

Power station generator section



Overview

What is a generator in a power system?

Generation is the part of power system where we convert some form of energy into electrical energy. This is the source of energy in the power system. It keeps running all the time. It generates power at different voltage and power levels depending upon the type of station and the generators used.

Which type of generating station should be chosen?

So, as we know the type of load and approximate amount of load at the station, different type of generating station is chosen. For example; Thermal plant, Hydel plant, Nuclear plant, Solar plant, Wind plant and Tidal plant are chosen to handle the base load on the system whereas Gas plants, Diesel plants are used to handle peak load demand.

What is a power station and a consumer?

The lines network between Generating Station (Power Station) and consumer of electric power can be divided into two parts. We can explore these systems in more categories such as primary transmission and secondary transmission as well as primary distribution and secondary distribution.

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Those electric power lines which connect generating station (power station) or sub station to distributors are called feeders. Remember that current in feeders (in each point) is constant while the level of voltage may be different.

How many kV does a generator produce?

Conventional modern generators produce electricity at a frequency that is a multiple of the rotation speed of the machine. Voltage is usually no more than 6 to 40 kV. The power output is determined by the amount of steam driving

the turbine, which depends mainly on the boiler.

How do hydroelectric power stations use kinetic energy?

Hydroelectric power stations use the kinetic energy of falling water to generate electrical energy. Some hydroelectric power stations use water falling from a dam in a river valley and others capture the natural energy generated by a large waterfall. When water falls, its gravitational potential energy is converted into kinetic energy.

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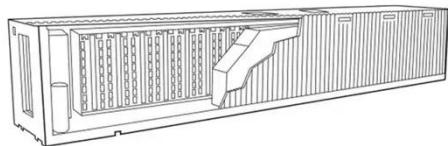


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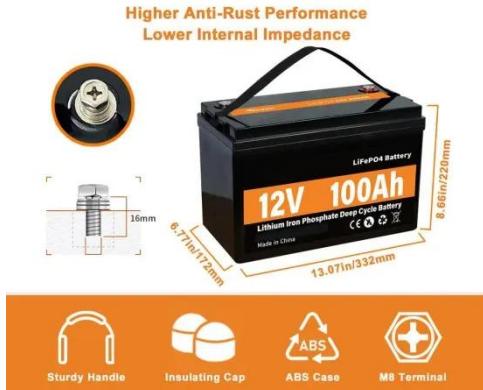


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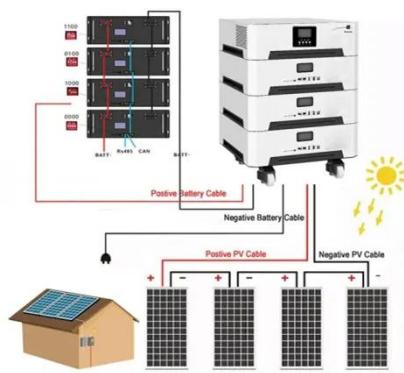
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