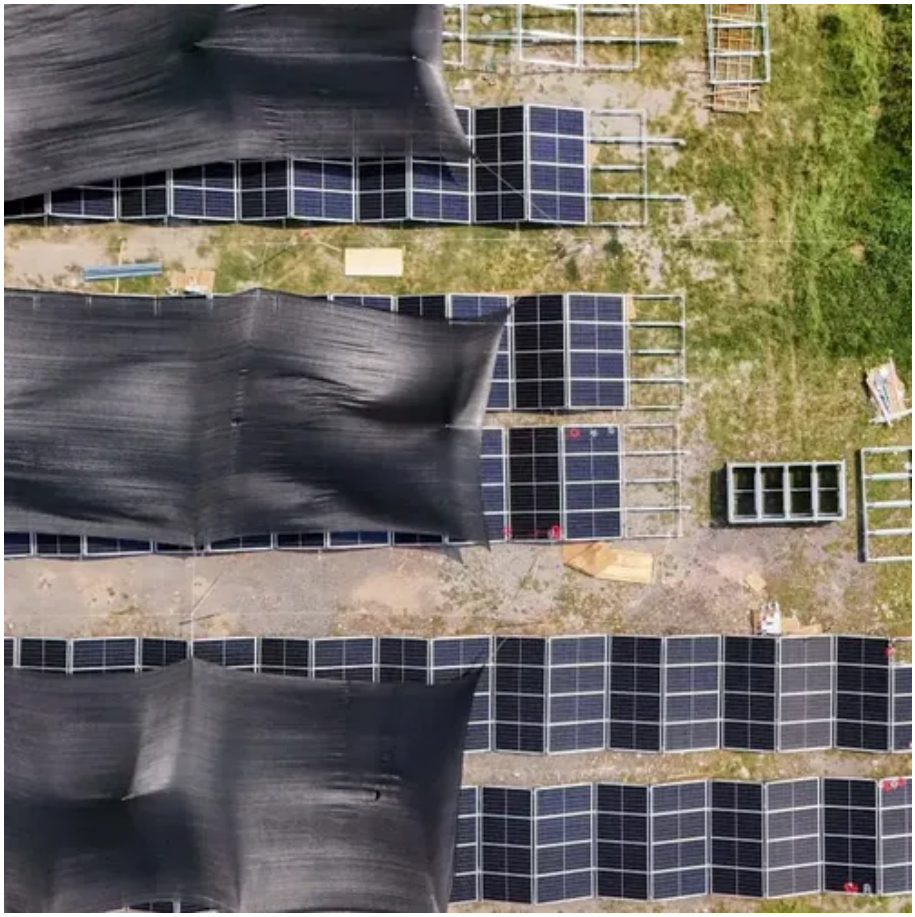
Wind power generation and thermal power peak regulation



Overview

In recent years, the high percentage of wind power accessibility in Northwest China has worsened the dilemma of peak regulation and spinning reserve in the power system, frequently resulting in wind aband.

Wind power generation and thermal power peak regulation

IET Renewable Power Generation

1 INTRODUCTION In response to the renewable energy security strategy and the 30o60 carbon neutral climate response goals, China's power supply structure will shift from thermal power ...

Combined Optimal Dispatch of Thermal Power Generators and Energy

Peak load and wind energy emission pressure rise more as wind energy penetration keeps growing, which affects the stabilization of the PS (power system). This paper suggests integrated optimal ...

A Distributionally Robust Optimization Strategy for a Wind

With the continuous expansion of grid-connected wind, photovoltaic, and other renewable energy sources, their volatility and uncertainty pose significant challenges to system peak regulation. ...

Economic Optimial Scheduling Strategy for Thermal Power Units ...

Economic Optimial Scheduling Strategy for Thermal Power Units Under Deep Peak Regulation Considering Wind Power Integration February 2025 DOI: 10.1007/978-981-96-1671-8_34

Optimal operation strategy of peak regulation combined thermal power

In recent years, the high percentage of wind power accessibility in Northwest China has worsened the dilemma of peak regulation and spinning reserve in the power system, frequently ...

Optimal Peak Regulation Strategy of Virtual and Thermal ...

The simulation example shows that the virtual power plant and its day-ahead and intra-day optimal peak regulation strategy can reduce the peak regulation cost of the power system, as ...

Wind Power Peak-Valley Regulation and Frequency Control ...

This chapter introduces wind power's demand for peak-valley regulation and frequency control and suggests several measures such as utilization of thermal power generator, energy storage, and ...

Analysis of Deep Peak Regulation and Its

Benefit of Thermal ...

Deep peak-shaving capacity of thermal power units in power system with large scale wind power integrated needs further analysis. In this paper, a calculation method of unit loss cost was put

Two Stage Stochastic Optimization Scheduling of Power System

A two-stage stochastic optimization approach is then utilized for day-ahead pre-dispatch of thermal power and storage units, and intraday dispatch adjustments are made to accommodate ...

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