

## Steady State Analysis of Distribution System with Wind Generation Uncertainty

**Authors :** Zakir Husain, Neem Sagar, Neeraj Gupta

**Abstract :** Due to the increased penetration of renewable energy resources in the distribution system, the system is no longer passive in nature. In this paper, a steady state analysis of the distribution system has been done with the inclusion of wind generation. The modeling of wind turbine generator system and wind generator has been made to obtain the average active and the reactive power injection into the system. The study has been conducted on a IEEE-33 bus system with two wind generators. The present research work is useful not only to utilities but also to customers.

**Keywords :** distributed generation, distribution network, radial network, wind turbine generating system

**Conference Title :** ICEE 2018 : International Conference on Electrical Engineering

**Conference Location :** Montreal, Canada

**Conference Dates :** May 24-25, 2018