

NUCLEAR *facts*



How safe are CANDU nuclear reactors?

CANDU NUCLEAR REACTORS ARE VERY SAFE. THERE ARE
THREE BASIC REASONS FOR THIS:

- It is impossible for a nuclear power plant to explode like an atomic bomb.
- The many safety systems of the CANDU nuclear reactor take into account not only human error but also equipment failure and external risks such as earthquakes.
- Should an accident occur, CANDU reactors are designed to contain radioactive emissions within reactor buildings.

What is the safety philosophy?

The safety philosophy used in CANDU nuclear power plants is to limit the chances of an accident occurring and to limit the effects of an accident, should one occur. This is called the “defence-in-depth” approach and sets high standards for designers, constructors and operators.

There are five main aspects to defence-in-depth:

- high-quality station equipment;
- nuclear plant operator training;
- fault detection and correction;
- special, independent safety systems;
- containment systems.

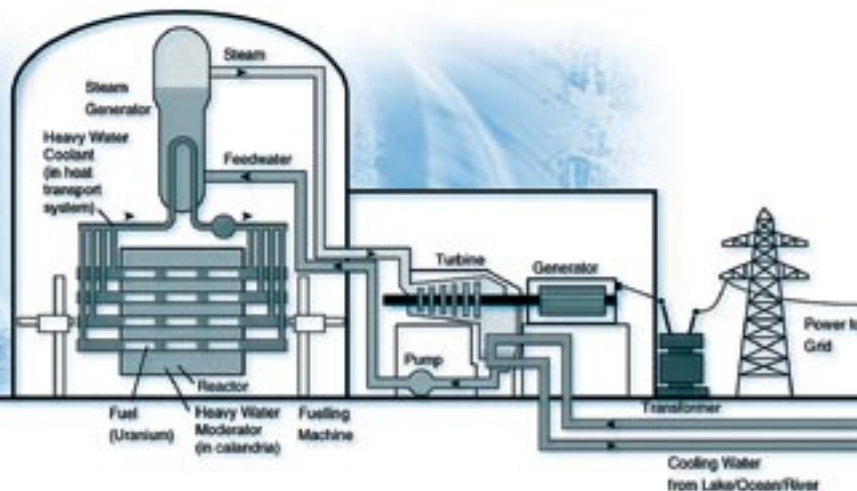
What is meant by high-quality station equipment?

All suppliers of components to our CANDU nuclear power plants, such as manufacturers of pumps, valves, piping and electrical systems, must meet stringent qualifications. In addition, critical control components are duplicated. This means that if one component malfunctions, another will take over and the safety of the station will not be jeopardized.

How are nuclear reactor operators trained?

The training of nuclear reactor operators is a very important aspect of the defence-in-depth nuclear safety philosophy.

Nuclear power station control room operators are carefully selected and spend approximately eight years in training. They must be authorized by the Canadian nuclear regulatory



CANDU nuclear reactors contain multiple safety barriers to ensure protection of workers and the public in the event of an accident.

