Polish Coal Industry’s Perspective

Post-Mining Perspectives: Capture and Use of Abandoned Mine Methane and Mine Reclamation and Revitalization of Post Mining Areas

Janusz Olszowski
President
Polish Mining Chamber of Industry and Commerce
The potential of the coal sector in Poland
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COAL SECTOR IN POLAND

- Service companies
- Scientific and research institutions
- Hard coal producers
- Producers of mining machinery and equipment

Sources: Own elaboration

Janusz Olszowski – Polish Mining Chamber of Industry and Commerce
Hard coal balance resources as of 1 January 2019

60 495,60 mln t

- Developed: 22 497,48 mln t (37,19%)
- Non-developed: 33 493,51 mln t (55,37%)
- With discontinued exploitation: 4 504,62 mln t (7,44%)

Source: „Balance of mineral resources in Poland” PIG, Warszawa 2018

Janusz Olszowski – Polish Mining Chamber of Industry and Commerce
In last 3 years coal production was at almost the same level of about 60 mln tons.


Janusz Olszowski – Polish Mining Chamber of Industry and Commerce
Workplaces in the Polish coal producers in 2006 – 2019

In last 3 years employment was at the stable level about 83 thousand people.

Import and export of hard coal in Poland in 2005 - 2019

Source: "GSMiE Institute of the Polish Academy of Sciences - Kraków"; Industrial Development Agency S.A., Katowice Branch

Janusz Olszowski – Polish Mining Chamber of Industry and Commerce
Workplaces in the Polish coal producers in 2019

Employment in the Polish coal mining industry at the end of December was: 83,3 thousand people.

In addition: approx. 400 thousand people work in the surroundings of the industry.

The Polish coal mining industry generates still 500 thousand jobs.

From December 2018 till December 2019 employment increased by only 457 people.

Sources: Own elaboration

Janusz Olszowski – Polish Mining Chamber of Industry and Commerce
Hard coal producers in Poland in 2019

- **Tauron Mining**
  - 3 mines

- **Jastrzębie Coal Company**
  - 5 mines

- **Węglokoks Kraj Ltd Co.**
  - 1 mine

- **Lublin Coal Bogdanka**
  - 1 mine

- **PG Silesia Ltd Co.**
  - 1 mine

- **Polish Mining Group**
  - 8 mines

- **EKO-PLUS Mining Plant Ltd Co.**
  - 1 mine

- **Siltech Mining Plant Ltd Co.**
  - 1 mine

- **Mines Restructuring Company**
  - 9 mines and parts of mines under liquidation process

*Janusz Olszowski – Polish Mining Chamber of Industry and Commerce*
Coal mining surroundings on the example of the Members of the Polish Mining Chamber of Industry and Commerce (GIPH)
Mining machines and equipment producers

For instance producers of: longwall shearsers, roadheaders, supports, conveyors, electric machines and apparatus

30 most important producers of mining machines and equipment belong to the GIPH

Sources: Own elaboration
Coal mining services companies

For example:
- mining construction companies,
- mines rescue services,
- information technology services,
- coal sales.

23 biggest coal mining services companies belong to the GIPH
Scientific and research institutions

For instance:

- Central Mining Institute
- Institute of Coal Chemical Processing
- Mineral and Energy Economy Research Institute of the Polish Academy of Sciences
- Strata Mechanics Research Institute of the Polish Academy of Sciences
- Science and Industrial Centre EMAG
- KOMAG Institute of Mining Technology
- Faculty of Mining, Safety Engineering and Industrial Automation, Silesian Technical University
- Mining Science and Traditions Foundation, Academy of Mining and Metallurgy

Sources: Own elaboration

Janusz Olszowski – Polish Mining Chamber of Industry and Commerce
Current use of coal in the Polish energy mix
Energy mix in Poland in January 2020

% share of individual fuels

73.39% of electric energy was generated from hard coal and lignite

Source: Own elaboration based on ENTSO-E data

Janusz Olszowski – Polish Mining Chamber of Industry and Commerce
Example of electric power generation from individual fuels during a single day (8 January 2020)

At midday gross energy in Poland is generated from hard coal and lignite

Source: forum.energii.eu
Draft of the energy policy of Poland till 2040 after introduced corrections
Energy policy of Poland till 2040 after introduced corrections

The main objectives are:
➢ provide energy security
➢ guarantee the competitiveness of the economy, energy efficiency
➢ reduce the environmental impact of the energy sector, with optimum use of Poland’s own energy resources.

New energy policy of Poland is after consultations. Some corrections were introduced and document waits for acceptance of government.

Source: Ministry of Energy
Janusz Olszowski – Polish Mining Chamber of Industry and Commerce
More important indicators accepted in Energy Policy with last changes

➢ 56-60% share of coal in the generation of electricity in 2030
➢ 21-23% RES in gross final energy consumption in 2030
➢ Introduction of nuclear energy in 2033
➢ Reducing of CO₂ emissions by 30% by 2030 (in relation to 1990)
➢ Improvement in energy efficiency by 23% by 2030 (in relation to the 2007 forecasts)
➢ Reduction of other air pollutants by 10 to 20% by 2040
Forecast of power structure in Poland by technology up to 2040 (TWh)

Poland does not plan phase out of coal by 2040.

Source: Ministry of Energy

Janusz Olszowski – Polish Mining Chamber of Industry and Commerce
The reduction of greenhouse gas emission will be reduced 50% by 2040 as compared to 1990.

LULUCF – Land use, Land use change, Forestry
The mix of energy fuels in Poland will be changing step by step during long period of time (20 years).
Direct legal instruments of the EU for phase out of coal
EU legal instruments against coal

➢ Revision of Large Combustion Plants Directive /LCP BREF/
  • introducing restrictive emission limits for pollutants such as of NOx, SO2, dust etc.

➢ European Union's Emission Trading Trading Scheme
  • Permanent administrative changes in the EU ETS focused on increasing the price of CO2 emission certificates.
  • /from about 5€/ton of CO2 till 2016, to about 23 €/t at present and 40 €/t in 2040/

➢ Stopping financing investments in coal production and use
EU legal instruments against coal


➢ Capacity Market - emission limit of 550 g CO2/kWh has been introduced. Coal power stations even with new technologies cannot be in the Capacity Market in Poland because they will never meet this limit.

➢ Introduction of methane emissions into the UE ETS.

Almost 80% of coal production in Poland comes from methane seams.

Because we do not have at present the technology for methane capture of low concentration introduction of coal mine methane into the ETS will mean a very fast liquidation of Polish coal mining sector.
Methane released and captured in Polish hard coal mines

Source: WUG

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What newly introduced and often used terms really mean?

**Just energy transition**
– is unjust, not economically justified coal phase out from the EU energy mix.

**Just coal regions transformation**
– is unjust accelerated closure of coal mines.
General comments

Poland still has a strong potential in the hard coal sector which gives our country energy security, lot of workplaces and big taxes.

➢ Does burning coal create a smog that kills people?

No! Because high standards and technologies used in Polish power plants eliminate emissions of toxic gases and dusts.

➢ Does CO2 emitted by Polish power plants (and power plants from the whole EU) lead to climatic catastrophe?

No! Because CO2 emissions from coal combustion in Poland and in the EU do not influence the global greenhouse effect.

So why shall we liquidate our coal industry?

Janusz Olszowski – Polish Mining Chamber of Industry and Commerce
What are the perspectives for Polish coal?

I think the perspectives for Polish coal will depend on how long we can oppose the crazy climatic ideas of the EU institutions.

I hope it will continue for a long time.
Thank you

Janusz Olszowski  
President  
Polish Mining Chamber of Industry and Commerce