

Applications of Power Electronics in Wind Power Plant

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Abstract: *This paper reviews the power electronic applications for wind energy systems. Various wind turbine systems with different generators and power electronic converters are described, and different technical features are compared. The electrical topologies of wind farms with different wind turbines are summarized and the possible uses of power electronic converters with wind farms are shown. Finally, the possible methods of using the power electronic technology for improving wind turbine performance in power systems to meet the main grid connection requirements are discussed*

Keywords: Fault ride-through, grid connection, power electronics converters, reactive power compensation, wind energy conversion, wind farms, wind turbine control.

