Corridor solar and wind power generation geographical knowledge

Here, we outline an optimized, phased pathway for integrating solar and wind energy into a globally interconnected and fully coordinated power system.

GEM is an interactive web-based decision support system that allows users to locate areas with high suitability for power generation and potential energy transmission corridors in the United States.

Here, using OpenStreetMap infrastructure data, we present the first publicly available, spatially explicit, harmonised dataset describing global solar PV and wind turbine installations.

High-resolution geographic information system (GIS) data and census data were used to identify completely electrified, half-electrified, partially electrified, and un-electrified villages and ...

Nevertheless, not all regions are suitable for generating electricity from these sources, which brings the need to identify and map the most favorable and promising regions for implementing ...

Here, we assess current and projected overlaps of wind and solar photovoltaic installations and important conservation areas across nine global regions using spatially explicit wind and solar data ...

Explore the significance and features of renewable transmission corridor designs for a sustainable energy future.

In a 100% renewable energy scenario of 12 central European countries, we investigate how geographical balancing between countries reduces the need for electricity storage. Our principal ...

Abstract Solar and wind resources are critical for the global transition to net-zero emission energy systems. However, their variability and unpredictability pose challenges for system ...

View of the renewable energy atlas in ArcReader with concentrating solar potential and USFS forests and regions. Comparison of total vs. specially designated acreages and high quality renewable ...

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