ContainerPower Energy Solutions

Battery over-discharge energy storage

Overview

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By charging the battery with low-cost energy during periods of excess renewable generation and discharging during periods of high demand, BESS can both reduce renewable energy curtailment and maximize the value of the energy developers can sell to the market.

Over-discharging a lithium-ion battery, meaning discharging it beyond its recommended minimum voltage, can have serious consequences for the battery’s performance, lifespan, and safety.

Lithium-ion batteries (LIBs) are pivotal in modern energy storage systems, yet their safety and longevity are critically threatened by several abuses. The over-discharge is overlooked in extreme operational conditions.

In practical applications, batteries often experience varying degrees of overdischarge, and their corresponding battery safety behaviors deserve further research. In this work, NCM523 pouch batteries were used to investigate the effects of overdischarge on battery aging behavior and TS.

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