

Dili Solar Ecosystem





Overview

Can a large-scale photovoltaic site selection model be used in deserts?

Current assessments of PV plant sites in deserts lack consideration of wind-sand hazards and ecological impacts. In this study, we have developed a new large-scale photovoltaic (PV) site selection model that integrates the analytic hierarchy process with geographic information system technology, and applies it to the desert regions of China.

What is the solar power potential of China's deserts?

China's deserts have a solar power potential 2–4 times the global demand in 2022. Best sites for photovoltaic farms are in the Tibetan Plateau and the gravel Desert. China deserts' solar power potential reduces 73–170 % of global emissions. Using 6–14.7 % of China's deserts can meet the country's electricity demand by 2025.

Can a desert meet China's electricity demand by 2025?

Using 6–14.7 % of China's deserts can meet the country's electricity demand by 2025. Desert areas offer rich solar resources and low land use costs, ideal for large-scale new energy development. However, desert ecosystems are fragile, and large-scale photovoltaic (PV) power facilities pose ecological risks.

Can China's desert regions harness solar power?

The results reveal that China's desert regions exhibit significant potential for harnessing solar power.



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Value China's deserts beyond energy projects , Science

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