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**NB**

**ENERGY INDUSTRY STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**NB/T 33004-2020**

Replacing NB/T 33004-2013

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**Code for construction and completion acceptance of electric  
vehicle charging/battery swap infrastructure**

电动汽车充换电设施工程施工和竣工验收规范

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## Foreword

This document was issued on 23 November 2020 by the National Energy Administration of the PRC and takes effect on 1 February 2021.

It is a NB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

It is classified under ICS 29.200, Chinese classification K81.

It replaces NB/T 33004-2013, which is superseded.

This code supersedes NB/T 33004-2013 'Code for construction and completion acceptance of electric vehicle charging/battery swap infrastructure'. Compared with NB/T 33004-2013, apart from editorial changes, the main technical changes are as follows.

The standards cited in the original standard that have since been withdrawn, or that had not yet been published at that time, have been replaced and updated.

'2 Basic requirement' of the new standard revises '2 Basic requirement' of the original standard, adding installation requirements for electrical equipment (see 2.1.16).

In '3 Power-supply system', the original 'power quality of the power-supply system' has been revised to 'power quality at the point of connection of electric vehicle charging/battery swap infrastructure to the public grid' (see 3.2.6).

In '4 Charging system', 'Construction' has been revised: requirements for power supply cables and secondary circuits have been added, together with requirements on charging equipment marking, installation height, theft protection, rain and snow protection and maintenance space.

In the 'Completion acceptance' of chapter 4, the performance parameters 'electromagnetic compatibility' and 'mean time between failures' have been deleted, and requirements for the structure, performance, protection and maintenance of AC charging piles and for the power quality of off-board chargers have been added.

The requirements for the 'completion acceptance of chargers used in battery swap stations' have been moved and merged into the chapter '5 Battery swap system'.

In '5 Battery swap system', 'Construction' has been revised: installation requirements for battery transfer equipment and battery swap equipment and grounding requirements for battery swap stations have been added, together with recommendations on the zoning of battery swap stations.

In the 'Completion acceptance' of chapter 5, 'charging rack', 'battery swap equipment', 'battery box storage rack' and 'battery box transfer equipment' have been merged into 'battery swap system'.

Requirements on the smooth operation of mechanisms, battery swap time, special operations such as hoisting, and security protection have been added to the completion acceptance of the battery swap system.

In '6 Monitoring system', 'Construction' has been revised: construction requirements for the security protection system have been added, as well as requirements for monitoring system wiring and lightning protection grounding.

In the 'Completion acceptance' of chapter 6, the items listed under 'functions the monitoring system shall have' have been deleted and replaced by the requirement to comply with the relevant provisions of the industry standard NB/T 33005.

In '7 Civil and other auxiliary infrastructures', 'Completion acceptance' has been revised: provisions on masonry, roofing, floors, building decoration, heating and water supply and drainage of station buildings and other ancillary buildings have been deleted and merged into the provisions on civil works.

The original 'fire protection system' has been changed into 'fire protection facilities for charging stations', 'fire protection facilities for battery swap stations' and 'fire protection systems for distributed charging facilities'.

A new chapter '8 Energy-saving and environmental protection' has been added, putting forward requirements for 'construction' and 'completion acceptance' with respect to building materials, noise control, energy-saving transformers and domestic sewage.

'9 Document acceptance' of the new standard revises '8 Document acceptance' of the original standard: the 'acceptance technical documents' have been merged into the 'acceptance application documents'.

In the document acceptance chapter, the 'minutes of design liaison meetings', 'installation technical disclosure records' and 'adjustment test records' have been deleted.

The 'list of equipment supplied under the contract' has been added, and it is required that the power-supply system also provide the commissioning test outline, test methods and test records.

'10 Acceptance evaluation' of the new standard corresponds to '9 Acceptance evaluation' of the original standard.

'Appendix A Application and report documents for the acceptance of electric vehicle charging/battery swap infrastructure projects' revises 'Appendix A Report documents for the completion acceptance of electric vehicle charging/battery swap infrastructure' of the original standard.

The content of Appendix A has been revised into two forms: the 'application for acceptance of electric vehicle charging/battery swap infrastructure project' and the 'acceptance certificate of electric vehicle charging/battery swap infrastructure project'.

This code was proposed by the China Electricity Council and is under the jurisdiction of, and interpreted by, the Energy Industry Standardization Technical Committee for Electric Vehicle Charging Infrastructure (NEA/TC 3).

Comments or suggestions arising during the implementation of this code should be sent to the Standardization Management Center of the China Electricity Council (No. 1, Lane 2, Baiguang Road, Beijing, 100761).

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