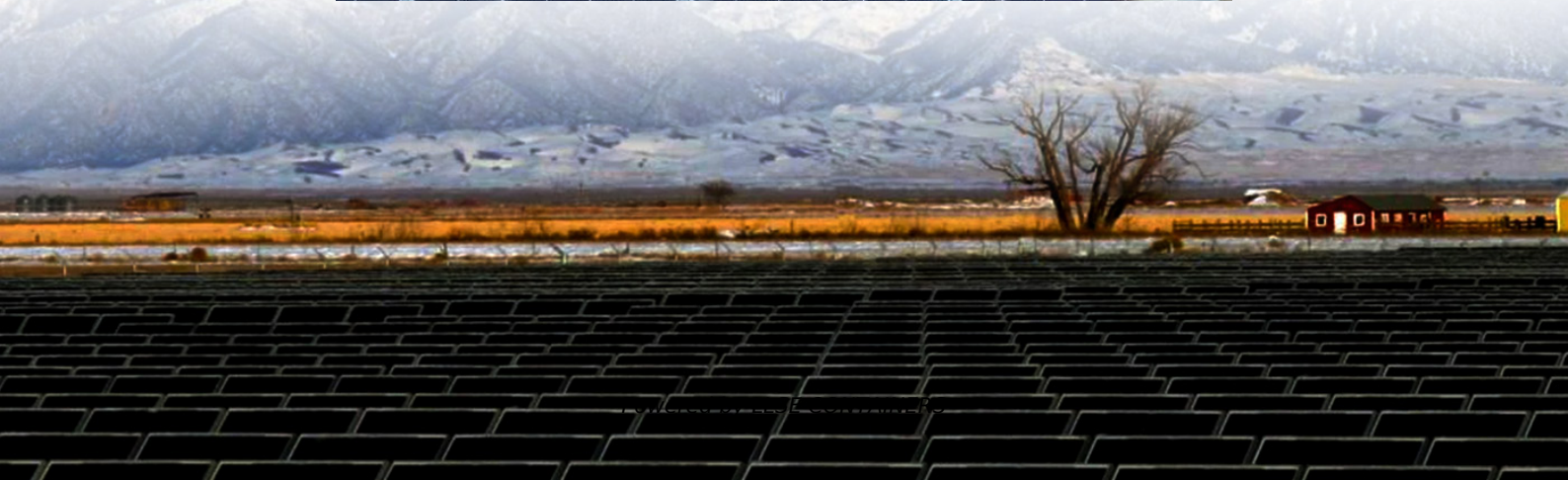


# **High-performance cost-effective grid-connected solar folding containers in Honduras**





## Overview

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What makes a photovoltaic system a grid-connected system?

Another very important aspect of photovoltaic installations that are grid-connected is the type of energy supplied into the network, whether reactive or active, which can change the type of power factor 11, 12. The most efficient systems are those that can vary the power according to grid requirements.

What are the target functions to be minimised in grid-connected hybrid systems?

The target functions to be minimised are electricity costs, maintenance and capital costs, and fuel costs. A genetic algorithm is used to combine the local generation, battery storage, and the power management system solution for grid-connected hybrid systems (Madhuri et al., 2022).

What is a hybrid grid?

An electrical distribution system known as a hybrid grid enables the integration of different domestically made sources, either in addition to the use of storage devices (Mastoi et al. 2023).

How much does an on-grid system cost?

According to Table 6, in the on-grid system, the total cost of the system is 1,355,437 \$, comprising initial capital, replacement, O&M, and fuel cost. Despite the high capital outlay in the PV (180,868 \$) and WT (271,600 \$) systems, their low ongoing costs and absence of fuel cost make them economical in the long term.



## High-performance cost-effective grid-connected solar folding contain

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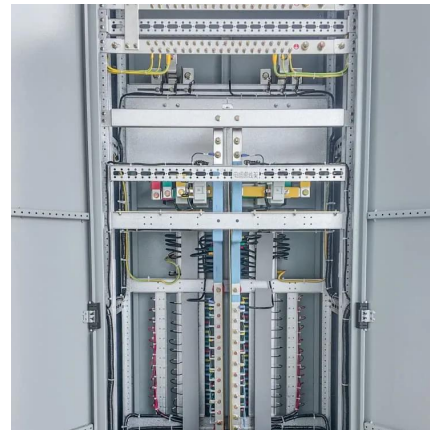


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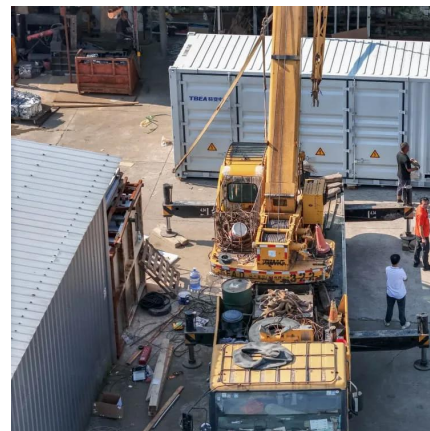


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