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WIND TURBINE TECHNOLOGY – A REVIEW

SWATI A. BARBADE
Research Scholar
Amanora Park Town, Tower No 18, Flat No 0304, R5 Sector, Hadapsar, Pune-28, India.

Abstract

With the increasing size of wind power generation it is required to perform power system stability analysis that uses dynamic wind generator models. In this paper are presented all the wind power system components, including the turbine, the generator, the power electronic converter and controllers. The aim is to study the Doubly Fed Induction Generator (DFIG) operation and its connection to the power system during normal operation. To harness the wind power efficiently the most reliable system in the present era is grid connected doubly fed induction generator. This paper highlights the application of computational intelligence methods in power system problems. Various types of CI methods, which are widely used in power system, are also discussed in the brief. Computation intelligent (CI) methods can give better solution in several conditions and are being widely applied in the electrical engineering applications. A comparative study of Fuzzy Logic and Artificial Neural Network is done.

Keywords : Wind power generation, Control, Neural networks, Doubly fed induction generator.