

# **Direction of the wind-solar complementary channel of the solar container communication station**





## Overview

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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. Since wind power,

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.

Does wind power and solar PV have a decarbonization pathway?

Since wind power and solar PV are specifically intermittent and space-heterogeneity, an assessment of renewable energy potential considering the variability of wind power and solar PV with high temporal resolution in different regions will facilitate more accurate identification of the decarbonization pathway of power system.

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.

What is China's power generation potential from wind-solar-hydro power resources?

Optimized wind-solar-hydro power complementary potential and output frequency China's total annual power generation potential from wind-solar-hydro power resources is 17.57 PWh after complementary optimization using the MOO model based on NSGA II, which is 4.2% less than the 18.34 PWh without considering complementary optimization.



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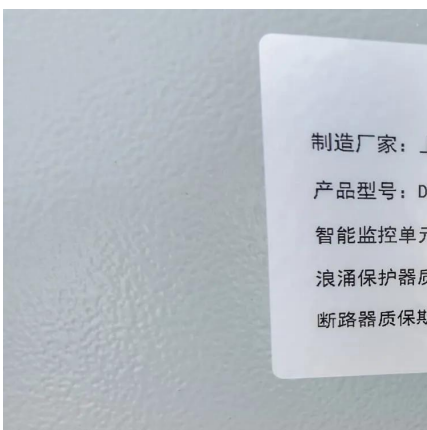
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