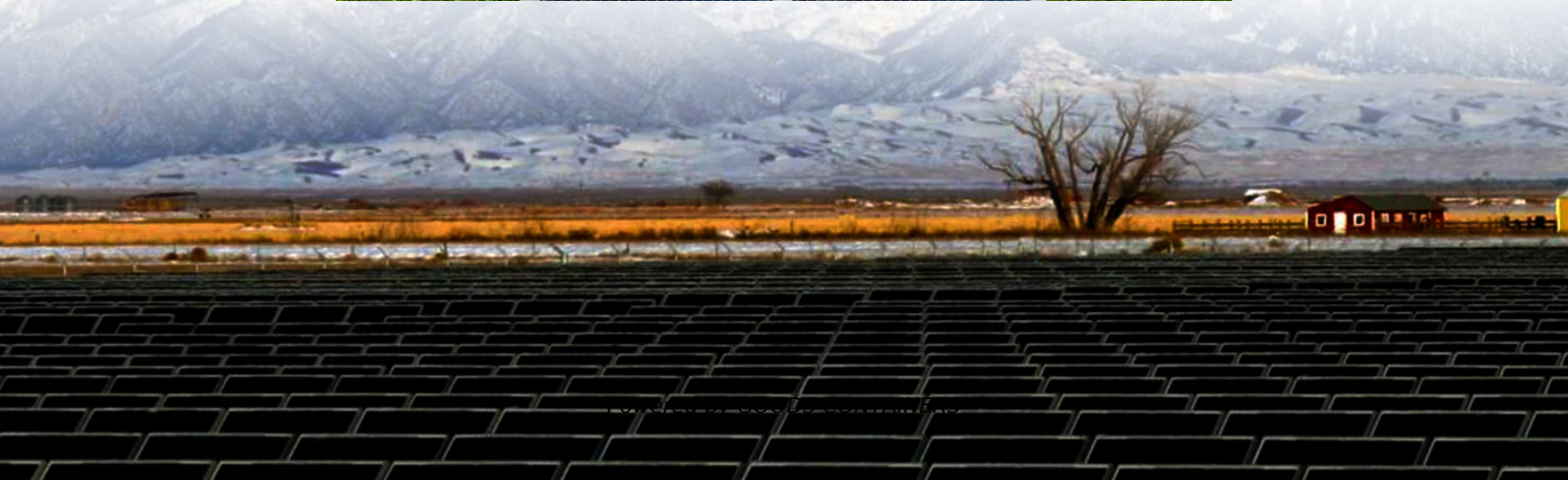


80kWh Sudanese photovoltaic container used for field research





Overview

Are solar power towers and parabolic troughs 'hypothetically relocated' in Sudan?

The study used techno-economic analysis for two of the most mature CSP technologies - solar power tower (SPT) and parabolic trough (PT) technology - to produce electricity in Sudan. Two commercial CSP plants, namely GEMASOLAR and ANDASOL-1, have been “hypothetically” relocated in six Sudanese zones using the system advisor model (SAM).

Can solar energy be used in Sudan?

Harvesting solar energy using CSP technologies in Sudan will not only increase the electricity generation capacity but also guarantees energy security and sustainability through creating and implementing energy mix plans in line with the UNs' SDGs for 2030.

Which solar power tower system is best for Sudan?

Relocating GEMASOLAR and ANDASOL-1 in Sudan showed better outputs than in Spain. The solar power tower system is the most suitable for Sudan's environment. The LCOE at zone1 for the 50 MWe solar tower plant is 0.086 USD/kWh. A 5 MWe solar tower pilot plant at zone1 with optimum specifications is proposed.

Which solar water pumping system is best for irrigation in Sudan?

Ali evaluated the most cost-effective solar water pumping system for irrigation in Sudan and showed that the PV pump is the most feasible pathway among solar irrigation pumps in Sudan.



80kWh Sudanese photovoltaic container used for field research



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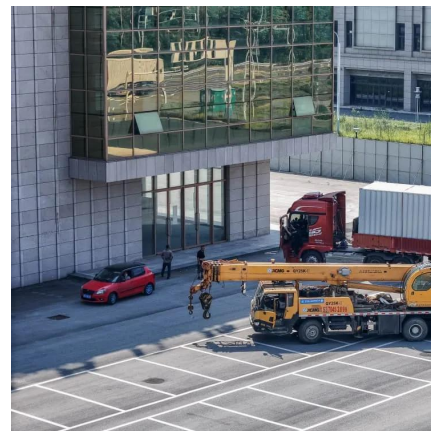
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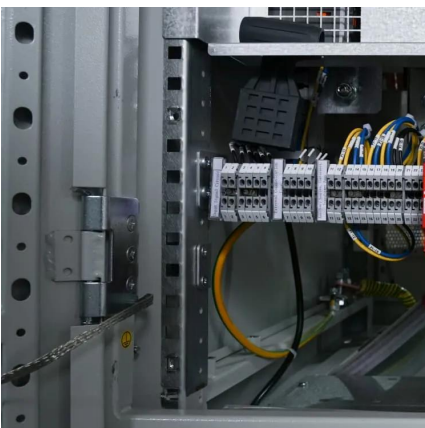
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