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

GB/T 44265-2024

**Electrical energy storage power stations - Technical
specification for sodium-ion batteries**

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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 is required. 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. This document is under the jurisdiction of the National Electric Energy Storage Standardization Technical Committee (SAC/TC 550). This document was drafted by: China Electric Power Research Institute Co., Ltd., Contemporary Amperex Technology Co., Ltd., Shenzhen Biya Di Lithium Battery Co., Ltd. Kengzi Branch, Huawei Digital Energy Technology Co., Ltd., Zhejiang Huayun Clean Energy Co., Ltd., Huizhou Yiwei Lithium Energy Co., Ltd., Beijing Institute of Technology Chongqing Innovation Center, Shuangdeng Group Co., Ltd., Zhejiang Yuna Technology Co., Ltd., Northeast Electric Power University, Ruipu Lanjun Energy Co., Ltd. The main drafters of this document are. Guan Yibiao, Shen Jinran, Ye Yonghuang, Jiang Yufeng, Zhang Yezheng, Xu Junjie, Xu Wencheng, Su Yuefeng, Yang Baofeng, Chen Yonghong, Yu Shengming, Liu Cheng, Zhang Yichi, Zeng Zhong, Qu Zhanzhan, Liu Xiaofeng, Guo Cuijing, Yang Jinxing, Liu Hao, Dong Dong, Liu Jialiang, Zhu Yuan, Yu Ran, Chen Lai, Wei Bin, Cai Xianyu, and Wang Jinzuan. Technical Specifications for Sodium Ion Batteries for Power Storage Stations

1 Scope

GB/T 44265-2024 is the Chinese technical specification for sodium-ion batteries in grid energy storage stations, and it is one of the first national standards anywhere for the technology. Sodium-ion is being pushed hard in China for exactly the application this standard covers: stationary storage, where energy density matters less than cost and where the absence of lithium and cobalt matters a great deal. The standard sets the

classification and designation of the cells, modules and battery systems, the requirements on the electrical performance including capacity, energy efficiency, rate performance, self-discharge, cycle life and calendar life, the performance at high and low temperature, which is where sodium-ion differs most from lithium-ion, the safety requirements and the abuse tests, overcharge, over-discharge, short circuit, crush, thermal and propagation, the requirements on the battery management system and on the monitoring, the environmental and reliability requirements, and the test methods, inspection rules and marking for each level. For a cell maker, a system integrator or a utility procuring storage in China, this is the specification.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 191 Pictorial markings for packaging, storage and transportation

GB/T 2828.1 Sampling procedures for inspection by attributes Part

GB/T 4857 (all parts) Packaging and transport packages

GB/T 5398 Test methods for large transport packages

GB/T 16471 Size and mass limits for transport packages

GB/T 44026 Technical specification for prefabricated cabin lithium-ion battery energy storage system DL/T 2528 Basic terms for power energy storage

3.1 Terms and Definitions The terms and definitions defined in DL/T 2528 and

GB/T 44026 and the following apply to this document.

3.1.1 Rated power charging-discharging cycles Under specified conditions, when the battery is cyclically charged and discharged at rated power, the number of cycles when the charge and discharge energy decays to the rated charge and discharge energy is guaranteed. Certificate value.

3.1.2 Nominal voltage of battery Mark or identify the voltage value of a battery.

3.1.3 Initialized charging Under specified conditions, the battery is discharged to the discharge cut-off condition and then charged to the charge cut-off condition.

3.1.4 Initialized discharging Under specified conditions, the battery is charged to the charge cut-off condition and then discharged to the discharge cut-off condition.