Annual Report
2018
Launched in December 2017, EURACOAL welcomed the Coal Regions in Transition Platform initiative of the European Commission. The aim of providing clean energy for all Europeans is fully supported. While structural changes are needed in those coal regions in decline, others need a long-term vision for coal mining and energy production from coal that fits with the Paris Agreement. The deployment of new technologies will be crucial. EURACOAL members promote both these change processes with environmentally compatible, clean coal projects and concepts for the future development of the regions.

At the annual political dialogue of the Coal Regions in Transition Platform held in Katowice, Poland on 30 November 2018, Vice President of the European Commission, Mr. Maroš Šefčovič, welcomed the €4.8 billion fund proposed by the European Parliament to accelerate transition in the coal regions.

EURACOAL President, Mr. Tomasz Rogala addresses the third working group meeting of the Coal Regions in Transition Platform in Brussels on 5 November 2018. He advised that, when talking of change in the coal mining sector, the conversation must reflect the importance and maturity of the sector’s value chain.

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MESSAGE FROM THE PRESIDENT
Tomasz Rogala

The European Association for Coal and Lignite was established in 2002. It grew out of earlier associations dating back to the birth of the European Union – to the Treaty of Paris of 1951. It was cooperation on coal and steel that guaranteed peace in Europe and led to the Union. EURACOAL members are proud of this heritage. Looking to the future, we wish to contribute to a strong and dynamic Europe during the energy transition.

As the European Union looks towards its one hundredth anniversary, the energy sector is preparing for a transformation as important as the Industrial Revolution. To understand the megatrends prevailing today, we should start with EU climate policy and global trends towards electrification.

EU climate policy

In its vision of the future economy, A Clean Planet for All, presented at the end of November 2018, the European Commission assumes net-zero carbon emissions by 2050 and a leading role for the EU in global climate action. It is worth pointing out that EU greenhouse gas (GHG) emissions account for just 9% of global emissions. The reality on the ground is that global fossil fuel production and consumption are increasing: global coal production grew 2.8% to a record 7 100 million tonnes in 2018, as reported below by the EURACOAL Market Committee. In contrast, coal supply in the EU fell by 4.4% in 2018 to 608 million tonnes. In fact, since 1990, carbon dioxide emissions from coal use in the EU have fallen by a massive 47% – a reduction unequalled by any other sector. Global action is clearly needed to avoid the worst impacts of climate change and the European Union should make a bigger effort to convince the rest of the world to introduce the same policies.

Trends in the rest of the world

Global positions and trends were clearly visible at the UNFCCC COP24 climate conference which Poland was privileged to host in Katowice during December 2018. Several countries – the US, Russia, Saudi Arabia and Kuwait, encouraged by some EU member states – blocked the endorsement of an Intergovernmental Panel on Climate Change (IPCC) report on the impacts of 1.5°C global warming. Further east, Asian countries currently consume around three quarters of global coal supply. As well as developing their renewable energy sources, they plan to increase coal use as it is a cheap way to power their economies.

The “Katowice Rulebook” adopted at COP24 is a roadmap to implement the UNFCCC Paris Agreement of 2015. It allows many ways to tackle rising emissions, although no agreement was reached on emissions trading – the most important one. The rulebook places great emphasis on the importance of the natural absorption of GHGs and on the development of low-emission technologies which are important for the coal industry.

Rising electricity demand

Forecasts by the International Energy Agency indicate that by 2040 global electricity demand will increase by 45% to 67%, driven mainly by China, India and Southeast Asia. In addition,
between 60% and 80% of primary energy will still come from fossil fuels. Coal consumption is expected to grow with rising demand in Asia, driven by electrification and economic development. Yet, the EU will continue to import raw materials and goods from these countries which, to maintain their economic competitiveness, are not planning EU-style decarbonisation policies. Moreover, limiting the use of the EU’s own fossil fuel resources leads to rising fuel imports and thus a dependency on external energy supplies. In 2018, expenditure on imports of fossil fuels to the EU amounted to €400 billion or 2.5% of GDP. At €311 billion, oil accounted for most of this total, gas imports cost the EU €71 billion, and coal imports just €18 billion in 2018.

Given this long-term perspective for energy transition, there are no grounds to stop research, development and deployment of modern clean coal technologies. That is why EURACOAL is engaged in the CoalTech2051 project funded by the EU Research Fund for Coal and Steel.

New technologies offer opportunities. Coal gasification opens up many new possibilities for the production of power, fuels and chemicals, as well as other products. It also allows many types of waste and biomass to be recycled into useful products. Knowing that we will still need to use coal, we should develop these technologies, as others are outside of the EU.

Renewable energy sources – wind turbines and solar PV – are growing fast, albeit from a small base. As their costs decrease, their use increases which hits coal use. However, the greater the share of renewables in the energy mix, the greater is the need for backup for when the wind does not blow. Energy storage technologies are still being developed, but with costs that are currently far from being acceptable to industry and households. Thankfully, backup can be provided most effectively from existing coal-fired power plants which are already available, affordable and flexible, so there is no need for investment in new gas-fired plants.
In September 2018, at the European Parliament in Strasbourg, the BE@CO@L exhibition showcased new technologies. The exhibition and related website (www.becoal.com) showed coal not only as an important energy source, but also as a precursor in the development of pharmaceuticals, fertilisers, biotech, carbon-based materials, steel and cement – underpinning the automotive and machinery sectors, as well as many others such as cosmonautics. The website debunks some myths and presents many facts about coal with answers to the most frequently asked questions.

Coal will be used in Europe for the next twenty to thirty years, maybe forty. EURACOAL members must meet that demand. At the same time, members recognise the need to transform. Coal companies must evolve as major businesses that continue to invest in human capital while supporting the same good salaries and benefits, the same number of jobs, the same wide network of equipment suppliers, contractors and research technologists, not to mention the same local and national tax contributions.

EURACOAL has been active in the Coal Regions in Transition Platform, a welcome initiative of the European Commission to help manage the transition. EURACOAL made a number of presentations at working group meetings of the platform during 2018 and at the annual political dialogue meeting held in Katowice on 30 November 2018. Our recommendation is for a socially responsible transition and we have provided figures for the coal-sector value chain, as well as expert opinion. The University of Economics in Katowice has calculated the costs of replacing jobs in the coal-mining sector and its supply chains. For the largest hard coal mining company in Europe – Polska Grupa Górnicza S.A. – this would be about €44 billion. In Germany, the cost of transforming the lignite sector is estimated by a government commission to be €40 billion. The European Parliament wishes to allocate €4.5 billion to fund transition in all the EU coal mining regions. Clearly, there remains a gap between what is desired by Europe’s leaders and what is possible on the ground with limited financial resources.
The coming years will be about societal changes. Climate change is not caused by coal alone, despite coal having become the main target for attack by numerous green NGOs. We will focus on projects that can be implemented by the coal sector and which bring benefits to the economy and society in the coal regions during the ongoing energy transition.

To that end, in December 2018, all the major Polish energy companies were partners in COP24. My company was involved in the organisation and hosted a side-event on coal gasification with EURACOAL members. The related Energy24 congress presented the high-tech nature of today’s modern coal industry. The Polish Minister of Energy, Mr. Krzysztof Tchórzewski, the Secretary of State for Energy responsible for the coal industry, Mr. Grzegorz Tobiszowski, and Mr. Piotr Naimski, the Government Plenipotentiary for strategic energy infrastructure all spoke at this high-level congress. In the words of Mr. Tchórzewski, „Nie ma możliwości zachowania tempa rozwoju gospodarczego [...] bez zachowania znacznej części energetyki węglowej, którą dziś posiadamy” (It is impossible to maintain the pace of economic development [...] without maintaining a significant part of the energy supply from the coal that we have today).

I am very pleased to serve as President and want to thank EURACOAL members for their support, especially the committee chairs and the Vice Presidents in 2018 – Mr. Vladimír Budínský, Dr. Wolfgang Cieslik and Dr. Lars Kulik. During the last year, EURACOAL attracted new members from Germany and Ukraine; together, we can look forward to securing a safer and more affordable energy transition with coal.
COMMITTEE ACTIVITIES: 
Energy and Environment Policy Committee 
Dr. Thorsten Diercks, Chairman

The EURACOAL Energy and Environment Policy Committee deals mainly with energy, climate, environmental and other coal-related policies, particularly policy initiatives of the European Commission and the related decision-making processes of the European Council and European Parliament. Given the importance of energy policy decisions made by individual member states, an exchange of views on these is another essential part of the committee's work. Current issues of concern are analysed, discussed and conclusions agreed on appropriate actions. The Committee’s position papers are used to inform opinion leaders and decision-makers in Brussels and beyond.

In 2018, the Energy and Environment Policy Committee met on 18 April and 24 October in Brussels. The key topics considered by the Committee were:

- **Clean Energy for All Europeans** policy package,
- the EU Emissions Trading System, including the Innovation Fund,
- Best Available Techniques (BAT) Reference Document for Large Combustion Plants (LCP BREF),
- Best Available Techniques (BAT) Reference Document for the Management of Waste from Extractive Industries (MWEI BREF),
- an application to include lignite mining on the carbon-leakage list under the revised ETS Directive,
- a public consultation on the Climate Strategy 2050,
- a review of the Water Framework Directive, and
- work of the EURACOAL Post-Mining Working Group.

The Committee started its activities in 2018 by acknowledging the report of an internal strategic workshop which had confirmed the major topics of interest, but placing more emphasis on promotional activities (e.g. the European Economic Congress in Katowice, a European Energy Forum dinner debate and exhibition in the European Parliament, the Economic Forum in Krynica, and side events at the UNFCCC COP24 climate conference in Katowice).

**Clean Energy for All Europeans**

The Committee followed the “trilogue” negotiations between the European institutions which agreed a final text in December. A comparison of the Council and Parliament positions was prepared for the members, highlighting the main differences on points of interest to the coal industry: an emission performance standard for capacity mechanisms and funds for modernisation and innovation. The Committee welcomed the letter in September from a blocking minority of member states – EURACOAL First Vice President, Vladimír Budinský (left), greets the Vice President of the European Commission and Commissioner for Energy Union, Mr. Maroš Šefčovič (right), at a high-level political dialogue of the Coal Regions in Transition Platform in the European Parliament, Brussels on 27 February 2018. During 2018, Mr. Budinsky chaired the European Social Sectoral Dialogue for Extractive Industries – an official body under DG Employment, Social Affairs and Inclusion.
France, Greece, Hungary, Ireland, Italy, Poland and the United Kingdom – who stated that member states should be free to design nationally appropriate capacity mechanisms under state aid rules.

**EU Emissions Trading System**

The revised EU ETS Directive was published in the **Official Journal on 19 March 2018** and entered into force twenty days later. During the revision, the Committee had focused on several important areas, such as the Market Stability Reserve, the elimination of international credits, the cancellation of allowances and the increased annual reduction factor for emission allowances.

The Commission launched a public consultation on the Innovation Fund to which EURACOAL responded at the beginning of April, after consulting members and confirming the eligibility of coal projects. EURACOAL’s response promoted CCS and CCU research and demonstration projects.

**Large Combustion Plants BREF**

The Committee followed progress of the legal action submitted by EURACOAL to the European Court in November 2017 concerning the process by which the European Commission has revised the Large Combustion Plants (LCP) BREF and published its conclusion on Best Available Techniques (BAT). Bulgaria, the Czech Republic, Finland, Germany, Hungary, Poland, Romania and Slovakia had voted against the revision during the formal “Article 75” Committee meeting in April 2017, but under the Lisbon Treaty’s qualified majority voting rules which came into force in March 2017, these eight member states failed to block the proposal by a mere 0.14%. Consequently, Poland brought an action before the European Court on 11 October 2017 (case no. T-699/17), followed by EURACOAL et al. on 7 November 2017 (T-739/17). Under Article 40 of the Statute of the European Court of Justice, other member states and interested parties could accede to these actions.

Bulgaria intervened to support the Polish case, while France applied to support the Commission’s position. In the EURACOAL et al. case, a total of eight companies from the Czech Republic, Germany and Poland eventually supported the action, as well as the German Brown Coal Association (DEBRIV) and the Free State of Saxony. France, the European Environment Bureau (a Commission-supported NGO) and Client Earth intervened in support of the Commission. Altogether, there were sixteen plaintiffs and interveners: power plant operators, trade associations, member states, a German federal state and NGOs, reflecting the controversy surrounding the revised LCP BREF.

In the EURACOAL et al. case, the Commission raised a plea of inadmissibility in February 2018, which was immediately countered by EURACOAL. Months later, on 13 December 2018, the General Court of the European Union rejected the application by EURACOAL et al. to annul or to partially annul the decision of the European Commission concerning the revised LCP BREF. The Court found the application inadmissible because:

- neither EURACOAL nor DEBRIV are directly affected;
- the corporate plaintiffs, despite being owners and operators of coal-fired power plants, are not directly affected as member states are free to implement BAT conclusions with discretion, i.e. with emission limits that are outside the ranges specified in the BAT conclusions and with derogations under Article 15(4) of the Industrial Emissions Directive; and
there is no automatic linkage between the BAT conclusions and the emission limits set by the competent authorities in member states (n.b. the Commission’s own press release of 31 July 2017 states that, “by mid-2021 the emission limits set for all large combustion plants will be in line with the requirements of the BAT conclusions”).

Given this tortuous reasoning, the Court would not even look at the substance of application submitted by EURACOAL et al. The case continues.

Management of Waste from Extractive Industries BREF

The Committee reflected on the results of the official technical working group meeting on the Management of Waste from Extractive Industries BREF that took place at the end of November 2017. The overall impression was positive as the Commission agreed to describe BATs for different mining sectors. Unlike the LCP BREF, the MWEI BREF is not a legally binding document, but rather only guidance for national authorities. It was published by the EC Joint Research Centre (JRC) in December 2018.

- The preface states that the document will be published by JRC, so not in the Official Journal. This reflects the non-binding nature of the document and is also the reason why it will not be translated into the EU languages.
- Legally, the document is non-binding as there is no link to the Industrial Emissions Directive. JRC implemented “performance objectives” instead of AELs or APLs and used the term “concentration ranges” in the tables. In addition, the tables with these ranges were moved from Chapter 5 “BAT Conclusions” to Chapter 4 “Techniques to consider in the determination of BAT”.
- A risk-based approach was adopted for important points of Chapter 5.
- In the preface and in the introduction to Chapter 5 “BAT Conclusions”, it is clarified that the document does not provide a legal interpretation, nor should it be used for such a purpose.

- Excavation voids are defined more precisely: “where deposited as extractive waste”.
- In Chapter 7 “Concluding remarks and recommendations for future work”, the dissenting views of EURACOAL and Euromines are published and it is only mentioned in passing that there were other dissenting views. Similarly, with BAT 28 on the placing of extractive waste back into excavation voids.

Application to include lignite mining on the ETS carbon-leakage list

The rationale and parameters used for giving carbon-leakage protection to eligible industrial sectors was presented to the Committee. The mining of hard coal remains on the 2021-2030 carbon-leakage list, thanks to earlier action by EURACOAL. The mining of lignite was again eligible to apply and EURACOAL duly submitted a verified application.

The Commission rejected this application, largely on the basis that lignite mines have no direct emissions and are not therefore listed in the EU ETS registry. EURACOAL had argued that the sector’s indirect emissions were significant and that the EU power sector as a whole and the lignite sector in particular suffer from carbon leakage – especially in southeast Europe where there is competition from non-EU lignite-fired power plants. Following interventions by EURACOAL, the preamble to the decision published in the Official Journal reflects that, “Some regional competition from extra-Union lignite power plants was demonstrated, although the Union wide assessment confirms the extremely limited exposure to external competition.”

Climate Strategy 2050

The European Commission announced a public consultation on a long-term strategy to reduce GHG emissions, known as the Climate Strategy 2050. The EURACOAL Secretariat prepared a draft response, sought members’ input and submitted its final response on 9 October 2018.
Water Framework Directive

The Committee was informed that the Water Framework Directive (WFD) was undergoing a “fitness check”, a process aimed at evaluating the directive’s efficacy. The Committee prepared position paper calling for:

- The central legal term of “deterioration” to be defined practicably and proportionately, WFD Art. 4.1.
- Time extensions beyond 2027 to balance water quality objectives with ongoing water management at mines and power plants, WFD Art. 4.4.
- The provision of WFD Art. 4.5 to be modified to resolve its contradiction.
- WFD Art. 4.7 to be reviewed so that it can be applied to all water uses.

Post-Mining Working Group

In April, a new EURACOAL Post-Mining Working Group had its kick-off meeting in Brussels. Dr. van de Loo was appointed to lead the group, bringing with him much experience of the Germany hard coal mining sector which produced its last coal in December 2018. During the year, it was agreed to hold meetings of the Post-Mining Working Group on an ad-hoc basis, under the umbrella of the Energy and Environment Policy Committee.

In October, at the Committee meeting, Dr. van de Loo, gave a short presentation on the history of the managed decline of the German hard coal mining industry, entitled “Transformation of German Coal Mining”. He showed the evolution of coal mining in the Ruhr region from 1969 and key points of the decision taken by Germany in 2007 to phase out hard coal mining in 2018. He described the functions of the new RAG Stiftung (RAG Foundation) which will now deal with all post-mining liabilities with an annual budget of around €220 million. The most important task for the Foundation will be to manage those inherited liabilities of unlimited duration, such as mine-water management, polder measures and groundwater purification. Committee members were informed on the many activities planned to commemorate the historic end of hard coal mining in Germany.

The last hard coal mine in Germany

Ceremonies were held to mark the end of 155 years of coal mining at the Prosper-Haniel coal mine in the industrial Ruhr Valley, culminating on Friday, 21 December 2018 when, on behalf of his Kumpels, a miner handed the last piece of coal lifted from the mine to German President, Dr. Frank-Walter Steinmeier, watched by European Commission President, Mr. Jean-Claude Juncker.

“Coal and prosperity are inseparable. Today we pay our respect for the courage and virtues of the coal miners,” said European Commission President, Mr. Jean-Claude Juncker, at Prosper-Haniel coal mine in Germany on 21 December 2018.
COMMITTEE ACTIVITIES:
Market Committee

Prof. Franz-Josef Wodopia, Chairman

The aim of the 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. These reports have a wide circulation beyond the EURACOAL membership and include, each year, the first aggregated annual data for the EU.

In 2018, the committee held two meetings, in April and October. Special topics included a presentation by the European Energy Exchange (EEX) on carbon trading, addressing members’ concern on possible price manipulation in 2018 – a concern also expressed by the Polish government in a letter to the European Commission dated 18 September 2018. EURACOAL released two coal market reports in 2018: one in April, the other in November.

World Coal Market Developments

Global coal production grew 2.8% to a new high of 7.1 billion tonnes in 2018, defying those who have talked of “peak coal”. It seems that a stable, high plateau of coal production has been reached.

At 720 million tonnes (+6% compared with 2017), India’s coal production in 2018 was again ahead of US production of 685 million tonnes (-3%), but still far behind China, the world’s largest producer at 3 546 million tonnes (+3%). China continued to close small, inefficient coal mines – mines with an annual production capacity of 100 million tonnes were shuttered in 2018 – but opened new coal mines with a capacity of 200 million tonnes so production increased. The country’s rail logistics were improved in 2018, helping to connect demand centres on the East coast with coal from Western provinces. Australia produced 453 million tonnes (+4%) of high quality coking coal and steam coal in 2018. Indonesia’s 557 million tonnes of coal production in 2018 (+14%) included around ninety million tonnes of lignite. President Joko Widodo has sent mixed messages on future coal production, but the country’s policy may hamper exports by enforcing a domestic market obligation (DMO) with regulated prices – a market of 115 million tonnes in 2018.

Global seaborne hard coal trade rose to 1.2 billion tonnes (+4.6%) in 2018, dominated by exports from Australia (386 Mt, +4%) and a record high from Indonesia (429 Mt, +10%) which exports steam coal, sub-bituminous coal and lignite.

Trade in coking coal grew to an estimated 325 million tonnes, dominated by Australia with a share of around 60%. This robust demand for coking coal was supported by strong steel output, which grew by 4.9% to 1.8 billion tonnes. Exports of US coking coal grew in 2018 to an estimated 55 million tonnes (+10%). Russia’s coking coal exports grew to 26 million tonnes (+14%), while Canada increased its coking coal exports by

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EURACOAL report on formation of coal prices in market-based economies: the case of Ukraine

At the request of the National Energy and Utilities Regulatory Commission of Ukraine (NEURC), in August 2018, EURACOAL gave its opinion on an official coal-pricing methodology introduced in 2016. The coal price was used when setting regulated electricity tariffs in Ukraine.
around a million tonnes to an estimated 30 million tonnes. Mozambique’s coking coal exports also grew by around a million tonnes to reach an estimated 8 million tonnes. Mongolia’s coking coal shipments to China increased to 26 million tonnes (+5%), despite long queues of trucks awaiting customs inspections at the border.

As noted above, Indonesia’s steam coal exports grew by 10% to 429 million tonnes in 2018. Russia continued to enjoy a prominent position on the Pacific and Atlantic steam coal markets with 172 million tonnes (+9%) helped by new infrastructure at its eastern ports of Vostochny and Nakhodka. Japanese utilities appreciated the market competition, while South Korea passed new regulations that increased demand for Russia’s low-sulphur coal. South Africa has been under much competitive pressure in the Asian market from Australia and Indonesia. The result is that South Africa’s share of global steam coal trade has declined to just 7% – an estimated 79 million tonnes in 2018, so slightly lower than in 2017. US steam coal exports of 50 million tonnes (+35%) were not enough to compensate for the decline in its domestic demand: so production fell by 3%. Colombia’s steam coal exports fell to 80 million tonnes in 2018 (-4%).

European hard coal production, lignite production and coal imports, 2018

<table>
<thead>
<tr>
<th>EU-28</th>
<th>million tonnes</th>
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<tr>
<td>ignite</td>
<td>367</td>
</tr>
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hard coal | 76             |
imports | 166            |

Note: bars show million tonnes of coal equivalent (Mtce) while figures at top of bars show millions of physical tonnes (Mt)
Source: EURACOAL members – *2017 data
On 9 July 2018, EURACOAL sponsored a European Energy Forum dinner debate in the European Parliament on the UN Sustainable Development Goal No. 7: Does coal have a role in providing affordable and clean energy?

Left to right: Mr. Hervé Martin, Head of Unit responsible for the EU Research Fund for Coal and Steel, DG RTD, EC; MEP Jaromír Kohlíček (GUE/NGL, CZ); Mr. Haitze Siemers, Head of Unit for New energy technologies, innovation and clean coal, DG ENER, EC; Mr. Michał Drabik, UNECE; MEP Jerzy Buzek (EPP, PL), Chair of the European Parliament Industry, Transport and Research Committee; Mr. Tomasz Rogala, EURACOAL President and Chairman, PGG; and the EURACOAL secretariat.

China imported around 216 million tonnes of steam coal in 2018, little changed from 2017. Imports declined sharply in November and December 2018, as import restrictions were tightened to limit total coal imports to the same level as 2017. With new quotas, imports surged in January 2019 to a near-record high. Chinese policy is to influence steam coal imports and so stabilise domestic steam coal prices within a price band of 500 to 570 RMB/tonne. In India, domestic production of steam coal – mostly produced by Coal India – grew to an estimated 645 million tonnes (+6%), but failed to keep pace with demand. So, after two consecutive years of decline, India’s steam coal imports grew by 15% to 168 million tonnes in 2018. Japan’s imports of steam coal in 2018 declined to 140 million tonnes (-3%); a decline in coal-fired power generation is now expected as nuclear power plants restart and low LNG spot prices encourage a switch from coal to gas. South Korea’s steam coal imports increased in 2018 to 115 million tonnes, despite the change of government in 2017 which led to measures aimed at reducing the country’s reliance on coal-fired power generation. Taiwan’s steam coal imports remained steady at an estimated 60 million tonnes. Elsewhere in Asia, coal-fired power generation is expanding. In Vietnam, coal imports grew to 24 million tonnes (+68%) in 2018, complementing domestic production of around 42 million tonnes. A similar picture of rising coal import demand is emerging in the Philippines, Pakistan and Bangladesh.

European Union Coal Market

Coal production in the European Union fell in 2018: hard coal production was 75.7 million tonnes (-6.1% compared with 2017) and lignite production was 366.8 million tonnes (-4.1%). Coal imports were also lower at 165.9 million tonnes, 3.5% less than 2017. Steam coal demand suffered as less coal was used for power generation: estimated to be 9% lower in 2018 compared with 2017. Lignite-fired power generation fell by 3%. Overall EU electricity generation fell by an estimated 0.3%.

Lignite production in Bulgaria fell 12.0% in 2018 to 30.3 million tonnes. Mini Maritsa Iztok EAD, a subsidiary of the state-owned Bulgarian Energy Holdings EAD, is by far the country’s largest coal producer. In 2019, the company’s business plan foresees lignite production of 27.5 million tonnes. The company’s coal mines in south-eastern Bulgaria sell their output mainly to three thermal power plants located nearby: one owned by ContourGlobal, one by AES and one state-owned. These and other coal power plants generate around 45% of Bulgaria’s electricity output.

In the Czech Republic, hard coal production declined to 4.5 million tonnes (-18%) in 2018 while hard coal imports in 2018 were 3.4 million tonnes.
(-8.0%), balanced by exports of 1.9 million tonnes (-18%). 2018 was marred by a terrible accident at the ČSM North Mine on 20 December 2018 which cost the lives of thirteen miners. It was announced that coal extraction from the OKD Lazy Mine will end by 31 October 2019 due to depletion.

Brown coal production in the Czech Republic was stable in 2018 at 39.2 million tonnes, 0.3% lower than 2017. Together, coal and brown coal power plants supplied 47% of total Czech power generation in 2018. By 2035, the country’s largest utility, ČEZ Group, expects to close more than half of its coal-fired units which currently total 4.64 GW.

Hard coal production in Germany definitively ended in December 2018. Production in 2018 was 2.8 million tonnes, a 28.0% fall in comparison with 2017. Hard coal consumption decreased by 11.2% in 2018. The use of hard coal for power generation and heat supply exhibited a particularly strong decline of over 16%. The increase in power generation from renewables as well as increases in input costs, particularly CO₂ allowance prices, contributed to this large decline. The unpredictability of wind power output was an ongoing problem for scheduling coal at power plants, both in 2017 and 2018.

There was a significant fall in German imports of hard coal to 44.5 million tonnes in 2018 (-7.2%), including a 12% fall in steam coal imports.

Lignite production in Germany was 166.3 million tonnes in 2018. Lignite consumption fell for the sixth consecutive year in 2018. The decline in 2018 was 2.9% as lignite-fired power generation fell due to the transfer of power plant units into a strategic reserve for backup purposes – eight units since October 2016. Electricity generation from coal and lignite thus fell – their combined share being 35.4% in 2018 and so still just above the share of renewables (35.0%). Wholesale electricity prices rose sharply in 2018, from around €35/MWh to €55/MWh (base load) on account of higher carbon prices which now make up half of the power price and put generation margins under pressure.

Lignite production in Greece by the Public Power Corporation (PPC) and other small, independent producers in 2018 was 36.5 million tonnes (-3.1%). PPC expects to mine 32.5 million tonnes in 2019 and independent producers will likely add around 2 million tonnes to this figure. In 2018, lignite-fired power generation fell by 9% to account for 29% of total power generation in Greece (excluding the isolated islands). A new 660 MW lignite unit at Ptolemais is under construction with operation expected in 2021.

**Steam coal import prices** at ARA ports in northwest Europe (NWE) & Qinhuangdao port in China, 2005-2019

Source: IHS McCloskey Coal Report
Lignite production in **Hungary** declined to 7.9 million tonnes in 2018, 1.3% less than in 2017 and accounted for 14.4% of total domestic electricity production (nuclear accounts for half). Mătrai Erőmű Zrt. is the only significant producer, supplying its own power plant. Coal imports declined by around 10% to 1.5 million tonnes, including coking coal and steam coal. One third of electricity is imported.

Hard coal production in **Poland** in 2018 was 63.4 million tonnes (-3.2%) – this being by far the largest of any EU member state. Exports of high-quality Polish coal collapsed from 6.3 million tonnes in 2017 to 3.9 million tonnes in 2018 (-38%) as domestic demand took precedence. Coal imports to Poland increased to 19.7 million tonnes (+46.8%) in 2018 – the highest ever – as buyers ensured supplies. Two thirds of imported coal came from Russia.

Polish lignite production fell from 61.1 million tonnes in 2017 to 58.5 million tonnes in 2018 (-4.3%) and lignite-fired electricity generation fell by 5.6%, despite a 1.7% rise in electricity demand. At the PGE GiEK Turów power plant, a new 490 MW unit is under construction with a planned completion date of April 2020.

Coal production in **Romania** declined in 2018 by 8.6% from 2017 to 23.5 million tonnes. Electricity production grew by over 2% to meet a similar growth in demand, but output from thermal power plants (coal and gas) fell by around 6%. Construction of Romgaz’s €270 million 430 MW gas-fired CCGT power plant began in 2018 at Iernut, partly funded by EUA auction revenues.

In 2018, total electricity production in **Slovakia** was an estimated 25.5 TWh, with around 5% from lignite. Coal production in 2018 fell by 17.4% to 1.5 million tonnes. Coal use will continue to decrease over the coming years, because subsidies paid in the general public interest to maintain electricity supply security will now only continue until 2023, rather than the previously agreed 2030.

The only operating lignite coal mine remaining in **Slovenia** is owned by Premogovnik Velenje d.o.o. – a subsidiary of the state-owned utility, Holding Slovenske elektrarne d.o.o. (HSE). In 2018, lignite production in Slovenia fell by 4.2% to 3.2 million tonnes.

**Spain**’s coal production in 2018 was 2.5 million tonnes, a 12.1% decline on 2017, and imports stood at 15.7 million tonnes (-18.2%). In June 2018, the government changed from the second conservative Rajoy government to the socialist Sánchez government. Within days of taking office, the new Minister for Ecological Transition presented the government’s position on coal, but was unable to negotiate a stable agreement with unions and coal companies. Coal production therefore ceased from 1 January 2019, other than from the small San Nicolás underground coal mine located in the Lleros de Abajo valley near Mieres in Asturias which produces up to 200 thousand tonnes each year for heating plants and for the nearby 15 MWe La Pereda experimental power plant.

Coal production in the **United Kingdom** declined to 2.6 million tonnes (-14.0%) in 2018 and imports grew to 9.9 million tonnes (+17.1%) with Russia and the US each accounting for around one third. On 19 March 2019, West Cumbria Mining was granted planning permission for a new coking coal drift mine: Woodhouse colliery with a potential annual output of 3 million tonnes.

**Coal and coke prices**

Steam coal demand across North America, Europe and Asia weakened after the 2018 winter season. In China, hydro and nuclear power generation displaced coal-fired power generation. A fall in LNG spot prices also encouraged some coal-to-gas switching in Asia and Europe. At the same time, steam coal supply has been strong over the last two years, leading to a glut.

Steam coal import prices averaged 92 US$/tonne at ports in northwest Europe during 2018, ending the year at about 85 US$/tonne. Prices collapsed at the beginning of 2019 to around 55 US$/tonne in early April. It was a different story in China. Since 2015, China has successfully stabilised national coal prices within a band. In 2018, regulations were used to restrict port operations and import restrictions were imposed from
October 2018. As noted in previous EURACOAL reports, China’s future coal production profile and internal logistics will be crucial for international prices.

The downturn in coal prices started in Europe where falling industrial output in Germany, some unseasonably warm weather, higher renewables power generation and an oversupply of LNG hit natural gas prices and ultimately demand for coal. This led to a coal supply glut, forcing Colombian and Russian producers to sell more coal to Asia.

In contrast to the steam coal market, coking coal prices were relatively stable in 2018 in a tight market, starting the year at just over 250 US$/tonne, drifting down to 175 US$/tonne in August and recovering by year end to around 200 US$/tonne (FOB) for Australian hard coking coal. Ongoing supply disruptions and erratic Chinese import demand led to price fluctuations. In January 2019, the spot price of Australian hard coking coal declined to below 200 US$/tonne, but has since rebounded. The tragic collapse of Vale’s tailings dam at Brumadinho and resulting loss of high-grade iron ore supply contributed to firmer prices as the use of lower-grade iron ore in steel making requires more coking coal.

On the gas market, LNG prices in Asia fell below European pipeline gas for the first time which has worrying competitiveness implications for coal. Of even more concern to the coal industry is that LNG prices on an energy basis have dropped below coal prices, following an apparent delinking of oil and gas prices in 2019.

**Freight Rates**

Sea freight rates for the historic benchmark route from Richards Bay in South Africa to the ARA ports (Antwerp-Rotterdam-Amsterdam) of northwest Europe held steady in 2018, ending the year little changed at 8.50 US$/tonne – falling after the winter heating season and rising at the end of the summer. Shipping rates from Colombia and Australia followed a similar pattern. For Europe, these higher shipping rates compared with the lows of 2016 favoured imported coal from Russia – rates from Murmansk port in Russia to northwest European ports firmed and made a spectacular recovery in the second quarter of 2019 to reach levels not seen since the end of 2013. While iron ore shipments from Brazil improved as Vale recovered some production losses following the dam collapse at Brumadinho in late January 2019, another reason for high shipping rates is the temporary loss of capacity as sulphur scrubbers are retrofitted to many vessels.

The Baltic Dry Index (BDI) averaged 1352 in 2018, another volatile year, 18% higher than in 2017 and ranging from 948 to 1774 before closing the year at around 1300. The BDI is a weighted composite of Capesize (40%), Panamax (30%) and Supramax (30%) average time-charter rates and is reported as a proxy indicator for the dry bulk shipping market. From 1 March 2018, charter rates for the smaller Handysize vessels are no longer included in this index.

**Baltic Dry Index (BDI) 2005-2019**

Source: Baltic Exchange Information Services Ltd.
The total combined fleet capacity of all 11,810 dry bulk vessels stood at 851 million dead-weight tonnes (dwt) in August 2019, with Panamax and Capesize carriers accounting for the greatest share of this total. The fleet grew by 3% in 2018 and with 1,130 new vessels on order, equal to 13% of the existing fleet capacity, it will continue to grow. Given the rising demand to ship iron ore, coal and grain over greater distances, dry bulk shipping rates are expected to increase in 2019, especially with high oil prices and new environmental costs. Six Valemax (c.400,000 dwt) made their maiden voyages from Chinese shipyards to Brazil to load their first cargos of iron ore. They bring the total deliveries for 2018 to fifteen Valemax, with eighteen still on the order books.

The shipping industry must comply with new environmental regulations, such as the International Maritime Organisation (IMO) Ballast Water Management Convention which requires ballast water treatment systems from 2019 and the IMO MARPOL Convention which sets a global limit for sulphur in heavy fuel oil of 0.5% from January 2020, replacing the current 3.5% limit. Complying with the low-sulphur limit will require the use of higher-cost, low-sulphur fuel oil, exhaust gas scrubbers or conversion of engines to use LNG. The extra capital investment and operating costs will likely push owners of the oldest vessels – those older than twenty years – towards scrappage.

**Carbon Prices**

European carbon allowances prices tripled in 2018 and have continued rising in 2019 to reach 27 €/EUA in mid-April – the month when European power utilities and industrial companies must surrender allowances to cover their emissions over the previous calendar year. At these levels, the carbon cost of burning a tonne of lignite to generate electricity is similar to the cost of mining that same tonne of lignite. With such a dramatic and rapid rise in input costs, many power utilities in the EU are experiencing financial difficulties.

Higher carbon prices are the direct result of the reform of the EU Emissions Trading System Directive which was concluded in early 2018 and came into force on 8 April. The annual cap will now decrease at a steeper rate of 2.2%, meaning an absolute decrease of 48 million allowances every year from 2021. Note that the supply of allowances was around 1,500 million in 2016, with some analyses showing 1,700 million allowances still in the market from previous years. From 2019, the market stability reserve (MSR) will cut annual auction volumes by an estimated 400 million allowances during its first two years of operation. Then, in 2023, the cancellation of allowances from the MSR will permanently remove up to 2,400 million allowances.

**Carbon prices:** allowance prices under the EU Emissions Trading System (ETS), 2005-2019
Source: European Energy Exchange
COMMITTEE ACTIVITIES:  
Technical Research Committee  
Dr. Alicja Krzemień, Chairwoman

The Technical Research Committee is the longest-established of the EURACOAL committees. It provides networking opportunities for members interested in submitting proposals to research programmes supported by the European Union. In addition, it aims to establish and maintain a favourable European policy towards coal research.

In 2018, there were two committee meetings, in June (Poland) and December (Brussels), as well as a proposal preparation workshop in Katowice.

The EU Research Fund for Coal and Steel (RFCS) is the dominant topic for the committee which tries to advise and support the development of this unique programme created from the assets of the European Coal and Steel Community (ECSC).

Much effort in 2018 was dedicated to two key issues: a sharp decrease in the interest on ECSC assets and the CoalTech2051 project on European coal research in light of EU policy objectives to 2050 and future global trends in coal use.

In the EU, the approach to coal has changed drastically. Security of energy supply now focuses on diversity of gas supply rather than a secure energy mix. At the same time, climate policy has become a priority, with strict targets. The European Commission focuses its efforts on supporting member states meet their emission targets for 2030 and 2050, and so coal is seen as a fuel in transition. DG Energy decided to focus its actions on securing social peace for the transition by establishing a dialogue with coal-dependent regions. Meanwhile, DG Research and Innovation looked to adjust and rethink its own priorities.

The CoalTech2051 project started in 2018 in order to find answers to questions on the future of coal-related research. By establishing a common understanding of future research needs, based on an appreciation of the current state-of-the-art, the research community can become an influential voice in the setting of priorities for publicly funded research, notably research funded by the RFCS, but also by other RTD programmes. A workshop and several working group meetings took place in 2018, the process of reviewing past projects started and a new European Network of Clean Coal Technologists was initiated.

In response to current RFCS research priorities, a workshop was organised by the Technical Research Committee in co-operation with the Central Mining Institute (GIG) of Poland. This took place in Katowice in February 2018 with a focus on coal mining operations, mine infrastructure and management, and unconventional use of coal deposits. The workshop was well attended by 31 participants who brought many high-level ideas that enabled ten combined proposals to be developed for submission to the RFCS 2018 call.
The European Commission introduced some novelties to the 2018 call. Listed priorities gained explanatory fiches to help proposers better understand which topics are preferred. A change to the evaluation rubric for project proposals was also made, with fewer points available under just three criteria: excellence (including innovation), impact and quality, and efficiency of implementation. Projects can gain a maximum of fifteen points plus one bonus point. This change significantly increases the importance of the bonus point.

Mid-year, the committee was informed of news from the European Commission that the RFCS was facing budgetary problems. There was already a decreased budget for 2018, but the Commission informed stakeholders that, without action, the budget would become insufficient for new calls. The Commission executed a short-term solution and is now working on a longer-term one.

On 3 December 2018, the committee met in Brussels prior to an RFCS Coal Advisory Group (CAG) meeting. Priorities for 2019 were discussed:

- sustainable energy generation and circular economy at coal mine sites;
- addressing occupational health or environmental risks during or after coal mine operation; and
- pilot/demonstration projects enhancing the delivery of clean coal technologies (CCTs).

As well as the Commission’s proposal to have fewer Technical Groups – two instead of three – experts and topics would be reorganised within the groups. This was indeed seen as a viable solution and the committee recommended one Technical Group on “Safe and productive coal mining operations and post-mining issues” and one on “Technical, economic and environmental issues related to coal treatment and use”.

The committee discussed also the possibility presented by the Commission of funding larger research projects, such as “green” steel production and transformative coal technologies. Possible technologies to be considered were identified, such as coal gasification at power plants in the context of a closed carbon-cycle economy or the co-gasification of coal with biomass or wastes. Energy storage in the form of hydrogen was highlighted as interesting, but considered difficult based on past experience. The technology readiness level (TRL) needed to justify large-scale projects was noted as an important factor in project selection.

The committee was updated on the RFCS monitoring and assessment exercise that the Commission delegated to a high-level panel of experts from across the coal and steel sectors.

Throughout the year, the Technical Research Committee was involved in a newly created post-mining working group of EURACOAL. While from a technical point of view, post-mining research is an existing discipline with many committee members already involved, the topic is more complicated at the legal and political levels. There is no uniform, EU-wide approach to post-mining activities or responsibilities. The committee remains very interested in this topic and will offer its advice to those who are engaged in the process of coal mine closure.

Members of the EURACOAL Technical Research Committee on a technical site visit to the Polish Mining Group’s KWK Piast-Ziemowit coal mine near Katowice, Poland on 29 June 2018.
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 27 members including national coal associations, importers associations, research institutes and individual companies. Members come from 15 countries: Bosnia-Herzegovina, Bulgaria, the Czech Republic, Finland, Germany, Greece, Hungary, Poland, Romania, Serbia, Slovakia, Slovenia, Spain, Turkey and Ukraine.

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 supports the Coal Regions in Transition Platform, an initiative of the European Commission led by DG Energy.

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

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 2018

Total income (a): 416 816 €
- membership fees: 384 400 €
- office sub-let, RFCS grant & other: 32 416 €
Total operating costs (b): 491 592 €
Net deficit (a – b): -74 776 €

Accounts for 2018, prepared on the basis of Belgian accounting standards, were audited by RSM InterAudit. The income statement showed a net deficit of €74 776 for the year and total assets amounted to €528 656 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
Mr. Tomasz Rogala – PGG
First Vice President
Mr. Vladimír Budinský – ZSDNP

Senior Vice President
Dr. Wolfgang Cieslik – VDKi
Vice Presidents
Dr. Lars Kulik – DEBRIV
Mr. Robert Ostrowski – PPWB

National Delegations
27 members from 15 countries

Brussels Secretariat
Secretary-General: Mr. Brian Ricketts
Deputy Sec-Gen: Ms. Magdalena Chawula-Kosuri

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

EXECUTIVE COMMITTEE

<table>
<thead>
<tr>
<th>Members</th>
<th>Country</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Mr. Tomasz ROGALA</td>
<td>Poland</td>
<td>President of EURACOAL and Chairman of the Board, PGG – Polska Grupa Górnicza S.A. (Polish Mining Group)</td>
</tr>
<tr>
<td>Mr. Vladimír BUDINSKÝ</td>
<td>Czech Republic</td>
<td>First Vice President of EURACOAL and Foreign Affairs Advisor, Severoceske dolny a.s.</td>
</tr>
<tr>
<td>Dr. Wolfgang CIESLIK</td>
<td>Germany</td>
<td>Senior Vice President of EURACOAL, President of VDKi and Member of the Board, STEAG GmbH</td>
</tr>
<tr>
<td>Dr. Lars KULIK</td>
<td>Germany</td>
<td>Vice President of EURACOAL and Chief Technology Officer Lignite, RWE Power AG</td>
</tr>
<tr>
<td>Mr. Robert OSTROWSKI</td>
<td>Poland</td>
<td>Vice President of EURACOAL and Chairman of the Management Board, PGE Górnictwo i Energetyka Konwencjonalna S.A.</td>
</tr>
<tr>
<td>Mr. Andon ANDONOV</td>
<td>Bulgaria</td>
<td>Executive Director, Mini Maritsa Iztok EAD</td>
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<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>Director – Mines Central Support Department, PPC – Public Power Corporation S.A.</td>
</tr>
<tr>
<td>Mr. Ömer BAYRAK</td>
<td>Turkey</td>
<td>General Director, TKI – Turkish Coal Enterprises</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 “Banović” d.d. Banovići</td>
</tr>
<tr>
<td>Mr. Iurii CHEREDNYCHENKO</td>
<td>Ukraine</td>
<td>General Director, DTEK Dobropolyeugol</td>
</tr>
<tr>
<td>Name</td>
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<td>Current Position</td>
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<tr>
<td>Mr. Dimitar CHOLAKOV</td>
<td>Bulgaria</td>
<td>Deputy Executive Director, Mini Maritsa Iztok EAD</td>
</tr>
<tr>
<td>Dr. Armin EICHHOLZ</td>
<td>Germany</td>
<td>Chairman of the Board, MIBRAG mbH</td>
</tr>
<tr>
<td>Dr. Renata EISENVORTOVÁ</td>
<td>Czech Republic</td>
<td>European Affairs Manager, Seven Energy</td>
</tr>
<tr>
<td>Mr. Miguel Ángel FRAJ GASCÓN</td>
<td>Spain</td>
<td>Vice President, CARBUNIÓN and Chief Executive Officer, Groupe Šamca</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>Member of the Board – Director of Mining, LEAG – Lausitz Energie Bergbau AG &amp; Lausitz Energie Kraftwerke AG</td>
</tr>
<tr>
<td>Mr. Pedro IGLESIA GÓMEZ</td>
<td>Spain</td>
<td>President – Director General, CARBUNIÓN – Federación Nacional de Empresarios de Minas de Carbón</td>
</tr>
<tr>
<td>Mr. Milan JAKOVLJEVIĆ</td>
<td>Serbia</td>
<td>Head of Mining Efficiency Improvement and Environmental Protection, 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 – Hornonitranske bane Previdzda, 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>Dr. Roger MIESEN</td>
<td>Germany</td>
<td>Chief Executive Officer, RWE Generation SE</td>
</tr>
<tr>
<td>Mr. Janusz OLSZOWSKI</td>
<td>Poland</td>
<td>President, GIPH – Górnica Izba Przemyslowo-Handlowa (Mining Chamber of Industry and Commerce)</td>
</tr>
<tr>
<td>Prof. Stanisław 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>Head of Mining Engineering Unit, PPC – Public Power Corporation S.A.</td>
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<tr>
<td>Dr. Jürgen-Johann RUPP</td>
<td>Germany</td>
<td>President, GVSt – Gesamtverband Steinkohle e.V. (German Coal Association) and Vorstand Finanzen (Finance Director), RAG A.G.</td>
</tr>
<tr>
<td>Mr. Ildar SALEEV</td>
<td>Ukraine</td>
<td>Chief Executive Officer, PRJSC Donetsksteel</td>
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<tr>
<td>Mr. Oleksandr SELISCHEV</td>
<td>Ukraine</td>
<td>Head of Strategic Planning &amp; Analysis Department, DTEK</td>
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<tr>
<td>Ing. Radim TABÁŠEK</td>
<td>Czech Republic</td>
<td>Reclamation and RE Centre Manager, OKD, a.s.</td>
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<tr>
<td>Mr. Dezső TÓRÓK</td>
<td>Hungary</td>
<td>President of Borsod-Abaúj-Zemplén County Government</td>
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<tr>
<td>Dipl.-Ökonom Dr. Kai VAN DE LOO</td>
<td>Germany</td>
<td>Dezernent “Politik und Statistik”, GVSt – Gesamtverband Steinkohle e.V. (German Coal Association)</td>
</tr>
<tr>
<td>Mr. Artur WASIL</td>
<td>Poland</td>
<td>President of the Board, Lubelski Węgiel „Bogdanka” S.A.</td>
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<tr>
<td>Mr. Sławomir WOCHNA</td>
<td>Poland</td>
<td>President, PPWB – Porozumienie Producentów Węgla Brunatnego (Confederation of Polish Lignite Producers) and Director – Kopalnia Węgla Brunatnego Turów, PGE GieK S.A.</td>
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<tr>
<td>Prof. Dr. Franz-Josef WODOPIA</td>
<td>Germany</td>
<td>Managing Director, VDKI – Verein der Kohlenimporteure e.V. (Coal Importers’ Association)</td>
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EURACOAL MEMBERS: an international partnership

<table>
<thead>
<tr>
<th>Country</th>
<th>Member Association / Company</th>
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<td>PRJSC Donetsksteel</td>
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The front cover shows a petal chart of EU electricity generation in 2017 using ENTSO-E capacity data (GW – shown by the angle of each slice of the pie) and Eurostat data for the electricity produced by each source (TWh – shown radially).