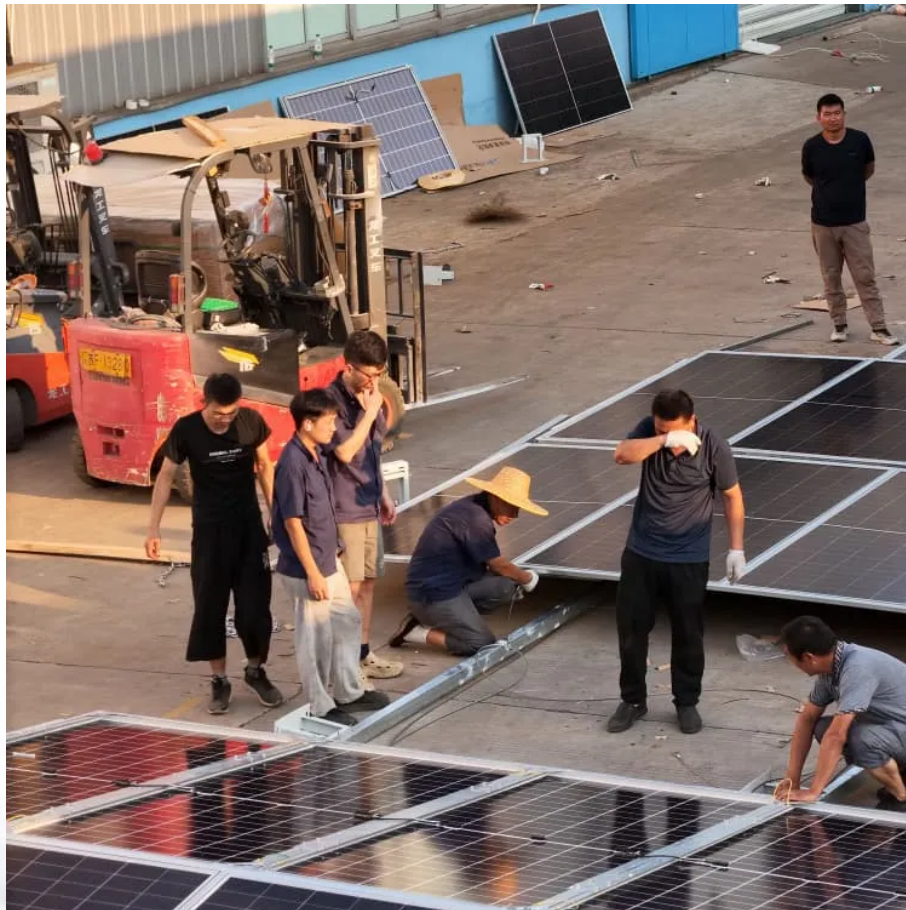


# School uses São Tomé solar-powered container for bidirectional charging





## Overview

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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.

Does the proposed charging system provide a well regulated charging scenario?

Graphical representation of power losses in the proposed charging system. On the basis of the proposed charger equations, Fig. 23 depicts the charger's efficiency for grid-to-vehicle mode and vehicle-to-grid mode, and it is found that the presented charger provides a well-regulated charging scenario for the charging and discharging.



## School uses São Tomé solar-powered container for bidirectional charging

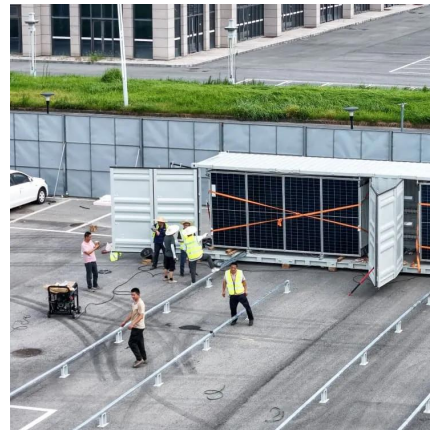


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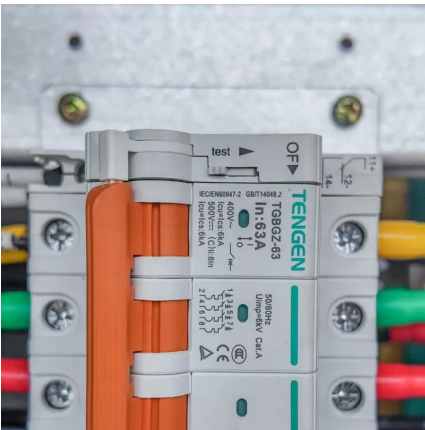
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