

Power Plants

Apparatus

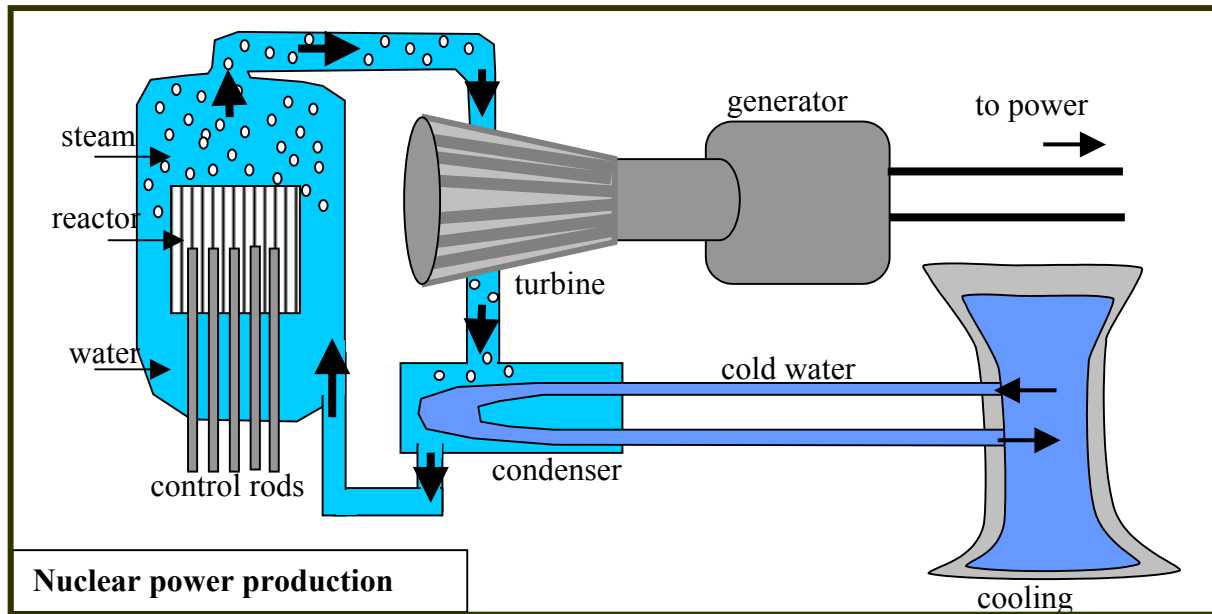
set of diagrams showing different means of electricity generation, see examples below and on next page

Action

The students examine the diagrams and find similarities between them. They should try to follow the energy conversions involved. They should also try to think of examples of electricity production which do *not* use a generator.

The Physics

Virtually all commercial electricity production uses a generator. Usually water, either as liquid or as steam, is used to drive a turbine which spins a coil in a generator to produce an *emf*. Examples include wind power, coal and other fossil fuel power plants, geothermal power and nuclear power plants. Solar cells *do not* use a generator, they use the photoelectric effect to produce a current. See the demonstration materials for the electricity generator for details on how the *emf* is produced.



Accompanying sheet

Power Plants

Compare the different means of generating electricity shown.
Which process or processes are used to produce electricity for your home?

What do you notice is similar about all these processes?

Can you think of a means of generating electricity
which does not use a generator?

Power generation diagrams to go with Power Plants Activity.

