
The technology enables charging the batteries of electric vehicles and transferring the stored energy back to the stationary storage system in the building or to the grid when ...

This article presents a novel multiport bidirectional dc-dc converter (MP-BDC) by featuring a two-phase interleaved architecture at each low-voltage port to mit

Bidirectional energy storage inverters serve as crucial devices connecting distributed energy resources within microgrids to external large-scale power grids.

In contrast to stationary storage and generation which must stay at a selected site, bidirectional EVs employed as mobile storage can be mobilized to a site prior to planned outages or arrive ...

Energy storage systems or batteries can be connected to the microgrid independently or work in conjunction with a distributed energy resource. Bidirectional DC-DC power converters (BDC) ...

A novel multi-objective function and an improved bi-directional coevolutionary (I-BiCo) Algorithm are employed to find the optimal RES and BESS placement and sizing, ...

The transition to sustainable energy models is greatly aided by bidirectional energy storage systems. By facilitating the use of renewable energy sources such as solar and wind, ...

In contrast to stationary storage and generation which must stay at a selected site, bidirectional EVs employed as mobile storage can be ...

That"s exactly what bidirectional energy storage technology enables through devices like the increasingly popular bidirectional inverters. As of 2025, this technology has become the ...

Distributed energy resources (DER) are integrated into a microgrid through dc-dc power electronic converters. The bidirectional dc-dc converter regulates charging and ...

This paper proposes a novel non-isolated, bidirectional DC-DC converter with an improved voltage gain conversion ratio. In the structure of the proposed converter, the coupled ...

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