

Advanced Fuzzy Control for a Doubly Fed Induction Generator in Wind Energy Conversion Systems

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Abstract : The control of a doubly fed induction generator by fuzzy is described. The active and reactive power can be controlled by rotor and grid side converters with fuzzy controller. The main objective is to maintain constant voltage and frequency at the output of the generator. However the Line Side Converter (LSC) can be controlled to supply up to 50% of the required reactive current. When the crowbar is not activated the DFIG can supply reactive power from the rotor side through the machine as well as through the LSC.

Keywords : Doubly Fed Induction Generator (DFIG), Rotor Side Converter (RSC), Grid Side Converter (GSC), Wind Energy Conversion Systems (WECS)

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