1 5MW wind turbine generator speed parameters

What is a GE 1.5 MW wind turbine?

GE's 1.5 MW series is represented by three-blade,upwind,horizontal axiswind turbines with a rated capacity of 1.5-megawatts. Three different models represent the 1.5 MW series - 1.5se,1.5sle,and 1.5xle. The rotor on a GE 1.5 MW turbine is designed to operate in an upwind configuration at 10 to 20 revolutions per minute (rpm).

What is a 1.5 MW wind turbine?

Building on a strong power generation heritage spanning more than a century,our 1.5 MW wind turbine--also known as the industry workhorse--delivers proven performance and reliability,creating more value for our customers. Our product strategy is focused on results that contribute to our customers' success and wind farm return on investment.

How much power does a GE wind turbine have?

The four models have different rated powers: 750 kW,1.5 MW,3.0 MW,and 5.0 MW. The 1.5-MW model was developed based on the GE 1.5s wind turbine,and the other three models were created by linearly scaling the airfoil characteristics for the 1.5 MW model to the different rotor sizes.

What is the rotor speed on a GE 1.5 MW turbine?

The rotor on a GE 1.5 MW turbine is designed to operate in an upwind configuration at 10 to 20 revolutions per minute(rpm). Rotor speed is regulated by a combination of blade pitch angle adjustment and generator/converter torque control.

What is a S82 - 1.5 MW wind turbine?

S82 - 1.5 MW is designed for generating the optimal power output even at sites with a modest wind speed regime. The wind turbine concept is based on robust design with pitch regulated blade operation,a 3-stage gearbox with 1,650 kW rating and flexible coupling to the asynchronous induction generator.

What is the generator efficiency of the WP 1.5 MW model?

The generator efficiency is 95%,which matches the WP 1.5 MW model instead of the more complicated loss models provided in the original Excel design files. Several FAST parameters were not directly specified in the Excel files and needed to be extracted from the values provided in the design files.

Rated Wind Speed (10 min. mean) approx. 12 m/s: approx 12.5 m/s: approx. 13 m/s: Cut-out wind speed (10 min. mean) 22 m/s: 22 m/s: 22 m/s: Survival wind speed: 52.5 m/s: 52.5 m/s: 52.5 ...

Consistent direct-drive version of the NREL 5MW turbine R M M Slot1,2, L Svenningsen 1, J D Sørensen 2 ... redesigned by scaling the control parameters related to the speed of the high ...

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The most fundamental measure of a wind turbine"s performance is given by its power curve. The wind turbine model developed here is tested by running the simulation at wind speeds from 1 to 20 m/s, with increments of 1 m/s between ...

Figure 4: Everage power-wind speed curve per 30s 4. Results The power output of the pitch controlled wind turbine generator, as a function of the wind. Power and energy production ...

The cut-in, rated and cut-out wind speeds in the wind turbine specifications refer to the wind speed at the nacelle height,12 which is 90m above the average sea level for this case study ...

The model is based on parameters from a GE 1.5-MW turbine. ... Turbine Properties; Turbine make: GE 1.5MW: Regulation method: Pitch control (disabled) Rotor diameter: 70.5 m: Hub height: 65 m: Number of blades: 3: ...

In Region 1, there is no power generated as the wind speed is lower than the cut-in wind speed (v cut-in = 3m/s) thus the generator torque is 0 and the wind is used to accelerate the rotor for ...

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