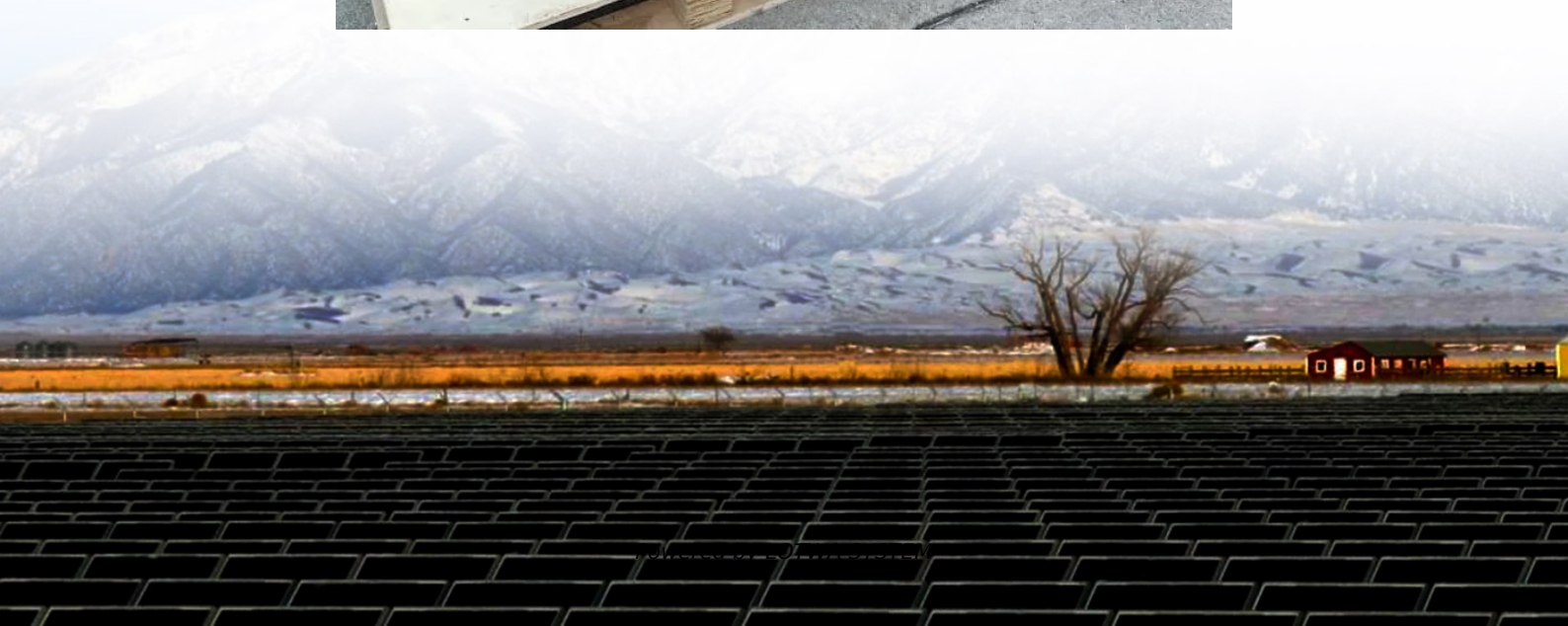


Flow Battery DCDC





Overview

How does BDC control the power flow between battery and DC link?

In the designed system, BDC controls the bidirectional power flow between the battery and DC link. Specifically, in the charging stage of battery operating in buck mode, DC-link supplies the power to the battery and BDC regulates the battery current using proportional-integral (PI) controller.

What is a bidirectional DC-DC converter (BDC)?

The bidirectional DC-DC converter (BDC) is used as an interface circuit between power generation unit and battery to control the charging and discharging mode of operation of battery . BDC topology has distinguishing features such as bidirectional power flow, transformer-less operation and The Authors, published by EDP Sciences.

What is bidirectional power flow control?

In battery applications, bidirectional power flow control by regulating the charging and discharging stage of battery is achieved by BDC. Accordingly, the battery current is controlled by adjusting the duty cycle of the BDC by taking into account the state of charge of the battery and current direction.

What is a bi-directional DAB DC-DC converter?

The bi-directional isolated DAB DC-DC converter finds applications in various applications including microgrid, electric vehicles (EV), energy storage integrations, etc. The circulating power flow in the DAB converter poses a threat to EV DC link voltage stability, increases converter switch current stress, reduces DAB converter efficiency.



Flow Battery DCDC

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