

عنوان مقاله:

Optimal scheduling of battery storage power stations for regulation provision in a smart grid framework

محل انتشار:

بیست و دومین کنفرانس ملی مهندسی برق، کامپیوتر و مکانیک (سال: 1403)

تعداد صفحات اصل مقاله: 14

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خلاصه مقاله:

This paper presents a model for battery storage power stations (BSPS) to take part in both energy and regulation markets. The BSPSs are clustered by a smart grid to facilitate participating in energy and regulation markets. It is considered that a smart grid provides required regulation by its diesel generator (DG) and BSPS. So, the smart grid applies its DG and BSPS to obtain the required regulation to the market operator. The smart grid uses its DG to generate energy quickly in response to a regulation calling up, while the BSPS can store excess electricity and give it back when needed to obtain regulation. This model lets the smart grid to participate in joint energy and regulation markets. The framework is modeled regarding the new generation of lithium-ion batteries. Several scenarios are implemented to prove the role of BSPS participation on smart grid obtained profit

کلمات کلیدی:

battery storage power stations, Electricity sources, Energy and regulation market, Smart grid

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