

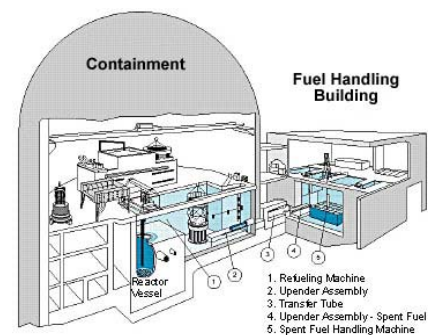
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**Nuclear Power Technology**

The basic principle behind a nuclear reactor is simple: the heat produced by a controlled nuclear fission chain reaction is used to create steam pressure that drives a power-generating turbine.

But the technology required to implement this principle efficiently and safely is enormously complex. The fission reaction must be maintained at the correct rate and quickly adjusted or stopped when necessary. Water temperature and pressure must be carefully controlled. Elaborate, redundant cooling systems are needed to guard against the possibility that the nuclear fuel will overheat and start to melt.



Different reactor designs approach these requirements in different ways, each with its advantages and disadvantages.

Our nuclear power experts have produced the resources linked below to help non-technical readers understand how these complex machines work—and what can go wrong with them.

## NUCLEAR POWER TECHNOLOGY BASICS

[How Does a Boiling Water Reactor Work?](#)

[Got Water? Nuclear Power Plant Cooling Water Needs](#)

[Overview: Pressurized Water Reactor Problems](#)

[How Nuclear Power Works](#)

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