Russia Deepens Role in Brazil’s Nuclear Fuel Cycle

Datum	16.10.2026
Subjekt	Jamestown
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Region	USA
Kategorie	Ekonomika, Energetický průmysl, Politika

Executive Summary: Russia has expanded its nuclear cooperation with Brazil this year, increasing uranium processing contracts by 25 percent and becoming Brazil’s largest uranium supplier.

- Moscow is moving beyond uranium exports toward deeper integration into Brazil’s nuclear fuel cycle, including conversion, enrichment, and potentially domestic uranium extraction.
- Rosatom—Russia’s state-owned nuclear energy corporation—is seeking to broaden its presence in Brazil through critical mineral projects, small modular reactors, and potential participation in nuclear power plant construction.
- Brazil’s plans to expand nuclear generating capacity present new opportunities for Moscow, but financing constraints and Brasília’s pursuit of technological sovereignty could limit Russia’s ambitions.

Russia and Brazil signed an agreement on July 31, increasing the volume of an existing contract from 2025 for Rosatom to process Brazilian uranium from the Caetité deposit in the state of Bahia **(**Atomnaia Energiia 2.0, July 31). In July, Brazil’s uranium imports from Russia totaled $84.5 million, 172 times more than in July 2025 and the highest monthly level since 1997 (Praim, August 11). This increase makes Russia Brazil’s largest uranium supplier (Biznes Zhurnal, August 11). Russia appears poised to secure a greater presence in Brazil’s other rapidly developing strategic sectors, potentially including deals on new reactor technologies, regulation of marine nuclear installations, and joint projects in critical mineral extraction. In March, for example, Rosatom’s Uranium One Group and Brazil’s Núcleo Brasil Energia Participações (NBEPar) agreed to establish the Nadina Minerals joint venture to explore, extract, and process mineral resources in Brazil (Atom Media, March 25).

Russian–Brazilian nuclear energy ties are not new. The foundation was laid after the collapse of the Soviet Union, with a 1994 agreement on cooperation in the peaceful use of nuclear energy and a 2008 accord that expanded that relationship (Mirovaia Politika, January 20, 2025). In 2008, the governments signed another agreement on the peaceful use of atomic energy, but operationalization was slow-moving (TASS, accessed October 13). In 2017, cooperation between the two countries acquired a commercial character when Rosatom-owned Uranium One won an international tender to supply 400 tons of natural uranium to the Brazilian state-owned company Indústrias Nucleares do Brasil (INB). At the same time, Rosatom and Eletronuclear—a Brazilian state-linked nuclear power plant (NPP) company—developed a dialogue on NPP construction, including prospects for small and medium-sized reactors. Russian and Brazilian entities also signed a memorandum on innovative nuclear technologies in 2017 (Social and Humanities Sciences, 2024). In 2021, the partnership acquired greater depth when Rosatom and Eletronuclear signed a memorandum on cooperation in the construction and maintenance of large- and small-capacity NPPs, nuclear materials management, personnel training, and nuclear medicine. In June 2021, branches of Rosatom and Brazil’s National Nuclear Energy Commission signed a five-year contract for monthly supplies of the medical isotopes Lu-177 and Ac-225. Russian supplies covered around 50 percent of Brazil’s demand

for medical radioisotopes in 2021 and 2022 (RIA Novosti, October 29, 2022).

December 2022 marked a new shift in the Russian–Brazilian uranium partnership when Rosatom-owned TENEX (Techsnabexport) announced a contract between its subsidiary Internexco GmbH and Brazil's state-owned INB. The contract provided for meeting 100 percent of the Angra NPP's requirements for enriched uranium products in 2023–2027. Rosatom described it as the first long-term contract in its history with Brazil for the supply of enriched uranium products (Atomnaia Energiia 2.0, December 7, 2022). Crucially, the December 2022 contract was not a one-off deal, but the beginning of a series of agreements between the two countries on cooperation in this domain (Interfax, May 4, 2023). In February 2025, Rosatom announced that it won an INB tender to enrich uranium mined in Brazil (Interfax, February 27, 2025).

Russia's engagement with Brazilian nuclear energy is no longer limited to assisting Brazil with processing uranium. Russia has shifted from uranium exports to integration into Brazil's nuclear fuel cycle. Ivan Dybov, director of Rosatom Latin America, said in February 2025 that Rosatom aims to create a model of cooperation with private companies for uranium extraction in Brazil (Rosatom, February 28, 2025). For Russia, the value of such a model is higher than that of conventional exports of raw materials or processing finished products—Russian enterprises could become part of the technological chain of Brazil's nuclear fuel cycle itself. The Nadina Minerals joint venture is a corroboration of such a trajectory. The plan involves more than just trade, including geological exploration, obtaining licenses, and establishing enterprises for the extraction and processing of strategic mineral resources in Brazil (TENEX, March 25, 2026). Rosatom is also discussing lithium projects with Brazilian companies (Rosatom, April 6).

Russia is likely to try to establish a position across the entire life cycle of the Brazilian nuclear industry, and Russian sources are already beginning to link uranium cooperation to Rosatom's broader offerings. Specifically, Rosatom has described the processing of Brazilian uranium as an "important step toward deepening the partnership within Brazil's national nuclear program," while simultaneously presenting Russia's concept of a closed fuel cycle and spent nuclear fuel processing technologies (Rosatom, June 30, 2025). This implies Russia's potential advancement along the chain: extraction, conversion, enrichment, fuel, generation, and, finally, nuclear fuel management. Such advancement would mean that the relationship would cease to depend on a single uranium supply contract. The Russian government is already linking existing cooperation to the possibility of constructing further generating capacity. On May 25, Russian Minister of Economic Development Maxim Reshetnikov stated the Kremlin sees "prospects in the construction of additional Russian-designed generating units, both large and small" (Interfax, May 25). Russian industry sources have also reported Brazil's interest in Russian-designed small NPPs. In July, this issue was discussed in relation to a potential site in the state of Santa Catarina (Rosatom, July 22).

In the Russian interpretation, the intensification of nuclear cooperation with Brazil after 2025 represents a transition from an export-supply model toward deeper technological integration into Brazil's nuclear fuel cycle. Securing the contract for the conversion and enrichment of Brazilian uranium, its recent expansion, and the establishment of a joint venture for the development of the mineral resource base create the prospect of a long-term Russian presence across several stages of the energy production chain. In turn, the discussion of new large- and small-capacity nuclear power units demonstrates that Russia views uranium cooperation as part of a broader technological partnership.

Brazil's renewed nuclear ambitions create a potentially significant long-term opening for Russian nuclear cooperation. Under the Plano Nacional de Energia (PNE) 2025, Brazil envisages up to roughly 14 gigawatts of additional nuclear capacity while seeking to expand domestic uranium production and strengthen its nuclear fuel cycle (Government of Brazil, February 19). This creates

demand for uranium, and for conversion, enrichment, and reactor technologies. Russia’s post-2025 involvement in processing Brazilian uranium can therefore be viewed as an entry point into a potentially expanding nuclear value chain. Opportunities, however, remain contingent on Brazil translating long-term planning into financed projects and balancing foreign partnerships with its technological sovereignty.

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