

Nuclear Stations of Low Power (SMR): Past, Present, Future

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Interest to SMR has arisen from the very beginning of atomic energy development. It is caused by independent energy resource creation for deleted and hard-to-reach areas, where the use of traditional organic sources of energy is impossible or complicated, and electric power lines are absent. Development of small nuclear energy in USA began in 50s of last century and it was subordinated to the tasks of Department of Defense. To solve these tasks 8 experimental SMR of electric power from 0,3 up to 3 MW were manufactured and put into operation. In 60s these stations were decommissioned. Floating nuclear power plant SMR Sturgis (MN-1A) was in operation since August 1968 till July 1976 in Panama canal region (on lake Gatun).

In the USSR design and calculation of SMR were made from the beginning of 50s of last century. The purpose of these researches was to reveal the most perspective SMR projects for implementation as demonstration and industrial samples. It has been worked about 20 variants of SMR with electric power of 1-1,5 MW with various reactors (on thermal, intermediate and fast neutrons) and different types of execution (stationary, unit-transportable, mobile and floating stations).

This work provides the implemented and modern, innovational projects in Russia and in the world.

Keywords: stationary, unit-transportable, mobile and floating stations

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