A new 910 MWe (electrical megawatt) unit is planned for the hard-coal-fired Rybnik power station, located on the outskirts of the city of Rybnik in Silesia Voivodship, to be constructed by Électricité de France (EDF).

This area is the most industrialized region of Poland, and is where most of the hard-coal mines and the majority of hard-coal power plants are located. Currently the Rybnik power plant has a generation capacity of 1775 MWe, installed in eight blocks, and is the biggest power plant in the Silesia region. The power generated in Rybnik - exceeding 9000 GWh - makes up 7% of the installed electric power in the Polish energy system, and its annual coal consumption is around 4 million tons. The new 910 MWe coal unit was due to replace the (almost 40 year old) units 1, 2, 3 and 4 that were to be shut down before 1st of January 2016.

The new unit would cost EUR 1.8 billion, which EDF planned to cover from the group’s own capital. However due to the increase in costs due to the Fukushima accident in 2011 and the economic downturn, it is no longer certain whether EDF is able to invest this sum without resorting to the financial markets.

Social and human rights impacts

One of the main problems presented by the new units is the health impact of coal combustion on the
The local health impacts from coal mining, transportation and combustion are also a significant concern, and communities living in proximity to these activities are experiencing adverse social impacts, such as displacement, and loss of social capital as well as facing increased risks of respiratory disease, heart disease, and lung cancer. Moreover use of large quantities of forest biomass can result in price increases and negative impacts on other sectors including paper, furniture and construction. As the power sector "sucks out" almost all available biomass from the market, smaller CHP and heating plants which could take advantage of local biomass potential are more likely to refrain from adjusting these plants to co-firing.

In addition, burning coal causes health related problems related to coal ash and air pollution. The plant also contributes to the region becoming 'locked in' to coal-based energy production for the next 40-50 years, making the shift to a renewable energy based society all the more difficult. Construction of the new Rybnik unit would prolong the dependence of the Silesia region on coal, potentially leading to new investments into coal mining. This increases the risk of 'stranded assets' as the requirements of climate and energy policy place ever-increasing pressure on the coal-based energy generation.

Both the Polish constitution and European Union legislation guarantee the right to live in a clean environment, and the quality of the air that citizens breathe every day is part of that right. The local health impacts from coal mining, transportation and combustion are also a significant concern, and communities living in proximity to these activities experience adverse social impacts including displacement and loss of social capital, as well as facing increased risks of respiratory disease, heart disease, and lung cancer.

Environmental and climate impacts

Burning coal is one of the most polluting methods of energy production. It causes significant changes to air quality through emissions of toxic substances such as SO2, NOx, small and large dust particles (PM10 and PM2.5) and heavy metals such as mercury and cadmium. Coal burning is also the largest single contributor to GHG emissions worldwide and thus has an impact on the climate of the region and the planet. Coal mining and coal combustion also cause serious water shortages and pollution both by modifying ground and subterranean water flows and sewage discharges that affect river and sea flora and fauna.

One of the most serious secondary effects of pollution from coal combustion is ocean acidification and acid rains. The Silesia region and Rybnik city itself are already struggling with chronically poor air conditions, and the new unit would do little to improve this situation. In fact replacing the ageing units 1 to 4 with small renewables based co-generation heat and power plants and drastically improving thermal efficiency of the buildings in Rybnik and Silesia region as a whole would lead both to the improvement of the air quality in the region as well as to increase of energy security and employment opportunities.
Other impacts

The full costs of energy generated from coal are not fully accounted for. For example, a series of subsidies are still provided to the coal sector in Poland, at both local and national levels.

In the case of the Rybnik power plant the decision of the city council of Rybnik exempted EDF’s investment from real estate tax, while coal and biomass co-firing falls under the definition of renewable energy and thus receives direct state support in the form of green certificates.

In 2011 over 50% of “renewable energy” produced in Poland originated from co-firing and EDF was by far the biggest beneficiary. Additionally EDF will receive a part of its CO₂ emission allowances in the period 2013-2019 for its power plants in Poland instead of having to purchase them on auctions, and is listed as a company that will be exempted from having to apply the Industrial Emissions Directive for all of its Polish power plants from 1st January 2016. All these subsidies distort the ability of the financial sector to take investment decisions based on unbiased economic calculations.

Brief history

In December 2012 EDF announced the suspension of the project, initially for three months. EDF stated that the reasons for the suspension of the project were:

1. the decision of the European Commission in July 2012 not to include the Rybnik plant in the National Investment Plan because it would not contribute to the modernisation of the Polish energy system. This decision meant the plant would not receive free CO₂ emissions allowances under Article 10c of the EU ETS directive; and prevents the Rybnik plant from benefiting from a state aid package of EUR 7.1 billion. (Source: European Parliament).
2. the projected abolition of support for the co-firing of coal and biomass in the most recent draft of the Polish renewable energy law (as the planned unit is projected to generate up to 10% of its energy from co-firing of hard coal with biomass);
3. the dire economic outlook and the projected decrease in energy demand as compared to the 2008-2009 forecasts on which the investment was based.

The economic case for shelving the project is growing. Both EDF and the Polish authorities are exerting strong pressure upon the European Commission to modify its decision from 13th July 2012, and the company is heavily lobbying the Polish law-makers to maintain the current support for co-firing.

Although the group did not say it is dropping it definitely, it has given a statement (via Gerard Roth, Vice-president of EDF for continental Europe) that it will not close units 1-4 but will ‘modernise’ them instead so they meet the IED directive standards and are able to operate for another 15 years. In this way the original replacement argument is becoming meaningless. A quick search in the English speaking media revealed that as usual this news appeared only in Polish.

Current status The project remains suspended. In July 2013 EDF maintained its decision to suspend the investment. In the meantime, EDF will invest EUR300m in modernising existing units. Were EDF to continue with the investment, the new unit would produce
approximately 4.7 million tons of CO2 per year.

2020

**Feb 28 2020 | Rybnik Power Plant may be decommissioned by the end of 2030.**

According to Adam Gaweđa, Secretary of State in the Ministry of State Assets, all 8 225MW coal units in Rybnik Power Plant will have been decommissioned by the end of 2030. Exact dates are known for four oldest units (1-4). It must be noted that Polska Grupa Eenergetyczna (PGE), owner of the power plant, has neither denied nor confirmed this information. PGE is going to built at least one 700MW gas unit in Rybnik PP.

Rybnik Power Plant supposed decommission timetable:
- Unit 1 decommissioned on 16.08.2021
- Unit 2 decommissioned on 16.08.2021
- Unit 3 decommissioned on 31.12.2022
- Unit 4 decommissioned on 31.12.2022
- Unit 5 operational until 2030
- Unit 6 operational until 2030
- Unit 7 operational until 2030
- Unit 8 operational until 2030

2017

**Nov 13 2017 | EDF finalizes the disposal of EDF Polska’s assets to PGE**

On the 13th November, 2017, EDF has finalized the disposal of EDF Polska assets (heat and electricity cogeneration and electricity generation) to PGE Polska Grupa Energetyczna SA. The transaction has been carried out on the basis of a valuation amounting to c. 6.1 billion zlotys for 100% of the perimeter of EDF Polska (c. 1.4 billion euros). The transaction perimeter includes the Rybnik generation plant, the coal cogeneration plants of Krakow, Czechnica, Gdansk, Gdynia, Torun and Wroclaw as well as the gas fired cogeneration plants of Zawidawie and Zielona Gora. This perimeter represents a total installed capacity of 4.4 GWth and 1.4 GWe. It also includes the heat distribution networks of Czechnica, Torun, Zawidawie and Zielona Gora. The Wroclaw plant, the cogeneration plants and heat distribution networks of Czechnica, Zawidawie and Zielona Gora are held indirectly through a 50% + 1 share stake via Kogeneracja.

**Jan 19 2017 | Polish consortium in talks over EDF plants**

French utility EDF is in talks with a Polish consortium over the potential sale of its combined heat and power plants in Poland. The Polish government has stipulated that the assets, also including a large coal-fired power plant, should only be sold to Polish local interests, with a view to protecting overall energy security. Warsaw had previously stopped a sale of the assets to an Australian and Czech bidder. On Wednesday EDF’s Polish subsidiary Kogeneracja said that EDF had formally ended the exclusive talks with IFM. EDF put its heat and electricity cogeneration plants up for sale at the start of last year, along with its 1.8 GW capacity coal-fired power plant at Rybnik in southern Poland (source Power Engineering International).

Related companies
Alstom
France

Website

Polska Grupa Energetyczna (PGE)
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