

عنوان مقاله:

Comparison of Maximum Power Point Tracking Methods for Medium to High Power Wind Energy Systems

محل انتشار:

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خلاصه مقاله:

This paper provides a comparison of the maximum power point tracking (MPPT) controllers used for extracting maximum power from the wind energy conversion systems (WECS) using permanent magnet synchronous generators (PMSG). These MPPT algorithms can be broadly categorized into four main control methods, namely tip speed ratio (TSR) control, power signal feedback (PSF) control, optimal torque control (OTC) and Perturb and Observation (P&O). Conclusions about the pros and the cons of the different MPPT methods are supported by analysis and simulation results based on a 35kW wind turbine systems.

کلمات کلیدی:

Wind energy conversion system (WECS); Maximum power point tracking (MPPT) methods; Adjustable speed generation system; Permanent-magnet synchronous generator (PMSG)

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