ContainerPower Energy Solutions

Energy storage peak shaving on the power generation side

Overview

Does a battery energy storage system have a peak shaving strategy?

Abstract: From the power supply demand of the rural power grid nowadays, considering the current trend of large-scale application of clean energy, the peak shaving strategy of the battery energy storage system (BESS) under the photovoltaic and wind power generation scenarios is explored in this paper.

Why is peak shaving important?

The reason is simple: the grid load and the necessary amount of power production need to be designed to accommodate these peak loads. With peak shaving, a consumer reduces power consumption (" load shedding ") quickly and for a short period of time to avoid a spike in consumption.

Does peak shaving power reduce Esed and ocgr?

A correction model of peak shaving power of ES with the objective of minimizing ESED and OCGR was established.

Can load peak shaving and valley filling reduce PVD?

The function of load peak shaving and valley filling is achieved, thus ensuring the safe and orderly operation of the rural power grid. The feasibility of the strategy is verified through simulation results on multiple scenarios, for the decreased PVD of 44.03%, 24.3%, and 33.4% in Scenario 1-3.

Why do distribution network operators use peak shaving?

For distribution network operators, peak shaving is a good way to keep the costs of network expansion low. An efficiently-operating network requires less copper installation in the form of power lines and distribution points.

Can a company provide supplemental power to avoid peak loads?

If reducing load is not desired or possible, a company can provide its own

supplemental power to avoid peak loads. Additional power could come from sources such as the company’s own electricity storage facilities or CHP plants.

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