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BSI Standards Publication

Framework for energy market communications

Part 451-7: Balancing processes, contextual and assembly models for European style market

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National foreword

This British Standard is the UK implementation of EN IEC 62325-451-7:2021. It is identical to IEC 62325-451-7:2021.

The UK participation in its preparation was entrusted to Technical Committee PEL/57, Power systems management and associated information exchange.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Amendments/corrigenda issued since publication

Date	Text affected
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English Version

Framework for energy market communications - Part 451-7:
Balancing processes, contextual and assembly models for
European style market
(IEC 62325-451-7:2021)

Cadre pour les communications pour le marché de l'énergie
- Partie 451-7: Processus d'équilibrage, modèles
contextuels et modèles d'assemblage pour le marché de
style européen
(IEC 62325-451-7:2021)

Kommunikation im Energiemarkt - Teil 451-7:
Ausgleichsprozesse, kontextuelle Modelle und Regeln zum
Aufbau von Modellen für den Markt nach europäischem Stil
(IEC 62325-451-7:2021)

This European Standard was approved by CENELEC on 2021-04-21. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

The text of document 57/2332/FDIS, future edition 1 of IEC 62325-451-7, prepared by IEC/TC 57 "Power systems management and associated information exchange" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62325-451-7:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-01-21
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-04-21

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62325-451-7:2021 was approved by CENELEC as a European Standard without any modification.

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(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC/TS 61970-2	-	Energy management system application program interface (EMS-API) - Part 2: Glossary	CLC/TS 61970-2	-
IEC 62325-351	2016	Framework for energy market communications - Part 351: CIM European market model exchange profile	EN 62325-351	2016
IEC 62325-450	2013	Framework for energy market communications - Part 450: Profile and context modelling rules	EN 62325-450	2013
IEC 62325-451-1	-	Framework for energy market communications - Part 451-1: Acknowledgement business process and contextual model for CIM European market	EN 62325-451-1	-
IEC 62325-451-2	-	Framework for energy market communications - Part 451-2: Scheduling business process and contextual model for CIM European market	EN 62325-451-2	-
IEC 62325-451-3	-	Framework for energy market communications - Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual models for European market	EN 62325-451-3	-
IEC 62325-451-4	-	Framework for energy market communications - Part 451-4: Settlement and reconciliation business process, contextual and assembly models for European market	EN 62325-451-4	-
IEC 62325-451-5	-	Framework for energy market communications - Part 451-5: Problem statement and status request business processes, contextual and assembly models for European market	EN 62325-451-5	-

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IEC 62361-100	-	Power systems management and associated information exchange - Interoperability in the long term - Part 100: CIM profiles to XML schema mapping	EN 62361-100	-
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FRAMEWORK FOR ENERGY MARKET COMMUNICATIONS –

Part 451-7: Balancing processes, contextual and assembly models for European style market

FOREWORD

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International Standard IEC 62325-451-7 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

The text of this standard is based on the following documents:

FDIS	Report on voting
57/2332/FDIS	57/2345/RVD

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

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- withdrawn,
- replaced by a revised edition, or
- amended.

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INTRODUCTION

This document is one part of the IEC 62325 series for deregulated energy market data exchanges based on the European style market profile. This part of IEC 62325 defines the document contextual models, the message assembly models as well as the XML schemas to be used for the Balancing process.

The principal objective of the IEC 62325 series is to produce standards which facilitate the integration of market application software developed independently by different vendors into a market management system, between market management systems and market participant systems. This is accomplished by defining message exchanges to allow these applications or systems access to public data and exchange information independent of how such information is represented internally.

The common information model (CIM), i.e. IEC 62325-301, IEC 61970-301 and IEC 61968-11, specifies the basis for the semantics for message exchange.

This European style market profile is based on different parts of the CIM IEC standards and specifies the content of the messages exchanged.

This document provides, for the European style market profile, the necessary information to be exchanged between Balancing Service Providers, Transmission System Operators and a Common Merit Order List about the Electricity Balancing market.

These market processes are based on the European regulations (No. 1227/2011 and No. 543/2013), on the European Balancing Guidelines on Electricity Balancing (No. 2017/2195), and on the concepts of third-party access and zonal markets. (see Annex ZZ)

This part of IEC 62325 was originally based upon the work of the European Network of Transmission System Operators (ENTSO-E) CIM Expert Group (formerly Working Group EDI).

The profile in this document is also designed to be used in markets in other countries, including Japan, that are designed based on the European style market.

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FRAMEWORK FOR ENERGY MARKET COMMUNICATIONS –

Part 451-7: Balancing processes, contextual and assembly models for European style market

1 Scope

This part of IEC 62325 specifies a UML package for the electricity balancing business process and its associated document contextual models, assembly models and XML schemas for use within the European style electricity markets.

This part of IEC 62325 is based on the European style market contextual model (IEC 62325-351). The business process covered by this part of IEC 62325 is described in Clause 5.

The relevant aggregate core components (ACCs) defined in IEC 62325-351 have been contextualised into aggregated business information entities (ABIEs) to satisfy the requirements of the European style market publication business process.

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 TS 61970-2, *Energy management system application program interface (EMS-API) - Part 2: Glossary*

IEC 62325-351:2016, *Framework for energy market communications - Part 351: CIM European market model exchange profile*

IEC 62325-450:2013, *Framework for energy market communications - Part 450: Profile and context modelling rules*

IEC 62325-451-1, *Framework for energy market communications - Part 451-1: Acknowledgement business process and contextual model for CIM European market*

IEC 62325-451-2, *Framework for energy market communications - Part 451-2: Scheduling business process and contextual model for CIM European market*

IEC 62325-451-3, *Framework for energy market communications - Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual models for European market*

IEC 62325-451-4, *Framework for energy market communications - Part 451-4: Settlement and reconciliation business process, contextual and assembly models for European market*

IEC 62325-451-5, *Framework for energy market communications - Part 451-5: Problem statement and status request business processes, contextual and assembly models for European market*