Cloud energy storage

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At present, significant progress has been made by scholars in the field of cloud energy storage. Current research primarily focuses on the operational mechanisms, optimization scheduling, economic benefits, and other aspects of user-side energy storage in the cloud energy storage model.

The overall framework of cloud energy storage integrated management services.

Cloud Energy Storage Service Mechanism Business Process.

The goal is to minimize the total system cost during the operation and dispatch of the cloud energy storage service provider. The total system cost is shown in Eq. (1)

The operation and maintenance cost of the cloud energy storage platform is shown in Eq. (2).

The cost of electricity purchased by distribution networks during peak load periods is shown in Eq. (3).

The cost of a small energy storage device to purchase power during low load periods is shown in Eq. (4).

Secondly, the demand function of distribution networks, must meet the demand distribution networks demand for each moment for the purpose. The demand function of distribution networks is shown in Eq. (6).

Finally, the scheduling function of the cloud energy storage platform is shown in Eq. (7).

System power balance constraint

Considering the role of the cloud storage operator, the power balance constraint should be maintained for the whole system. The system power balance constraint is shown in Eq. (10).

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