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European Network of
Transmission System Operators
for Electricity

ENTSO-E
OUTAGE TRANSPARENCY PROCESS
IMPLEMENTATION GUIDE

2015-01-08

VERSION 4 RELEASE 0

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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 errors. Alignment of the models and attribute names with the CIM model following integrity check. Align Dependency table Approved by Market Committee on 2014-02-04.
4	0	2015-01-08	This version takes into account the EMFIP corrigendum version 5. The following changes have been made: • Cardinality of association between Asset_RegisteredResource and Asset_MktPSRType has its multiplicity changed from “1..1” to “0..1 • Outage document: provide clarifications in section 4.9 about the use of reason codes.

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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 ENTSO-E Harmonised Role Model.
4. A Common Identification System for the Energy Industry, The Energy Identification Coding Scheme – EIC.
5. The ENTSO-E Code List.
6. IEC 62325-301, Framework for energy market communications Common information model (CIM) Extensions for markets.
7. IEC 62325-351, Framework for energy market communications CIM European market model exchange profile
8. IEC 62325-450, Profile and context modeling rules.
9. IEC 62325-451-1, Framework for energy market communications The acknowledgement document.
10. IEC 62361 part 100, Naming and design rules for CIM profiles to XML schema mapping.
11. The introduction of different time series possibilities (CurveType) within ENTSO-E electronic documents.
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 unavailability data as defined in the regulation, the EMFIP detailed description and the EMFIP Business Requirements Specification.

Its purpose is to facilitate the provision of unavailability 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 unavailability data between the European electricity market participants and the Transparency platform via the Data 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 UNAVAILABILITY PROCESS OVERVIEW

2.1 BREAKDOWN OF THE UNAVAILABILITY PROCESS

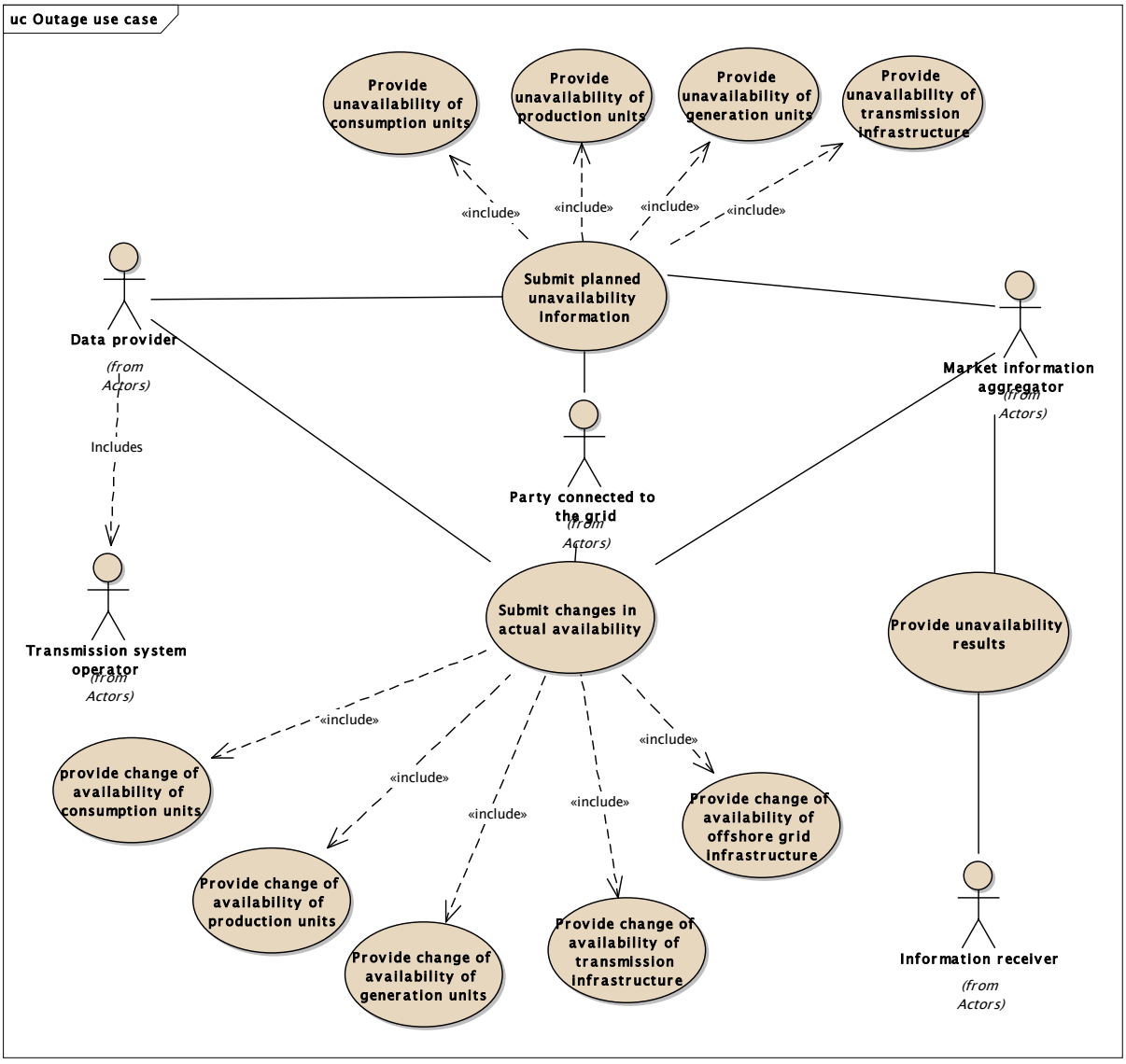

FIGURE 1: INFORMATION EXCHANGE FOR THE PROVISION OF UNAVAILABILITY INFORMATION

The provision of unavailability information is relatively straightforward and is basically broken down into two use cases; the provision of planned unavailability information and the provision of changes in actual availability. The platform makes the information provided in the two initial use cases available to the public as soon as any information is received.

The provision of unavailability information can be broken down into three categories:

1. The provision of planned or changes in actual consumption unavailability that mainly concern the unavailability of large consumption units.

2. The provision of planned or changes in actual transmission unavailability that mainly concern the unavailability of parts of the transmission infrastructure.

3. The provision of planned or changes in actual generation unavailability that mainly concern the unavailability of generation and production units.

3 THE UNAVAILABILITY PROCESSING SEQUENCE

3.1 GENERIC PROCESSING SEQUENCE

The unavailability process basically follows two different periodicities; a regular periodicity for the provision of the planned unavailability and an event based periodicity for the provision of changes in actual availability.

The periodicities basically follow the same information sequence.

Following the reception of an unavailability 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.

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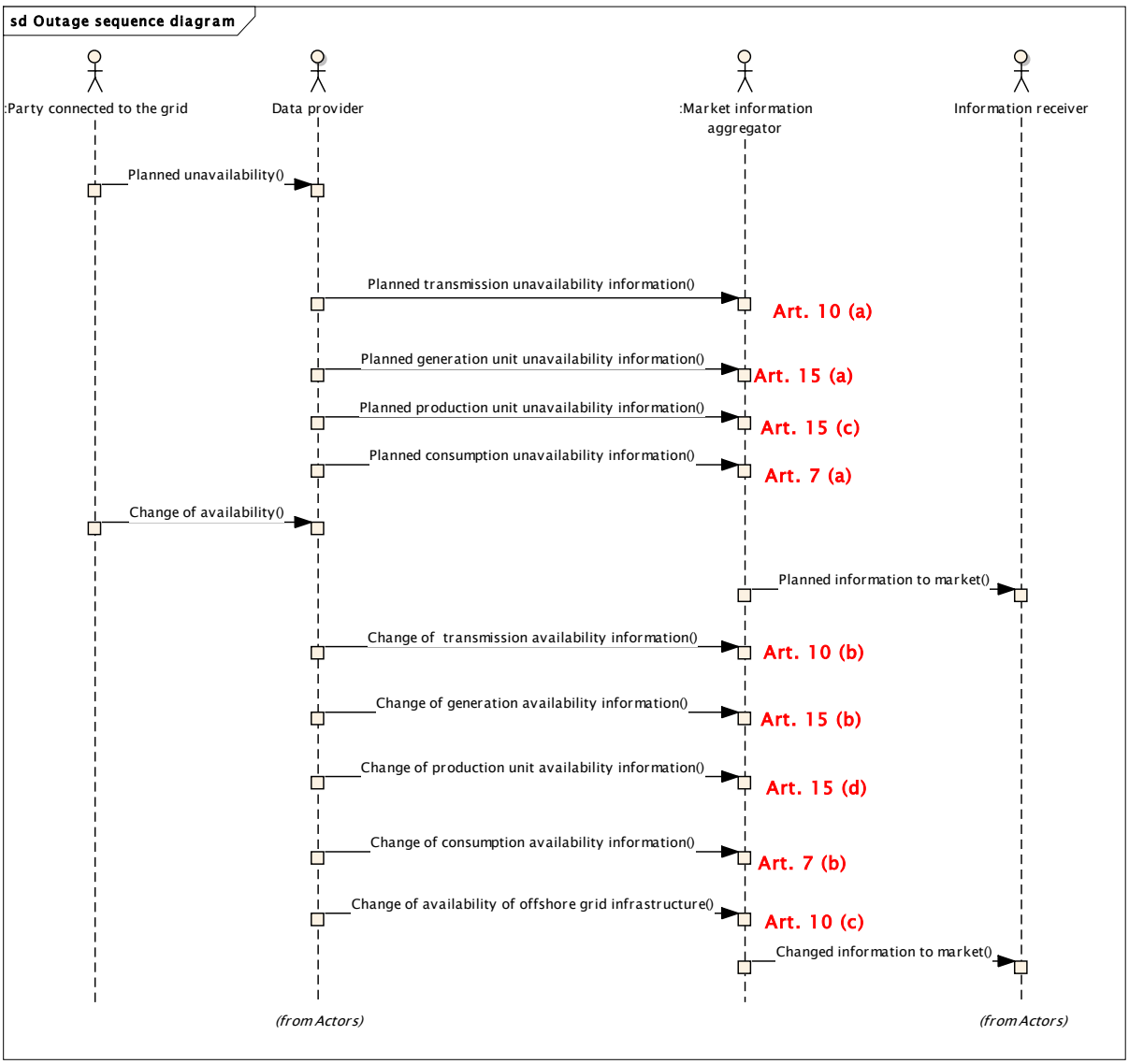


FIGURE 2: GENERIC UNAVAILABILITY PROCESS SEQUENCE

4 UNAVAILABILITY MARKET DOCUMENT IMPLEMENTATION

4.1 CONTEXTUAL MODEL

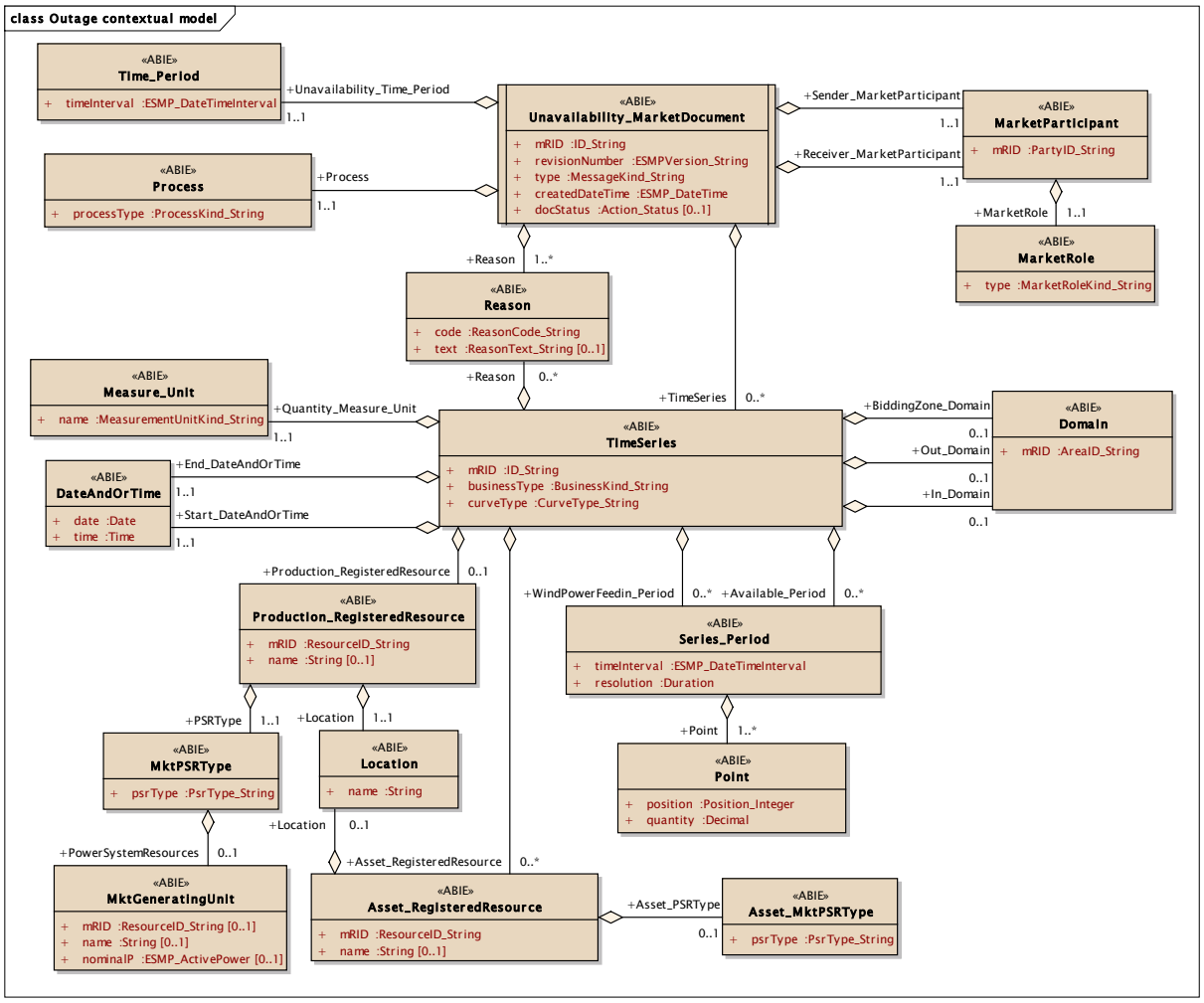
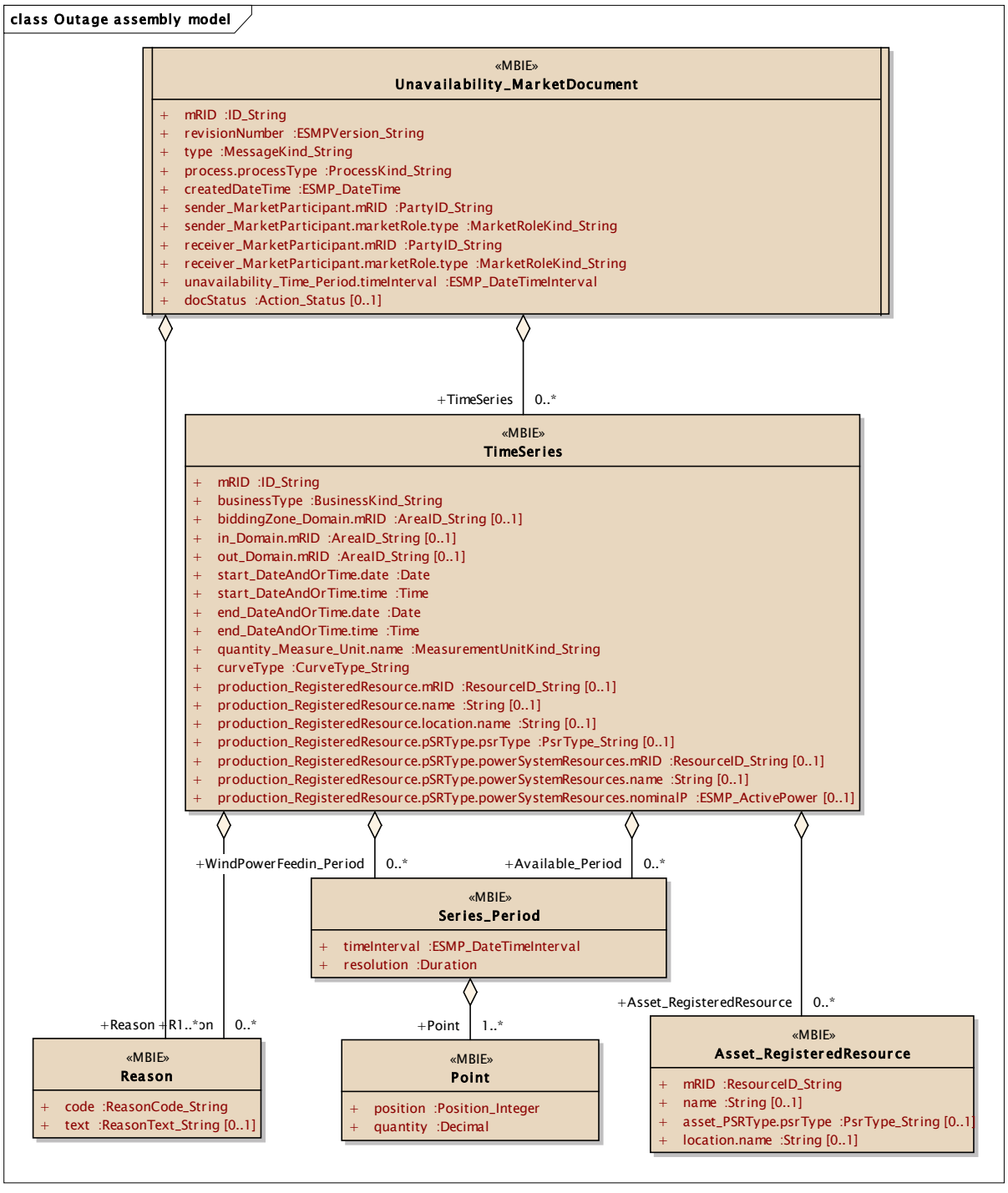


FIGURE 3: UNAVAILABILITY MARKET DOCUMENT CONTEXTUAL MODEL

166 ## 4.2 INFORMATION MODEL



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168 **FIGURE 4: UNAVAILABILITY MARKET DOCUMENT INFORMATION MODEL**

4.3 RULES GOVERNING THE UNAVAILABILITY MARKET DOCUMENT

4.3.1 THE TRANSMISSION OF UNAVAILABILITY INFORMATION

Each unavailability (planned maintenance or forced unavailability) should be transmitted in a single document with the identification of the document being used as the identification of the unavailability in question.

An Unavailability Market Document may be revised through the use of the revision number. The latest revision of the document provides the current state of the unavailability.

4.3.2 STATUS INFORMATION

An unavailability document when transmitted may have two states, it is by default always active or it has the status of cancelled or withdrawn.

A cancellation are foreseen where a planned unavailability will not take place,

A withdrawal is foreseen where there has been an error in the transmission of the information (in this case, a reason should be given).

Note that an unavailability is deemed terminated when its end date is past. If the end date approaches and the unavailability is always in vigor the data provider must provide an update to the unavailability with a new end date.

4.3.3 DOCUMENT INSTANCE IMPLEMENTATION

The XML documents described in this implementation guide are to be used for the upload of information to the EMFIP platform; they may also be used for the download of information to market participants in order to enable automatic processing of the information within their systems.

Consequently attributes that describe basic configuration information (such as name, voltage level, etc.) have been included in the XML documents as optional attributes that may be used only in the case where information is downloaded from the platform. This information shall not be used in the case where information is uploaded to the platform.

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4.3.4 DOCUMENT ATTRIBUTE DEPENDENCIES

Article involved Attribute		Art. 7(a) and 7(b) Unavailability of consumption units	Art. 15(a) and 15(b) Unavailability of generation units	Art. 15(c) and 15(d) Unavailability of production units
	type	A76: load unavailability	A80: generation unavailability	A77: production unavailability
TimeSeries	businessType	A53: planned maintenance A54: forced unavailability	A53: planned maintenance A54: forced unavailability	A53: planned maintenance A54: forced unavailability
	biddingZone_Domain.mRID	Used	Used	Used
	in_Domain.mRID	Not used	Not used	Not used
	out_Domain.mRID	Not used	Not used	Not used
	production_RegisteredResource.mRID	Not used	Used	Used
	production_RegisteredResource.name	Not used	Used only for download transmissions Not used for upload transmission	Used only for download transmissions Not used for upload transmission
	production_RegisteredResource.location.name	Not used	Used only for download transmissions. Not used for upload transmissions	Used only for download transmissions. Not used for upload transmissions
	production_RegisteredResource.psrType.psrType	Not used	Used only for download transmissions. Not used for upload transmissions	Used only for download transmissions. Not used for upload transmissions
	production_RegisteredResource.psrType.powerSystemResources.mRID	Not used	Used	Not used
	production_RegisteredResource.psrType.powerSystemResources.name	Not used	Used only for download transmissions. Not used for upload transmissions	Not used
	production_RegisteredResource.psrType.powerSystemResources.nominalP	Not used	Used only for download transmissions. Not used for upload transmissions	Used only for download transmissions. Not used for upload transmissions
Asset_RegisteredResource	mRID	Used only for upload transmissions	Not used	Not used
	name	Not used	Not used	Not used
	asset_PSRType.psrType	Not used	Not used	Not used
	location.name	Not used	Not used	Not used
	Available_Period	Used	Used	Used
	WindPowerFeedin_Period	Not used	Not used	Not used
	Reason	Used	Used	Used

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Article involved Attribute		Art. 10(a) and 10(b) Unavailability of transmission infrastructure	Art. 10(c) Unavailability of offshore grid infrastructure
	type	A78: transmission unavailability	A79: offshore grid infrastructure unavailability
TimeSeries	businessType	A53: planned maintenance A54: forced unavailability	A54: forced unavailability
	biddingZone_Domain.mRID	Not used	Used
	in_Domain.mRID	Used	Not used
	out_Domain.mRID	Used	Not used
	production_RegisteredResource.mRID	Not used	Not used
	production_RegisteredResource.name	Not used	Not used
	production_RegisteredResource.location.name	Not used	Not used
	production_RegisteredResource.psrType.psrType	Not used	Not used
	production_RegisteredResource.psrType.powerSystemResources.mRID	Not used	Not used
	production_RegisteredResource.psrType.powerSystemResources.name	Not used	Not used
	production_RegisteredResource.psrType.powerSystemResources.nominalP	Not used	Used
Asset_RegisteredResource	mRID	Used if no security restrictions	Used
	name	Used only for download transmissions if no security restrictions Not used for upload transmissions	Used only for download transmissions Not used for upload transmissions
	asset_PSRType.psrType	Used only for download transmissions Not used for upload transmissions	Used only for download transmissions Not used for upload transmissions
	location.name	Used only for download transmissions Not used for upload transmissions	Used only for download transmissions Not used for upload transmissions
	Available_Period	Used	Not used
	WindPowerFeedin_Period	Not used	Used
	Reason	Used	Used

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197 **FIGURE 5: UNAVAILABILITY DEPENDENCY TABLE**

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198 ## 4.4 UNAVAILABILITY MARKET DOCUMENT CLASS SPECIFICATION

199 An electronic document containing the information necessary to satisfy the business process
200 concerning the provisional planned unavailability of assets and production and consumption
201 resource objects as well as the punctual change of availability of the same equipment.

202 ### 4.4.1 MRID

ACTION	DESCRIPTION
Definition of element	Unique identification of the document being exchanged within a business process flow. This identifies a given unavailability document.
Description	An Unavailability Market Document describes a specific unavailability and must have a unique identification assigned by the sender of the document for all transmissions to the receiver. All additions, modifications, or suppressions concerning the unavailability 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

203 ### 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 an unavailability. 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. Every document version has a creation date and time that could be effectively used as the document timestamp since a new document version cancels and replaces the previous document version.
Size	A version number may not exceed 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

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204 ### 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:*** A76 = Load unavailability A77 = Production unavailability A78 = Transmission unavailability A79 Offshore grid infrastructure unavailability A80 = Generation unavailability.
Size	The document type value may not exceed 3 alphanumeric characters (no blanks).
Applicability	This information is mandatory.
Dependence requirements	None.

205 ### 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:*** A26 = Unavailability information
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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206 ### 4.4.5 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.

207 ### 4.4.6 SENDER_MARKETPARTICIPANT MRID

ACTION	DESCRIPTION
Definition of element	The identification of a party in the energy market. --- The document owner.
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.

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208 4.4.7 SENDER_MARKETPARTICIPANT.MARKETROLE.TYPE

ACTION	DESCRIPTION
Definition of element	Identification of the role played by a market player. --- The document owner. --- The role associated with a MarketParticipant.
Description	The sender role, which identifies the role of the sender within the document. ***Permitted codes are:*** A20 = Party Connected to the Grid A39 = Data Provider 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.

209 4.4.8 RECEIVER_MARKETPARTICIPANT.MRID

ACTION	DESCRIPTION
Definition of element	The identification of a party in the energy market. --- The document recipient
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.

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210 4.4.9 RECEIVER_MARKETPARTICIPANT.MARKETROLE.TYPE

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

211 4.4.10 UNAVAILABILITY_TIME_PERIOD.TIMEINTERVAL

ACTION	DESCRIPTION
Definition of element	The start and end date and time for a given interval. --- The time interval that is associated with an electronic document and which is valid for the whole document.
Description	This information provides the start and end date and time of the time interval covering the whole unavailability document.
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.

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212 ### 4.4.11 DOCSTATUS

ACTION	DESCRIPTION
Definition of element	Identification of the condition or position of the document with regard to its standing. It is used to identify an unavailability document that has been withdrawn or cancelled.
Description	This information is only provided to indicate a cancellation of an unavailability situation. The cancelled status only applies to planned outages. The withdrawn status is only used to indicate that the outage should be removed. The permitted code of this information is: A09 = Cancelled A13 = Withdrawn. Note 1: in the case of this document the term “cancelled” refers to the cancellation of a planned unavailability. The term “withdrawn” refers to an unavailability that is erroneous and has to be removed from the transparency platform. Note 2: the Doc status shall only be provided in the case of the withdrawal or cancellation of an unavailability document.
Size	The maximum length of a doc status is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This information is only provided if an unavailability has been withdrawn or cancelled.

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4.5 RULES GOVERNING THE TIME SERIES CLASS

A set of time-ordered quantities being exchanged in relation to a product.

A time series shall exist to describe a specific piece of an unavailability situation. It conveys the data related to the unavailability. For consumption or generation unit unavailability it identifies the available capacity during the event. For transmission asset unavailability it identifies the impact on cross zonal capacity per direction.

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.

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:*** A53 = Planned maintenance A54 = Forced unavailability In a given outage the business type shall be the same.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

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221 4.5.3 BIDDINGZONE_DOMAIN.MRID

ACTION	DESCRIPTION
Definition of element	Unique identification of the domain. --- The bidding domain associated with a TimeSeries
Description	The identification of the bidding zone for which the unavailability information is being provided. A bidding zone cannot vary within an Outage Document. 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	The bidding zone is provided as in accordance with the dependency table..

222 4.5.4 IN_DOMAIN.MRID

ACTION	DESCRIPTION
Definition of element	Unique identification of the domain. --- The domain where energy is going associated with a TimeSeries
Description	The identification of the domain where the energy is going for which the unavailability information is being provided. 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 in domain is only provided in the case of a transmission unavailability that influences cross border capacity.

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223 4.5.5 OUT_DOMAIN.MRID

ACTION	DESCRIPTION
Definition of element	Unique identification of the domain. --- The domain where energy is coming from associated with a TimeSeries.
Description	The identification of the domain where the energy is coming from for which the unavailability information is being provided. 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 out domain is only provided in the case of a transmission unavailability that influences cross border capacity.

224 4.5.6 START_DATEANDORTIME.DATE

ACTION	DESCRIPTION
Definition of element	Date as "yyyy-mm-dd", which conforms with ISO 8601. --- A start date and/or time associated with a TimeSeries.
Description	This identifies the date of the start of the unavailability being described in the time series.
Size	The date must be expressed as YYYY-MM-DD.
Applicability	This information is mandatory.
Dependence requirements	None.

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225 ### 4.5.7 START_DATEANDORTIME.TIME

ACTION	DESCRIPTION
Definition of element	Time as "hh:mm:ssZ", which conforms with ISO 8601. --- A start date and/or time associated with a TimeSeries.
Description	This identifies the time of the start of the unavailability being described in the time series.
Size	The time must be expressed as HH:MM:SSZ.
Applicability	This information is mandatory.
Dependence requirements	None

226 ### 4.5.8 END_DATEANDORTIME.DATE

ACTION	DESCRIPTION
Definition of element	Date as "yyyy-mm-dd", which conforms with ISO 8601. --- An end date and/or time associated with a TimeSeries.
Description	This identifies the date of the end of the unavailability being described in the time series.
Size	The date must be expressed as YYYY-MM-DD.
Applicability	This information is mandatory.
Dependence requirements	None.

227 ### 4.5.9 END_DATEANDORTIME.TIME

ACTION	DESCRIPTION
Definition of element	Time as "hh:mm:ssZ", which conforms with ISO 8601. --- An end date and/or time associated with a TimeSeries.
Description	This identifies the time of the end of the unavailability being described in the time series. If the time is not known an approximate time should be given. This may updated when more precise information becomes available.
Size	The time must be expressed as HH:MM:SSZ.
Applicability	This information is mandatory.
Dependence requirements	None.

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228 ### 4.5.10 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. Possible units of measure codes are: MAW = Megawatts
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

229 ### 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. Possible CurveType codes are: A01 = Sequential fixed size block A02 = Point A03 = Variable sized blocks
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

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230 4.5.12 PRODUCTION_REGISTEREDRESOURCE.MRID

ACTION	DESCRIPTION
Definition of element	The unique identification of a production unit resource. --- Characteristics of a production unit affected by the unavailability.
Description	The identification of a production unit that is affected by the unavailability. The codification scheme used shall be: A01 = EIC coding scheme.
Size	The maximum length of the registered resource 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 identification is provided in accordance with the dependency table.

231 4.5.13 PRODUCTION_REGISTEREDRESOURCE.NAME

ACTION	DESCRIPTION
Definition of element	The name is any free human readable and possibly non unique text naming the production unit. --- Characteristics of a production unit affected by the unavailability.
Description	The name of a production unit for which the information is being provided.
Size	The maximum length of the name is 35 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	The name is provided in accordance with the dependency table.

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232 4.5.14 PRODUCTION_REGISTEREDRESOURCE.PSRTYPE.PSRTYPE

ACTION	DESCRIPTION
Definition of element	The coded type of a power system resource. --- Characteristics of a production unit affected by the unavailability. --- The classification for this production unit.
Description	This represents the coded type of production unit resource being described. This qualifies the underlying generating unit If provided. 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	The Resource Type is provided in accordance with the dependency table.

233 4.5.15 PRODUCTION_REGISTEREDRESOURCE.PSRTYPE.
234 POWERSYSTEMRECOURCES.MRID

ACTION	DESCRIPTION
Definition of element	The unique identification of a generation unit. --- Characteristics of a production unit affected by the unavailability. --- The classification for this production unit. --- The generation unit dependent on a given type.
Description	The identification of a generation unit that is affected by the unavailability. The codification scheme used shall be: A01 = EIC coding scheme.
Size	The maximum length of the registered resource 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 identification is provided in accordance with the dependency table.

4.5.16 PRODUCTION_REGISTEREDRESOURCE. PSRTYPE. POWERSYSTEMRECOURCES.NAME

ACTION	DESCRIPTION
Definition of element	The name of the generation unit. --- Characteristics of a production unit affected by the unavailability. --- The classification for this production unit. --- The generation unit dependent on a given type.
Description	The name of a generation unit for which the information is being provided.
Size	The maximum length of the name is 35 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	The name is provided in accordance with the dependency table.

4.5.17 PRODUCTION_REGISTEREDRESOURCE.PSRTYPE. POWERSYSTEMRESOURCES.NOMINALP

ACTION	DESCRIPTION
Definition of element	The nominal power of the object in question. --- Characteristics of a production unit affected by the unavailability. --- The classification for this production unit. --- The generation unit dependent on a given type
Description	This represents the nominal power of the generation unit.
Size	The nominalIP is expressed in MAW. 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	The nominal power is provided in accordance with the dependency table.

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239 ## 4.6 RULES GOVERNING THE ASSET_REGISTEREDRESOURCE CLASS

240 An asset that is registered through the market participant registration system.

241 An asset registered resource class shall exist where transmission assets need to be
242 identified.

243 ### 4.6.1 MRID

ACTION	DESCRIPTION
Definition of element	The unique identification of an asset.
Description	The identification of a transmission infrastructure asset is being provided. The codification scheme used shall be: A01 = EIC coding scheme.
Size	The maximum length of the asset registered resource 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 identification is provided in accordance with the dependency table.

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244 4.6.2 NAME

ACTION	DESCRIPTION
Definition of element	The name of an asset.
Description	The name of the transmission infrastructure asset for which the information is being provided.
Size	The maximum length of the name is 35 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	The name is provided in accordance with the dependency table.

245 4.6.3 ASSET_PSRTYPE.PSRTYPE

ACTION	DESCRIPTION
Definition of element	The coded type of an asset. --- The classification for the asset.
Description	This represents the coded identification of the type of asset being described. 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	The Resource Type is provided in accordance with the dependency table.

246 4.6.4 LOCATION.NAME

ACTION	DESCRIPTION
Definition of element	The name is any free human readable and possibly non unique text naming the object. --- The name of the location of the asset.
Description	The name of the location of the asset for which the unavailability information is being provided.
Size	The maximum length of the name is 35 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	The location name is provided in accordance with the dependency table.

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4.7 RULES GOVERNING THE SERIES_PERIOD CLASS

The identification of the period of time corresponding to a given time interval and resolution.

The series period class provides the market time unit information for:

- Available capacity in the Available_Period class, the available consumption capacity, generation capacity or production unit capacity, or the impact on cross border capacity.
- or wind power feeding capacity in the WindPowerFeeding_Period class, the off shore wind power feed in capacity to the transmission infrastructure.

for a given unavailability.

At least one series period class shall exist.

There may be several series period classes for a time series per object type (installed, unavailable or wind power feedin). The overall time interval covered by the period shall be within the complete Time Interval of the series period.

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

4.7.1 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.

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4.7.2 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: • PT60M if the resolution is hourly • PT30M if the resolution is half hourly • PT15M if the resolution is quarter hourly • PT1M if the resolution is for a minute.
Applicability	This information is mandatory.
Dependence requirements	None.

4.8 RULES GOVERNING THE POINT CLASS

The identification of the values being addressed within a specific interval of time

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

The position must respect the rules for position generation as defined in [11] ("*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

Leading zeros in a quantity shall be suppressed before transmission.

4.8.1 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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275 4.8.2 QUANTITY

ACTION	DESCRIPTION
Definition of element	Principal quantity identified for a point..
Description	This information defines the available, installed, wind power feed in or specific point quantities of an unavailability that is taken from or put into the area for the position within the interval period. 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 mandatory.
Dependence requirements	None.

276 4.9 RULES GOVERNING THE REASON CLASS

277 The motivation of an act.

278 The Reason Class provides the reasons for the unavailability of the unavailability being
279 described. It is used at the header level to identify the reasons for the unavailability.

280 It may also be provided at the detailed level if specific information is provided for each time
281 series. This normally uses exclusively the code A95, complementary information.

282 In all cases at least one reason class at the header level must be provided.

283 The associated reason codes to be used in respect to the regulatory definitions have to
284 comply with the following table:

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Detailed Data Definition	Implementation Guide
Maintenance	B19 (Foreseen Maintenance)
Upgrading	B19 (Foreseen Maintenance) & A95 (Complementary Information) with reason text “Upgrading”
Incident/Forced Outage	B18 (Failure) or B20 (Shutdown) depending on the case.
Failure	B18 (Failure)
Shutdown	B20 (Shutdown)
External factors	A95 (Complementary Information)
Other	A95 (Complementary Information)

286 ### 4.9.1 CODE

ACTION	DESCRIPTION
Definition of element	The motivation of an act in coded form.
Description	The reason code identifying that complementary information about an unavailability or planned maintenance. • A95: complementary information (this requires the use of the ReasonText attribute.) • B18 = Failure • B19 = Foreseen Maintenance • B20 = Shutdown **Refer to ENTSO-E Core Component Code list document for the valid list of codes.**
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

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287 ### 4.9.2 TEXT

ACTION	DESCRIPTION
Definition of element	The textual explanation corresponding to the reason code.
Description	This provides additional textual information concerning the unavailability which may be provided as necessary.
Size	The maximum length of this information is 512 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Used only if the reason code is insufficient to identify a reason information being provided.

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