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

**GB/T 44659.2-2024**

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**Short-circuit current calculation for renewable energy power  
stations and connection systems - Part 2**

新能源场站及接入系统短路电流计算 第2部分：光伏发电

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### 1 Scope

Part 2 of China's national standard for calculating short-circuit currents in renewable generation stations and their connection systems. Where the first part establishes the principles and the general method, this part covers the application to specific generation types and configurations. The distinction matters because inverter-based sources are not one category: a full-converter wind turbine, a doubly-fed induction generator, a photovoltaic inverter and a battery storage converter each contribute fault current differently. The doubly-fed machine is the awkward one, since its stator is connected directly to the network and behaves like an induction generator while its rotor converter behaves like an inverter, so it contributes both a decaying machine current and a controlled converter current at once. Representing each of them adequately without requiring a full electromagnetic transient simulation for every study is the practical problem the series addresses.

### About this edition

GB/T 44659.2-2024 is the current edition. It was issued on 26 October 2024 and has been in force since 1 May 2025.

The interval between issue and effect is the transition period. It exists so that producers, laboratories and buyers can requalify products, revise procedures and use up documentation before the new text becomes the one that applies. The date on this page is the official one from the record of the Standardization Administration.

### Classification and status

Its Chinese Standard Classification code is CCS F 20. CCS is the domestic scheme, a letter for the sector and two digits for the subject within it, and it is the code by which the standard is filed and searched in China.

The GB/T prefix marks a recommended national standard. It is not, in itself, law: it becomes binding when a contract names it, when a regulation or a mandatory standard refers to it, or

when a producer declares conformity with it. In practice that covers most of the cases in which it will be read - a purchase specification, an inspection agreement or a certification scheme.

## How a Chinese national standard is set out

Chinese national standards are drafted to the rules of GB/T 1.1, which fixes the order in which a standard is set out. The document opens with a foreword recording the issuing bodies, the relationship to any previous edition and the technical committee responsible for it. Clause 1 is the scope. Clause 2 lists the normative references - the other standards that have to be applied together with this one, and without which its requirements cannot be met. Clause 3 gives the terms and definitions. The technical clauses follow: the requirements themselves, the test or measurement methods by which conformity is established, the inspection rules that say how a lot is sampled and judged, and, for a product standard, the provisions on marking, packaging, transport and storage. Annexes, normative or informative, come last.

GB/T 44659.2-2024 runs to 24 pages in the English translation. What is delivered is the complete document in that order: every clause, every table, every figure and every annex of the Chinese original, with the same numbering, so that a reference to a clause number in a contract or a test report points to the same place in both languages.

## About this English translation

The English edition of GB/T 44659.2-2024 is a full translation of the official Chinese text, not a summary, an abstract or a machine rendering left unchecked. Clause and subclause numbers, table and figure numbers and annex letters are those of the original, because they are what a specification, a purchase order or a test report cites.

Technical terms are translated against the vocabulary standards of the same field, so that a term used in GB/T 44659.2-2024 reads the same way as in the other Chinese standards it is used beside. Where a term has an established English form in an ISO or IEC document on the same subject, that form is used; where China's term has no foreign counterpart, it is translated literally and the Chinese is kept alongside it rather than replaced by an approximation.

Quantities, units and symbols are carried over unchanged. Chinese standards use SI, so a value in the translation is the value in the original document, not a conversion, and a limit read from the English text is the limit that will be applied by a Chinese inspection body reading the Chinese one.

This page is compiled from the official publication record: the standard number and both titles, the issuing bodies, the dates of issue and effect, the ICS and CCS classification. The requirements, limits, tables and test conditions are in the document itself.