
Accordingly, this study provides a detailed methodology and implementation steps of the spatial MCDA method that used a GIS-based analytic hierarchy process (AHP) technique.

Abstract This study investigates the technical and economic feasibility of solar-powered adsorption cooling systems in Saudi Arabia, a region with high solar irradiance and ...

Although sandstorms and high winds may occasionally reduce sunlight availability for solar panels in Riyadh, these weather events are typically short-lived and do not significantly impact overall ...

The deployment of solar energy in Saudi Arabia faces significant challenges, particularly around localizing the value chain and addressing environmental factors such as ...

Currently the construction of a solar tower pilot plant for high temperature solar gas turbine in the Riyadh Techno Valley on the campus of King Saud University is under way.

The dataset is specific to Riyadh, Saudi Arabia, and contains solar radiation data with a focus on meteorological factors. It is useful for both local and global solar energy ...

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This study presents and optimizes a solar-driven EC system integrated with underfloor air distribution (UFAD) to enhance thermal ...

The high temperatures and increased load on air conditioning during these months can lead to higher energy consumption, negating the potential benefits of solar radiation.

Case Study 1: Al-Rashid Logistics Warehouse (Riyadh) Challenge: A 50,000 sq.m. logistics hub with high energy demands from refrigeration units and forklifts. Monthly electricity ...

This study presents and optimizes a solar-driven EC system integrated with underfloor air distribution (UFAD) to enhance thermal comfort and minimize water use in a ...

The deployment of solar energy in Saudi Arabia faces significant challenges, particularly around localizing the value chain and ...

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Summary Photovoltaic (PV) power is increasingly promoted as a sustainable energy source, yet its efficiency remains hindered by high operating temperatures. To address this issue, this ...

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