Asian Nuclear Power Developments
(First Half) Q2 2025

Overview

Historically, we have published Asian research on a quarterly basis and focused on investments which accelerate energy transition. However, with all of the public attention and government focus on integrating nuclear into an increasing number of countries energy mix, we decided to release this report focused on specific developments on nuclear in several Asian countries. Note, all of this activity was reported in just one half of Q2- not the entire quarter.

The techniques in this short document involve Taiwan adopting the USA strategy of re-using prior nuclear sites and Rosatom building nuclear plants in countries with a history of seismic activity/risk.

Philippines

In early April, it was reported that The Marcos administration is assessing several areas across the Philippines as possible sites for nuclear energy development in a bid to stick with its previously announced 2032 timetable. In the interview, Energy Undersecretary Garin stated that the Department of Energy (DOE) had evaluated multiple sites where nuclear power plants could be constructed.

- Assessed were areas in Bataan, both in Morong and Mariveles and locations in Bulacan and Batangas. These were judged to be crowded but also potential sites for data centres.
- Southern provinces of Masbate and Palawan were also assessed. While Palawan is one of the most stable sites for nuclear development, the key issue lies in the province's lack of connection to the national grid.
- DOE is also setting its sights on provinces in the western portion of the Visayas and Mindanao that are not prone to tsunami.

The Government's roadmap aims to deliver at least 1.2 GWs of nuclear capacity by 2032, doubling to 2.4 GWs by 2035 and doubling again to 4.8 GW by 2050. In fact, the government plans for nuclear plant construction before the end of President Marcos' term, as he has consistently advocated nuclear power as a way to provide affordable electricity to Filipino households and businesses.(1)

Vietnam

In April, Vietnam officially approved a revised version of its national power development plan, allocating $136 billion by 2030 to strengthen long-term energy security and includes nuclear power for the first time.

By 2030, solar energy (its leading source) is expected to contribute over 25% of Vietnam's electricity mix. In comparison, LNG and coal are projected to account for 12.3% and 16.9% respectively.

The plan also formally incorporates nuclear power into Vietnam's energy structure, with the first plants planned to come online between 2030 and 2035. Installed nuclear capacity is projected to reach from 4.0- 6.4 GW, equivalent of around 4-6 large-scale nuclear power plants. The government said another 8 GW of nuclear capacity would be added to the mix by mid-century.(2)

In mid-May, following the two country Presidents meeting in Moscow, Vietnam and Russia agreed to quickly negotiate and sign agreements on building nuclear power plants in Vietnam.

These will include an interdepartmental roadmap for the development of nuclear technologies for the period up to 2030. The roadmap covers the construction of a nuclear science and technology centre, the supply of fuel for the

Footnotes:
(1) https://www.philstar.com/business/2025/04/02/2432771/government-maps-out-potential-nuclear-sites
(2) https://www.nucnet.org/news/vietnam-approves-updated-energy-plan-that-includes-nuclear-for-first-time-4-4-2025

research reactor in Da Lat, the participation of the Vietnamese side in the Consortium "International Research Centre based on the MBIR reactor" and the training of personnel for the Vietnamese nuclear industry.(3)

Myanmar

At the end of April, Rosatom announced "The recent earthquake has not affected Rosatom's (nuclear) plans in Myanmar. " The agreement, signed previously by leaders of both countries, involves cooperation to build a SMR in Myanmar with an initial 110 MW capacity, consisting of two 55 MW reactors manufactured by Rosatom. The 28th March earthquake, which measured 7.7, left over 3,500 dead. Myanmar is one of the world's most seismically active countries.(4)

Indonesia

In early May 2025, Reuters reported that Indonesia announced plans for a major expansion in renewable energy by 2040, including the introduction of 10 GW of nuclear power. It expects contracts to be given in the next five years. This would more than double current capacity as Indonesia, one of the world's biggest emitters of greenhouse gases, aims for carbon neutrality before 2050.

By 2040, Indonesia aims to have an additional 103 GW power capacity, made up of 75 GW from solar, wind, geothermal and biomass, 10 GW from nuclear energy, and the remaining 18 GW from gas. Indonesia's current installed power capacity is around 90 GW, with circa 80% from fossil fuel, and 20% from clean electricity (hydro leads with 8%).(5) Zero from nuclear.

Major players indicating their interest in playing a role to develop Indonesian nuclear to date include Rosatom (Russia), China National Nuclear Corporation (China), Rolls Royce (UK) , EDF (France) and NuScale Power (USA).(6)

Previously, Indonesia had fast-tracked its development target for nuclear power plants from 2032 to 2029 and identified 29 sites that could accommodate these facilities. Once operational, Indonesia plans to generate 45-54 GW of nuclear power, transforming its energy generation previously dominated by fossil fuels up to 2023.

ThorCon PT Indonesia, the local unit of US-based ThorCon, announced plans to build Indonesia's first nuclear power plant (FNPP) located in Bangka-Belitung province. It will have a capacity of 500 MW (2 x 250 MWe) with a prototype in 2029 and then start operations by 2032.(7)

Taiwan – Reopening Closed Nuclear Plants

In mid-May, Taiwanese lawmakers revised a nuclear power bill that effectively enables the restarting of Taiwan's atomic plants. Under the amended law, nuclear plants that could previously only operate for 40 years will be allowed to renew or extend their licences for up to 20 years at a time. The revision also allows operators to apply for licence renewal before or after it expires.

Taiwan had three nuclear power plants with six active reactors at their peak in the 1980s but has been phasing out nuclear power since then. The government several years ago set a goal of creating a "nuclear-free homeland" by 2025, thus all nuclear power plants had to be decommissioned as their operating licences expired.

The bill was introduced only days before Taiwan's last operating reactor is set to go offline (17th May).While this shut down cannot be averted, Premier Cho Jung-tai announced he would not oppose bringing back decommissioned reactors if approved legally and following at least a three year to review safety before a restart (Taipower).(8)

Taiwan's 2023 energy mix was (LNG imports) 40%, also coal nearly 40%.

Footnotes:
(3) http://atominfo.ru/en/news5/e0404.htm
(4) https://www.reuters.com/business/energy/russias-rosatom-says-will-proceed-with-myanmar-nuclear-plant-despite-quake-2025-04-22/
(5) https://ember-energy.org/countries-and-regions/indonesia/
(6) https://www.reuters.com/sustainability/cop/indonesia-plans-10-gw-nuclear-power-major-renewable-energy-push-presidential-2025-05-01/
(7) https://asian-power.com/regulation/exclusive/indonesia-leads-race-build-smrs-in-southeast-asia
(8) https://www.bangkokpost.com/thailand/general/3024687/taiwan-proposes-to-revive-nuclear-power-plants

Following USA lead

Taiwan is not alone in opting for deciding to reopen previously operating nuclear power plants. In the USA in 2024:

- In September, Constellation Energy announced plans to spend $1.6 billion to restart the 835-MW Three Mile Island Unit 1 reactor. Microsoft signed a $16 billion agreement to purchase energy from the reanimated plant over the course of 20 years in order to power its data centres. Three Mile Island Unit 2, the site of a partial meltdown in 1979, and is not being restarted.
- At the end of September 2024, Holtec International closed a $1.5 billion loan from the US DOE's Loan Programs Office which will be used to finance the reopening of the 805-megawatt Palisades Nuclear Generating Station in Michigan. The Palisades plant was closed by Holtec in May 2022 due to financial issues after 50 years of operation. It was the eighth-oldest nuclear plant in the USA at the time it was closed. The energy generated will involve a number of USA Midwestern states.(9)

Uzbekistan

In mid-May 2025, Rosatom issued a statement that it had begun manufacturing reactor equipment for the first unit of the low-capacity nuclear power plant in Uzbekistan. Its plant in Saint Petersburg has poured the first steel casting weighing 205 tons for the RITM-200N reactor unit

Under the agreement signed between Uzbekistan and Russia in May 2024, construction is planned for a small-scale nuclear power plant consisting of six reactors, each with a capacity of 55 MW, totalling 330 MW, in the Jizzakh district. In April 2025, construction began on the installation and assembly base and supporting buildings for the SMR project, although the first reactor of the nuclear plant is scheduled to be commissioned five years after the start of construction.

The station will be based on the RITM-200N model, a land-based adaptation of the RITM-200 pressurized water nuclear reactors currently used in nuclear-powered icebreakers. However, this technology has not yet been implemented on land. The project's estimated cost is not expected to exceed $2 billion, with financing largely sourced from external loans.(10)

In March, French nuclear materials group Orano and state-owned Uzbek uranium producer Navoiyuran, announced the entry of ITOCHU Corporation, which is acquiring an undisclosed minority stake in the JV. Local Uzbekistan uranium will be used in the reactors.(11)

Kyrgyzstan

In mid-May, head of the Rosatom, announced that Russia is ready to start building a low-power nuclear power plant in Kyrgyzstan, but Bishkek must first determine the specific parameters of the project. Moscow is ready to build a block nuclear power plant with a capacity from 110 to 440 MW on the basis of the RITM-200N installation, the prototype of which was a reactor developed by Russia for a new generation of nuclear icebreaker.

Similar to Myanmar, almost the entire territory of the republic is in a zone of increased seismic danger, thus construction time might need to be extended to 6-7 years.

This would become the 2nd Central Asian nuclear power plant, following Uzbekistan's, which is being built on the border between Uzbekistan and Kazakhstan.(12)

Footnotes:
(9) https://www.canarymedia.com/articles/nuclear/palisades-three-mile-island-nuclear-restart
(10) https://kun.uz/en/news/2025/05/13/rosatom-begins-manufacturing-reactor-for-uzbekistans-first-small-nuclear-plant
(11) https://www.world-nuclear-news.org/articles/orano-navoiyuran-agree-to-develop-uzbek-project
(12) https://iz.ru/en/node/1886235