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# The risk analysis related to the Ostrołęka C Power Plant development



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## Report Summary

### *The risk analysis related to the Ostrołęka C Power Plant development*

In 2008 the Ostrołęka C Power Plants were taken over by Energa Group and the Ostrołęka C development process has begun. This costly process (the estimated current cost is approximately PLN 300 million) shows a deep crisis affecting the area of the Large-scale Corporate Power Industry. From this point of view, there are four important dates related: 2017 - first, the date of the announcement for the commissioning of a 1000 MW unit; 2014 - a deviation from the C unit being built due to its unprofitability; 2016 - a reassessment resulting in the building decision and the unit commissioning in 2024; the end of 2017 (December 28th) - an invitation to tender for the Ostrołęka C Power Plant construction project (the min. price offer - PLN 4,8 billion, the contractor: *China Power Engineering Group*; the medium offer - PLN 6,0 billion - the contractor: *Alstom Power Systems*; the max. offer - PLN 9,6 billion, the contractor: Polimex-Mostostal, Rafako).

These offers clearly show the crisis of the Ostrołęka C Power Plant building project. Namely, the comparison between minimal and maximal price shows that the project can be attractive for China (having expertise in the technology and *knowhow*, resources; and it would be built by Chinese construction companies and, in the future, would constitute the great market for Chinese coal). What is more, China is not subjected to stranded costs risks (China can implement a colonisation type of policy by investing in Polish businesses). In no case is the Ostrołęka C Power Plant project suitable for Poland as Polish companies cannot win in any of the fields of competition (including the technology, *knowhow*, resources, construction and installations, coal supplies).

The UE environmental regulations constitute yet another area of the investment risk. Generally speaking, the Ostrołęka C Power Plant has an environmental Integrated Permit dated March 2011, allowing for the following acceptable emission limits of SO<sub>2</sub>, NO<sub>x</sub> and dust, respectively: 200, 200, 30 mg/m<sup>3</sup>. These levels of emission greatly exceed acceptable values imposed by the European Commission Decision of 1 July 2017, concerning the best available technologies (BAT) for large power facilities. Moreover, there is a risk that the C unit building project is impossible due to the limitation (Winter Package) of the acceptable CO<sub>2</sub> emission for the new sources of electrical power under 0,55 t/MWh (in this context the classification of the block as 'new' depends on the closing date of the tender, price offers proposed during the ongoing tender process do not provide any grounds for a rational tender termination before the EU Regulation enters into force).

With regards to the recent assumptions, taking into consideration a typical service life of the modern coal units, the planned date of investment's completion (2024) would indicate that Ostrołęka C Power Plant would be operated until 2080, at least. Therefore, the investment is completely irrational in terms of the Global Energy Transformation, especially in terms of the COP21 Paris Agreement (Paris, 2015) concerning the policies aimed at preventing a 2°C temperature increase,

compared with the pre-industrial levels (the aim is to eliminate CO<sub>2</sub> emission of the fossil fuel combusting process in the time horizon until 2050).

To conclude, considering of all of the above statements, and in light of the macroeconomic perspectives, the Ostrołęka C Power Plant development plan is irrational for four major reasons, involving:

1° - the increase in the electricity cost (above justified costs) in the medium-term perspective (especially between 2020-2030), 2° - the huge risk of stranded costs in the long-term perspective (after the year 2030), 3° - the successive 'neo-colonisation' of the Polish power industry by letting it be taken over by foreign countries, 4° - losing a chance to rebuild macroeconomically through microeconomics).

### *The analysis of lost chances (the alternative for Ostrołęka C Power Plant)*

It is observed that the employment, indirectly or directly related to renewable energy, is growing increasingly (over 9,8 million employed in 2017). That is related to the rapid RES (Renewable Energy Sources) development as well as to the emergence of the new services linked to renewable energy. Simultaneously, the employment in the fuel and energy sector is decreasing.

A similar tendency can be observed when following the financial results of Polish companies connected with the Large-scale Corporate Power Industry. In 2015, for the first time, the mining sector suffered negative gross financial results. The same situation happened in the electricity, gas and water production and supply sector. On the other hand, the gross financial results of the companies linked to RES are improving gradually (despite the unfavourable energy policy).

In this regard, the investment in Ostrołęka C (1000 MW) coal unit will limit the Prosumer Energy Independent Investment in renewable sources as well as energy services on the emerging electricity markets (the development of SMEs - Small and Medium-sized Enterprises on the Ostrołęcki micro-region local market). Yet another sector losing a chance for alternative income related to production related to biogas power plants, is agriculture. The comparative analysis results - between an investment in the Ostrołęka C Power Plant (Investment1) and a similar, in terms of energy, investment in RES sources (Investment2) - seem to confirm the aforementioned hypothesis. The analysis shows that the cost of electrical energy produced by the coal plant (including the cost of entitlements) can be higher than the production cost related to the RES sources. Moreover, the diversification of prices will be even more visible, and unfavourable for coal power plants, taking into consideration the constant RES sources development (the price decrease) as well as constant price increases for energy coming from coal power plants (the cost of entitlements).

While comparing the employment rate, Investment2 offers 45% more workplaces (Investment1 - 3050 people; Investment2 - 4700 people), respectively. In the extreme case when the coal will be imported for Investment1 (there is a great risk it will be) - the Ostrołęka C Power Plant will employ 250 people as the majority of workplaces will be transferred outside the Polish territory. Simultaneously, the employment rate related to renewable energy (Investment2) will be 1200% higher.

The investment in the renewable energy, which seems to be a good alternative for Ostrołęka C, creates an investment market in the energy sector for Prosumer Energy Independent Investors reaching from 10 to 17 billion PLN for the country, and for the Ostrołęcki micro-region (RES sources covering the local energy needs) between 670 and 870 million PLN.

Based on the above, the Ostrołęka C Power Plant would block RSE sources investment possibilities in the Ostrołęcki region as well as the related energy services. On the other hand an alternative investment in the renewable sources would increase the employment, and thus would lead to an increase in the level of skills and competence of the local population. What is more, the local farmers could gain additional income from energy-related production. SMEs (Small and Medium-sized Enterprises) could benefit by providing energy services or by producing RSE sources components. Establishing local companies would improve the situation in the Ostrołęcki micro-region. Moreover, it would bring tangible benefits for the whole district and for the city - related, for instance, to an increasing CIT (SMEs) and PIT tax base (resulting from higher employment).