

# Cambridge IGCSE Chemistry

## Topic 6: Chemical energetics

### Energy transfer

#### Notes



*Describe the release of heat energy by burning fuels*

- Burning fuels (i.e. combustion) releases heat energy
  - Reacting fuels with oxygen / oxidation of fuels

*State the use of hydrogen as a fuel*

- Hydrogen can be used as a fuel (can be burnt to produce energy)

*(Extended only) Describe the use of hydrogen as a fuel reacting with oxygen to generate electricity in a fuel cell (Details of the construction and operation of a fuel cell are **not** required)*

- Use of hydrogen as a fuel:
  - Oxidised (reacted with oxygen) within the fuel cell to produce a potential difference
  - Overall reaction in a hydrogen fuel cell involves the oxidation of hydrogen to produce water
  - Fuel cell involves the reaction of a fuel (in this case: hydrogen) with oxygen to produce electricity

*Describe radioactive isotopes, such as  $^{235}\text{U}$ , as a source of energy*

- Radioactive isotopes can be used as a source of energy
- Nuclear power stations use fission of e.g. uranium to generate heat

