

Frequency regulation function of energy storage power station





Overview

Can large-scale battery energy storage systems participate in system frequency regulation?

In the end, a control framework for large-scale battery energy storage systems jointly with thermal power units to participate in system frequency regulation is constructed, and the proposed frequency regulation strategy is studied and analyzed in the EPRI-36 node model.

Does battery energy storage participate in system frequency regulation?

Since the battery energy storage does not participate in the system frequency regulation directly, the task of frequency regulation of conventional thermal power units is aggravated, which weakens the ability of system frequency regulation.

Do energy storage stations improve frequency stability?

With the rapid expansion of new energy, there is an urgent need to enhance the frequency stability of the power system. The energy storage (ES) stations make it possible effectively. However, the frequency regulation (FR) demand distribution ignores the influence caused by various resources with different characteristics in traditional strategies.

How can battery energy storage respond to system frequency changes?

The classical droop control and virtual inertia control are improved with battery charge as feedback. Also, the battery energy storage can respond to system frequency changes by adaptively selecting a frequency regulation strategy based on system frequency drop deviations.



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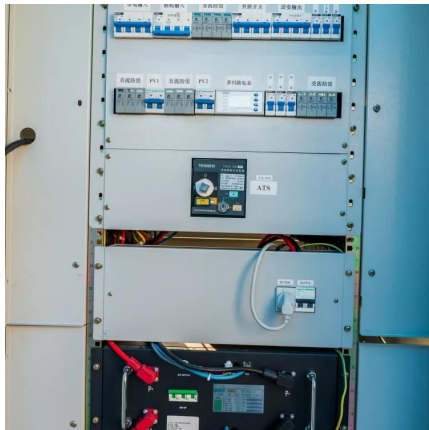
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