SOLARTECH
WHERE SOLAR MEETS ART & TECHNOLOGY

Solar Energy South Africa

Water and wind can generate electricity

Overview

Hydropower utilizes turbines and generators to convert that kinetic energy into electricity, which is then fed into the electrical grid to power homes, businesses, and industries.How do we get energy from water?

Hydropower, or hydroelectric power, is a renewable source of energy that generates power by using a dam or diversion structure to alter the natural flow of a river or other body of water.

How does water make electricity?

To create electricity, water is channeled through tunnels in the dam. The power of the water causes turbines to turn. The turbines make generators move. Generators are machines that produce electricity. Hydroelectric energy is made by moving water. Hydro comes from the Greek word for water.

How is hydroelectricity generated?

Hydroelectricity is generated at a hydroelectric dam. Water stored at a hydroelectric dam has potential energy. When it runs through the dam this turns to kinetic energy. The kinetic energy of the moving water is used to generate electricity. Water flows down through the penstock. It turns the blades of turbines as it passes through them.

How does a wind generator work?

The energy in the wind turns the blades that are connected to the main shaft, which turns and spins a second shaft, which spins a generator to create electricity. – A machine that is used to make electricity. When the generator head is turned, this energy is converted to electrical energy.

What is hydroelectric power?

Hydroelectric power is a form of renewable energy in which electricity is produced from generators driven by turbines that convert the potential energy of moving water into mechanical energy. Hydroelectric power plants usually

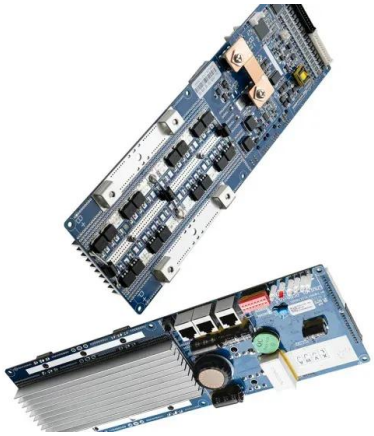
are located in dams that impound rivers, though tidal action is used in some coastal areas.

How is electricity generated at hydropower plants?

Hydropower utilizes turbines and generators to convert that kinetic energy into electricity, which is then fed into the electrical grid to power homes, businesses, and industries. HOW EXACTLY IS ELECTRICITY GENERATED AT HYDROPOWER PLANTS?

Because hydropower uses water to generate electricity, plants are usually located on or near a water source.

Water and wind can generate electricity



Hydroelectric power , Definition, Renewable Energy, ...

Hydroelectric power is a form of renewable energy in which electricity is produced from generators driven by turbines that convert the potential energy of moving water into mechanical energy. Hydroelectric power ...

[Hydroelectricity generation explained]

This is how hydroelectricity systems use flowing water to generate electricity: Water from streams and rivers flows downhill. The higher the water source, the more potential energy it has and the more electricity the ...

The Science of Wind Energy: How Turbines Convert Air into Electricity

What are the environmental benefits of wind energy? Wind energy is clean and produces no greenhouse gases, making it an eco-friendly alternative to fossil fuels. How much electricity ...

How giant 'water batteries' could make green power ...

The Nant de Drance pumped storage hydropower plant in Switzerland can store surplus energy

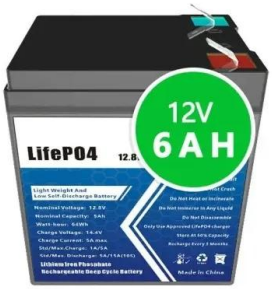
from wind, solar, and other clean sources by pumping water from a lower reservoir to an upper one, 425 meters higher. ...

How Do Wind Turbines Work? , Department of Energy

The terms "wind energy" and "wind power" both describe the process by which the wind is used to generate mechanical power or electricity. This mechanical power can be used for specific tasks (such as grinding grain or pumping ...

How Hydropower Works , Department of Energy

Hydropower, or hydroelectric power, is a renewable source of energy that generates power by using a dam or diversion structure to alter the natural flow of a river or other body of water. Hydropower relies on the endless, constantly ...



Wind Energy , Department of Energy

2 ???· Wind power or wind energy is a form of renewable energy that harnesses the power of the wind to generate electricity. It involves using wind turbines to convert the turning motion of blades, pushed by moving air (kinetic ...

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