

# **Optimal dispatch of solar container energy storage system**





## Overview

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How can a dish-Stirling concentrated solar power system be optimized?

Zayed et al. (2020) optimize the design and operation of a dish-Stirling concentrated solar power system using design variables such as the interception factor; concentrator mirror reflectance; and, receiver absorbance, transmittance and emissivity.

How does solar energy storage affect energy prices?

In many geographic locations, there is significant penetration of photovoltaic generation, which depresses energy prices during the hours of solar availability. An energy storage system affords the opportunity to dispatch during higher-priced time periods, but complicates plant design and dispatch decisions.

What is a single-technology CSP with thermal energy storage plant?

The plant design is the baseline single-technology CSP with thermal energy storage plant shown in Table 7. The dispatch solution is revenue-maximizing, and is dependent on the electricity prices and the solar resource available during the problem horizon.

What is hybrid CSP-PV with storage plant configuration?

Hybrid CSP-PV with storage plant configuration (Graphic ©NREL). A depiction of a molten salt power tower CSP plant with thermal energy storage and a steam Rankine power cycle, co-located with a PV field and battery storage. Colored by the system sizing design variables:



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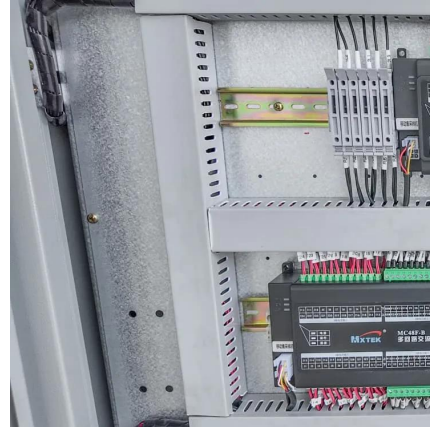






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