

SolarInnovate Energy Solutions

Energy storage of Fengguan Power



Overview

Why is Fengning the most significant pumped storage facility in North China?

When fully charged, the upper reservoir can store enough energy to power the plant at full capacity for 10.8 hours, equivalent to nearly 40 GWh. This makes Fengning the most significant pumped storage facility in North China in terms of balancing renewable energy output.

How much energy does a Fengning power plant hold?

Fengning's advanced design includes an upper reservoir with a capacity of 45.04 million cubic meters and a lower reservoir holding 71.56 million cubic meters. When fully charged, the upper reservoir can store enough energy to power the plant at full capacity for 10.8 hours, equivalent to nearly 40 GWh.

What is the Fengning pumped storage power station?

The Fengning Pumped Storage Power Station, the world's largest facility of its kind, has commenced full operations with the commissioning of its final variable-speed unit on December 31.

Why is energy storage and demand response important in China?

Providing valuable policy implications for the development of energy storage and demand response in China. Energy storage and demand response offer critical flexibility to support the integration of intermittent renewable energy and ensure the stable operation of the power system.

How much energy storage will China have by 2023?

By 2023, an additional 21.5 GW of energy storage had been installed, with over 95% of this capacity being lithium battery-based electrochemical storage (CIAPS, 2024). Several regions in China have already mandated wind and solar power plants to integrate a certain amount of energy storage capacity.

Why is pumped storage important in China?

In August 2023, the U.S. Energy Information Administration credited pumped storage with increasing the flexibility of China's power grid. That made it "particularly important in China, which has a large and growing share of wind and solar power in its generation mix," the EIA said at the time.

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