

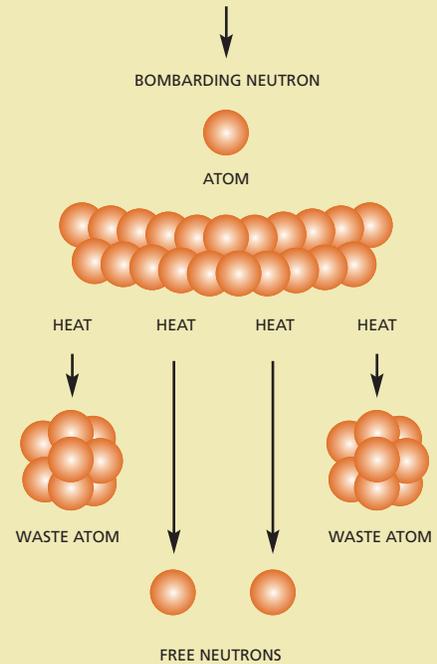
# Generating Electricity From Nuclear Energy

The most modern power generation plants built today use the same principles that Thomas Edison used in the plants he built over a century ago:

- Water is heated to form steam
- The steam spins the propeller-like blades of a turbine
- The turbine spins the large shaft of the generator. Coils of wire on the spinning generator shaft create a magnetic field to produce electricity.
- Electricity is delivered to users over transmission lines.

A key difference among power plants is the source of the heat that is used to boil the water into steam. Fossil-fuel plants create that heat by burning coal, natural gas or oil.

Nuclear power plants do not burn a fuel. Instead, they use a process known as fission which involves splitting the atoms of its fuel – small pellets of uranium.



## The Nuclear Difference: Electricity from Fission

The core of every atom – the nucleus – contains energy. When an atom splits, it releases that energy in the form of heat, along with sub-atomic particles like neutrons. A nuclear reactor uses a controlled chain reaction – the neutrons from splitting uranium atoms strike other atoms and cause them to split, resulting in a continual release of heat that is used to boil water to make steam.