

1. Solar panels/solar energy
2. Windmills
3. Hydroelectric power
4. Generators and dynamos
5. Fuel cells
6. Dry cell (batteries)
7. Voltaic cells

Let's consider each of these sources of electrical energy.

SOLAR ENERGY

Energy from the sun can be harnessed (collected) and changed into electricity using solar cells. Solar cells are devices, which turn the sun's radiant energy into electricity. They are most used to generate electricity in **space-ships, artificial satellites, hospitals, research station, watches and calculators.**

WINDMILLS

A windmill is a machine designed to convert the energy of the wind to either pump water or produce electricity. Windmills are used to generate electricity when they are connected to turbines.

Turbines is a machine for producing continuous power in which a wheel or rotor, typically fitted with vanes, is made to revolve by the moving flow of water, stream, gas, air, or other fluid.

HYDROELECTRIC POWER

Electricity that is produced from water is called Hydro-Electricity. Hydroelectric dams produces electrical power through the use of the gravitational force of falling water or flowing water (kinetic energy).

Most hydroelectric dams power comes from potential energy of dammed water driving a water turbine and a generator. The power generated depends on the volume and difference in height between the source and the water's outflow. A large pipe known as the penstock delivers the stored water to the turbine. In Ghana the Akosombo Dam and Kpong Dam generate electricity for the nation.

GENERATORS AND DYNAMOS

Generators (and dynamos) are machines that convert mechanical energy into electricity energy. Generators may produce direct current (D.C.) or alternating current (A.C.). Direct current occurs when current flows in the same direction all the time. Alternating current results when current flows in one direction for a while and reverses its direction e.g. generators in power stations.