

EFFECTIVENESS OF SPEED SENSOR AND SENSOR-LESS CONTROLLER IN A GRID CONNECTED DFIG BASED WT SYSTEM - A COMPARATIVE STUDY

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ABSTRACT

This paper presents the performances of a grid connected DFIG based WT system with and without speed sensor and their effectiveness have been compared. Performances of the controller have been demonstrated through time domain simulation studies. Simulation results have been compared and conclusions have been drawn. Results show that the satisfactory operation of speed sensor-less system under varying wind speed power generation as that of speed sensor controller.

KEYWORDS: Wind Energy Conversion System (WECS), Doubly Fed Induction Generator (DFIG), and Speed Sensor-Less Controller