

Energy storage power supply can be overcharged





Overview

Why is energy storage oversupply a problem?

The expansion is driven mainly by local governments and lacks coordination with new energy stations and the power grid. In some regions, a considerable storage oversupply could lead to conflicts in power-dispatch strategies across timescales and jurisdictions, increasing the risk of system instability and large-scale blackouts.

What are battery energy storage systems?

Battery energy storage systems offer power grids key opportunities for better flexibility, renewable energy integration, and reliable power supply by storing excess renewable energy during low demand times to release during peak demand enabling higher renewable energy penetration and supporting global decarbonisation.

Are battery energy storage systems a good choice?

Battery Energy Storage Systems (BESS), on the other hand, have become a well-established and essential technology in the field of energy storage. However, BESS still faces challenges such as lower power density, limited cycle stability, and potential chemical hazards.

Is excessive energy storage a problem?

Spyros Foteinis highlights the acknowledged problem that an insufficient capacity to store energy can result in generated renewable energy being wasted (Nature 632, 29; 2024). But the risks for power-system security of the converse problem — excessive energy storage — have been mostly overlooked.



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Energy Storage Systems

Energy storage systems can resolve these disruptions instantly by charging and discharging quickly and precisely, delivering a steady and constant power supply.

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