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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 45906.7-2025

**Substation secondary system - Part 7: Centralized monitoring
and control system of substationm**

变电站二次系统 第7部分：集中监控系统

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 7 of GB/T 45906 "Substation Secondary Systems". GB/T 45906 has published the following parts.

- Part 1: General requirements;
- Part 2: Data and models;

- Part 3: Communication message specifications;
- Part 4: Network security protection;
- Part 5: Protection, control and related equipment;
- Part 6: Station monitoring system;
- Part 7: Centralized monitoring system;
- Part 8: Electrical operation error prevention;
- Part 9: Construction specifications;
- Part 10: Testing and inspection.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the China Electricity Council.

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Introduction

In order to meet the transformation and development needs of the substation secondary system, the top-level design of the overall architecture, functions, data and equipment of the

substation secondary system is realized.

Design, promote the optimization and upgrading of new power system equipment manufacturing industry, improve the overall performance and reliability level of substation secondary system, formulate this system List standards.

GB/T 46906 "Substation Secondary System" comprehensively covers general requirements, equipment system functional requirements, project implementation and testing, etc.

The substation secondary system consists of 10 parts.

- Part 1: General requirements. The purpose is to standardize the overall requirements and reliability, functional integration, information interaction, Network security and other technical requirements.
- Part 2: Data and Model. The purpose is to standardize the substation secondary system data and model framework, clarify data classification, collection Processing requirements, modeling methods, and model configuration processes.
- Part 3: Communication message specification. The purpose is to standardize the communication protocol set of the substation secondary system, clarify the data objects and communication The implementation method of the service.
- Part 4: Network security protection. The purpose is to standardize the technical requirements for security protection of substation secondary systems.
- Part 5: Protection control and related equipment. The purpose is to standardize substation relay protection and safety automatic devices, automation equipment Technical requirements for power equipment, power metering and power quality equipment, collection and execution equipment, communication equipment and auxiliary monitoring equipment.
- Part 6: Station Monitoring System. The purpose is to standardize the technical requirements of the station monitoring system, including functions, performance, information exchange, etc.
- Part 7: Centralized monitoring system. The purpose is to standardize the system architecture, functions, performance, information exchange, and Mutual technical requirements.
- Part 8: Electrical operation error prevention. The purpose is to standardize the overall requirements, architecture, functions and Energy, performance and application requirements.
- Part 9: Construction Specifications. The purpose is to standardize the overall requirements, design principles, process control and construction of substation secondary system engineering.

System and technical requirements.

- Part 10. Testing and inspection. The purpose is to standardize the general principles and requirements for the inspection of substation secondary system equipment and systems.

Please wait. Substation secondary system Part 7: Centralized monitoring system

1 Scope

This document specifies the overall requirements, system architecture, functional requirements, and requirements, information interaction, performance requirements and security requirements.

This document applies to the design, development, construction, operation, maintenance and overhaul of centralized control systems.

2 Normative references

GB/T 22239

GB/T 36572

GB/T 45906.1

GB/T 45906.2

GB/T 45906.4

GB/T 45906.8

GB 50052

GB 50174

GB/T 50980

IEC 60870

3 Terms and Definitions

The terms and definitions defined in GB/T 45906.1 and the following apply to this document.

3.1

The basic software platform of the centralized monitoring system of substations provides data, models and interface services for the integration and operation of centralized control systems.

The basic conditions for the development, operation, communication and resource