

## **Coal and oil fired power stations**

The diagram shows a typical coal or oil fired power station. A brief outline of its operation is as follows.

Coal or oil is burned in a furnace to generate heat.

Water in the boiler or heat exchanger absorbs the heat and is converted into steam at a high pressure.

The steam enters a turbine causing it to spin and converts about 50% of the energy stored in the steam into kinetic energy.

The steam is condensed to water and is pumped back into the boiler. This is done by using cooling water from a nearby river or sea or using cooling towers.

The turbine turns a generator which converts the kinetic energy into electrical energy.

The electricity passes through a step-up transformer before entering the National Grid, in order to reduce energy loss in transmission.