



Position of the Association of Bulgarian Energy Agencies (ABEA) on *Belene* NPP and the risks for Bulgaria of reopening the project

At its 12th Energy Conference on 06.12.2016 – after the session on new energy policy focused on energy balance and customers – the Association of Bulgarian Energy Agencies approved and disseminated a position on Belene NPP and the risks for Bulgaria. Why does ABEA declare its position once again now, and what has happened in the course of over a year?

In fact, for more than a year now there is nothing new. Bulgarian energy policy is still not targeted at strategic development. The national energy sector is still rather a part of the struggle for political power in Bulgaria, which is still in the traditional context of pro- and anti- Russia outlooks – a combination which completely confuses the "average" Bulgarian. And again, the vast majority of the population and the media make no difference between energy and electricity. This "energy culture" is an excellent environment for continuous manipulation in the media and in politics.

However, there are new facts that are confusing and cause concern that the energy sector in Bulgaria is not strategically focused, and in some respects it even evolves in a direction contrary to common sense:

- In the context of upcoming elections in March 2017, the Government, through Bulgarian Energy Holding (BEH), assigned to the Bulgarian Academy of Sciences (BAS) – without any public procurement procedure – a contract for BGN 2.5 million for drafting a National Energy Sector Strategy (focused on electric power). Why is it focused on electricity? Is not Bulgaria excessively electrified at present? Here we do not discuss why Bulgaria's energy sector strategy is limited mainly to electricity, a quarter of which is exported anyway. In fact, it was an assignment to BAS, in addition to the extended operation of the units 5 and 6 (2000 MW) of NPP Kozloduy, to prove the viability of construction of the new Belene NPP and an organizational form for the continuation of this construction.
- After the first studies, in a brief summary, the "BAS Report" gave the impression that under certain conditions the Belene project was "viable". Some circles – including decision makers from the energy sector – repeatedly emphasized with satisfaction that the opinion of BAS on the construction of Belene NPP was positive. Later on, the Bulgarian Academy of Science declared that this was not the case, and that BAS has outlined only some

frameworks of possible development. In fact, the conclusion on page 268 of the published report clearly states that the domestic demand for electricity is covered until 2040 without Belene NPP, and what is more – that the possibility of huge electricity exports exists. After the publication of the report, it became clear that Units 4-6 of the Thermal Power Plant in Varna will be modernized for use of natural gas and will be put into operation this year. In view of this, it is patently clear that Belene NPP has no place in the power system of Bulgaria.

The assignment of the Bulgarian Energy Holding and the opinion of the Bulgarian Academy of Sciences essentially completely ignored the already well-known EU Reference Scenario of 2016 for Energy, transport and GHG emissions Trends to 2050(https://ec.europa.eu/energy/sites/ener/files/documents/20160713%20draft_publication_REF2016_v13.pdf), according to which the share of nuclear power in the EU electricity production from 2015 to 2050 is reduced from 15% to 7%, with major nuclear energy investments to be made in the modernization of existing nuclear capacities. The EU Reference Scenario points out that after Fukushima, all power plants meeting the requirements for safety compliance will have production costs exceeding EUR 100 /MWh, which is confirmed by the estimates of projected nuclear electricity costs planned in Turkey and the UK. With regard to the electricity balance of Bulgaria, the reference scenario confirms the continuation of operation of Units 5 and 6 in Kozloduy NPP by 2050 and envisages implementation of a new nuclear power level of 500 MW around 2045.

Which problematic areas related to the construction of Belene NPP remained out of the scope of the assignment of BEH and out of the consequent study made by BAS?

- Comprehensive analysis of the status and energy issues of Bulgaria, including optimization of its energy balance, global and European trends for decentralization of the energy sector and its competitiveness in a liberalized European energy market.
- The development of the energy sector towards a gradual transition to renewable energy sources and flexible markets for electricity consumption.
- Lack of vision for the development of the energy sector in transition, integrating new energy production technologies.
- The systemic problems of the management and reliability of the national electric power generation in the conditions of 4 x 1100 MW operating base-load, non manoeuvrable capacities.
- The seismic risk of the site of Belene NPP, which was one of the reasons that the German company RWE POWER, chosen as a strategic investor in the Belene project, withdrew from the project.
- The quality of the ordered equipment. It is worth noting that after Fukushima the production of Finland's 5th reactor (Olkiluoto 3) took place under the control of the nuclear regulators of Finland, France and the UK. The

equipment for Belene NPP was not produced under independent quality control. This is also one of the main reasons for the withdrawal of RWE POWER from the Belene project.

- Long-run environmental risks. The current nuclear program does not address the long-term environmental risks of Kozloduy NPP related to the management of spent nuclear fuel. The construction of Belene NPP will exacerbate these problems and make them even more difficult to solve, especially since this plant is unlikely to be state-owned but will be owned by some vague investors.
- Civil liability for nuclear damage. There is no single system in the world to regulate nuclear liability for nuclear damage. In Germany each operator is obliged to provide coverage of EUR 2.5 billion; in the UK the liability is raised to EUR 1.2 billion per accident; in Finland the operator is required to have insurance of a minimum of EUR 700 million, with their liability unlimited; in Japan the responsibility of each operator is \$1.2 million per incident; in the U.S. the liability is over \$10 billion per incident; in Russia - \$ 350 million. For Bulgaria, the liability for nuclear damage is set at 96 million leva (about 49 million euros), which is negligible, and the potential operator is essentially not responsible for nuclear damage.

Alongside the technological, economic and environmental risks listed above, the construction of Belene NPP will increase the present dependence on the import of gas, oil and nuclear fuel of Bulgaria to a full energy dependence on a non-EU country, which is in contradiction to EU energy security policy.

Yet, if all these risks are present, is it possible to build Belene NPP? "YES!", if under certain circumstances, including a shared ownership, Bulgaria gives guarantees to the investor to purchase the power produced by the NPP. This means that at a cost of about 100 € / MWh and the lack of competitiveness of the plant, Bulgaria shall take a maximum market risk on a take or pay basis to buy the electricity generated for more than 15 years for a total amount of about 25.84 billion EUR – a fantastic economic burden that the state will not be able to bear. This also means that with BEH's consolidated assets, amounting to only about BGN 8.5 billion (EUR 4.25 billion), the investor may win a lawsuit against the state, thus becoming the sole owner not only of all assets of BEH (NEK EAD, ESO EAD, Bulgargas EAD, Bulgartransgaz EAD, Bulgartel EAD, Kozloduy NPP, Maritza East 2 TPP, Belene NPP), but also of the country's economy. Is this the main goal of the Belene NPP saga, whose final stage starts with a contract for equipment within a project suspended by the parliament, and ends with the financial enslavement of the entire state?

Let us not allow this black scenario for Bulgaria to happen!

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