

عنوان مقاله:

Maximizing the Income of a Wind Power Plant Integrated with a Battery Energy Storage System

محل انتشار:

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خلاصه مقاله:

In this paper, a new control strategy is presented to manage the amount of energy that is generated by wind farm plant and sold to the electricity market. This control method empowers the operator to make a balance between energy supply and demand in a profitable way using battery storage. Controller is based on Model Predictive Control (MPC) theory using dynamic programming algorithm along with a nonlinear battery energy storage model. We propose a control scheme that applies a policy of selling more energy at high price regime and storing it when the price is low in compliance with the electricity market pattern of Australia. The efficiency of this control strategy is evaluated via simulation of an actual wind farm data and NSW price data

کلمات کلیدی:

Renewable Energy, Wind Power, Energy Storage System, Model Predictive Control

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