



BUHLE POWER

# **School uses Dublin photovoltaic container for bidirectional charging**





## Overview

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Can a bi-directional battery charging and discharging converter interact with the grid?

This paper presents the design and simulation of a bi-directional battery charging and discharging converter capable of interacting with the grid.

What is bidirectional charging?

Bidirectional charging describes the technology of not only charging an electric vehicle from the grid, but also feeding electricity back into the grid or to consumers. This is often referred to as Vehicle-2-Grid (V2G) or Vehicle-2-Home (V2H).

Why do EV batteries need bidirectional charging?

This can result in economic benefits for customers and help avoid overloading the energy supply grid. In contrast, bidirectional charging enables an EV battery to both receive and deliver energy to and from an external power source, making it a more flexible and efficient use of the battery.

Can a bidirectional electric vehicle charger improve efficiency and integration of electric vehicles?

Future work will involve studying and testing a new model for a bidirectional Electric Vehicle (EV) charger. This can be implemented. This research aims to improve the efficiency and integration of electric vehicles with the grid. 1. A. Verma and B. Singh, "An Implementation of Renewable Energy Based Grid Interactive Charging Station,"



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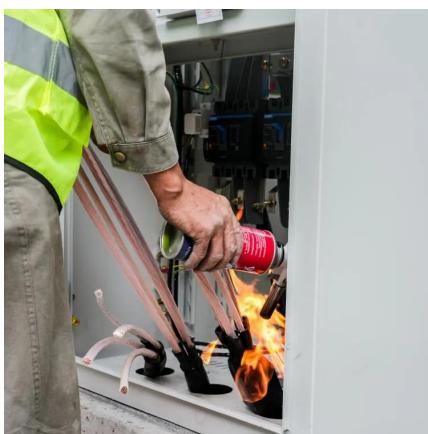
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## Bidirectional charging

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