

WindBOOST* Control System

Introduction

As a leading global provider of energy products and services, GE continues to invest heavily in advancing its 1.5 MW wind turbine product line. With a core focus on reliability, efficiency, and multi-generational product advancements, GE's 1.5 MW wind turbine is the most widely used turbine in its class.

GE's WindBOOST* control system upgrade is a unique offering in the wind industry and the latest addition to the 1.5 MW platform, which helps increase the annual energy production (AEP) of a wind plant by allowing increased power output (kW). This advancement helps increase the return on wind plant investments for our customers.

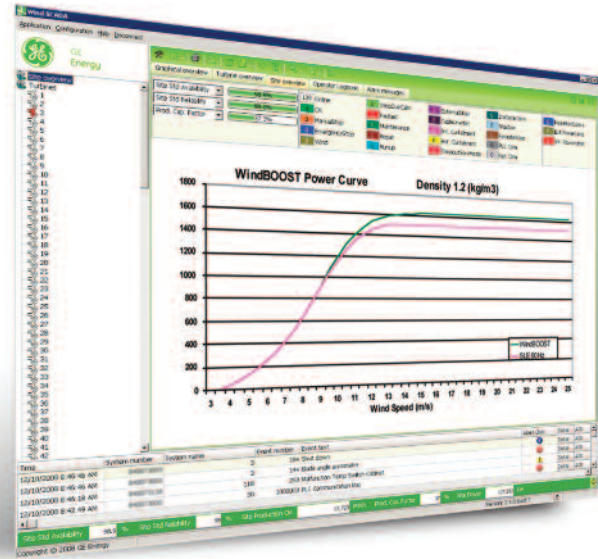
Applicable Platforms

The WindBOOST control system is offered as an option available on new and existing 1.5 MW SLE 60 Hz wind turbine generators with 80 m towers.

Technical Description

The WindBOOST control system uses smart control algorithms to assess ambient conditions and calculates an increase in rotational speed of the turbine to maximize AEP. This additional speed increases output power by 100 kW from 1500 kW to 1600 kW.

The WindBOOST control system also provides grid stability by allowing the turbine to maintain -0.9 to 0.9 Power Factor during operation. The maximum reactive power of the turbine is maintained by reducing additional output of the WindBOOST control system when grid conditions demand reactive power. This transition is handled by the control system and returns the turbine to full additional power when grid Volt-Amp-Reactive (VAR) demand is satisfied.



GE's WindBOOST control system is designed to minimize changes to turbine hardware components. This can reduce downtime during installation of this product. The WindBOOST control system is operator friendly, SCADA controlled, and can be remotely accessed to turn the feature on or off.

Features and Benefits

- Up to 4% increased annual energy output, resulting in higher return on investment
- Flexibility to increase power production when rates are highest
- Patent-pending control technology for optimum rotational speed, resulting in increased energy production
- Remote capability to turn feature on and off at the turbine level
- Increased power output while maintaining grid stability

For more information please visit www.ge-energy.com/wind or call 1-866-750-3150

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