

عنوان مقاله:

Operation and control of combined wind power system with energy storage equipments

محل انتشار:

بیست و ششمین کنفرانس بین المللی برق (سال: 1390)

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خلاصه مقاله:

wind power as a renewable energy source produces a fluctuating output power because of its intermittent nature. Active power fluctuations have adverse effects on power quality, voltage and frequency. Integrating an energy storage system (ESS) with the wind farm can smooth the intermittent output power. Various ESS technologies and configurations are available for this application. This paper estimates the power rating of ESS and their interfaces. Then a feedback-based control strategy developed to ensure the proper operation of the combined system. The whole system is modeled and simulated. Simulation results verify the effectiveness of this control strategy, providing a novel discipline for smoothing the output power.

کلمات کلیدی:

output fluctuating, smoothing effect, active power control, state-of-charge

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