

Suggestions on rational design of energy storage projects





Overview

Can energy storage systems be rationally allocated?

In this context, the theoretical research and methodological exploration of Energy Storage Systems (ESS), as a key component within the IES framework, have become particularly important. This article proposes an innovative method for rational allocation of energy storage capacity and selection of appropriate energy storage types in IES.

Why is energy storage configuration important?

In the context of increasing renewable energy penetration, energy storage configuration plays a critical role in mitigating output volatility, enhancing absorption rates, and ensuring the stable operation of power systems.

How are the benefits generated by energy storage configuration models evaluated?

In this section, based on the energy storage configuration results mentioned above, the actual benefits generated by these three commercial models are evaluated from four perspectives: technical, economic, environmental, and social. The specific descriptions of the evaluation indicators are as follows.

How much storage capacity should a new energy project have?

For instance, in Guangdong Province, new energy projects must configure energy storage with a capacity of at least 10% of the installed capacity, with a storage duration of 1 h . However, the selection of the appropriate storage capacity and commercial model is closely tied to the actual benefits of renewable energy power plants.



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