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European Network of
Transmission System Operators
for Electricity

ENTSO-E
BALANCING TRANSPARENCY PROCESS
IMPLEMENTATION GUIDE

2015-09-22

VERSION 4 RELEASE 2
DRAFT

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Revision History

Version	Release	Date	Comments
1	0	2013-06-24	First version.
2	0	2013-09-12	Version taking into account the comments issued during the Public Consultation.
3	0	2014-01-24	Version taking into account comments in addition to correcting some typing error. Alignment of the models and attribute names with the CIM model following integrity check. Reposition of docStatus Addition of periodTimeInterval Dependency table alignment. Approved by Market Committee on 2014-02-04.
4	0	2015-01-08	Reference to ENTSO-E XML namespace reference document version 2 release 0 and recommendation.
4	1	2015-04-23	Maintenance request (EMFIP21) on the “imbalance volume” relative to Article 17(h). The quantity value is either positive or negative. Changes have been made in Figure 5 column Article 17(h), § 4.7 and § 4.7.2 item description
4	2	2015-09-23	Maintenance request (EMFIP16) on the “source of reserve” relative to Article 17(b) to 17(g). In some case the source of the reserve is not identified, i.e. generation or load, thus the AssetType A03 (resource object, i.e. a resource that can either produce or consume energy) is to be used. Changes are made in § 4.3.3 and § 4.5.6.

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Reference Documents

1. Commission Regulation No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council. (note: all articles mentioned in the current document come from this regulation).
2. Central Information Transparency Platform - Business Requirements Specification.
3. The Harmonised ENTSO-E Role Model.
4. A Common Identification System for the Energy Industry, The Energy Identification Coding Scheme – EIC.
5. The ENTSO-E Code List.
6. The introduction of different time series possibilities (CurveType) within ENTSO-E electronic documents.
7. IEC 62325-301, Framework for energy market communications Common information model (CIM) Extensions for markets.
8. IEC 62325-351, Framework for energy market communications CIM European market model exchange profile
9. IEC 62325-450, Profile and context modelling rules.
10. IEC 62361 part 100, Naming and design rules for CIM profiles to XML schema mapping.
11. IEC 62325-451-1, Framework for energy market communications The acknowledgement document.
12. ENTSO-E XML namespace reference document version 2 release 0. This reference shall ensure to have compliant electronic document instance files; and in particular to apply the following recommendations:
    - **In order to enable flexibility, it is recommended that the schema location instruction (and xsi definition) in the schema compliant instance should not be used.**

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1 INTRODUCTION

This implementation guide is one of the implementation guides drafted by ENTSO-E to enable the establishment of a common level of fundamental data transparency as per the Regulation on transparency and provision of information in European electricity markets.

This implementation guide focuses on defining the information to be exchanged for the publication of the balancing data as defined in the EMFIP Business Requirements Specification.

Its purpose is to facilitate the provision of balancing information to a central information platform. This platform should enable the establishment of a coherent and consistent view of the European wholesale electricity market by all the market participants as well as to interested European consumers.

The implementation guide is one of the building blocks for using UML (Unified Modelling Language) based techniques in defining processes and documents for interchange between actors in the electrical industry in Europe.

This guide provides a standard for enabling a uniform layout for the transmission of balancing data between the European electricity market participants and the Transparency platform via the Market Information Provider (who may be the Transmission System Operator). The information model within the guide shall ensure that a common interface can be provided between different software solutions.

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2 THE BALANCING PROCESS OVERVIEW

2.1 BREAKDOWN OF THE BALANCING PROCESS

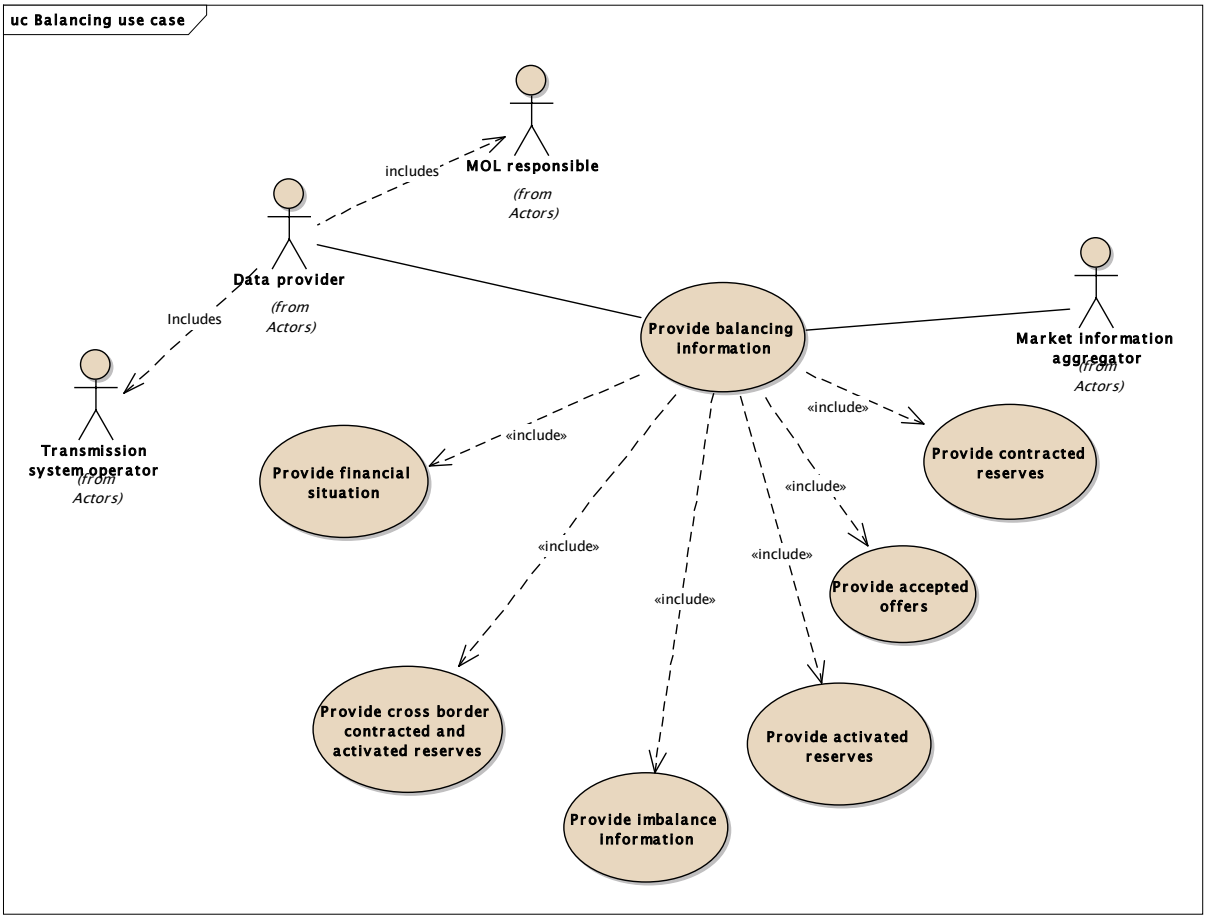

FIGURE 1: INFORMATION EXCHANGE FOR THE PROVISION OF BALANCING INFORMATION

The provision of balancing information is relatively straightforward and can be shown as a single use case that includes separate use cases covering the information requirements within a given time interval. The dialogue is essentially between the data provider and the market information aggregator. The data provider could be the system operator, the market operator MOL Responsible or the Reserve Allocator, etc...

The balancing information submission requirements can be outlined as follows:

1. Provide contractual reserves.
2. Provide accepted offers.
3. Provide activated balancing energy.
4. Provide imbalance volumes and prices.

5. Provide cross border contracted and activated reserves.

6. Provide financial situation.

The platform makes the information provided available to the public as soon as any information is received.

3 THE BALANCING TRANSPARENCY PROCESS SEQUENCE

3.1 GENERIC PROCESSING SEQUENCE

The balancing transparency process can be basically divided into five groups of information requirements; procurement requirements, accepted offers, reserve activation, imbalance situation and financial settlement. The sequence diagram in figure 2 outlines the information flows necessary to satisfy the identified requirements.

Following the reception of a balancing market document, the acknowledgement business process as per IEC 62325-451-1 shall be applied. In particular, the Data provider shall receive an acknowledgement stating whether the document has been accepted or rejected and the reasons for the rejection.

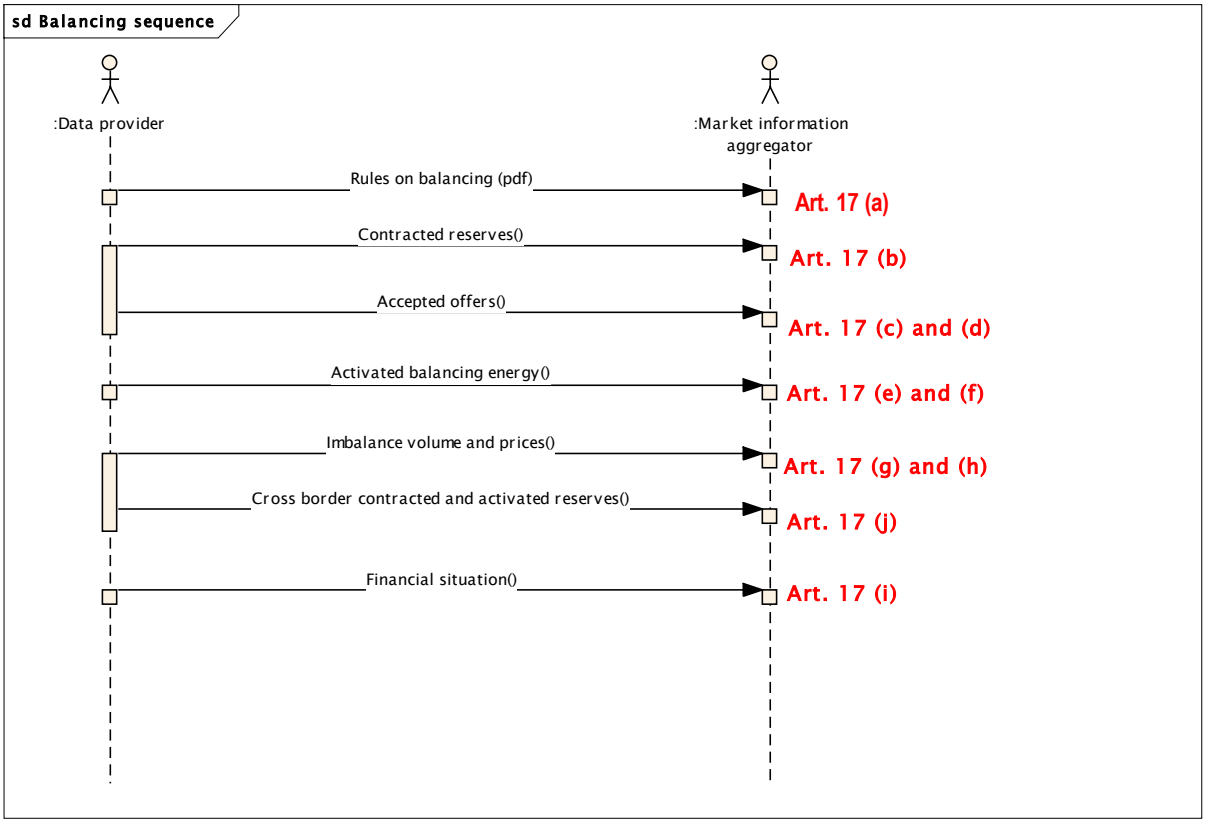

FIGURE 2: GENERIC BALANCING PROCESS SEQUENCE

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4 BALANCING MARKET DOCUMENT IMPLEMENTATION

4.1 CONTEXTUAL MODEL

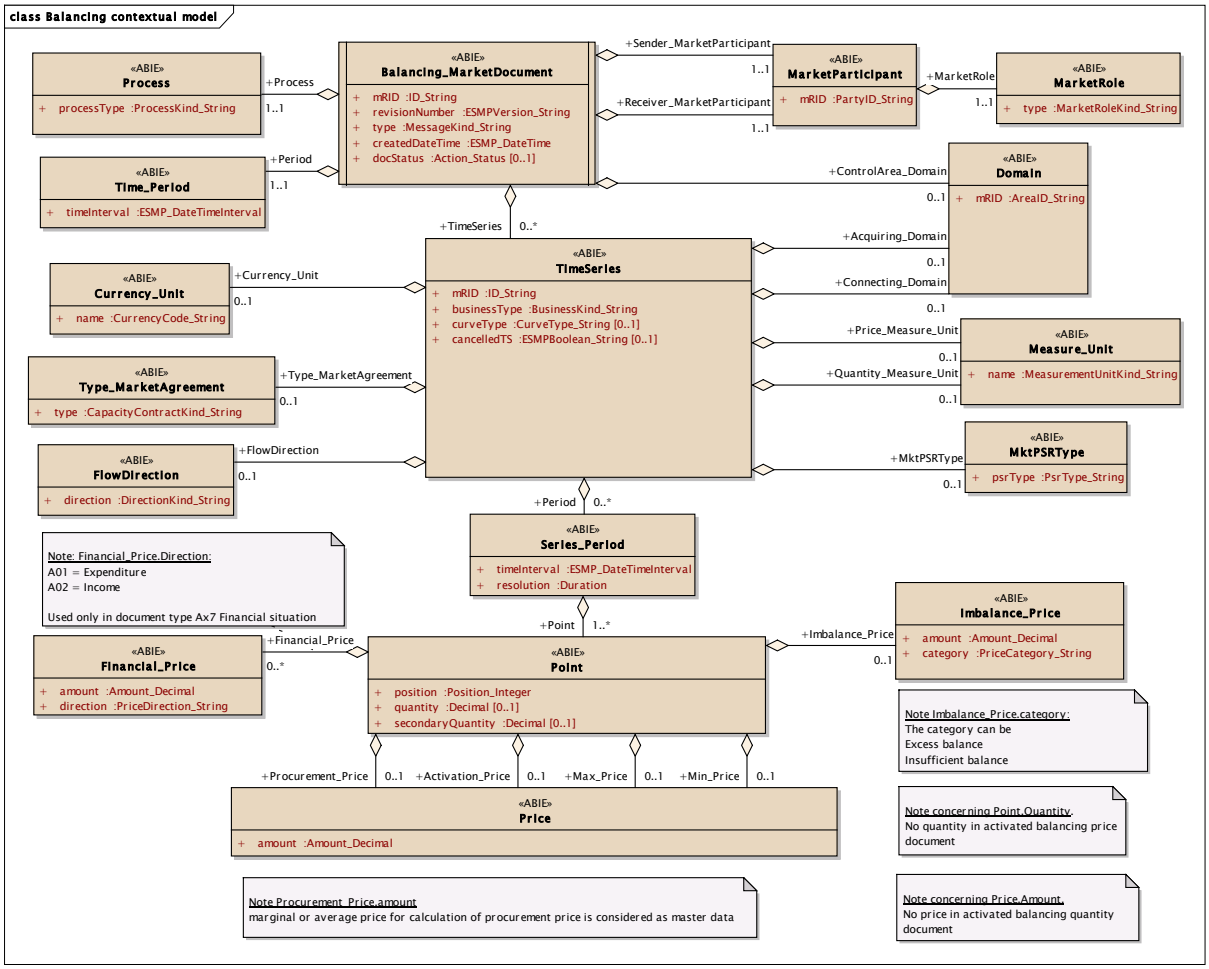

FIGURE 3: BALANCING MARKET DOCUMENT CONTEXTUAL MODEL

166 ## 4.2 INFORMATION MODEL

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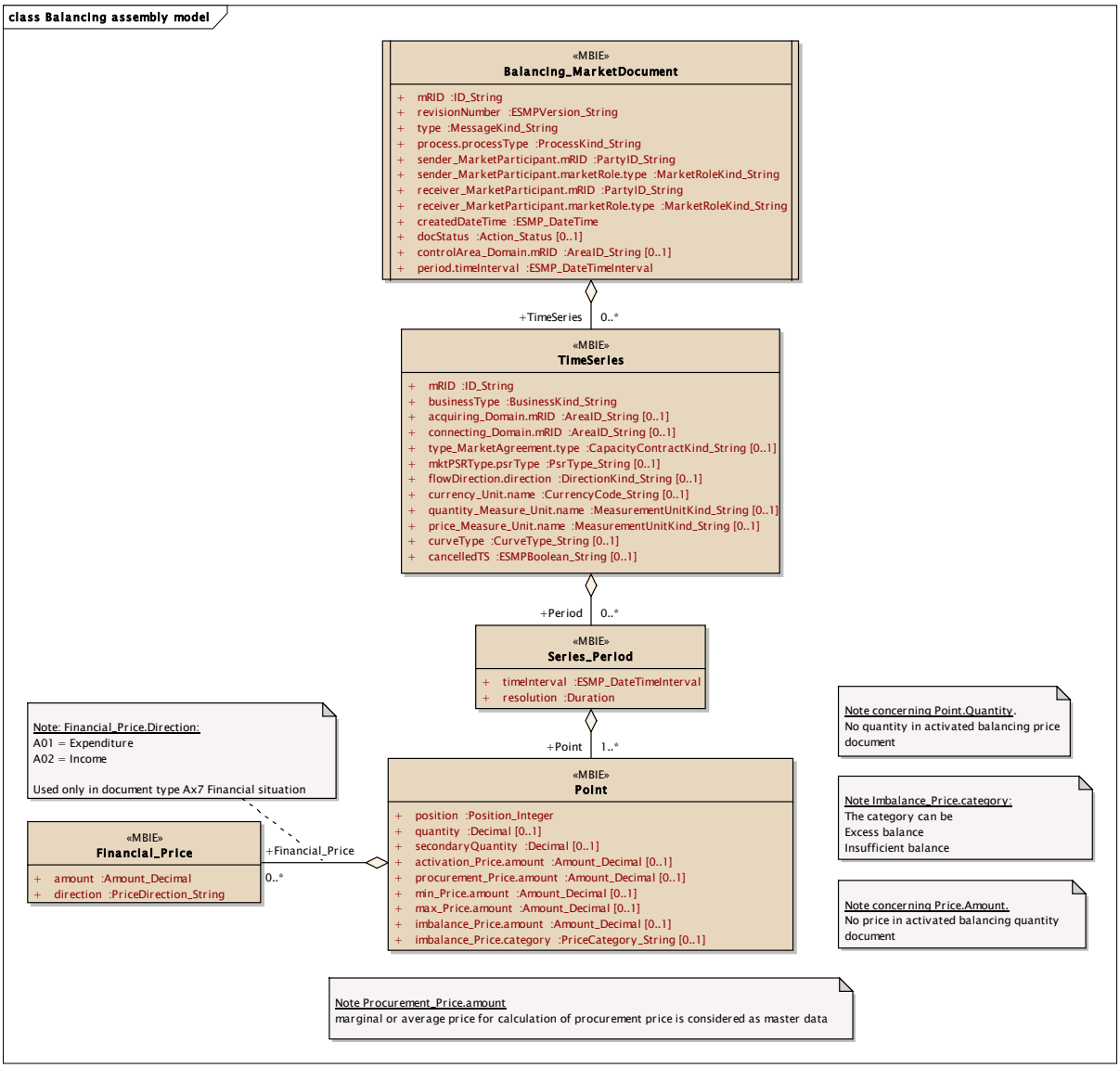

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169 **FIGURE 4: BALANCING MARKET DOCUMENT INFORMATION MODEL**

4.3 RULES GOVERNING THE BALANCING MARKET DOCUMENT

4.3.1 THE TRANSMISSION OF BALANCING INFORMATION

Each transmission of balancing information as indicated in the sequence in figure 2 should be transmitted in a single document. Any changes necessary to the information transmitted should be adjusted through the use of a new version of the document in question. This is particularly true in the case of the transmission of activated balancing energy, the imbalance volumes and the settlement information.

The latest revision of a document provides the current state of the information contained in the document.

4.3.2 STATUS INFORMATION

A balancing document shall have a docStatus class instance in the case where the information provided is final for articles 17 (e), 17 (h) and 17 (i).

4.3.3 DOCUMENT ATTRIBUTE DEPENDENCIES

Article involved Attribute		Art. 17(b)	Art. 17(c)	Art. 17 (d)
	type	A81: contracted reserve	A89: contracted reserve price	A82: accepted offer
	process.processType	A34: contracted	A34: contracted	A34: contracted
TimeSeries	businessType	A95: frequency containment reserve A96: automatic frequency restoration reserve A97: manual frequency restoration reserve A98: replacement reserve	A95: frequency containment reserve A96: automatic frequency restoration reserve A97: manual frequency restoration reserve A98: replacement reserve	A95: frequency containment reserve A96: automatic frequency restoration reserve A97: manual frequency restoration reserve A98: replacement reserve
TimeSeries	acquiring_Domain.mRID	Not used	Not used	Not used
TimeSeries	connecting_Domain.mRID	Not used	Not used	Not used
TimeSeries	type_MarketAgreement.type	Used hourly, daily, etc.	Used hourly, daily, etc.	Not used
TimeSeries	mktPSRType.psrType	Used load/generation/ resource object	May be used load/generation/ resource object	May be used load/generation/ resource object
TimeSeries	currency_Unit.name	Not used	Used	Not used
TimeSeries	flowDirection.direction	Used	Used	Used
TimeSeries	Period	Used	Used	Used
Point	quantity	Used	Not used	Used
Point	secondaryQuantity	Not used	Not used	May be used
Point	activation_Price.amount	Not used	Not used	Not used
Point	procurement_Price.amount	Not used	Used	Not used
Point	minimum_Price.amount	Not used	Not used	Not used
Point	maximum_Price.amount	Not used	Not used	Not used
Point	imbalance_Price.amount	Not used	Not used	Not used
Point	imbalance_Price.category	Not used	Used for download transmission	Not used
Point	financial_Price	Not used	Not used	Not used

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Article involved Attribute		Art. 17(e)	Art. 17(f)	Art. 17 (g)
	type	A83: activated balancing quantities	A84: activated balancing price	A85: imbalance prices
	process.processType	A16: realised	A16: realised	A16: realised
TimeSeries	businessType	A95: frequency containment reserve A96: automatic frequency restoration reserve A97: manual frequency restoration reserve A98: replacement reserve	A95: frequency containment reserve A96: automatic frequency restoration reserve A97: manual frequency restoration reserve A98: replacement reserve	A19: balance energy deviation
	acquiring_Domain.mRID	Not used	Not used	Not used
	connecting_Domain.mRID	Not used	Not used	Not used
	type_MarketAgreement.type	Not used	Not used	Not used
	mktPSRType.psrType	May be used load/generation/ resource object	May be used load/generation/ resource object	May be used load/generation/ resource object
	currency_Unit.name	Not used	Used	Used
	flowDirection.direction	Used	Used	Not used
	Period	Used	Used	Used
Point	quantity	Used	Not used	Not used
	secondaryQuantity	Not used	Not used	Not used
	activation_Price.amount	Not used	Used	Not used
	procurement_Price.amount	Not used	Not used	Not used
	minimum_Price.amount	Not used	Not used	Not used
	maximum_Price.amount	Not used	Not used	Not used
	imbalance_Price.amount	Not used	Not used	Used
	imbalance_Price.category	Not used	Used for download transmission	Used
	financial_Price	Not used	Not used	Not used

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Article involved Attribute		Art. 17(h)	Art. 17(i)	Art. 17 (j)
	type	A86: imbalance volume	A87: financial situation	A88: cross-border balancing
	process.processType	A16: realised	A16: realised	A16: realised
TimeSeries	businessType	A19: balance energy deviation	A99: financial information	A06: external trade
TimeSeries	acquiring_Domain.mRID	Not used	Not used	Used
TimeSeries	connecting_Domain.mRID	Not used	Not used	Used
TimeSeries	type_MarketAgreement.type	Not used	Not used	Not used
TimeSeries	mktPSRType.psrType	Not used	Not used	Not used
TimeSeries	currency_Unit.name	Not used	Used	Used
TimeSeries	flowDirection.direction	Not used	Not used	Used
TimeSeries	Period	Used	Used	Used
Point	quantity	Used The quantity value could be either positive or negative.	Not used	May be used
Point	secondaryQuantity	Not used	Not used	Used
Point	activation_Price.amount	Not used	Not used	Not used
Point	procurement_Price.amount	Not used	Not used	Not used
Point	minimum_Price.amount	Not used	Not used	Used
Point	maximum_Price.amount	Not used	Not used	Used
Point	imbalance_Price.amount	Not used	Not used	Not used
Point	imbalance_Price.category	Not used	Not used	Not used
Point	financial_Price	Not used	Used	Not used

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185 **FIGURE 5: BALANCING DOCUMENT DEPENDENCY TABLE**

186 Note: When the acquiring and connecting domain is known use article 17(j) and when the
187 domains are not known in the merit order list (Nordic region for example) use article 17(d).

188 ## 4.4 BALANCING_MARKETDOCUMENT CLASS SPECIFICATION

189 An electronic document containing the information necessary to satisfy the requirements of a
190 given business process.
191 For a given process (balancing or imbalance), there should be 1 document to report
192 quantities and 1 document to report prices.

193 ### 4.4.1 MRID

ACTION	DESCRIPTION
Definition of element	Unique identification of the document being exchanged within a business process flow.
Description	A balancing market document describes a specific situation in the balancing information sequence and it must have an identification assigned by the document sender that is unique for all transmissions to the receiver. All additions, modifications, or suppressions concerning the document must use the same identification.
Size	The identification of a document may not exceed 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None

194 ### 4.4.2 REVISIONNUMBER

ACTION	DESCRIPTION
Definition of element	Identification of the version that distinguishes one evolution of a document from another.
Description	The document version is used to identify a given version of the document. The first version number for a given document identification shall normally be 1. The document version number must be incremented for each retransmission of a document that contains changes to the previous version. The receiving system should ensure that the version number for a document is superior to the previous version number received.
Size	A version number may not exceed 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

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195 4.4.3 TYPE

ACTION	DESCRIPTION
Definition of element	The coded type of a document. The document type describes the principal characteristic of the document.
Description	The document type identifies the information flow characteristics. ***Permitted codes are:*** A81 = Contracted reserves A82 = Accepted offers A83 = Activated balancing quantities A84 = Activated balancing prices A85 = Imbalance prices A86 = Imbalance volume. A87 = Financial situation A88 = Cross border balancing A89 = Contracted reserve prices
Size	The document type value may not exceed 3 alphanumeric characters (no blanks).
Applicability	This information is mandatory.
Dependence requirements	None.

196 4.4.4 PROCESS.PROCESSTYPE

ACTION	DESCRIPTION
Definition of element	The identification of the nature of process that the document addresses. --- The Process associated with an electronic document header that is valid for the whole document.
Description	The process type identifies the type of processing to be carried out on the information. ***Permitted codes are:*** A34 = Contracted A16 = Realised
Size	The process type value may not exceed 3 alphanumeric characters (no blanks).
Applicability	This information is mandatory.
Dependence requirements	None.

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197 4.4.5 SENDER_MARKETPARTICIPANT.MRID

ACTION	DESCRIPTION
Definition of element	The identification of a party in the energy market --- The MarketParticipant issuing the document
Description	The sender of the document is identified by a unique coded identification. This code identifies the party that is responsible for the document content. The codification scheme used shall be : A01 = EIC coding scheme.
Size	The maximum length of a sender's identification is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	Both the identification and the coding scheme are mandatory.
Dependence requirements	None.

198 4.4.6 SENDER_MARKETPARTICIPANT.MARKETROLE.TYPE

ACTION	DESCRIPTION
Definition of element	The identification of the role played by a market player. --- The MarketParticipant issuing the document --- The role associated with a MarketParticipant.
Description	The sender role, which identifies the role of the sender within the document. ***Permitted codes are:*** A39 = Data Provider A35 = MOL Responsible A04 = System Operator or TSO A32 = Market Information Aggregator
Size	The maximum length of a sender role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

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4.4.7 RECEIVER_MARKETPARTICIPANT.MRID

ACTION	DESCRIPTION
Definition of element	The identification of a party in the energy market. --- The MarketParticipant receiving the document.
Description	The receiver of the document is identified by a unique coded identification. The codification scheme used shall be: A01 = EIC coding scheme
Size	The maximum length of a receiver's identification is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	Both the identification and the coding scheme are mandatory.
Dependence requirements	None.

200

4.4.8 RECEIVER_MARKETPARTICIPANT.MARKETROLE.TYPE

ACTION	DESCRIPTION
Definition of element	The identification of the role played by a market player. --- The MarketParticipant receiving the document. --- The role associated with a MarketParticipant.
Description	The receiver role, which identifies the role of the receiver within the document. ***Permitted codes are:*** A39 = Data Provider A32 = Market Information Aggregator A04 = System Operator or TSO A35 = Mol Responsible A33 = Information Receiver
Size	The maximum length of a receiver role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

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201 4.4.9 CREATEDDATETIME

ACTION	DESCRIPTION
Definition of element	The date and time of the creation of the document.
Description	The date and time that the document was prepared for transmission by the application of the sender.
Size	The date and time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Applicability	This information is mandatory.
Dependence requirements	None.

202 4.4.10 DOCSTATUS

ACTION	DESCRIPTION
Definition of element	Identification of the condition or position of the document with regard to its standing.
Description	This information is only provided to indicate the status of the document transmitted. ***Permitted codes are:*** A01 = Intermediate; a status to be used if the information in the document is preliminary. This assumes that a revised document will be provided. A02 = Final; a status to be used if the information provided in the document is considered definitive. This does not prevent corrections being made to the content if necessary.
Size	The maximum length of a doc status is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	See section 4.3.3 for use.

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203 4.4.11 CONTROLAREA_DOMAIN.MRID

ACTION	DESCRIPTION
Definition of element	The unique identification of the domain. --- The identification of the control area of the issuer.
Description	The identification of the control area associated with the information provided. The codification scheme used shall be: A01 = EIC coding scheme.
Size	The maximum length of the area code is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This information is not used in the case of cross border balancing information exchanges.

204 4.4.12PERIOD.TIMEINTERVAL

ACTION	DESCRIPTION
Definition of element	The start and end date and time for a given interval. --- The beginning and ending date and time of the period that the transmission network document is covering
Description	This information provides the start and end date and time of the period the balancing market document is covering.
Size	Both the start and the end date and time must be expressed in UTC as YYYY-MM-DDTHH:MMZ
Applicability	This information is mandatory.
Dependence requirements	None.

205 4.5 RULES GOVERNING THE TIME SERIES CLASS

206 A time series shall exist to describe the specific information associated with the information
207 being sent (balancing reserves, imbalance, financial report or cross border balancing).

208 In the case of cross border balancing the values are provided on a per border basis.

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209 4.5.1 MRID

ACTION	DESCRIPTION
Definition of element	A unique identification of the time series.
Description	A unique identification within the document assigned by the sender. This must be unique for the whole document and guarantee the non-duplication of all the attributes of the time series class.
Size	The maximum size of a time series identification is 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

210 4.5.2 BUSINESSTYPE

ACTION	DESCRIPTION
Definition of element	The identification of the nature of the time series.
Description	The nature of the time series for which the product is handled. ***Permitted codes are:*** A95 = frequency containment reserve A96 = Automatic frequency restoration reserve A97 = Manual frequency restoration reserve A98 = replacement reserve A19 = Balance energy deviation. A06 = External trade without explicit capacity A99 = financial information
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

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211 4.5.3 ACQUIRING_DOMAIN.MRID

ACTION	DESCRIPTION
Definition of element	The unique identification of the domain. --- The identification of the acquiring area.
Description	The identification of the domain in which acquired reserves would eventually be used. The codification scheme used shall be: A01 = EIC coding scheme.
Size	The maximum length of the domain code is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	The acquiring domain is only provided in the case of cross border balancing information exchanges.

212 4.5.4 CONNECTING_DOMAIN.MRID

ACTION	DESCRIPTION
Definition of element	The unique identification of the domain. --- The identification of the connecting area
Description	The identification of the domain where the reserve is coming from. The codification scheme used shall be: A01 = EIC coding scheme.
Size	The maximum length of the domain code is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	The connecting domain is only provided in the case of cross border capacity information exchanges.

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213 ### 4.5.5 TYPE_MARKETAGREEMENT.TYPE

ACTION	DESCRIPTION
Definition of element	The specification of the kind of the contract, e.g. long term, daily contract. --- The identification of the procurement time unit.
Description	The identification of the type of procurement time period for which reserves are contracted. ***Permitted codes are:*** A01 = Daily. A02 = Weekly A03 = Monthly A04 = Yearly A13 = Hourly A06 = Long term contract
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This information is provided in accordance with the dependency table.

214 ### 4.5.6 MKTPSRTYPE PSRTYPE

ACTION	DESCRIPTION
Definition of element	The coded type of a power system resource. --- The identification of the source type of the reserve.
Description	This represents the coded identification of the type of resource being used to provide the reserves. In general only the aggregated types of generation or load are expected. A03 = Resource object A04 = Generation A05= Load Refer to the ENTSO-E codelist for the list of valid codes.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This information is provided in accordance with the dependency table.

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215 4.5.7 FLOWDIRECTION.DIRECTION

ACTION	DESCRIPTION
Definition of element	The coded identification of the direction of energy flow. --- The flow direction associated with a TimeSeries
Description	This identifies the direction of the intended flow of the reserve for the acquiring domain. ***Permitted codes are:*** A01 = Up. A02 = Down. A03 = Up and down (i.e. symmetric).
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This information is provided in accordance with the dependency table.

216 4.5.8 CURRENCY_UNIT.NAME

ACTION	DESCRIPTION
Definition of element	The identification of the formal code for a currency (ISO 4217). --- The currency associated with a TimeSeries.
Description	The currency used for the monetary amount expressed within the document. **Refer to ENTSO-E Code list document for valid codes.**
Size	The maximum length of this information is 3 alphanumeric characters respecting the standard ISO 4217.
Applicability	This information is dependent
Dependence requirements	This information is provided in accordance with the dependency table.

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217 4.5.9 QUANTITY_MEASURE_UNIT.NAME

ACTION	DESCRIPTION
Definition of element	Identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure associated with the quantities in a TimeSeries.
Description	The unit of measurement used for the quantities expressed within the time series. **Permitted code is:** MAW = Megawatts MWH = Megawatt hours
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This information is only provided in the case where quantity information is provided (see dependency table).

218 4.5.10 PRICE_MEASURE_UNIT.NAME

ACTION	DESCRIPTION
Definition of element	Identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure associated with the prices in a TimeSeries.
Description	The unit of measurement used for the prices expressed within the time series. **Permitted code is:** MAW = Megawatts MWH = Megawatt hours
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	This information is only provided in the case where price information is provided (see dependency table).

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219 4.5.11 CURVETYPE

ACTION	DESCRIPTION
Definition of element	The identification of the coded representation of the type of curve being described.
Description	This represents the coded identification of the curve that is described in the Period and Interval class. ***Permitted codes are:*** A01 = Sequential fixed block A03 = Variable sized blocks
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This is only used whenever a series period class is provided.

220 4.5.12 CANCELLEDTS

ACTION	DESCRIPTION
Definition of element	An indicator stating that the TimeSeries, identified by the mRID, is cancelled as well as all the values sent in a previous version of the TimeSeries in a previous document.
Description	The indication that the data for the time series has been withdrawn. This differentiates between a time series with no values and one with values that have to be revoked. The code for the indicator is as follows: A01 =Yes – the time series data has been withdrawn
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	If the data for a time series has been cancelled this attribute shall be specified.

221 4.6 RULES GOVERNING THE SERIES_PERIOD CLASS

222 The series period class provides the balancing time unit information in respect to the
223 balancing reserve capacity.

224 There may be more than one series period class for a time series. The overall time interval
225 covered by the period shall be within the complete time Interval of the series period.

226 The number of periods within a time series as characterized by the resolution must
227 completely cover the period's time interval.

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228 4.6.1 TIMEINTERVAL

ACTION	DESCRIPTION
Definition of element	The start and end time of the period.
Description	This information provides the start and end date and time of the period being reported.
Size	Both the start and the end date and time must be expressed in UTC as YYYY-MM-DDTHH:MMZ
Applicability	This information is mandatory.
Dependence requirements	None.

229 4.6.2 RESOLUTION

ACTION	DESCRIPTION
Definition of element	The definition of the number of units of time that compose an individual step within a period.
Description	This information defines the resolution of a single period.
Size	The Resolution is expressed in compliance with ISO 8601 and shall be equal to: • P1Y if the resolution is yearly • P1M if the resolution is monthly • P7D if the resolution is weekly • P1D if the resolution is daily • PT60M if the resolution is hourly • PT30M if the resolution is half hourly • PT15M if the resolution is quarter hourly
Applicability	This information is mandatory.
Dependence requirements	None.

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4.7 RULES GOVERNING THE POINT CLASS

The Point class contains the relative position within a time interval period with the quantity and eventual prices associated with that position.

No quantity in activated balancing price document.

Marginal or average for calculation of procurement price is considered as master data.

The position must respect the rules provided for position generation as defined in [6] ("*The introduction of different time series possibilities (CurveType) within ENTSO-E electronic documents*").

Any leading zeros in a position shall be suppressed.

Negative values are not allowed in time series quantities except for Article 17(h).

Leading zeros in a quantity shall be suppressed before transmission.

4.7.1 POSITION

ACTION	DESCRIPTION
Definition of element	A sequential value representing the relative position within a given time interval.
Description	This information provides the relative position of a period within an interval.
Size	The relative position must be expressed as a numeric integer value beginning with 1. All leading zeros must be suppressed. The maximum number of characters is 6.
Applicability	This information is mandatory.
Dependence requirements	None.

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242 4.7.2 QUANTITY

ACTION	DESCRIPTION
Definition of element	Principal quantity or the accepted offer quantity identified for a point.
Description	This information defines the principal quantity or the accepted offer quantity. A decimal point value may be used to express values that are inferior to the defined unit of measurement. The decimal mark that separates the digits forming the integral part of a number from those forming the fractional part. (ISO 6093) shall always be a period (“.”). All quantities are non-signed values except for Article 17(h) where negative values are accepted.
Size	The maximum length of this information is 17 numeric characters (decimal mark included). The number of decimal places identifying the fractional part of the quantity depends on local market rules.
Applicability	This information is dependent.
Dependence requirements	This information is provided in accordance with the dependency table.

243 4.7.3 SECONDARYQUANTITY

ACTION	DESCRIPTION
Definition of element	Activated quantity or the offered volume identified for a point..
Description	This information defines the activated quantity or the offered volume. A decimal point value may be used to express values that are inferior to the defined unit of measurement. The decimal mark that separates the digits forming the integral part of a number from those forming the fractional part. (ISO 6093) shall always be a period (“.”). All quantities are non-signed values.
Size	The maximum length of this information is 17 numeric characters (decimal mark included). The number of decimal places identifying the fractional part of the quantity depends on local market rules.
Applicability	This information is dependent.
Dependence requirements	This information is provided in accordance with the dependency table.

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244 4.7.4 ACTIVATION_PRICE.AMOUNT

ACTION	DESCRIPTION
Definition of element	A number of monetary units specified in a unit of currency. --- The activation pricing information per quantity and interval.
Description	This identifies the activation price for the quantity of reserve identified in the point class.
Size	The maximum length of this information is 17 numeric characters (decimal mark included). The number of decimal places identifying the fractional part of the amount depends on local market rules.
Applicability	This information is dependent.
Dependence requirements	This information is provided in accordance with the dependency table.

245 4.7.5 PROCUREMENT_PRICE.AMOUNT

ACTION	DESCRIPTION
Definition of element	A number of monetary units specified in a unit of currency. --- The procurement pricing information per quantity and interval.
Description	This identifies the procurement price for the quantity of reserve identified in the point class.
Size	The maximum length of this information is 17 numeric characters (decimal mark included). The number of decimal places identifying the fractional part of the amount depends on local market rules.
Applicability	This information is dependent.
Dependence requirements	This information is provided in accordance with the dependency table.

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4.7.6 MIN_PRICE.AMOUNT

ACTION	DESCRIPTION
Definition of element	A number of monetary units specified in a unit of currency. --- The minimum pricing information per quantity and interval.
Description	This identifies the minimum price for the reserve identified in the time series.
Size	The maximum length of this information is 17 numeric characters (decimal mark included). The number of decimal places identifying the fractional part of the amount depends on local market rules.
Applicability	This information is dependent.
Dependence requirements	This information is provided in accordance with the dependency table.

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4.7.7 MAX_PRICE.AMOUNT

ACTION	DESCRIPTION
Definition of element	A number of monetary units specified in a unit of currency. --- The maximum pricing information per quantity and interval.
Description	This identifies the maximum price for the reserve identified in the time series.
Size	The maximum length of this information is 17 numeric characters (decimal mark included). The number of decimal places identifying the fractional part of the amount depends on local market rules.
Applicability	This information is dependent.
Dependence requirements	This information is provided in accordance with the dependency table.

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248 4.7.8 IMBALANCE_PRICE.AMOUNT

ACTION	DESCRIPTION
Definition of element	A number of monetary units specified in a unit of currency. --- The imbalance pricing information per quantity and interval.
Description	This identifies the imbalance price for the quantity of reserve identified in the point class.
Size	The maximum length of this information is 17 numeric characters (decimal mark included). The number of decimal places identifying the fractional part of the amount depends on local market rules.
Applicability	This information is dependent.
Dependence requirements	This information is provided in accordance with the dependency table.

249 4.7.9 IMBALANCE_PRICE.CATEGORY

ACTION	DESCRIPTION
Definition of element	The category of a price to be used in a price calculation. --- The imbalance pricing information per quantity and interval.
Description	This identifies whether the imbalance price is in excess or insufficient balance. Note: the price category is mutually agreed between system operators. The permitted codes are: A04 = Excess balance A05 = insufficient balance A06 = Average bid price A07= Single marginal bid price.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This information is provided in accordance with the dependency table.

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250 ## 4.8 RULES GOVERNING THE FINANCIAL_PRICE CLASS

251 The cost corresponding to a specific entity expressed in a currency.

252 ### 4.8.1 AMOUNT

ACTION	DESCRIPTION
Definition of element	A number of monetary units specified in a unit of currency.
Description	This identifies the financial amount in relation to a specific direction associated with a Transmission System Operator for procuring, activating and settling balancing information
Size	The maximum length of this information is 17 numeric characters (decimal mark included). The number of decimal places identifying the fractional part of the amount depends on local market rules.
Applicability	This information is mandatory.
Dependence requirements	None.

253 ### 4.8.2 DIRECTION

ACTION	DESCRIPTION
Definition of element	The direction of a price payment (i.e. an impacted area system operator pays to internal market parties or inverse)..
Description	This identifies whether the amount is an expenditure or income in respect to the system operator. The permitted codes are: A01 = Expenditure A02 = Income
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

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