
Bidirectional charging of solar-powered containers on oil platforms

What is solar-powered bidirectional OBC based on bhgc?

The solar-powered bidirectional OBC based on the coupled-inductor high gain converter with grid-to-vehicle (G2 V) and vehicle-to-grid (V2 G) operations is shown in Fig. 1 and schematic diagram of LEV charging scheme with BHGC is depicted in Fig. 2.

Can BLDC drive be used for a solar-powered on-board charging system?

The designed system also presents a soft-starting of BLDC drive for propulsion mode of operation. This work proposes an efficient configuration for a solar-powered on-board charging system utilizing a coupled inductor high-gain converter with Grid-to-Vehicle (G2 V) and Vehicle-to-Grid (V2 G) operations.

Does a solar-powered on-board charging system work?

The proposed solar-powered on-board charging system utilizing a coupled inductor high-gain converter demonstrates effective high-gain step-up and step-down operation.

What is an on-board charger (OBC)?

The bidirectional power flow capability of an on-board charger (OBC) benefits utilities and enhances the functionality of light electric vehicles (LEVs). The design of an OBC consists of an active front-end converter (AFC) and a proposed bidirectional high gain converter (BHGC).

Discover how Hager Group is pioneering bidirectional charging technology and energy storage systems to support grid stability and renewable energy use. CEO Sabine ...

This paper introduces a method, for grid connected bidirectional charging stations (BCS) that utilize a combination of energy sources (solar & wind). The system adjusts its ...

This paper introduces a cutting-edge solar photovoltaic (PV) tied electric vehicle (EV) charging system integrating a bilateral chopper. The system aims to optimize energy utilization and ...

This paper discusses India's electric vehicle deployment, its impact on the grid, the crucial role of charging control strategies for bidirectional power flow and ensuring grid stability and control ...

B. Power-grid Flexibility (Demand-Oriented Transport and E-Charging Solution) This pilot aims to optimize energy usage and enhance grid stability through advanced ...

Once back home, the collected credit counterbalances the electric vehicle charging by facilitating bidirectional power transfer, so efficiently utilizing home-generated solar energy ...

Request PDF | Solar Powered Bidirectional On-Board Charger for Integration of Electric Vehicle into Grid | This Rapid increase of hydrocarbons in the atmosphere leads to ...

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Schematic representation of a bidirectional EV charging system integrating conventional (coal, oil, natural gas) and renewable (solar) energy sources has been shown. ...

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Bidirectional charging requires specific communication between vehicle, charge point and grid. Only chargers that support this feed-in functionality and speak the correct protocol are suitable.

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