

# **HYDROELECTRIC ENERGY: ADVANTAGES OF HYDROELECTRIC ENERGY**

Hydroelectric energy is the electrical energy derived from hydro (water) power. It is a non-conventional or alternate source of energy.

## **How hydroelectric energy is generated?**

Before discussing advantages and disadvantages of Hydroelectric power, let's first understand how a hydroelectric power plant works to understand its merits and demerits better. Flowing water possesses kinetic energy. Traditionally, this energy was used to drive water mills to grind pulses etc. Modern day methods have modified this use for a bigger purpose- generation of electricity. When rain falls on high grounds in hilly areas, it flows down in the form of rivers and reaches the sea level. This water is stopped in between and stored in large reservoirs or dams. The dams are at a height and thus water now contains potential energy. This water is then made to flow to large turbines. The

water flows with high speed and pressure and rotates turbines, which in turn generates electricity. The water stream follows its natural course, once out of the generator. This is how a hydroelectric power plant can convert the potential energy of stored water in a reservoir of a tall dam into electric energy.

The main reason for using this form of energy for electricity generation is the fact that it is an alternate source of energy and can bring a relief to the use of conventional energy sources. Other advantages of hydro energy are discussed below.

### **Advantages of Hydroelectric Energy**

- 1) It is a non-polluting source of energy.
- 2) It has lower operational cost compared to fossil fuel-based generation plants.
- 3) Can be easily transmitted through wires to long distances.
- 4) Dams made for generation of Hydroelectricity also help in irrigation projects.

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