

Are small modular reactors a key component of Russia's nuclear energy strategy?

The development of small modular reactors (SMRs) is one of the key components of Russia's nuclear energy strategy to 2050. The main role of SMRs in the context of future deployment in Russia is to power remote regions, including the vast and scarcely populated lands of Siberia and the Russian Far East, which lack extensive power transmission lines.

Where will Russia's first small modular reactor be built?

Nuclear regulator Rostekhnadzor has granted a licence to build the country's first land-based small modular reactor, in the Republic of Sakha (also known as Yakutia) in Russia's Arctic north. How a completed plant could look (Image: Rosatom/Telegram)

What is a small modular reactor?

The small modular reactor (SMR) is a class of small nuclear fission reactor, designed to be built in a factory, shipped to operational sites for installation and then used to power buildings or other commercial operations. The term SMR refers to the size, capacity and modular construction. Reactor type and the nuclear processes may vary.

What type of reactors are used in Russia's nuclear power plant?

The nuclear unit features small modular reactors (SMRs) technology. Eleven of Russia's reactors are of the RBMK 1000 type, similar to the one at Chernobyl Nuclear Power Plant. Some of these RBMK reactors were originally to be shut down but have instead been given life extensions and uprated in output by about 5%.

What is Russia's largest nuclear engineering company?

Atomenergoproekt: by far Russia's largest nuclear engineering company designed to build up to 8 reactors per year. OKBM Afrikantov: nuclear reactor design and engineering company. The world's leading company in production of fast breeder reactors.

Which countries have built modular reactors?

Working with Oregon State University (OSU), NuScale Power developed the first Nuclear Regulatory Commission approved model for the US market in 2022. As of 2024, only China and Russia have successfully built operational SMRs. There are more than 80 modular reactor designs under development in 19 countries.

o The SVBR-100 is a multipurpose small modular fast reactor lead-bismuth (LBE) cooled, 100 MWe. o SVBR-100 is the Russia's first innovative project in NPP development conducted in the format of public-private partnership - Rosatom opens the doors for international investors in the SVBR-100 reactor project

The small modular reactor (SMR) is a water-cooled RITM-200N 55 MW reactor that has been adapted from the RITM-200 series used to power Russia's latest fleet of nuclear-powered icebreakers. It will be built near Ust-Kuyga in Yakutia (also known as Sakha) in Russia's Arctic north, with the aim of commissioning in 2028.

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Small modular reactors (SMRs) are disrupting conventional notions surrounding nuclear power. Smaller, more compact, and producing minimal emissions, this innovative alternative to traditional nuclear power is receiving more public and private sector attention as governments across the world scramble to meet global energy needs reliably and ...

Russia has the largest number of small nuclear reactors [1] in the world. [2] Sortable table Name Power (in MW e) Technology Producer Status [3] a: 0: a: a: a EGP-6: 11: ... Small modular reactor; Micro nuclear reactor; List of nuclear reactors; List of small nuclear reactor designs; List of United States Naval reactors; List of Soviet Naval ...

Nikiet is working on a variety of small modular reactor designs based on traditional integral pressurised water reactors and high-temperature gas-cooled reactor technology. The range of generated electric power is 1-100MW, with a ...

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