

# Solar power generation costs in Sudan



## Overview

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Projected levelised costs for solar PV generation are falling to approximately \$35/MWh by 2025 and \$25/MWh by 2035 - roughly \$0. Compare this with diesel generation costs of \$0.3 billion annually in imports. The financial case for solar in Sudan is compelling. On average, Sudan receives 3,800 hours of sunshine annually. Sudan's electricity prices (December 2023): Households - USD 0.3. As of 2021, only 17% of the population. Concentrating solar power (CSP) technologies are proven renewable energy (RE) systems to generate electricity in neighboring countries from solar radiation and have the potential to become cost-effective in the future. Most of the attention is given to solar photovoltaic (PV) systems; no thorough. The national grid has experienced a significant decrease in electricity demand since the conflict, with Khartoum and Gazira, which previously accounted for 75% of the demand, being disconnected due to transmission network damages.

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### UTILITY-SCALE SOLAR IN SUDAN

The latest Renewable Energy Master Plan (2019-2033) is targeting the development of nearly 2.5 GW from utility-scale solar and wind projects and 850 MW from distributed generation (rooftop solar, solar

### [Renewable Energy in Sudan: Current Status and Future Prospects](#)

This paper reviews the current status and future potential of renewable energy in Sudan. While hydropower generates approximately 54.6% of Sudan's electricity, other renewable sources



### Sudan's Untapped Solar Potential

The financial case for solar in Sudan is compelling. Projected levelised costs for solar PV generation are falling to approximately \$35/MWh by 2025 and \$25/MWh by 2035 - roughly \$0.0376/kWh.

### [Renewable Energy in Sudan: Current Status and Future Prospects](#)

Sudan relies heavily on refined petroleum products for electricity generation, excluding hydropower, contributing to environmental degradation through petroleum combustion.



[Full article: An analysis of Sudan's energy sector and its renewable](#)



### [Concentrating solar thermal power generation in Sudan: Potential](#)

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

The article starts with a brief discussion of the importance of RE in general and in Sudan in particular, followed by an analysis of Sudan's energy sector. This section includes a discussion of



### [Sudan Solar Panel Manufacturing Report , Market Analysis and Insights](#)

Explore Sudan solar panel manufacturing landscape through detailed market analysis, production statistics, and industry insights. Comprehensive data on capacity, costs, and growth.

### [Sudan Electricity Generation Mix 2023 , Low-Carbon Power Data](#)

Sudan's electricity mix includes 65% Hydropower, 28% Unspecified Fossil Fuels and 1% Solar. Low-carbon generation peaked in 2022.



### **Updates of Electricity and Petroleum Report in Sudan**

Conflict in Sudan has affected fuel supply to thermal power plants, increasing the dependency on hydro-generation to meet the grid load. Since the conflict outbreak in April 2023, all thermal power stations

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