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

GB/T 46375-2025

Operational nuclear power plant core metadata

运行核电厂核心元数据

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Foreword

This document conforms to GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting is scheduled. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the National Nuclear Energy Standardization Technical Committee (SAC/TC 58). This document was drafted by: China Nuclear Power Operation Management Co., Ltd., Nuclear Industry Standardization Institute, and Nuclear Power Operation Research (Shanghai) Co., Ltd. Suzhou Thermal Power Research Institute Co., Ltd., CGN Nuclear Power Operation Co., Ltd., Huaneng Nuclear Energy Technology Research Institute Co., Ltd., State Nuclear Power Plant Operation Service Wu Technology Co., Ltd., Xingyuan Certification Center Co., Ltd., China Nuclear Power Co., Ltd., Nuclear Power Operation Research Institute, CGN Smart Energy Technology (Shenzhen) Co., Ltd., Liaoning Hongyanhe Nuclear Power Co., Ltd., Taishan Nuclear Power Joint Venture Co., Ltd., Yangjiang Nuclear Power Co., Ltd. Fujian Ningde Nuclear Power Co., Ltd., Daya Bay Nuclear Power Operation and Management Co., Ltd., and Guangxi Fangchenggang Nuclear Power Co., Ltd. The main drafters of this document are. Li Zhipeng, Shang Xianhe, Zou Zhengyu, Zhong Weidong, Qiu Shaoyang, Gao Shunlong, Wu Jize, Qin Bojie, and Shen Xuanchen. Zhang Yongxing, Yang Liming, Luo Yuzhi, Huang Lijun, Shao Jiaan, Fan Lingfeng, Chen Wen, Yang Ming, Du Facan, Luo Weikang, Pan Feng, Dong Zhengpeng, Liu Wenke Ou Ruipeng, Yang Jiadong, Gao Jun, Liu Xiaohong, Liu Hua, Wang Xin, Zhu Weiqing, Deng Ruiyuan, Zhu Xi, Li Jiang. Running nuclear power plant core metadata

1 Scope

GB/T 46375-2025 is the Chinese national standard covering the metadata backbone of an

operating nuclear station - the identifiers for systems, structures and components, the document and configuration records tied to them, and the definitions that let plant data survive forty years of changing software. At 27,500 words, first edition. Issued on 31 October 2025, it has been in force since 31 October 2025.

This document specifies the general requirements for the encoding rules, models, attributes, and description methods of core metadata of nuclear power plants during operation. This document applies to data management, data utilization, and data exchange for core production activities in operating nuclear power plants, providing a foundation for the digital transformation of nuclear power plants. Establish a data foundation for digital transformation.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 43697-2024 Data Security Technology - Data Classification and Grading Rules

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 metadata Data that defines and describes other data. [Source: GB/T 45434.2-2025, 3.1.1]

3.2 core metadata The smallest set of metadata that describes the most basic information about the data. [Source: GB/T 30523-2023, 3.3]

3.3 metadata model Based on the analyzed images and textual representations, the analysis identified the organization's strategies for accomplishing its mission, functions, goals, objectives, and tactics, as well as its management and operational strategies. The data needed to evaluate the organization. [Source: GB/T 36344-2018, 2.7]

3.4 Critical sensitive equipment; specific plant vulnerability equipment; SPV Specific equipment that has a significant impact on the safe operation and reliability of nuclear power plants.

3.5 Radiation work permit (RWP) When conducting work that may result in ionizing radiation exposure within a radiation control area, a permit issued by the responsible department must clearly specify the work to be performed. Radiation safety requirements, protective measures, and approval processes.

3.6 Clarification request; CR Applications for system or equipment improvements, modifications, or clarifications submitted to the design team during the commissioning and implementation of nuclear power engineering systems.

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