



FACT SHEET

Energy and Change

Sources of Renewable energy

1. Plants, hydropower (falling water), wind, biofuel (wood) and sunlight are renewable energy sources. It causes little pollution of the atmosphere.
2. Hydro means water.
Hydro-electric power stations are built next to dams or in the mountains where there are large waterfalls.
It is used in wetter climates and where the water supply is fast running. E.g. Lesotho Highlands Scheme and Cahora Bassa in Mozambique.
3. Most of South Africa's rivers dry up during the dry season.
One of South Africa's source of hydro-electricity is the Cahora Bassa Dam [292 km long, 38 km wide, 157 m maximum depth] on the Zambezi River in Mozambique.
4. Vanderkloof Dam [Northern Cape]
 - Second biggest dam in South Africa.
 - The highest dam wall is 108 metres with a span of 765 metres.
 - When the dam is full then the shoreline is 100 km long.
5. Tugela-Vaal Scheme [Northern Drakensberg]
 - Problems of future water supply increased.
 - Solution – Transfer water from the Tugela River catchment area into the Vaal River.
 - It generates electricity for 10 hours per day.
 - Sterkfontein Dam is situated in the very upper reaches of the Vaal. This reservoir forms the upper storage reservoir for the Tugela-Vaal pumped storage scheme.
6. Electricity from the Gariep Dam is fed into the Eskom network at the Hydra Distribution Station near De Aar.
7. Renewable energy resources will help reduce our dependence on imported fossil fuels; decarbonise our energy supply and increase our energy security.
8. Wind [air current] moves different objects [clothes hanging on a washing line; windsurfers; windmill blades that pump water; sailing ships; kite surfers; dead leaves; etc.].
9. Energy coming from the Sun, is called solar energy [used mainly to heat water].
10. Biofuels are fuels made from plants [sugar cane, maize, wood, soybeans and algae] as well as waste material produced by humans [gives off biogas as it breaks down].
11. Ethanol is a renewable, domestically produced alcohol fuel made from plant materials, such as maize, sugar cane and other grasses.