

## Kongres Container

# Renewal and transformation of wind-solar complementary base for communication base stations

## GRADE A BATTERY

LiFepo4 battery will not burn when overcharged over discharged, overcurrent or short circuit and can withstand high temperatures without decomposition.



## Overview

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What is the complementary coefficient between wind power stations and photovoltaic stations?

Utilizing the clustering outcomes, we computed the complementary coefficient  $R$  between the wind speed of wind power stations and the radiation of photovoltaic stations, resulting in the following complementary coefficient matrix (Fig. 17.).

Is there a complementarity between wind and solar energy?

Studying the complementarity between wind and solar energy is crucial for optimizing the use of these renewable resources. Multi-energy compensation systems need to consider multiple metrics, and current research relies on the correlation of single metrics to study this complementarity.

How do we evaluate the complementarity of wind and solar resources?

Previous studies have primarily used the Pearson correlation coefficient (CC) and similar metrics to evaluate the complementarity of wind and solar resources. For instance, Che et al. directly calculated Pearson CC to analyze the complementarity between wind and solar power and between wind and hydropower.

Can wind-solar-hydro complementarity improve China's future power system stability?

Wind-solar-hydro complementary potential shows great temporal and spatial variation. Renewable complementarity can improve China's future power system stability. In the context of carbon neutrality, renewable energy, especially wind power, solar PV and hydropower, will become the most important power sources in the future low-carbon power system.

Which cluster of wind power stations exhibit the weakest complementarity with radiation?

Analysis of the matrix reveals that the 4th, 5th, 7th, and 8th clusters of wind power stations exhibit the weakest complementarity with the radiation of photovoltaic stations. In contrast, the 5th, 7th, 8th, and 10th clusters of photovoltaic stations similarly demonstrate poor complementarity with the wind speed of wind power stations.

Are wind power and solar PV power potential complementary?

The assessment results of temporal volatility of wind power and solar PV power potential in different regions of China show that they can be well complementary at different time scales.

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