

How to Benefit from Being Encircled by Soviet-Type Nuclear Plants



On 26 April 1986, a human error and the Soviet equipment caused the Chernobyl disaster – the largest technological catastrophe ever. For many days Soviet authorities attempted to conceal the scale of the disaster. The Soviet Union admitted that an accident had occurred only after radiation levels set off alarms at the Forsmark Nuclear Power Plant in Sweden. Instead of immediate evacuation, people were taken to the streets on the the May Day to celebrate the communist party with red banners and portraits of Lenin.

Because of the wind direction, the bulk of contamination ended up in Belarus which suffered more than any other country from the disaster. Chernobyl-type nuclear plants are more than just history. The territory of Belarus is literally encircled by Soviet-type nuclear plants. Just across the border are Smolensk and Kursk nuclear plants in Russia, Ignalina plant in Lithuania, and nuclear plants in Ukrainian Rivne and Chernobyl. The European Union authorities considered Ignalina unsafe and Lithuania had to close it down last year.

The Russian authorities do not think that their Soviet-type plants are too dangerous and Ukraine perhaps lacks funds to replace its own. The closure of Ignalina decreased energy dependence of Lithuania, which plans to build another nuclear plant on the border with Belarus. Russia also depended on Ignalina and plans to build a nuclear reactor in its Kalinigrad enclave. Vladimir Putin already signed a decree to begin construction. This will increase to seven the number of active and recently closed (but still dangerous) nuclear

plants close to the Belarusian border. Belarus has none on its own territory.

Belarus authorities has long dream of [building](#) its own nuclear plant and it is likely to appear on the Lithuanian border. Although Russia's assertiveness in using its natural gas and oil as strategic weapons may justify the rush to build more nuclear plants, it should not blind the decision-makers. The costs of building a nuclear plant are enormous and require heavy external borrowing. Purchasing and recycling radioactive fuel is also very expensive and Belarus will have to rely on Russia for that. And at some point, the nuclear plant will need to be dismantled which takes decades.

For instance, it will take 20-30 years to complete dismantlement of the Ignalina plant. If you add all these maintenance costs together, the nuclear energy is far from cheap. Chernobyl showed the world that nuclear energy is particularly dangerous in undemocratic and nontransparent societies. Belarus learned the [lesson](#) the hard way with human suffering of hundreds of thousands and hundreds of billions dollars in economic losses. Still many tend to forget that in the absence of full transparency and independent control mechanisms, nuclear energy is a too dangerous toy to play with. It is true that Belarus cannot control nuclear stations across its border and is exposed to any potential accidents.

The fact that it cannot do anything about it should be accepted and building its own station will not change it. Belarus is not exactly the [ideal](#) of democracy and good governance and the risks of a human error similar to that which caused Chernobyl are too high. If the Belarus nuclear plant sponsored, built, fueled and maintained by Russia it will make the country even more dependent upon its Eastern neighbor. Instead of exposing itself to more foreign debt and dependence upon Russia, Belarus should bargain with Lithuania, Russia and Ukraine and buy cheap nuclear energy from them. They will always have a surplus of energy to sell. And given

the competition between these countries, the price will be reasonable. Ripping the benefits of cheap nuclear energy without bearing the costs of maintaining nuclear plants would be a wise policy for a country which suffered so much from Chernobyl.

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Belarusian Nuclear Power Project: Dangerous and Expensive



On September 2nd, Belarus moved one step closer to building its first nuclear reactor by signing an agreement with Russia's AtomStroyExport for constructing a nuclear power plant in Astravets, Hrodna region. The launch of the first nuclear plant unit is scheduled for 2016 and the second – for 2018.

For Belarusian President Alyaksandr Lukashenka – who announced building the power plant during his annual visit to the contaminated Chernobyl zone – a domestic nuclear energy source is a “national security” guarantee. Today Belarus uses minimal

domestic electric production capacity and is able to provide for only 10 percent of its energy needs.

Approximately 75 percent of its electricity is imported from Russia, a supplier not shy about exploiting the energy dependence of its neighbors turning energy “from a purely economic issue into a political one,” as Lukashenka himself acknowledged.

Diversifying energy supplies to Belarus is indeed an exigent matter. But a nuclear plant built by Russia on a Russian loan, serviced by Russian technicians and fed with Russian fuel might be a very good deal for Russia, but will hardly make Belarus more independent. Moreover, the new nuclear plant would supply only 25 percent of Belarus energy needs and would begin operation in 2016 or later, even according to the most optimistic prognoses. What will happen to the high-level radioactive waste from the power plant is still unclear, but in solving this problem, Belarus would most likely also have to rely on Russia (although currently neither Russia nor Ukraine permit the import of radioactive waste).

Belarusian Ministry of Natural Resources and Environmental Protection has reassured the population that the nuclear power plant would meet international standards on nuclear and radiation safety. However, the track record of Russian power stations is far from comforting. No further proof is needed when one remembers the Chernobyl catastrophe on 1986 – the worst nuclear power plant disaster in history and the only level 7 instance on the International Nuclear Event Scale. An estimated 260 million curies of radiation were released – about 200 times more radiation than was released by the bomb dropped on Hiroshima. Belarus faced 70 percent of the fallout, and twenty-three years later, one fifth of its territory is still radioactively contaminated. Already in 1992, Belarus was spending 20 percent of its budget on Chernobyl-related problems.

Another disturbing example is Mayak, a nuclear fuel reprocessing plant in Chelyabinsk oblast in Russia. Working conditions at Mayak resulted in severe health hazards; by the beginning of the twenty-first century about half a million people in the region have been irradiated in one or more of the incidents.

One need not look far back, however. Just this August, about seventy people were killed in an accident at the Sayano-Shushenskaya hydroelectric station. The consequences would have been much more serious, had the station been a nuclear power plant. Despite significant technological advances, nuclear power remains a dangerous energy source.

In the midst of financial crisis and borrowing left and right, Belarusian government seems oblivious to the costs of the nuclear power plant – up to \$12 billion not counting the expenses on a spent fuel storage facility. For comparison, Belarus' annual budget in 2008 was about \$25 billion. The loan to finance the project will probably come from Russia since Belarusian financial system is just as poorly diversified as its energy. Being slow to send the last \$500 million installment of its \$2 billion loan to Belarus this summer, Moscow is hardly a reliable creditor, and it has never been never squeamish to use the dependency of its smaller neighbors to its own advantage.

Despite all this, in the eighteen years of its independent history marred by the Chernobyl disaster, Belarus has been edging closer to acquiring a nuclear power plant. Belarus announced started a program to examine 15 possible sites for constructing a nuclear power plant. In 1996, Belarusian Energy Minister, Valentin Gerasimovm announced that Belarus was seeking \$3.5 to \$4 billion in aid to build a nuclear power plant. In 1997, the Dubrowna region in northeast Belarus volunteered to host a nuclear power plant. In 2002, Lukashenka named Russia as main partner in the area of energy and nuclear research.

The nuclear power station will be built in Astravets, the most beautiful part of the country full of Belarus historical landmarks. The proposed site is just 20 kilometers from the Lithuanian border and 50 kilometers from Vilnius. International law does not allow building nuclear power plants so close to the border without informing and receiving approvals from neighboring countries. However, Lithuania has not been officially notified about the project yet and is concerned about the plans of the Belarusian government no less than the Belarusian citizens.

Opponents of the project point out that Astravets is far from being an ideal location for a nuclear power plant due to its wind rose and seismic instabilities in the area. In 1909, the region experienced an earthquake measuring 7 on the Richter scale. The most recent earthquake occurred in 1999.

Before deciding to spend an exorbitant amount on the nuclear project, the Belarusian government should read the numerous studies that explain why nuclear power is neither environment-friendly nor cost-effective when compared to other carbon-free or low-carbon options, which include wind power, combined-cycle gas power plants, and energy efficiency measures.

In the end, building a nuclear plant will only deepen Belarus' economic dependence on Russia and will not contribute to the country's wasteful level of energy consumption. Most importantly, in the absence of independent environmental expertise and very limited access of media and public to the project, the Russian-built station might be very dangerous to Belarus and its EU neighbors.