FTMRS SOLAR

West Asia Energy Storage Frequency Modulation Power Station Integrator

Overview

What is dynamic frequency modulation model?

The dynamic frequency modulation model of the whole regional power grid is composed of thermal power units, energy storage systems, nonlinear frequency difference signal decomposition, fire-storage cooperative fuzzy control power distribution, energy storage system output control and other components. Fig. 1.

What is a mixed energy storage station?

The mixed energy storage station was set to assist the thermal power units in primary frequency regulation. Fixed K droop control was implemented in the storage control mode. Under the renewable energy penetration rate of 25%, the system grid interface inertia constant M is 7.5.

How to control frequency modulation of energy storage battery?

By adjusting the output of the energy storage battery according to the fixed sagging coefficient, the power can be quickly adjusted and has a better frequency modulation effect. Based on the adaptive droop coefficient and SOC balance, a primary frequency modulation control strategy for energy storage has been recommended .

How to evaluate frequency modulation performance under a control strategy?

Similarly, under external perturbations, the frequency modulation power change evaluation method is similar to frequency, the corresponding average value of power fluctuation is adopted Pm, power peak difference Δ P, the overall degree of power fluctuation Psd evaluates the frequency modulation performance under the corresponding control strategy.

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