

State Grid Corporation Relay Protection Team



Overview

The first batch of new power system series relay Conducted research on fault mechanisms, fault characteristics, relay protection algorithms, etc., and prop.

Key Takeaways

The State Grid relay protection team is highly professional, experienced, and capable of ensuring reliable fault detection and system stability across complex power networks.

Expertise and Capabilities

The team is skilled in designing, configuring, testing, and commissioning relay protection systems for substations and power plants of various voltage levels, ensuring reliable operation even under demanding conditions. They are proficient with both traditional mechanical relays and modern IEC 61850-based integrated solutions, allowing them to tailor protection strategies to specific grid requirements and equipment types. Their engineers are familiar with hardware and software platforms from most global relay protection manufacturers, enabling them to recommend and implement the latest solutions regardless of supplier.

Advanced Fault Detection and Coordination



State Grid's relay protection team employs advanced algorithms and intelligent electronic devices (IEDs) to detect faults accurately and quickly. Techniques such as XGBoost-based fault detection have been shown to achieve detection accuracies above 95% for various fault types, with low false alarm and missed alarm rates, significantly improving grid safety and reliability. The team also optimizes communication protocols and distributed intelligent control systems to reduce data transmission delays and enhance system robustness in complex grid environments.

System Stability and Smart Grid Integration

The team is adept at coordinating protection devices across the network to ensure fast fault clearance, selectivity, and minimal disruption to healthy parts of the grid. They are capable of implementing System Integrity Protection Schemes (SIPS) and wide-area monitoring using phasor measurement units (PMUs) to maintain stability in modern, power-electronics-dominated grids. Their work includes real-time simulation testing to verify relay performance under realistic grid conditions, including HVDC systems and converter-based networks.

Professionalism and Reliability

With a strong tradition of dedicated work, the team combines technical expertise, practical experience, and evidence-based methodologies to deliver robust, cost-effective, and reliable protection solutions. Their approach ensures that relay protection systems operate effectively, maintain grid stability, and adapt to emerging challenges such as distributed energy resources, renewable integration, and cybersecurity threats. In summary, the State Grid relay protection team is recognized for its technical excellence, innovative fault detection methods, and comprehensive system coordination, making it a critical component in maintaining the safety and reliability of modern power grids.

Article Content

The first batch of new power system series relay

Conducted research on fault mechanisms, fault characteristics, relay protection algorithms, etc., and proposed a new relay protection algorithm that

State Grid Corporation of China Org Chart + Executive

The leadership team is emphasizing financial discipline. Transformation is driven by electrification. State Grid Corporation of China is

State Grid Company Profile | Management and Employees List

Established in 2002, SGCC is a state-owned company that takes the investment, construction and operation of power grids as core business. Committed to re-electrification and energy connectivity,

State Grid Corporation of China

The State Grid Corporation of China (SGCC), commonly known as the State Grid, is a Chinese state-owned electric utility corporation. It is the largest utility company in the world.

State Grid Corporation of China

State Grid Corporation of China (SGCC) was established on December 29, 2002. As the largest utility in the world, SGCC has a stable ranking of the 2nd on Fortune Global 500. SGCC constructs...

Integration and Coordination Strategy of Relay Protection System in ...

The first part introduces the past situation of smart grid systems and explains the importance and existing problems of relay protection systems in the current power grid.

Environmental Science PAPER OPEN ACCESS You may also like ...

This work was financially supported by the State Grid Technology project of "Evaluation and test of the effect of core components on the performance of relay protection device ".

Strategy for evaluating the status of relay protection ...

Based on this, this paper proposes a novel relay protection equipment status evaluation strategy. Firstly, considering the fuzziness and uncertainty of the boundary division of relay protection

Operation and Maintenance Technology of Relay Protection

The condition assessment of relay protection applies the scientific concept of condition-based maintenance to the actual work site, which is of great significance.

State Grid vows to bolster power supply reliability

To guarantee uninterrupted power supply during the harvest, a service team from State Grid Yingshang visited the farm, assessing its electricity needs on site and providing full support for a

New development in relay protection for smart grid

Abstract This series of papers report on relay protection strategies that satisfy the demands of a strong smart grid. These strategies include ultra-high-speed transient-based fault discrimination, new co

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Power System Protective Relays: Principles & Practices

Abstract: Protective relays and devices have been developed over 100 years ago to provide “last line” of defense for the electrical systems. They are intended to quickly identify a fault and isolate it so the

Protecting the Core: Securing Protection Relays in Modern Substations

Introduction — Why Securing Protection Relays Matters More Than Ever Substations are critical nexus points in the power grid, transforming high-voltage electricity to ensure its safe and

Integration and Coordination Strategy of Relay Protection System in ...

Abstract: The purpose of this paper is to discuss the integration and coordination strategy of relay protection system in smart grid, focusing on analyzing the main problems existing in the

A review on adaptive power system protection schemes for future

Each bus comprises protective relay (R1, R2) and current transformer (CT1, CT2) required for the line protection. In the case of overcurrent protection relays for existing power grid distribution

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

