Rybnik coal power plant  Poland

Sectors: energy plants - coal

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By: BankTrack
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Project website

Status

Planning Design Agreement Construction Operation Closure Decommission

Description
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.

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.

What must happen
As long as the European Commission maintains its decision from July 2012 that the project will not be incorporated into National Investment Plan, and support for coal with biomass co-firing is scaled down by 70% as in the latest version of the law, EDF is unlikely to resume the investment. The decision to abandon this risky investment could be hastened by one of EDF’s main creditor banks raising doubts about the project’s economic feasibility. In the case that the project proceeds, any private bank should participate to its financing in any way.

Issues
Social impact

One of the main problems presented by the new units is the health impact of coal combustion on the citizens of Silesia region. The investment area is characterised by bad air quality. On 21st November 2011, the European Commission sued Poland in the European Court of Justice for lack of progress in its implementation of the Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC), which should have been implemented in Poland by the 11th of June 2010. The directive requires in particular that the PM10 (larger dust particles) level does not exceed 50 miligrams/m$^3$ more than 35 times a year. However this PM10 level is breached with much higher frequency in many Polish metropolitan areas including Jaworzno and Rybnik in the Silesia region. Recently a group of residents of Rybnik have taken the Polish state to court over the bad air quality and the lack of clear plans to improve the situation in the foreseeable future. Protests over poor air quality have already led to changes in the regional legislation in the neighbouring Malopolskie Voivoship and its capital, Krakow.

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.

Environment

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.

Human rights

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.

Other issues

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 CO$_2$ 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.

Governance

Updates

Polish consortium in talks over EDF plants

Jan 19 2017

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).
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<td><strong>Alstom</strong> France show profile</td>
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<td>The tender for supplying the boiler and the turbine hall to the new unit in Rybnik has been won by Alstom and is valued at 900 million euros. Alstom has historically been involved in corruption scandals around the world-ranging from Indonesia, through Zambia, Malaysia, Latvia, Brazil and Tunisia to Slovenia.</td>
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<td><strong>EDF</strong> France show profile energy plants - nuclear</td>
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<td>Operator of Rybnik power station. EDF is the biggest foreign investor in the Polish energy sector with a market share of 10% in electricity production and 20% in the Polish heating market. Companies forming EDF group in Poland produce energy predominantly on the basis of coal. EDF is the second largest buyer of hard coal in Poland.</td>
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