

Self-built wind power generation system





Overview

What is a micro-wind turbine?

Micro-wind turbines are small wind turbines that generate electricity from the wind. Farmers have widely utilised small wind turbines to generate electricity for their homes and pump water. These turbines have a power output ranging from 3.5 kW to 50 kW and must be mounted on a tower (BWEA, 2006).

Can self synchronized voltage source control of DFIG wind turbine generator improve power system?

It is believed that the self synchronized voltage source control of DFIG wind turbine generator is one of the possible solutions to realize virtual inertia and is helpful to increase the frequency stability of power system, thus is meaningful in the transformation of the power system dominated by renewable energy.

What is a small wind turbine?

Farmers have widely utilised small wind turbines to generate electricity for their homes and pump water. These turbines have a power output ranging from 3.5 kW to 50 kW and must be mounted on a tower (BWEA, 2006). Micro-wind turbines are smaller than the so-called small wind turbines, having power outputs below 3.5 kW.

What is the efficiency of a wind turbine?

Efficiency of a wind turbine is the ratio between the power extracted by it (P_T) and the power of the wind (P_W), a parameter called the power coefficient (C_p) eqn. (3). (3) $C_p = \frac{P_T}{P_W}$



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