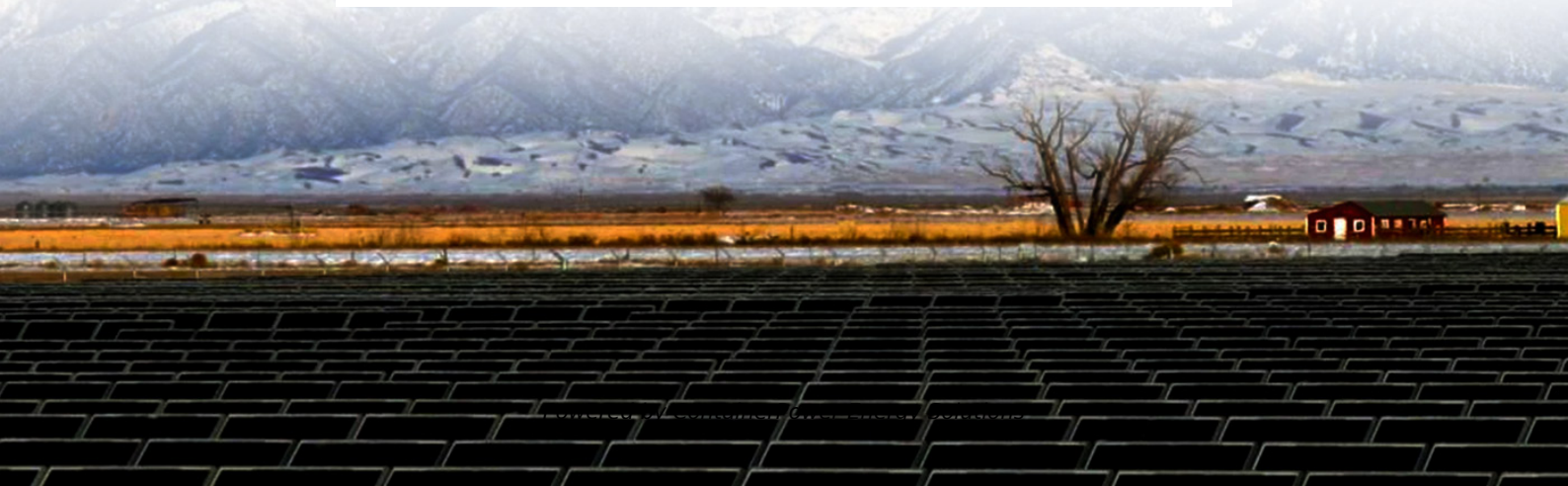
ContainerPower Energy Solutions

Portugal s industrial energy storage revenue share for peak shaving and valley filling



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.

Does energy storage ramping reduce peak demand shave potential?

We observe energy storage ramping capability decides peak shaving potential, fast ramping batteries can significantly reduce peak demand charge. The numerical experiment indicates that storage providing backup does not significantly reduce gains performing arbitrage and peak demand shaving.

What is the power and capacity of Es peaking demand?

Taking the 49.5% RE penetration system as an example, the power and capacity of the ES peaking demand at a 90% confidence level are 1358 MW and 4122 MWh, respectively, while the power and capacity of the ES frequency regulation demand are 478 MW and 47 MWh, respectively.

Are power and capacity of Es increasing as penetration of Re increases?

As can be seen in Table 8, both the demands of power and capacity of ES are increasing as penetration of RE rises.

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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