

What are the pros and cons of different fuels?

Earlier in the course, you learnt about combustion as an example of a chemical change and how reactions can be endothermic or exothermic. This task is designed to extend your thinking, by comparing the pros and cons of fuels in terms of their products of combustion.

Task

Make a leaflet to advise homeowners on the pros and cons of fuels that they use, in terms of their products of combustion. Use your own knowledge of the subject and the information at the end of this activity sheet.

Your leaflet should cover:

- the general word equations for incomplete and complete combustion
- examples of pollutants that can be produced by combustion
- an explanation of why combustion is an exothermic reaction.

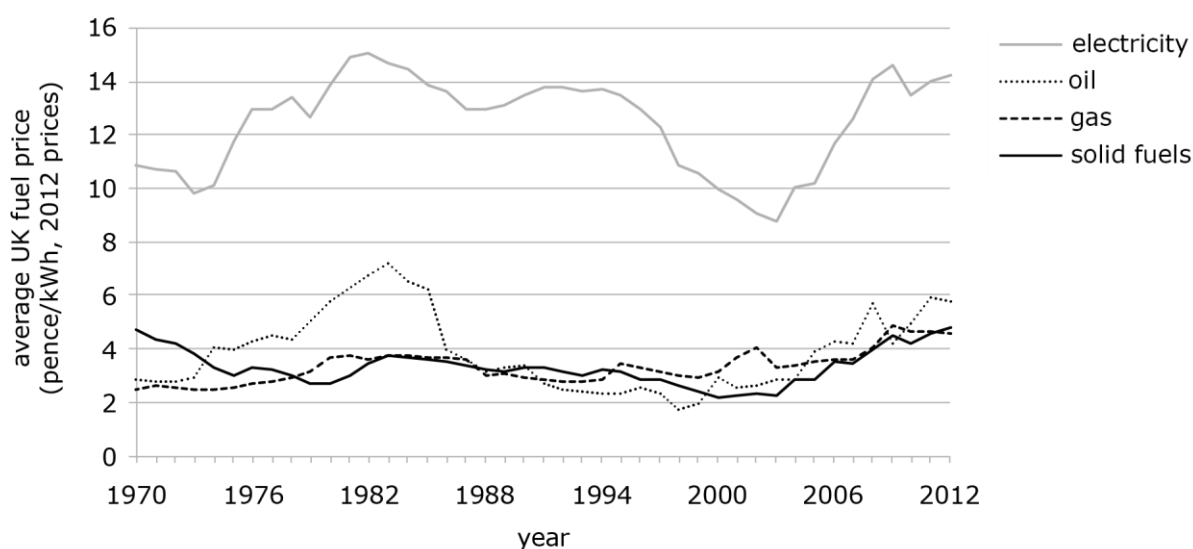
The leaflet has to inform homeowners who may not have good scientific knowledge, so it must be informative and accessible.

Useful information

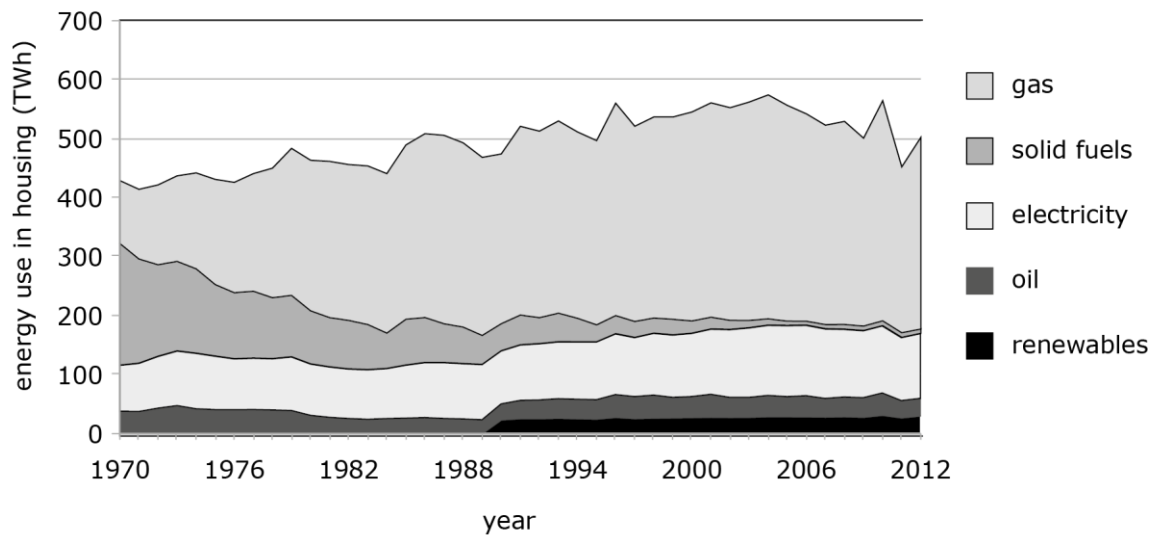
Fuel	Energy transferred to surroundings during the combustion of 1 kg of the fuel (MJ/kg)
coal	33
methane (natural gas)	56
wood	21

Energy and CO ₂ per home and per person	1970	2012
Average energy use per household (kWh)	22 600	18 600
Average energy use per person (kWh)	7700	7800
Average energy spend per household (£)	1050	1250
Average energy spend per person (£)	360	530
Average CO ₂ per household (tonnes)	9.6	5.0
Average CO ₂ per person (tonnes)	3.3	2.1

Source: United Kingdom housing energy fact file, Department of Energy & Climate Change, 2013



Source: United Kingdom housing energy fact file, Department of Energy & Climate Change, 2013



Source: United Kingdom housing energy fact file, Department of Energy & Climate Change, 2013