

XYZ Storage's Data-Driven Unmanned Intelligent Safety Storage Power Station Management System Achieves International Leadership

Recently, the Chinese Society for Electrical Engineering assessed the Data-Driven Unmanned Intelligent Safety Storage Power Station Management System developed by XYZ Storage, confirming that the system is internationally advanced, with several innovative technologies at a globally leading level.

The system focuses on improving the safety and intelligent, unmanned operation of energy storage power stations. It addresses key challenges such as equipment safety risks, insufficient operational reliability, difficult maintenance, and complex decision-making processes. The solution integrates horizontal data integration, vertical function coordination, unified interface interaction, and flexible expansion into a comprehensive intelligent safety management system, enabling centralized monitoring, intelligent analysis, and digital business operations. This significantly reduces the workload for operation and maintenance, lowers safety risks, improves equipment reliability, and enhances decision-making efficiency.

The project's success is marked by three key innovations: (1) it establishes an integrated data collection-transmission-storage-use management system for large energy storage power stations, employing spatial constraint storage algorithms and refined compression methods to greatly improve data management efficiency; (2) it develops a data-driven active safety management system for storage stations, enabling data mining, health diagnostics, root cause warnings, rapid fault location, and intelligent maintenance, thereby improving operational reliability and safety; and (3) it introduces power market price forecasting and operational optimization for storage plants, creating a data-driven solution for unmanned intelligent safety management and decision-making.

The solution has already been applied in energy storage projects in provinces including Shandong, Guizhou, Jiangsu, Qinghai, and Anhui, enhancing the safety of storage stations and the reliability of energy dispatching. This system provides strong support for the development of China's new power systems.