

TECHNICAL REPORT

**Distributed energy resources connection with the grid -
Part 100: Generating plants and units grid connection standard mapping**

CONTENTS

FOREWORD	3
INTRODUCTION	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 General	6
5 Basic policy	7
5.1 Structure of technical committees related to renewable energy and distributed energy resources	7
5.2 Types of publications related to the connection of DER with the grid	8
5.2.1 General	8
5.2.2 Basic publications	9
5.2.3 System publications	9
5.2.4 Testing publications	9
5.2.5 Product publications	9
5.3 Basic rules for drafting publications related to the connection of DER with the grid	10
Annex A (informative) Basic publications	12
A.1 General	12
A.2 List of publications relevant to vocabularies	12
A.3 List of publications relevant to measurements	12
A.4 List of publications relevant to protection relay	13
A.5 List of publications relevant to switchgear	13
A.6 List of publications relevant to power quality and EMC	13
A.7 List of publications relevant to information exchange	14
A.8 List of publications relevant to electrical safety	15
Annex B (informative) System publications	16
B.1 General	16
B.2 List of system publications	16
Annex C (informative) Testing publications	17
C.1 General	17
C.2 List of testing publications	17
Annex D (informative) Product publications	18
D.1 General	18
D.2 List of publications regarding testing provisions	18
Annex E (informative) National and regional standards and regulations	19
Bibliography	22
Figure 1 – Structure of the IEC 62786 series	7
Figure 2 – Structure of technical committees	8
Figure 3 – Basic and system publications relevant to grid connection	10
Table 1 – Types of publications related to the connection of DER with the grid	8
Table 2 – Requirements for generating plants and systems	10
Table 3 – Requirements for power generating units	11

Table 4 – Items to be provided in product publications	11
Table A.1 – Publications relevant to vocabularies	12
Table A.2 – Publications relevant to measurements	12
Table A.3 – Publications relevant to protection relay	13
Table A.4 – Publications relevant to switchgear	13
Table A.5 – Publications relevant to power quality and EMC	13
Table A.6 – Publications relevant to information exchange.....	14
Table A.7 – Publications relevant to electrical safety.....	15
Table B.1 – List of system publications	16
Table C.1 – List of testing publications	17
Table D.1 – List of publications regarding testing provisions	18
Table E.1 – List of national and regional standards and regulations.....	19

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Distributed energy resources connection with the grid -
Part 100: Generating plants and units grid connection standard mapping**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

IEC TR 62786-100 has been prepared by IEC technical committee 8: System aspects of electrical energy supply. It is a Technical Report.

The text of this Technical Report is based on the following documents:

Draft	Report on voting
8/1782/DTR	8/1796/RVDTR

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Report is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 62786 series, published under the general title *Distributed energy resources connection with the grid*, can be found on the IEC website.

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

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

A mapping platform for grid connection is available to the IEC [1]¹. It can be used not only to model an existing standard collection (typically in the scope of a system committee, or of a technical entity, or on a standard series), but also a portfolio of projects. It can also be published and used as a browsing facility for stakeholders. One very interesting aspect of this mapping tool is that such mapping tool is not tied to IEC standards: any standards contributing to the scope of interest of the map can be added and referred, including hyperlinks to the web location where further details could be found. Such mapping tool can really deliver to public users a holistic view of standardization efforts and existing deliverables of a given technical scope, and as such favour and promote the use of relevant standards in that scope.

SMB already approved the set of Mapping Platform rules and agreed on the principles and concept (SMB/7088A/RV). Implementation, communication to and training for technical and advisory bodies started in September 2020 with webinars and the publication of AC/39/2020 including a user's guide.

¹ Numbers in square brackets refer to the Bibliography.

1 Scope

This document gives guidance for the drafting of IEC publications which relate, wholly or partly, to connection of distributed energy resources (DER) with the grid. Technical committees relevant to the connection of DER with grid are advised to follow the guidance given in this document when they prepare new publications and clauses relevant to the connection of DER with the grid, as well as when they revise existing publications so that consistent and harmonized standards can be delivered.

Annex A, Annex B, Annex C, and Annex D list documents relevant to grid connection of DER in order to ensure that other IEC publications are consistent with these documents and to avoid overlapping each other.

Table E.1 lists national and regional standards and regulations relevant to connecting DER with the grid.

2 Normative references

There are no normative references in this document.

Bibliography

- [1] Generating unit grid connection standard mapping [viewed 2025-09-22]. Available at: <https://mapping.iec.ch/#/maps/161>
- [2] IEC TS 62786:2017, *Distributed energy resources connection with the grid*⁷

⁷ This publication has been withdrawn.