocus the debate to jobs, the economy and energy security. Coal powers Europe's industry and safeguards its competitiveness. In this respect, EURACOAL will continue to point to the added value and wealth creation of coal mining and coal-fired power generation.

My thanks go to our Vice Presidents – Mr. Phil Garner, Dr. Maksymilian Klank and Prof. Franz-Josef Wodopia – who stepped in at crucial moments during my two-year term to ensure that EURACOAL was well represented. I trust that our new President, Mr. Paweł Smoleń, will enjoy similar support and I wish him every success. The committee chairs do a sterling job and I note especially the contribution of Dr. Jürgen Czwalińska over the last twenty years. He has chaired the EURACOAL Technical Research Committee with total commitment and we wish him a long and happy retirement. Finally, I pay tribute to all EURACOAL members who worked hard with our secretariat in Brussels to promote our common interests throughout 2012.

Glück auf!

**Dr.-Ing. Hartmuth Zeiß** President

## EU Citizens' Initiative on climate and energy

This initiative, registered on 8 August 2012 and led by Polish MP Ludwik Dorn of Solidarna Polska, calls for the suspension of the EU Climate and Energy Package of 2008 – excluding energy efficiency clauses – and any further climate regulations until a climate agreement has been signed by the other major CO<sub>2</sub> emitters: China, USA and India. Its main objectives are:

1. To stop EU climate policy wasting hundreds of billions of euros on ineffective unilateral action on the climate at a time of economic crisis.
2. To stop carbon leakage – export of jobs and businesses to developing countries without climate legislation.
3. To make fuel and energy cheaper, increase employment and reduce fuel poverty. This will increase social cohesion and reduce social exclusion.
4. To increase energy security by allowing Member States to use their own natural energy resources.

To be successful, one million signatures must be collected from EU citizens with minimum numbers from at least one quarter of the 27 Member States. The European Commission would then have to respond with an official communication and hearings in the European Parliament.

[www.affordable-energy.eu](http://www.affordable-energy.eu)



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## Report by the Secretary-General Mr. Brian Ricketts

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EURACOAL was founded in 2002, although the association can trace its history back 60 years to 1953 when the *Comité d'étude des producteurs de charbon d'Europe occidentale* or CEPCEO was established. A trade association's reputation comes from the impact of its activities, not by its age. Hence, in its tenth year, EURACOAL dedicated itself to promoting our messages in Brussels where our positions had some influence, especially during important votes in the European Parliament.

Together with EURACOAL committees, the secretariat kept members informed on coal-related activities and initiatives at the EU level during 2012. Meetings were held to promote the interests of the coal sector with the European Commission, European Parliament and Member State representations, as well as with other bodies such as the European Economic and Social Committee and NGOs. In addition, EURACOAL Vice Presidents and the Secretary General made presentations at a number of important conferences, including in Antwerp, Berlin, Geneva, Katowice, London, Ostrava, Plovdiv, Prague, Warsaw and, of course, in Brussels.

During 2012, proposals were again made to increase the EU 2020 target for CO<sub>2</sub> emission reductions from 20% to 30%. These appear to ignore the July 2011 vote in the European Parliament when MEPs rejected a new 30% target. The Commissioner for Climate Action, Ms. Connie Hedegaard, announced in April that she would publish an assessment of the EU Emissions Trading Scheme by the end of 2012; this Carbon Market Report was published in November with six options for the structural reform of the ETS. The debate on this will likely run for some time because the Commission attempts to fundamentally change the EU's hard-won agreement on the 2008 climate and energy package.

In March 2012, the Polish government rejected DG Climate Action's 2050 roadmap for moving towards a low-carbon economy. The Polish government has taken a strong stand against new unilateral CO<sub>2</sub> reduction targets by the EU because its economy is heavily dependent on coal, with no affordable or accessible alternatives. Recognising the importance of coal, not just in Poland, but also in other

Member States, a citizens' initiative was launched in 2012. One of the first ever such initiatives, it aims to suspend the EU climate and energy package (Box 4, page 10).

The well-established European Round Table on Coal or "Coal Round" in the European Parliament continued, with three meetings in 2012. This non-party political grouping of MEPs with an interest in coal, co-chaired by Dr. Christian Ehler MEP and Mr. Bogdan Marcinkiewicz MEP, allows EURACOAL members and invited guests to debate topical issues with parliamentarians.

In March, the first Coal Round addressed the EU Emissions Trading Scheme, in particular the unwelcome proposals to set aside allowances to boost carbon market prices. Green MEP Claude Termès joined the meeting as rapporteur for the Energy Efficiency Directive. There was a very good discussion – including clear words on coal-fired power plant efficiency and flexibility from Mr. Wolfgang Dirschauer who spoke on behalf of EURACOAL President Zeiss. UK MEP Mr. Roger Helmer spoke forcibly against many of the Green Party's proposed amendments to the Energy Efficiency Directive.

Under its proposals for Horizon 2020 (also known as Framework Programme 8), the Commission included CCS, but nothing on conventional power generation from coal. EURACOAL worked closely with a number of other trade associations to show that this was a serious omission and proposed several amendments on flexible and efficient power generation from fossil fuels. Similarly, lignite conversion to chemicals offers exciting possibilities, as explained by IBI from Central Germany in a number of presentations made in

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## EC Berlin Fossil Fuels Forum

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At its eighth plenary in October, the Berlin Forum allowed a dialogue between the Commission and stakeholders on issues related to fossil fuels, with a special focus on natural gas. The Forum noted that the share of gas in the energy mix was decreasing due to strong competition from coal and renewables. Whilst renewables benefitted from government support, lower world coal prices had made gas less competitive for electricity production – some participants suggested that gas price indexation should be adapted to market needs. Unconventional gas, especially shale gas, could be a considerable opportunity for the EU, not least to make gas more competitive, but faces significant public acceptance problems. The Forum noted that a few Member States had suspended further shale gas exploration while others were pressing ahead.

The Forum acknowledged that, in all scenarios, fossil fuels will retain a significant share of the energy mix in 2050, even though the share of renewable energy sources increases. Power plant dispatchability will be important for the future of individual fuels and for the further integration of renewables – the latest coal- and lignite-fired plants being the most flexible.

The Forum reiterated the need for carbon capture and storage (CCS) to be commercially deployed from 2020 to realise the EU's decarbonisation targets and stressed the need for at least some EU demonstration projects by the second half of this decade. Taking into account the link between CCS and the future of coal and gas in the energy mix, it was acknowledged that implementing CCS technologies requires additional efforts. The Forum hoped that the Commission would address outstanding issues in a new communication in the near future. Equally, participants recognised public acceptance as a critical factor, not only for demonstration but also for deployment of CCS and active communication was vital, e.g. through – but not limited to – the CCS Project Network.

For the future, the Commission will consider if the focus of the Forum should be enlarged to allow a strategic discussion on the role of different energy sources in the energy mix and their contribution to solving future challenges. EURACOAL believes that for all major issues related to fossil fuels, the Forum provides a valuable platform for interaction and exchange of information with the Commission. However, the Commission needs to take the lead on thematic discussions by hosting working group meetings with stakeholders.

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## Report by the Secretary-General

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Brussels about their plans and how Horizon 2020 could help, including at a Coal Round in June which focussed on Horizon 2020.

Many EURACOAL members participated in the 3rd European Coal Days and EURACOAL, for the first time, co-operated with the World Coal Association and the Central European Energy Partners to bring coal to Brussels for three days in November (see below).

The coal industry has lobbied for a three-step approach for the development of coal-fired power generation: improved efficiency, R&D and CO<sub>2</sub> capture and storage (CCS). Recently, CCS has dominated policy debate in the EU, and even more so in certain Member States. In November, the International Energy Agency (IEA) presented its new roadmap on high efficiency and low emissions (HELE roadmap) at a special International Round Table on Coal in the European Parliament. EURACOAL supported this work and hopes that advice from the IEA will push governments to look again at what upstream energy efficiency can deliver in terms of emission

reductions. Earlier in the year, in January, EURACOAL was pleased to host at its offices the Brussels launch of the IEA's first Medium-Term Coal Market Outlook. Director of Energy Markets and Security, Mr. Didier Houssin, showed that the growth in coal use from 2000 to 2010 had almost matched the growth of all other energy sources – oil, gas, renewables and nuclear – combined (see Figure 3).

EURACOAL is engaged in a Sectoral Social Dialogue at the European level covering the extractive industries sector. In a process overseen by DG Employment, EURACOAL members meet with other employer associations and employee representatives from the mining industry to discuss matters of mutual interest which, in 2012, included important discussions on health and safety, on the inclusion of silica in the carcinogens directive and on occupational exposure limits for nitrogen dioxide. Given that there has been no observed link between silica and cancer among coal miners, EURACOAL issued a position paper on silica that supported the February

2012 position of the EU Industry Silica Task Force. In September, we made a detailed response to the EC Scientific Committee on Occupational Exposure Limits revised recommendation on NO<sub>2</sub>.

Organisational changes within the European Commission, made at the end of 2011, mean that responsibilities for coal now rest with a number of desk officers, spread across many units. Co-ordination of coal policy remains the responsibility of one Head of Unit who EURACOAL will continue to liaise with on policy, whilst dealing with others on new energy technologies and clean coal, CO<sub>2</sub> capture and storage, coal markets and international relations.

My thanks go to EURACOAL members for their good co-operation and support, and to my staff who can be proud of what they achieved during 2012 in the name of coal. The photo exhibition, "Faces of Modernisation in the Coal Industry", reminded us all of the very many people who depend on the modern coal industry for their livelihoods (see pages 18 - 19).



3 - IEA Medium-Term Coal Market Report 2011 - Mr. Didier Houssin, Director of Energy Markets and Security at the International Energy Agency (left) presents the IEA's new coal market report to the EURACOAL Secretary-General at the Brussels launch on 25 January 2012

## 3rd European Coal Days



**CHRISTIAN EHLER MEP**  
& **BOGDAN MARCINKIEWICZ MEP**

WOULD LIKE TO INVITE YOU TO

**3RD EUROPEAN  
COAL DAYS  
2012**

**13<sup>TH</sup> NOVEMBER**  
TUESDAY

Working Breakfast 8:00 - 9:30 MEMBERS SALON

**COAL INDUSTRY ACROSS EUROPE**

Workshop 13:00 - 15:00 JAN 6Q2

**DOES A PROSPEROUS WORLD ECONOMY NEED COAL?**

International Round Table on Coal 15:30 - 17:30 Goethe Institut, Rue Belliard 58

**CLEAN COAL TECHNOLOGIES**

**14<sup>TH</sup> NOVEMBER**  
WEDNESDAY

13.00 - 14.30 JDE Atrium Exhibition

**OFFICIAL OPENING CEREMONY OF THE PHOTO EXHIBITION**

High-Level Dialogue 15.00 - 17.00 JDE 51

**THE SOCIAL AND REGIONAL DIMENSIONS OF COAL IN EUROPE**

Dinner Event hosted by the European Energy Forum: 19.00 - 21.30 Members Salon

**COAL – THE GLOBAL PICTURE**

**15<sup>TH</sup> NOVEMBER**  
THURSDAY

Working Breakfast 8:00 - 9:30 MEMBERS SALON

**CLEAN COAL STRATEGY**

**EURACOAL**  
European Association  
for Coal and Lignite

**CEEP**  
Central Europe Energy Partners

**WORLD COAL  
ASSOCIATION**



**EPP Group**  
in the European Parliament

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## 3rd European Coal Days: joint meeting of EURACOAL with EESC Consultative Committee on Industrial Change (CCMI)

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During this high-level meeting, EURACOAL and CCMI members focused on the situation for coal in Spain, the Czech Republic and Poland, with employer and employee representatives. EURACOAL President, Dr. Hartmuth Zeiß, thanked EESC President Staffan Nilsson and CCMI President Jorge Pegado Liz for their willingness to host a debate on coal.

Dr. Zeiß pointed to the essential role that coal quietly plays in meeting Europe's demand for electricity, but warned that, "More investment was needed in many countries to keep coal production and use on a path of ever greater productivity and efficiency, lower emissions and technical progress." Ultimately, this would lead, he said, to the deployment of CO<sub>2</sub> capture and storage at coal-fired power plants around the world.

Here, he called for, "Europe to show leadership, in the deployment of technologies – technologies that are relevant and affordable around the world."

The situation in Spain is pressing as the government must implement Council Decision 2010/787/EU on State aid to facilitate the closure of uncompetitive coal mines. A requirement of that decision is that if a mine continues to operate beyond the end of 2018, then it must repay all State aid received prior to that date. What this means is that Spanish coal mines which would otherwise be commercially viable before 2018 would have to close because they have no possibility to repay past aid. Regional government delegates and industrialists – including Mr. Ricardo González Mantero, General Director for Energy and Mining in Castilla y León – urged the Commission to revisit this onerous requirement so that Spanish coal mining can continue without subsidies.

From the Czech Republic, CCMI member Dr. Renata Eisenvortová explained that the brown coal mining industry there faces arbitrary mining limits and the revocation of sections on the compulsory purchase of land from the Mining

4 – 3rd European Coal Days: joint meeting of EURACOAL with EESC Consultative Committee on Industrial Change (CCMI) held in the EESC Jacques Delors building, Brussels

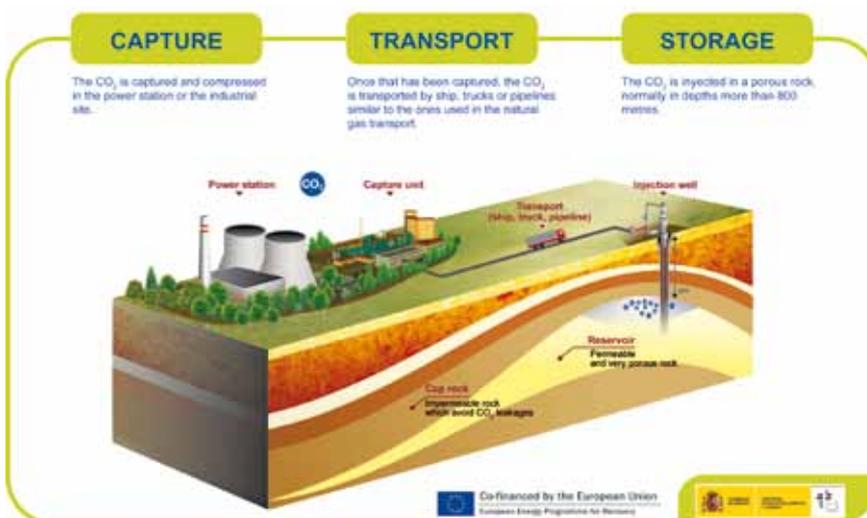


## 3rd European Coal Days: working breakfast on clean coal hosted by MEP Salvador Garriga Polledo

3rd European Coal Days: Presentation of clean coal projects in Spain  
by Mr. José Carlos De Dios González, Director of CO<sub>2</sub> Geological Storage  
Programme, Fundación Ciudad de la Energía (CIUDEN)



5 – Aerial view of the es.CO<sub>2</sub> centre in Cubillos del Sil, Spain - The Fundación Ciudad de la Energía (CIUDEN) is the leading public developer of CO<sub>2</sub> capture, transport and geological storage technologies in Spain. In 2012, CIUDEN successfully commissioned the es.CO<sub>2</sub> pilot plant where CO<sub>2</sub> is captured using oxy-combustion in circulating fluidised bed technology – a world first.



6 – **Compostilla CCS project** - The region of Castilla y León strongly supports the OXYCFB300 Compostilla Project, one of the most advanced and most promising CCS demonstration projects in Europe. The project has been selected by the European Energy Programme for Recovery (EPR) to receive funding of €180 million. If Spanish coal mines were closed prematurely, then this project could be jeopardised, along with the global benefits of such technological leadership. Moreover, 3 500 jobs in Castilla y León depend directly on coal mining with a further 4 500 indirect jobs: in all around 10% of employment in the region.

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## 3rd European Coal Days: joint meeting of EURACOAL with EESC Consultative Committee on Industrial Change (CCMI)

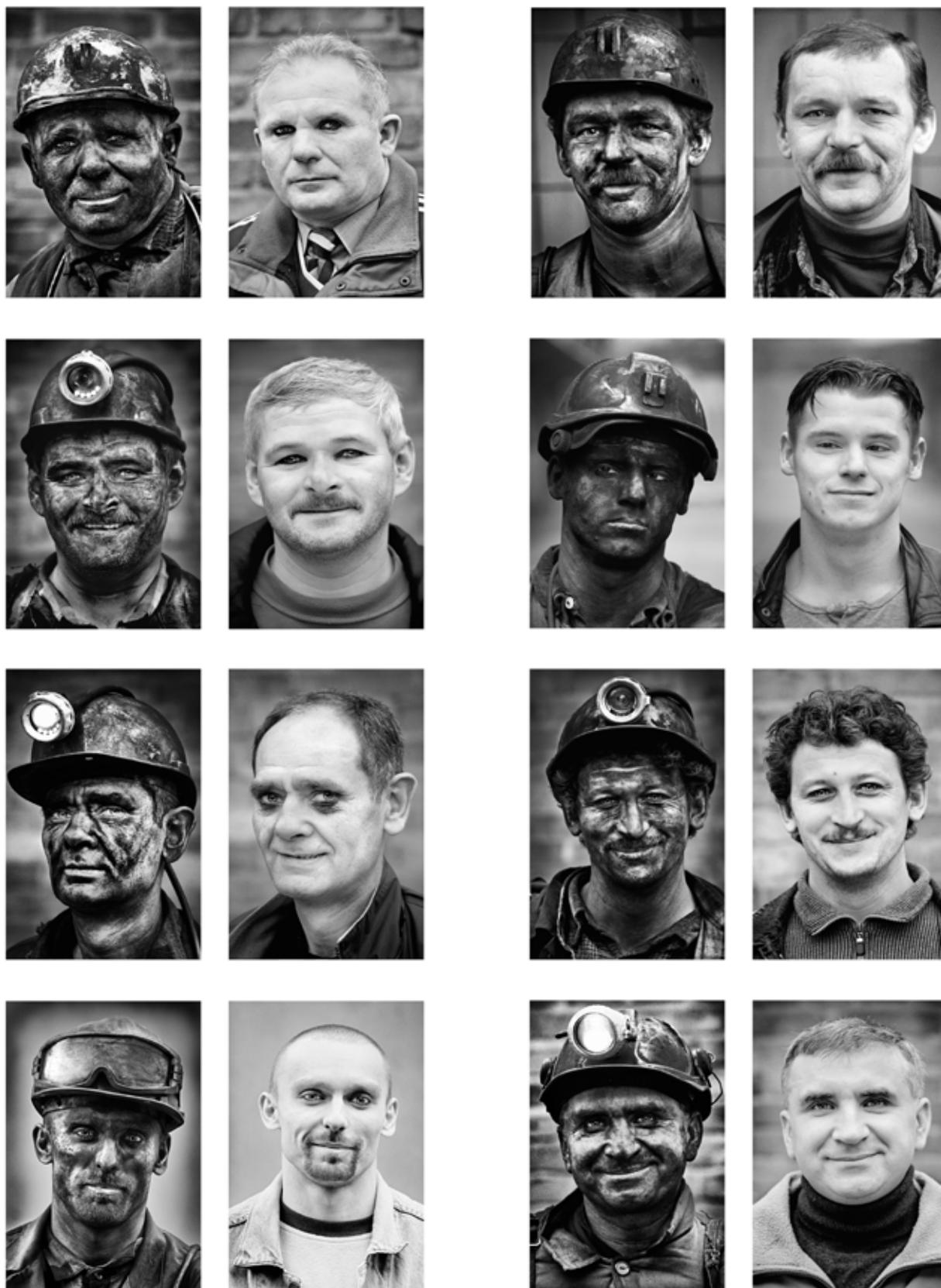
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Act. For the Czech brown coal mining companies, this creates an unacceptable hurdle to long-term investments; for some companies it is a critical short-term issue that, if not resolved, will lead to significant job losses in regions that already suffer from high unemployment.

Representatives from Poland included Mr. Kazimierz Grajcarek, Chairman of the Secretariat of Mining and Energy at NSZZ, the National Committee of "Solidarity" and Dr. Filip Grzegorzczak of Kompania Węglowa. They outlined the unique set of circumstances facing Poland, beginning with its heavy dependence on coal for electricity production. Restructuring of the coal industry has been on going now for many years, always with the aim of ensuring adequate coal supplies at competitive prices. Productivity improvements have inevitably meant job losses and Mr. Grajcarek pointed to the social hardship that this has caused in Silesia where Kompania Węglowa is the major employer – some 6 000 people – and an important contributor to the region's tax revenues. Retraining and incentives for new businesses were essential

responses. However, Mr. Grajcarek expressed the frustration of workers in Poland who view the decarbonisation agenda in the EU's climate and energy policy as a self-sacrifice that does little to address the global climate challenge. Looking to the future, Vice President of EURACOAL, Dr. Maksymilian Klank, saw a need for investment in new and upgraded infrastructure in the mining and power sectors to ensure that Poland could continue to enjoy the wider economic benefits of reliable and affordable electricity from its indigenous coal while reducing emissions. He cautioned against taking actions that would exclude coal from our power generation fuel mix: innovation today would allow the world's most abundant fossil fuel to overcome tomorrow's challenges.

In all three member states – Spain, the Czech Republic and Poland – recent protest demonstrations illustrate that the issues discussed at the high-level dialogue are not academic: they affect people's livelihoods and need to be solved as part of a pragmatic and rational debate on the future of coal in Europe.



**“Front Miners” by Aleksander Prugar (Poland) exhibited during the 3rd European Coal Days in the EESC Jacques Delors building, Brussels.**



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## EC-EURACOAL 8th Coal Dialogue, 30 May 2012

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The 8th Coal Dialogue, jointly hosted by the European Commission DG Energy and EURACOAL aimed to better acquaint officials with the coal industry and the issues that it currently faces. It also offered a platform for the Commission to outline the important steps being taken to secure a clean, secure and competitive energy future for the European Union. Sessions covered energy policies, new technologies, carbon capture and storage (CCS) and the role of best practices. In the concluding session, EURACOAL Vice President, Prof. Wodopia, said that the future of coal was both exciting and challenging. In the short term, he wondered how the euro crisis would affect energy policy decisions and called for realistic policies that reflected the realities of the situation. He referred to MEP Ehler's opening remarks in which he attempted to open our eyes to the current *cul de sac* that CCS now finds itself in, and the steps that could be taken to put it back on a viable track forward that includes efficiency improvements on all fronts. Prof. Wodopia called for a feasible route to a low-carbon economy – not necessarily a perfect route, but one that others around the world could follow.

Mr. Panek, Head of Unit responsible for coal, wrapped up on behalf of the Commission, drawing a number of positive messages from the dialogue which had included input from other DGs and a lively discussion among the eighty or so participants, including many non-EURACOAL members. He said that although there was no chapter devoted to coal in the Energy Roadmap 2050, it would have an important role to play in

the future. During the meeting, he had seen the industry thinking constructively about its future strategies, for example on flexible generation where coal-fired plants could be just as valuable as gas-fired ones. Nevertheless, Mr. Panek expressed some worry about the mood towards CCS which, for the Commission, was a *sine qua non* technology. He called on industry to push ahead on the assumption that CCS would be needed. To achieve commercial deployment by the mid-2020s required action now, he said, to address public acceptance barriers. In this respect, offshore CO<sub>2</sub> storage would help some projects, but not all. Mr. Panek called for efforts to be refocused on the issue of public acceptance, linking this to best practices in the coal industry and its social licence to operate. Here, he referred to an important conclusion from the dialogue: how to transfer the best practices that had been presented? He understood that mining conditions were different in different countries and even in different coal basins, but believed that "meta" messages could nevertheless be drawn. He encouraged EURACOAL to share its members' best practices more widely – a process that the Commission could facilitate.

Before thanking participants and everyone involved with organising the meeting, Mr. Panek spoke positively about how DG Energy's re-organisation meant that coal was now mainstreamed in the DG, with more units now integrating coal-related topics such as coal markets, coal-related R&D and coal policy in their respective agendas.

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## EURACOAL Executive Committee and General Assembly 2012 in Ljubljana

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7 – EURACOAL Executive Committee after an underground visit to the Velenje mine that supplies coal to the nearby Šoštanj power plant in the Šalek valley. In June 2012, the EURACOAL Executive Committee and General Assembly meetings were held in Ljubljana, Slovenia, kindly hosted by EURACOAL member Premogovnik Velenje, d.d.

A photograph of three miners in a dark tunnel. They are wearing grey hard hats with headlamps and checkered work jackets. The miner on the left is looking down, the middle one is looking towards the right, and the one on the right is looking forward. The tunnel walls are dark and textured, with wooden beams visible. The lighting is dim, primarily from the headlamps.

EURACOAL Photo Competition 2012  
Faces of modernisation  
in the European coal industry





EURACOAL Photo Competition 2012  
Faces of modernisation  
in the European coal industry



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## COMMITTEE ACTIVITIES

### Energy Policy Committee Dr.-Ing. George Milojcic, Chairman

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EURACOAL's Energy Policy Committee deals mainly with energy, climate and other coal-related policies, particularly in connection with initiatives of the European Commission and the decision-making processes of Council and the European Parliament. Because of the significance of energy policy decisions made by individual Member States, an exchange of views on such developments is an essential part of the Energy Policy Committee's activities. Coal industry trends, together with current issues, are analysed, discussed and conclusions agreed on appropriate actions. The committee's position papers and opinions contribute to the decision-making process in Brussels. In some cases, this material is also used to inform decision makers in Member States. In 2012, the Energy Policy Committee met on 22 March in Brussels and on 20 September in Luxembourg.

At the meeting on 22 March, the Berlin Fossil Fuels Forum was discussed, focussing on the workshops in Brussels and looking ahead to the Plenary meeting held on 11/12 October 2012 in Berlin. The 8th Coal Dialogue of 30 May 2012, co-organised by DG Energy and EURACOAL in Brussels, was also on the agenda.

The evaluation of the Energy Roadmap 2050, adopted in December 2011 by DG Energy, was a major item for discussion. In EURACOAL's opinion, this document makes a major contribution to a reasoned energy policy debate. In the roadmap, the European Commission continues to pursue a technology-neutral path for the energy sector. Concerning future power generation, various scenarios are considered. According to analysis in the Energy Roadmap

2050, electricity will continue to play a major role. Assumptions concerning power demand appear realistic, with its slight upward trend. Various possibilities to cover power demand were modelled and evaluated. In all scenarios, power supply is based on three pillars: nuclear energy; increasing production from renewable energy source and fossil fuels, utilised as efficiently as possible in the medium term and with CCS in the long term. In its projections, the European Commission does not express any preference for specific technologies, or indeed for particular sources of primary energy, thus respecting the fact that Member States are free to determine their energy mixes for power generation.

For EURACOAL, "clean coal" is a key element in the energy debate. It was therefore decided in March to review the clean coal strategy initially formulated in 2005 and to relaunch it, so that it can again inform debate. The new brochure "A Strategy for Clean Coal" was finalised in September, after approval by members. The Brussels office staff and members who participated in this effort are all thanked. It was agreed to present the new brochure at the 3rd European Coal Days on 15 November.

An important topic for the Energy Policy Committee was the political evaluation of the EU's long-term research strategy "Horizon 2020". It was unanimously agreed that EURACOAL's efforts should aim at securing a place for coal in this wide-ranging and long-term programme, be it directly or indirectly. These concerns were expressed particularly in discussions with Members of the European Parliament at the 17th European Round Table on Coal on 6 June.

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## COMMITTEE ACTIVITIES

### Energy Policy Committee

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The meeting of 20 September in Luxembourg offered the opportunity to discuss the future strategy to finance infrastructure projects with a representative of the European Investment Bank. During 2012, the European Investment Bank began a review of its funding principles. The aim of the discussion was to create awareness that investments in coal deposits and highly efficient power plants should be co-financed by the EIB. The importance that coal projects often have for regional economies was also stressed.

Much time was devoted to discussing and evaluating initiatives to intervene in the EU Emissions Trading Scheme. EURACOAL adopted a critical position on this and expressed its opinion on fundamental and specific issues in several position papers.

In September, the energy and climate policies in the UK, Poland and Germany were discussed. It was acknowledged with some concern that some Member States, the UK for instance, were taking major decisions at national level that would be damaging for coal. For example, the UK Energy Bill tabled at the end of November seeks to introduce a CO<sub>2</sub> emission performance standard for new power plants. EURACOAL members CoalPro and Coallmp lobbied against this standard since it would leave gas-fired power plants unaffected, but would require coal-fired power plants to be built with CCS. A CO<sub>2</sub> emission performance

standard is questionable: it contradicts the Industrial Emissions Directive, has no environmental benefit given the EU-wide cap under the ETS Directive and must therefore, in EURACOAL's opinion, be judged very critically. In Germany a conflict concerning the internal electricity market is emerging because of the massive financial support for renewable energies and their priority feed-in. If we assume that renewable energies will continue to expand, then the internal market segment subject to competition will become smaller and smaller.

Co-operation with the Central European Energy Partners (CEEP) was discussed. Here, it is important that all efforts to advocate coal within the political process should focus on common issues. In this respect, discussions to date and co-operation between EURACOAL and CEEP, for example on the 3rd European Coal Days and Round Tables on Coal in Brussels, can be viewed positively. It seems especially important that the specific interests of Member States in central and eastern Europe be better acknowledged than has previously been the case in Brussels.

The participation of EURACOAL members in the Energy Policy Committee was again active. Members' high level of competence and their commitment was the basis of fruitful discussions and altogether successful work, for which members are cordially thanked.

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## COMMITTEE ACTIVITIES

### Environment Committee Mr. David Brewer, Chairman

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The Environment Committee met twice in 2012, in May and November. The most important issues discussed relate to the inter-relationship of various power plant emission control measures and the potential for leap-frogging emissions reduction requirements. If uncoordinated, these could play havoc with the investment needs for coal and lignite fired power plants, creating an investment climate of great uncertainty. At worst, this could lead to investment decisions subsequently superceded by further requirements and consequent stranded assets.

The greatest area of concern at present is the revision of the Large Combustion Plants Best Available Technology (BAT) process, otherwise known as LCP BREF, currently being conducted by the European IPPC Bureau. The process will assess BAT for emissions control at large combustion plants and it is a requirement of the Industrial Emissions Directive (IED) that the BAT emission values should eventually be applied. The work is protracted and many parties are

involved, including EURACOAL. CO<sub>2</sub> emissions are excluded from this process as they are governed by other European measures, but mercury emissions may be included at the initiative of some Member States.

LCP BREF is a substantial process. A huge amount of technical information related to hundreds of power plants is involved and the first draft of the Bureau's conclusions is not expected before May 2013. The Bureau has accepted the view of power plant operators that coal and lignite plants should be split into different size categories, with different BAT emission limits, but two important issues remain. First, there is a need to define and exclude start-up and shut-down periods as coal and lignite power plants in several Member States will increasingly operate as mid-merit rather than on base load, thus providing the essential flexibility to balance intermittent renewables. Second, on mercury emissions, EURACOAL's view is that existing control measures, and those that

8 - **Photovoltaic installation** on the coal heap of Auguste-Victoria mine in Marl/Germany



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## COMMITTEE ACTIVITIES

### Environment Committee

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will need to be introduced to comply with the IED, for emissions of other pollutants are also very effective in reducing mercury emissions. This applies particularly to flue gas desulphurisation. The Bureau's approach to mercury will be carefully monitored.

Additionally on mercury, EURACOAL had serious concerns that the work of an Intergovernmental Negotiating Committee (INC) would lead to a legally binding instrument at the UN level with stringent requirements. EURACOAL made appropriate representations and in the event these concerns proved to be unfounded. Of particular importance was the Committee's decision not to classify ash from coal and lignite power stations as a mercury waste, the implications of which could have been very serious. Meanwhile, the work of the INC resulted in the text of a Mercury Convention. The agreed text of the convention now needs to be formally adopted by government representatives during a conference at Minamata, Japan in 2013.

Apart from the LCP BREF process, other emissions control requirements could have emerged as a result of revisions of the Gothenburg Protocol and the National Emissions Ceilings Directive. In the event, the outcome of negotiations in relation to the revision of the Gothenburg Protocol, which is not limited to the European Union, resulted in emissions limits which were no more demanding than those required by the IED. Moreover, the revision did not address mercury.

Now that the revision of the Gothenburg Protocol has been completed, the Commission will

move on to considering a review of the National Emissions Ceilings Directive. Whilst this will not directly affect emission limits for individual power plants, it may reduce overall emission ceilings in individual Member States and may therefore have the same effect. There is no firm information as yet on the extent to which the Commission has progressed the revision, but it has declared 2013 to be the "Year of Air Quality". Further long-term proposals can therefore be expected and again, these will have to be carefully monitored.

On other environmental issues, towards the end of the year the Commission proposed a revision of the Directive on the assessment of the effects of certain public and private projects on the environment, otherwise known as the Environmental Impact Assessment Directive. Whilst some changes do need to be made, the Commission's proposals, despite being described as a simplification, are excessive and over-prescriptive, some might say draconian. They would dramatically increase the timescale and costs that it would take to get projects, including mining and power station projects off the ground. There is already opposition from some Member States and industry associations and EURACOAL is preparing a position paper.

In the coming year, the Committee will continue to monitor developments and new initiatives proposed by the Commission. Experience has shown that EURACOAL is best placed to make representations most effectively by getting involved at the earliest possible stage and the Committee's efforts will be directed towards this end.

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## COMMITTEE ACTIVITIES

### Technical Research Committee Dr.-Ing. Jürgen Czwalinna, Chairman

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*At the end of 2012, Dr. Jürgen Czwalinna who had chaired the Technical Research Committee (TRC) for nearly two decades retired. All EURACOAL members offer their sincerest thanks to Dr. Czwalinna. After leading the committee with skill and tact, he can now look forward to a long and happy retirement. His successor is Dr. José Luis Fuentes-Cantillana, Managing Director of AITEMIN (Asociación para la Investigación y Desarrollo Industrial de los Recursos Naturales or the Association for Research and Industrial Development of Natural Resources) in Spain. He too brings many years of experience in mining-related R&D to the committee.*

Throughout 2012, activities in the Technical Research Committee focussed on the preparation of joint project proposals to the coal research programme of the EC Research Fund for Coal and Steel (RFCS) and on the RFCS monitoring and assessment exercise, undertaken as part of the Commission's statutory seven-year review of the programme.

For the 2013 RFCS call for proposals, the Committee organised two preparatory workshops, one for mining engineering projects (TGC 1) and another one for projects in the fields of coal preparation, conversion and upgrading as well as coal combustion, clean and efficient coal technologies and CO<sub>2</sub> capture (TGCs 2 and 3).

The mining engineering workshop was held on 22/23 February in Marl and was organised by EVONIK on behalf of RAG. Twenty five EURACOAL members attended. In all, seventeen joint proposals were established, including several re-submissions. To develop these proposals and following positive experience from the past, the TRC again offered a voluntary one-step review.

The committee held a full meeting on 27 and 28 June at Ptolemais in Greece, kindly hosted by the Public Power Corporation who also organised a technical visit to their opencast mine and power plant complex. The findings of the TRC peer review experts assigned to each project were presented and discussed. Later, these findings were forwarded to the project coordinators in order to help improve the overall quality of project proposals and thus enhance the chances for success.

EURACOAL member ISSeP in Liège revived the workshop to prepare joint project proposals for TGCs 2 and 3. During the workshop on 28 March, participants were given the opportunity to present their ideas, which were then categorised under different headings in order to facilitate the drafting of actual project proposals ready for submission.

In October, all proposals submitted by the call deadline were evaluated by independent experts appointed by the EC RFCS Unit. The outcome was the main item on the agenda of the second TRC meeting, which was held on 5 December. The large number of submissions made by the coal sector under the recent call is seen as good evidence for the continued interest of the industry in coal-related R&D and provides good arguments in favour of the RFCS programme.

Several members of the Technical Research Committee contributed significantly to the monitoring and assessment exercise of the entire RFCS programme following their appointment to an expert committee. Upon its completion, the main results of this exercise were presented and discussed on the occasion of the 10th anniversary of the RFCS, celebrated on 19/20 September in Luxembourg. The Final Monitoring Report and the Final Assessment Report will be standalone documents available electronically. Both of these reports were finalised and delivered to the Commission.

A major outcome of the assessment is that the overall potential benefits of the RFCS programme for the coal and steel industries amounts to € 700 million per year. Compared to the total budget of € 500 million spent over the last seven years, this implies a leverage of nearly 10:1 on the disbursed funds.

Similarly positive results came from the monitoring which attests that the RFCS programme covers the R&D needs of the coal and steel industries and is in general efficiently managed. Nevertheless the report contains many valuable suggestions for detailed improvements. These suggestions will be dealt with by a joint working group of CAG and SAG due to conclude its work in spring 2013. EURACOAL TRC members will be represented in this new working group.

In addition, a condensed Joint Monitoring and Assessment Report is in production and will be published as a paper version in order to inform politicians and a wider public audience.

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## COMMITTEE ACTIVITIES

### Market Committee Mr. Nigel Yaxley, Chairman

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In 2012, the Market Committee held two meetings and welcomed speakers from the European Commission and from Bettercoal. The expiry of Council Regulation 405/2003, which laid down rules for the monitoring of EU hard coal imports, means that the Commission itself no longer collects coal market data. EURACOAL was pleased to receive a letter of recommendation from the Commission for our on-going efforts to present a true picture of the European coal market in our regular market reports, helped enormously by EURACOAL member VDKi in Germany.

Bettercoal is a coal consumers' initiative that aims to see the principles of good corporate social responsibility (CSR) adopted at all mines that supply the international coal market. In some regions of the world, mining is a sensitive sector given its environmental impacts together with examples of poor human rights and safety standards. EURACOAL supports the aims of the initiative. It is in the interests of the entire coal industry to demonstrate that competitive coal production is not at the expense of poor CSR standards and that procedures are in place to identify poor practices and encourage continuous improvement. Here, the EU provides a model for sustainable mining and EURACOAL suggests that it will be governments who ultimately have the biggest influence on the success of the Bettercoal initiative.

#### World Coal Market Developments

Global hard coal production is estimated to have reached 7 200 million tonnes (Mt) in 2012, helped by a significant production increase to 370 Mt (+16.7 Mt or 4.7%, year-on-year) in Australia which fully recovered from the devastating floods of 2011. China increased production by 3.8% or 134 Mt to 3 650 Mt, and there were further increases in Indonesia, Colombia, Russia and South Africa. Coal India's production at 436 Mt again fell short of targets set by the Indian government, being only 1% more than in 2011. Stock levels at many Indian power plants were at "super critical" levels and led to rolling blackouts, reflecting hand-to-mouth coal purchasing. The country is forecast to have imported a record 117 Mt of hard coal in 2012, often buying lower spec coals simply to secure tonnages.

China was again the world's largest coal importer, reportedly importing 235 Mt in 2012, followed by Japan with 185 Mt and then India. For comparison, EU hard coal imports totalled 211 Mt in 2012.

With our initial estimate being 1 026 Mt, global seaborne hard coal trade likely exceeded one billion tonnes for the first time in 2012. Coking coal exports were stable at around 242 Mt, compared with 239 Mt in 2011. Coking coal trade reflects global crude steel production which was little changed in 2012 at 1 548 Mt (+1.2%). Steam coal exports increased from 739 Mt in 2011 to an estimated 784 Mt in 2012. The growth in Indonesian coal exports – of all types – has been remarkable: from 57 Mt in 2000 to 315 Mt in 2012. Even accounting for the uncertainty surrounding Indonesian export data, it now dominates steam coal trade in the way that Australia continues to dominate coking coal trade. Rising taxes and royalties, and perhaps even export quotas, may dampen Indonesia's future export growth.

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Australia exported 302 Mt (+6%) of hard coal, followed by Indonesia (+2% to 315 Mt) and Russia (+19% to 115 Mt). In the Atlantic Basin, Colombia's exports grew to 80 Mt (+11%), despite a rail strike during much of July and attacks on infrastructure, reflecting social unrest and the on-going civil war between government forces and FARC. South Africa increased exports to 76 Mt (+9%), with just 12 Mt going to the EU; exports would have been greater but for strikes in the mining and transport sectors during the last six months of 2012.

These supply-side developments, with every major exporter expanding volumes, put downward pressure on coal prices in all markets: in North America, Europe and particularly in Asia. In Europe, marker prices fell 20% during 2012, ending the year at 90 \$/t. Low prices stimulated coal demand. Imports to the important EU market rose by 13 Mt, with strong growth in the UK and Spain despite their stagnating economies. Indian imports rose by 11 Mt and Chinese imports by a massive 52 Mt, while Japan added 10 Mt as the country again relied heavily on fossil fuel imports since many of its nuclear power plants remain closed following the terrible accident at Fukushima in March 2011. Safety concerns led to nuclear plant outages in other countries during 2012, notably in South Korea and Belgium.

US mines recorded a sharp decline in output, down 7.2% to 922 Mt, and several mines were idled or closed. However, the US continued to enjoy a strong demand for its hard coal exports which rose to 114 Mt (+17%). Steam coal exports grew 48% to 51 Mt, with European consumers again taking significant volumes (31 Mt), of which 27 Mt came to the EU. In marked contrast, coal-fired generation in the US fell by 12% in 2012 because natural gas was again the preferred fuel for power generation. Gas prices fell to as low as 1.85 \$/mmBtu in

April, although they rose to 3.43 \$/mmBtu by year end (c.f. an average UK NBP gas price of around 9 \$/mmBtu in 2012). Whilst this is still at a level where gas-fired power plants can outbid coal plants, the trend is clearly back to more realistic prices for US domestic gas. With the opening of Sabine Pass LNG export terminal in Louisiana scheduled for 2015, the era of cheap gas, including shale gas, is likely to end and coal will make a comeback. In any event, US coal exports will continue so long as international prices cover their high marginal costs of supply. During 2012, some US rail operators recognised that their pricing would need to reflect international coal price developments and agreed some price indexation which means that US coal is likely to remain competitive, even if international prices decline.

The vagaries of the weather which badly affected Australian coal exports in 2011 because of too much rain and consequent flooding of mines, were evidenced by low water levels affecting coal shipping along stretches of the Mississippi during 2012 because of too little rain.

Looking ahead, a growing dependence on imported coal appears to be the only way that India will be able to meet demand for electricity as its economy grows. India will benefit from developments in South Africa where rail infrastructure capacity is catching up with recent port expansions. There remains great potential to expand exports from not only South Africa, but also Mozambique where the Moatize and Minas Moatize projects came on stream in 2012. The situation in China is more complex. Today, it remains

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## COMMITTEE ACTIVITIES

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the world's largest coal importing country, but this could quickly change as new rail transport routes allow more coal from the vast coal reserves in north western China and Mongolia to be brought to market. In 2012, Inner Mongolia surpassed Shanxi to become China's largest coal-producing province. Moreover, the Chinese coal market is shifting inland as the government seeks to better balance wealth creation across all provinces. Overall, it will be developments in Asia that determine the future price of coal in Europe.

#### European Coal Market

In Europe, hard coal output at 128 Mt was stable, although the UK and Germany saw sharp falls. The lignite industry enjoyed an increase in output of 8 Mt across Member States to 433 Mt, responding to strong demand. An interesting evolution was the dramatic increase in coal imports by the UK and Spain. Overall, EU hard coal imports rose 12 Mt or 6% to reach 211 Mt in 2012. Russia – accounting for more than one quarter of EU imports – would be greatly affected by any downturn in demand. Its cost base is relatively high, with transport costs to Baltic ports making up more than half of sales prices.

Growth in lignite consumption came mostly from Germany (+5% to 185.4 Mt), spurred by the new large lignite plants commissioned in

2011 and 2012, including BoA 2 and 3 near Cologne and Boxberg R near Cottbus. However, this increase is likely to be temporary as older plants will now be closed. German hard coal production was down 1.4 Mt or 7.7% over the twelve months, but imports increased to reach a record 43.0 Mt reflecting strong demand for coal-fired power generation.

Low hydro reservoir levels on the Iberian Peninsula contributed to an increased demand for coal in Spain and Portugal, but coal's competitive position against gas was the main driver since both renewable and nuclear generation grew. Polish hard coal production increased by 3% to 78.1 Mt, but stocks of indigenous coal grew sharply as imports were favoured. Elsewhere, stocks fell in the UK and at the ARA ports of Amsterdam, Rotterdam and Antwerp.

One of the most active of the fuel-switching markets is the UK, and coal consumption in 2012 was up 12.5 Mt (+24%) with a 33% increase in electricity production from coal. Domestic coal production over the same period saw a decline of 1.6 Mt (-8.7%), leading to a greater call on imports and stocks. Total imports increased by 38% to 44.8 Mt, compensating for the production shortfall and responding to buoyant demand.

Currently, there are some 28 GW of coal-fired plants in the UK, of which 8 GW will have to close by 2015, as they will no longer meet EU requirements under the large combustion plant directive (LCPD). It has been announced that 5 GW will close in March 2013 - having used up their limited life-time

hours; the remainder could also close prematurely. These cannot be replaced by new coal-fired units, given that the on-going electricity market reform prohibits new coal plant without CCS.

The competitive position of coal will also be eroded as the UK implements a carbon "floor price" – effectively a carbon tax – that will add to the costs of generating with fossil fuels. Floor prices are 15.70 £/tCO<sub>2</sub> (April 2013 to March 2014) before climbing to 30 £/tCO<sub>2</sub> in 2020 – then equivalent to a tax on coal of 107 \$/t and more than doubling the price of using this commodity. By 2030, the UK government has said the floor will reach a massive 70 £/tCO<sub>2</sub> in 2009 money.

## COMMITTEE ACTIVITIES

### Market Committee

1 — **Steam coal prices** at ports in northwest Europe compared with US Central Appalachian steam coal, 2005 - 2013. Source: IHS McCloskey NWE CIF and US Energy Information Administration, based on Platts and SNL Energy



Looking ahead, the European coal market will remain healthy providing investments are made to replace or renew older coal-fired plants to meet new environmental standards.

#### Coal and Coke Prices

Prices for steam coal delivered to the northwest European ARA ports were below 100 \$/t for almost all of 2012: prices fell during the first four months, but since then coal has traded within quite a narrow range, from 84-96 \$/t. Coal is highly competitive with natural gas which, on an energy basis, is more than twice the price of coal. This helped to drive a major switch from gas to coal in power generation. UK and Spanish import figures confirmed this trend. It also shows that in times of austerity and economic stagnation, cheap power generation from coal and lignite directly benefit the EU economy, being moreover a highly liquid and transparently traded fuel supplied from a diverse international market, which is not the case for gas.

The price of South African export coal at the Richards Bay terminal was little different from European landed prices – even showing a

premium in the summer (May/June) and again reflecting the fact that this once major coal exporter to Europe now finds the Asian market more attractive. Chinese FOB prices for domestic coal at northern ports on the Bohai Sea ended the year a full 20 \$/t above ARA CIF prices whilst US domestic coal prices traded at a 20 \$/t discount.

Unfortunately, the low import prices for coal make it difficult for indigenous hard coal production to compete, even though prices remain high by historical standards. For this reason, UK producers, for example, were unable to benefit from the buoyant market, which instead saw a surge in imports. The high cost of diesel fuel – used in surface mining in the UK – and high costs at some Polish mines both contributed to this situation. As always, there are notable exceptions and certain mines in Poland have enjoyed record-breaking output and profitability.

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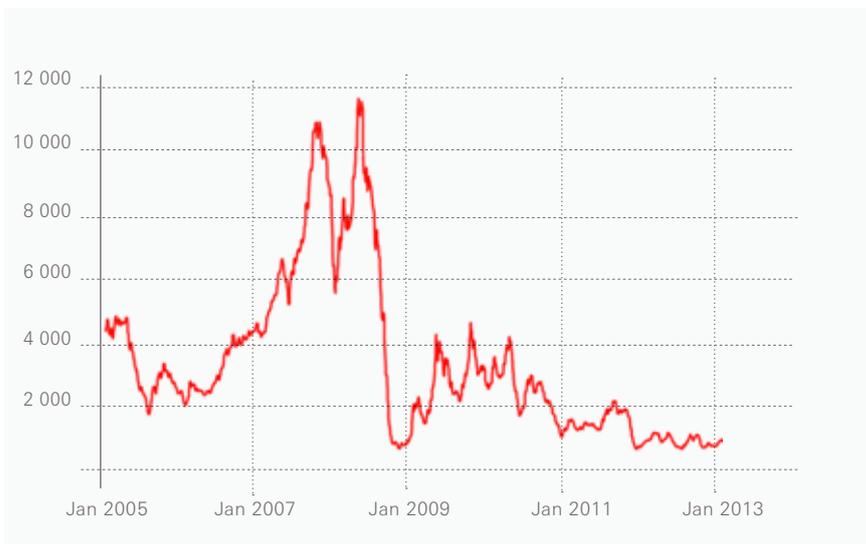
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#### 2 — Baltic Dry Index (BDI), 2005-2013.

Source: Baltic Exchange Information Services Ltd.



It is not only European mines that are struggling against low prices. Many higher cost mines worldwide are operating below their long-run costs and closures are inevitable. Even a modest price rise, whilst helping indigenous producers, would not markedly influence coal's competitive position against gas. Analysts expect a slight recovery of coal prices in the next couple of years, but this will largely depend on the price of oil and hence natural gas.

Coking coal spot prices fell by one third or more since 2011 ending the year at 160 \$/t FOB Australia due to fewer orders from China and a recovery of output following floods in Queensland. Chinese coke prices dropped significantly to 315 \$/t, largely due to the removal of export taxes on coke.

#### Freight Rates

Sea freight rates remained extremely low in 2012 with the Baltic Dry Index (BDI) below 1 000 for most of the year, making life difficult for shipping companies. The slowdown in global economic growth has moderated trade in all bulk commodities, thus affecting

demand for charters. The beginning of 2012 saw freight rates fall further, following a trend that started in late 2011. Despite some improvement through November, the index ended the year trading around 700, a value that the BDI has not touched since 1986. Rates are expected to stay low, at least for the next couple of years, helping the market for lower CV sub-bituminous coals.

The total combined fleet for all dry bulk vessel types stood over 700 million dead-weight tonnes (dwt) at the end of 2012, a 20% increase on 2011, with Panamax and Capesize carriers making up two thirds of the total. In this highly cyclical sector, new builds ordered during the halcyon days of 2007 and 2008 are only now being delivered. Overcapacity meant that scrappage rates grew in 2012 from the already high rate seen in 2011.

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## COMMITTEE ACTIVITIES

### Market Committee

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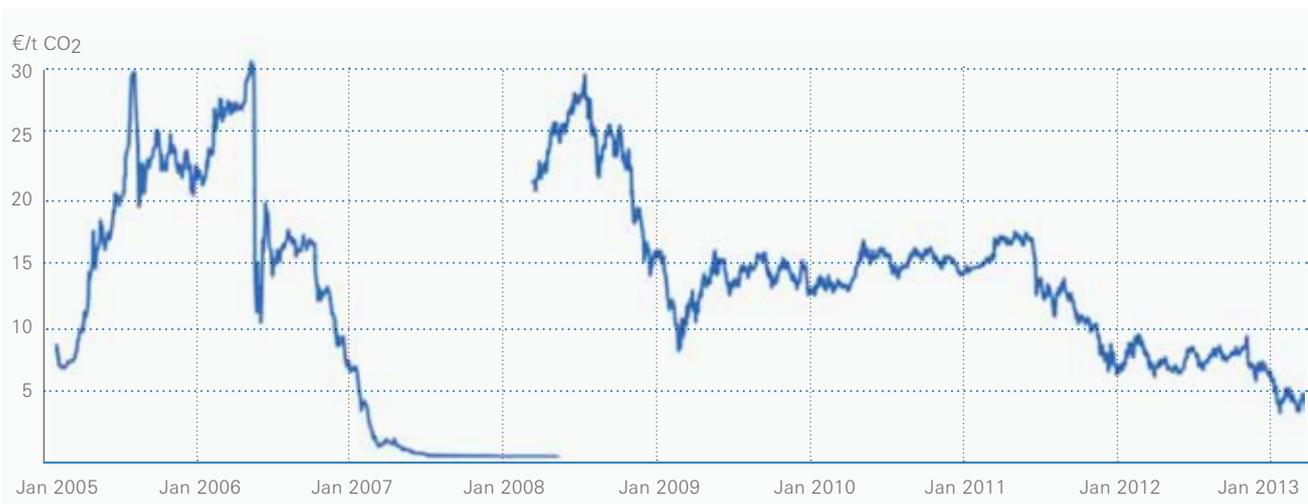
#### Carbon Prices

The EU carbon market traded in the 6-9 €/tCO<sub>2</sub> range during much of 2012, with a plentiful supply of allowances. Market volatility was influenced by noise from Brussels on a potential intervention in the market to boost prices. By year end, the much delayed auctioning of Phase 3 allowances had begun, adding to NER300 allowances sold by the European Investment Bank on behalf of the Commission and depressing prices towards 6 €/tCO<sub>2</sub>.

To incentivise fuel switching from coal to gas, as called for by some – including in the gas industry, would need a massive shift in the underlying commodity prices. The favourable position of coal in the power mix has more to do with the high price of gas than the low price of CO<sub>2</sub> emission allowances – see special section on pages 38-47.

Attempting to engineer a carbon price high enough to encourage fuel switching would run counter to the principle of an open and competitive EU internal energy market – why should the pockets of gas exporters to Europe be lined by European electricity consumers when a cheaper fuel is available, and much of it home produced?

3 - Allowance prices under the EU Emission Trading Scheme, 2005-2013  
Source: European Energy Exchange



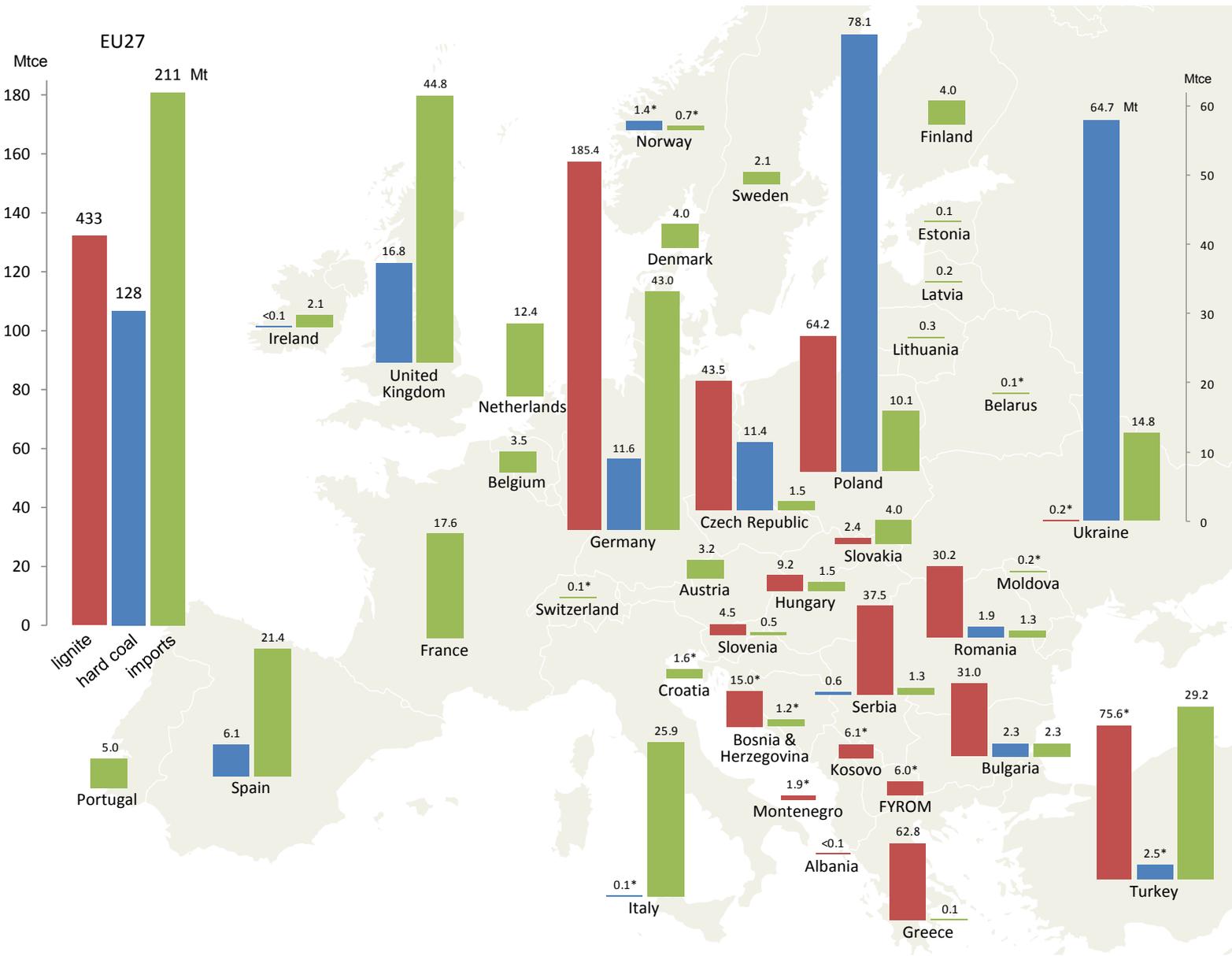
# COAL IN EUROPE 2012

## Lignite Production, Hard Coal Production and Imports

1 - Europe's hard coal and lignite production and also imports in 2012

Source: EURACOAL members - \* 2011 data

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



## PROSPERITY AND GROWTH

### The Importance of a Strategy for Clean Coal

#### Dr. George Milojcic

EURACOAL launched a new edition of its Strategy for Clean Coal during a working breakfast hosted by MEP Salvador Garriga Polledo in the European Parliament on 15 November 2012. Here, Dr. George Milojcic, Chief Executive of the German Brown Coal Association (DEBRIV), writes about the strategy, drawing on his presentation at the working breakfast.

#### Preamble

To begin with, there is a need for realism about the opportunities and risks in the energy sector. The European Union is well integrated into the global economy and its strategies on climate and energy should be developed against this backdrop.

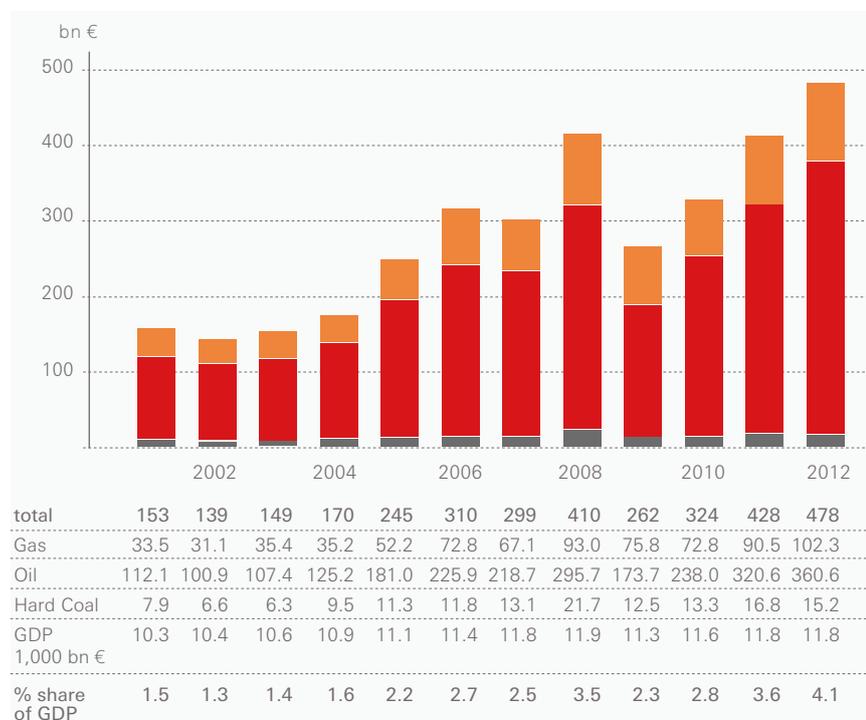
#### 1. High energy prices and the EU's external energy bill

The bill for importing energy into the EU-27 tripled between 2002 and 2012: energy imports accounted for more than 4% of GDP in 2012 (cf. 1.3% of GDP in 2002). This is a significant outflow of purchasing power; in many member states, it can make the difference between growth and recession (Figure 1).

#### 1 – The external energy bill of the EU-27

Source: Statistik der Kohlenwirtschaft

● Hard coal, ● Oil, ● Gas



The biggest component of the EU's external energy bill is for oil imports, accounting for around three quarters of the total. The share spent on natural gas has increased considerably, but the outflow is much smaller than for oil in absolute terms. Even smaller is the share spent on coal imports. What can be deduced from this data?

## PROSPERITY AND GROWTH

### The Importance of a Strategy for Clean Coal

Oil has today and will continue to have the highest share of total primary energy supply, the highest share of imported energy, the highest price per unit of energy and the highest geopolitical risk. This is all well known since the oil crises of the 1970s. A major aim of energy policy since then has been to minimise oil supply risks by diversifying external supplies and by substituting oil in the heating sector with natural gas. In the power sector, a preference for nuclear and coal developed. These were the guiding principles over the past forty years.

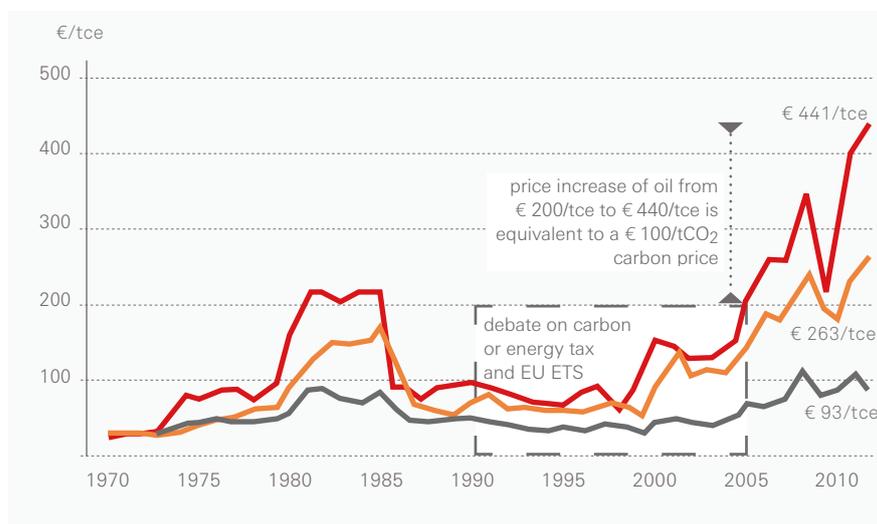
Oil is still dominant in the transport sector: cars, trucks, planes, ships and many trains need oil to operate. The debate around biofuels is complex – there is no simple fix to replace oil. Volumes of biofuels are limited, environmental impacts are high and there is a conflict between food production and the production of biofuels.

More difficult to understand is why the use of natural gas for transport increases only very slowly. There are low-hanging fruits to be picked in the transport sector. Natural gas prices are still only 60% those of oil on an energy-content basis (Figure 2). Besides this price advantage, natural gas can provide an immediate CO<sub>2</sub> reduction of around one quarter when it replaces diesel fuel.

#### 2 – Imported energy prices in Germany 1970-2011 with 2012 estimate

Source: Statistik der Kohlenwirtschaft

- imported steam coal
- imported crude oil
- imported natural gas



By historical standards, oil and gas prices are very high today. Hence, there are good reasons to use energy as efficiently as possible. Do we need therefore any additional actions by government? For example, actions to push up CO<sub>2</sub> prices by intervening in the EU ETS or to raise energy taxes. It is important to understand that the rise in the price of oil from around \$50/bbl (€200/tce) in 2005 to \$110/bbl (€440/tce) in 2012 is equivalent to over €100/tCO<sub>2</sub>.

The price difference between gas and coal has widened: coal is more competitive today than ten years ago. Nevertheless, there is a broad debate now on how to bring more gas into the power sector with some calling for political intervention. Fuel switching attracts more attention than enhancing efficiency through investment.

## PROSPERITY AND GROWTH

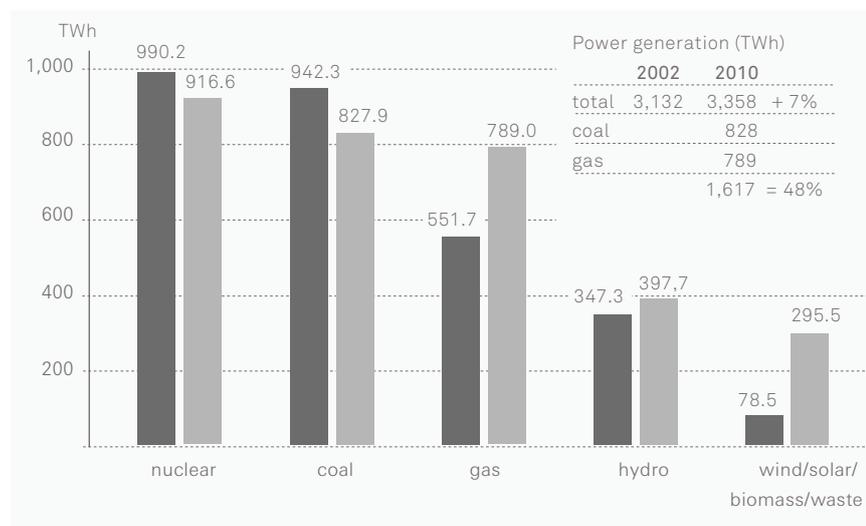
### The Importance of a Strategy for Clean Coal

Obviously, there is a need for a deeper understanding of what the impact will be of high energy prices on economic growth and prosperity. A look back at history indicates that economic growth is driven mainly by two factors: technological progress and the availability of relatively cheap energy. With economic recovery now a top priority in the EU, policy makers should recognise that competitive energy supplies are a major factor for growth. A precondition for competitive energy is a diversified energy mix to foster inter-fuel competition and investment in new infrastructure.

#### 2. Recent developments in the power sector

Between 2002 and 2010, power generation increased by 7% in the EU-27, with lower generation from nuclear and coal, and higher generation from gas and renewables (Figure 3). Fossil fuels, mainly coal and gas, still underpin around 50% of generation. Nuclear and coal remain very important for many member states; together, they provide base load at competitive prices.

3 – Power generation mix in the EU-27, 2002 and 2010 - Source: Statistik der Kohlenwirtschaft



The pattern of electricity production has mirrored changes in capacity (Figure 4). There has been a large build of natural gas-fired power plants: around 116 GW was added between 2000 and 2011 – over 200 new units. Today, some seek political intervention to support gas burn which has fallen because of high gas prices. Large new wind, PV and biomass power generation capacities have also been added. Some say that a faster expansion of renewables is the answer to everything, but at what cost?

## PROSPERITY AND GROWTH

### The Importance of a Strategy for Clean Coal

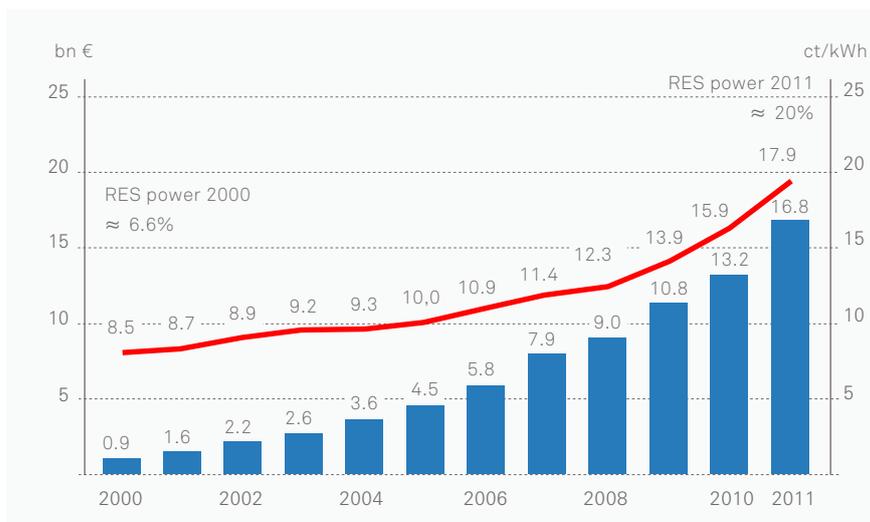
**4 – EU-27 power plant capacities and net changes in 2011 with net growth since 2000** - Source: Wind in Power – 2011 European statistics, European Wind Energy Association, February 2012

EU-27 capacity in 2011		net growth from 2000 to 2011		change in 2011
% share by energy source	total = 896 GW	MW		MW
gas	23	116,000		9,718
wind	10	84,000		9,616
hydro	14	4,300		615
others	2	6,500		1,373
photovoltaic	5	47,000		21,000
nuclear	14		-14,000	-6,253
coal	26		-10,000	1,307*
oil	6		-14,000	-447

Notes: \* 2,147 MW of coal-fired capacity was commissioned, 841 MW was closed.

The German experience demonstrates that a rising share of renewable energy sources (RES) is very expensive. Figure 5 shows two trends. Firstly, the renewables levy increased from one billion euros in 2000 to €16.8 billion in 2011, and further increases lie ahead because growth is mostly in high-priced offshore wind, biomass and PV. Secondly, there is a huge increase in the support paid for each unit of electricity (kWh); this has doubled from 8.5 ct/kWh to 17.9 ct/kWh. In short, renewables have become even more expensive. EURACOAL concludes that whilst renewables do have a place in the energy mix, this will be secured only in combination with nuclear, gas and coal for a long time to come.

**5 – German's green levy on electricity consumers, 2000 to 2011**- Source: BDEW (2010) / RWI-Position #45; BMU, Juli 2012, Erneuerbare Energien in Zahlen



Gas prices are very high today. The major suppliers – Russia, Norway and North Africa – are still willing and able to maintain price linkages between oil and gas. For this reason, there is no doubt that coal is more competitive today than at any time over the past twenty years. Many experts predict a prolonged period of high oil and gas prices. Inter-fuel competition is then the key to achieving reasonably priced electricity supplies for industry and private consumers across Europe.

## PROSPERITY AND GROWTH

### The Importance of a Strategy for Clean Coal

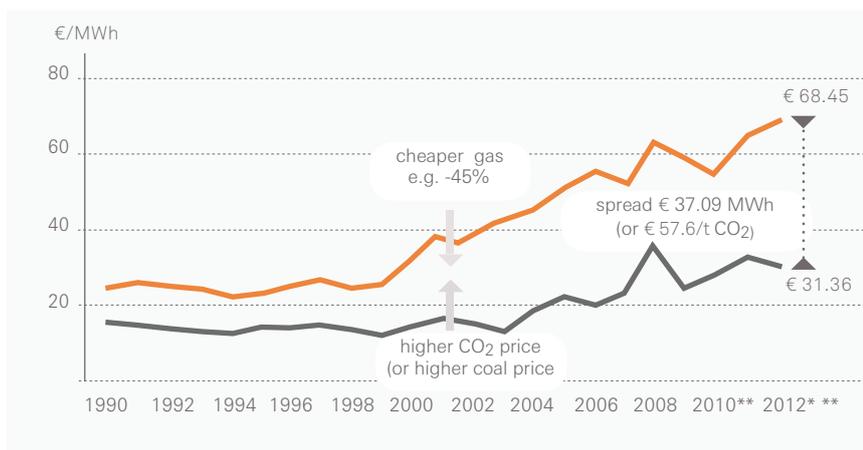
The coal industry supports a competitive structure for the internal electricity market, precisely because the competitive strengths of coal are then clear to see. There is no doubt that coal sets a price benchmark in the base-load market and ensures competition amongst those mid-merit plants that must respond to swings in demand.

#### 3. On competition between gas and coal in the power sector

Since 1990, fuel costs for power generation have risen dramatically. Figure 6 shows fuel input costs for generating electricity in Germany, assuming a coal plant with an efficiency of 38% and a gas plant with an efficiency of 49%. Today, fuel costs for such a coal plant are around €31/MWh and for a gas plant around €68/MWh: a spark-dark spread of €37/MWh.

**6 – Fuel costs for coal- and gas-fired power generation in Germany** - Notes: Assumed efficiencies are 38% for coal-fired power plant and 49% for gas-fired power plant. Data for 2011 and 2012 are \*partially estimated or \*\*preliminary.

— hard coal cross border  
— gas at the power plant



This is the reason why gas plants in Germany are only operating when they are needed for other purposes, for example to supply heat from combined heat and power plants or for network stability. Merchant gas plants are lying idle.

The decision to operate a power plant depends on its short-run marginal cost. In a simplified model, this comprises fuel cost and the cost of CO<sub>2</sub> emission allowance certificates. If the fuel cost is known, along with the quantity needed to generate a unit of electricity and hence the emission of CO<sub>2</sub> per kWh, then it is easy to calculate a CO<sub>2</sub> price which would balance the fuel cost spread between coal and gas. Figure 6 shows that the price differential between gas and coal has increased over time. Given the price differential of €37/MWh in the first half of 2012 and the assumed power plant efficiencies, it would require a CO<sub>2</sub> price of around €58/tCO<sub>2</sub> to make gas plants competitive.

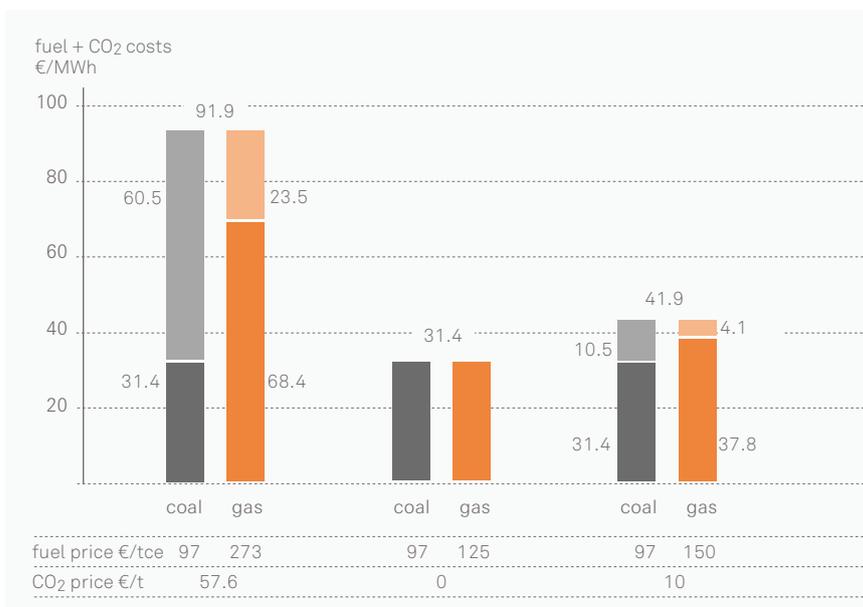
If this calculated CO<sub>2</sub> price is added to current fuel costs, then the short-run marginal cost would be around €92/MWh, as shown on the left in Figure 7. Compare this with power prices in Germany on the wholesale market of around €50/MWh and most would agree that a CO<sub>2</sub> price in the €50/tCO<sub>2</sub> to €60/tCO<sub>2</sub> range would harm the EU economy and cause consumers to suffer.

## PROSPERITY AND GROWTH

### The Importance of a Strategy for Clean Coal

#### 7 – How gas could be competitive: high carbon prices, dramatically lower gas prices or a combination

■ fuel costs per MWh  
■ CO<sub>2</sub> costs per MWh



The logical conclusion is that gas prices, driven upwards by an oligopoly of exporters, are too high. The hope that European politicians will help gas producers to maintain these prices by intervening in the EU ETS is wrong and misplaced. If gas producers want more gas to be used in the power sector, then they have to reduce their prices. For this to happen, there must be more competition on the supply side: competition, not only between gas suppliers, but also between gas, coal, nuclear and renewables in the power sector, assuming that renewables can become competitive without subsidy.

This is one very good reason why nuclear and coal are needed in Europe, because without nuclear and without coal, there is no inter-fuel competition in the power sector. In addition, technological progress is needed which is why EURACOAL presents a clean coal strategy. "Clean coal" is a synonym for greater efficiency, more flexibility and lower emissions.

#### 4. A clean coal strategy

Coal is competitive: Europe's cheapest electricity comes from coal- and lignite-fired power stations. Cheap electricity is the feedstock for a competitive industrial society – a competitive Europe. This is well understood and the coal industry fully supports a competitive internal electricity market, because security of supply and competitiveness are coal's winning strengths on such a level playing field.

There is no doubt that coal will continue to set benchmark prices for base-load and flexible mid-merit power generation. And with more intermittent renewables, coal's flexibility will become even more important. When the wind doesn't blow and when the sun doesn't shine, it will be coal that keeps the lights on. On top of this, policy makers should reflect that the cheapest virtual store of electricity is a stock of coal sitting next to a power station.

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## PROSPERITY AND GROWTH

### The Importance of a Strategy for Clean Coal

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Detracting from coal's benefits are questions over its long-term acceptability. The power utilities, the coal industry and political leaders have the task of convincing the public that coal is not only inexpensive and secure, but that clean coal technologies are available which minimise the environmental impacts of coal mining and coal utilisation.

In 2005, EURACOAL launched a strategy to promote "clean coal" and has now relaunched this as A Strategy for Clean Coal which is available on the EURACOAL website. This strategy aims to secure the future of coal-based power generation by communicating not only the achievements that have already been attained, but also, and above all, the future potential of clean coal technologies.

Turning to international trends, it can be expected that the economic environment will become even more challenging. It would therefore be wise to concentrate on what can be done today that is economically viable. EURACOAL believes that clean coal offers secure, affordable and environmentally friendly power generation in Europe. However, the widely varying situations amongst EU member states means that the strategy for clean coal comprises three distinct steps:

**1.** Increase efficiency, offer greater flexibility and reduce emissions in the short term through two individually important and collectively powerful responses to the climate challenge:

- modernisation of existing plants, and
- construction of state-of-the-art plants.

In this way, it is possible to significantly reduce emissions of conventional pollutants – SO<sub>2</sub>, NO<sub>x</sub> and dust – as well as reduce CO<sub>2</sub> emissions per unit of electricity by 20% to 40%. In addition, this step facilitates a greater share of renewables which cannot work without the backup provided by conventional power plants. All this can happen today.

**2.** Develop highly efficient coal-fired power plants, approaching 50% efficiency. Improvements will come incrementally over time, but always delivering ever-higher efficiencies. There is a need to work continuously on improvements; success depends on investment in R&D today that pays dividends tomorrow.

**3.** New technologies for CO<sub>2</sub> capture and storage that can be deployed the day after tomorrow. This is important for coal- and gas-fired power generation, as well as for energy-intensive industries. The time frame for the first industrial application is beyond 2020 and, according to the EC Energy Roadmap 2050, CCS will become more widespread by 2030. High-efficiency power plants are a pre-requisite for the introduction of CCS. Industry and governments should push forward with demonstration projects to gain experience and build trust in CCS technologies. In addition, there is a need to discuss how a European CO<sub>2</sub> transport and storage infrastructure can evolve in the 2020s.

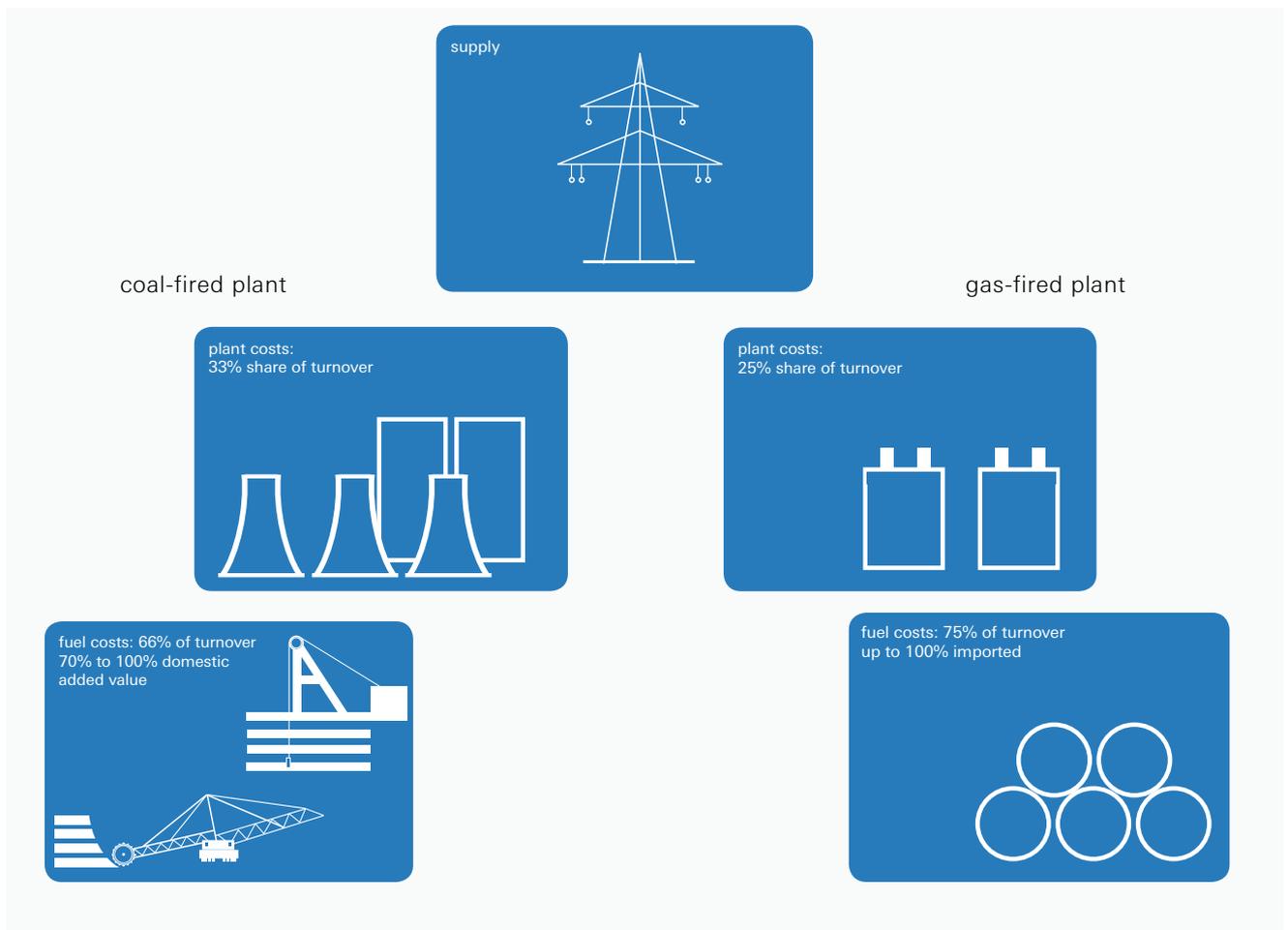
## PROSPERITY AND GROWTH

### The Importance of a Strategy for Clean Coal

EURACOAL is convinced that clean coal was, is and will be a synonym for a balanced cost-effective energy supply. It guarantees security of supply, fits with environmental protection requirements and creates added economic value in the EU. A balanced development of the power sector following a clean coal strategy meets EU climate policy aims and makes a vital contribution to EU ambitions in several other fields.

It is crucial to maintain progress with a clean coal strategy based on modernisation and CCS for a reliable long-term solution. Various CO<sub>2</sub> capture technologies have been tested by power plant operators who have taken a leading role. Other industries also have to develop appropriate CO<sub>2</sub> capture technologies and there has been a lot of activity in, for example, the steel industry. In principle, industry has delivered on many of CCS's promises since the technologies are now well understood.

8 – **Energy flow is cash flow:** a 1,000 MW power plant operating at base load for 7,000 hours each year has a €7 billion turnover (€50/MWh)



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## PROSPERITY AND GROWTH

### The Importance of a Strategy for Clean Coal

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However, operators of power plants or industrial facilities are not specialists in CO<sub>2</sub> transport or storage. Yet, it is only specialists who can hope to make a business case out of these activities. Therefore, a separation of tasks – between plant operators and specialist infrastructure companies – should contribute to finding a solution that delivers CCS widely. In this respect, EURACOAL supports DG Energy's work on CCS infrastructure and will actively participate in the analysis and debate.

#### 5. Fuel switching versus modernisation with clean coal

The EU faces a choice on the way to go for its energy supply. Modest CO<sub>2</sub> reductions could be achieved by fuel switching, but Europe would have to pay an even larger gas bill. The alternative approach is "modernisation with clean coal" which generates added economic value within the Union.

In a clean coal scenario, more investment is needed in the short term. In fact, investment requirements for the next decade can be estimated fairly easily. Today, the total capacity of coal-fired power plants is around 240 GW in the EU-27. Assuming a 50-year plant life, this means that it is desirable and feasible to replace about 5 GW every year. This equates to a €6 to €10 billion investment each year. In addition, some gas-fired plants must be built. In Figure 8, the coal and the gas alternatives are compared. Modernisation with clean coal leads to a much more favourable economic path than another "dash for gas" since it creates lasting value. It should be noted that there are still a large number of coal-producing regions in Europe where coal is a major economic factor. Investment in coal mines and power plants provides an anchor for many other businesses: supply chain companies, service companies and a whole range of other companies that depend on the supply of heat and power. At the heart, lie some 250,000 direct jobs in the EU coal industry.

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## PROSPERITY AND GROWTH

### The Importance of a Strategy for Clean Coal

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#### 6. Conclusions

Every source of electricity – gas, nuclear, coal or renewables – has to address questions related to security of supply, prices, environmental impacts, consumer acceptance, long-term liabilities and many other issues. EURACOAL presents its answers on coal; others must answer questions on competing sources of energy. EURACOAL believes that there are good reasons to follow the path of modernisation and to maintain a balanced energy mix which differs from member state to member state, depending on local resources, political decisions and fair competition. Highly efficient coal- and gas-fired power plants are needed to meet CO<sub>2</sub> reduction targets in the medium-term. In the longer-term, CCS will be important for both industry and the power sector.

If Europe maintains an energy mix that includes coal and goes down a technology-driven path, it can show leadership to other important regions outside the EU. A dash for gas would not show leadership since it cannot be followed by others in, for example, developing countries where coal is abundant and gas is scarce.

EURACOAL believes policy makers need to consider these important issues and the association is ready and willing to be part of the discussion on our energy future.

## Members & Activities

### EURACOAL's mandate

The European Association for Coal and Lignite is the umbrella organisation of the European coal industry. The associations and companies representing the coal industries of 20 countries work together in EURACOAL. Coal producers, importers, traders and consumers all have seats and votes in EURACOAL.

By integrating the countries of eastern and central Europe, and welcoming Members from neighbouring countries outside the European Union, EURACOAL has anticipated political developments taking place in Europe. The Association, evolved from CECSO (the European Solid Fuels' Association) after the expiry of the Treaty establishing the European Coal and Steel Community (ECSC Treaty) in 2002.

EURACOAL's mission is to highlight the importance of coal's contribution to security of energy supply within the EU, to energy price stability, to added economic value and to environmental protection. EURACOAL seeks to be an active communicator, with the aim of creating an appropriate framework within which the European coal industry and coal consumers can operate.

Around 30% of the power generated in the EU-27 is coal-based. Steel producers and other energy-intensive industries all need large quantities of energy. Coal is therefore an important and reliable source of energy in its own right and will remain a vital component of EU energy supply.

EURACOAL's activities are entirely geared towards the interests of its Members. This includes the whole process chain, beginning with coal extraction, marketing and transport,

right through to coal use at power stations, in the steel industry, in other industrial and commercial sectors and by private households. Coal research plays an important role here to optimise processes.

EURACOAL is the voice of the coal industry in Brussels, actively involved in the political process and always a proponent of coal as a vital component in a balanced European energy mix. EURACOAL's activities are directed towards:

- keeping Members informed on all coal-relevant matters at the EU level,
- creating a platform for Members to hold discussions and exchange opinions,
- voicing the interests of the coal industry at European level,
- creating favourable political and regulatory conditions, especially via the European Parliament, the Commission and the Council,
- exchanging information and working with the Commission and Parliament,
- participating in the European Commission's Social Dialogue with industry,
- supporting activities of the European Economic and Social Committee,
- offering Members a platform to develop joint R&D projects,
- co-operating with other politically relevant associations and interest groups in Brussels to boost awareness of coal and the industry's interests, and
- public relations work to promote coal.

EURACOAL is a Brussels-based European association, responsive to the considerable powers of the EU institutions, especially the European Parliament and the Commission. It represents the interests of its Members in its dealings with these institutions, participates in expert discussions and helps shape public opinion. EURACOAL's committees are the cornerstone of the Association. They elaborate positions on energy, environment and research policy, as well as on coal markets. While EU decisions are primarily determined by the Brussels-based institutions, the Council – and therefore the Member States – also have far-reaching powers. The contribution that EURACOAL Members make to energy and environmental policy at national level is therefore just as important as the collective representation of their interests in Brussels. When looked at this way, EURACOAL is not just a platform for voicing the collective interests of Members, but a forum for information exchange where Members can explore issues of concern to the coal industries in individual Member States.

### Major Activities of EURACOAL

The EU's general objectives - to implement the single internal market, to increase the Community's economic strength, to protect consumers and to achieve reasonable standards in respect of environmental protection – have all created a wide scope for legislative initiatives, and much of this impacts on the coal industry. The liberalisation of power and gas markets, the introduction of EU rules on subsidies and the adoption of measures aimed at strengthening commercial businesses by introducing competitive market structures all open up good opportunities for coal – but are also fraught with risks. The coal industry

## Members & Activities

welcomes the Commission’s various strategies on energy and climate, noting the major challenges that lie ahead.

EURACOAL considers it vitally important for Europe to develop robust energy and environmental policies for the long term. These will open up new opportunities for coal in the power generation sector – more efficient plants, cleaner plants and plants fitted with CO<sub>2</sub> capture and storage. With the right frameworks in place, the EU can benefit from a secure, low-carbon future with coal and become a beacon for those developing countries where coal use is rising rapidly.

In the area of environmental protection, EU legislation has an impact on the production and use of all forms of energy. In particular, it affects the relative

competitiveness of oil, gas and coal. Some of EURACOAL’s most important activities here have focussed on:

- access to resources to avoid the hasty abandonment of mines and to legally protect raw material resources,
- climate protection policies, such as the Emissions Trading Scheme, and support for renewable sources of energy and combined heat and power (CHP),
- policies and regulations to demonstrate CO<sub>2</sub> capture and storage (CCS), including financing of CCS projects and infrastructure solutions to transport and store CO<sub>2</sub>,
- clean air policy, as reflected in the Large Combustion Plants

Directive and the Industrial Emissions Directive,

- management of mining waste and residues from power plants,
- water protection, mining activities and groundwater, and
- soil and nature conservation, such as rehabilitation of mine sites or large-scale nature conservation projects linked to infrastructure development.

EURACOAL responds to Commission initiatives and formal legislative procedures in Parliament with advice from industry specialists. Properly briefed policy makers and politicians will generally make better decisions. In this way, EURACOAL raises the legitimate interests of a key sector of the economy, namely the European coal industry.

### 1 – EURACOAL - an international partnership

#### General Assembly

Coal producers, importers, traders, coal-based power utilities, R&D institutes

#### Executive Committee

(discussions, opinion forming, work programme, lobbying positions)

#### President

Mr. Paweł Smoleń – PGE

#### Vice Presidents

Mr. Piotr Rykala - Kompania Węglowa  
Mr. Nigel Yaxley - CoalImp  
Prof.-Dr. Franz-Josef Wodopia - GVSt

#### National Delegations

35 members from 20 countries

#### Committees (chairs)

Energy Policy Committee  
Dr.-Ing. George Milojcic - DEBRIV

Technical Research Committee  
Dr. José Luis Fuentes-Cantillana Isusi – AITEMIN

Environment Committee  
Mr. David Brewer - CoalPro

Market Committee  
Mr. Nigel Yaxley - CoalImp

#### Brussels Secretariat

Secretary-General: Mr. Brian Ricketts  
Deputy: Mrs. Gitta Hulik  
PA: Mrs. Marguerite Johnson

### 2 – EURACOAL - serving the interests of the European coal industry

European Institutions:  
Council - Parliament - Commission

EURACOAL

National Coal Associations and coal-related companies

National Institutions:  
Parliaments & Governments



## Members & Activities

### 1 – Members

Country	Member Association / Company	as at March 2013
Belgium	ISSeP – Institut Scientifique de Service Public (Scientific Institute of Public Services)	
Bosnia-Herzegovina	RMU Banovici d.d.	
Bulgaria	MMI – Mini Maritsa Iztok EAD	
Bulgaria	Vagledobiv Bobov dol EOOD	
Czech Republic	ZSDNP – Zamestnavatelský svaz dulního a naftového průmyslu (Employers' Association of Mining and Oil Industries)	
Finland	Finnish Coal Info	
France	BRGM – Bureau de Recherches Géologiques et Minières (Research Institute of Geology and Mining)	
Germany	DEBRIV – Deutscher Braunkohlen-Industrie-Verein e.V. (German Association of Lignite Producers)	
Germany	GVSt – Gesamtverband Steinkohle e.V. (German Hard Coal Association)	
Germany	VDKI – Verein der Kohlenimporteure e.V. (Hard Coal Importers' Association)	
Greece	PPC – Public Power Corporation SA	
Greece	ISFTA – Institute for Solid Fuels Technology and Applications	
Hungary	Mátrai Kraftwerk AG	
Italy	ENEL S.p.A.	
Poland	PPWB – Porozumienie Producentów Wegla Brunatnego (Confederation of Polish Lignite Producers)	
Poland	ZPWGK – Związek Pracodawców Górnictwa Wegla Kamiennego (Polish Hard Coal Mining Employers' Association)	
Poland	GIG – Główny Instytut Górnictwa (Central Mining Institute)	
Poland	EMAG Institute of Innovative Technologies	
Poland	KOMAG Institute of Mining Technology	
Romania	APFCR – Asociatia Producatorilor si Furnizorilor de Carbune din Romania (Coal Producers and Suppliers' Association of Romania)	
Romania	PATROMIN – Asociata Patronala Miniera din Romania (Mining Employers' Association of Romania)	
Serbia	EPS – Elektroprivreda Srbije (Electric Power Industry of Serbia)	
Slovak Republic	HBP – Hornonitrianske bane Prievidza, a.s.	
Slovenia	Premogovnik Velenje d.d.	
Spain	CARBUNION – Federación Nacional de Empresarios de Minas de Carbón (National Coal Mining Employers' Association)	
Spain	Geocontrol, S.A.	
Sweden	Svenska Kolinstitutet (Swedish Coal Institute)	
Turkey	TKI – Turkish Coal Enterprises	
Ukraine	DTEK	
Ukraine	Ukrvuglerobotodavtsy (All-Ukrainian Coal Industry Employers' Association)	
United Kingdom	CoalPro – Confederation of UK Coal Producers	
United Kingdom	CoalImp – Association of UK Coal Importers	
United Kingdom	Coaltrans Conferences Ltd.	
United Kingdom	Golder Associates (UK) Ltd.	
United Kingdom	University of Nottingham	

## 2 - Committees

Committee	Chairman	Secretary
Energy Policy Committee	Dr.-Ing. George Milojcic (DEBRIV)	Mr. Zygmunt Borkowski (ZPGWK)
Environment Committee	Mr. David Brewer (CoalPro)	Mr. Bernd Bogalla (GVSt)
Market Committee	Mr. Nigel Yaxley (Coallmp)	Mrs. Gitta Hulik (EURACOAL)
Technical Research Committee	Dr. José Luís Fuentes-Cantillana Isusi (AITEMIN)	Mr. Bernd Bogalla (GVSt)

## 3 - Executive Committee

Executive Committee Members		as at March 2013
Mr. Paweł Smoleń	Poland	President EURACOAL and Vice President of the Management Board for Operations PGE
Mr. Piotr Rykala	Poland	Vice President EURACOAL and Vice President Kompania Węglowa
Mr. Nigel Yaxley	UK	Vice President EURACOAL and Managing Director Coallmp
Prof. Dr. Franz-Josef Wodopia	Germany	Vice President EURACOAL and Chief Executive, GVSt
Mr. Mustafa Aktaş	Turkey	General Director, TKI
Mr. David Brewer	UK	Director General, CoalPro
Mr. Zdeněk Bučko	Czech Republic	Sokolovská uhelná právní nástupce a.s.
Mr. Munever Čerčić	Bosnia-Herzegovina	Director General, RMU Banovice d.d.
Eng. Teodor Drebov	Bulgaria	Executive Director, Mini Maritsa Iztok EAD
Prof. Dr. Sc. Eng. Józef Dubiński	Poland	General Director, Central Mining Institute
Dr. Jürgen Eikhoff	Germany	Production Director, RAG AG
Dr. Renata Eisenvortová	Czech Republic	European Affairs Manager, Czech Coal a.s.
Dr. Nikolaos Galitis	Greece	Human Resources Director, Public Power Corporation SA
Mr. Phil Garner	UK	Director, CoalPro
Mr. Magnus Grill	Sweden	Chief Executive Officer, Swedish Coal Institute
Mr. Milan Jakovljević	Serbia	Director Coal Production Department, EPS
Ing. Rastislav Januščák	Slovakia	Director of the Supervisory Board, Hornonitrianske bane Prievidza a.s.
Mr. Constantin Jujan	Romania	Director General, Compania Nationala a Huilei s.a.
Eng. Ivan Karaivanov	Bulgaria	Deputy Executive Director, Mini Maritsa Iztok EAD
Dr. Maksymilian Klank	Poland	Vice President, ZPGWK
Dr. Nikolaos Koukouzas	Greece	Director of Research, CERTH/ISFTA
Dr. Johannes Lambertz	Germany	Chief Executive Officer, RWE Power AG
Mr. Oscar Lapastora Turpin	Spain	Vice President, CARBUNION
Dr. Marios Leonardos	Greece	Director Mines Planning & Performance Dept., Public Power Corporation SA
Mr. Roman Łój	Poland	Chairman of the Board, Katowicki Holding Węglowy SA
Mrs. Mercedes Martín Gonzáles	Spain	Director General, CARBUNION
Dr. Milan Medved	Slovenia	General Manager, Premogovnik Velenje d.d.
Dr.-Ing. George Milojcic	Germany	Chief Executive, DEBRIV
Mr. Constantin-Viorel Petcu	Romania	Chairman, APFCR
Dr. Erich Schmitz	Germany	Chief Executive, VDKI
Mr. Oleksandr Selishev	Ukraine	Head of Strategic Planning & Analysis, DTEK
Mr. Radim Tabášek	Czech Republic	Chief Reclamation Officer, OKD a.s.
Mr. Bernd Tönjes	Germany	Chairman of the Board, RAG AG
Dr. Catherine Truffert	France	Research Director, BRGM
Dr. Joachim Witzel	Hungary	Member of the Board, Mátrai Kraftwerk AG
Mr. Stanislav V. Yanko	Ukraine	Head of the Union, Ukrvuglerobotodavtsy
Mr. Nigel Yaxley	UK	Managing Director, Coallmp
Mr. Roberto Zangrandi	Italy	Head EU Affairs, ENEL S.p.A.
Mr. Ognyan Zarev	Bulgaria	Manager, Vagledobiv Bobov Dol EOOD
Dr. Hartmuth Zeiß	Germany	Chairman of the Managing Directors, Vattenfall Europe Mining & Generation AG
Mr. Stanislav Żuk	Poland	President, PPWB

