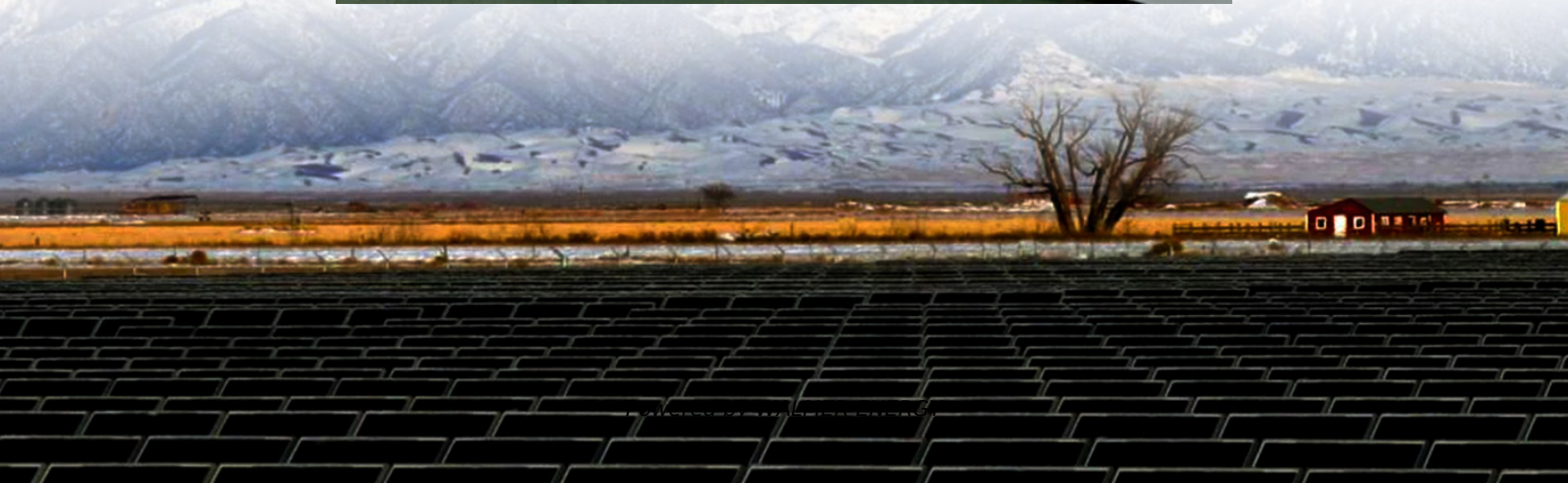


Sudan Peak Valley Off-Grid Energy Storage Power Generation





Overview

What is the power grid in Sudan?

Sudan's interconnected power grid network consists of different types of power generation stations (hydropower and thermal power plants), power substations, and transmission lines, mainly of the 220 kV and 500 kV lines, as shown in Fig. 7 . Currently, Sudan has three grid regions.

Where is the best place to harvest solar energy in Sudan?

A study by Fadlallah and Serradj assessed the monthly average solar radiation across 21 locations in Sudan, as shown in Figure 11, identifying Kutum as the most favorable site for solar energy harvesting, followed by Wawa, Dongola, and Al-Goled. Solar potential map of Sudan . Average monthly solar radiation in Sudan .

Does Sudan have solar power?

While hydropower generates approximately 54.6% of Sudan's electricity, other renewable sources contribute only 0.78% to the national grid. Sudan's hydropower capacity stands at 1907 MW, with plans to add 2197 MW. As a Sunbelt country, Sudan has immense solar energy potential, yet it has only constructed a 10-MW solar PV plant (5 MW on-grid).

How much solar power will Sudan have by 2035?

Plans are underway to deploy 1200 solar pumps in West and North Kordofan. By 2035, the government also plans to establish 190 MW of solar PV home systems, 400 MW of solar pumping, 250 MW of rooftop PV systems, and 27 MW of PV-diesel hybrid systems. In wind energy, Sudan aims to achieve a total installed capacity of 1550 MW by 2035.



Sudan Peak Valley Off-Grid Energy Storage Power Generation

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