

Muscat High Temperature Solar System





Overview

What is the best solar PV system for Oman?

The best suitable solar PV system for Oman and the best solar PV site among 25 locations in Oman were identified using HOMER software. The research found that the best type of PV is the Ingeteam 1164kVA with generic PV.

Does dust accumulation affect solar PV performance in Oman?

Dust accumulation and soiling of solar panel affects the solar PV performance significantly. In Oman, there are many factors to cause dust accumulation, such as emissions from power plant chimneys, smelters from the industry, movement of vehicle and sandstorms.

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.

Does sandstorm affect solar panel performance in Oman?

However, Oman experiences varying sun hours, residential load and temperature during summer and non-summer period. In this paper, performance of solar PV is assessed separately for these two periods instead of annually. Previous studies analysed the impact of dust on solar panel, however not focused on sandstorm.



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