The new 858 MW unit at the PGE Belchatów power station, commissioned in 2011, is the biggest power generation unit ever built in the history of the Polish power industry and the most advanced unit in Poland. It achieves a net efficiency of 42% on lignite fuel and meets all EU environmental standards, including requirements on carbon capture and storage. With an installed capacity totalling 5 300 MW, Belchatów is Europe’s largest power station.

© Artur Marciniec / Alamy stock photo
## CONTENTS

Message from the President .................................................................................................................. 5

Committee Activities

- Market Committee .......................................................................................................................... 8
- Energy and Environment Policy Committee .................................................................................. 14
- Working Group on Large Combustion Plants ................................................................................ 15
- Working Group on the Management of Tailings and Waste-Rock in Mining Activities .......... 16
- EC Social Sectoral Dialogue Committee for Extractive Industries ............................................. 17
- Technical Research Committee ..................................................................................................... 18

EURACOAL Activities ......................................................................................................................... 20

Financial Report for 2016 .................................................................................................................... 20

Committees and Executive Committee ............................................................................................... 21

EURACOAL Members ........................................................................................................................... 23

## FEATURES

UNFCCC Paris Agreement ..................................................................................................................... 6

12th EC-EURACOAL Coal Dialogue on the future of coal after COP 21 ........................................ 7

IEA Medium-Term Coal Market Report ............................................................................................. 8

Coaltrans World Coal Leaders Network™ Conference 2016 ........................................................... 13

EESC own-initiative opinion on “Indigenous Coal in the EU Energy Transition” ............................... 15

Dinner debate in the European Parliament on climate change ........................................................ 16

Reform of the EU Emissions Trading System ..................................................................................... 17

Energy Tour 2016 ............................................................................................................................... 19
EURACOAL’s publication *Coal industry across Europe* offers a comprehensive review of coal production, trade and use in EU member states and participants in the Energy Community. The 6th edition features a series of special insights covering recent coal-sector investments and cutting-edge R&D that have enhanced productivity at coal mines, improved efficiency at coal-fired power plants and limited the environmental impacts of coal use.
MESSAGE FROM THE PRESIDENT
Dr. Wolfgang Cieslik

The year 2016 was a year of change in Europe on many levels. For the coal industry, change took on a larger profile as political thinking towards coal had repercussions within the sector and beyond. Yet, with change came some familiar refrains.

The coal sector retains its position in the EU energy mix, reliably supplying around one quarter of EU electricity. In 2016, the EU mined 371 million tonnes of brown coal or lignite, while 87 million tonnes of hard coal production were supplemented by a further 167 million tonnes of imported coal. Coal remains an important business in the EU.

In 1897, Mark Twain’s obituary was published – by mistake – in an American newspaper. Today, we read in the New York Times, in Der Spiegel, in the UK Guardian and in many other newspapers of the imminent demise of coal. It needs to be said, in Mr. Twain’s words, “The reports of coal’s death are greatly exaggerated.” The coal industry today is a seven- to eight-billion tonne per year behemoth that supplies over 40% of global electricity. All of the world’s iron and steel has, at some point, been produced from iron ore using coal.

On 4 November 2016, the Paris Agreement entered into force, thirty days after the EU had ratified this international accord and thus taking the number of signatories above the agreed threshold. Around the world, one can see a push to modernise the energy sector with new technologies, all in response to the overarching political imperative to meet our climate targets, with less emphasis on competitive markets. In the global coal industry, discussions on high-efficiency, low-emission (HELE) technologies and carbon capture and storage (CCS) intensified, as well as on alternative uses of coal and captured carbon dioxide (CCU) in chemicals and fuels, for example. Moreover, the role of conventional thermal power generation to balance intermittent renewables, such as wind and solar, became more important as the share of renewables grew.

Coal is not about to go away and the industry stands proud in the knowledge that coal provides more electricity around the world than any other energy source. Of all the basic commodities, electricity is the most civilising. Yet, the industry is accused of causing climate change and premature deaths through air pollution, even though solutions to these environmental impacts are at hand. The question then is whether to prioritise implementation of these solutions which all come at a cost that society must bear.

In Europe, emissions of sulphur dioxide, oxides of nitrogen and dust from coal-fired power plants have been massively reduced since 1990, and will continue to be reduced to very low levels. Since the 1970s, coal use has grown in the OECD countries, while life expectancy has risen from seventy years to eighty years. Using more coal has helped to reduce energy poverty and improve the living conditions of many people. According to the official EU survey of income and living conditions, energy poverty in the EU is rising with rising energy prices, affecting 54 million citizens or around 10% of the total population. Coal’s affordability often makes it the fuel of choice for
electricity generation in those member states where electricity prices are the subject of political attention.

While coal is important across the EU, for many member states it is essential. A third of Denmark’s electricity and almost half of Germany’s electricity comes from coal – facts that you will rarely hear in Brussels. Around half of electricity in Bulgaria, Greece and the Czech Republic is generated from coal and lignite. In Poland, over 80% of electricity generation depends on coal and lignite.

Yet, in light of the Paris Agreement and the EU’s tough climate targets, coal, oil and natural gas are viewed as transition fossil fuels, because they are ultimately incompatible with a low-carbon, climate-friendly economy.

Renewables are heavily promoted as an alternative to fossil fuels and even to nuclear in the case of Germany and France. Indeed, enormous investments have been made in renewables with impressive growth in capacity of mainly wind and solar. Since the year 2000, the EU has added 71 GW of solar PV and over 100 GW of wind power. Unfortunately, the growth in actual output – useful electricity – has been less spectacular. There are periods when output is close to zero and these periods can extend to a week or more in the middle of winter when high-pressure weather systems sit over large parts of Europe. During these cold spells, it is only conventional thermal generation that can meet electricity demand. The storage capacity of pumped hydro in the EU is very limited and while electric batteries offer promise, they are yet to be proven at a material scale.

What we are seeing in Europe is the construction of a second energy system: we continue to depend on the existing, conventional system when the wind does not blow or the sun does not shine. Hence, investing in renewables should not be seen as an alternative to conventional generation, because we need both which means higher costs for consumers.

Some argue that flexible gas-fired plants will be needed to balance intermittent renewables. Flexible plants will certainly be needed, but existing modern coal-fired plants are equally as flexible as combined-cycle gas-turbine (CCGT) power plants.

The Commission’s Winter Package, launched in November 2016, is an important step towards a fully functioning internal market for electricity, this being an objective that EURACOAL supports. However, the good progress made to date might be jeopardised if capacity mechanisms are subject to emission performance standards that interfere with a member state’s right to choose its own energy mix and with the package’s major objective of creating an Energy Union. Policies that endanger security of energy supply also endanger European integration.

The proposed 550 gCO₂/kWh emission performance standard in the revision to the electricity market regulation discriminates against certain technologies (i.e. coal-fired power stations,
certain gas-fired power plants and oil-fired plants) while privileging others (i.e. nuclear power plants and some gas-fired combined-cycle power plants). EURACOAL will continue to voice its concerns against this unwarranted standard.

In these times of political change concerning the sector, coal-fired power plants may be enjoying something of a renaissance in Europe. New plants have opened recently in Bosnia and Herzegovina, Bulgaria, the Czech Republic, Germany, Italy, the Netherlands, Poland and Slovenia. If coal remains competitive and if government policy values security, then there is every chance that coal will survive as a strong component in Europe’s future energy mix.

To that end, the coal sector puts a strong focus on research and development into the future technologies that will be needed to keep coal in a sustainable and competitive energy mix. EURACOAL has always been active in this field and will remain so, searching for new technologies that can make coal cleaner. This is a great opportunity, as we are convinced that a world with coal will be more prosperous than one without.

Finally, I would like to pay tribute to one of the founding fathers of EURACOAL.

In 2016, Dr. George Milojcic, Chief Executive of the German Brown Coal Association (DEBRIV), announced that he would be retiring. He was instrumental in establishing EURACOAL in 2002, bringing together for the first time hard coal producers, lignite producers and coal importers from across Europe. EURACOAL members have greatly appreciated and valued Dr. Milojcic’s devotion to EURACOAL over many years, most recently as Chairman of our Energy and Environmental Policy Committee.

Vice President Janusz Olszowski spoke for all EURACOAL members when he presented Dr. Milojcic with a ceremonial sword worn by Polish mining engineers and said, “I wish to congratulate you on your great results in EURACOAL and wish you much health, good luck and all the best for your future.”

12th EC-EURACOAL Coal Dialogue on the future of coal after COP 21

The 12th EC-EURACOAL Coal Dialogue took place on 10 June 2016, jointly chaired by Prof. Klaus-Dieter Borchardt, Director for the Internal Energy Market at DG Energy, and EURACOAL Vice President, Vladimír Budinský.

This dialogue examined the future of coal after the UNFCCC conference of the parties (COP 21) held in Paris in December 2015. Keynote speeches were made by MEP Claude Turmes (Greens/EFA, LU), Philip Owen, Acting Director for International and Mainstreaming in DG Climate Action, and Dumitru Fornea, a member of the European Economic and Social Committee who was rapporteur for an EESC own-initiative opinion on coal (see box on page 15). The two sessions focused firstly on the future perspectives for coal use with reference to COP 21, Energy Union, EU climate targets and international coal markets, and secondly on the future perspectives for coal mining in the EU, covering the social impacts of coal industry restructuring and modernisation. A detailed report is available on the EURACOAL website.

“Black meets Green”
EURACOAL Vice President, Vladimír Budinský (left), with MEP Claude Turmes at the 12th EC-EURACOAL Coal Dialogue in Brussels on the future of coal after COP 21.
COMMITTEE ACTIVITIES:
Market Committee
Prof. Franz-Josef Wodopia, Chairman

The aim of the EURACOAL Market Committee is to deliver accurate, consistent and timely data on production, imports and consumption of hard coal and lignite in Europe, and to publish these data in regular market reports.

In 2016, Prof. Franz-Josef Wodopia took over the helm of the Market Committee, replacing Dr. Erich Schmitz who had served with distinction over many years. Prof. Wodopia built his career in the coal industry, rising to lead GVSt, the German Coal Association, before becoming General Manager at VDKi, the Coal Importers’ Association. He brings to the committee his solid, in-depth knowledge of the industry.

IEA Medium-Term Coal Market Report

According to the International Energy Agency, coal will remain an important part of the global energy mix. The Agency’s 2015 coal market report shows an annual demand growth of 0.8% to 2020. Although coal-fired power generation in the EU will likely decline by 1.5% per year, this pales in comparison with the expected growth in Asia.

The committee held two meetings, in April and September, to discuss, among other topics, two EURACOAL market reports and the latest edition of Coal industry across Europe. The latter was launched in Brussels on 23 January 2017 by EURACOAL President, Dr. Wolfgang Cieslik, in the presence of Mr. Keisuke Sadamori, Director of Energy Markets and Security at the International Energy Agency.

Throughout the year, members were informed on topics of interest, such as Turkish coal import tax changes and international regulations covering the carriage of goods by inland waterways, railways and road.

World Coal Market Developments

Global coal production decreased slightly again in 2016, after peaking in 2014. Despite this decrease, the overall story since the 1970s has been positive, with global hard coal production increasing almost two and half times to around 6.7 billion tonnes in 2016. Although China experienced the largest absolute decrease, the relative production decreases were largest in the European Union and the United States.

Steam coal prices made a spectacular recovery towards the end of 2016, reaching over 95 US$/tonne. The fundamentals for this price recovery were production cuts, mainly in China. The Chinese policy to restrict coal supply by limiting annual working at coal mines to 276 days had a large impact on domestic coal production. After a spike in power demand, and hence coal demand, during the hot summer of 2016, the Chinese government eased the “276 policy” to allow steam coal mines to work a full 330 days. Also driving coal prices were higher freight rates which saw steep increases in the second half of 2016, partly due to higher fuel oil prices.

The Chinese policy to cut coal production from the 3.5 billion tonnes seen in 2015 led to an increase in coal imports, estimated at 256 million tonnes in 2016. The national five-year plan for 2016-2020 states that 800 million tonnes per year of outdated coal mine capacity will be removed from production, while 500 million tonnes per year of improved capacity will be added. Although coal’s
share in China’s power generation mix is likely to fall, the Chinese National Energy Administration announced in November 2016 that coal-fired power generation capacity should grow by 18% to 1,100 GW by 2020.

Coal production in India is estimated to have been 639 million tonnes in 2015/16, a 4% increase in comparison with the previous fiscal year and reflecting the Indian government’s policy to expand indigenous production. Coal India Ltd. aims to increase its production from 539 million tonnes in 2015/16 to 908 million tonnes in 2019/20. India imported 166 million tonnes of steam coal in 2016. However, early in 2017, the Indian government issued circulars to state-owned power plants concerning the compulsorily purchase of indigenous coal.

US coal producers continued to suffer in 2016 strong competition from indigenously produced shale gas and competitive imported coal prices. Production fell 19% to 661 million tonnes. However, the change in the US administration, with promises to revive the coal sector, could boost demand as certain restrictions associated with the previous administration’s Clean Power Plan are lifted.

Australian coal production decreased by 2% to 433 million tonnes in 2016, mainly for export on the back of higher steam and coking coal prices. Coal production is forecast to gradually increase through to 2022 in response to increased demand for high quality coal, mainly from India and the ASEAN region.

Global seaborne hard coal trade is estimated at 1,100 million tonnes in 2016, almost the same level as in 2015. Supply is dominated by Australian and Indonesian exporters who supplied 35% and respectively 28% of the international seaborne market. Australia increased its exports 0.8% to 392 million tonnes in 2016, while Indonesian exports also increased slightly to 369 million tonnes, an increase of 4 million tonnes. Russian exports grew to 165 million tonnes (+9% in comparison with 2015), reinforcing its position as the world’s third largest coal exporter. The US saw its exports fall by 12 million tonnes to 54 million tonnes (-19%), while Colombia increased exports to 89 million tonnes (+10%). South Africa’s coal exports decreased slightly to 75 million tonnes, a 2.4% reduction.

In Indonesia, coal-fired power plants coming online over the next few years will affect coal supply for export as the government enforces its domestic reservation policy that requires domestic coal mines to fulfil most of the country’s coal-fired power generation needs. Indonesia has an ambitious target to increase its domestic coal-fired power generation fleet by more than 14 GW by 2022, but progress is slow.

China regained its position as the world’s largest coal importer in 2016: 196 million tonnes of steam coal and 59 million tonnes of coking coal. The second largest importer was India with 217 million tonnes, slightly down on 2015. Japan imported 191 million tonnes of coal in 2016, little changed from 2015. Imports into Japan will likely increase as more than 3 GW of coal-fired electricity generation capacity is scheduled to be added by 2020. South Korea saw imports shrink to 134 million tonnes of coal in 2016. However, with no indigenous supply, its coal imports will also likely increase as coal-fired capacity is projected to increase, in line with South Korea’s policy to diversify its energy mix to ensure security of supply.

Coking coal trade reflects the demand for iron and steel. Global crude steel output increased in 2016 by 0.8% to 1,628.5 million tonnes. EU crude steel production fell by 2.3% to 162.3 million tonnes; some member states suffered particularly sharp falls: 31.1% in the United Kingdom and 8.2% in Spain. Italy increased its steel production by 5.9%, strengthening its position as the second largest EU producer after Germany. Australia dominates coking coal trade with exports of 189 million tonnes in 2016. The US (37 million tonnes), Canada (28 million tonnes) and Russia (22 million tonnes) were also important exporters, while Mongolia’s role is growing as an exporter to China. As a result of the very high coking coal prices seen in 2016, several coking coal mines in Queensland, Australia and Canada are scheduled to restart operations.
In the short- to medium-term, coal-fired power generation is still the most affordable way to provide electricity to the 1.2 billion people without access to electricity. The movement against coal diminished in 2016 after the change of administration in the US, but remains strong in the EU. The IEA Medium-Term Coal Market Report 2016 forecasts that coal demand will plateau globally over the next five years: while demand growth stalls in China, falling demand in the US and the EU will be balanced by rising consumption in India and South East Asia. Steam coal will continue to play a significant role in the energy mixes of many economies.

In the long term, coal will remain an important source of global energy, although prospects for new growth are limited. Coal consumption is projected to increase in lower-income countries – because of its low cost – but this is expected to be offset by efforts to reduce coal use in higher-income countries, including in EU member states.

**European Coal Market**

In Europe, lower gas prices, generous renewable energy feed-in-tariffs, EU-wide CO₂ pricing, national carbon taxes and coal taxes, as well as other measures to reduce greenhouse gas emissions have all weakened coal’s market.

---

**European hard coal production, lignite production and coal imports, 2016**

<table>
<thead>
<tr>
<th>EU-28</th>
<th>million tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lignite</td>
</tr>
<tr>
<td></td>
<td>371</td>
</tr>
<tr>
<td></td>
<td>hard coal</td>
</tr>
<tr>
<td></td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>imports</td>
</tr>
<tr>
<td></td>
<td>167</td>
</tr>
</tbody>
</table>

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

Source: EURACOAL members – *2015 data
position. Although oil and gas prices recovered to the same levels as in 2015, after dropping at the beginning of 2016, they remained relatively low and therefore competitive against coal. Nevertheless, the gas industry continued to lobby for a higher carbon price under the EU emissions trading system to force fuel switching from coal to gas.

EU hard coal production shrank by 11.4 million tonnes in 2016 or 11.6% compared with 2015 to 87.2 million tonnes, due to lower demand and strong competition, mainly from Colombian and Russian exporters. Higher coal prices in the second half of 2016 were much welcomed by the coal mining industry. EU lignite production in 2016 fell to 371.3 million tonnes, 7.2% lower than in 2015.

EU coal imports fell by 23.9 million tonnes or 12.5% to 166.8 million tonnes, mainly due to the dramatic collapse in UK coal imports which declined to just 8.3 million tonnes, 67% less than in 2015, as a result of the UK’s carbon price floor – a unilateral carbon tax. With three new coal-fired power plants now operating, coal imports for own use into the Netherlands grew by 14.5% to 14.5 million tonnes (i.e. excluding shipments in transit to other countries). Coal imports elsewhere fell slightly: Germany decreased its imports to 53.1 million tonnes (-4.3%); Italy decreased to 17.9 million tonnes (-8.7%); Spain reduced imports to 14.7 million tonnes (-22.6%); while in France, coal imports decreased to 13.5 million tonnes (-5.6%). Poland imported slightly more coal at 8.3 million tonnes (+1.2%), this being less than the 9.0 million tonnes the country exported.

The EURACOAL Market Report, published twice each year, contains full details of European coal and lignite production, as well as European coal trade.

Coal and Coke Prices
After a five-year-long period of decline, steam coal prices recovered strongly in the second half of 2016 to reach 95 US$/tonne CIF at ports in northwest Europe. However, average spot prices in 2016 were only slightly higher than in 2015 and, by the end of March 2017, northwest European import prices had fallen back to 70 US$/tonne CIF.

Coking coal prices skyrocketed in 2016 to a five-year high of over 300 US$/tonne FOB, principally due to measures by Chinese regulators and high demand from the Chinese steel industry. At year end, the spot price of Australian prime low-volatile hard coking coal was 250 US$/tonne FOB, well above the 77 US$/tonne at the start of the year. ARA coke prices almost doubled during the year, rising from 150 $US/tonne to 290 $US/tonne.

Steam coal import prices at ARA ports in northwest Europe (NWE) & Qinhuangdao port in China. 2005-2017
Source: IHS McCloskey Coal Report
The fundamentals behind these price increases were Chinese government policy. Accounting for around one half of global coal consumption and with an enormous influence on global coal trade, China throttled coal production by limiting the number of working days at coal mines through implementation of the government’s “276 policy”. The government aims to keep steam coal prices between 70 US$/tonne and 85 US$/tonne.

With the higher prices, many of the major coal producers returned to profit. Anglo American cancelled two metallurgical coal mine divestments. Glencore reported a profit on a net basis in 2016, but a $1 billion coal-hedge loss. BHP reported its highest profits from coking coal since 2009, but cautioned against short-term uncertainties. Rio Tinto’s coal division had one of the biggest gains among the company’s divisions in 2016. Arch Coal emerged from bankruptcy in October 2016 followed by Peabody Energy in April 2017, being respectively the second-largest and largest US coal companies by production volumes.

Freight Rates

Freight rates gradually recovered during 2016. For example, after falling to 2.38 US$/tonne in March, rates for the benchmark Richards Bay – Rotterdam route rose to 7.33 US$/tonne in November, leading to increased coal prices at the ARA ports of Antwerp, Rotterdam and Amsterdam. However, on average, freight rates for this particular route were still lower in 2016 than in 2015.

The Baltic Dry Index, published by the London-based Baltic Exchange, reached 961 at the end of 2016 and continued rising to 1338 at the end of March 2017, having fallen to an all-time record low of 290 on 10/11 February 2016. This rise was overdue as the low rates were unsustainable for many shipping companies. For example, Hanjin Shipping Co. Ltd. of South Korea, the world’s seventh-largest shipping company, filed for bankruptcy protection on 31 August 2016.

The total combined fleet capacity of all 11 390 dry bulk vessels stood at 808 million dead-weight tonnes (dwt) in June 2017, with Panamax and Capesize carriers accounting for the greatest share of this total. The fleet of 400 000 dwt Valemax carriers continues to grow with new orders from China and Japan bringing the total number to sixty-six. Overall, new vessels on order total just 8.5% of the existing fleet capacity and scrappage rates will remain high with IMO’s Ballast Water Management Convention effective from September 2017, on top of IMO’s recently adopted air pollution regulations. With this contraction in vessel supply and a healthy outlook for demand growth, the dry bulk shipping market is expected to recover from 2017 onwards, although perhaps moderated initially by faster steaming – closer to the optimal 14 knots.
Carbon Prices

In the first two months of 2016, the price in the secondary market of EU emissions trading system (ETS) allowance certificates collapsed from just over 8.00 €/tCO₂ to below 5.00 €/tCO₂ following a court action by the Polish government. Allowance prices continued to fall during the year, reaching a low of 4.00 €/tCO₂ in September 2016, before recovering to end the year at 6.55 €/tCO₂.

While lower natural gas prices reduced demand for allowances, their price was driven fundamentally by political decisions in Brussels, notably by the various attempts to increase carbon prices by managing the relatively large surplus of allowances. This surplus built up following the economic crisis of 2008 that persists today in some EU member states. Late in December 2015, the Polish government applied to the European Court of Justice to annul the ETS market stability reserve that had been agreed by the European Parliament and European Council in October 2015, thus putting into question the legality of the European Commission’s intention to directly influence ETS allowance prices.

Looking to the future, uncertainty surrounds the Phase IV trading period (2021 to 2030) due to the ongoing negotiations with the European institutions on reform of the EU ETS. Allowance futures for 2017 to 2025 show a slight rise in prices, from 5.00 €/tCO₂ to 5.70 €/tCO₂. Looking further into the future, emissions from all sectors covered by the EU ETS must fall to zero, because, under the declining emission cap, no new allowances will be issued after 2058.

Coaltrans World Coal Leaders Network™ Conference 2016

In October 2016, EURACOAL President Cieslik was the keynote speaker at the Coaltrans World Coal Leaders Network™ Conference in Lisbon. He discussed the Energy Union and the role of coal in the EU’s planned shift to renewables during an on-stage interview. His presentation is available on the EURACOAL website.

Carbon prices: allowance prices under the EU Emissions Trading System (ETS), 2005-2017
Source: European Energy Exchange
COMMITTEE ACTIVITIES:
Energy and Environment Policy Committee
Dr.-Ing. George Milojcic, Chairman

The EURACOAL Energy and Environment Policy Committee deals primarily with energy, climate, environment and other coal-related policies. The committee responds to the initiatives and procedures of the three European Union institutions, namely the European Commission, the European Parliament and the European Council. Due to the significant implications of energy policy decisions made by individual member states, an exchange of views between members on national issues is an important part of the committee’s activities.

The committee had another busy year in 2016, with new areas of competence following the merger of the Environment Committee and the Energy Policy Committee. New ad-hoc working groups were created to deal with specific issues, led by Dr. Thorsten Diercks who has had a long association with EURACOAL, including as Secretary-General for five years.

The committee met twice, in March and September. In March, the committee discussed the UNFCCC Paris Agreement, being the outcome of COP 21 held in December 2015, and the letter sent by EURACOAL President, Dr. Wolfgang Cieslik, and Vice President, Mr. Janusz Olszowski, to European Council President, Mr. Donald Tusk. In this letter, we expressed our grave concerns that, by ratifying the Paris Agreement, the EU would be committed to climate targets that were disproportionally ambitious. Translated copies of the letter were sent to all twenty-eight EU Heads of State (see box on page 6).

Also discussed in March was the legislative proposal to reform the EU emissions trading system (ETS), in particular the creation of a market stability reserve and modernisation fund. Reports on the LCP BREF and MTWR BREF files were keenly debated (see below). The Secretary-General reported on his tour of the United Kingdom to judge sentiment towards climate policy, which included meetings with the World Coal Association and Baroness Worthington, as well as EURACOAL members and trade unionists.

In the September meeting, LCP BREF and EU ETS were again high on the agenda. A presentation of the EU Reference Scenario 2016, which covers trends in energy, transport and GHG emissions to 2050, was also of interest to members.

On each policy file, committee members were regularly briefed on latest developments, mainly COP 21, LCP BREF and EU ETS reform, including EURACOAL position papers, infographics, draft reports, European Parliament’s amendments, plenary votes and Council discussions. A new file on the committee agenda was the “Clean Energy” package which was released in November 2016 and known informally as the “Winter Package”. With this legislative proposal, the European Commission aims to reform the electricity market, introduce new energy governance processes and enhance EU energy efficiency regulation.

In June, EURACOAL members met with the Romanian Secretary of State for Energy to discuss the industry’s strategic direction against the backdrop of the UNFCCC Paris Agreement and the EU’s related commitment to a 40% reduction in greenhouse gas emissions by 2030. In July, EURACOAL published its response to the public consultation on State aid to secure electricity supplies, subtitled “keeping the lights on”.

EURACOAL’s dialogue with the European Commission continued at the highest level, with members having the chance to express EURACOAL’s position on topics of concern in the energy sector, notably at the 12th EC-EURACOAL Coal Dialogue (see box on page 7).


At the end of February 2016, the EC Joint Research Centre (JRC) released its pre-final draft of the LCP BREF. EURACOAL submitted its comments on this draft in mid-March, pointing to the incorrectly derived data from reference plants and failure to take into account supplementary data submitted by stakeholders. This led to emission limit ranges in the draft conclusions that were too stringent for chlorine (HCl), sulphur (SO₂), dust (PM₂.₅), mercury (Hg), oxides of nitrogen (NOx) and carbon monoxide (CO).

When deciding on new emission limits, there should be a clear differentiation between new and existing power plants, as retrofitting is not always cost-effective or even practical. From January 2016, existing plants subject to the Large Combustion Plants Directive must meet the stricter requirements of the Industrial Emissions Directive (IED). These plants are major assets – costing €1-2 billion to replace – and their regulation should not damage the confidence of utilities to invest for the future.

At the beginning of April, EURACOAL addressed the Director for Quality of Life, Water and Air at DG Environment with a summary of the problematic issues for the coal sector. These were discussed at a meeting with the Director on 26 May 2016. DG Environment noted that, despite a lack of cost data from industry, a cost-benefit analysis of techniques had been undertaken.

At the end of June, the JRC published a final draft of the LCP BREF, bringing to an end the work of the official Technical Working Group and moving the focus to the IED Article 13 Forum meeting of

---

**EESC own-initiative opinion on “Indigenous Coal in the EU Energy Transition”**

During 2016, EURACOAL made significant efforts in all the EU institutions. For example, on 24 May 2016, the European Economic and Social Committee (EESC) voted in a plenary meeting on its own-initiative opinion on coal. This followed the adoption on 5 November 2015, after heated debate, of a very favourable opinion of the EESC Consultative Commission on Industrial Change (CCMI) on the “Contribution of indigenous coal and lignite resources to the EU’s energy security”.

Before the EESC plenary vote, the text was rewritten and the opinion retitled “Indigenous coal in the EU energy transition”. The new text examines coal’s role in the energy sector and the future shape of the coal and lignite mining industry in Europe.

Although the adopted conclusions were not fully supported by EURACOAL, they are nevertheless a step forward and have encouraged the European Commission to take a more proactive approach towards coal during the “energy transition”. Both the original and revised opinions are available on the EESC website.

---

Mr. Pierre Jean Coulon, President (2015-2018) of the Transport, Energy, Infrastructure and the Information Society (TEN) section at the European Economic and Social Committee (EESC)
stakeholders. The EURACOAL working group agreed, during a teleconference in September, on the points to be made in the Article 13 Forum meeting.

Separately, on 15 September, the EURACOAL secretariat took part in a workshop on BAT compliance costs organised by the European Commission. This focused on the methodology applied to the revision of all BAT reference documents and not specifically to the LCP BREF.

At the end of September, EURACOAL submitted to DG Environment its comments on the LCP BREF final draft, together with an independent expert’s opinion on BAT-associated emission levels for mercury emissions to air from existing lignite-fired power plants. The submission was shared with the permanent representations of member states to the EU as they were intimately involved in the revision process.

The Article 13 Forum meeting, chaired by the European Commission, took place on 20 October 2016 with the aim of providing an opinion on the final draft of the LCP BREF. Many comments had been submitted by member states and other stakeholders by the 23 September deadline. Late submissions by Bulgaria, Germany, the European Power Plant Suppliers Association and the European Environmental Bureau (an NGO) brought the total number of comments to 454. These were assessed by the European Commission and sent to Forum members as a spreadsheet compilation on 18 October. The aim was to classify comments as “consensual” (after amendment, in some cases) or “non-consensual” where there was no unanimity among Forum members. During the meeting, the chair explained that non-consensual comments were not lost, but would be reported as the “views of certain members”. In all, fifty-one comments were considered “consensual” and the Commission pre-selected a further eight to clarify or discuss in the meeting.

All comments and assessments would eventually be reported by DG Environment to the so-called Article 75 Committee of member state representatives in annexes to the minutes of the Article 13 Forum meeting, except those considered irrelevant which included three EURACOAL comments of a general nature.

### Working Group on the Management of Tailings and Waste-Rock in Mining Activities Best Available Techniques Reference Document (MTWR BREF)

The EURACOAL working group met in September 2016 in Berlin to prepare and discuss comments for submission to the EC Joint Research Centre (JRC) that is responsible for this file on behalf of DG Environment. It was agreed that EURACOAL would request an intermediate draft, as the file is very complex and concerns many sectors and sub-sectors.
EURACOAL submitted 125 comments to the JRC at the end of October. Combined with the many and varied comments submitted by other members of the official Technical Working Group, this created an even greater need for an intermediate draft. EURACOAL believes that jumping straight to a final draft MTWR BREF, with discussion only in the final Technical Working Group meeting, would be insufficient and so compromise the quality of the reference document. As a result, the JRC proposed that stakeholders should participate in two special webinars, scheduled for the first quarter of 2017.

Donald Trump was elected to become the 45th President of the United States on 8 November 2016, after campaigning with the slogan “Trump digs coal”. photo © Michael Vadon, 2016

EC Social Sectoral Dialogue Committee for Extractive Industries

In 2016, the SSDC for Extractive Industries focused on three main topics: training and education, health and safety and the Energy Union. EURACOAL was most active in discussions on energy-related matters and, during the plenary session on 11 October 2016, Dr. George Milojcic, Chair of the EURACOAL Energy and Environment Policy Committee, gave a speech on the role of coal in the energy transition with a special focus on the flexibility of conventional thermal power plants needed to balance renewables. He explained that coal-fired power plants are well able to fulfil this important role.

Reform of the EU Emissions Trading System

In July 2015, the European Commission put forward its proposal to amend the EU emissions trading system, notably by decreasing the emission cap by 2.2% annually from 2021 onwards, compared with the current 1.74% annual decline. The additional reduction was shown by the European Commission to be equivalent to cutting the entire emissions of the United Kingdom.

Debate on ETS reform continued throughout 2016, with EURACOAL issuing two position papers and supporting infographics that called for fair management of the proposed modernisation fund and warned that conventional thermal power plants would still be needed as the share of renewables grows.
COMMITTEE ACTIVITIES:
Technical Research Committee
Dr. Alicja Krzemień, Chairwoman

The Technical Research Committee is the longest-established of all the EURACOAL committees, having met on 164 occasions. It aims to provide a networking opportunity for members interested in submitting proposals to research programmes supported by the European Union. In addition, it is concerned to establish and maintain a favourable research policy at the European level, one that is of benefit to future coal exploitation in all its forms.

The committee met twice during 2016. In June, a technical visit to the Shotton opencast coal mine followed a regular committee meeting held in Newcastle, UK. Among the agenda items discussed were proposals in response to the 2016 call under the EU Research Fund for Coal and Steel (RFCS), as well as changes to the legal basis of the fund and the possibility of submitting an “accompanying measures” proposal.

The second meeting took place in Brussels on 6 December 2016. Topics discussed included the committee’s work plan and the possible “accompanying measures” project proposal, progress in the European Parliament on the procedure to change the legal basis of the RFCS, the European Commission’s revised Strategic Energy Technology Plan (SET Plan) and elements of the Winter Package, in particular a Commission communication on accelerating clean energy innovation.

Workshops on RFCS R&D proposals

The EURACOAL workshop dedicated to coal mining operations, mining infrastructure and management, and the unconventional use of coal deposits (TGC1) was held on 2/3 March 2016 at the Central Mining Institute (GIG) in Katowice. There were twenty-nine participants and sixteen project clusters were created. All R&D ideas were discussed and grouped into draft joint proposals for which, in most cases, co-ordinators were nominated.

The EURACOAL workshop on coal preparation, conversion and upgrading, coal combustion, clean and efficient coal technologies, and CO₂ capture took place on 13 May 2016 at STEAG GmbH headquarters in Essen. There were twenty-four participants and twenty project ideas from which three project clusters were created and proposals initiated.

Research Fund for Coal and Steel management

EURACOAL representatives met in November 2016 with the newly appointed manager responsible for the RFCS Unit within the Directorate-General for Research & Innovation. He explained his practical approach to managing the programme, with a focus on administrative efficiency, and was keen to discuss strategic targets for coal-related research, rather than any overarching policy objectives on fossil fuel use. He mentioned the roles of the Advisory Groups and the Technical Groups in setting future research priorities, and encouraged the coal industry to create a platform similar to the European Steel Technology Platform (ESTEP) which would enable an exchange of knowledge on state-of-the-art coal research globally.

Changes to the legal basis of the EU Research Fund for Coal and Steel

The European Commission continued, in 2016, to press ahead with changes to the legal basis of the RFCS programme. It desires to bring the RFCS programme in line with other EU research programmes, despite the uniqueness of the RFCS programme which was established under the
Treaty of Nice using the residual funds of the European Coal and Steel Community, monies that came from levies on coal and steel producers.

The European Council held a meeting in March 2016 during which five member states rejected the European Commission’s proposed changes to the RFCS legal basis. After that meeting, member states were asked to send comments and suggestions on how to improve the proposal. Based on their replies, the Dutch Presidency prepared a compromise proposal. Meanwhile, the Polish government sent a letter in which it maintained its rejection of the whole proposal, seeing no need to introduce any changes. In this letter, the Polish Ministry of Science and Higher Education expressed its support for EURACOAL’s position which the secretariat had circulated widely. The outcome of the European Council meeting in June was as follows:

- Poland, supported by Greece, was against the changes.
- Luxembourg, Austria, Spain, Sweden, France and the European Commission supported the Dutch compromise.
- The UK, Belgium and Greece had reservations.
- Germany abstained.

In the European Parliament, where MEP Buzek was rapporteur, most MEPs agreed that there was no need to align the RFCS programme with other EU-funded research programmes, such as Horizon 2020. Members of the responsible Industry, Research and Energy (ITRE) committee submitted amendments, many of them extreme and some demanding a complete change to the scope by replacing it with one focussed on social issues during the “energy transition”. These were rejected in a committee vote. An amendment to set an end date for the RFCS programme – concurrent with the Multiannual Financial Framework – was also rejected.

Shortly after the ITRE vote, there was a European Parliament plenary vote on 14 December 2016. Many amendments from the ITRE committee were resubmitted, but again mostly rejected, except for minor ones including one extending the scope of the programme to cover social issues.

**Energy Tour 2016**

Students from Vrije Universiteit Brussel and Vesalius College joined officials from the European Commission and the member state permanent representations to the EU on a visit to the Garzweiler mine and Niederaußem power plant on 2 May 2016. Matthias Dürr from the RWE Brussels office and Jannis Boyan, responsible for opencast mine planning and approvals, made short presentations and acted as site guides.

Group stands in front of a bucket-wheel excavator at Garzweiler opencast lignite mine – one of the largest land-based machines in the world.

A highlight of the visit was standing next to the Bagger 288 excavator which can mine 240,000 tonnes of lignite each day. Dieter Rüsenberg shared his knowledge of operations at the Niederaußem power plant and introduced the RWE Coal Innovation Centre where lignite drying, improved flue gas desulphurisation, CO₂ capture and power-to-gas are all being developed at various scales, right up to commercial.

A cross-sectional model of a lignite-fired boiler helps explain operations at the Niederaußem power plant.
EURACOAL ACTIVITIES – serving the interests of the European coal industry

The European Association for Coal and Lignite – EURACOAL – is the umbrella organisation of the European coal industry. EURACOAL evolved in 2002 from the European Solid Fuels’ Association – CECSO – after the expiry of the Treaty establishing the European Coal and Steel Community.

EURACOAL has 31 members including national coal associations, importers associations, research institutes and individual companies. Members come from 18 countries: Belgium, Bosnia-Herzegovina, Bulgaria, the Czech Republic, Finland, France, Germany, Greece, Hungary, Poland, Romania, Serbia, Slovakia, Slovenia, Spain, Turkey, Ukraine and the United Kingdom.

EURACOAL’s mission is to highlight the importance of coal to security of energy supply in the EU, to energy price stability, to economic added 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.

EURACOAL has three committees:
- Energy and Environment Policy Committee
- Market Committee
- Technical Research Committee

EURACOAL is officially represented in the European Commission RFCS Coal Advisory Group (DG Research & Innovation).


EURACOAL co-organises the Coal Dialogue with the European Commission (DG Energy).

EURACOAL co-operates with Members of the European Parliament in the cross-party European Round Table on Coal.

EURACOAL organises meetings and workshops, such as the International Coal Dialogue.

EURACOAL informs and works with many stakeholders, notably:
- European Commission (DG Competition, DG Energy, DG Research & Innovation and DG Employment, Social Affairs & Inclusion)
- European Parliament (ITRE and ENVI committees)
- European Economic & Social Committee (CCMI – Consultative Commission on Industrial Change)
- International Energy Agency
- World Coal Association

FINANCIAL REPORT FOR 2016

Total income (a): 438 039 €
- membership fees: 398 150 €
- office sub-letting & bank interest: 39 889 €
Total operating costs (b): 517 000 €
Net deficit (a – b): -78 961 €

Accounts for 2016, prepared on the basis of Belgian accounting standards, were audited by RSM InterAudit. The income statement showed a net deficit of €78 961 for the year and total assets amounted to €683 399 at year end.
General Assembly
coal producers, importers, traders, coal-based power utilities, R&D institutes

Executive Committee
discussions, opinion forming, work programme, lobbying positions

President
Dr. Wolfgang Cieslik – VDKi

Vice Presidents
Mr. Vladimír Budinský – ZSDNP
Dr. Lars Kulik – DEBRIV
Mr. Janusz Olszowski – GIPH

National Delegations
31 members from 18 countries

Brussels Secretariat
Secretary-General: Mr. Brian Ricketts
Deputy Sec-Gen: Ms. Magdalena Chawula-Kosuri
Public Affairs Manager: Mr. Mike Bostan

Committees & Chairs
Energy and Environment Policy Committee
Dr. Thorsten Diercks – DEBRIV
Market Committee
Prof. Dr. Franz-Josef Wodopia – VDKi
Technical Research Committee
Dr. Alicja Krzemień – GIG

COMMITTEES

<table>
<thead>
<tr>
<th>Committee</th>
<th>Chair</th>
<th>Secretary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy and Environment Policy Committee</td>
<td>Dr. Thorsten Diercks (DEBRIV)</td>
<td>Mr. Zygmunt Borkowski (GIPH)</td>
</tr>
<tr>
<td>Market Committee</td>
<td>Prof. Dr. Franz-Josef Wodopia (VDKi)</td>
<td>Mr. Mike Bostan (EURACOAL)</td>
</tr>
<tr>
<td>Technical Research Committee</td>
<td>Dr. Alicja Krzemień (GIG)</td>
<td>Ms. Magdalena Chawula-Kosuri (EURACOAL)</td>
</tr>
</tbody>
</table>

EXECUTIVE COMMITTEE

<table>
<thead>
<tr>
<th>Members</th>
<th>Country</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Wolfgang CIESLIK</td>
<td>Germany</td>
<td>President of EURACOAL, President of VDKi and Member of the Board, STEAG GmbH</td>
</tr>
<tr>
<td>Mr. Vladimír BUDINSKY</td>
<td>Czech Republic</td>
<td>Vice President of EURACOAL, Member of the Board, ČEZ Distribuce &amp; Foreign Affairs Advisor, Severooeske doly a.s.</td>
</tr>
<tr>
<td>Dr. Lars KULIK</td>
<td>Germany</td>
<td>Vice President of EURACOAL, CTO Lignite, RWE Power AG</td>
</tr>
<tr>
<td>Mr. Janusz OLSZOWSKI</td>
<td>Poland</td>
<td>Vice President of EURACOAL and President, GIPH – Górnicza IZba Przemyslowo-Handiowa (Mining Chamber of Industry and Commerce)</td>
</tr>
<tr>
<td>Mr. Mustafa AKTAŞ</td>
<td>Turkey</td>
<td>General Director, TKİ – Turkish Coal Enterprises</td>
</tr>
<tr>
<td>Mr. Andon ANDONOV</td>
<td>Bulgaria</td>
<td>Executive Director, Mini Maritsa Iztok EAD</td>
</tr>
<tr>
<td>Mr. Daniel ANTONIE</td>
<td>Romania</td>
<td>Director of Mining, Complexul Energetic Oltenia S.A.</td>
</tr>
<tr>
<td>Mr. Konstantinos ARAMPATZIS</td>
<td>Greece</td>
<td>Head of Mines Planning and Performance Branch, PPC – Public Power Corporation S.A.</td>
</tr>
<tr>
<td>Mr. Didier BONIJOLY</td>
<td>France</td>
<td>Deputy Director – Georesources Division, BRGM – Bureau de Recherches Géologiques et Minières</td>
</tr>
<tr>
<td>Name</td>
<td>Nationality</td>
<td>Position and Company/Association</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ing. Zdeněk BUČKO</td>
<td>Czech Republic</td>
<td>Specialist – Technical Department, Sokolovská uhelná pravni nastupce a.s.</td>
</tr>
<tr>
<td>Mr. Munever ČERGIĆ</td>
<td>Bosnia-Herzegovina</td>
<td>Chief Executive, RMU &quot;Banovići&quot; d.d. Banovići</td>
</tr>
<tr>
<td>Mr. Dimitar CHOLAKOV</td>
<td>Bulgaria</td>
<td>Deputy Executive Director, Mini Maritsa Iztok EAD</td>
</tr>
<tr>
<td>Dr. Thorsten DIERCKS</td>
<td>Germany</td>
<td>Hauptgeschäftsführer (Chief Executive), DEBRIV – Deutscher Braunkohlen-Industrie-Verein e.V. (German Association of Lignite Producers)</td>
</tr>
<tr>
<td>Dr. Armin EICHHOLZ</td>
<td>Germany</td>
<td>Chairman of the Board, MIBRAG mbH</td>
</tr>
<tr>
<td>Dr. Renata EISENERTOVÁ</td>
<td>Czech Republic</td>
<td>European Affairs Manager, Severní energetická a.s.</td>
</tr>
<tr>
<td>Mr. Miguel Ángel FRAJ GASCON</td>
<td>Spain</td>
<td>Vice President, CARBUNIÓN and Chief Executive Officer, Grupo Samca</td>
</tr>
<tr>
<td>Mr. Ludvik GOLOB</td>
<td>Slovenia</td>
<td>President and CEO, Premogovnik Velenje, d.d. (Coal Mine Velenje)</td>
</tr>
<tr>
<td>Dipl.-Ing. Uwe GROSSER</td>
<td>Germany</td>
<td>Vorstand Bergbau (Director of Mining), Vattenfall Europe Mining &amp; Generation A.G.</td>
</tr>
<tr>
<td>Dipl.-Ing. Matthias HARTUNG</td>
<td>Germany</td>
<td>Vorsitzender des Vorstandes (Chairman of the Board), RWE Generation SE and RWE Power AG</td>
</tr>
<tr>
<td>Mr. Stanislav V. IANKO</td>
<td>Ukraine</td>
<td>Head of the Federation of Employers Fuel-Power Complex</td>
</tr>
<tr>
<td>Mr. Pedro IGLESIA GÓMEZ</td>
<td>Spain</td>
<td>President and Director General, CARBUNIÓN – Federación Nacional de Empresarios de Minas de Carbón</td>
</tr>
<tr>
<td>Mr. Milan JAKOVLJEVIĆ</td>
<td>Serbia</td>
<td>Director – Coal Production Department, EPS – Elektroprivreda Srbije (Electric Power Industry of Serbia)</td>
</tr>
<tr>
<td>Ing. Rastislav JANUŠČÁK</td>
<td>Slovak Republic</td>
<td>Director of Strategy and External Affairs Department, HBP – Hornonitrianske bane Prievdia, a.s.</td>
</tr>
<tr>
<td>Dr. Nikolaos KOUKOUZAS</td>
<td>Greece</td>
<td>Director of Research, CERTH/CPERI – Chemical Process &amp; Energy Resources Institute</td>
</tr>
<tr>
<td>Prof. Stanislaw PRUSEK</td>
<td>Poland</td>
<td>General Director, GIG – Główny Instytut Górnictwa (Central Mining Institute)</td>
</tr>
<tr>
<td>Dr. Christos ROUMPOS</td>
<td>Greece</td>
<td>General Department of Mines, PPC – Public Power Corporation S.A.</td>
</tr>
<tr>
<td>Dr. Jürgen RUPP</td>
<td>Germany</td>
<td>Vorstand Finanzen (Finance Director), RAG A.G.</td>
</tr>
<tr>
<td>Mr. Oleksandr SELISCHEV</td>
<td>Ukraine</td>
<td>Head of Strategic Planning &amp; Analysis Department, DTEK</td>
</tr>
<tr>
<td>Mr. Krzysztof SZLAGA</td>
<td>Poland</td>
<td>President of the Board, Lubelski Węgiel „Bogdanka“ S.A.</td>
</tr>
<tr>
<td>Ing. Radim TABÁŠEK</td>
<td>Czech Republic</td>
<td>Chief Reclamation and RE Officer, OKD, a.s.</td>
</tr>
<tr>
<td>Mr. Bernd TÖNJES</td>
<td>Germany</td>
<td>Vorsitzender des Vorstandes (Chairman of the Board), RAG A.G.</td>
</tr>
<tr>
<td>Mr. Dezső TÖRÖK</td>
<td>Hungary</td>
<td>President of Borsod-Abaúj-Zemplén County Government</td>
</tr>
<tr>
<td>Dr. rer. oec. Kai VAN DE LOO</td>
<td>Germany</td>
<td>Dezernent Bereich „Politik und Statistik“, GVST – Gesamtverband Steinkohle e.V. (German Coal Association)</td>
</tr>
<tr>
<td>Prof. Dr. Franz-Josef WODOPIA</td>
<td>Germany</td>
<td>Managing Director, VDKi – Verein der Kohlenimporteure e.V. (Coal Importers’ Association)</td>
</tr>
<tr>
<td>Mr. Nigel YAXLEY</td>
<td>United Kingdom</td>
<td>Managing Director, CoallmP – Association of UK Coal Importers and Producers</td>
</tr>
<tr>
<td>Mr. Stanisław ŻUK</td>
<td>Poland</td>
<td>President, PPWB – Porozumienie Prodotów Węgla Brunatnego (Confederation of Polish Lignite Producers)</td>
</tr>
</tbody>
</table>
EURACOAL MEMBERS – an international partnership

<table>
<thead>
<tr>
<th>Country</th>
<th>Member Association / Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>ISSeP – Institut Scientifique de Service Public (Scientific Institute of Public Service)</td>
</tr>
<tr>
<td>Bosnia-Herzegovina</td>
<td>RMU “Banovići” d.d. Banovići</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>MMI – Mini Maritsa Iztok EAD</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>ZSDNP – Zaměstnavatelský svaz důlního a naftového průmyslu (Employers’ Association of Mining and Oil Industries)</td>
</tr>
<tr>
<td>Finland</td>
<td>Finnish Coal Info</td>
</tr>
<tr>
<td>France</td>
<td>BRGM – Bureau de Recherches Géologiques et Minières (The French Geological Survey)</td>
</tr>
<tr>
<td>Germany</td>
<td>DEBRIV – Deutscher Braunkohlen-Industrie-Verein e.V. (German Association of Lignite Producers)</td>
</tr>
<tr>
<td></td>
<td>GVSt – Gesamtverband Steinkohle e.V. (German Coal Association)</td>
</tr>
<tr>
<td></td>
<td>VDKi – Verein der Kohlenimporteure e.V. (Coal Importers’ Association)</td>
</tr>
<tr>
<td>Greece</td>
<td>PPC – Public Power Corporation S.A.</td>
</tr>
<tr>
<td></td>
<td>CERTH/CPERI – Chemical Process and Energy Resources Institute</td>
</tr>
<tr>
<td>Hungary</td>
<td>Borsod-Abaúj-Zemplén County Government</td>
</tr>
<tr>
<td>Poland</td>
<td>PPWB – Porozumienie Producentów Węgla Brunatnego (Confederation of Polish Lignite Producers)</td>
</tr>
<tr>
<td></td>
<td>GIPH – Górnicza Izba Przemysłowo-Handlowa (Mining Chamber of Industry and Commerce)</td>
</tr>
<tr>
<td></td>
<td>Lubelski Węgiel „Bogdanka” S.A.</td>
</tr>
<tr>
<td></td>
<td>GIG – Główny Instytut Górnictwa (Central Mining Institute)</td>
</tr>
<tr>
<td></td>
<td>KOMAG Institute of Mining Technology</td>
</tr>
<tr>
<td>Romania</td>
<td>PATROMIN – Asociaţia Patronală Minieră din Romania (Mining Employers Association of Romania)</td>
</tr>
<tr>
<td>Serbia</td>
<td>EPS – Elektroprivreda Srbije (Electric Power Industry of Serbia)</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>HBP – Hornonitrianske bane Prievidza a.s.</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Premogovnik Velenje d.d.</td>
</tr>
<tr>
<td>Spain</td>
<td>CARBUNIÓN – Federación Nacional de Empresarios de Minas de Carbón (National Coal Mining Employers’ Association)</td>
</tr>
<tr>
<td></td>
<td>Geocontrol S.A.</td>
</tr>
<tr>
<td></td>
<td>SUBTERRA Ingeniería S.L.</td>
</tr>
<tr>
<td>Turkey</td>
<td>TKİ – Turkish Coal Enterprises</td>
</tr>
<tr>
<td>Ukraine</td>
<td>DTEK</td>
</tr>
<tr>
<td></td>
<td>Federation of Employers Fuel-Power Complex of Ukraine</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>CoallmP – Association of UK Coal Importers and Producers</td>
</tr>
<tr>
<td></td>
<td>Golder Associates (UK) Ltd.</td>
</tr>
<tr>
<td></td>
<td>Trolex Ltd.</td>
</tr>
<tr>
<td></td>
<td>University of Nottingham</td>
</tr>
</tbody>
</table>