Bidirectional charging of mobile energy storage containers for research stations

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Contributing to this research gap, this article combines techno-economic grid simulations with scenario-based Life Cycle Assessments. The case study focuses on rural ...

The aim of the project was to optimise the geographical and temporal distribution of surplus energy from renewable energy systems (RE systems) using bi-directional electric vehicles ...

This paper introduces a novel testing environment that integrates unidirectional and bidirectional charging infrastructures into an existing hybrid energy storage system.

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 ...

Bidirectional electric vehicles (EV) employed as mobile battery storage can add resilience benefits and demand-response capabilities to a site"s building infrastructure.

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

This feature can prove valuable in industrial fleets, contributing substantially to grid stability and financial savings through temporary renewable energy storage and peak load balancing. DC ...

Building Integrated Vehicle Energy Solutions (BIVES) and Resilient Energy Storage and Backup (RESB) represent the most accessible and immediate opportunities for adopting bidirectional ...

The proposed bidirectional DC/DC converter facilitates efficient bidirectional power flow between electric

vehicles (EVs) and renewable energy sources (RES) fed charging ...

This study evaluates the long-term environmental effects of a widespread deployment of bidirectional charging in the European energy supply sector using a prospective life cycle ...

This paper introduces a novel testing environment that integrates unidirectional and bidirectional charging infrastructures into an ...

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