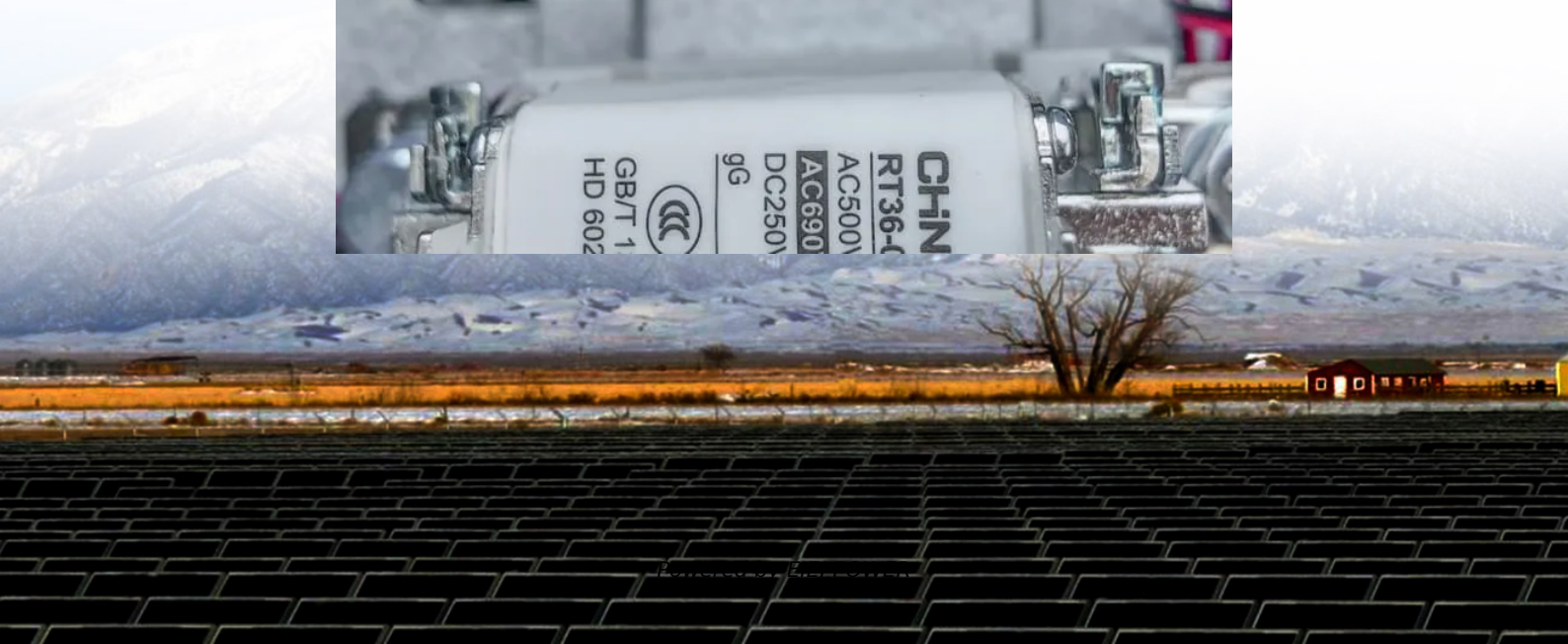


How to identify wind-solar complementary batteries for solar container communication stations





Overview

The complementarity between wind and solar resources is considered one of the factors that restrict the utilization of intermittent renewable power sources such as these, but the traditional complementarity ass.

Does solar and wind energy complementarity reduce energy storage requirements?

This study provided the first spatially comprehensive analysis of solar and Wind energy Complementarity on a global scale. In addition, it showed which regions of the world have a greater degree of Complementarity between Wind and solar energy to reduce energy storage requirements.

Is there a complementarity between wind and solar resources?

To assess the complementarity between wind and solar resources, the observed daily wind speed (at 10 m) and sunshine duration data for 56 years (1961–2016) from 726 national meteorological stations are collected, and the corresponding solar radiation is calculated according to Eq. (1).

Are wind and solar systems complementary?

That said, the complementary use of wind and solar resources combined, also known as hybrid systems, is attractive. Hybrid systems are complementary even when availability values are not entirely complementary, called imperfect complementarity .

How to analyze complementarity of wind and solar energy?

Analyzing the complementarity of wind and solar energies requires the collection of multidisciplinary information, in which the primary criterion for deliberating the implementation of hybrid systems is related to mapping the weather conditions of a given location.



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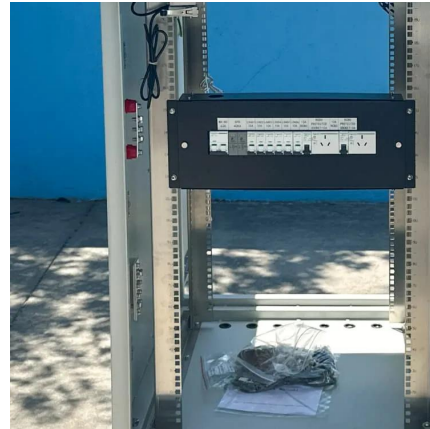
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