Abstract

Wind energy systems based on doubly fed induction generators (DFIGs) have been dominantly used in high-power applications since they use power-electronic converters with ratings less than the rating of the wind turbine generators. The DFIG is very sensitive to unbalanced grid voltage as its stator is directly connected to the grid. The rotor and stator currents could be highly unbalanced even under a very small unbalanced grid voltage. So there is much more importance of designing and modelling of controllers for eliminating the fault and sustaining fault ride through condition. Modelling of controllers is different for steady state condition and transient conditions with fault ride through conditions. This paper presents an overview of trends and advancements in control strategies of DFIG based wind turbine system in transient conditions.
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An Overview of Modelling and Control Strategies for FRT Conditions in DFIG based Wind Energy Systems


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