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**Start-up of the first standby diesel generator at Akkuyu NPP Unit 1 completed**

*Standby diesel generators will ensure uninterrupted operation of NPP’s active safety systems*

**February 21, Büyükeceli, Mersin province, Türkiye. – The first standby diesel power plant (SDPP) was successfully launched at Akkuyu NPP Unit 1 (the plant is being built by Rosatom State Corporation in Türkiye).**

The equipment commissioning specialists started the installation at idle and began preparations for a step-by-step verification of its operation under load. In total, three standby diesel generator sets (DGS) will operate at each Unit the Akkuyu NPP.

After switching on, about 50 control operations will be performed at the DGS in various operating modes. After the specialists are convinced of the reliability of all DGS systems when operating at the rated power level, the installation will be switched to the “on-duty” mode. The standby diesel generator is working in this mode during the NPP operation. The readiness to receive the SDPP load does not exceed 15 seconds from the moment of receiving the start signal. The whole process takes place automatically. In addition, putting diesel generators on duty is a mandatory requirement for the start of the reactor cold and hot tests.

“Standby diesel power plants are one of the key elements of nuclear power plant safety systems. Each Unit of the Akkuyu NPP is equipped with three such power plants. They serve for the autonomous power supply of the nuclear power plant in case of a shutdown of the main power supply. Each of the three standby diesel power plants is equipped with a diesel generator set. Today we have launched the first of them, the DGS of the standby diesel power plant of the normal operation system. Together, three diesel generators on each Unit will be able to provide electric power to all the unit systems provided for by the project for at least 72 hours without refuelling,” said, Akkuyu Nuclear JSC Deputy Director of the NPP under Construction **–** Chief Technology Officer **Andrey Zhukov**.

**For reference:**

**About diesel generator sets**

The project of modern Akkuyu NPP Power Units with Russian-designed VVER-1200 reactors provides for the use of three diesel generator sets for each Power Unit: two DGS of the emergency power supply system and one DGS of the normal operation system.

The capacity of each set will be 6.3 MW. They are intended for power supply of the main technological equipment of the plant in case of disconnection of the external power source before transfer of the reactor plant to a safe state. Each diesel generator set is located in a separate building of a standby diesel power plant next to the main buildings of the NPP Power Unit.

To ensure high launch reliability, each DGS is equipped with a backup launch circuit, which is carried out by a signal from the safety control systems. The project provides for the possibility of remote start-up of diesel generators from a block or standby control point of the NPP, as well as from its own shield of the standby power plant. Diesel fuel reserves at the SDPP are designed for autonomous operation of the units during the day. In total, the NPP site provides a fuel supply for the operation of each diesel generator set for at least 6 days. This time is more than enough to restore normal power supply.

Each SDPP diesel generator is equipped with autonomous fuel, cooling, oil, starting air, heating, ventilation, and power supply systems of its own needs.

The use of three independent standby diesel power plants is an example of the implementation of the principle of diversified protection. This approach to building the safety of automated NPP control systems, fixed in the safety standards of the International Atomic Energy Agency (IAEA), requires two or more standby systems or one function for the performance, in this case, the power supply of NPP systems.

**About the Akkuyu NPP Project**

Akkuyu NPP is the first-ever nuclear power plant in the Republic of Türkiye being built by Rosatom. The Akkuyu NPP project includes four power units equipped with Generation 3+ VVER reactors of Russian design. The capacity of each NPP power unit will be 1200 MW.

Akkuyu NPP is the first project in the global nuclear industry being implemented according to the Build-Own-Operate model.

Russia is actively developing scientific and technical cooperation with all interested countries. The implementation of major international projects also continues. Rosatom and its divisions take an active part in this work.