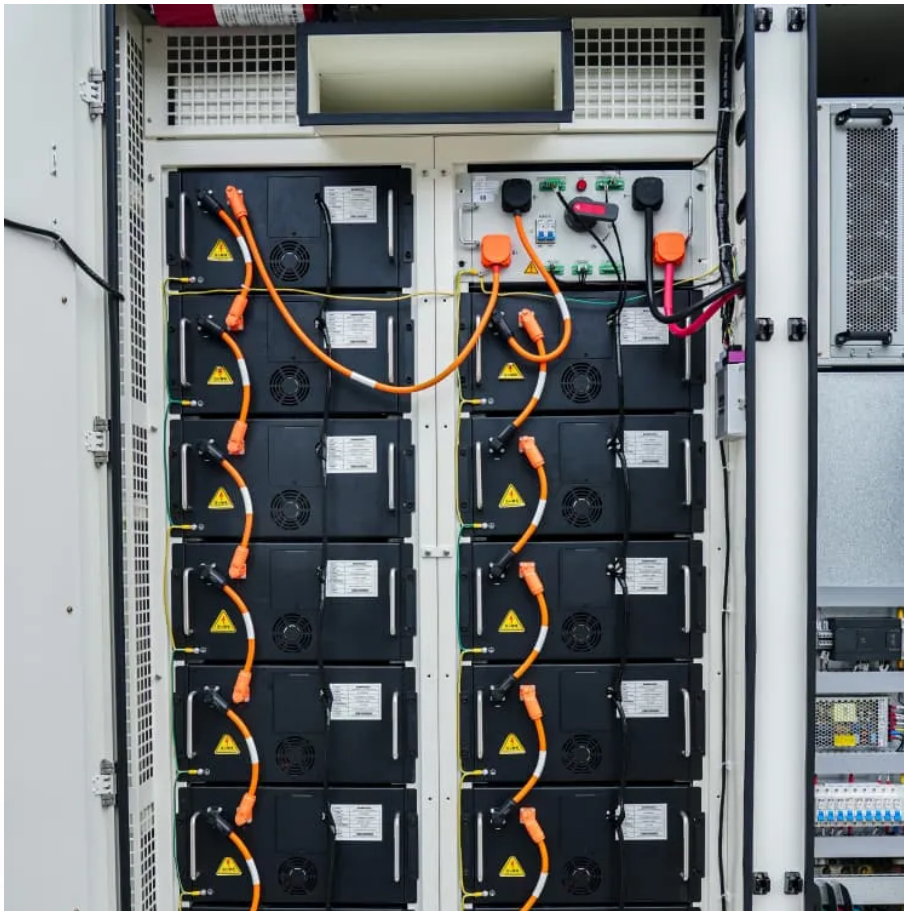


# Energy storage grid demand





## Overview

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Why do we need a grid-scale energy-storage system?

Under some conditions, excess renewable energy is produced and, without storage, is curtailed 2, 3; under others, demand is greater than generation from renewables. Grid-scale energy-storage (GSES) systems are therefore needed to store excess renewable energy to be released on demand, when power generation is insufficient 4.

Should energy storage be removed from energy grid connection?

For energy storage, the new Chinese policy emphasized the need to remove energy storage as a prerequisite for renewable energy project grid connection, a requirement that has been a major driver for battery build. Nonetheless, BNEF still expects strong demand for batteries, as the policy doesn't explicitly require mandates to stop.

Are hybrid energy storage and demand response more reliable mitigation techniques?

Estimations demonstrate that both energy storage and demand response have significant potential for maximizing the penetration of renewable energy into the power grid. To address the intermittency of renewable sources, the paper suggests and discusses hybrid energy storage and demand response strategies as more reliable mitigation techniques.

What is demand response & energy storage?

Demand response and energy storage are sources of power system flexibility that increase the alignment between renewable energy generation and demand.



## Energy storage grid demand

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### Battery technologies for grid-scale energy storage

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