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## **A Highly Effective Fault-Ride-Through Strategy for a Wind Energy Conversion System with Doubly Fed Induction Generator**

this project, based on the proper stator voltage control, to address symmetrical as well as unsymmetrical and unbalanced grid voltage sags, an improved Fault-Ride through (FRT) system is proposed for a wind turbine with Doubly Fed Induction Generator (DFIG). This is accomplished by adopting a properly modified topology of the conventional wind energy conversion system (WECS) with DFIG that provides the ability to regulate the stator voltage through the system of the rotor power converters. Therefore, significant improvement of the FRT capability is attained, since any oscillations of both the stator and rotor currents that may be caused by the voltage dip can be considerably reduced and they can remain within predefined safety limits. The implementation of the new topology as well as the corresponding control system are cost effective. The proposed system is simulated using MATLAB/SIMULINK.

**Domain:** Power Systems \_ Wind Power Generation

**Technology:** Electrical