Experience site licensing for Yakutsk SMR

Saint Petersburg, Russian Federation.

Andrei Chernoknizhnikov
Head of the Advanced NPP Department
Branch office for capital projects implementation
Rosenergoatom, JSC
Basis for the project implementation

01 Comprehensive program of the Government of the Russian Federation for development of equipment, technologies and scientific research of nuclear energy use

02 Decision of Rosatom to start the pilot project

03 The need for energy supply to mining facilities
Siting of the Yakutsk SMR

For Yakutsk SMR deployment has been chosen Republic of Sakha (Yakutia)
Technical characteristics of Yakutsk SMR

- **Reactor unit** — RITM-200M
- **Electrical power** — 55 MW
- **Thermal power** — 190 MW
- **UCF** — not less then 90%
- **Refueling cycle** — not less then 5-6 years
- **Design service life** — not less then 60 years

* Unit Capacity Factor
Project unique conditions

- Extreme climatic conditions of Yakutsk SMR location region
- Experience for a possible series of the referent projects
- Limited available knowledge about Yakutsk SMR location region
- Complex logistics routes for the organization of construction and operation
Completed "milestones" of the project

01. The memorandum of understanding between Rosatom and state authorities was approved in 2020.

02. Priority research has been carried out to confirm the safety of the possible deployment of the SMR with RITM-200M reactor unit.

03. Site preliminary engineering surveys have been carried out.

04. Cost assessment, environmental impact assessment and related documentations have been developed.
Expertise and approval of the design documentation

The requirements of the Russian Federation legislation regarding siting for NPP have been met.

Public acceptance procedure for SMR site have been held.

State ecological expertise of the environmental impact assessment and related documentation successfully passed.
In October 2022 the PSAR materials were sent to Rostechnadzor (Regulator)

The main purpose of the review was to prove the possibility of allocation of the SMR at the selected site – to confirm PSAR compliance with the requirements of Russian codes and standards

The process of the site license obtaining, including a number of consultations with Rostechnadzor experts, lasted about 6 months

21.04.2023 site license for Yakutsk SMR has been approved by Rostechnadzor
Main tasks of the project in 2023

- Execution of engineering surveys (design stage)
- Development of the design documentation for construction
- Development of the Safety analysis Report of the Yakut SMR
- Development of the documentation, sufficient to obtain a license for construction and a construction permit
- State expertise in order to codes and standards
Thank you

Andrei Chernoknizhnikov
Head of the Advanced NPP Department
Branch office for capital projects implementation
Rosenergoatom, JSC
Phone: +7 (495) 783 01 43
E-mail: chernoknizhnikov-as@rosenergoatom.ru