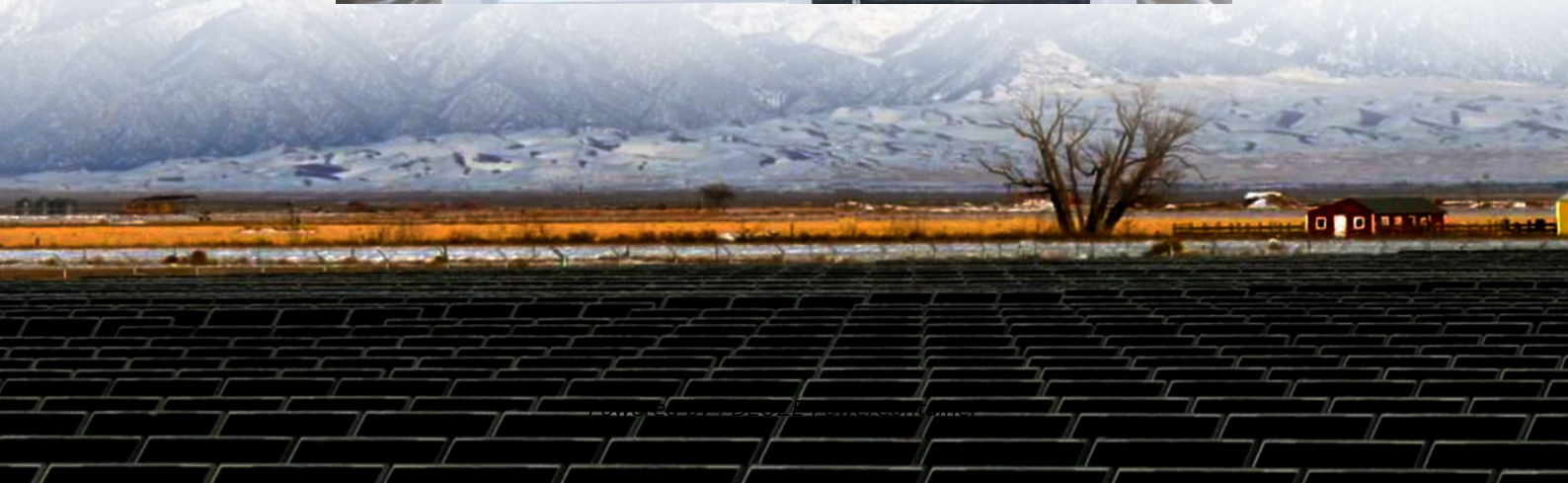


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Slovenia Energy Storage Peak Shaving and Valley Filling Project



Overview

Do energy storage systems achieve the expected peak-shaving and valley-filling effect?

Abstract: In order to make the energy storage system achieve the expected peak-shaving and valley-filling effect, an energy-storage peak-shaving scheduling strategy considering the improvement goal of peak-valley difference is proposed.

How is peak-shaving and valley-filling calculated?

First, according to the load curve in the dispatch day, the baseline of peak-shaving and valley-filling during peak-shaving and valley filling is calculated under the constraint conditions of peak-valley difference improvement target value, grid load, battery power, battery capacity, etc.

Does overloaded power grid affect peak shaving and valley filling?

The decreasing proportion of the peak-valley difference between the power grid and users' electricity purchasing costs are both lower than that in the base case when the load reduces by 20%. Thus, the dynamic price mechanism proposed in this study exhibits more obvious effects on peak shaving and valley filling when the power grid is overloaded.

Does constant power control improve peak shaving and valley filling?

Finally, taking the actual load data of a certain area as an example, the advantages and disadvantages of this strategy and the constant power control strategy are compared through simulation, and it is verified that this strategy has a better effect of peak shaving and valley filling. Conferences > 2021 11th International Confe.

Does peaking shaving and valley filling affect load-side comfort level?

(1) A power grid-flexible load bilevel model based on dynamic price is constructed in this study while considering the influence of peaking shaving

and valley filling on the load-side comfort level. The optimal dispatch is achieved considering load-side peak shaving and valley filling incentive subsidy-comfort level economic penalties.

Does peak shaving power reduce Esed and ocgr?

A correction model of peak shaving power of ES with the objective of minimizing ESED and OCGR was established.

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