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**Framework for energy market communications –
Part 351: CIM European market model exchange profile**

**Cadre pour les communications pour le marché de l'énergie –
Partie 351: Profil de modèle d'échange pour un système de gestion de marché
de style européen basé sur le CIM**



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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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CONTENTS

FOREWORD.....	6
INTRODUCTION.....	8
1 Scope.....	9
2 Normative references.....	9
3 Terms and definitions	9
4 European style market concepts	11
4.1 From the CIM information model to the European style market profile.....	11
4.1.1 General	11
4.1.2 Applying the framework to the European style electricity market.....	12
4.1.3 Examples for building a European style market profile	12
4.2 European style market package structure	13
4.3 The European electricity market concepts.....	15
4.4 Business process modelling	16
4.5 Business rules for the European style market profile	17
4.5.1 General	17
4.5.2 Identification of an ESMP electronic document.....	17
4.5.3 Time	18
4.5.4 Coding scheme identification.....	18
4.5.5 Direction of flow within TimeSeries	18
4.5.6 Quantity within a TimeSeries	19
5 Package architecture	22
5.1 Documentation structure	22
5.2 European style market classes	23
5.2.1 Overview of the model.....	23
5.2.2 IsBasedOn relationships from the European style market profile	24
5.2.3 Detailed ESMPClasses	25
5.2.4 Primitives.....	49
5.2.5 Datatypes	50
5.2.6 Enumerations.....	69
Bibliography	70
Figure 1 – IEC 62325-450 modelling framework.....	11
Figure 2 – Example of restrictions applied to CIM for a profile.....	13
Figure 3 – Overview of European style market profile dependency.....	14
Figure 4 – Curve – “Points” (24 hour day with a 4 hour resolution)	20
Figure 5 – Curve – “Sequential fixed size blocks” (24 hour day with a 4 hour resolution).....	20
Figure 6 – Curve – “Variable sized blocks” (24 hour day with a 4 hour resolution).....	21
Figure 7 – Curve – “Non-overlapping breakpoint” (24 hour day with a 4 hour resolution)	21
Figure 8 – Curve – “Overlapping breakpoint” (24 hour day with a 4 hour resolution)	22
Figure 9 – ESMPClasses	24
Table 1 – Attribute documentation example	23
Table 2 – Association Ends documentation example	23
Table 3 – Compound Datatype documentation example	23

Table 4 – IsBasedOn dependency	25
Table 5 – Attributes of ESMPClasses::AceTariffType	26
Table 6 – Association ends of ESMPClasses::AceTariffType with other classes	26
Table 7 – Attributes of ESMPClasses::AggregateNode	26
Table 8 – Attributes of ESMPClasses::Analog.....	27
Table 9 – Association ends of ESMPClasses::Analog with other classes	27
Table 10 – Attributes of ESMPClasses::AnalogValue	28
Table 11 – Attributes of ESMPClasses::AttributeInstanceComponent	28
Table 12 – Attributes of ESMPClasses::Auction	29
Table 13 – Attributes of ESMPClasses::BidTimeSeries	30
Table 14 – Attributes of ESMPClasses::ConstraintDuration	30
Table 15 – Attributes of ESMPClasses::Currency_Unit	30
Table 16 – Attributes of ESMPClasses::DateAndOrTime	31
Table 17 – Attributes of ESMPClasses::Domain.....	31
Table 18 – Association ends of ESMPClasses::Domain with other classes	32
Table 19 – Attributes of ESMPClasses::FlowDirection.....	32
Table 20 – Attributes of ESMPClasses::Location	33
Table 21 – Attributes of ESMPClasses::MarketAgreement	33
Table 22 – Attributes of ESMPClasses::MarketDocument.....	34
Table 23 – Association ends of ESMPClasses::MarketDocument with other classes	35
Table 24 – Attributes of ESMPClasses::MarketEvaluationPoint	36
Table 25 – Association ends of ESMPClasses::MarketEvaluationPoint with other classes.....	36
Table 26 – Attributes of ESMPClasses::MarketObjectStatus	36
Table 27 – Attributes of ESMPClasses::MarketParticipant.....	37
Table 28 – Association ends of ESMPClasses::MarketParticipant with other classes	37
Table 29 – Attributes of ESMPClasses::MarketRole	38
Table 30 – Attributes of ESMPClasses::Measure_Unit	38
Table 31 – Attributes of ESMPClasses::MktGeneratingUnit.....	38
Table 32 – Association ends of ESMPClasses::MktGeneratingUnit with other classes	39
Table 33 – Attributes of ESMPClasses::MktPSRType	39
Table 34 – Association ends of ESMPClasses::MktPSRType with other classes	39
Table 35 – Attributes of ESMPClasses::Name	40
Table 36 – Attributes of ESMPClasses::Point	40
Table 37 – Association ends of ESMPClasses::Point with other classes	41
Table 38 – Attributes of ESMPClasses::Price	41
Table 39 – Attributes of ESMPClasses::Process	42
Table 40 – Attributes of ESMPClasses::Quantity.....	42
Table 41 – Association ends of ESMPClasses::Quantity with other classes	42
Table 42 – Attributes of ESMPClasses::Reason.....	43
Table 43 – Attributes of ESMPClasses::RegisteredResource	43
Table 44 – Association ends of ESMPClasses::RegisteredResource with other classes.....	44
Table 45 – Attributes of ESMPClasses::Series_Period.....	44

Table 46 – Association ends of ESMPClasses::Series_Period with other classes	45
Table 47 – Attributes of ESMPClasses::Time_Period	45
Table 48 – Association ends of ESMPClasses::Time_Period with other classes.....	45
Table 49 – Attributes of ESMPClasses::TimeSeries	46
Table 50 – Association ends of ESMPClasses::TimeSeries with other classes.....	47
Table 51 – Attributes of ESMPClasses::VoltageLevel.....	49
Table 52 – Attributes of ESMPDataTypes::Action_Status	50
Table 53 – Attributes of ESMPDataTypes::ElectronicAddress	50
Table 54 – Attributes of ESMPDataTypes::ESMP_DateTimeInterval.....	50
Table 55 – Attributes of ESMPDataTypes::StreetAddress	51
Table 56 – Attributes of ESMPDataTypes::StreetDetail	51
Table 57 – Attributes of ESMPDataTypes::TelephoneNumber	51
Table 58 – Attributes of ESMPDataTypes::TownDetail	52
Table 59 – Attributes of ESMPDataTypes::AllocationMode_String.....	52
Table 60 – Attributes of ESMPDataTypes::Amount_Decimal	52
Table 61 – Restrictions of attributes for ESMPDataTypes::Amount_Decimal.....	52
Table 62 – Attributes of ESMPDataTypes::AnalogID_String	53
Table 63 – Attributes of ESMPDataTypes::AnalogType_String	53
Table 64 – Attributes of ESMPDataTypes::ArealID_String.....	53
Table 65 – Restrictions of attributes for ESMPDataTypes::ArealID_String	53
Table 66 – Attributes of ESMPDataTypes::AttributeValue_String.....	54
Table 67 – Restrictions of attributes for ESMPDataTypes::AttributeValue_String	54
Table 68 – Attributes of ESMPDataTypes::AuctionKind_String	54
Table 69 – Attributes of ESMPDataTypes::BusinessKind_String.....	54
Table 70 – Attributes of ESMPDataTypes::CapacityContractKind_String	55
Table 71 – Attributes of ESMPDataTypes::Category_String	55
Table 72 – Attributes of ESMPDataTypes::Characters10_String.....	55
Table 73 – Restrictions of attributes for ESMPDataTypes::Characters10_String	55
Table 74 – Attributes of ESMPDataTypes::Characters15_String.....	56
Table 75 – Restrictions of attributes for ESMPDataTypes::Characters15_String	56
Table 76 – Attributes of ESMPDataTypes::Characters2_String.....	56
Table 77 – Restrictions of attributes for ESMPDataTypes::Characters2_String	56
Table 78 – Attributes of ESMPDataTypes::Characters35_String.....	57
Table 79 – Restrictions of attributes for ESMPDataTypes::Characters35_String	57
Table 80 – Attributes of ESMPDataTypes::Characters70_String.....	57
Table 81 – Restrictions of attributes for ESMPDataTypes::Characters70_String	57
Table 82 – Attributes of ESMPDataTypes::ClassificationKind_String	57
Table 83 – Attributes of ESMPDataTypes::CurrencyCode_String	58
Table 84 – Attributes of ESMPDataTypes::CurveType_String.....	58
Table 85 – Attributes of ESMPDataTypes::DirectionKind_String.....	58
Table 86 – Attributes of ESMPDataTypes::EnergyProductKind_String	58
Table 87 – Attributes of ESMPDataTypes::ESMP_ActivePower.....	59
Table 88 – Restrictions of attributes for ESMPDataTypes::ESMP_ActivePower	59

Table 89 – Attributes of ESMPDataTypes::ESMP_DateTime	59
Table 90 – Restrictions of attributes for ESMPDataTypes::ESMP_DateTime	59
Table 91 – Attributes of ESMPDataTypes::ESMP_Float	60
Table 92 – Restrictions of attributes for ESMPDataTypes::ESMP_Float	60
Table 93 – Attributes of ESMPDataTypes::ESMP_Voltage	60
Table 94 – Restrictions of attributes for ESMPDataTypes::ESMP_Voltage	60
Table 95 – Attributes of ESMPDataTypes::ESMPBoolean_String	61
Table 96 – Attributes of ESMPDataTypes::ESMPVersion_String	61
Table 97 – Restrictions of attributes for ESMPDataTypes::ESMPVersion_String.....	61
Table 98 – Attributes of ESMPDataTypes::ID_String.....	62
Table 99 – Restrictions of attributes for ESMPDataTypes::ID_String	62
Table 100 – Attributes of ESMPDataTypes::MarketRoleKind_String	62
Table 101 – Attributes of ESMPDataTypes::MeasurementPointID_String	62
Table 102 – Restrictions of attributes for ESMPDataTypes::MeasurementPointID_String.....	63
Table 103 – Attributes of ESMPDataTypes::MeasurementUnitKind_String.....	63
Table 104 – Attributes of ESMPDataTypes::MessageKind_String.....	63
Table 105 – Attributes of ESMPDataTypes::ObjectAggregationKind_String	63
Table 106 – Attributes of ESMPDataTypes::PartyID_String	64
Table 107 – Restrictions of attributes for ESMPDataTypes::PartyID_String	64
Table 108 – Attributes of ESMPDataTypes::PayloadId_String	64
Table 109 – Restrictions of attributes for ESMPDataTypes::PayloadId_String	64
Table 110 – Attributes of ESMPDataTypes::PaymentTerms_String	64
Table 111 – Attributes of ESMPDataTypes::Position_Integer	65
Table 112 – Restrictions of attributes for ESMPDataTypes::Position_Integer.....	65
Table 113 – Attributes of ESMPDataTypes::PriceCategory_String.....	65
Table 114 – Attributes of ESMPDataTypes::PriceDirection_String.....	65
Table 115 – Attributes of ESMPDataTypes::ProcessKind_String	66
Table 116 – Attributes of ESMPDataTypes::PsrType_String.....	66
Table 117 – Attributes of ESMPDataTypes::Quality_String.....	66
Table 118 – Attributes of ESMPDataTypes::ReasonCode_String.....	66
Table 119 – Attributes of ESMPDataTypes::ReasonText_String	67
Table 120 – Restrictions of attributes for ESMPDataTypes::ReasonText_String	67
Table 121 – Attributes of ESMPDataTypes::ResourceID_String	67
Table 122 – Restrictions of attributes for ESMPDataTypes::ResourceID_String.....	67
Table 123 – Attributes of ESMPDataTypes::RightsKind_String.....	68
Table 124 – Attributes of ESMPDataTypes::Status_String.....	68
Table 125 – Attributes of ESMPDataTypes::TariffKind_String	68
Table 126 – Attributes of ESMPDataTypes::YMDHM_DateTime	68
Table 127 – Restrictions of attributes for ESMPDataTypes::YMDHM_DateTime	69

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FRAMEWORK FOR ENERGY MARKET COMMUNICATIONS –

Part 351: CIM European market model exchange profile

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International Standard IEC 62325-351 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

This second edition cancels and replaces the first edition published in 2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Add the attribute “cancelledTS” to the class TimeSeries. The attribute is defined in IEC 62325-301 Edition 1, and was not use in the European style market profile but is now necessary for the Transparency Regulation.
- b) Add the attribute “quality” to the class “Point” and a new CIMDataType “QualityString”. The attribute is defined in IEC 62325-301 Edition 1, and was not use in the European style market profile. This attribute will enable to develop the data exchange related to the settlement business process within a synchronous power system for cross-border flows.

- c) Add an association between the class “Reason” and the class “Series_Period”. This association enables to report errors on the “Series_Period”.
- d) Add the class “MktGeneratingUnit” from IEC 62325-301. This class is necessary to publish information on generation units as per Transparency Regulation.
- e) Add a class “VoltageLevel” from IEC 61970-301. This class is necessary to publish information as per Transparency Regulation.
- f) Add a class “Location” from IEC 61968-11. This class is necessary to publish information as per Transparency Regulation.
- g) Class “MarketParticipant”, change the cardinality of the attribute “mRID” to [0..1] and add the attribute “name” from IEC 62325-301 as [0..1].
- h) Class “Price”, change the cardinality of attribute “amount” from [1] to [0..1] and add an association with the class “TimeSeries” as [0..*] to [0..*].
- i) Add a class “ConstraintDuration” from IEC 62325-301 necessary for activation constraints on the balancing market
- j) Add the constraints on datatypes.

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

CDV	Report on voting
57/1618/CDV	57/1681/RVC

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

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.

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

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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.

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

This part of IEC 62325 provides the European style market profile specifications that support the European style design electricity markets. These electricity markets are based on the European regulations, and on the concepts of third party access and zonal markets. This part of IEC 62325 was originally based upon the work of the European Transmission System Operators (ETSO) and then on the work of the European Network of Transmission System Operators (ENTSO-E) on electronic data interchange.

FRAMEWORK FOR ENERGY MARKET COMMUNICATIONS –

Part 351: CIM European market model exchange profile

1 Scope

This part of IEC 62325 is applicable to European style electricity markets.

This part of IEC 62325 specifies a UML package which provides a logical view of the functional aspects of European style market management within an electricity markets.

This package is based on the common information model (CIM). The use of the CIM goes far beyond its application in a market management system.

Due to the size of the complete CIM, the object classes contained in the CIM are grouped into a number of logical packages, each of which represents a certain part of the overall power system being modelled. Collections of these packages are progressed as separate International Standards.

From the CIM packages, regional contextual models are built to cover the market information interchange requirements for a given region, i.e. the business context. A region may be a continent where common electricity market designs are used for the exchange of information (Europe, North America, Asia, etc.). It may also be a specific country or an organization that has particular needs and wishes to benefit from the CIM.

This new edition of IEC 62325-351 contains new classes and associations required to comply with new business development for European style market, and in particular the implementation of the European regulations (No. 1227/2011 and No. 543/2013).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 62325-450:2013, *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: Naming and design rules for CIM profiles to XML schema mapping*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC TS 61970-2, as well as the following apply.