

ICS 27.180  
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**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/Z 35483-2017**

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**Wind turbines -- Production-based availability**

**Issued on: December 29, 2017**

**Implemented on: July 1, 2018**

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**Issued by: General Administration of Quality Supervision, Inspection and  
Quarantine of the People's Republic of China, Standardization  
Administration of the People's Republic of China**

## Table of Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms, definitions and abbreviations

3.1 Terms and definitions

### Foreword

This guidance technical document was drafted in accordance with the rules given in GB/T 1.1-2009.

This guidance document uses the translation method equivalent to IEC /T S61400-26-2:2014 "Wind Generators Part 26-2.

Power generation availability.

The documents of our country that have a consistent correspondence with the international documents that are normatively cited in this guidance document are as follows.

---GB/T 2900 (all parts) Electrotechnical terminology [IEC 60050 (all parts)]

The following editorial technical documents have been edited as follows.

--- Power curve measurement reference standard IEC 61400-12 corrected to IEC 61400-12-1.

This guidance technical document was proposed by the China Machinery Industry Federation.

This guidance document is under the jurisdiction of the National Wind Machinery Standardization Technical Committee (SAC/TC50).

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## Introduction

This guidance document is intended for owners, power companies, creditors, operators, manufacturers, consultants, and supervisors in the wind power industry.

When the regulatory agencies, certification bodies, insurance companies, and other interested parties exchange information about performance indicators, establish a common foundation and build

An information model that provides a way to assign specific time periods to different categories of information. Calculating wind turbine availability and reliability

When the indicator is used, the model provides a basis for how to allocate time.

In order to explain the availability, service life, maintenance and determination of maintenance intervals for wind turbines and components, this guidance is provided.

The article defines the general terminology required for wind turbines, environmental constraints, and calculation of the availability of wind turbines. wind power

The unit includes all equipment prior to the electrical connection point\*. The availability is related to the power generation time and power generation of the wind turbine.

Consider environmental factors. These environmental factors include wind conditions and other weather conditions, as well as the status of the grid and substation. In addition, this guidance

The technical documentation also provides the terminology required for performance indicators related to wind turbine generation. In this guidance technical document, the basic letter

The interest category is enclosed in double quotes and the optional information category is shown in bold.

This guidance document is an extension of GB /Z 35482-2017 and applies the information model specified in GB /Z 35482-2017.

Type, but added information about power generation. The information model structure and interrelationships applied in GB /Z 35482-2017 also apply to

This guidance document is based on the expansion of power generation.

This guidance document is intended to establish a common basis for the exchange of information on the availability of power generation. Calculating the availability of power generation

Time and power generation can be allocated using an information model.

Note. \* The electrical connection point depends on the project, but is usually the low voltage

or high voltage port where the wind turbine is connected to the collector line.

Wind turbine generation capacity availability

## 1 Scope

This guidance technical document provides a calculation framework for wind turbine generating capacity performance indicators, describes the data classification method, and gives

An example of applying these data to calculate performance metrics.

The method provided in this guidance document is an extension of the time allocation model described in GB /Z 35482-2017. additional

Two additional layers have been added to record the actual and potential power generation in the same time period.

The purpose of this guidance document is not to specify the calculation method for the availability of power generation, nor to provide a basis for performance measurement of power curves.

According to; for power curve measurement, please refer to IEC 61400-12-1.

This guidance document also includes the following informative annexes.

- Calculation example of lost power generation;
- Algorithm example of power generation indicator;
- Examples of other performance indicators;
- Application examples.

## 2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

IEC 60050 (all parts) electrical terminology (International electrotechnical vocabulary)

GB /Z 35482-2017 Wind turbine generator time availability (IEC /T S61400-26-12011, IDT)

## 3 Terms, definitions and abbreviations

The following terms, definitions and abbreviations are the same as the relevant terms and definitions contained in GB /Z 35482-2017 and IEC 60050-415.

Applicable to this document.

### **3.1 Terms and definitions**

#### **3.1.1**

Site condition siteconditions

Factors affecting wind turbine generation, such as topography, climate and meteorological conditions, sector management, electrical conditions, and contractual constraints.

#### **3.1.2**

Actual power generation actualenergyproduction

Electrical energy measured at the point of connection between the wind turbine and the power collection system (according to IEC 60050-415)

Note. Depending on the wind turbine design, the connection point can be on the low voltage side or on the medium and high voltage side.

#### **3.1.3**

Potential power generation potentialenergyproduction

Electrical energy calculated according to wind turbine design guidelines, technical specifications and site conditions.