

BRIEF

ROSATOM IN EUROPE
RUSSIA'S TROJAN HORSE?

| ANDREA BONELLI |

The national security aspects of nuclear energy have long been sidelined, overshadowed by the much larger geopolitical interest in gas and oil. However, Russia's state-owned nuclear corporation, Rosatom, which is pursuing various opportunities in Europe and globally, has become part of Russia's broader strategy to rebuild its geopolitical influence. According to some recent estimates, Russia has spent over \$92 billion to support this prong of its strategy over the last ten years.¹ The European Union (EU), however, is not fully cognisant of or properly postured to address the geopolitical and security risks accompanying Moscow's use of Rosatom to advance its strategic interests.

To understand the nature and extent of this challenge, it is necessary to highlight at least three aspects of the nuclear energy sector that create the potential for exploitation by malignant geopolitical actors: the building and maintenance leverage, the nuclear fuel supply security, and the potential exposure to hybrid threats.

BUILDING AND MAINTENANCE LEVERAGE

There are two main pathways for building a national nuclear energy programme. One is an "independent" approach, in which nuclear energy is pursued for self-sufficiency and the priority is the development of the national nuclear energy industry. The other is a "dependent" approach, in which the priority is to satisfy the demand for electricity by buying technology and know-how from other countries. Only a few nations have companies able to design and build nuclear reactors for commercial nuclear power plants (NPPs); the French Orano,

the US Westinghouse and the South Korean Kepco are the main examples.

The anti-nuclear sentiment following the Chernobyl and the Fukushima disasters has negatively affected the political and business environment for these companies. Meanwhile, Rosatom has quietly emerged as a global leader, with 67% of the NPP construction market in the emerging economies, trailed behind by the Chinese companies – China National Nuclear Corporation (CNNC) and the China General Nuclear Power Group (CGN).² The opportunity for these two main geopolitical rivals of the West to bundle technology and foreign policy is clear: the export of nuclear technology can become a tool for "soft power" projection, influence and even coercion of the nations that become dependent on this technology in ensuring the security of their electricity supply.

Rosatom is not only a state-controlled corporation; it is also, as a result of being both a vertically and a horizontally integrated company, the first to offer a Build-Own-Operate (BOO) model for building NPPs. Under this model, the Russian party provides the financing and insurance; manages the construction, operation and maintenance as well as the entire nuclear fuel supply chain; and ensures decommissioning of the plant, while the hosting country obtains electricity at a fixed price. The hosting country, however, also becomes highly dependent on a company deemed strategic by Russia's regime and instrumental in its geopolitical ambitions.

NUCLEAR FUEL CYCLE RISKS

The production of electricity from nuclear reactions is referred collectively as the "nuclear fuel cycle". It starts with the mining of uranium

and ends with the disposal of nuclear waste. To prepare uranium for use in an NPP, it goes through the steps of mining and milling, conversion, enrichment and fuel fabrication. According to the International Nuclear Fuel Cycle Information System (INFICIS), only a few countries have full autonomous capacity in all operations included in the nuclear cycle. These are China, France, Russia, the United States, the United Kingdom and Japan.³ This generates a tendency for some supplier countries to demand “exclusivity”, as well as a certain alignment with the policies they pursue.⁴ The concerns do not end there, since some fuels are compatible only with the specific types of reactors, thus generating a risk of further dependence. For example, many NPPs in Central and Eastern Europe can be refuelled only with the fuel manufactured in Russia.⁵

EXPOSURE TO HYBRID THREATS

The traditional security risk related to nuclear energy was that the development of a civil nuclear programme could underpin a nuclear military programme. The risk of proliferation of radioactive material convertible into “dirty bombs” by violent non-state actors has also been a major concern.⁶ More broadly, however, nuclear power plants can become vectors for hybrid threats to national security as possible targets for actions such as physical or cyber-attacks aimed at causing serious nuclear incidents or disruption to the entire energy system, accompanied by disinformation campaigns to spread confusion and fear in a target society.⁷

Furthermore, an NPP might serve as a base for hostile operations against a host country. This could especially happen in cases of the BOO models, since the host country may have only limited oversight in terms of what is happening in the facility during the construction and after such a plant becomes operational. Intelligence and special forces operatives assuming the identities of contractors and sub-contractors building, supplying, operating and servicing a plant would be able to conduct their activities without drawing much suspicion.⁸ Akkuyu in Turkey and Paks II in Hungary, which are both being built by

Rosatom, are two cases where a possibility of having such “hybrid outposts” established inside NATO territory should be of considerable concern.⁹

ROSATOM’S OPERATIONS AND EUROPEAN RESPONSES

Born in 2007 through the merger and consolidation of more than 400 nuclear-related entities, the Rosatom State Atomic Energy Corporation rapidly became not only the feather in Putin’s cap but also the global leader in the nuclear energy sector. Considering the risks described above and Russia’s tendency to use its energy resources as a foreign policy tool, the European activities of Rosatom should be cause for serious concern.

Of its 36 overseas NPP projects, two are currently in EU countries (Hanhikivi-1 in Finland and Paks II in Hungary) and two in neighbouring countries (the recently completed Astravyets in Belarus and Akkuyu in Turkey).¹⁰ All of them saw the direct involvement of the Russian government during the negotiations; in the cases of Belarus and Hungary, each country received a €10 billion loan from Russia to implement their NPP projects.¹¹ This will inevitably result in increased economic and political leverage for Moscow, but in each

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case the responses in managing these and other risks associated with Russia’s involvement differ and reveal a very limited role for the EU-level engagement.

In the case of Hanhikivi-1, the national authorities of an EU member state, Finland, which is well attuned to the nature and character of hybrid threats, are monitoring and undertaking measures to mitigate these risks as a routine matter of national security and safety governance, without much need for European-level involvement.

Concerning the Astravyets NPP, the response is spearheaded by another EU member state, Lithuania, that is seeking to mobilise its EU partners in the region as well as the EU institutions themselves to take a tough stance against Belarus, but with somewhat limited

success so far. Only very recently did the European Council call upon the European Commission to “investigate possible measures to prevent commercial electricity imports from third countries’ nuclear facilities that do not fulfil EU recognised safety levels.”¹² Meanwhile, the European Parliament (EP) has recently passed a resolution recognising the Astravyets NPP as a geopolitical project of Russia and Belarus that does not comply with international nuclear safety standards.¹³

Only in the Hungarian case was an investigation by the European Commission launched, but that was related to a potential violation of state aid rules and therefore did not delve into the origin of the funds, nor into whether building a new NPP was consistent with the EU’s common policies on energy or in countering hybrid threats.¹⁴

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The situation regarding fuel supplies for nuclear power plants in Europe is also worrying, as in this regard the EU is divided into two distinct groups with different levels of exposure to Russia-related risks. Western-designed reactors used in the NPPs of Western Europe can work with a range of suppliers, while the power plants of Central Eastern Europe located in Bulgaria, Czechia, Hungary, Slovakia and, in some cases also Finland, that operate Russia-designed reactors have only one possible supplier – TVEL, owned by Rosatom.¹⁵ In 2014, the European Commission reported the situation, indicating that 30% of the Union’s nuclear fuel supply came from a single company, TVEL, and that there was no possibility of diversification, at least in the short term. Although the situation was mitigated by the fact that these states have a long-term supply agreement in place with Rosatom, the risk of supply disruptions in the event of commercial or political conflicts was not considered, even though the operators of the Russian-built reactors in the EU had stocks of fuel for only a few months.¹⁶ In the last report published by the

Euratom Supply Agency, the situation seems not to have changed, with the agency inviting these states to build up strategic fuel stocks.¹⁷

THE SPILLOVER EFFECTS

A complete separation between nuclear energy and politics is impossible, given the resources necessary to develop this industry and the strategic essence of any nuclear energy deal. Also worth noting is that Rosatom, with synergy and support from the Russian government, was able to gain a competitive advantage from the other companies in the sector. Because of that and because of the strategic importance of exporting nuclear power technology, Rosatom activities are part of the Russian state’s foreign policy and are accompanied by efforts “to use soft power to shape perceptions in the target country.”¹⁸

At the same time, with an ever-greater integration of energy systems in Europe and the consequent increase in possible spillover effects of Rosatom’s activities, the lack of coherent policy and effective actions taken by the European institutions is also evident. Although the European Commission and Euratom are effective in monitoring and setting the standards for managing nuclear safety and environmental risks, there is a lack of a clear mandate and capacity to counter the economic and political leverages as well as hybrid threats in this field.

With regard to the activities of Rosatom in neighbouring countries such as Belarus or Turkey, the only way forward is political, diplomatic and economic pressure as a union, but that is difficult to generate due to the diverging national interests and perspectives of member states. In relation to such activities within the EU, it is necessary to strengthen vigilance over possible attempts of building influence and posing hybrid threats as well as reduce the dependency on the nuclear fuel supplied by Russia – efforts in which the national governments have the main responsibility but the EU institutions could also play a role. In particular, more efforts should be directed towards strengthening EU member states’ capacity to counter hybrid threats in the nuclear energy sector, but also towards recognising and managing these threats as a strategic (i.e., not solely economic or environmental safety) issue for the entire EU.

New NPPs in the EU and its vicinity should be assessed by the EU from a security and geopolitical perspective, focusing on potential activities aimed at increasing economic and political leverage and at creating hybrid threats through nuclear energy sector projects. This would send a signal to the individual member states that they cannot disregard these aspects and their spillover impacts on fellow members

while pursuing deals with Rosatom. In the short term, using the EU-NATO cooperation framework to assess hybrid threats could increase awareness that engaging with Rosatom is more complicated than a mere business proposition and could make clear why it is necessary to limit Rosatom's inroads into Europe.¹⁹

ENDNOTES

- ¹ Anna Titova, "Nalog na velichiye: Kak Kremli' potratil 46 trln rubley na geopoliticheskiye spetsoperatsii" [Tax on greatness: How the Kremlin spent 46 trillion rubles on geopolitical special operations], *Novaya Gazeta [New Newspaper]*, 27 January 2021.
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- ³ Elina Brutschin and Jessica Jewell, "International Political Economy of Nuclear Energy," in *Handbook of the International Political Economy of Energy and Natural Resources*, ed. Andreas Goldthau, Michael F. Keating, and Caroline Kuzemko (Northampton: Edward Elgar Publishing, 2018).
- ⁴ A key example is the "123 agreements" of the United States, so named because they are imposed by Section 123 of the Atomic Energy Act of 1954. These agreements establish the need for a cooperation agreement as a prerequisite for nuclear transactions with any country. For more details on the requirements established by the agreements, see "The U.S. Atomic Energy Act Section 123 At a Glance," Fact Sheets & Briefs, Arms Control Association, last modified April 2019.
- ⁵ The only exception at present is Ukraine, which signed an agreement with Westinghouse in 2018 to diversify the supply of nuclear fuel compatible with Russian-designed reactors. "Nuclear Power in Ukraine," Country Profiles, World Nuclear Association, last modified January 2021.
- ⁶ Pamela S. Falk, "The Dirty Bomb Threat," *Foreign Affairs*, 5 April 2017.
- ⁷ European Centre of Excellence for Countering Hybrid Threats, NATO Stratcom Centre of Excellence, NATO Cooperative Cyber Defence Centre of Excellence, and NATO Energy Security Centre of Excellence, *Nuclear Energy and the Current Security Environment in the Era of Hybrid Threats* (Helsinki: European Centre of Excellence for Countering Hybrid Threats, 2019).
- ⁸ Aaron Stein, "Turkey's Nuclear Program – Challenges and Opportunities," Atlantic Council, December 2016.
- ⁹ For the Turkish case, see European Centre of Excellence for Countering Hybrid Threats et al., *Nuclear Energy and the Current Security Environment*, 14. For the Belarus case, see Giedrius Česnakas and Justinas Juozaitis, "Nuclear Geopolitics in the Baltic Sea Region: Exposing Russian Strategic Interests behind Ostrovets NPP," Atlantic Council Issue Brief, 31 July 2017.
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- ¹³ European Council, "European Council Meeting (10 and 11 December 2020) – Conclusions," EUCO 22/20, 11 December 2020; European Parliament, "Safety of the nuclear power plant in Ostrovets (Belarus) (2021/2511(RSP))," European Parliament Resolution (provisional edition), P9_TA-PROV(2021)0052, 11 February 2021.
- ¹⁴ European Commission, "State Aid: Commission Clears Investment in Construction of Paks II Nuclear Power Plant in Hungary," Press Release, 6 March 2017.
- ¹⁵ Finland also operates two Western-designed reactors.
- ¹⁶ European Commission, "European Energy Security Strategy," Communication from the Commission to the European Parliament and the Council, COM/2014/0330 final, 28 May 2014.
- ¹⁷ Euratom Supply Agency, *Annual Report 2019* (Luxembourg: Publications Office of the European Union, 2020).
- ¹⁸ Pami Aalto, Heino Nyssönen, Matti Kojo and Pallavi Pal, "Russian nuclear energy diplomacy in Finland and Hungary," *Eurasian Geography and Economics*, 58:4, 408.
- ¹⁹ European Commission, *European Energy Security Strategy*, 3–4.

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