

## ContainerPower Energy Solutions

# Is Oman suitable for solar power generation



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## Overview

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Why is solar energy important for Oman?

Solar energy is a vital and strategic solution for the provision of electric power in the Sultanate of Oman, given its vast unused land and available solar energy resources. This makes Oman an excellent potential candidate for solar energy development and deployment.

Is solar PV a viable option in Oman?

Consequently, numerous studies have explored the potential of solar PV in different locations, the feasibility of rooftop solar PV, public awareness of the solar PV transition, policies to promote solar PV and the overall scope of solar energy in Oman.

Does Oman have a solar system?

Also, Oman has implemented policies for rooftop PV systems such as Sahim rooftop solar PV initiative and several solar projects have been initiated since 2020 that are expected to be operational, before 2030 .

Where to install solar PV in Oman?

This case study offers an information on solar PV power generation on rooftops in optimal locations in Oman, considering various factors. The northern regions of Oman are the most suitable locations to install the solar PV systems. In the northern regions Ibri is the best locations for rooftop solar PV projects compared to other locations.

Why do solar panels perform better in Oman during summer?

The findings showed that performance ratio at all locations decreases during the summer compared to non-summer periods due to high temperature experienced in Oman. Ibri is the top location in Oman suitable for solar PV projects. Their annual energy output is further increased by regular cleaning of the solar PV panels.

Which energy source contributes the most to electricity generation in Oman?

In Oman, natural gas contributes the maximum share to electrical power generation . The cost of avoided carbon emission due to the solar PV generation system [81, 82] can be calculated in terms of social cost of carbon (C C O 2 a v o i d e d) by the following equation (26).

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