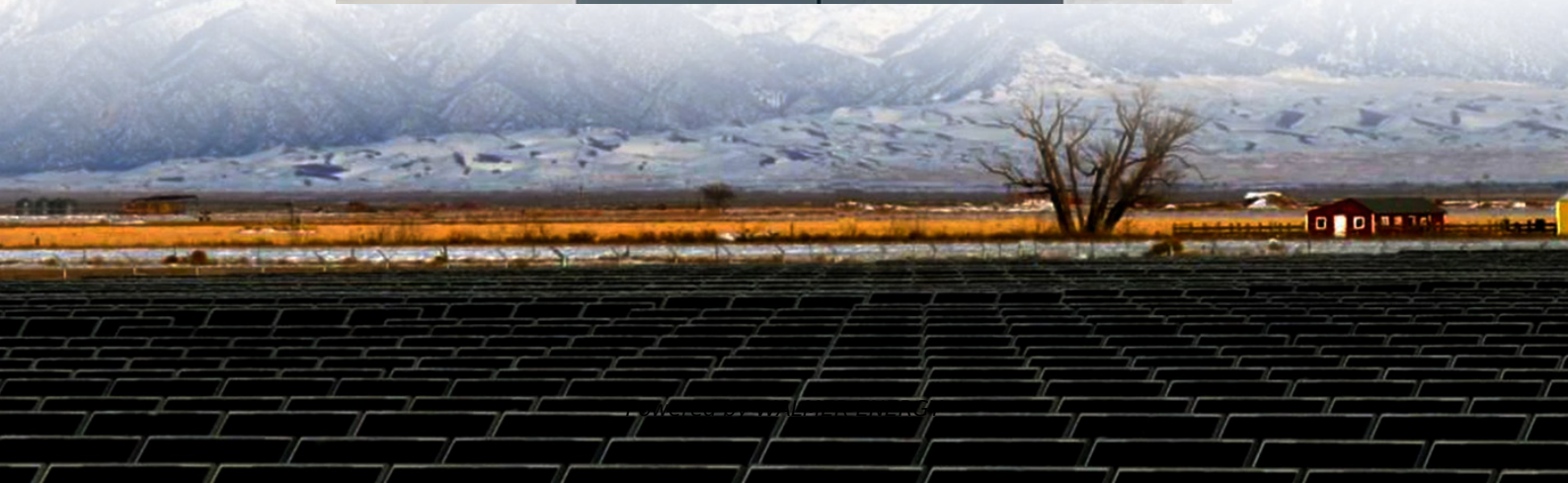


The impact of high temperature in summer on energy storage batteries





Overview

What is the evolution mechanism of battery thermal safety under high-temperature conditions?

Under high temperature conditions, the cyclic aging and calendar aging tests are performed. After the tested battery decays to different aging levels, thermal runaway tests and multi-angle characterization tests are conducted to clarify the evolution mechanism of battery thermal safety under high-temperature conditions.

How do thermal issues affect battery safety?

Thermal issues are a critical challenge in battery safety, directly determining the prevention efficacy of thermal runaway-induced hazards. Effective thermal runaway mitigation requires dual approaches: internally suppressing heat generation through electrochemical optimization and externally enhancing heat dissipation via thermal management.

How does thermal management affect battery performance?

Meanwhile, thermal management serves as an external approach to protect batteries against extreme temperatures, with its efficacy directly determining battery lifespan, performance and safety. Ultimately, if batteries still undergo unpredictable thermal runaway, fire suppression strategies become the final safeguard.

How can battery thermal safety be improved?

Mitigating the occurrence of thermal runaway is crucial to ensure battery thermal safety. The primary approach to achieve that involves understanding the mechanisms and patterns of heat generation during thermal runaway and subsequently addressing these internal heat-related issues through mitigation

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