Atlantic Council
GLOBAL ENERGY CENTER

ISSUE BRIEF

Nuclear Geopolitics in the Baltic Sea Region

Exposing Russian Strategic Interests Behind Ostrovets NPP

JULY 2017 GIEDRIUS ČESNAKAS AND JUSTINAS JUOZAITIS

Construction of the Ostrovets nuclear power plant (NPP) in Belarus in close vicinity (approximately twenty-four miles) to Vilnius, the Lithuanian capital city, is an important but often overlooked and underestimated security challenge for the Baltic Sea Region (BSR).

The project is normally discussed in the context of broader environmental and safety concerns, as it does not comply with the United Nations Espoo[1] and Aarhus[2] conventions and its irresponsible construction raises legitimate concerns about nuclear safety.[3] According to Belarusian Vice Minister for Energy Mikhail Mikhadyuk, ten incidents and three fatalities have been documented at the construction site since concrete was first poured in November 2013.[4] The most serious technological incident occurred in July 2016, when construction workers dropped a reactor pressure vessel weighing 330 tons from a height of seven to fourteen feet.[5] Belarusian authorities decided to replace the damaged reactor vessel, but its replacement collided with a railway power line pillar while being transported[6] and was nevertheless installed into its designated position as the first power-generating unit on April 1, 2017.[7]

1 United Nations Economic and Social Council, *Meeting of the Parties to the Convention on Environmental Impact Assessment in a Transboundary Context*, Espoo Implementation Committee, March 12-14, 2013, https://www.unece.org/fileadmin/DAM/env/documents/2013/eia/ic/ece.mp.eia.ic.2013.2e.pdf.

2 United Nations Economic Commission for Europe, *Summary Report of Aarhus Convention MOP 5, PRTR Protocol MOPP 2, and Their Joint High-Level Segment*, June 30-July 4, 2014, http://www.iisd.ca/download/pdf/sd/crsvol190num2e.pdf.

3 Naja Bentzen, *Safety of Nuclear Installations in Belarus*, European Parliamentary Research Service, June 2, 2016, http://www.europarl.europa.eu/RegData/etudes/ATAG/2016/583789/EPRS_ATA(2016)583789_EN.pdf.

4 "Deputy Minister of Energy: 10 Accidents Happened at NPP, 3 Dead," *Charter97*, September 16, 2016, https://charter97.org/en/news/2016/9/15/222688/.

5 "Belarusian Energy Ministry Confirms Extraordinary Situation in Ostrovets NPP," Baltic News Service, July 26, 2016, http://www.bns.lt/topic/1911/news/50212415/.

6 Charles Digges, "Rosatom Replaces Reactor Vessel That Technicians Dropped at Its Belarusian Plant," Bellona, May 2, 2017, http://bellona.org/news/nuclear-issues/2017-05-rosatom-replaces-reactor-core-that-technicians-dropped-at-its-belarusian-plant.

7 "Reactor Pressure Vessel Installed into First Unit of Belarusian Nuclear Power Plant,"-Belta News Agency, April 3, 2017, http://atom.belta.by/en/belaes_en/view/reactor-pressure-vessel-installed-into-first-unit-of-belarusian-nuclear-power-plant-9205/.

The **Energy Diplomacy Initiative** (EDI), as part of the Atlantic Council's Global Energy Center, aims to drive a global conversation on critical climate and energy security challenges, with the objective to prevent conflict and build bridges through energy ties, provide everyone with access to reliable, affordable, sustainable, and modern energy, and galvanize communities for climate action around a more stable, secure, and prosperous world.

However, Minsk's noncompliance with international law and the questionable safety of the Ostrovets NPP are not the only issues with the Belarusian nuclear program, even if they are at the center of public debate and intergovernmental talks. Russian support enables and facilitates the Ostrovets NPP project; Moscow finances 90 percent of the costs[8] and provides technology (two VVER-1200 nuclear reactors), expertise, and a general contractor—Atomstroyexport, a subsidiary of the state-owned company Rosatom.[9] Moscow's participation in the project not only strengthens its economic and political influence in Belarus, but also establishes it as a strong voice on issue-specific decisions related to Belarusian nuclear energy policy. Russia has widely used strategic energy infrastructure as a tool for attaining foreign policy objectives before, and with today's tensions between Russia and the West, one cannot approach the Ostrovets NPP only from the perspectives of international law and nuclear safety. Geopolitics must be part of the equation.

Rosatom as Russian Foreign Policy Instrument

Russia's business activities in the energy sector are not driven purely by economic rationale; the Kremlin also uses its influence in the energy sector as a foreign policy tool. When Vladimir Putin was elected president in 2000, the Russian government started to increase its control over the energy sector. By 2007, three companies became what President Putin has defined as "national champions" for promoting Russia's national interests: Gazprom in the natural gas sector, Rosneft in the oil sector, and Rosatom in the nuclear energy sector.[10] Even though both researchers and diplomats often label Gazprom and Rosneft as the Kremlin's de facto ambassadors,[11] surprisingly Rosatom does not share a similar association—despite being a state-owned monopoly, accounting for roughly one-third of the global uranium enrichment market,[12] and being tasked with implementing Russian nuclear energy policy.

Rosatom was established in 2007, when the Russian government reorganized its Federal Agency on Atomic Energy (what was the Ministry of Atomic Energy until 2004) into a state corporation. It is the central holding company for Russia's entire nuclear energy complex. Rosatom owns companies, such as the aforementioned Atomstroyexport, that operate in Russia and abroad. It controls companies engaged in the peaceful use of nuclear energy, as well as those responsible for making nuclear weapons. Rosatom also manages research institutions and owns a nuclear icebreaker fleet. In total, the company manages more than three hundred enterprises and organizations.[13] Responsibility for controlling Rosatom was delegated to Sergey Kiriyenko, a man who, as prime minister of Russia, introduced Vladimir Putin as the chief of the Federal Security Service in 1998. In October 2016, Kiriyenko was appointed as the first deputy head of the Administration of the President of Russia, responsible for Putin's reelection, illustrating deep personal ties between corporate management and the Kremlin political elite.

Apart from its official activities, Rosatom plays an important role in Russian foreign policy by helping Moscow retain some degree of influence in the former Soviet space. Rosatom accomplishes this objective primarily by ensuring dependence on its nuclear fuel supply and technology. The environment for implementing this strategy is favorable, as Russian (formerly Soviet) VVER-type reactors are constructed in Armenia, Bulgaria, the Czech Republic, Slovakia, Hungary, and Ukraine. Except for supplies to Ukraine, Rosatom's subsidiary TVEL is the only nuclear fuel supplier for these countries due to specific contractual terms and the limited availability of alternative manufacturers for nuclear fuel assemblies.[14] In 1997, Westinghouse Electric Company introduced nuclear fuel assemblies for Russian VVER reactors, but some

8 Officially, Russia is lending the money to Belarus. However, the long history of Belarus-Russia relations suggest that Russia will write off these debts.

9 Mycle Schneider and Antony Froggatt, *The World Nuclear Industry Status Report 2016*, a Mycle Schneider Consulting Project, July 2016, http://www.worldnuclearreport.org/IMG/pdf/20160713MSC-WNISR2016V2-HR.pdf.

10 Putin, V.V. *Mineral Natural Resources in the Strategy of Development of the Russian Economy* in H. Balzer, "Vladimir Putin's Academic Writings and Russian Natural Resource Policy," *Problems of Post-Communism*, vol. 53, no 1, January/February 2006, 53.

11 Isabel Grost and Nina Poussenkova, "Petroleum Ambassadors of Russia: State versus Corporate Policy in the Caspian Region," The James Baker III Institute for Public Policy, Rice University, April 1998, http://www.bakerinstitute.org/media/files/Research/44988762/petroleum-ambassadors-of-russia-state-versus-corporate-policy-in-the-caspian-region.pdf.

12 "Uranium Enrichment," World Nuclear Energy Association, last updated May 2017, http://www.world-nuclear.org/information-library/nuclear-fuel-cycle/conversion-enrichment-and-fabrication/uranium-enrichment.aspx.

13 "About us," Rosatom, http://www.rosatom.ru/en/about-us/#.

14 Tomas Vlcek, "Critical assessment of Diversification of Nuclear Fuel for the Operating VVER Reactors in the EU," *Energy Strategy Reviews* 13-14 (2016), 79.

The construction site of the very first Belarusian nuclear power plant, which will have two power-generating units, is seen near the town of Ostrovets, Belarus April 19, 2016. *Photo credit*: Reuters/Vasily Fedosenko.

fuel rod deflections were experienced in the Czech NPP in 2009. The rod torsion resulted in forced operational interruption and forceful removal of rods.[15] TVEL remained the core supplier of nuclear fuel for VVER reactors in the aforementioned countries, and some of them have contracts for supply until 2034.[16]

Only Ukraine has partially diversified its nuclear fuel supply by extending the agreement with Westinghouse in 2014 in the wake of Russia's military intervention, which very nearly caused nuclear fuel supply disruptions. On March 5, 2014, in the context of Russia's intervention in Crimea, Russian Deputy Prime Minister Dmitry Rogozin announced intentions to impose an embargo on nuclear fuel exports to Ukrainian nuclear power plants.[17] Eight days later, Rosatom announced that TVEL would continue to supply nuclear fuel, averting a potentially serious crisis[18] as nuclear fuel in certain Ukrainian reactors was close to being depleted. This episode underscores the importance of Rosatom's role in Russian foreign policy.

Operational VVER nuclear reactors in former Soviet Republics and Warsaw Pact countries serve as another strategic advantage for Rosatom, as the respective governments have incentives to rely on the same technology used to install their first nuclear reactors if they choose to construct additional ones. Because

15 Tomas Vlcek, Martin Jirusek, and James Henderson, "Risk Assessment in Construction Process in Nuclear Sector within the Central and Eastern Europe," *International Journal of Energy Economics and Policy* 5, no. 2 (2015), 489.

16 Vlcek "Critical Assessment of Diversification of Nuclear Fuel," 77-85.

17 "Россия ввела эмбарго на поставки ядерного топлива для Украины," [Russia Imposed an Embargo on the Supply of Nuclear Fuel for Ukraine], *Economic News*, March 5, 2014, http://news.eizvestia.com/news_economy/full/476-rossiya-vvela-embargo-na-postavki-yadernogo-topliva-dlya-ukrainy.

18 Charles Digges, "Rosatom Vows Continue Nuclear Fuel Flow to Ukraine in Spite of Putin-Imposed Embargo," *Bellona*, March 14, 2014, http://bellona.org/news/nuclear-issues/2014-03-rosatom-vows-continue-nuclear-fuel-flow-ukraine-spite-putin-imposed-embargo.

Rosatom follows Russian governmental guidance, in these instances host countries intensify their relationships with Moscow. For example, prior to signing a contract with Rosatom for the construction of two reactors (without any procurement procedures), the Hungarian government signed an agreement with Russia regarding Paks NPP in central Hungary.

According to available public information about the agreement, Russia ensured financing for the Paks NPP expansion through a state-controlled bank, providing a loan of approximately $13 billion. Moreover, Hungary decided that the contract details with Rosatom would be kept confidential for thirty years. However, despite agreement with Russia on financing for the NPP, in 2017 the Hungarian government decided to finance the project from its own state funds or through a non-Russian loan. Nevertheless, strong economic links with Russia boosted by nuclear sector cooperation have strongly influenced Hungary's pro-Russia stance, including its assessment of Russian actions in Ukraine and its position on sanctions against Russia. A similar trend can be observed in Slovakia, where Rosatom is constructing two VVER reactors in the Mochovce NPP.[19] Bratislava demonstrates a rather favorable attitude towards Russia regarding the Ukrainian-Russo conflict and the European Union's (EU's) internal negotiations on sanctions against Russia, a position that was especially visible during Slovakia's presidency of the Council of the EU.[20]

Finland provides another example in this regard. Rosatom has been part of the construction of Finnish Hanhikivi NPP (an approximately $7.8 billion project) since 2013, when it selected a VVER-1200 reactor model unit from Rosatom. Rosatom would not have been able to join the project if Russia had not used economic leverage against Fortum (a Finnish majority-state-owned energy company)[21] by denying it the possibility of investing in hydroelectric power in the Karelia region (Russia), a long-term interest of Fortum's. Even though Fortum was reluctant to take part in the Hanhikivi NPP project, the company expected that its participation would ensure more favorable Russian positions regarding Karelia or keep the Russian market open for further investments. In the end, Fortum joined the Hanhikivi NPP project, while Russia offered the Finnish company the opportunity to invest in power and heat production in Ural and West Siberia as compensation, even if access to Karelia was denied.[22]

The Hanhikivi NPP is a build, own, operate (BOO) project[23] with nuclear fuel supply provided by TVEL for at least ten years. The strategic importance of the project to Russia is illustrated by its decision to provide $2.7 billion in funding from its National Welfare Fund and accept an electricity price of only €50 per megawatt hour, well below the price for other NPPs, showing how geopolitics dominates over economic considerations. The Hanhikivi NPP increases Finland's dependence on Russian fuel and technology for potentially one hundred years (because of construction, fuel supply, and a possible extension of operations) and creates greater political, economic, and technological leverage for Moscow. This resembles the decision in Belarus to build Ostrovets NPP, a project that intensifies Belarus's energy dependence on Russia.[24] As Finland aims to decarbonize its energy system, Russia will continue to lose its dominance in Finland's energy sector, but will be able to maintain its influence through the NPPs. The Hanhikivi NPP is very important for Rosatom as it shows its capability to successfully implement a project under the strictest nuclear and environmental regulations, potentially opening Western European markets for future investments.

Rosatom also assists in expanding Russia's sphere of influence to Asia, Africa, and South America. The company offers appealing BOO contracts to countries with no experience in nuclear technologies and those lacking in financial capabilities: Rosatom's subsidiaries operate the NPPs and Russian state-owned banks

19 Expected to go online in 2018-2019.

20 Eric Maurice, "EU must change 'ideological' policy on Russia, says Slovak FM," eu*observer*, June 30, 2016, https://euobserver.com/foreign/134133.

21 The Finnish government required that domestic firms or EU companies would own at least 60 percent of the shares.

22 Toivo Martikainen, Katri Pynnöniemi, Sinikukka Saari & Ulkopoliittisen instituutin työryhmä, "Venäjän muuttuva rooli Suomen lähialueilla" [Changing Russia's Role in Neighboring Finland], Valtioneuvoston selvitysja tutkimustoiminnan [State Council Reports Research Activities], 34/2016, August 30, 2016.

23 Rosatom builds, provides finances for, and operates the NPP.

24 Finland is already highly dependent on imports for oil (89 percent), natural gas (100 percent), and coal (66 percent). Oil, coal, and gas cover 39 percent of total fuel share in Finland. For more, see "Finland" chapter in International Energy Agency, *Oil and Gas Security: Emergency Response of IEA Countries*, 2012, https://www.iea.org/publications/freepublications/publication/CountryChapterFinland.pdf; "Nuclear Power in Finland," World Nuclear Association, updated May 2017, http://www.world-nuclear.org/information-library/country-profiles/countries-a-f/finland.aspx; "Finland: Energy System Overview," International Energy Agency, http://www.iea.org/media/countries/Finland.pdf.

provide loans to finance the projects.[25] Since the development of nuclear energy outside of Europe and the United States is mostly occurring in emerging economies, Moscow is taking the opportunity to create political, economic, and technological links with rising powers. This also increases Russia's long-term geopolitical influence (by as much as a century) in states that opted for Rosatom's NPPs.

By keeping and expanding its long-term technological presence in the nuclear energy sector, Russia is strengthening its position in Finland, Africa, Asia, South America, and the former Soviet sphere of influence, creating possibilities for bilateral diplomacy and greater economic and political involvement in the affairs of nations reliant on Rosatom's technologies. And, as illustrated in Hungary, Finland, and Slovakia, Rosatom's presence in these countries has either already secured more favorable positions vis-à-vis Russia or is creating more advantageous environments in which to do so.

Strategic Peculiarities of Ostrovets NPP

The construction of Ostrovets NPP with two VVER-1200 pressurized water reactors (total installed generation capacity of 2400 megawatts [MW]) began in late 2013 and the first unit is expected to be finished in 2020. The initial contract for construction of the Ostrovets NPP was signed on October 11, 2011, between the Belarusian state enterprise Directorate for Nuclear Power Plant Construction and Atomstroyexport. In November 2011, Russia and Belarus agreed that Russia would loan up to $10 billion to finance 90 percent of the project cost. With that, Belarus committed itself to purchasing Russian nuclear fuel assemblies for the entire life cycle of the nuclear reactors.[26] These contractual terms strengthened Russia's long-term influence in Belarus, with Rosatom's subsidiaries playing a key role in the process by ensuring Minsk's dependence on Russian technology and nuclear fuel supply.

However, Russian strategic gains might cost them even more. Per the general contract signed in July 2012, construction of the Ostrovets NPP was estimated to cost $10 billion, while additional infrastructure to accommodate the remoteness of the region was estimated to cost $3 billion.[27] But, due to the decrease in the value of the Russian ruble since 2014, the current estimate has soared to around $24 billion[28] (the gross domestic product of Belarus in 2015 was $54 billion). Increased cost estimates have not changed the commissioning deadline of the Ostrovets NPP and there are no signs that a lack of funding will lead to delays, even if it is unclear how both parties will cover the emerging investment gap.

The construction of the Ostrovets NPP under the contractual obligations with Russia lacks a sound strategic justification for Belarus. As specified in the Belarusian Energy Security Concept, Minsk aims to cover more of Belarus's energy demand with domestically produced energy and diversify its energy mix and suppliers, decreasing its reliance on its dominant energy supplier: Russia.[29] The project does help Belarus diversify its energy mix: completion of the Ostrovets NPP will enable Belarusian electricity demand to be met by nuclear power generation,[30] alleviating the need for electricity imports from Russia. This will also reduce natural gas consumption by 25 percent,[31] significantly reducing dependence on Russian natural gas supply[32] at prices well below market.

However, increasing domestic energy production and decreasing energy imports from Russia in this way fails to serve Minsk's strategic objective of reducing its energy dependence on Moscow—it simply changes the form of dependence. Russia will retain and even expand its economic and political influence in Belarus not only by loaning the money,[33] but also by making

25 T. Vlček, "The Sector of Nuclear Energy in Central and Eastern Europe" in M. Jirušek and T. Vlček (eds.), *Energy Security in Central and Eastern Europe and the Operations of Russian State-Owned Energy Enterprises* (Masaryk University: Brno, 2015), 344.

26 "Minsk's Cooperation Agreement with Moscow on Building Ostrovets NPP Ratified in Closed-Door Parliament Hearing," *Bellona*, translated by Maria Kaminskaya, November 3, 2011, http://bellona.org/news/ukategorisert/2011-11-minsks-cooperation-agreement-with-moscow-on-building-ostrovets-npp-ratified-in-closed-door-parliament-hearing.

27 Mycle Schneider and Antony Froggatt, *The World Nuclear Industry Status Report 2015*, A Mycle Schneider Consulting Project, July 2015, https://www.worldnuclearreport.org/IMG/pdf/20151023MSC-WNISR2015-V4-HR.pdf.

28 Mycle Schneider and Antony Froggatt, *The World Nuclear Industry Status Report 2016*, A Mycle Schneider Consulting Project, July 2016. Currency converted by authors according to the rate on May 9, 2017.

29 Concept of Energy Security of the Republic of Belarus, 2015.

30 Schneider and Froggatt, *The World Nuclear Industry Status Report 2016.*

31 Olga Meerovskaya et al., *Belarus Energy Sector: The Potential for Renewable Energy Sources and Energy Efficiency*, ENER2I, 2014, https://ener2i.eu/page/34/attach/0_Belarus_Country_Report.pdf.

32 Ninety percent of the natural gas used for power and heat generation in Belarus comes from Russia.

33 Having in mind Russia's loan policy towards Belarus, it can be expected that at least some part of loan will be forgiven in

Belarusian and Russian national flags are seen at the construction site of the Ostrovets nuclear power plant.
Photo credit: Reuters/Vasily Fedosenko

Minsk dependent on Rosatom's subsidiaries for training, technology, and know-how. Even though the Directorate for Nuclear Power Plant Construction will be operating the Ostrovets NPP, Belarus has no experience operating nuclear power plants and will have to rely on Russian assistance. Moreover, under its contractual obligations, Belarus will be required to purchase some of the crucial components, such as nuclear fuel assemblies, for the Ostrovets NPP from Russia.[34] Hence, not only will Russia remain dominant in the Belarusian natural gas sector, as Minsk does not have any alternative suppliers, it will also reign in its nuclear energy sector.

Beyond the immediate concerns related to Russian influence, the legacy of the 1986 Chernobyl disaster adds more controversy to Lukashenko's strategic calculations, as Belarus suffered the most from radioactive contamination. According to the United Nations, 70 percent of the total radioactive fallout from the disaster in Chernobyl's NPP descended on Belarus, contaminating 20 percent of its agricultural lands and 23 percent of its forests with radionuclides.[35] In the early 1990s, independent Belarusian authorities were forced to allocate approximately 20 percent of government spending to mitigate consequences.[36] Belarusians developed a negative sentiment towards nuclear power at that time and included a pledge to make Belarus a nuclear-free state in the constitution. Such a disadvantageous historical context, conflicting public opinion,[37] and a lack of sound strategic rationale

exchange for political commitments or expansion of Russian military presence in Belarus.

34 "Minsk's Cooperation Agreement with Moscow on Building Ostrovets NPP Ratified in Closed-Door Parliament Hearing," *Bellona*.

35 "The United Nations and Chernobyl: The Republic of Belarus," United Nations Office for Coordination of Humanitarian Affairs, 2004, http://www.un.org/ha/chernobyl/belarus.html.

36 Aliaksandr Novikau, "Nuclear Power Debate and Public Opinion in Belarus: From Chernobyl to Ostrovets," *Public Understanding of Science*, (2017), 280.

37 Sources indicate different attitudes of Belarusians towards Ostrovets NPP. Please see Novikau, "Nuclear Power Debate and Public Opinion in Belarus" and Опрос: Почти половина белорусов отрицательно относятся к строительству БелАЭС," [Survey: Almost Half of Belarusians Have Negative Views about the Construction

suggest that Minsk is motivated by making short-term economic gains,[38] as economic stability is a central pillar on which the credibility of Lukashenko's regime is built.

It is also crucial to examine why Russia provides significant support for the Ostrovets NPP despite already having substantial influence in Belarusian politics. Belarus is a member of many Russian integration projects, including the Commonwealth of Independent States, Collective Security Treaty Organization, Eurasian Economic Union, Union State, and others, and there is also a high degree of integration between Russian and Belarusian armed forces and intelligence. Russian state-owned companies also have a strong foothold in the Belarusian energy sector. For example, Gazprom is the sole shareholder of the Belarusian natural gas transmission system operator, while management of the Belarusian electricity system is subordinate to a centralized dispatch in Moscow. Most importantly, the Belarusian economy relies on Russian subsidies for strategic commodities, including gas and oil, and on trade with Russia in general, as more than 50 percent of trade in goods is with Russia.[39]

Extensive Russian support for the Belarusian nuclear program could be considered an overinvestment, provided that Russia's aims are limited to gaining more influence in Belarusian politics. On the other hand, facilitation of the Belarusian nuclear program seems far more rational when taking into consideration that it also helps promote Moscow's strategic interests in the BSR and increases its foothold in Belarus.

The Ostrovets NPP as a Russian Instrument for Political Gains in the BSR

When Lithuania, Latvia, and Estonia joined NATO and the EU in 2004, introducing Euro-Atlantic security guaranties and increasing economic diversification, Russian influence in the BSR decreased substantially. Thus, energy geopolitics emerged as Moscow's main tool for pressuring its neighbors. This strategy was mostly used against the Baltic States, where Russia had a natural gas supply monopoly. Moscow pushed the Baltic States towards energy supply diversification because of oil supply disruptions,[40] and Gazprom's pricing policies resulted in Lithuania[41] and Latvia[42] paying the highest wholesale prices for Russian natural gas in the EU for certain periods of time. However, the unbundling of the strategic natural gas companies, enhancement of pipeline networks, and construction of an alternative gas supply route—the liquefied natural gas terminal Independence—commercialized Russian natural gas supply and further diminished the Kremlin's influence in the BSR. Moscow's support for the Belarusian nuclear program could compensate for this strategic loss by serving Russian national interests in four principal ways, outlined here and then discussed in greater detail.

First, Moscow can use the Ostrovets NPP as a rationale for combating strategic energy projects and therefore attempt to prevent further infrastructural integration in the BSR, and Russia can try to use current interstate electricity interconnections for its own gain. Second, the plant can serve as an instrument for promoting political disagreements within the BSR. Russia, intentionally or not, is tempting Poland, Sweden, Latvia, Estonia, and Finland with cheap electricity and, hence, provoking a favorable response to the project. However, the close geographic proximity of the Ostrovets NPP to the Lithuanian state border (twelve miles) and construction mishaps place the burden of nuclear safety risks almost exclusively on Lithuania. Such conditions have stimulated Lithuania's resistance to the project and driven it to seek political support from other BSR countries, the EU, and international institutions, such as the International Atomic Energy Agency (IAEA), United Nations, and Organization for Security and Co-operation in Europe.

Third, constructing an NPP right on the doorstep of the Euro-Atlantic space justifies Russia in stationing additional military capacities, such as manpower and

of Belarusian NPP], Tut By Media, May 23, 2017, https://news.tut.by/economics/544353.html.

38 Bentzen, *Safety of Nuclear Installations in Belarus.*

39 "Основные показатели внешней торговли" [The Main Indicators of Foreign Trade], Национальный статистический комитет Республики Беларусь [National Committee of Statistics of the Republic of Belarus], http://www.belstat.gov.by/ofitsialnaya-statistika/makroekonomika-i-okruzhayushchaya-sreda/vneshnyaya-torgovlya_2/osnovnye-pokazateli-za-period-s-__-po-____gody_10/osnovnye-pokazateli-vneshnei-torgovli/.

40 Oil supply disruptions have happened over the years mostly for political reasons.

41 European Commission, *Quarterly Report on European Gas Markets*, vol. 7, no. 4, fourth quarter of 2014, Directorate-General for Energy, Market Observatory for Energy, 2015, https://ec.europa.eu/energy/en/data-analysis/market-analysis.

42 Dominykas Tučkus, "LNG Impact on Lithuanian Natural Gas Market," Litgas, May 29, 2015, http://www.lsta.lt/files/events/150529_Tuckus.pdf.

Table 1. The Chronology of Nuclear Power Plant Projects in the Baltic States and Belarus

Visaginas NPP	Ostrovets NPP
March 2006: Baltic States' energy companies agree to conduct a feasibility study regarding a new regional NPP	**July 2006:** Introduction of nuclear power into National Energy Development Plan is considered
December 2006: Initial conceptual work begins	**September 2007:** Nuclear power is included in the Belarusian Energy Security Concept
January 2007: New NPP is included in Lithuania's National Energy Strategy	**November and December 2007:** Preparatory work and site selection process begins
July 2007: Lithuanian Nuclear Power Plant Law is adopted	**July 2008:** Law on the Use of Nuclear Energy is adopted
August 2008: Environmental impact assessment for construction site near Visaginas is prepared	**December 2008:** Construction site near Ostrovets is proposed as preferential
May 2010: Detailed plan for construction site near Visaginas is approved	**September 2011:** Construction site near Ostrovets is confirmed by presidential decree
July 2011: Hitachi, Ltd. is selected as the strategic investor for the Visaginas NPP	**October 2011:** Initial contract with Atomstroyexport is signed
December 2011: Polish energy company PGE withdraws from the Visaginas NPP project	**July 2012:** General contract is signed
October 2012: Advisory referendum in Lithuania regarding construction of the Visaginas NPP is held	**November 2013:** First concrete is poured in Ostrovets construction site

Sources: "General Information about the Construction of the Belarusian Nuclear Power Plant," Ministry of Emergency of the Republic of Belarus, June 10, 2013, http://www.gosatomnadzor.gov.by/index.php/en/safety-of-belarus-npp/general-information-about-construction-of-belarus-npp; Sergey Tretiakevich and Philipp Speransky, "Safety Review of the Belarusian Nuclear Power Plant Design" (presented at IAEA Technical Meeting TM-46995 Istanbul Technical University – Energy Institute, Istanbul, Turkey, November, 3-5, 2014); "Project Timeline," VAE SPB, March 2014, http://www.vae.lt/lt/projektas/projekto-eiga.

anti-air defenses, extremely close to NATO's eastern frontier.

Finally, though only in extreme circumstances, Ostrovets NPP can be used as a tool for hybrid warfare, should pro-Russian forces use it to stage incidents, potentially spreading fake information via social media, and provoking Lithuania to evacuate its capital city, Vilnius.

Russian Efforts to Combat Strategic Energy Projects and Challenge Political Unity in the Baltic Sea Region

In the context of energy infrastructure, Russia is combating two interrelated processes in the Baltic Sea Region. Moscow opposes the implementation of the EU's Baltic Energy Market Interconnection Plan, which aims to strengthen infrastructural integration among BSR countries in the electricity sector. Russia also stands against ambitious regional energy projects, namely the construction of the Visaginas NPP in Lithuania and the desynchronization of the Baltic States from the Integrated Power System/ Unified Power System (IPS/UPS), coordinated by the Electric Power Council of the Commonwealth of Independent States and de facto controlled by a dispatch in Moscow.

From a chronological perspective, one can argue that the Belarusian nuclear program emerged as a response to a similar joint program conducted by the Baltic States and Poland. Please see Table 1 supporting this argument.

The chronology of the Ostrovets NPP project combined with Russia's efforts to persuade Lithuanian society to oppose the Visaginas NPP, by claiming that it is costly and uncompetitive,[43] suggests that Belarus likely coordinated its nuclear program with Russia long before reaching formal agreements. It would have made more sense for Belarus to construct an NPP at alternative construction sites, such as in

43 Republic of Lithuania, *Grėsmių Nacionaliniam Saugumui Vertinimas [National Security Threat Assessment]*, 2014, https://www.vsd.lt/wp-content/uploads/2016/10/gresmes-2013.pdf.

"[T]he Belarusian Academy of Sciences in 1993 made a conclusion . . . that Ostrovets was among the worst places to construct an NPP."

Krasnopolyansk or Kukshinovsk in the Mogilev region, that have better developed infrastructure and are located close to Belarusian heavy industry and further away from densely inhabited areas and key state institutions, which would have softened international criticism and eliminated Lithuanian opposition. Moreover, the Belarusian Academy of Sciences in 1993 made a conclusion, after assessing thirty potential construction sites, that Ostrovets was among the worst places to construct an NPP.[44]

By supporting and facilitating the Belarusian nuclear program and initiating the Baltic NPP project in the Kaliningrad region, Russia helped interrupt the construction of the largest power generation unit in the Baltic States, Visaginas NPP.[45] As a result, the Baltic States will not be able to export substantial amounts of electricity to Scandinavia and Poland. With Lithuania already reliant on Russian electricity, freeing interstate interconnection capacities enables Moscow to lure other BSR countries with the prospect of cheap electricity as well, and could stimulate favorable responses to the Ostrovets NPP.

Not only does such maneuvering promote disagreements between Lithuania and other BSR countries, it also helps Moscow achieve a strategic victory of greater importance. The EU and BSR nations made substantial investments in regional electricity infrastructure meant to interconnect the Baltic States with the wider BSR region. For example, investments in the Sweden-Lithuania 700 MW interconnection NordBalt amounted to €550 million,[46] while a €580 million investment was made in the Poland-Lithuania 500 MW interconnection LitPol Link,[47] and €320 million was invested in the Finland-Estonia 650 MW Estlink 2 interconnection.[48] Apart from aiming for stronger infrastructure integration of the BSR, these projects enabled the Baltic States to diversify their electricity imports and replace uncompetitive electricity generation with more cost-effective imports from Scandinavia. If Moscow manages to persuade BSR countries to purchase electricity produced in the Ostrovets NPP, however, it will exploit interstate interconnection capacities for its own benefit and deny or reduce the ability of the Baltic States to import electricity from BSR markets.

The Ostrovets NPP also helps Russia keep the IPS/UPS synchronous zone intact. The Baltic States are the only members of the European Union that have their electricity systems synchronized with the IPS/UPS zone. Simultaneous membership in the EU and synchronous operation with the IPS/UPS creates certain strategic issues—the development of the electricity sector is mostly determined by national decision-making and the EU's Common Energy Policy, but day-to-day management depends on Moscow's centralized control over system frequency of the entire IPS/UPS synchronous area.[49] Moreover, Baltic Transmission System Operators are obliged to coordinate the development of the national electricity networks they are responsible for, along with the Belarusian and Russian authorities.[50]

The Baltic States, with political and financial support from the EU,[51] aim to synchronize instead with the Continental European Network, something Russia

44 "Ученый: на площадке БелАЭС ничего более ответственного, чем свинокомплекс, возводить нельзя," [Scientists: Nothing More Responsible than the Pig Complex Should Be Built on the Spot of Belarussian NPP], naviny.by, January 31, 2017, http://naviny.by/new/20170131/1485873043-uchenyy-na-ploshchadke-belaes-nichego-bolee-otvetstvennogo-chem.

45 The Baltic NPP in Kaliningrad was suspended shortly after Lithuania's referendum on Visaginas NPP, even though construction had already begun.

46 "First Electricity Transmitted through NordBalt Sold on the Market," Litgrid, February 18, 2016, http://www.litgrid.eu/index.php/news-events-/news/first-electricity-transmitted-through-nord-balt-sold-on-the-market/3107.

47 "LitPol Link Starts Trial Operations," LitPol Link, December 9, 2015, http://www.litpol-link.com/news/litpol-link-starts-trial-operations-O5JnB3.

48 "EstLink 2 Has Been Taken Over," Elering, February 7, 2014, https://elering.ee/estlink-2-has-been-taken-over-2/&article_searchword=&from=&to=.

49 Sigitas Kadisa et al., "Challenges for the Baltic Power System Connecting Synchronously to Continental European Network," (2016).

50 Соглашение о параллельной работе энергосистем Беларуси, России, Эстонии, Латвии, Литвы (БРЭЛЛ) [*Agreement on Parallel Work of Belarusian, Russian, Estonian, Latvian and Lithuanian Energy Systems (BRELL)*], March 26, 2010, http://so-ups.ru/fileadmin/files/company/international/icdevelopment/BRELL/BRELL_Agreement_051015.pdf.

51 "Baltic Synchronization," entsoe, http://tyndp.entsoe.eu/insight-reports/baltic-synchronisation/.

opposes for three main reasons. The first is Moscow's diminishing influence in the former Soviet space as it loses its strategic benefits discussed in the preceding paragraph. Second, desynchronization would mean that Belarus and the Baltic States would operate in different synchronous zones, substantially reducing cross-border transmission capacity between the Baltic States and their eastern neighbors, therefore eliminating the possibility of exporting large quantities of electricity produced in the Ostrovets NPP to BSR markets. Finally, Russia is protecting its Kaliningrad enclave. Desynchronization would force Russia to choose between synchronizing Kaliningrad with the Continental European Network or ensuring its island operation, both of which are strategically disadvantageous to the Kremlin.

Russian efforts to block the synchronization project are gaining momentum and certain trends can already be identified. Vladimir Putin himself has tried to convince the EU that synchronization is irrational and cost-ineffective. For example, during a visit to the seventieth United Nations General Assembly, he argued: "we will have to reform the system, spending billions of dollars, as well as our European partners who will also have to spend billions of dollars to integrate the Baltic countries into their power grid. […] What for?"[52] Moreover, in an interview, President Putin said desynchronization of the Baltic States' electricity grid would cost Russia up to €2.5 billion,[53] more than twice the preliminary estimate for the synchronization project itself. Therefore, Russia can use the Ostrovets NPP as an argument against synchronization as it further integrates Baltic States into the IPS/UPS synchronous zone, and any changes due to desynchronization would result in further Russian investments into the grid.

Military Dimension and Provocations

In late 2016, Belarus constructed a new military base near the Ostrovets NPP. The official purpose of this military installation, approximately twelve miles from NATO's eastern flank, is to house a battalion of three hundred contract soldiers, trained in St. Petersburg by Russia's National Guard, to protect the Ostrovets NPP and nuclear fuel transport. Limited data available indicate the battalion is not yet fully formed; it will be expanded and receive additional reinforcements in September 2017, the same month that the largest annual military exercises in Russia's western military district and Belarus, *Zapad*, will take place. Though there are no conscripts yet, the Belarusian Ministry of Interior's announcement suggests that the battalion will be expanded and that conscripts might be included,[54] which would allow the base to be expanded, adding more troops near the NATO border.

Belarus also strengthened its anti-air capacities on its northwestern border to better protect the Ostrovets NPP. Thus, new radiolocation military infrastructure and mobile radars were assigned along with surface-to-air defense units. From a nuclear security perspective, these steps can be interpreted as attempts to protect Ostrovets NPP from terror attacks, but they also strengthen Russian anti-access/area denial (A2/AD) capabilities in the BSR and create additional issues for airplane traffic. Many flight routes to and from Vilnius International Airport cross the NPP area, and the close proximity of Vilnius airport to the Belarusian border and the NPP increases the chance of incidents.

Aside from the military argument, the Ostrovets NPP can be used for organizing provocations against Lithuania. The conditions are favorable as one-third of Lithuania's population (919,000) and its capital city, Vilnius, are located within a sixty-two-mile radius of the Ostrovets NPP. Moreover, the NPP will be cooled with water from the Neris River, a tributary of the Nemunas water basin, a main source of Lithuanian drinking water. Russia could provoke Lithuanian authorities to evacuate the capital by staging incidents and spreading fake information via social media. Moreover, Russia could promote internal disagreements within NATO and the EU about how these institutions should react to such a provocation directed against one of their members. However, such a scenario is likely to happen only in extreme circumstances, as Rosatom would lose its credibility and any chances of expanding its activities to the Western markets by doing so.

Policy Approaches and Their Limitations

Most policy approaches regarding the Ostrovets NPP are rather superficial, limited to concerns over

52 "World in Focus: Putin's Full Interview ahead of UN General Assembly Address," Sputnik International, September 29, 2015, https://sputniknews.com/politics/201509291027695060-putin-interview-charlie-rose-transcript/.

53 Anca Gurzu, "Baltics Threaten to Unplug Russian Region," Politico, November 4, 2015, http://www.politico.eu/article/baltics-threaten-to-unplug-russian-region-power-kaliningrad-electricity-interconnectors-lithuania-poland-sweden/.

54 "На БелАЭС прибыли спец войска" ["Special Forces Arrived at Belarusian NPP"], Charter97, February 23, 2017, https://charter97.org/ru/news/2017/2/23/241766/.

"Ostrovets NPP is not an independent Belarusian project, but rather a Russian project with Belarusian consent."

nuclear safety and Minsk's non-compliance with international law. Such policies miss the geopolitical aspect of the Ostrovets NPP. They approach Belarus while ignoring how the Ostrovets NPP serves Russian strategic interests and that it cannot move forward without Moscow's support. The EU, for example, centers its attention on urging Belarus to conduct so-called stress tests in the Ostrovets NPP using the EU's methodology. The International Atomic Energy Agency (IAEA) lacks the proper tools to influence the Belarusian nuclear program as it can inspect nuclear safety only when invited by the host country and is obliged to stay within the boundaries of the invitation. That said, Belarus is using the IAEA to validate the nuclear safety of the Ostrovets NPP, as it has the liberty to decide when and what to showcase to IAEA experts. Most BSR countries limit their comments regarding Ostrovets to underscoring the importance of nuclear safety and international law, and shy away from making harsher statements. Only Lithuania has adopted a law forbidding the purchase of electricity from Ostrovets NPP and denying Belarus the use of its energy infrastructure, while Poland has announced it will not purchase electricity produced in the Ostrovets NPP.

Aforementioned efforts fail to grasp the magnitude of an emerging geopolitical issue. While Russians often urge the West not to confuse business with politics, Rosatom strengthens Russia's positions in Central and Eastern Europe and Finland, and is expanding its influence in emerging economies. While the EU is considering how it can help Lukashenko's regime democratize, Russia is increasing its foothold in Belarus by facilitating and supporting the construction of the Ostrovets NPP. While the EU aims to increase the Baltic States' energy independence, Russia is attempting to exploit the Ostrovets NPP by blocking strategic energy projects, such as the Visaginas NPP and desynchronization, and using present energy infrastructure to increase the Baltic States' reliance on Russia's energy supply. While BSR officials debate about nuclear safety, additional military presence is stationed near NATO's eastern border. If decisions of Vilnius and Warsaw not to purchase electricity produced at the Ostrovets NPP are the only measures that directly hamper Russian strategic interests, they will need support from other BSR countries and international institutions to be effective.

The problem remains that the current policy approaches mainly treat the symptoms, and not the cause, of the emerging regional geopolitical security challenge. Well-balanced policy vis-à-vis the Ostrovets NPP that addresses the causes rests on the following two pillars. First, the issue should not be limited to a matter of nuclear safety and international law—it should also connect to other important processes, such as EU policies and infrastructure development in the BSR, Russian and Belarusian A2/AD capabilities, and other security issues. In short, geopolitics should be addressed as the root cause of the Ostrovets NPP. Second, policy should not be limited to Belarus, but expanded to include Russia—the Ostrovets NPP is not an independent Belarusian project, but rather a Russian project with Belarusian consent.

Giedrius Česnakas, PhD, is an associate professor at the General Jonas Žemaitis Military Academy of Lithuania, and has been honored with an award for the best research of young scientists in the fields of humanitarian and social sciences from the Lithuanian Academy of Sciences for his research in energy diplomacy.

Justinas Juozaitis is a PhD candidate at Faculty of Political Science and Diplomacy, Vytautas Magnus University. He holds a position of junior researcher in the Energy Security Research Centre and is a member of the Future Energy Leaders program (FEL-100) at the World Energy Council.

Atlantic Council Board of Directors

Atlantic Council

The Atlantic Council is a nonpartisan organization that promotes constructive US leadership and engagement in international affairs based on the central role of the Atlantic community in meeting today's global challenges.

Atlantic Council

1030 15th Street, NW, 12th Floor,
Washington, DC 20005

(202) 463-7226, www.AtlanticCouncil.org