

# Energy storage power station operation and profitability





## Overview

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How can pumped storage power stations be fully independent?

In the model of “completely independent participation in the market”, the technical transformation of the pumped storage power station should be accelerated, the energy conversion efficiency of the power station should be reasonably improved, the power loss should be reduced, and the cost recovery of the power station should be promoted.

Do pumped storage power stations improve economic benefits?

According to the results of sensitivity analysis, the operation of pumped storage power stations under different models is guided, to promote the improvement of economic benefits of power stations. In the selection of sensitive factors, priority should be given to the factors that have a greater impact on income.

How to determine the operation strategy of a pumped storage power station?

When formulating the operation strategy of the power station, reference can be made to the operation data reported by the power station for the five years from 2018 to 2022. The power consumption and power generation of the pumped storage power station during this period are shown in Figure 5.

What are the development models of pumped storage power stations?

According to the different stages of the development of the power market, this paper puts forward the corresponding development models of pumped storage power stations, which are successively the “two-part price system” model, the “partial capacity fixed compensation” model, and the “completely independent market participation” model.



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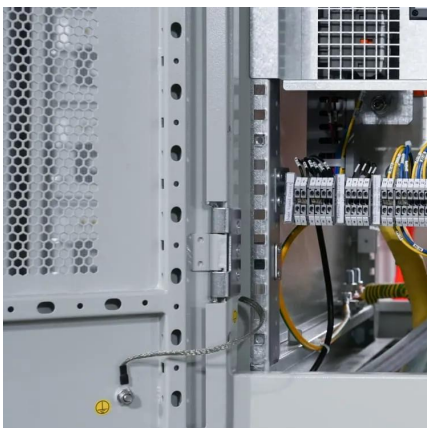


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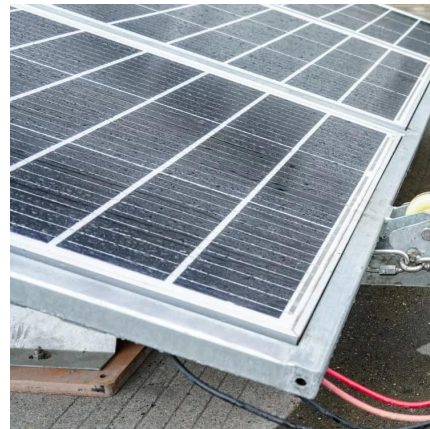


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The location of pumped storage power station is limited by geographical location, water head, terrain and geology, etc. Compared with the conventional frequency regulation resources ...



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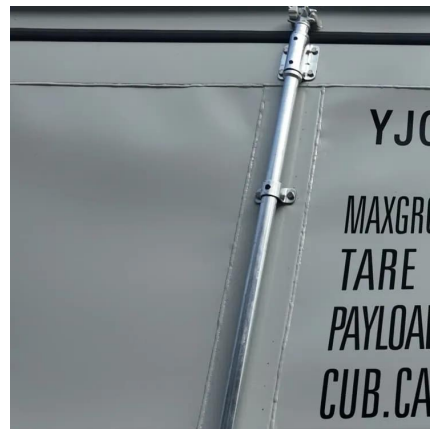


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