ICS 03.100.30
CCS A 00

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 44651.3-2025

Implementation guidances for knowledge management - Part 3: Electric power industry

知识管理实施指南 第3部分：电力

Issued on: August 29, 2025 **Implemented on: March 1, 2026**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

Table of Contents

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 3 of GB/T 44651 "Guidelines for the Implementation of Knowledge Management". GB/T 44651 has been published in the following parts.

- Part 1: Equipment manufacturing industry;

- Part 2: Pharmaceuticals;

- Part 3: Electricity.

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 is submitted by the State Intellectual Property Office.

This document is under the jurisdiction of the National Technical Committee for Standardization of Knowledge Management (SAC/TC554).

This document was drafted by: China Southern Power Grid Research Institute Co., Ltd.,

China National Institute of Standardization, State Grid Hubei Power Transmission and Transformation Engineering Co., Ltd.

Co., Ltd., Hangzhou Green Energy Environmental Protection Power Generation Co., Ltd., China Southern Power Grid Co., Ltd., Deyang Heavy Equipment Testing Co., Ltd., Neng (Xiangshan) Environmental Protection Energy Co., Ltd., Fujian University of Technology, and Hubei Fangyuan Dongli Electric Power Science Research Co., Ltd.

The main drafters of this document are: Guo Qi, Yue Gaofeng, Yang Yuliang, Zhou Yuzhong, Wang Shumin, Mao Ting, Wang Jiatao, Huang Kun, Xiong Jingjing, Shi Qiangqiang, He Jingyun, Wang Zhimin, Wang Qinghong, Lin Zhengping, Gao Liang, Liu Shouhua, Tan Wei, Xie Meijuan, Yang Fang, Zhang Weijuan, Jin Chunhua, and Wang Xiaokai.

0.1 Overview

The power industry is an important pillar of the national economy and an important guarantee for national energy security and national economic development.

The development of new energy storage, ultra-high voltage, smart grid and other fields has accelerated the transformation of the power industry.

It has become a typical knowledge-intensive industry. As an important data element in the power industry, knowledge is essential for building a system with the ability to perceive, analyze, learn, and apply The power hub with such capabilities is of great significance in promoting the high-quality development of the power industry and will become a driving force for the digital transformation of the power industry and the realization of innovation-driven development.

The driving force of development.

At the same time, policies such as new power system construction, carbon peak and carbon neutrality, and digital transformation have brought new opportunities for knowledge management in the power industry.

The development of new technologies such as big data, artificial intelligence, cloud computing, Internet of Things, blockchain, 5G communication, and digital twins has also brought new challenges to the power industry.

It provides technical support for deeper mining and utilization of knowledge.

This document aims to serve the high-quality development of the power industry and is based on GB/T 34061.1-2017 "Knowledge Management System Part 1.

Under the guidance of the framework of the Guidelines, combined with the current situation and needs of China's power industry, this paper proposes a general framework, method and construction of knowledge management in the power industry.

Implementation guidelines are provided.

0.2 Process Approach

This document is aimed at power technology research and development, power planning and design, power equipment manufacturing, power engineering construction, power system dispatching, power operation and maintenance Maintenance, power marketing, customer service and organizational management support eight typical business scenarios in the power industry, with knowledge identification, acquisition, storage, sharing and application Based on knowledge activities such as knowledge management, this paper sorts out the knowledge management methods and measures applicable to the power industry to guide the implementation of the knowledge management activity system in the power industry.

By integrating the business chain with the knowledge chain (see Figure 1), the knowledge management level of the power industry can be improved and the knowledge The support role of various business scenarios accelerates the construction of new power systems, promotes multi-energy complementarity and diversified interaction, serves the green transformation of electricity, and ensures Energy supply security, high quality and sustainable development.

Figure 1.Integration of business chain and knowledge chain GB/T 44651 "Guidelines for the Implementation of Knowledge Management" aims to provide guidance for the implementation of knowledge management systems in different industries.

It consists of the following parts.

- Part 1: Equipment manufacturing industry. The purpose is to provide a general framework, methods and construction guidelines for knowledge management in the manufacturing industry.

- Part 2: Pharmaceuticals. Aims to provide a general framework, methods and construction guidelines for knowledge management in the pharmaceutical industry.

- Part 3: Electricity. The purpose is to provide a general framework, methods and construction guidelines for knowledge management in the power industry.

Knowledge Management Implementation Guide Part 3: Electricity

1 Scope

This document provides a guide to implementing a knowledge management system in the power industry, including leadership, planning, support, operation, performance evaluation and improvement.

implementation guidance on this topic.

This document is applicable to scientific research institutes, enterprises, service agencies