

Distinguish, differentiate, compare and explain what is the Difference between Bio-mass energy and Hydro electricity. Comparison and Differences.

What is Biomass Energy and How it is produced ?

Biomass is the term used to describe all biological produced matter. These include wood and woody wastes, agricultural crops and their waste byproducts, municipal solid waste, animal wastes, waste from food processing, and aquatic plants and algae. Traditionally, biomass has been utilized through direct combustion, and this process is still widely used in many parts of the world. Biomass fuel is a renewable energy source and its importance will increase as national energy policy and strategy focuses more heavily on renewable and conservation. Biomass power plants have advantages over fossil-fuel plants, because their pollution emissions are less.

Biomass is burned to produce steam; the steam turns a turbine and drives a generator, producing electricity. The electricity is produced by direct combustion of biomass, advanced gasification and pyrolysis technologies are almost ready for commercial scale use. Biomass can be used as a primary energy source or as a secondary energy source to power gas turbines. As a secondary energy source, biomass is used to make a fuel, which can be used to fire a gas turbine.

What is Hydroelectricity?

Hydroelectricity is electrical energy generated when falling water from reservoirs or flowing water from rivers, streams or waterfalls is channeled through water turbines. Most commonly, water is dammed and the flow of water from the dam drives turbines that generate energy, which is then converted into electricity.

Hydroelectricity power plants can range in size from very small (10 megawatts or less) to very large, sometimes with over 2000 megawatts of capacity. Large plants, which usually involve the damming of a river, are the most developed form of hydroelectricity generation, while mini or micro plants are by comparison at a relatively early stage of development.

Difference between Bio-mass energy and Hydro electricity

1. Bio-gas plant is cheap, small . size and can be installed anywhere. Hydro electricity can be generated only at few places in hilly terrain by constructing dam over river.
2. Bio-mass energy utilize wastes bio-mass materials like cow dung, plant residue, vegetable waste and sewage etc. Hydro electricity utilize kinetic energy of flowing water or potential energy of water stored at a height.