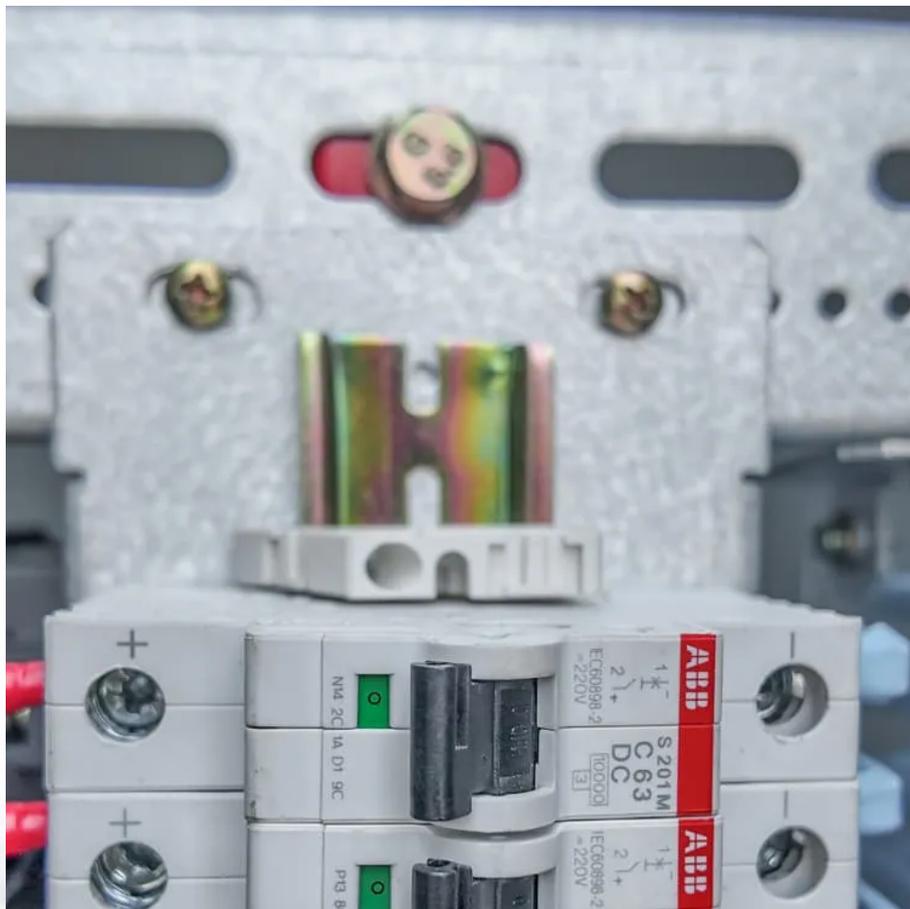


Parallel connection of batteries in energy storage power stations





Overview

What happens if a battery is connected in parallel?

When batteries are connected in parallel, the overall capacity and current output of the battery bank increase, while the voltage remains constant. Each additional battery contributes to the total energy storage, effectively extending backup time within the same voltage system.

Are parallel battery systems stable?

Nevertheless, we also warn about some risks behind stability. First, parallel battery systems inflict intrinsic capacity loss due to cell inconsistencies, causing capacity loss even reaching up to 34% according to the terminals of the closed orbit.

Is a parallel battery system convergent?

We show the parallel battery system to be essentially a convergent, stable, and robust system with a highly precise and absolutely reliable battery management system. The long-term trajectory of batteries connected in parallel in repeated cycles will be enveloped in a closed orbit insensitive to initial states of systems.

Do parallel battery systems cause energy loss?

Parallel battery systems are found to inflict another intrinsic energy loss due to the inconsistency between cells on different branches.



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