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

GB/T 46373-2025

**Technical requirements for connecting compressed air energy
storage station to power grid**

压缩空气储能电站接入电网技术规定

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Table of Contents

1.Scope	1
2 Normative References	1
3.Terms and Definitions	1
4.General Requirements	2
5 Power Control	2
6.Primary frequency modulation	3
7.Operational adaptability	3
8 Power Quality	4
9.Relay protection and automatic safety devices	4
10 Scheduling Automation and Communication	5
11 Simulation Model and Parameters	5
6 References	7

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. 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 by the China Electricity Council. This document is under the jurisdiction of the National Technical Committee on Standardization of Power Storage (SAC/TC550). This document was drafted by: State Grid Jiangsu Electric Power Research Institute, State Grid Jiangsu Electric Power Company, and China Power. Scientific Research Institute Co., Ltd., Institute of Engineering Thermophysics, Chinese Academy of Sciences, Tsinghua University, Jiangsu Fangtian Electric Power Technology Co., Ltd., China Yangtze River Three Gorges Corporation, China Energy Engineering Group Corporation Engineering Research Institute, State Grid Shandong Electric Power Research Institute State Grid Hubei Electric Power Research Institute and China Storage & Energy (Beijing) Technology Co., Ltd. The main drafters of this document are. Yuan Yubo, Kong Xiangping, Zhou Qi, Mei Shengwei, Sheng Yong, Yang Cenyu, Chen Yong'an, Hu Juan, Xie Ningning, and Shi Mingming. Du Yunlong, Yang Hongyu, Liu Dan, Zhu Lingkai, Luo Fei, Li Jiahui, Zhou Jianhua, Chang Yong, Chen Laijun, Xiong Ping, Gu Wen, Zhao Dongdong, Gong Zhiqiang, Liu Xiaotong Xu Zhiqiang, Zhang Xuehui, and Shang Xingyu. Technical Regulations for Connecting Compressed Air

Energy Storage Power Stations to the Power Grid

1 Scope

GB/T 46373-2025 is the Chinese national standard covering connecting a CAES plant to the network - the active and reactive power capability in both charge and discharge, the ramp rates and the response to dispatch, the fault ride-through and the protection, and the metering and communication with the control centre. First edition, under the China Electricity Council, and it belongs with the saline aquifer siting standard GB/T 46545.1-2025. In force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026.

This document specifies the general requirements for the grid connection of compressed air energy storage power stations, as well as power control, primary frequency regulation, operational adaptability, and power consumption. Technologies related to quality, relay protection and safety automatic devices, dispatch automation and communication, simulation models and parameters, grid connection testing and evaluation, etc. Require. This document applies to newly built, renovated, and expanded compressed air energy storage systems connected to the public power grid at voltage levels of 10(6)kV and above. Construction, operation, maintenance and overhaul of power plants.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. 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 7409.1 Excitation system for synchronous motors - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 43687, GB/T 40595 and DL/T 2528, as well as the following terms and definitions, apply to this document.