

# How many watts of solar energy are needed in Sudan





## Overview

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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 many solar plants are there in Sudan?

The government has identified six additional sites capable of producing a total of 2197 MW, though no significant new installations have been recently initiated. As part of the Sunbelt region, Sudan possesses substantial solar energy potential. However, the grid-connected capacity remains limited to the 5-MW El Fasher solar PV plant.

How much electricity does Sudan use per capita?

Sudan's electricity consumption per capita stands at 0.3 MWh, significantly lower than that of neighboring countries such as Libya (4 MWh/capita) and Egypt (1.6 MWh/capita) (see Figure 5). To address this disparity and reduce reliance on oil, increased adoption of renewable energy sources is imperative.

How much solar radiation does Sudan have?

Sudan possesses an average annual radiation range of 436 to 639 W/m<sup>2</sup> per year, which exceeds the annual global average. The period of solar radiation in the country is between 8.5 and 11 hours per day . There is, furthermore, much unused land available for RE development .



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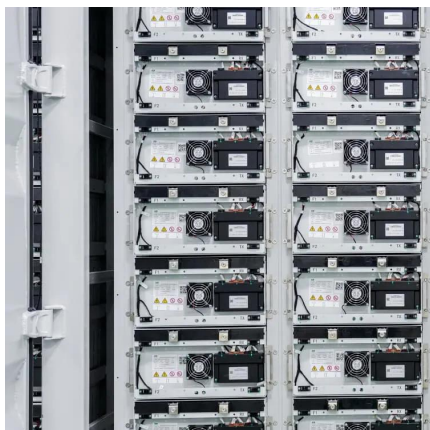
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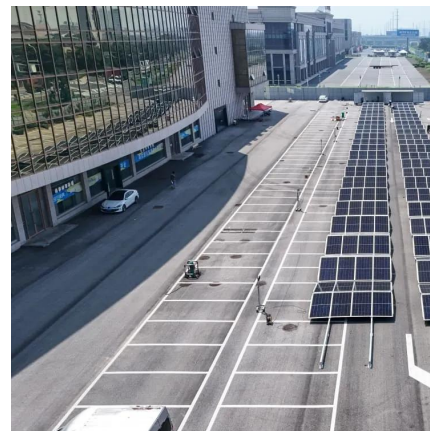


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