

ICS 29.020

CCS F 29



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

GB/Z 42722-2023

**Implementation guidelines for industrial power demand side
management**

工业领域电力需求侧管理实施指南

Issued on: May 23, 2023

Implemented on: December 1, 2023

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

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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: Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents: This document is proposed by China Electricity Council: This document is under the jurisdiction of the National Power Demand Side Management Standardization Technical Committee (SAC/TC575): This document is drafted by: China Electricity Council Science and Technology Development Service Center, China Southern Power Grid Research Institute Co., Ltd., Shan East Electric Power Engineering Consulting Institute Co., Ltd., China Electric Power Research Institute Co., Ltd., State Grid Jiangsu Electric Power Co., Ltd. Marketing Service Center, China Electricity Council (Beijing) Technology Development Co., Ltd., China Southern Power Grid Integrated Energy Co., Ltd., State Grid Zhejiang Electric Power Co., Ltd., Beijing Solar Light Energy Ring Education Technology Co., Ltd., State Grid Shandong Electric Power Company, Yunnan Power Grid Co., Ltd. Electric Power Research Institute, State Grid Shandong Province Electric Power Company Economic and Technological Research Institute, Jianyan Yingke (Beijing) Technology Co., Ltd., Qingdao Haier Energy Power Co., Ltd., Ningxia Sirui Energy Management Technology Co., Ltd., Xinjiang Fengyang Electricity Sales Co., Ltd., Ningxia Power Investment Smart Energy Co., Ltd., Tianna Energy Technology (Shanghai) Co., Ltd. Division, Nengguanxia Technology (Jiangsu) Co., Ltd. The main drafters of this document: Yang Di, Xiao Yong, Zheng Haicun, Wang Xinyi, Han Wende, Li Yan, Tian Shiming, Yang Shihai, Wang Zhen, Zhang Feng, Zhang Di, Ju Wenjie, Nie Yongjie, Xue Wanlei, Liu Yan, Chai Jiqiang, Wen Hongwei, Zhang Na, Zhang Zhengxi, Chen Chen, Zhao Yang, Li Yingli:

The Party Central Committee and the State Council attach great importance to the power

demand-side management, and regard the power demand-side management as a key to further promote the structural reform of the supply side: It is an important measure to promote the revolution of energy production and consumption, the construction of ecological civilization and the promotion of green development of electric power economy: Advancing Electricity in Industry Demand-side management helps to optimize the structure of industrial power consumption, adjust the way of power consumption, improve the efficiency and benefit of industrial electric energy utilization, and promote the Balanced and coordinated development with the environment: "National Energy Production and Consumption Revolution Strategy (2016-2030)" clearly carried out special actions for power demand side management in the industrial field, and proposed Formulate work guidelines, and form demonstration experiences to promote in the fields of transportation, construction, and commerce: In the context of implementing carbon peaking and carbon neutrality, strengthen the use of electricity Energy demand-side management as the core guides enterprises to improve energy efficiency and demand response capabilities: Through the implementation of power demand side management in the industrial field Encourage industrial parks to build energy service systems, build power demand-side management platforms, and innovate comprehensive energy service models; guide industrial enterprises Improve the power demand side management system construction, improve power quality, strengthen power equipment transformation and information construction, and promote power substitution and distributed Energy utilization, energy cleanliness and recycling, comprehensively improve energy efficiency and demand response capabilities in the industrial field: This document aims to establish and improve the power demand-side management in the industrial field, to guide energy-consuming units to carry out power demand-side management, and to strengthen power management: Energy management, adjusting the energy structure, improving terminal power consumption efficiency, optimizing resource allocation, continuously improving energy efficiency per unit of industrial added value, and achieving safe and reliable Rely on electricity consumption, save electricity consumption, demand response, green electricity consumption, and intelligent electricity consumption: Guidelines for the Implementation of Power Demand Side Management in Industrial Fields

1 Scope

This document gives guidance on implementing demand side management in industry: how an industrial consumer identifies the load it can shift or shed, how that flexibility is organised, and how it is offered to the grid. Demand side management is the cheapest capacity there is - the megawatt not consumed at the peak costs nothing to build. China's industrial load is large enough that even a small shiftable fraction changes the national picture, which is why this exists as a national document rather than a utility programme. Issued on 23 May 2023 by SAMR and SAC as a guiding technical document, in force from 1 December 2023, under the technical jurisdiction of the China Electricity Council. It sits

alongside GB/Z 44642 on the energy internet, which describes the system this flexibility is offered into.

This document gives the working basis, work content, work evaluation and continuous improvement of the implementation of power demand side management in the industrial field: This document is applicable to all kinds of energy-consuming units in the industrial field, including industrial enterprises and industrial parks, to carry out power demand side management, and to cooperate with industrial enterprises: Industry-related business, service industry and other organizations, power facilities and public buildings can be used as a reference:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document: GB 4943:

1 Audio-video, information technology and communication technology equipment Part 1: Safety requirements GB/T 9414:

9 Maintainability Part 9: Maintenance and Maintenance Support

GB/T 12325 power quality power supply voltage deviation

GB/T 12326 Power quality voltage fluctuation and flicker

GB/T 13869 Electricity Safety Guidelines

GB/T 14549 Power Quality Harmonics of Public Grid

GB/T 15316 General Rules for Energy Saving Monitoring Technology

GB/T 15543 Power Quality Three-phase Voltage Unbalance

GB/T 15576 Low-voltage complete reactive power compensation device

GB/T 15587 Guidelines for Energy Management of Industrial Enterprises

GB/T 15945 Power Quality Power System Frequency Deviation

GB 17167 General rules for equipment and management of energy measuring instruments for energy-consuming units

GB/T 18481 Power Quality Temporary Overvoltage and Transient Overvoltage GB/T 18657:

1 Telecontrol Equipment and System Part 5: Transmission Protocol Part 1: Transmission Frame Format

GB/T 19001 Quality Management System Requirements

GB/T 21052 Information Security Technology Information System Physical Security
Technical Requirements

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