

How is nuclear energy in the reactor converted into electrical energy?

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The chain fission reaction is accompanied by a considerable release of thermal energy. This heat is taken from the active zone of the reactor by the coolant – a liquid or gaseous substance that passes through the core of the reactor. The thermal reactors mostly use water as a coolant and the fast-neutron reactors – liquid metals (such as in BN 600 – sodium).

Simultaneously, thermal energy accumulated by the coolant is used to produce steam under pressure. The steam is used to power the turbine of an electric generator.