
Does the user-side energy storage system participate in a high reliability power supply transaction?
According to the above analysis, in order to fill the research gap of the user-side energy storage system participating in the high reliability power supply transaction, this paper first proposes a high reliability power supply transaction model between the user-side energy storage system and the power grid company.

How to optimize the energy storage system on the user-side?
In the optimization configuration of the energy storage system on the user-side in Fig. 6, it is necessary to consider the constraints of high reliability power supply tasks on the capacity of the energy storage system on the user-side, as well as the impact of its actual output on the objective function.

What is the user-side energy storage system optimization configuration model?
The user-side energy storage system optimization configuration model proposed in this paper is a nonlinear,mixed-integer problem. The integer aspects mainly involve the decision variables in the outer optimization model: the rated capacity and rated charging/discharging power of the user-side energy storage system.

Why is a user-side energy storage system important?
The user-side energy storage system can not only participate in the capacity market as a quick response resource for users to obtain benefits [3,4],but also ensure users' power consumption according to the actual high reliability power supply scenarioby taking advantage of its high flexibility,fast response speed and other characteristics .

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