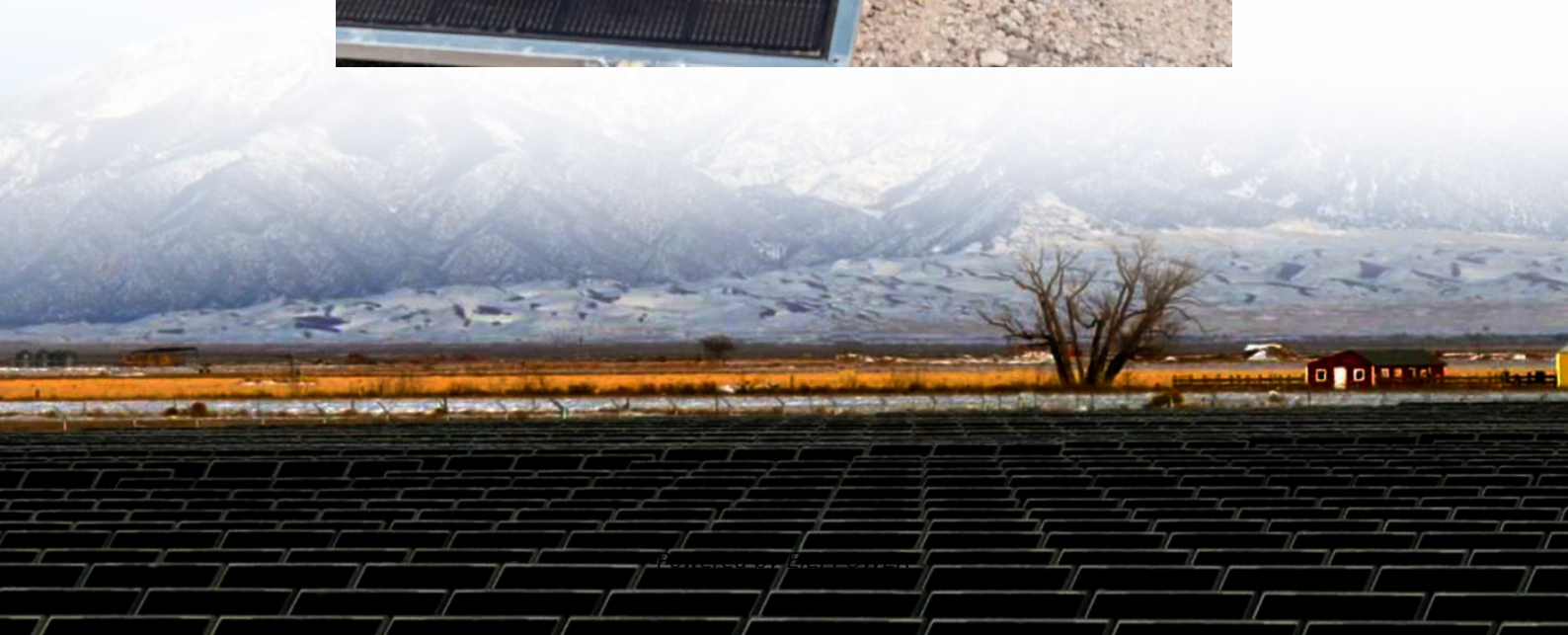


# **The price of wind solar and storage complementarity**





## Overview

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Is there complementarity between wind and solar energy?

The paper offers a global analysis of complementarity between wind and solar energy. Complementarity is examined regarding PV panel inclination and storage capacity. The concept of renewable energy sources complementarity has attracted the attention of researchers across the globe over recent years.

Can wind and solar PV complementarity be used as a planning strategy?

Notwithstanding these limitations, the result of this work clearly highlights the added value of using wind and solar PV complementarity and electricity criteria as a planning strategy for new VRE capacity deployment aiming to reduce the power flexibility needs, namely, the use of expensive energy storage systems.

How stable is the complementarity rate at wind power shares?

The Pearson complementarity rate and Euclidean distance complementarity rate exhibit relatively stable peaks at wind power shares of 35%, 55%, 70%, and 80%, with values ranging from 0.9759 to 0.9774, indicating the linear characteristics of the system.

Why is spatiotemporal complementarity of wind and solar power important?

Understanding the spatiotemporal complementarity of wind and solar power generation and their combined capability to meet the demand of electricity is a crucial step towards increasing their share in power systems without neglecting neither the security of supply nor the overall cost efficiency of the power system operation.



## The price of wind solar and storage complementarity

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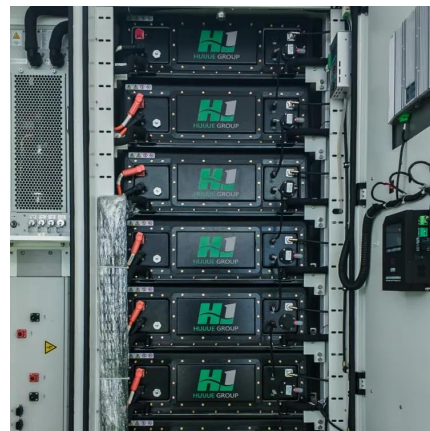


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