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TECHNICAL SPECIFICATION

Distributed energy resources connection with the grid

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CONTENTS

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DISTRIBUTED ENERGY RESOURCES CONNECTION WITH THE GRID

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Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC TS 62786 has been prepared by IEC Technical Committee 8: System aspects for electrical energy supply.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
8/1439/DTS	8/1457/RVDTS

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

DISTRIBUTED ENERGY RESOURCES CONNECTION WITH THE GRID

1 Scope and object

This technical specification provides principles and technical requirements for distributed energy resources (DERs) connected to the distribution network. It applies to the planning, design, operation and connection of DERs to distribution networks. It includes general requirements, connection scheme, choice of switchgear, normal operating range, immunity to disturbances, active power response to frequency deviation, reactive power response to voltage variations and voltage changes, EMC and power quality, interface protection, connection and start to generate electrical power, active power management, monitoring, control and communication, and conformance tests.

This document specifies interface requirements for connection of generating plants with the distribution network operating at a nominal frequency of 50 Hz or 60 Hz.

DERs include distributed generation and permanently connected electrical energy storage in the form of synchronous generators, asynchronous generators, converters, etc., connected to the medium voltage (MV) or low voltage (LV) distribution network.

NOTE Mobile electrical energy storage devices (e.g. electrical vehicles) are under consideration for future editions.

The requirements of this document can be superseded by laws and regulations where applicable.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61000 (all parts), *Electromagnetic compatibility (EMC)*

IEC TS 62749, *Assessment of power quality – Characteristics of electricity supplied by public networks*