

## Potential Nuclear Newcomer Countries

In recent years, dozens of countries have made announcements on more or less concrete plans to start building nuclear power plants in the future. Only three potential newcomer countries have reactors under construction: Bangladesh, Egypt, and Türkiye. All these projects are implemented by the Russian nuclear industry. Otherwise, most plans are in very early stages.

### Few Newcomers Added in the Past 25 Years – Few More Underway

Over the past 25 years, only three countries started up nuclear power programs, Belarus, Iran, and the United Arab Emirates, while two countries terminated the generation of nuclear electricity, Germany and Lithuania.

Three potential newcomer countries had nuclear reactors under construction as of mid-2024: Bangladesh, Egypt, and Türkiye, all implemented by Russia. The impact of sanctions and other recent geopolitical developments on the future of these projects remains uncertain, albeit some effects have already been documented.

Other countries like Kazakhstan, Nigeria, Poland, Saudi Arabia, and Uzbekistan have more or less advanced plans, but so far few of them have selected a design, none has raised necessary financing. Several countries, including Indonesia, Jordan, Thailand, and Vietnam have suspended or cancelled earlier plans.

Some recent key developments in selected countries:

- **Europe:**
  - **Poland.** Following the 1986-disaster in Chernobyl, the construction of two reactors was abandoned. Since then, various attempts to restart a nuclear program failed. Renewed efforts by September 2022 drew bids from EDF (France), KHNP (South Korea) and Westinghouse (US/Canada). Hope was to start operating

a first reactor by 2033. However, the incoming Tusk Government tempered expectations with Industry Minister Marzena Czarnecka stating in early May 2024: “We cautiously assume that it will be 2040, our predecessors had an optimistic scenario of 2032, without having much on the table. I’m realistic; we know very well that all investments of this type are usually delayed.”<sup>1</sup>

- **Türkiye.** Construction of four units started between 2018 and 2022 at the Akkuyu site. Turkish authorities had hoped to connect Unit 1 to the grid in 2023 to coincide with the 100th anniversary of the foundation of the Republic of Türkiye. That target was missed, and startup of the first unit is currently expected in 2025.
- **Africa and Asia:**
  - **Bangladesh.** Two reactors of Russian design have been under construction since 2017–2018. They were scheduled to start up in 2023 and 2024. Reportedly, sanctions have led to delays in the delivery of some equipment and the commissioning of Unit 1 has been pushed back to late 2024 at least.
  - **Egypt.** Construction of the first, Russian-designed, nuclear power plant was launched at the El-Dabaa site on 20 July 2022, even as the war in Ukraine was ongoing. Building of Units 2–4 began between November 2022 and January 2024.
  - **Kazakhstan.** Several potential suppliers had been considered for the construction of small or large reactors. A preferred site was selected but no technology has been chosen and no financing package announced. However, “Rosatom has a certain advantage as supplier of the nuclear island”.<sup>2</sup>
  - **Nigeria.** The country signed nuclear cooperation agreements with several countries and considered the option of developing up to 4 GW of nuclear capacity. However, when in early 2023 Nigeria launched its Energy Transition Plan (ETP) with the goal of carbon neutrality by 2060, nuclear power did not feature amongst the options outlined for electricity generation, while the country’s “Long-Term Low-Emission Development Strategy envisages 8 gigawatts nuclear by mid-century then providing less than one tenth of the power. No concrete investment steps have been taken.

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<sup>1</sup> *Reuters*, “Poland's first nuclear plant seen starting operations in 2040, minister says”, 7 May 2024, see [reuters.com/world/europe/polands-first-nuclear-plant-seen-starting-operations-2040-minister-says-2024-05-07/](https://www.reuters.com/world/europe/polands-first-nuclear-plant-seen-starting-operations-2040-minister-says-2024-05-07/).

<sup>2</sup> *NEI Magazine*, “Kazakhstan continues to pursue NPP plans”, 13 April 2023, see [neimagazine.com/news/newskazakhstan-continues-to-pursue-npp-plans-10756528](https://www.neimagazine.com/news/newskazakhstan-continues-to-pursue-npp-plans-10756528).

- **Saudi Arabia.** In early May 2024, it was reported<sup>3</sup> that the government had let slip the deadline for bids from China, France, Russia, and South Korea for the construction of two large reactors. While a potential site has been selected, no new bidding deadline was set, thus no technology has been chosen, no financing package agreed, and no construction schedule determined.
- **Uzbekistan.** In May 2022, officials announced that a site for the construction of two Russian-designed VVER-1200 reactors had been chosen in the Farish district of the Jizzakh region, near Lake Tuzkan. The financing package had been under negotiations at the time and no further information was released since. Then, in early May 2024, Rosatom announced the signing of an agreement for the construction of a nuclear power plant in the Jizzakh region comprising six small modular reactors with a capacity of 55 MW each based on a Russian design with a total capacity of 330 MW. Rosatom’s Director General Likhachev commented: “This is not just a preliminary agreement; we are starting construction this summer.”<sup>4</sup>

Nevertheless, many of the agreements are non-binding and, with the exception of the three newcomer countries that have reactors under construction, most of the projects are many years from implementation, let alone completion. Many might be abandoned in due course as has been the case countless times in the past.

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<sup>3</sup> *Middle East Economic Digest*, “Saudi Arabia foregoes April nuclear bid deadline”, 2 May 2024, see [linkedin.com/pulse/breaking-news-saudi-arabia-foregoes-april-nuclear-bid-deadline-meed-wp09f/](https://www.linkedin.com/pulse/breaking-news-saudi-arabia-foregoes-april-nuclear-bid-deadline-meed-wp09f/).

<sup>4</sup> *The Diplomat*, “Uzbekistan, Russia to Start Construction of Small Nuclear Power Plants”, 29 May 2024, see [thediplomat.com/2024/05/uzbekistan-russia-to-start-construction-of-small-nuclear-power-plants/](https://thediplomat.com/2024/05/uzbekistan-russia-to-start-construction-of-small-nuclear-power-plants/).