Kongres Container

Sudan Thermal Power Plant Energy Storage Planning Project

Overview

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.

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).

What are the barriers to solar energy development in Sudan?

In the case of Sudan, technology and financing of solar energy projects are still the two big barriers to solar energy development in general. Other barriers include : High economic risk of CSP technologies and lack of public/private investment. High market concentration impeding new stakeholder entry.

What are the energy production resources in Sudan?

More than 96% of this capacity was derived from fossil fuels and hydropower; the rest was dependent on RE, viz., solar and biomass . The country started to increase its production from solar resources, leading to an increase in capacity from 14 MW in 2019 to 18 MW in 2020. shows the breakdown of energy production resources in Sudan.

Is there a pilot CSP plant in Sudan?

Up to now, there is no pilot CSP plant has been demonstrated in the country.

Moreover, there is an ambiguity and lack of data for planned RE capacities in Sudan's vision for 2031 with regards to CSP targets. The literature survey indicated that limited studies had explored the solar energy potential in Sudan.

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.

Sudan Thermal Power Plant Energy Storage Planning Project

Contact Us

For catalog requests, pricing, or partnerships, please visit: https://drugiswiatowykongrespolakow.pl