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**The innovative SNPP in Yakutia obtained positive conclusion for the power unit construction from the Russian Natural Resources Supervision Authority**

*The design of the first land-based SMR nuclear power plant in the modern Russia complies with ecological requirements and national rules for environmental protection*

Russian Natural Resources Supervision Authority (Rosprirodnadzor) approved the positive conclusion of the expert commission of the State Environmental Impact Assessment on the materials for justifying the construction license for No. 1 power unit of the Yakutian small nuclear power plant (SNPP).

Materials to justify the license, including environmental impact assessment documents, were handled to Rosprirodnadzor following the results of the public hearings in the village of Ust-Kuiga in Yakutia in December 2023. During the public hearings, local people got detailed information about organizing the construction of the Yakutian NPP, layout plan for organizing the land spots and environmental protection measures.

The nuclear power plant in Yakutia, based on the RITM-200N reactor unit with a capacity of 55 MW, is Rosatom’s flagship project in the segment of land-based SNPPs. Currently, work is underway on construction of the NPP external infrastructure facilities, including buildings of a temporary construction camp for 1,500 people. The access road from the village of Ust-Kuiga to the NPP construction site is also being built along with the production and technical base No. 2.

Today the development of the Russian Arctic zone is considered a state priority. This region has a shortage of electricity and requires local energy supplies. At the same time, there is no sense in building large power plants in this region as it’s not economically feasible. That is why as a leader in small modular reactors technologies Rosatom once decided to replicate SMR projects in such regions. The floating nuclear power plant operating in Pevek (FNPP, Rosenergoatom branch office) already addresses the issues both to replace the Bilibino NPP capacities as well as to provide power supply to the Baimskaya ore zone’s projects. The successful experience of its operation in the Arctic and the Far North has laid the ground to further leverage SMR technology for hard-to-reach and isolated areas. The dynamics shows that every year the share of carbon-neutral electricity in the total regional energy balance is steadily growing amounting to 28.5% of all electricity produced in Chukotka in 2023.

**For reference:**

The project for the construction of a Russian-designed SNPP utilizes the latest RITM-200N reactor plant which is based on many years of experience in operating small reactors on ships of the Russian nuclear-powered icebreaker fleet (over 400 reactor-years). Implementation of the SNPP project will ensure energy self-sufficiency and social and economic development of the Arctic Yakutia. Fuel supply for the SNPP is required once every 5 years, which ensures stable power supply to vital industrial enterprises and social facilities.

The SNPP will become the heart of one of the largest mineral resource centers in Russia which in the future will provide power to industrial enterprises. This involves development of the Kyuchus, Deputatskoye, and Tirekhtyakh deposits, construction of transportation and engineering infrastructure, social facilities in Ust-Yansk and Verkhoyansk Districts, and construction of a 110 (220) kV power transmission line Ust-Kuiga – Tirekhtyakh – Deputatsky. The SNPP project entails positive transformations in the township of Ust-Kuiga and Ust-Yansk District, which will create a developed area that is comfortable for work and life.

Modern NPP designs with RITM series reactors have a high level of safety, achieved through multi-level systems and shell barriers, as well as a combination of active and passive safety systems. These systems prevent the possibility of an accident, and several levels of barriers built into the design of the stations prevent the release of radioactive substances into the environment. SMR NPPs ensure the energy independence of the region, stable electricity and heat supply with clean energy. They can benefit energy-intensive industries, and reduce emissions of harmful substances into the atmosphere by replacing existing generation sources, in particular diesel ones.

Rosenergoatom Joint-Stock Company (a part of the Electric power division of the Rosatom State Corporation) manages 11 operating Russian nuclear power plants, including a floating nuclear thermal power plant (FNPP) located in Chukotka. The share of electricity generated by nuclear power plants in Russia's energy balance is about 20%, and by 2045, as ordered by the Russian President, should reach 25%.