THE ROLE OF UPPER SILESIAN INDUSTRIAL REGION IN POLISH ENERGY TRANSITION

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IT IS THE LARGEST POLISH INDUSTRIAL REGION, AS WELL AS ONE OF THE LARGEST IN THE WHOLE OF EUROPE. IT COVERS AN AREA OF 3359.74 KM² AND HAS OVER 2.5 MILLION INHABITANTS.
• covers 14 larger cities and several smaller towns
• the mining industry is of the greatest importance there, because there are several active hard coal mines in the GOP area.
• Another very important area of industry that the GOP deals with is the energy industry: there are several power plants here.
UPPER SILESIAN INDUSTRIAL REGION IS AN AREA WITH ENORMOUS CONCENTRATION OF INDUSTRY.

Dominates here:

- Mining industry (more than a dozen active coal mines, mainly as Katowicki Holding Węglowy and Kompania Węglowa)
- Iron and steel industry (more than a dozen active iron and nonferrous metals)
- Transport industry (example General Motors Manufacturing Poland and Fiat Auto Poland, Konstal, Bumar Łabędy)
- The energy industry (more than a dozen power plants)
- Mechanical engineering
- Chemical industry
## IMPORTANT INDICATORS FOR POLAND AND SILESIA

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
<th>Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita (Poland)</td>
<td>13600 EUR</td>
<td>2020</td>
<td>Eurostat</td>
</tr>
<tr>
<td>GDP per capita (Upper Silesia)</td>
<td>13300 EUR</td>
<td>2020</td>
<td>Eurostat</td>
</tr>
<tr>
<td>Lignite/Hard coal share in electricity production – Poland</td>
<td>70%</td>
<td>2020</td>
<td>wysokienapiecie.pl</td>
</tr>
<tr>
<td>Workers in the coal industry (lignite and hard coal) (Poland)</td>
<td>91578</td>
<td>2018</td>
<td>Industry Development Agency,</td>
</tr>
<tr>
<td>Workers in the hard coal industry (Upper Silesia)</td>
<td>72 000</td>
<td>2018</td>
<td>WiseEuropa</td>
</tr>
</tbody>
</table>
CURRENT STATUS OF TRANSITION IN POLAND

National context

• Poland’s energy sector is heavily reliant on coal with a 78% share in 2018. The main barrier to the just transition agenda in Poland is the lack of an agreed and consensual coal phase-out date. Respective governments reject the fact that it is inevitable.

• Instead, they argue that ending coal mining poses a threat to the country’s energy security (relying on domestic fuel and cutting unfavourable gas deals with Russia are a priority). Yet, the high costs and low efficiency of domestic mining are resulting in growing imports – mainly from Russia.

• According to the Energy Strategy, the high consumption of coal is planned to be sustained for the next decade. Namely, it is supposed to have a 56% share of total electricity generation in 2030, which in turn corresponds to the extraction of 46 million tonnes of coal per year.
Electricity sources in Poland in 2020

- Coal: 70%
- Natural gas: 18%
- Renewable energy sources: 10%
- Others: 2%

Source: Own diagram based on the data from https://wysokienapiecie.pl/35619-zrodla-energii-w-polsce-w-2020-mniej-wegla-wiecej-gazu-oze/
Ten years ago, the coal industry, which is dominated by hard coal mining, was responsible for 1.8% of the added value generated in Poland. Today, this figure stands at only approx. 1%. The mining industry’s share in employment and wages also declined, although the strength of the miners’ unions slowed down that process.
DURING THE TIMES OF PROSPERITY THE COAL INDUSTRY WAS THE DRIVING FORCE OF THE POLISH ECONOMY.

*Is the domestic coal mining a sinking ship which has its best years already behind it?
COAL IN THE EUROPEAN UNION IS BECOMING A THING OF THE PAST

In 2020, the EU production of hard coal was 56 million tonnes, 80 % less than the 277 million tonnes of 1990.

However, Poland is one of the two member states where hard coal is mined. What’s more, we are responsible for 96% Union’s production.

On 14 July, the European Commission adopted a set of proposals to make the EU’s climate, energy, transport and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.

Achieving these emission reductions in the next decade is crucial to Europe becoming the world’s first climate-neutral continent by 2050 and making the European Green Deal a reality.
The European Green Deal should transform the EU into a modern, resource-efficient and competitive economy, ensuring:
- no net emissions of greenhouse gases by 2050
- economic growth decoupled from resource use
- no person and no place left behind
THREE CHALLENGES FOR UPPER SILESIAN INDUSTRIAL REGION

**demographic challenge**

It is necessary to stop the decline in the number of inhabitants in the region and the process of rapid aging of the population.

**economic challenge**

Further development of a competitive industrial base and market services is necessary to align the region’s GDP per capita with highly developed European countries.

**social challenge**

Improving the quality of life in the region requires solving the problem of very high air pollution, as well as supporting areas characterized by high unemployment, poverty and increased crime, decapitalised housing and transport infrastructure.
HOW DOES THE SARS-COV-2 PANDEMIC AFFECT HARD COAL CONSUMPTION IN POLAND?
CHANGES IN ELECTRICITY PRODUCTION IN 2020 COMPARED TO 2019

Source: PANDEMIA PRZYSPIESZA - ODCHODZENIE OD WĘGLA - TRANSFORMACJA ENERGETYCZNA W POLSCE, EDYCJA 2021, FORUM ENERGII
The share of coal in electricity production fell below 70% in 2020.

On the other hand, the share of renewable energy sources increased due to prosumer solar farms and onshore wind farms.

There were also more cogeneration gas units.

Installed capacity in photovoltaic sources increased to 4 GW.

Electricity production decreased by 3.8% and the demand for it decreased by 2.1%.

Net imports of electricity reached a record level of 13.3 TWh, which accounts for 7.8% of consumption electricity in Poland.

Both consumption and production of thermal coal decreased. Coal stocks have increased, which at the end of 2020, were amounted to 15 million tonnes.
Poland extended the concession for the operation of the Turów mine until 2026 without conducting research on the impact on the environment.

The Czech Republic filed a complaint against the actions of the Polish government and demanded compensation.

The Court of Justice of the European Union imposed a gigantic penalty on Poland. Every day Poland will be charged EUR 500,000. This is a consequence of further coal mining in the Turów mine.

The closure of the mine would force the shutdown of the nearby Turów power plant, which is responsible for the production of about 5-7 per cent of electricity in Poland.
INEVITABLE ENERGY TRANSFORMATION

• An effective development policy of the Śląskie Voivodeship should take into account the inevitability of the end of hard coal mining. Highly industrialized European regions base their economies on efficient manufacturing, not the mining sector.

• Clear communication of the long-term perspective industry decline will provide employees, local communities and mining companies with time and resources to adapt to change.

• Changes in mining must be accompanied by a comprehensive modernization of the entire fuel and energy system. Investments in low-emission technologies for the production of electricity and heat, as well as deep thermal modernization of buildings in the region, may provide a positive impulse on the labor market, which will be comparable to the scale of departures from the sector in the next dozen or so years.
THANK YOU FOR YOUR ATTENTION

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