

Card B - What ways can we produce energy without fossil fuels?

Nuclear power

Nuclear power stations can generate large quantities of energy. Sizewell B near Leiston, Suffolk, on the East Anglian coast can generate enough energy to supply 2 million homes and accounts for 3 % of the UK's electrical needs. A nuclear fuel pellet, about half an inch long, provides the same amount of electricity as one and a half tonnes of coal. There are 10 nuclear power stations in the UK and 10 new sites were approved by the Government in 2009.

Hydropower

Hydropower harnesses the energy from flowing water. It is non-polluting and renewable. This is done by harnessing the energy stored in the moving water to turn a turbine which then produces electricity.

Hydrogen

This is a clean and efficient fuel as it occurs naturally in water. The only by-product is water vapour.

Solar power

Solar panels (made up of photovoltaic cells) are increasingly being used in the UK on building roofs to provide electricity to households and factories.

Geothermal heat

This is gained from using pumps which use the constant temperature found in the ground a few feet below the surface. A geothermal heat pump uses the heat in the ground during the winter as a heat source, but will also help cool buildings in the summer by putting unwanted heat back into the ground in the summer months.

Bio- energy

Bio-energy comes from burning organic matter such as wood or plants, agricultural crops, animal waste and hemp. Many farmers now also grow sustainably grown crops which have high natural oil content which are then used as biofuels.

