



ENGINEERING PRINCIPLES common to all magnetic fusion reactors are diagrammed. A magnetic field must confine the fusion plasma; an auxiliary heating system must help to raise its temperature; a fuel-recycling system must keep it pure and well supplied with thermonuclear fuel. The heat the plasma releases must be withstood by the first wall of the reactor. The neutrons the plasma releases must penetrate into the blanket, where the energy the neutrons deposit must be transferred (in the form of heat) to a coolant. In turn the coolant can generate steam, the steam can drive turbines and the turbines can generate electricity. Nuclear reactions in the blanket must also "breed" tritium, which is radioactive and is extremely rare in nature.

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Figure 2