



## 技术类成果

# 巨型电站群“调控一体化”技术研究

### 【创新性】

该项研究在系统高可靠性冗余设计、集群通信、海量数据传输与处理、负载均衡、智能报警、广域多站同步调试、智能平台管理、多重控制闭锁、梯级自动发电控制以及对枢纽下游发电航运实时优化控制等方面实现了重大技术突破。

### 【影响力】

采用该项技术在上世界上规模最大的梯级水电站之一金沙江下游梯级实现远方“调控一体化”，为巨型电站实现现地无人值班的目标奠定了技术基础。该技术成功推广到黄河上游集控中心等 20 余个水电和新能源集控中心。标志着我国巨型梯级水电站“调控一体化”技术已居国际领先水平。

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## TECHNICAL STUDIES ON INTEGRATED DISPATCHING AND CONTROL OF GIANT HYDROPOWER STATION GROUPS

### 【 Innovation 】

The research has achieved significant technological breakthroughs in terms of high reliability redundancy design of the systems, trunking communications, massive data transmission and handling, load balancing, intelligent alarm, wide-field and multi-station simultaneous debugging, the management of intelligent platforms, multiple locking, cascade automatic power generation control, and real-time optimization and control of power generation and shipping in the lower reaches of hubs.

### 【 Influence 】

This technology was used to achieve the remote cascade regulation integration in the lower reaches of the Jinsha River, one of the world's largest cascade hydropower stations, laying a technical foundation for achieving the goal of unmanned operation on site for giant power stations. It was also successfully applied to nearly 20 hydropower and new energy centralized control centers, including the centralized control center in the upper reaches of the Yellow River. This signals that China's integrated dispatching and control technology for huge cascade hydropower stations have already reached the international advanced level.

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