

Turkey's nuclear power plant: old problems, new solutions

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On 1 September, Recep Tayyip Erdoğan met Vladimir Putin on the sidelines of the Shanghai Cooperation Organisation summit in China. Their discussions covered bilateral relations and energy cooperation, with a particular focus on the Akkuyu nuclear power plant and its financing. The Turkish president emphasised that tests had been completed on a mechanism enabling the costs of building the facility to be covered by payments from the Turkish state-owned energy company BOTAŞ for Russian gas. These funds are to remain in Turkey and be allocated to investment in the power plant.

The construction of the Akkuyu nuclear power plant is facing serious difficulties due to Western sanctions imposed on Russia, which hinder both the acquisition of financial resources and access to the components necessary to complete the facility. Although the preliminary agreement between Erdoğan and Putin to finance the project through BOTAŞ's payments for Russian gas alleviates some of these challenges, it does not resolve the fundamental issue of sourcing components for the plant.

Commentary

- **The construction of the Akkuyu nuclear power plant has become increasingly problematic for Turkey over the past two years.** The launch of the first of four reactors, originally scheduled for 2023, has been postponed to 2026 due to difficulties in financing the project by Rosatom. Transaction delays stem from financial institutions' concerns about engaging with the Russian banking sector, which is subject to US sanctions. Furthermore, funds allocated for the plant have been frozen in US banks, most likely deemed to violate the prohibition on transactions with the Central Bank of Russia.
- **Russia's main challenge lies in its restricted access to critical components from Western suppliers needed to complete construction of the plant.** These include turbines, control systems, and radiation-resistant materials. The issue of construction difficulties was raised in May 2025 by Turkish Foreign Minister Hakan Fidan, who appealed to President Putin for assistance in overcoming them. In light of the prolonged construction timeline and the financial and logistical difficulties, in July 2025 Rosatom began negotiations with investors from China, India, the Middle East, and Turkey regarding the sale of a 49% stake in the project. The involvement of a new partner is intended to help bypass Western sanctions and secure both funding and components necessary to complete the facility.

- **The preliminary agreement between Erdoğan and Putin on financing the nuclear power plant only partially addresses the existing problems.** This mechanism most likely involves the Turkish company BOTAŞ transferring payments for Russian gas directly to the account of the Turkish-Russian joint venture Akkuyu Nükleer A.Ş., registered in Ankara and responsible for the project. This is intended to allow Russia to access funds free of sanctions and continue construction. However, it does not resolve the issue of limited access to key components. Therefore, acquiring a partner through a share sale is of crucial importance, as it would allow Akkuyu Nükleer to overcome this obstacle. Although Turkey has the right of first refusal for these shares, local economic actors are likely unable to supply the components or finance them independently, which may prompt Moscow to favour foreign investors, such as those from China. However, the involvement of an additional external partner could create a problem for Russia in the form of an assertive co-owner who might hinder operational decisions during the plant's operation. In Turkey, further loss of control over strategic infrastructure, wholly owned by foreign entities, could raise new concerns about the country's sovereignty and energy security.
- **The construction of Akkuyu, Turkey's first nuclear power plant, is a major strategic investment aimed at diversifying the country's energy sources.** Preparations for the project began in 2010, when Turkey and Russia signed an agreement under which Rosatom established the special purpose company Akkuyu Nükleer A.Ş., registered in Ankara and governed by Turkish law. The Akkuyu plant is planned to consist of four reactors and is expected to cover approximately 10% of Turkey's annual electricity demand. The project is being carried out under the build-own-operate (BOO) model and remains entirely under the control of Rosatom, which is responsible for financing (estimated at \$24–25 billion), construction, 60 – years of operation, and eventual decommissioning of the facility. According to the 2010 agreement, Turkey is obliged to purchase 70% of the electricity produced by the first two reactors and 30% from the other two for 15 years, at a fixed price of \$0.1235 per kWh. After that period, any surplus energy may be sold on the free market.
- **Once construction is completed, the power plant will bind Turkey to Russia for decades in terms of energy dependence,** granting Moscow yet another tool to exert pressure on Ankara in bilateral relations. However, Moscow's weakened position due to sanctions may simultaneously present an opportunity for Turkey to strengthen its leverage in relations with the Russian Federation – for example, when negotiating more favourable gas prices.