

SolarTech Power Solutions

Hydroelectric power station generator



Overview

Who makes a generator for a hydropower station?

For more than 125 years, ANDRITZ Hydro has been supplying generators for hydropower stations. Today, generators with a total capacity of more than 160,000 MVA are in service all over the world. Hydrogenerators convert the mechanical energy from the turbine into electrical energy using an excitation system.

What is hydroelectric power generation?

Hydroelectric power generation is an established technology that uses the potential energy of water to generate electricity. The main components of the hydropower plants are shown in Fig. 3.46 and comprise a dam or retaining wall, a water turbine, and an electrical generator.

How do hydroelectric power plants work?

In case of serious interest for cooperation, contact us at info@energyencyclopedia.com. In hydroelectric power plants, the water propels the turbine blades, and the generator transforms the energy of a rotating turbine shaft into electricity.

How does a hydroelectric facility work?

A hydroelectric facility is a special type of power plant that uses the energy of falling or flowing water to generate electricity. They do this by directing water over a series of turbines which convert the potential and kinetic energy of water into the rotational motion of the turbine.

How much energy does a hydraulic power station produce?

In the hydraulic power stations (Hydropower on a small scale), the electrical energy can be generated by water kinetic energy, which can activate the mechanical turbine's energy [43, 44]. Table 1 A Pico-hydro system might produce just 2 kW, whereas a large utility-scale hydro system could easily

produce hundreds of Megawatts. .

How kinetic energy can be generated in a hydraulic power station?

Therefore, it has added attention to optimize the operation and generate compensatory of other generation types [41,42]. In the hydraulic power stations (Hydropower on a small scale), the electrical energy can be generated by water kinetic energy, which can activate the mechanical turbine's energy [43, 44].

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Warranty
10 years

LiFePO₄

Intelligent BMS

Wide Temp:
-20°C to 55°C



Hydroelectric Power Plant Operating Principles

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**Efficient
Higher Revenue**

- Max. Efficiency 97.5%
- Max. PV Input Voltage 600V
- 150% Peak Output Power
- 2 MPPT Trackers, 150% DC Input Oversizing
- Max. PV Input Current 16A, Compatible with High-Power Modules



**Intelligent
Simple O&M**

- IP66 Protection Degree: support outdoor installation
- Smart I-V Curve Diagnosis Function: locate PV string faults accurately and automatically detect faults
- DC & AC Type II SPD: prevent lightning damage
- Battery Reverse Connection Protection



**Flexible
Abundant Configuration**

- Plug & Play, EPS Switching Under 10ms
- Compatible with Lead-Acid and Lithium Batteries
- Max. 6 units Inverters Parallel
- ATCI Function (Optional): when an arc fault is detected the inverter immediately stops operation

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