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Kommunikation på energimarknaden – Del 451-10: Profiler för energiförbrukningsdata ("Min energidata")

*Framework for energy market communications –
Part 451-10: Profiles for energy consumption data ("My Energy Data")*

Som svensk standard gäller europastandarden EN IEC 62325-451-10:2021. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 62325-451-10:2021.

Nationellt förord

Europastandarden EN IEC 62325-451-10:2021

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 62325-451-10, First edition, 2020 - Framework for energy market communications - Part 451-10: Profiles for energy consumption data ("My Energy Data")**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 33.200.00

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Postadress: Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00.
E-post: sek@elstandard.se. Internet: www.elstandard.se

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Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

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English Version

Framework for energy market communications - Part 451-10:
Profiles for Energy Consumption Data ("My Energy Data")
(IEC 62325-451-10:2020)

Cadre pour les communications pour le marché de l'énergie
- Partie 451-10: Profils de données sur la consommation
d'énergie ("Mes données d'énergie")
(IEC 62325-451-10:2020)

Kommunikation im Energiemarkt - Teil 451-10: Profile für
Energieverbrauchsdaten ("Meine Energiedaten")
(IEC 62325-451-10:2020)

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

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European foreword

The text of document 57/2266/FDIS, future edition 1 of IEC 62325-451-10, 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 62325-451-10:2021.

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) 2021-10-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-01-01

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Endorsement notice

The text of the International Standard IEC 62325-451-10:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61968-11	NOTE	Harmonized as EN 61968-11
IEC 61970-301	NOTE	Harmonized as EN IEC 61970-301
IEC 62325-301	NOTE	Harmonized as EN IEC 62325-301
IEC 62325-351	NOTE	Harmonized as EN 62325-351
IEC 62325-450	NOTE	Harmonized as EN 62325-450
IEC 62351-3	NOTE	Harmonized as EN 62351-3
IEC 61968-9	NOTE	Harmonized as EN 61968-9

Annex ZA (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	2004	Energy management system application program interface (EMS-API) - Part 2: Glossary	CLC/TS 61970-2	2005
IEC 62325-351	-	Framework for energy market communications - Part 351: CIM European market model exchange profile	EN 62325-351	-
IEC 62325-450	2013	Framework for energy market communications - Part 450: Profile and context modelling rules	EN 62325-450	2013
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	-

CONTENTS

FOREWORD.....	9
INTRODUCTION.....	11
1 Scope.....	13
2 Normative references	13
3 Terms and definitions	13
4 Document contextual model and message assembly model basic concepts	15
4.1 Overview.....	15
4.2 European style market package structure	16
4.3 From the European style market profile to the document contextual model	17
4.4 From the document contextual model to the message assembly model.....	17
4.5 From the assembly model to the XML schema	17
5 The My Energy Data business process	17
5.1 Business process definition.....	17
5.2 Business rules for the My Energy Data document	17
5.2.1 General	17
6 Contextual and assembly models.....	19
6.1 My Energy Data contextual model.....	19
6.1.1 Overview of the model	19
6.1.2 IsBasedOn relationships from the European style market profile.....	20
6.1.3 Detailed My Energy Data contextual model.....	21
6.2 My Energy Data assembly model	29
6.2.1 Overview of the model	29
6.2.2 IsBasedOn relationships from the European style market profile.....	30
6.2.3 Detailed My Energy Data assembly model	31
6.2.4 Primitives	36
6.2.5 Datatypes	37
6.2.6 Enumerations	44
7 XML schema.....	45
7.1 General.....	45
7.2 XML schema URN namespace rules	45
7.3 Code list URN namespace rules.....	45
7.4 URI rules for model documentation	46
7.4.1 Datatype.....	46
7.4.2 Class	46
7.4.3 Attribute.....	46
7.4.4 Association end role name.....	47
7.5 MyEnergyData_MarketDocument schema	47
7.5.1 Schema description	47
Annex A (informative) Use cases	53
A.1 Overview.....	53
A.2 Deliver services based on data provision	54
A.2.1 Description of the use case	54
A.2.2 Name of use case.....	54
A.2.3 Version management.....	54
A.2.4 Scope and objectives of use case.....	55
A.2.5 Narrative of use case.....	55

A.2.6	Key performance indicators (KPI)	57
A.2.7	Use case conditions.....	57
A.2.8	Further information to the use case for classification/mapping	58
A.2.9	General remarks.....	58
A.2.10	Diagrams of use case	59
A.2.11	Technical details – Actors.....	60
A.2.12	References	60
A.2.13	Step by step analysis of use case	60
A.2.14	Information exchanged	77
A.2.15	Requirements (optional)	78
A.2.16	Common terms and definitions.....	78
A.2.17	Custom information (optional).....	78
Annex B (informative)	EUMED Metering Model	79
B.1	EUMED Metering Global View.....	79
B.2	EUMED Metering objects description	80
B.2.1	General	80
B.2.2	MessageType Object	80
B.2.3	HeaderType Object.....	80
B.2.4	UsagePoint Object.....	81
B.2.5	UsagePointLocation Object.....	81
B.2.6	MeterReading Object.....	81
B.2.7	Meter Object.....	82
B.2.8	Customer Object.....	82
B.2.9	ReadingType Object	82
B.2.10	IntervalBlock Object.....	83
B.2.11	IntervalReading Object	84
B.2.12	ReadingQuality Object.....	84
B.3	EUMED Metering Data Types	84
B.3.1	General	84
B.3.2	DateTimeInterval Data Type	85
B.3.3	CustomerKind Data Type.....	85
B.3.4	MeasuringPeriodKind Data Type.....	85
B.3.5	UnitMultiplier Data Type	85
B.3.6	UnitSymbol Data Type	86
B.3.7	MeasurementKind Data Type.....	86
B.3.8	FlowDirectionKind Data Type.....	86
B.3.9	CommodityKind Data Type	86
Annex C (informative)	CIM Objects used in EUMED Metering	88
C.1	HeaderType Object.....	88
C.1.1	General	88
C.1.2	UsagePoint Object.....	88
C.1.3	UsagePointLocation Object.....	90
C.1.4	MeterReading Object.....	90
C.1.5	Meter Object.....	91
C.1.6	Customer Object.....	91
C.1.7	ReadingType Object	92
C.1.8	IntervalBlock Object.....	94
C.1.9	IntervalReading Object	94
C.1.10	ReadingQuality Object.....	95

C.2	CIM Data Types	96
C.2.1	General	96
C.2.2	VerbType Data Type	97
C.2.3	ReplayDetectionType Data Type	97
C.2.4	UserType Data Type	98
C.2.5	MessageProperty Data Type	98
C.2.6	PhaseCode Data Type	98
C.2.7	CurrentFlow Data Type	99
C.2.8	Voltage Data Type	99
C.2.9	ActivePower Data Type	99
C.2.10	AmiBillingReadyKind Data Type	100
C.2.11	UsagePointConnectedKind Data Type	100
C.2.12	StreetAddress Data Type	100
C.2.13	StreetDetail Data Type	101
C.2.14	TownDetail Data Type	101
C.2.15	TelephoneNumber Data Type	101
C.2.16	ElectronicAddress Data Type	102
C.2.17	Status Data Type	102
C.2.18	Minutes Data Type	103
C.2.19	Money Data Type	103
C.2.20	LifecycleDate Data Type	103
C.2.21	AcceptanceTest Data Type	103
C.2.22	PerCent Data Type	104
C.2.23	CustomerKind Data Type	104
C.2.24	MacroPeriodKind Data Type	105
C.2.25	AggregateKind Data Type	105
C.2.26	MeasuringPeriodKind Data Type	105
C.2.27	AccumulationKind Data Type	107
C.2.28	FlowDirectionKind Data Type	108
C.2.29	CommodityKind Data Type	109
C.2.30	MeasurementKind Data Type	110
C.2.31	ReadingInterharmonic Data Type	114
C.2.32	UnitMultiplier Data Type	114
C.2.33	UnitSymbol Data Type	114
C.2.34	Currency Data Type	118
C.2.35	DateTimeInterval Data Type	120
C.3	CIM Objects	121
C.3.1	HeaderType Object	121
C.3.2	UsagePoint Object	121
C.3.3	UsagePointLocation Object	123
C.3.4	MeterReading Object	123
C.3.5	Meter Object	124
C.3.6	Customer Object	124
C.3.7	ReadingType Object	125
C.3.8	IntervalBlock Object	127
C.3.9	IntervalReading Object	127
C.3.10	ReadingQuality Object	128
Annex D	(informative) EUMED Metering Issues to be discussed	129
D.1	General	129

D.2	Changes to IEC 61968-11	129
D.2.1	Attributes	129
D.2.2	Links	129
D.3	Changes to IEC 61968-100	130
Annex E (informative)	Complementary Use Cases	131
E.1	Use Cases from M441 Mandate	131
E.2	ebIX use cases	133
Bibliography	134
Figure 1	– Positioning of EUMED Market and EUMED Metering	12
Figure 2	– IEC 62325-450 modelling framework	15
Figure 3	– Overview of European style market profile dependency	16
Figure 4	– My Energy Data contextual model	20
Figure 5	– My Energy Data assembly model	30
Figure A.1	– Download My Data is the first phase of EUMED	53
Figure B.1	– EUMED Metering object diagram	80
Table 1	– IsBasedOn dependency	20
Table 2	– Attributes of My Energy Data contextual model::MyEnergyData_MarketDocument	21
Table 3	– Association ends of My Energy Data contextual model::MyEnergyData_MarketDocument with other classes	22
Table 4	– Attributes of My Energy Data contextual model::DateAndOrTime	22
Table 5	– Attributes of My Energy Data contextual model::Domain	22
Table 6	– Attributes of My Energy Data contextual model::MarketAgreement	23
Table 7	– Attributes of My Energy Data contextual model::MarketEvaluationPoint	23
Table 8	– Association ends of My Energy Data contextual model:: MarketEvaluationPoint with other classes	23
Table 9	– Attributes of My Energy Data contextual model::MarketParticipant	24
Table 10	– Association ends of My Energy Data contextual model:: MarketParticipant with other classes	24
Table 11	– Attributes of My Energy Data contextual model::MarketRole	24
Table 12	– Attributes of My Energy Data contextual model::Measure_Unit	25
Table 13	– Attributes of My Energy Data contextual model::Original_MarketDocument	25
Table 14	– Attributes of My Energy Data contextual model::Point	25
Table 15	– Association ends of My Energy Data contextual model:: Point with other classes	26
Table 16	– Attributes of My Energy Data contextual model::Quantity	26
Table 17	– Attributes of My Energy Data contextual model::Reason	27
Table 18	– Attributes of My Energy Data contextual model::Series_Period	27
Table 19	– Association ends of My Energy Data contextual model:: Series_Period with other classes	27
Table 20	– Attributes of My Energy Data contextual model::Time_Period	27
Table 21	– Attributes of My Energy Data contextual model::TimeSeries	28
Table 22	– Association ends of My Energy Data contextual model:: TimeSeries with other classes	28

Table 23 – Attributes of My Energy Data contextual model::UsagePointLocation.....	29
Table 24 – IsBasedOn dependency.....	31
Table 25 – Attributes of My Energy Data assembly model::MyEnergyData_MarketDocument.....	31
Table 26 – Association ends of My Energy Data assembly model::MyEnergyData_MarketDocument with other classes.....	32
Table 27 – Attributes of My Energy Data assembly model::MarketEvaluationPoint	33
Table 28 – Attributes of My Energy Data assembly model::Point.....	33
Table 29 – Attributes of My Energy Data assembly model::Reason	34
Table 30 – Attributes of My Energy Data assembly model::Series_Period	34
Table 31 – Association ends of My Energy Data assembly model:: Series_Period with other classes	34
Table 32 – Attributes of My Energy Data assembly model::TimeSeries	35
Table 33 – Association ends of My Energy Data assembly model:: TimeSeries with other classes	36
Table 34 – Attributes of ESMPDataTypes::Action_Status	37
Table 35 – Attributes of ESMPDataTypes::ESMP_DateTimeInterval	37
Table 36 – Attributes of ESMPDataTypes::ArealID_String.....	38
Table 37 – Restrictions of attributes for ESMPDataTypes::ArealID_String	38
Table 38 – Attributes of ESMPDataTypes::BusinessKind_String	38
Table 39 – Attributes of ESMPDataTypes::CapacityContractKind_String.....	38
Table 40 – Attributes of ESMPDataTypes::CurveType_String	39
Table 41 – Attributes of ESMPDataTypes::EnergyProductKind_String	39
Table 42 – Attributes of ESMPDataTypes::ESMP_DateTime	39
Table 43 – Restrictions of attributes for ESMPDataTypes::ESMP_DateTime.....	39
Table 44 – Attributes of ESMPDataTypes::ESMPVersion_String.....	40
Table 45 – Restrictions of attributes for ESMPDataTypes::ESMPVersion_String.....	40
Table 46 – Attributes of ESMPDataTypes::ID_String.....	40
Table 47 – Restrictions of attributes for ESMPDataTypes::ID_String.....	40
Table 48 – Attributes of ESMPDataTypes::MarketRoleKind_String.....	41
Table 49 – Attributes of ESMPDataTypes::MeasurementPointID_String.....	41
Table 50 – Restrictions of attributes for ESMPDataTypes::MeasurementPointID_String.....	41
Table 51 – Attributes of ESMPDataTypes::MeasurementUnitKind_String	41
Table 52 – Attributes of ESMPDataTypes::MessageKind_String	42
Table 53 – Attributes of ESMPDataTypes::PartyID_String.....	42
Table 54 – Restrictions of attributes for ESMPDataTypes::PartyID_String.....	42
Table 55 – Attributes of ESMPDataTypes::Position_Integer	42
Table 56 – Restrictions of attributes for ESMPDataTypes::Position_Integer	43
Table 57 – Attributes of ESMPDataTypes::Quality_String	43
Table 58 – Attributes of ESMPDataTypes::ReasonCode_String	43
Table 59 – Attributes of ESMPDataTypes::ReasonText_String.....	43
Table 60 – Restrictions of attributes for ESMPDataTypes::ReasonText_String.....	43
Table 61 – Attributes of ESMPDataTypes::Status_String	44
Table 62 – Attributes of ESMPDataTypes::YMDHM_DateTime.....	44

Table 63 – Restrictions of attributes for ESMPDataTypes::YMDHM_DateTime.....	44
Table B.1 – Objects of the EUMED Metering CIM Format	79
Table B.2 – MessageType Object	80
Table B.3 – HeaderType Object	81
Table B.4 – UsagePoint Object	81
Table B.5 – UsagePointLocation Object	81
Table B.6 – MeterReading Object	82
Table B.7 – Meter Object	82
Table B.8 – Customer Object	82
Table B.9 – ReadingType Object	83
Table B.10 – IntervalBlock Object	83
Table B.11 – IntervalReading Object.....	84
Table B.12 – ReadingQuality Object	84
Table B.13 – Data Types of EUMED Metering CIM Format.....	84
Table B.14 – DateTimeInterval Data Type.....	85
Table B.15 – CustomerKind Data Type	85
Table B.16 – MeasuringPeriodKind Data Type	85
Table B.17 – UnitMultiplier Data Type	85
Table B.18 – UnitSymbol Data Type	86
Table B.19 – MeasurementKind Data Type	86
Table B.20 – FlowDirectionKind Data Type	86
Table B.21 – CommodityKind Data Type	87
Table C.1 – HeaderType Object.....	88
Table C.2 – UsagePoint Object.....	89
Table C.3 – UsagePointLocation Object.....	90
Table C.4 – MeterReading Object	91
Table C.5 – Meter Object	91
Table C.6 – Customer Object.....	92
Table C.7 – ReadingType Object	92
Table C.8 – IntervalBlock Object.....	94
Table C.9 – IntervalReading Object	95
Table C.10 – ReadingQuality Object	95
Table C.11 – CIM Data Types	96
Table C.12 – QualityOfReading Data Type.....	97
Table C.13 – ReplaydetectionType Data Type	97
Table C.14 – UserType Data Type	98
Table C.15 – MessageProperty Data Type	98
Table C.16 – PhaseCode Data Type	98
Table C.17 – CurrentFlow Data Type	99
Table C.18 – Voltage Data Type	99
Table C.19 – ActivePower Data Type.....	99
Table C.20 – AmiBillingReadyKind Data Type.....	100
Table C.21 – UsagePointConnectedKind Data Type	100

Table C.22 – StreetAddress Data Type	100
Table C.23 – StreetDetail Data Type	101
Table C.24 – TownDetail Data Type	101
Table C.25 – TelephoneNumber Data Type	102
Table C.26 – ElectronicAddress Data Type	102
Table C.27 – Status Data Type	102
Table C.28 – Minutes Data Type	103
Table C.29 – Money Data Type	103
Table C.30 – LifecycleDate Data Type	103
Table C.31 – AcceptanceTest Data Type	104
Table C.32 – PerCent Data Type	104
Table C.33 – CustomerKind Data Type	104
Table C.34 – MacroPeriodKind Data Type	105
Table C.35 – AggregateKind Data Type	105
Table C.36 – MeasuringPeriodKind Data Type	106
Table C.37 – AccumulationKind Data Type	107
Table C.38 – FlowDirectionKind Data Type	108
Table C.39 – CommodityKind Data Type	110
Table C.40 – MeasurementKind Data Type	111
Table C.41 – ReadingInterharmonic Data Type	114
Table C.42 – UnitMultiplier Data Type	114
Table C.43 – UnitSymbol Data Type	115
Table C.44 – Currency Data Type	119
Table C.45 – DateTimeInterval Data Type	121
Table C.46 – HeaderType Object	121
Table C.47 – UsagePoint Object	122
Table C.48 – UsagePointLocation Object	123
Table C.49 – MeterReading Object	124
Table C.50 – Meter Object	124
Table C.51 – Customer Object	125
Table C.52 – ReadingType Object	125
Table C.53 – IntervalBlock Object	127
Table C.54 – IntervalReading Object	127
Table C.55 – ReadingQuality Object	128
Table D.1 – Attributes to be added to IEC 61968-11	129
Table D.2 – Links to be changed in IEC 61968-11	129
Table D.3 – Attributes to be added to	130
Table E.1 – M441 Use Cases	131

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FRAMEWORK FOR ENERGY MARKET COMMUNICATIONS –**Part 451-10: Profiles for Energy Consumption Data ("My Energy Data")****FOREWORD**

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International Standard IEC 62325-451-10 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
57/2266/FDIS	57/2312/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.

The French version of this standard has not been voted upon.

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

A list of all the parts in the IEC 62325 series, published under the general title *Framework for energy market communications*, can be found on the IEC website.

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- amended.

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INTRODUCTION

This part of IEC 62325 is one of the IEC 62325 series for deregulated energy market communications.

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 standard, i.e. IEC 61970-301, IEC 62325-301, IEC 62325-351, and specifies the content of the messages exchanged.

"My Energy Data" (MED) is the term adopted in Europe as a generic description of services to offer customers (residential, municipalities, ...) the possibility of downloading their energy consumption information and granting access to third parties to that information to enable service providers to offer analytical and other services to customers (residential, municipalities, ...).

Europe needs to define a standard to support the "My Energy Data" requirements.

The application domain of this work is limited to customers connected to Distribution System Operator (DSO) grids.

The main objective is to have a standardized and interoperable format so that various actors (customers, municipalities, ...) can download electrical energy data. The content of the standard will mainly be an XML schema (XSD) associated with a message. The message will consist of an envelope and a semantic part. The semantic part will be essentially based on IEC 61970-301, IEC 61968-11, IEC 62325-301. The envelope part will take into account standards IEC 61968-100, IEC 62325-503, IEC 62325-504.

My Energy Data is primarily subject to Regulation (EU) 2019/943 of the European parliament and of the council of 5 June 2019 on the internal market for electricity.

As stated in the "My Energy Data" document (published in November 2016 by European Smart Grids Task Force Expert Group 1 – Standards and Interoperability):

- "My Energy Data services are primarily subject to the EU General Data Protection Regulation (GDPR) 2016/679/EC, the Energy Efficiency Directive 2012/27/EU, the Electricity Directive 2009/72/EC, the Gas Directive 2009/73/EC and further country-specific legislation"
- "One of the key aspects that would significantly contribute to opening the European internal market for future Energy Services is for the industrial initiative to establish a common format for energy data interchange that allows companies to seamlessly provide their services throughout the EU Member State. The ad hoc group intends to continue its work and invite to join all interested stakeholders which have not been extensively consulted due to time constraints. It recommends therefore that – after the publication of the European Commission Winter Package – a European industry initiative consisting of all interested stakeholders, such as, but not limited to manufacturers, utilities, vendors, laboratories and national regulators will be formed in early 2017 with the aim to provide further detailed specifications on a common format for energy data interchange under consideration of the high-level requirements provided by this report."

"This document will support the European Regulation. It will increase interoperability. The following parties which will benefit from this standard are: customers, suppliers, transmission and distribution system operators, aggregators, energy service companies, and other parties which provide energy or other services to customers."

This document provides the profile associated to use case "Download My Data" and is named "EUMED Market" profile. The first use case, "Download my data", is described in Annex A. The previous version of EUMED, called "EUMED Metering" circulated among the task force in January 2018 is described in Annex B, Annex C and Annex D.

The "EUMED Metering" proposal was based on IntervalBlock and IntervalReading CIM classes as proposed in 61968-9 IS standard to Model Time Series. It was based on a European project proposal (Flexiciency deliverable D6.0).

As an alternative, and in order to be consistent with IEC European Style Market Profiles (ESMP), experts familiar with 62325 and ESMP proposed to investigate a EUMED CIM based on Time Series.

As a consequence, the decision was to postpone circulation of first CD among National Committees in order to define a solution based on TimeSeries.

Figure 1 presents the two models, EUMED Market and EUMED Metering.

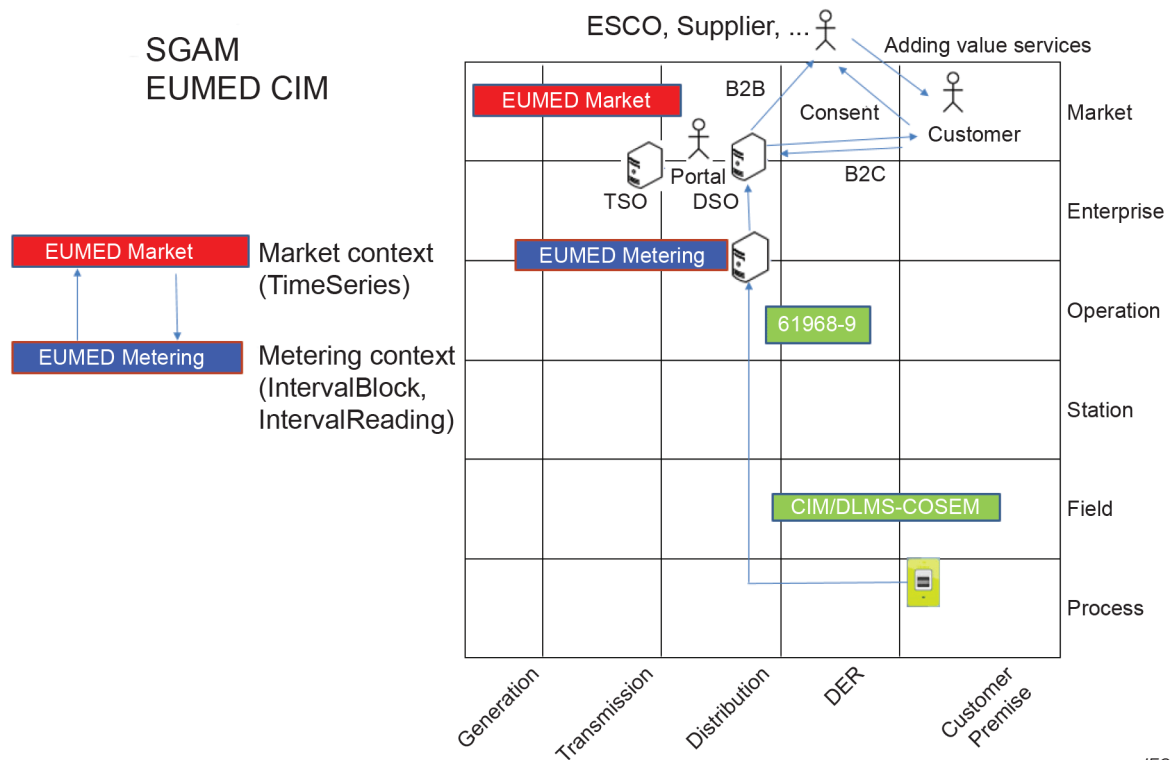


Figure 1 – Positioning of EUMED Market and EUMED Metering

The EUMED Metering profile has been described in Annex B of this document. The compatibility between EUMED Metering and EUMED Market will be studied later, and EUMED Metering profile will potentially be integrated in IEC 61968 series.

FRAMEWORK FOR ENERGY MARKET COMMUNICATIONS –

Part 451-10: Profiles for Energy Consumption Data ("My Energy Data")

1 Scope

Based on the European style market contextual model (IEC 62325-351), this part of IEC 62325 specifies a UML package for the Energy Consumption Data business process and its associated document contextual model, assembly model and XML schema for use within the European style electricity markets.

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 Energy Consumption Data business process.

The contextualised ABIEs have been assembled into the Energy Consumption Data document contextual model.

A related assembly model and an XML schema for the exchange of Energy Consumption information between market participants is automatically generated from the assembled document contextual model. The XML schema follows IEC Code Components management and copyright licensing.

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 61970-2:2004, *Energy management system application program interface (EMS-API) – Part 2: Glossary*

IEC 62325-351, *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 62361-100, *Power systems management and associated information exchange – Interoperability in the long term – Part 100: CIM profiles to XML schema mapping*