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The Geopolitics of Russia's Civil Nuclear Exports Four Years into the War

By Jane Nakano

Nuclear industry underpins Russia's technological and industrial strengths, with its achievements and shortfalls reflecting the state of Russia's economy. As a key avenue for Russia's international engagements, nuclear energy commerce has implications far beyond the balance sheet of its State Atomic Energy Corporation, commonly known as Rosatom. Four years since commencing the full-scale war on Ukraine, as of February 2026, Russia is still **building** 6 nuclear reactor units at home and has at least 20 units under active construction in 7 countries (see Table 1).

The current state of Russia's nuclear industry is largely shaped by the war's effects on Russian economy. While the war initially propped up economic growth through the military spending, some argue that the Russian economy is now near a collapse and is at **risk** of falling into a recession. Russia's oil revenues have **fallen** from 50 percent of state income before the war to 25 percent. Russia's federal revenues from taxes on oil and gas in January 2026 came in at **half** the level of January 2025, marking the lowest since July 2020. Yet this economic picture is far from certain; other experts point to several signs of resilience, such as the modest level of annual spending deficit at **3.5 percent**, and the inflation rate that is "**only modestly higher**" than its central bank target.

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While the economy has been largely resilient, how the war and the attendant Western sanctions have affected Russia's nuclear export strategy merits closer examination. Nuclear commerce is inherently

geopolitical: Through reactor construction, fuel supplies, and reactor maintenance, nuclear commerce creates or maintains diplomatic and commercial relationships over multiple decades. This white paper presents five observations on the evolving geopolitics of Russia's nuclear exports four years after Russia's full-scale invasion of Ukraine.

1. The war's effects on Russia's influence in global nuclear commerce have been mixed.

Reactions to the war have varied across countries with nuclear commercial ties with Russia. Some have resolutely acted to distance themselves from the influence of Russian nuclear industry. Shortly after the war began, Finland severed its ties with Rosatom for the construction of the Hanhikivi Nuclear Power Plant (NPP), which had been agreed upon in 2013, with commissioning targeted for 2024. The project had already had its construction start date pushed back several times, and construction had not yet commenced at the time of termination.

Concern over sovereignty and national security underpinned the Finnish decision, as the country had been **navigating** tensions over its Russian border from the refugee inflow attributed to Moscow. Not only did Finland terminate the project, but the country also joined NATO in April 2023.

Moreover, Russian aggression has led several Western countries to decide to phase out dependence on Russian nuclear fuels and services. Russia has been a major supplier of enriched uranium fuel to the United States, while also supplying uranium, services related to uranium conversion and enrichment, as well as enriched uranium fuel to European markets. Since the war, the United States, European Union, and a few other allies have introduced measures to reduce energy imports from Russia, including nuclear fuel, oil and gas, in order to strain Russia's ability to earn revenue to finance the war. For example, U.S. Congress passed the **Prohibiting Uranium Imports Act** (H.R. 1042) in May 2024. Effective from August 2024 to December 2040, the law essentially **bans** the import of Russian natural uranium and low-enriched uranium, but allows for waivers through the end of 2027. The United Kingdom has also **committed** to phasing out Russian nuclear fuel imports. This timeline was later advanced from 2030 to align with the U.S. statutory commitment of 2028, under the U.S.-UK Technology Prosperity Deal of September 2025.

Table 1: Russia's Ongoing Nuclear Projects Abroad

Country	NPP & Units	Status
Bangladesh	Rooppur 1 and 2	Construction start dates in 2017 and 2018
China	Tianwan 7 and 8	Construction start dates in 2021 and **2022**
China	Xudapu 3 and 4	Construction start dates in 2021 and **2022**
Egypt	El Dabaa 1–4	Construction start dates in 2020, 2020, **2023**, and **2024**
Hungary	Paks II	Construction start date in **2026**
India	Kudankulam 3–6	Construction start dates in 2017 and 2021
Iran	Bushehr 2	Construction start date in November 2019
Turkey	Akkuyu 1–4	Construction start dates in 2018, 2020, 2021, and **2022**
Total: 8 sites, 7 countries	Total: 20 units	

Note: Bold denotes reactor units that entered active construction (i.e., the first concrete pour)after the war began on February 24, 2022.

Source: Author analysis of data from multiple news agencies and organizations.

Elsewhere, however, nuclear commerce seems to be helping Russia preserve its economic ties with governments whose political visions and security interests are less divergent from those of Moscow (see Table 1). A total of six reactors have entered construction since the war began, ranging from within a week (Tianwan Unit 8 in China) to four years later (the **Paks II** NPP in Hungary). Stressing its energy security needs, Hungary secured "**full and general exemption**" for the Paks II NPP project in thefourteenth EU sanctions package that was adopted in June 2024; Hungary **reversed** its opposition to the EU restrictions on the liquefied natural gas supplies from Russia in return. The sanction exemption has practically eliminated foreign suppliers' need to secure exemption license from their respective government authority before delivering certain products and services for the Paks II project.

In fact, the pro-Kremlin government of Hungary has not been deterred from pursuing the Paks II NPP despite being an EU member. The Hungarian authority issued construction license for the Paks II NPP in August 2022—within half a year of the full-scale Russian invasion of Ukraine. Hungary's desire for Rosatom's continued work on Paks II reflects its comfort with Russia's political orientation as well as activities in Ukraine.

2. Western sanctions have posed financial and logistical challenges to Rosatom's projects, but most projects are staying the course.

Four years into the war, Russia currently has 20 reactor units under active construction, at 8 sites in 7 countries (See Table 1). Although Rosatom has avoided direct Western sanctions thus far—except for the Ukrainian sanction—Western sanctions on adjacent sectors have affected a few of these Rosatom projects abroad.

For example, the sanctions on Russian banks have **delayed** Bangladesh's ability to make interest payments to Rosatom for the construction of the $12.65 billion Rooppur NPP, which is **90 percent** financed by Russian loans. As many major Russian banks have lost access to the Society for Worldwide Interbank Financial Telecommunications (commonly known as SWIFT), Russia and Bangladesh reached an **agreement** in April 2023 that they would use the Chinese renminbi for the Bangladesh loan repayment of $300 million. Some believe that transactions between Russia and Bangladesh have utilized China's Cross-Border Interbank Payment System, but it remains unclear whether the system has been used by the parties to date. Notably, Russia initially **refused** to accept the payment in the Chinese renminbi on "concerns of potential currency conversion losses." Even after the agreement, the Russians were reportedly still seeking alternative payment methods, such as to open a direct payment channel between the central banks of Russia and Bangladesh, a currency swap agreement, or the use of the Russian ruble.

The Akkuyu NPP in Turky was another Rosatom project affected by the Western financial sanctions, where a $2 billion fund earmarked for the plant construction was **frozen** by U.S.-based firm JP Morgan. However, Russia and Turkey financial channels in fall 2025, following a successful plea by Ankara to Washington about the important role that the Akkuyu NPP would play in Turkey's energy security. Washington **granted** a project-specific exemption; Moscow welcomed the step as it accords Russia a "special payment corridor" that allows transactions outside the U.S.-controlled banking system.

Beyond financing, sanctions have posed physical logistical challenges to some of Rosatom export projects. For example, the sanctions pressed the Bangladesh government to **deny** a docking request from a Russian vessel with materials for the Rooppur NPP in late 2022, while also imposing the entry restrictions on nearly 70 Russian vessels into its territorial waters the following spring. The Akkuyu NPP in Turkey is another Rosatom project that has faced logistical issues as a result of Western political pressure. The German government's scrutiny on Siemens Energy's application for an export permit to supply important electrical components for the plant resulted in a long delay. In response, Rosatom **turned** to China to supply the replacement components.

Despite the ongoing sanctions and diplomatic challenges, there currently is no indication that these ongoing projects would be abandoned by Russia or the host countries. As of January 2026, Rosatom **outlined** its expectation that the first units will enter in operation at the Rooppur NPP (Bangladesh), the Akkuyu NPP (Turkey), as well as the Tianwan and Xudapu NPP's (China) later the same year.

While it is difficult to ascertain how realistic Rosatom's schedule targets are, Russia's desire to preserve its presence in the global nuclear commerce and the host countries' interest in obtaining nuclear power generation capacity appear to remain in alignment—strong enough to overcome various financial and logistical challenges.

3. The war has altered Russia's reactor export strategy and priorities.

Even if the existing projects remain on track, the war has significantly dimmed Rosatom's new business prospects. Many countries without indigenous nuclear industry previously viewed Russia as a competitive supplier of reactors with a good track record of project deliveries. Such a positive perception was reinforced by the growing challenges that European suppliers have encountered, such

as the significant schedule and cost overruns at the **Olkiluoto 3** project in Finland (by Framatome and Siemens AG) and the **Flamanville 3** project in France (by Electricité de France).[1]

However, the war seems to have cast doubt over Rosatom's continued ability to deliver. Even where Russia has ongoing projects, it is uncertain whether Rosatom can leverage the existing ties to secure additional contracts. For example, Rosatom has been constructing the Akkuyu NPP to deliver Turkey with the country's first nuclear power program. In December 2025, Turkey's energy minister **noted** that the country had received new, additional Russian financing worth $9 billion to complete the four-reactor unit project, the first of the units is scheduled to come online in 2026. Yet the existing tie does not seem to guarantee a future round of order for Rosatom. Turkey is reportedly considering working with for the country's second site in Sinop, and **China** for its third site in Thrace.

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Against the backdrop of dimming prospect for nuclear technology exports to developed economies, Russia is strengthening its focus on the Global South countries that are friendly to Russia. Markets of the Commonwealth of Independent States (CIS) are a prime target for Rosatom to preserve its presence. Chief among them is Belarus, which shares a border with multiple countries that are actively opposed to the Russian war on Ukraine, such as Poland and Lithuania, as well as Ukraine itself. Belarus has also been **serving** as a staging point for Russia's attacks on Ukraine. Belarus' Ostrovets nuclear power project by Rosatom has stood out as a sign of its close ties with Russia, as the plant has **added** a second unit since the war. Moreover, in November 2025, Belarus **decided** to build a third unit at Ostrovets, while also asking Rosatom to build a second NPP, possibly in Mogilev.

Several CIS countries in Central Asia are also important for Rosatom. For example, Uzbekistan became the first country—and thus far the only country—to **sign** a new nuclear engineering, procurement, and construction (EPC) contract with Rosatom since the war. Following the May 2024 contract to build small modular reactors (SMRs), the two parties also **agreed** in September 2025 to include two units of water-water energetic reactor (VVER)-1000 and two units of RITM-200N SMR. Kazakhstan is another key commercial partner to Rosatom that has a strong linkage over uranium trade. In June 2025, Kazakhstan **selected** Rosatom to build a nuclear power plant (although at time of writing there has been no report of an EPC contract).

Notwithstanding the continuing nuclear commerce with Russia, some CIS states may be starting to hedge against Russian nuclear influence by seeking alternative partners.[2] Their concerns stem from the uncertainty over Russia's ability to deliver on new projects under the Western sanctions, combined with Rosatom's financial condition. For example, Uzbekistan has **rescheduled** the first concrete pour from

1. Author's interview with Dmitry Gorchakov of the Bellona Foundation, January 30, 2026.
2. Author's interview with Dr. Anna Davis of Sefton Analytics, January 27, 2026.

March 2026 until at least December 2026 due to a concern over technical readiness of RITM-200 SMRs as well as financial details of the arrangement; Rosatom has been clear that it would not finance the SMR project in Uzbekistan.[3]

Following the selection of Rosatom for its first NPP, Kazakhstan has **chosen** China's CNNC to lead an international consortium for two additional NPP projects.[4] Rosatom and CNNC were selected after a bidding process that also involved France's EDF and Korea Hydro & Nuclear Power. In his June 2025 meeting with Chinese President Xi Jinping, Kazakh President Kassym-Jomart Tokayev **noted** how the Kazakhs "consider [CNNC] as a reliable strategic partner in the NPP construction project." Moreover, Chairman Almassadam Satkaliyev of Kazakhstan's Atomic Energy Agency **explained** that the selection of CNNC was due to "China [having] all the necessary technologies and a complete industrial base" and remarked that Kazakhstan's "next top priority is cooperation with China."

The historical ties likely accord Russia with continued preeminence in the Kazakh nuclear sector, but it is notable how Kazakhstan may be trying to leverage the China option to generate economic multiplier effects from the nuclear commercial diplomacy. For example, Kazakh President Tokayev **stated** that "the project unlocks new opportunities for transfer of technologies, training of specialists, creation of jobs and development of associated industries, such as mechanical engineering and instrument making."

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If Russia's economic condition continues to deteriorate, Rosatom will likely need to strengthen its partnership with Chinese companies. But this bilateral tie could forebode fierce competition in the future. As Chinese technological expertise and supply chain capacity continue to rise, developing countries could begin favoring China as a technologically viable and geopolitically acceptable choice for their civil nuclear endeavors. The implications of the evolving Russia-China nuclear energy ties warrant close attention.

4. Russia's global fuel and decommissioning services face an uncertain future.

Nuclear fuel and fuel-related services are another source of Rosatom revenue that faces a questionable future. To be clear, Russian exports of oil and gas far surpass those of enriched uranium. However, the fuel supply business (including conversion, enrichment, and fabrication) has been a major source of Russia's preeminence in the global nuclear market and commercial ties with the Western economies, as nuclear fuel is produced to reactor technology specifications and thus hard to substitute. In 2023, Russia earned **$2.7 billion** from exporting enriched uranium, mostly to the United States and the European Union.

3. Author's interview with Dmitry Gorchakov of the Bellona Foundation, January 30, 2026.
4. Note that no site selection is made for the second and third NPPs while the first NPP is to be built near Lake Balkhash.

As the U.S., UK, and EU governments strive to reduce Russia dependence by expanding domestic capacity to produce nuclear fuel, Russian shares in the global fuel and fuel-service market are bound to decline. Countries with Russian-designed reactors that are traditionally highly dependent for Russian nuclear fuel, such as Bulgaria and the Czech Republic, are beginning to source Western fuels instead. For example, the Czech Republic's majority-state owned CEZ has signed several contracts with Westinghouse to supply nuclear fuels since the Russian war. Notably, Hungary has also signed contracts with **Westinghouse** and **Framatome** to supply fuels for its VVER units at the Paks NPP.

Decommissioning is another service Russia had export ambition in. Rosatom had been v**iewing** decommissioning as an important aspect of "diversifying its nuclear business in Europe, where Rosatom already had limited prospects for building nuclear reactors even before the war." The 2009 acquisition of NUKEM Technologies was to be a launch pad for Rosatom's expansion in decommissioning work, especially in Europe as a fertile market with a number of mature reactor units. However, European regulatory restrictions and attendant project suspensions that resulted from the war dealt a major blow to NUKEM, which was once **described** by its former managing director as "Rosatom's bridgehead in the West." After the outbreak of the war, provision of loans and guarantees became difficult to obtain, and the acute business deterioration led the company to file for insolvency in April 2024. As such, Russia's business opportunity in the decommissioning service may become largely limited to CIS countries in much the same way as Rosatom's nuclear technology exports.

5. Rosatom is expanding its business in the Arctics development.

Since 2022, the development of the Northen Sea Route (NSR) has **become** a strategic priority for Russia. The NSR enables a shorter voyage between Europe and Asia, holding a significant operational and commercial advantage. Year-round navigation of the NSR has become the Russian government's important goal; this goal requires Russia's icebreaker fleet, which currently includes eight nuclear-powered ice breakers, to **expand**.

Placing a high confidence in Rosatom as an entity it can "trust and control," the Kremlin **assigned** Rosatom to help execute its Arctic vision, and the development of icebreakers and auxiliary vessels became a top priority for Rosatom.[5] For example, Rosatom's main focus in the 2023-2024 timeframe **included** the creation of an icebreaker fleet and coastal infrastructure.

Nuclear-powered icebreakers under construction appear to include three under Project 22220, and one under Project 10510. Russia's nuclear-powered icebreakers under Project 22220 (Arktika class) are each powered by **RITM-200**, consisting of two pressurized water reactors, and designed to break through ice up to three meters thick, while those under proposed Project 10510 (Lider class) would be powered by **RITM-400** and designed to penetrate ice up to 4.3 meters thick.

However, the western sanctions and Russia's financial difficulties have exposed how **dependent** Rosatom has been on foreign suppliers and their technologies for the icebreaker construction, such as equipment sets for shaft lines, backup diesel generators, and stern tube seals. Also, the funding situation for new nuclear-powered icebreakers appears to be **precarious** despite the strategic importance of the Arctic deployment and requisite expansion of the country's icebreaker fleet.

5. Author's interview with Dmitry Gorchakov of the Bellona Foundation, January 30, 2026.

Conclusion

The Russian war on Ukraine since February 2022 has illuminated how a supplier selection is shaped by multiple factors. While a strong track record in project deliveries and affordability are important, so is a sense of economic sovereignty and energy security. The war has not wiped out the existing slate of Rosatom projects around the world, but it has significantly dimmed the outlook for Russia's leadership in the global nuclear commerce. ■

Jane Nakano *is a senior fellow in the Energy Security and Climate Change Program at the Center for Strategic and International Studies (CSIS) in Washington, D.C.*