

# Substation energy storage and power big data

What is substation data & why is it important?

Substation data contain the core information of the power grid operation, and its sensitivity and importance are self-evident. Under a cloud-side collaborative architecture, data may face a higher risk of leakage during transmission and storage.

What is a complex substation environment?

In a complex substation environment, the convergence of multi-source, heterogeneous data poses a significant challenge. These data originate from a diverse array of sensors, devices, and systems, featuring various formats and structures, and are extremely complex to process.

What data types are generated by intelligent devices in a substation?

As a key critical of the power system, a substantial number of intelligent devices are deployed in the substation. The data generated by these devices exhibit exponential growth, and the data types are diverse and complex, encompassing both structured and unstructured data.

Can AI integrate multi-source heterogeneous data in substations?

However, the integration of multi-source heterogeneous data in substations has consistently presented a challenge for AI technology intervention. The effective integration of data from different platforms remains a significant challenge at present.

What is the role of big data in energy storage?

The role of big data in energy power and energy storage systems. On the grid side, the configuration of distributed or self-contained battery energy storage can replace peaking and reactive generators.

Why is load mapping important for substation location optimization?

The load mapping results at different scenarios could provide important data support for optimizing the substation location. The substation location optimization process is based on four different scenarios: extreme power consumption, winter peak power consumption, summer peak power consumption, and low power consumption.



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