



Wind-solar complementarity in solar container communication stations of various countries





Overview

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.

Do wind power and photovoltaic stations complement each other?

Typically, wind power and photovoltaic stations are situated at different locations, necessitating the study and analysis of wind speed-radiation complementarity across various regions. This study focuses on wind power stations and photovoltaic stations in Qinghai and Gansu provinces to explore their complementarity.

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.).

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.



Wind-solar complementarity in solar container communication station



Assessing the potential and complementary characteristics ...

By calculating the Kendall rank correlation coefficient between wind and solar energy in China, the study mapped the spatial distribution of wind-solar energy ...

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This paper demonstrates the limitations of traditional wind-solar complementarity evaluation metrics from both theoretical and mathematical perspectives, and proposes a novel ...



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[Matching Optimization of Wind-Solar Complementary Power](#)

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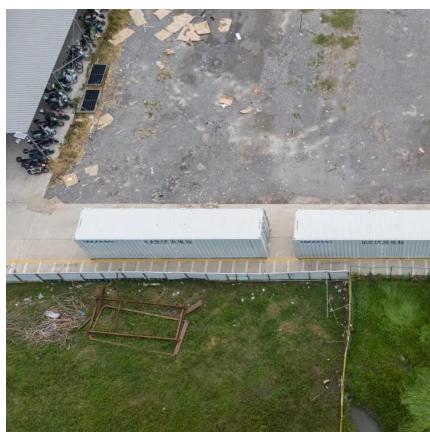
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Analysis of the advantages of wind and solar complementarity ...

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