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Title: Wind power station generator

Generated on: 2026-04-05 11:05:14

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What is a wind turbine generator system?

Md. Sawkat Ali The wind turbine is a rotary device that can convert wind energy into electrical energy. The main operating parts of a wind turbine generator system (WTGS) are turbine, nacelle, and tower; the nacelle consists of a generator, the mechanical gearing, wind and speed sensors, a control system, and a yaw mechanism system .

What are the components of wind power generation system?

In terms of configuration, wind power generation system normally consists of wind turbine, generator, and grid interface converters where the generator is one of the core components. There are the following wind power generation technologies such as synchronous generator, induction generator, and doubly fed induction generator.

What type of generator is used for a wind turbine?

Squirrel-cage induction or brushless DC (BLDC) generators are usually used for small wind turbines in household applications. Doubly fed induction generators are usually used for megawatt size turbines. Synchronous machines and permanent-magnet synchronous machines (PMSM) can also be used for wind-turbine applications.

What are the different types of wind turbine generators?

There are many wind turbine generator types based on how they are designed and functions. However, in this guide, we will mainly look into the Horizontal-Axis and Vertical-Axis wind turbines. Horizontal-Axis Wind Turbines (HAWTs) are the most common type of wind turbine - the ones that all of us would have seen the most.

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