# Analysis of wind-solar complementary situation of China s solar container communication stations

It summarizes the spatial potential and projected capacity trajectories under carbon neutrality goals, with estimates suggesting a combined capacity of 5,496 to 7,662 GW of wind and solar power by 2060, ...

Using ERA5 reanalysis data for wind speed and solar irradiance, an evaluation was carried out to determine the potential and spatial distribution of ...

Based on the China Surface Climate Data Dataset V3.0, we analyze herein the spatial and temporal distribution in wind- and solar-energy resources in China and evaluate via the Spearman ...

This study examines the spatiotemporal variability and complementarity of wind and solar resources across China, and evaluates their response to future climate change scenarios (RCP 4.5 ...

1. Introduction. Can a multi-energy complementary power generation system integrate wind and solar energy? Simulation results validated using real-world data from the southwest region of China. ...

Our study bridges this gap by analyzing spatiotemporal variations, complementarity, and carbon mitigation capacity of wind-solar resources under climate scenarios, incorporating environmental ...

Abstract: This study explores the potential of renewable power to meet the load demand in China. The complementarity for load matching (LM-complementarity) is defined firstly.

Using meteorological data from 17 Global Climate Models (GCMs) in the Sixth Coupled Model Intercomparison Project (CMIP6) under different emission scenarios (SSP1-2.6, SSP2-4.5, SSP5 ...

Abstract: Changes in wind and solar energy due to climate change may reduce their complementarity, thus affecting the stable power supply of the power system. This paper investigates the wind and ...

To meet China"s goal of carbon neutrality by 2060, substantial investment in upgrading power systems needs to be made to optimize the deployment of new photovoltaic and wind power ...

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