



RWE and Belene

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Germany's second largest utility RWE is planning to invest over 1.5 billion euros in an extremely controversial nuclear power plant in Bulgaria. The name of the project is Belene, and it is situated in the north of the country, only a few kilometers from the border to Romania. There are grave concerns regarding the project's safety, as Belene is sited in an area prone to large earthquakes. RWE and the Bulgarian utility NEK plan to build two nuclear reactors of a previously untested Russian design here.

Over the past two years, environment organizations throughout Europe have campaigned against this project, which they consider to be among the most dangerous nuclear plants planned in Europe. More than a dozen international banks have turned down financing for Belene, and even many of RWE's Supervisory Board members are opposed to this investment. On April 18th 2008, the German newspaper "Die Welt" wrote: "According to sources close to the supervisory board, the municipal shareholders of RWE as well as union representatives on the board have expressed strong criticism of the project. Neither the proposed Russian technology nor the location – an earthquake area – are considered to be safe enough to carry out such a complex project."¹

Belene: A Short History

The plan to build two nuclear reactors in the north of Bulgaria was developed in the early 1980s. As early as 1983, however, Soviet scientists warned that the site was not suitable for a nuclear power plant (NPP) due to its high seismic risks.² During the last large earthquake in 1977, many buildings collapsed, and over 120 people were killed only 14 km from the Belene site. The Communist regime, however, disregarded these warnings and began construction of the NPP in 1985. When the Communist regime fell, the project was officially 40% complete, but the first democratically elected government decided to scrap Belene after the Bulgarian Academy of Science put forward a 421-page study warning against a completion of the reactors.³ In its decision, the Bulgarian Cabinet deemed Belene to be "technically unsafe and economically unviable."

The current government, however, which is led by the post-Communists, decided to restart the project and awarded the construction contract for Belene to the Russian company Atomstroyexport in 2006. The planned design is a so-called AES 92 with two Russian VVER 1000/466B reactors. This is a new design for which there is no operational experience anywhere in the world and for which no independent safety assessments exist. In fact, independent experts, such as Dr. Antonia Wenisch from the Austrian Ecology Institute, call Belene a "mystery reactor."⁴ Albena Simeonova, one of the leaders

¹ „Gemeinsame Sache mit Vattenfall bei British Energy?“, Die Welt, April 18, 2008

² Letter 500-HO/06.11.1984 from N. Georgiev, Director of the Central Laboratory on High Geodesy, Bulgarian Academy of Science, to St. Nozharova, Deputy Head of the Utility "Energiya"

³ Plamen Tsvetanov (ed), *АЕЦ "БЕЛЕНЕ" - Изследвания и становище на Българската Академия на Науките (NPP "BELENE" – Analysis and conclusions from the Bulgarian Academy of Science)*, Sofia, (1990) Bulgarian Academy of Science

⁴ „AES-92 for Belene: The Mystery Reactor“, Antonia Wenisch, Austrian Institute of Ecology, February 2007

of the Bulgarian environment movement, comments: "I am consternated that our government wants to pay up to 7 billion euros to turn Bulgaria into a testing ground for the Russian nuclear industry."

A Nuclear Expert Warns

In November 2007, the former head of the Bulgarian nuclear safety authority, Dr. Georgui Kastchiev, went public with his concerns regarding the Belene project. Dr. Kastchiev has 35 years of experience in the nuclear sector, half of them in the start-up and operation of NPPs with VVER type reactors. From 1997 until 2001, he was head of the Bulgarian Nuclear Safety Authority, and is currently a senior nuclear physicist with the Institute for Risk Research at the University of Vienna. His critique shows that one does not have to be an opponent of nuclear power to oppose Belene.

According to Dr. Kastchiev: "The safety issues confronting Belene are immense and include design problems, lack of qualified construction personnel, inadequate safety culture at the corporate and governmental level, insufficient independence and competence of the regulatory body, and the lack of a strategy to deal with spent fuel and high-level waste. If one figures in the high seismic risks of the location and the low level of the nuclear safety culture in Bulgaria, there can only be one conclusion: This project must not go forward."⁵

Dr. Kastchiev is especially concerned that the Bulgarian authorities continue to dispute the seismic risks in the Belene region. Although numerous scientific bodies, such as the Federal German Center for Geosciences and the European Seismological Commission, expect earthquakes of an intensity of 7.5 to 8.5 on the European Macroseismic Scale in the Belene region⁶, the Bulgarian government continues to claim that, "Belene is one of the calmest seismic regions in Bulgaria."⁷ "The fact that the Bulgarian authorities are simply denying the very real and well-established seismic risks of the site should send a wake-up call to RWE," says Kastchiev.



March 4th, 1977: Earthquake in Svistov, 12 kilometers from the Belene site

⁵ Presentation of Dr. Georgui Kastchiev for DG Energy and Transport, November 23, 2007

⁶ „Erdbebengefährdungskarten für Rumänien und Bulgarien“, Bundesanstalt für Geowissenschaften und Rohstoffe, 2005

⁷ „Bulgarian Scientists Close their Eyes on Seismic Risk of Belene Nuke Plant“, Sofia Echo, November 27, 2007

Dr. Kastchiev is well-known as a whistle-blower in Bulgaria. In 2006, he brought to light an incident in the Bulgarian Kozloduy nuclear power station, where after a loss of coolant, the emergency shut-down function failed, and it took operators over 6 hours to shut down the reactor. Under different circumstances, i.e. a loss of coolant in one of the reactor's vital parts, this failure of the central safety system would have led to a catastrophic melt-down of the reactor core.⁸ The Bulgarian authorities, however, did not deem this incident important enough to register it with the International Atomic Energy Agency in Vienna until Kastchiev made it public. Sofia then saw itself forced to upgrade the incident to the INES (International Nuclear Event Scale) 2 level that indicates an incident with consequences for plant safety. "This is only one of many instances where Bulgarian nuclear authorities have tried to keep problems in the dark," says Kastchiev.

Ignoring Environmental Risks

When the Environmental Impact Assessment Study (EIA) for Belene was prepared in 2004, the type of reactor was yet undecided. The EIA was therefore strongly criticized both by environment organizations and the Austrian government. "I have never seen such a sloppy and low quality EIA in my entire professional career," says Jan Haverkamp, energy expert for Greenpeace in Eastern Europe. "All environmental risks, such as a significant accident, the danger of a plane crash or an earthquake as well as questions of decommissioning and dealing with the plant's nuclear waste are not dealt with in this document."⁹ When Greenpeace went to court to contest the EIA, even the document's authors conceded that a new environmental study would have to be undertaken once a decision is taken regarding the reactor type. Both RWE and the Bulgarian government have, however, categorically refused to undertake further environmental studies.

One of the key criticisms of the Belene project concerns the treatment of its waste. Bulgaria's electricity utility NEK plans to ship the spent fuel to Russia, as Bulgaria does not have a long-term storage facility for radioactive waste. "In Russia, nuclear waste is stored under frightening conditions," says Vladimir Slivyak from the Russian environment organization Ecodefense. Russia's own nuclear waste already by far exceeds the capacity of the nuclear facilities in Majak and Krasnoyarsk. Soils and water in the areas surrounding the facilities are heavily contaminated and have precipitated a health catastrophe in the region.¹⁰ "Sending high-risk nuclear waste from Belene to Russia under these circumstances is completely unacceptable and unethical," says Slivyak.

In order to deflect criticism of Belene, RWE and NEK like to point out that the EU Commission issued a positive opinion on the project in December 2007. The Commission's opinion, however, only confirms that Belene is in line with the provisions of the Euratom Treaty. This treaty was conceived in the 1950s and does not provide for a comprehensive safety review. Such a review could not have been undertaken anyway, as the Russian builder only finalized the detailed design plans for Belene in September 2008. Also, the Commission did not deal with questions of Belene's environmental impact, and in fact, deliberately excluded site-specific risks from its opinion statement. This bureaucratic "trick" enabled a positive statement for a project that is clearly not in line with the nuclear standards being applied in Western Europe. Even the European Investment Bank noted in regards to the EU's opinion: "It is not a detailed evaluation of the project. Additionally, nuclear safety is not part of the EU Commission's responsibilities, but is under the national authorities. Therefore key issues relating to safety are not covered (...)"¹¹

⁸ „In letzter Minute“, Tagesspiegel, April 24, 2006

⁹ „Comments on the Decision on Environmental Impact Assessment“, Jan Haverkamp, Consultant on nuclear energy issues in Central Europe for Greenpeace, February 2, 2005

¹⁰ „Nuclear Waste Piling Up at Russia's Overloaded Facilities“, Environment News Service, June 23, 2004

¹¹ Memo: „Commission Favourable Opinion for Belene Nuclear Power Station“, EIB, December 18, 2007

The Most Expensive Option

"Belene has no clear economic or technical rationale," says Ivan Ivanov, a member of Parliament from the opposition party, Democrats for a Strong Bulgaria. Bulgaria's leading economic think tank, the Institute for Market Economics (IME), sees Belene as a "superfluous project on the backs of taxpayers" and writes in a letter to the European Commission "rather than meeting Bulgaria's economic needs, the project seems a response to lobbying pressures thus open to corruption and mismanagement and will further multiply Russian dominance of Bulgaria's energy sector."¹²

"Belene is the most expensive of all energy options for Bulgaria," says the economist Petko Kovatchev from the Green Policy Institute in Sofia. "That's why basically all of the country's well-known economists have come out against the project." According to Kovatchev and his colleagues, there are many alternatives to Belene, but due to political reasons, none of these have been seriously considered. Bulgaria is the biggest energy waster in Europe: the country currently needs eight times as much energy as the EU average to produce one euro of gross domestic product. And renewable energy such as wind, solar and biogas still make up less than 1% of Bulgaria's electricity mix. According to Kovatchev, the overpriced Belene project will crowd out quicker and less costly investments in energy efficiency and renewables.

If Belene is such a high-cost option, why is the project moving forward? For Ognyan Minchev, Director of the Institute for Regional and International Studies, the answer is simple: "Russian companies and Russian authorities have absolute freedom of what we might call 'informal personal influencing' of public officials in countries like Bulgaria." The economist Georgy Ganev of the Center for Liberal Studies estimates that 1/3 of the project costs for Belene will end up in corrupt channels.¹³ Dr. Kastchiev makes the same case: "Belene is currently one of the main generators of corruption in Bulgaria."

Corruption

Bulgaria is known for its pervasive corruption, in many cases extending to the highest circles of government. In the summer of 2007, the former Minister of Economics and Energy, Rumen Ovcharov, had to resign because of his role in obstructing investigations into a corruption scandal around one of his business interests. And in April 2008, the Minister of the Interior, Rumen Petkov, followed suit because of his close connections to an organized crime syndicate. In November 2008, the European Commission cut off funding for Bulgaria due to corruption concerns - the first time in its history that the Commission has taken such a drastic step towards one of its member states.¹⁴ According to Transparency International, Bulgaria is the most corrupt country in the EU with corruption seriously affecting public procurement procedures, concession contracts, legal proceedings and many other aspects of public procedures. Apparently, membership in the EU has not helped, as corruption is currently on the rise.¹⁵

RWE nonetheless claims that it will ensure that Belene becomes a "lighthouse project" with "zero tolerance" for corruption. RWE's belief, that as a minority shareholder, it will now overnight be able to turn Bulgaria's largest infrastructure project into a kind of corruption-free island seems, at best, extremely naive. Such promises cannot conceal the fact that corruption raises and compounds all other existing project risks, including the safety issues.

Belene and Russia

¹² Letter of the IME to Energy Commissioner Andris Piebalgs, January 20, 2007

¹³ Quoted in „Nuclear ambitions fan controversy in Bulgaria“, Matthew Brunwasser, *International Herald Tribune*, October 30, 2007

¹⁴ „EU-Kommission streicht Bulgarien Hilfen in Millionenhöhe“, AFP, November 25, 2008

¹⁵ „Transparency International: Corruption in Bulgaria is on the Rise“, Novinite.com, September 23, 2008

From the beginning, it was patently clear that Belene is viewed as a geopolitical project by Russia and will increase Bulgaria's dependence on its "big brother." In 2006, when Gazprom threatened to prematurely cancel its gas contracts with Bulgaria, it made a set of demands towards the Bulgarian government, of which one was the construction of a nuclear power plant in Belene. Although RWE claims that there was an open tender for the project, this was in fact, not the case. During the gas crisis, Bulgaria's Energy Minister, Rumen Ovcharov, was called to Moscow. Upon his return in February 2006, he made the following public statement: "The construction of the Belene nuclear power plant without Russia's participation is extremely hard from a technical point of view and is quite questionable from a legal point of view."¹⁶ It was therefore no surprise that, a few months later, the construction contract for Belene was awarded to the Russian company Atomstroyexport whose majority control resides with Gazprom.

As expressed by the Russian news agency Novosti, Belene plays a strategic role for the expansion of the Russian nuclear industry. On July 22nd, 2008 Novosti wrote: "The Bulgarian project means much for Russia. Russia waited out the European pause in nuclear power plant construction that dragged on from the Soviet times, and winning the prestigious tender represented breaking back into the Western market of NPP construction. The Belene NPP is the first Russian nuclear project on the EU territory. This nuclear power plant is important not only economically but also politically, as it bolsters Russia's position in the Balkans and in Europe."¹⁷

In view of the industry's track record, one of Russia's leading nuclear critics comments: "We have the Russian nuclear industry to thank for the world's most horrific nuclear accident. It is an industry that acts without regard for the safety and health of citizens in its own country and which engages in questionable and dangerous projects abroad. It is a real mystery to us why RWE now wants to help the Russian nuclear industry expand its sphere of influence," says Vladimir Sliviyak of Ecodefense.

Banks Say No

Belene is only one of many nuclear projects that were planned during Soviet times and are now being put back on official agendas. Whether these projects are realized or not will depend mainly on Western investors and financiers.

According to official estimates, Belene is slated to cost at least 7 billion euros, and this is clearly the project's Achilles heel.¹⁸ In 2006, several Western banks were approached to finance Belene. Over a dozen banks including Citibank, Credit Suisse, Deutsche Bank and UniCredit found the project too controversial and therefore turned down funding applications.^{19 20} After its efforts to raise capital on the financial markets failed, the Bulgarian government therefore decided to bring a financially strong investor into the project: RWE.

Although RWE signed a contract with the Bulgarian utility NEK in 2008 to take on 49% of the project's equity, this does still not solve Belene's financial quandary. In July 2008, Bulgaria's leading English-speaking paper thus wrote: "Economic Minister pessimistic on financing of Belene nuclear power plant." Even if RWE chips in 1.5 billion euros, over 5 billion euros in bank loans still need to be found. While the French bank BNP Paribas has agreed to act as the project's financial advisor, it has refused to participate in the

¹⁶ „Ovcharov: Belene NPP will fail without Russia“, Standart, February 3, 2006

¹⁷ „Russian nuclear project in Bulgaria gets the green light,“ Novosti, July 22, 2008.

¹⁸ „Economic Minister pessimistic on Belene nuclear power plant funding“, Sofia Echo, July 8, 2008

¹⁹ „Banken beugen sich Öko-Gruppe“, Süddeutsche Zeitung, October 21, 2006

²⁰ „A Belene Chronology“, Greenpeace, February 2008

projects financing with its own money - a stance that experts see as a clear warning to prospective financiers.

RWE and Belene: A Risky Deal

RWE prides itself on having won the tender for Belene and beating competitors like E.ON and ENEL, but what are the real reasons that RWE was selected as the main investor? According to the Bulgarian media, there are two main reasons. First of all, RWE was willing to put up with less control than its competitors. This, however, also means less control over safety parameters during construction and operation. And secondly, RWE was more flexible regarding the financing arrangements.

"We are amazed to see how RWE is playing with its shareholder's capital," says the Bulgarian economist Petko Kovatchev. "Belene is a classic stop-and-go project and is only on the political agenda in Bulgaria when the post-Communists are in government." Kovatchev points out that there will be elections in Bulgaria this summer and that there are good chances that one of the anti-Belene opposition parties will be part of the new government. "Over the past 29 years, Belene has been stopped time and again – who guarantees RWE that this won't happen again? Then, every euro that goes into the project will be burnt money," he says.

Jan Haverkamp, Greenpeace expert for Eastern Europe, also warns that RWE completely underestimates the difficulties of implementing such a project in Bulgaria. "Up to now, RWE only operates nuclear plants in its home market in Germany. In Bulgaria, however, there is not a developed safety culture, and the energy sector is rife with corruption." He points out that RWE's partner has already blatantly announced that contracts for Belene will be awarded to Bulgarian companies without public tender.²¹ "In such a corrupt system, it will be impossible to enforce high quality standards," says Haverkamp.

German environment organizations point to other risks. In 2007 and the first half of 2008, RWE lost some 500,000 customers in Germany. And according to RWE Board member Rolf Pohlig, this already had a discernible impact on the company's earnings.²² "If RWE now invests into a project that Soviet scientists warned against, that several Bulgarian governments and many international banks turned down, even the best PR agency is not going to be able to avert considerable damage to the company's reputation," says Heffa Schücking, director of the German environment organization Urgewald. She points out that nuclear power is extremely unpopular in Germany, which is still RWE's most important market. "There is no question that a vast majority of RWE's customers agree that it's irresponsible and risky to build nuclear power plants in earthquake regions. Once word gets around, we're going to see more and more of these people asking themselves if they really want to stick with a utility that is endangering the health and safety of millions of citizens in Europe," she adds.

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²¹ „Request for Investigation into Tendering Practices of the Belene Nuclear Power Project“, Greenpeace, September 9, 2008

²² Quoted in „Was macht Großmann beim RWE?“, Ruhrbarone, June 11, 2008