

## PDEOZE PowerContainer

**Is the energy storage solar power station suitable for the north**



## Overview

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Why is energy storage important?

Energy storage is one of the most important technologies and basic equipment supporting the construction of the future power system. It is also of great significance in promoting the consumption of renewable energy, guaranteeing the power supply and enhancing the safety of the power grid.

Is northwest China a good place for solar energy development?

Northwest China has abundant solar energy resources and extensive land, making it a pivotal site for solar energy development. However, restrictions on site selection and severe weather conditions have hindered the establishment and operation of photovoltaic (PV) power stations.

What is a suitable area for solar power production?

Therefore, a highly suitable area with high electricity consumption is preferable, leveraging abundant solar resources while meeting diverse industrial demands. Areas with high suitability and low electricity consumption are ideal for exporting electric power and optimizing land resource utilization.

Is Gobi desert suitable for photovoltaic power stations?

Development of improved site suitability map using comprehensive indicator system. Gobi Desert shows high suitability for construction of photovoltaic power stations. Solar energy generation can meet projected demand and reduce carbon emissions.

How can a power supply reduce energy storage demand?

The addition of power supplies with flexible adjustment ability, such as hydropower and thermal power, can improve the consumption rate and reduce the energy storage demand. 3.2 GW hydropower, 16 GW PV with 2 GW/4 h of energy storage, can achieve 4500 utilisation hours of DC and 90% PV power consumption rate as shown in Figure 7.

Do weather conditions affect photovoltaic power stations?

However, restrictions on site selection and severe weather conditions have hindered the establishment and operation of photovoltaic (PV) power stations. Previous studies have not considered meteorological factors when evaluating site suitability, leading to research gaps in identifying suitable areas and establishing indicator systems.

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