

Russia

Russian nuclear industry



Overview

*According to PRIS

11

nuclear power plants (including the world's only floating NPP)

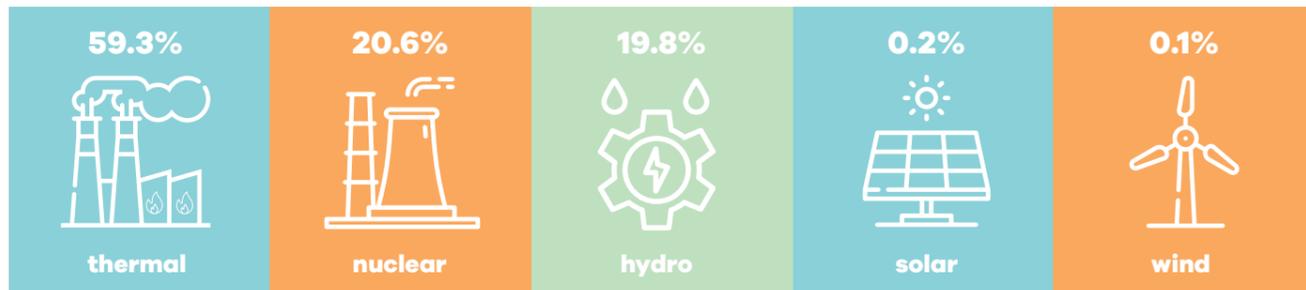
38

nuclear reactors

03

nuclear reactors under construction

Generation mix



Russian nuclear facts

02 commercial-scale Fast Breeder Reactors (FBR) are operating in Russia (BN-600, BN-800)

05 nuclear-powered icebreakers are operating along the Northern Sea Route

30% of the electricity produced in the European part of Russia is generated by nuclear power plants



Viewpoint

High-tech solutions at the service of people and sustainable development

The world's first nuclear power plant (NPP) to contribute to a country's electrical grid was built in the Russian city of Obninsk in 1954. Today, Russia ranks fourth in the world in terms of the number of operating nuclear power units (38). Russia's range of nuclear reactors includes pressurised water reactors in the VVER series, high power channel reactors in the RBMK class, and fast sodium reactors. The world's first lead-cooled fast reactor BREST-300-OD is currently being built in the Tomsk region, while low-power EGP-6 reactors and the world's first civilian floating nuclear power plant Akademik Lomonosov are already successfully operating beyond the Polar Circle.

Rosatom's mission is to provide "high-tech solutions for the service of people." The company works to improve the quality of people's lives and contribute to mankind's sustainable development. We build nuclear power plants not only in Russia, but also abroad, develop nuclear applications for use outside of the energy sector and advance nuclear science, and help countries master high-tech solutions and create nuclear infrastructure.

Russia has created a comprehensive programme to help develop its nuclear science and nuclear technology sector. Rosatom's priorities in the mid-term are to develop and provide two-component nuclear energy system, a closed nuclear fuel cycle, small and medium-sized nuclear power plants, plasma technologies, and thermonuclear fusion.

A separate area of our activity is hydrogen energy. In the near future, we will start the industrial production of green hydrogen at Russian NPPs both for domestic consumption and export. There are plans to build a railway communication network on the island of Sakhalin with Rosatom's participation.

We are convinced that closing the nuclear fuel cycle is the future of nuclear energy – and fast reactor technologies are an integral part of this task. Closing the nuclear fuel cycle will transform the peaceful atom into a nearly inexhaustible renewable energy source with a lifespan of many millennia. And in Russia, this is no longer some theoretical technology of the distant future – a complex product will be made available to the market within the coming 10-15 years.

In our opinion, the foundation of the world's future energy balance is the so-called "green square," which comprises nuclear, solar, wind, and hydropower. We do not see nuclear energy as a competitor to existing renewable sources, but as a partner working towards the same goal in a playing field where all sides of the square complement and reinforce each other. This is the most reliable and efficient way to build a carbon-free society of the future, one in which all tools at our disposal, including nuclear power, are harnessed for the betterment of the world.



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