



European Network of  
Transmission System Operators  
for Electricity

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# ALLOCATION DOCUMENT UML MODEL AND SCHEMA

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## Revision History

Version	Release	Date	Comments
0	1	2018-03-12	First drafting of the document.
1	0	2018-05-08	Document approved by MC

62

## 63 1 Objective

64 The purpose of this document is to provide the contextual and assembly UML models and the  
65 schema of the AllocationResult\_MarketDocument.

66 The schema of the AllocationResult\_MarketDocument could be used in various business  
67 processes.

68 It is not the purpose of this document to describe all the use cases, sequence diagrams,  
69 business processes, etc. for which this schema is to be used.

70 This document shall only be referenced in an implementation guide of a specific business  
71 process. The content of the business process implementation guide shall be as follows:

- 72 • Description of the business process;
- 73 • Use case of the business process;
- 74 • Sequence diagrams of the business process;
- 75 • List of the schema (XSD) to be used in the business process and versions of the  
76 schema;
- 77 • For each schema, dependency tables providing the necessary information for the  
78 generation of the XML instances, i.e. when the optional attributes are to be used, which  
79 codes from which ENTSO-E codelist are to be used.

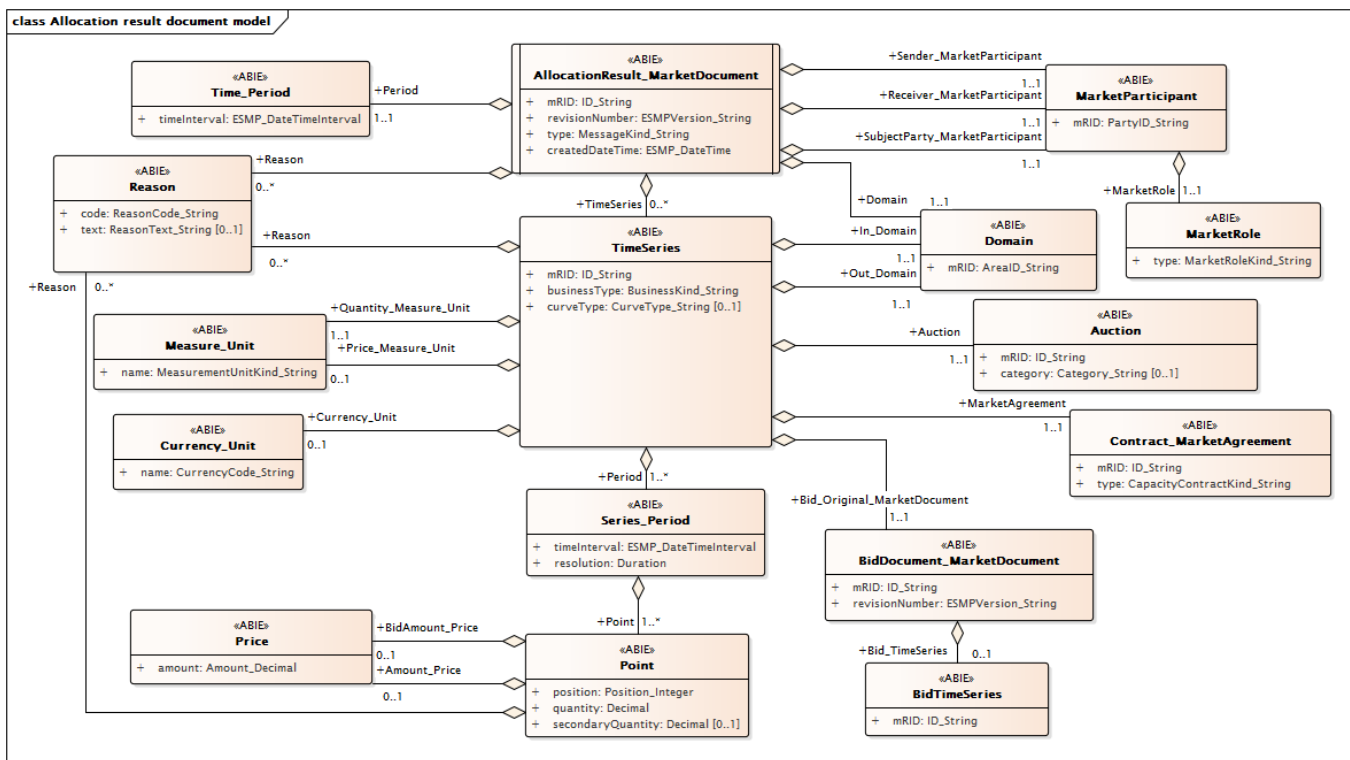
80

81 **2 AllocationResult\_MarketDocument**

82 **2.1 Allocation result contextual model**

83 **2.1.1 Overview of the model**

84 Figure 1 shows the model.



85

86 **Figure 1 - Allocation result contextual model**

87 **2.1.2 IsBasedOn relationships from the European style market profile**

88 Table 1 shows the traceability dependency of the classes used in this package towards the  
89 upper level.

90

**Table 1 - IsBasedOn dependency**

Name	Complete IsBasedOn Path
AllocationResult_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
Auction	TC57CIM::IEC62325::MarketManagement::Auction
BidDocument_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
BidTimeSeries	TC57CIM::IEC62325::MarketManagement::BidTimeSeries
Contract_MarketAgreement	TC57CIM::IEC62325::MarketManagement::MarketAgreement
Currency_Unit	TC57CIM::IEC62325::MarketManagement::Unit
Domain	TC57CIM::IEC62325::MarketManagement::Domain
MarketParticipant	TC57CIM::IEC62325::MarketCommon::MarketParticipant
MarketRole	TC57CIM::IEC62325::MarketCommon::MarketRole
Measure_Unit	TC57CIM::IEC62325::MarketManagement::Unit
Point	TC57CIM::IEC62325::MarketManagement::Point
Price	TC57CIM::IEC62325::MarketManagement::Price

Name	Complete IsBasedOn Path
Reason	TC57CIM::IEC62325::MarketManagement::Reason
Series_Period	TC57CIM::IEC62325::MarketManagement::Period
Time_Period	TC57CIM::IEC62325::MarketManagement::Period
TimeSeries	TC57CIM::IEC62325::MarketManagement::TimeSeries

91

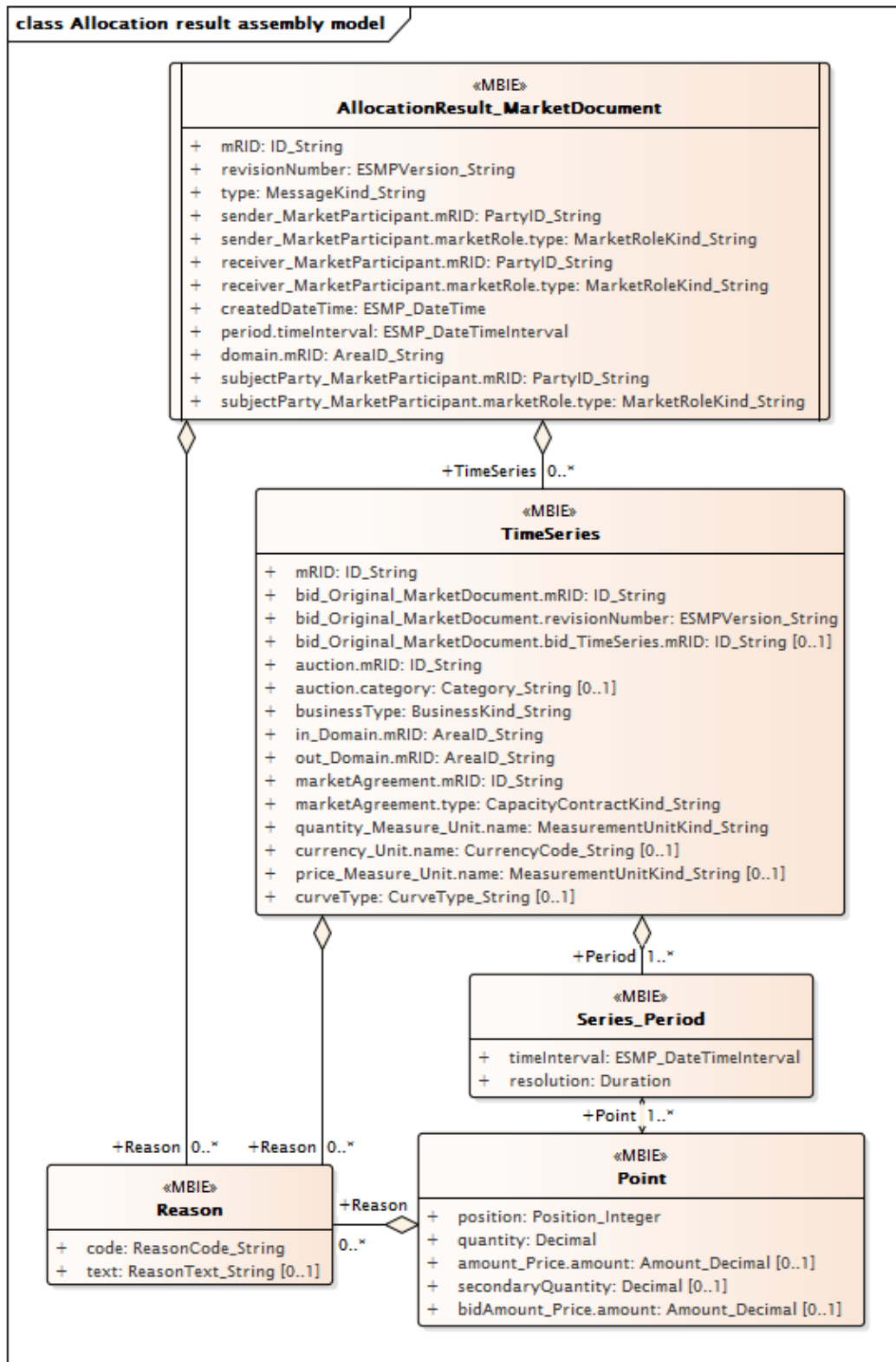
92

93

94 2.2 Allocation result assembly model

95 2.2.1 Overview of the model

96 Figure 2 shows the model.



97

98

Figure 2 - Allocation result assembly model



99

100 **2.2.2 IsBasedOn relationships from the European style market profile**

101 Table 2 shows the traceability dependency of the classes used in this package towards the  
102 upper level.

103 **Table 2 - IsBasedOn dependency**

Name	Complete IsBasedOn Path
AllocationResult_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
Point	TC57CIM::IEC62325::MarketManagement::Point
Reason	TC57CIM::IEC62325::MarketManagement::Reason
Series_Period	TC57CIM::IEC62325::MarketManagement::Period
TimeSeries	TC57CIM::IEC62325::MarketManagement::TimeSeries

104

105 **2.2.3 Detailed Allocation result assembly model**

106 **2.2.3.1 AllocationResult\_MarketDocument root class**

107 An electronic document containing the information necessary to satisfy the requirements of a  
108 given business process.

109 There is only one allocation result document per sender and subject party for a given auction  
110 identification and bid time interval.

111 In the case where the allocation result document contains all bids and resales that have been  
112 validated for processing in the auction in the latest version of bid and resales documents  
113 received, this shall include bids and resales that have not been satisfied. In this case the  
114 quantity and price amount of the bids and resales that have not been satisfied shall be equal to  
115 zero.

116 It is also possible for the allocation result document to contain only the bids that have been  
117 allocated capacity transmission rights and resales that have sold capacity transmission rights.

118 A third possibility exists where only the aggregation of the bids that have capacity transmission  
119 rights and the aggregation of transmission rights that have been sold are provided. In this case  
120 the bid identification shall not be specified.

121 Only one of these possibilities is permitted in a given allocation result document.

122 Table 3 shows all attributes of AllocationResult\_MarketDocument.

123 **Table 3 - Attributes of Allocation result assembly  
124 model::AllocationResult\_MarketDocument**

Order	mult.	Attribute name / Attribute type	Description
0	[1..1]	mRID ID_String	The unique identification of the document being exchanged within a business process flow.
1	[1..1]	revisionNumber ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
2	[1..1]	type MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.
3	[1..1]	sender_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- Document owner.

Order	mult.	Attribute name / Attribute type	Description
4	[1..1]	sender_MarketParticipant.marketRole.type MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
5	[1..1]	receiver_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- Document recipient.
6	[1..1]	receiver_MarketParticipant.marketRole.type MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
7	[1..1]	createdDateTime ESMP_DateTime	The date and time of the creation of the document.
8	[1..1]	period.timeInterval ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.
9	[1..1]	domain.mRID AreaID_String	The unique identification of the domain. --- The domain covered within the document.
10	[1..1]	subjectParty_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- The party for whom the bid is allocated.
11	[1..1]	subjectParty_MarketParticipant.marketRole.type MarketRoleKind_String	The identification of the role played by a market player. --- The party for whom the bid is allocated.

125

126 Table 4 shows all association ends of AllocationResult\_MarketDocument with other classes.

127

128

**Table 4 - Association ends of Allocation result assembly model::AllocationResult\_MarketDocument with other classes**

Order	mult.	Class name / Role	Description
12	[0..*]	TimeSeries TimeSeries	Association Based On: Allocation result contextual model::TimeSeries.TimeSeries[0..*] ----- Allocation result contextual model::AllocationResult_MarketDocument.[]
13	[0..*]	Reason Reason	Association Based On: Allocation result contextual model::Reason.Reason[0..*] ----- Allocation result contextual model::AllocationResult_MarketDocument.[]

129

### 130 2.2.3.2 Point

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

132 Table 5 shows all attributes of Point.

133

**Table 5 - Attributes of Allocation result assembly model::Point**

Order	mult.	Attribute name / Attribute type	Description
0	[1..1]	position Position_Integer	A sequential value representing the relative position within a given time interval.
1	[1..1]	quantity Decimal	The quantity that has been allocated or resold in the auction. The principal quantity identified for a point.

Order	mult.	Attribute name / Attribute type	Description
2	[0..1]	amount_Price.amount Amount_Decimal	A number of monetary units specified in a unit of currency. --- The price expressed for each unit of quantity allocated.
3	[0..1]	secondaryQuantity Decimal	The quantity that was in the original bid or resale document. The secondary quantity identified for a point.
4	[0..1]	bidAmount_Price.amount Amount_Decimal	A number of monetary units specified in a unit of currency. --- The original price expressed in the original bid or resale for each unit of quantity requested.

134

135 Table 6 shows all association ends of Point with other classes.

136 **Table 6 - Association ends of Allocation result assembly model::Point with other**  
137 **classes**

Order	mult.	Class name / Role	Description
5	[0..*]	Reason Reason	Association Based On: Allocation result contextual model::Reason.Reason[0..*] ----- Allocation result contextual model::Point.[]

138

### 139 2.2.3.3 Reason

140 The motivation of an act.

141 Table 7 shows all attributes of Reason.

142 **Table 7 - Attributes of Allocation result assembly model::Reason**

Order	mult.	Attribute name / Attribute type	Description
0	[1..1]	code ReasonCode_String	The motivation of an act in coded form.
1	[0..1]	text ReasonText_String	The textual explanation corresponding to the reason code.

143

### 144 2.2.3.4 Series\_Period

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

146 Table 8 shows all attributes of Series\_Period.

147 **Table 8 - Attributes of Allocation result assembly model::Series\_Period**

Order	mult.	Attribute name / Attribute type	Description
0	[1..1]	timeInterval ESMP_DateTimeInterval	The start and end time of the period.
1	[1..1]	resolution Duration	The definition of the number of units of time that compose an individual step within a period.

148

149 Table 9 shows all association ends of Series\_Period with other classes.

150 **Table 9 - Association ends of Allocation result assembly model::Series\_Period with**  
151 **other classes**

Order	mult.	Class name / Role	Description
2	[1..*]	Point Point	Association Based On: Allocation result contextual model::Point.Point[1..*] ----- Allocation result contextual model::Series_Period.[]

152

153 **2.2.3.5 TimeSeries**

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

155 For each time series in the document, the identification shall be a unique number assigned by  
156 the auction office.

157 Table 10 shows all attributes of TimeSeries.

158 **Table 10 - Attributes of Allocation result assembly model::TimeSeries**

Order	mult.	Attribute name / Attribute type	Description
0	[1..1]	mRID ID_String	A unique identification of the time series.
1	[1..1]	bid_Original_MarketDocument.mRID ID_String	The unique identification of the document being exchanged within a business process flow. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.
2	[1..1]	bid_Original_MarketDocument.revisionNumber ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.
3	[0..1]	bid_Original_MarketDocument.bid_TimeSeries.mRID ID_String	A unique identification of the time series. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries. --- The identification of the time series that was used in the original bid or resale. This is the unique number that is assigned by the bidder when he made his original bid or resale.
4	[1..1]	auction.mRID ID_String	The unique identification of the auction. --- The identification linking the allocation to a set of specifications created by the auction operator.
5	[0..1]	auction.category Category_String	The product category of an auction. --- The identification linking the allocation to a set of specifications created by the auction operator.
6	[1..1]	businessType BusinessKind_String	The identification of the nature of the time series.
7	[1..1]	in_Domain.mRID AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
8	[1..1]	out_Domain.mRID AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.

Order	mult.	Attribute name / Attribute type	Description
9	[1..1]	marketAgreement.mRID ID_String	The unique identification of the agreement. --- The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.
10	[1..1]	marketAgreement.type CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract. --- The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.
11	[1..1]	quantity_Measure_Unit.name MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW.
12	[0..1]	currency_Unit.name CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
13	[0..1]	price_Measure_Unit.name MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed
14	[0..1]	curveType CurveType_String	The identification of the coded representation of the type of curve being described.

159

160 Table 11 shows all association ends of TimeSeries with other classes.

161 **Table 11 - Association ends of Allocation result assembly model::TimeSeries with other**  
162 **classes**

Order	mult.	Class name / Role	Description
15	[1..*]	Series_Period Period	Association Based On: Allocation result contextual model::Series_Period.Period[1..*] ----- Allocation result contextual model::TimeSeries.[]
16	[0..*]	Reason Reason	Association Based On: Allocation result contextual model::Reason.Reason[0..*] ----- Allocation result contextual model::TimeSeries.[]

163

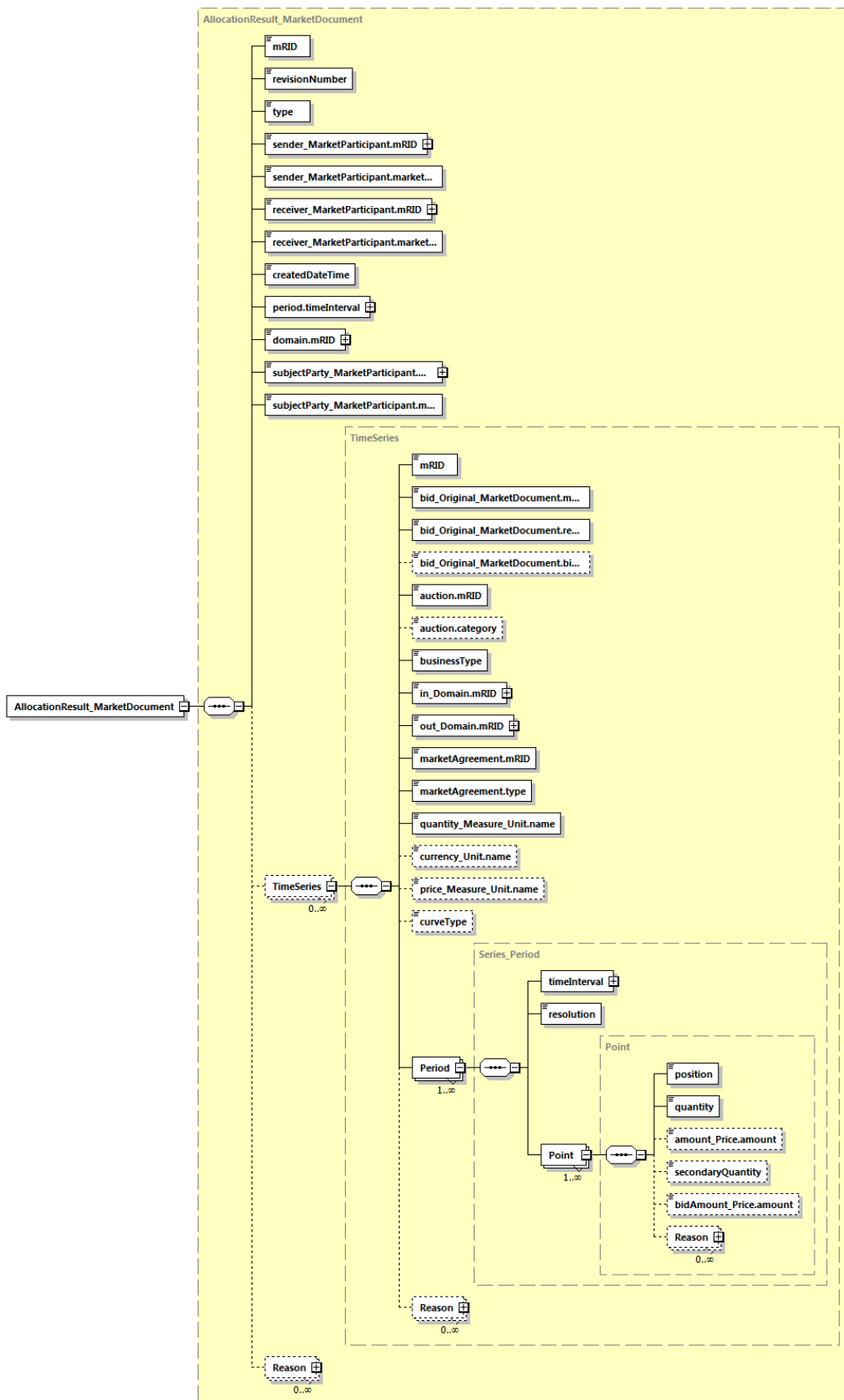
## 164 **2.2.4 Datatypes**

165 The list of datatypes used for the Allocation result assembly model is as follows:

- 166 • ESMP\_DateTimeInterval compound
- 167 • Amount\_Decimal datatype
- 168 • ArealID\_String datatype, codelist CodingSchemeTypeList
- 169 • BusinessKind\_String datatype, codelist BusinessTypeList
- 170 • CapacityContractKind\_String datatype, codelist ContractTypeList
- 171 • Category\_String datatype, codelist CategoryTypeList
- 172 • CurrencyCode\_String datatype, codelist CurrencyTypeList
- 173 • CurveType\_String datatype, codelist CurveTypeList
- 174 • ESMP\_DateTime datatype
- 175 • ESMPVersion\_String datatype
- 176 • ID\_String datatype
- 177 • MarketRoleKind\_String datatype, codelist RoleTypeList
- 178 • MeasurementUnitKind\_String datatype, codelist UnitOfMeasureTypeList
- 179 • MessageKind\_String datatype, codelist MessageTypeList
- 180 • PartyID\_String datatype, codelist CodingSchemeTypeList
- 181 • Position\_Integer datatype
- 182 • ReasonCode\_String datatype, codelist ReasonCodeTypeList
- 183 • ReasonText\_String datatype
- 184 • YMDHM\_DateTime datatype
- 185
- 186

187 2.2.5 AllocationResult\_MarketDocument XML schema structure

188



189  
 190  
 191

Figure 3 - AllocationResult\_MarketDocument schema structure

192 **2.2.6 AllocationResult\_MarketDocument XML schema**

193

194 The schema to be used to validate XML instances is to be identified by:

195 urn:iec62325.351:tc57wg16:451-3:allocationresultdocument:7:0

```

196 <?xml version="1.0" encoding="utf-8"?>
197 <xs:schema xmlns:ecl="urn:entsoe.eu:wgedi:codelists" xmlns:sawsdl="http://www.w3.org/ns/sawsdl"
198 xmlns="urn:iec62325.351:tc57wg16:451-3:allocationresultdocument:7:0"
199 xmlns:cimp="http://www.iec.ch/cimprofile" xmlns:xs="http://www.w3.org/2001/XMLSchema"
200 targetNamespace="urn:iec62325.351:tc57wg16:451-3:allocationresultdocument:7:0"
201 elementFormDefault="qualified" attributeFormDefault="unqualified">
202   <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-wgedi-
203 codelists.xsd"/>
204   <xs:element name="AllocationResult_MarketDocument" type="AllocationResult_MarketDocument"/>
205   <xs:simpleType name="ID_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
206 cim16#String">
207     <xs:restriction base="xs:string">
208       <xs:maxLength value="35"/>
209     </xs:restriction>
210   </xs:simpleType>
211   <xs:simpleType name="ESMPVersion_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
212 schema-cim16#String">
213     <xs:restriction base="xs:string">
214       <xs:pattern value="[1-9]([0-9]){0,2}"/>
215     </xs:restriction>
216   </xs:simpleType>
217   <xs:simpleType name="MessageKind_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
218 schema-cim16#String">
219     <xs:restriction base="ecl:MessageTypeList"/>
220   </xs:simpleType>
221   <xs:simpleType name="PartyID_String-base" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
222 schema-cim16#String">
223     <xs:restriction base="xs:string">
224       <xs:maxLength value="16"/>
225     </xs:restriction>
226   </xs:simpleType>
227   <xs:complexType name="PartyID_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
228 schema-cim16#String">
229     <xs:simpleContent>
230       <xs:extension base="PartyID_String-base">
231         <xs:attribute name="codingScheme" type="ecl:CodingSchemeTypeList"
232 use="required"/>
233       </xs:extension>
234     </xs:simpleContent>
235   </xs:complexType>
236   <xs:simpleType name="MarketRoleKind_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
237 schema-cim16#String">
238     <xs:restriction base="ecl:RoleTypeList"/>
239   </xs:simpleType>
240   <xs:simpleType name="ESMP_DateTime" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
241 cim16#DateTime">
242     <xs:restriction base="xs:dateTime">
243       <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-9]|[12][0-
244 9]|[3][01])|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|[12][0-9]|30))T((01[0-9]|2[0-3]):[0-5][0-9]:[0-
245 5][0-
246 9])Z)|(((13579)[26][02468][048]|13579)[01345789](0)[48]|13579)[01345789][2468][048]|02468[048][0246
247 8][048]|02468[1235679](0)[48]|02468[1235679][2468][048]|0[0-9][0-9][13579][26])[\-](02)[\-](0[1-
248 9]|1[0-9]|2[0-9])T((01[0-9]|2[0-3]):[0-5][0-9]:[0-5][0-
249 9])Z)|(((13579)[26][02468][1235679]|13579)[01345789](0)[01235679]|13579)[01345789][2468][1235679]|02
250 468[048][02468][1235679]|02468[1235679](0)[01235679]|02468[1235679][2468][1235679]|0[0-9][0-
251 9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-8])T((01[0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)"/>
252     </xs:restriction>
253   </xs:simpleType>
254   <xs:simpleType name="AreaID_String-base" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
255 schema-cim16#String">
256     <xs:restriction base="xs:string">
257       <xs:maxLength value="18"/>
258     </xs:restriction>
259   </xs:simpleType>
260   <xs:complexType name="AreaID_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
261 cim16#String">
262     <xs:simpleContent>

```



```

263         <xs:extension base="AreaID_String-base">
264             <xs:attribute name="codingScheme" type="ecl:CodingSchemeTypeList"
265 use="required"/>
266         </xs:extension>
267     </xs:simpleContent>
268 </xs:complexType>
269 <xs:simpleType name="YMDHM_DateTime" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
270 cim16#DateTime">
271     <xs:restriction base="xs:string">
272         <xs:pattern value="((([0-9]{4})[\-]([013578]|1[02])[\-]([01-9]|[12][0-
273 9]|3[01])|([0-9]{4})[\-]((0[469])|(11))[\-]([01-9]|12)[0-9]|30))T((([01][0-9]|2[0-3]):[0-5][0-
274 9])Z)|((([13579][26][02468][048]|13579][01345789](0)[48]|13579][01345789][2468][048]|02468][0246
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276 8][048]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-
277 9])Z)|((([13579][26][02468][1235679]|13579][01345789](0)[01235679]|13579][01345789][2468][1235679]|02
278 468][048]|02468][1235679]|02468][1235679](0)[01235679]|02468][1235679][2468][1235679]|0-9][0-
279 9][13579][01345789])[\-]([02][\-]([01-9]|1[0-9]|2[0-8])T((([01][0-9]|2[0-3]):[0-5][0-9])Z)"/>
280     </xs:restriction>
281 </xs:simpleType>
282 <xs:complexType name="ESMP_DateTimeInterval"
283 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
284     <xs:sequence>
285         <xs:element name="start" type="YMDHM_DateTime" minOccurs="1" maxOccurs="1"
286 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval.start"/>
287         <xs:element name="end" type="YMDHM_DateTime" minOccurs="1" maxOccurs="1"
288 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval.end"/>
289     </xs:sequence>
290 </xs:complexType>
291 <xs:complexType name="AllocationResult_MarketDocument"
292 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
293     <xs:sequence>
294         <xs:element name="mRID" type="ID_String" minOccurs="1" maxOccurs="1"
295 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
296         <xs:element name="revisionNumber" type="ESMPVersion_String" minOccurs="1"
297 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
298 cim16#Document.revisionNumber"/>
299         <xs:element name="type" type="MessageKind_String" minOccurs="1" maxOccurs="1"
300 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
301         <xs:element name="sender_MarketParticipant.mRID" type="PartyID_String"
302 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
303 cim16#IdentifiedObject.mRID"/>
304         <xs:element name="sender_MarketParticipant.marketRole.type"
305 type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
306 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
307         <xs:element name="receiver_MarketParticipant.mRID" type="PartyID_String"
308 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
309 cim16#IdentifiedObject.mRID"/>
310         <xs:element name="receiver_MarketParticipant.marketRole.type"
311 type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
312 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
313         <xs:element name="createdDateTime" type="ESMP_DateTime" minOccurs="1"
314 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
315 cim16#Document.createdDateTime"/>
316         <xs:element name="period.timeInterval" type="ESMP_DateTimeInterval"
317 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
318 cim16#Period.timeInterval"/>
319         <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
320 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
321         <xs:element name="subjectParty_MarketParticipant.mRID" type="PartyID_String"
322 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
323 cim16#IdentifiedObject.mRID"/>
324         <xs:element name="subjectParty_MarketParticipant.marketRole.type"
325 type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
326 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
327         <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
328 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
329 cim16#MarketDocument.TimeSeries"/>
330         <xs:element name="Reason" type="Reason" minOccurs="0" maxOccurs="unbounded"
331 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument.Reason"/>
332     </xs:sequence>
333 </xs:complexType>
334 <xs:simpleType name="Position_Integer" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
335 schema-cim16#Integer">
336     <xs:restriction base="xs:integer">
337         <xs:maxInclusive value="999999"/>

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338         <xs:minInclusive value="1"/>
339     </xs:restriction>
340 </xs:simpleType>
341 <xs:simpleType name="Amount_Decimal" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
342 cim16#Decimal">
343     <xs:restriction base="xs:decimal">
344         <xs:totalDigits value="17"/>
345     </xs:restriction>
346 </xs:simpleType>
347 <xs:complexType name="Point" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
348 cim16#Point">
349     <xs:sequence>
350         <xs:element name="position" type="Position_Integer" minOccurs="1"
351 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.position"/>
352         <xs:element name="quantity" type="xs:decimal" minOccurs="1" maxOccurs="1"
353 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.quantity"/>
354         <xs:element name="amount_Price.amount" type="Amount_Decimal" minOccurs="0"
355 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Price.amount"/>
356         <xs:element name="secondaryQuantity" type="xs:decimal" minOccurs="0"
357 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
358 cim16#Point.secondaryQuantity"/>
359         <xs:element name="bidAmount_Price.amount" type="Amount_Decimal" minOccurs="0"
360 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Price.amount"/>
361         <xs:element name="Reason" type="Reason" minOccurs="0" maxOccurs="unbounded"
362 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.Reason"/>
363     </xs:sequence>
364 </xs:complexType>
365 <xs:simpleType name="ReasonCode_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
366 schema-cim16#String">
367     <xs:restriction base="ecl:ReasonCodeTypeList"/>
368 </xs:simpleType>
369 <xs:simpleType name="ReasonText_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
370 schema-cim16#String">
371     <xs:restriction base="xs:string">
372         <xs:maxLength value="512"/>
373     </xs:restriction>
374 </xs:simpleType>
375 <xs:complexType name="Reason" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
376 cim16#Reason">
377     <xs:sequence>
378         <xs:element name="code" type="ReasonCode_String" minOccurs="1" maxOccurs="1"
379 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason.code"/>
380         <xs:element name="text" type="ReasonText_String" minOccurs="0" maxOccurs="1"
381 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason.text"/>
382     </xs:sequence>
383 </xs:complexType>
384 <xs:complexType name="Series_Period" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
385 cim16#Period">
386     <xs:sequence>
387         <xs:element name="timeInterval" type="ESMP_DateTimeInterval" minOccurs="1"
388 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period.timeInterval"/>
389         <xs:element name="resolution" type="xs:duration" minOccurs="1" maxOccurs="1"
390 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period.resolution"/>
391         <xs:element name="Point" type="Point" minOccurs="1" maxOccurs="unbounded"
392 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period.Point"/>
393     </xs:sequence>
394 </xs:complexType>
395 <xs:simpleType name="Category_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
396 schema-cim16#String">
397     <xs:restriction base="ecl:CategoryTypeList"/>
398 </xs:simpleType>
399 <xs:simpleType name="BusinessKind_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
400 schema-cim16#String">
401     <xs:restriction base="ecl:BusinessTypeList"/>
402 </xs:simpleType>
403 <xs:simpleType name="CapacityContractKind_String"
404 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
405     <xs:restriction base="ecl:ContractTypeList"/>
406 </xs:simpleType>
407 <xs:simpleType name="MeasurementUnitKind_String"
408 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
409     <xs:restriction base="ecl:UnitOfMeasureTypeList"/>
410 </xs:simpleType>
411 <xs:simpleType name="CurrencyCode_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
412 schema-cim16#String">

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413         <xs:restriction base="ecl:CurrencyTypeList"/>
414     </xs:simpleType>
415     <xs:simpleType name="CurveType_String" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
416 schema-cim16#String">
417         <xs:restriction base="ecl:CurveTypeList"/>
418     </xs:simpleType>
419     <xs:complexType name="TimeSeries" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
420 cim16#TimeSeries">
421         <xs:sequence>
422             <xs:element name="mRID" type="ID_String" minOccurs="1" maxOccurs="1"
423 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
424             <xs:element name="bid_Original_MarketDocument.mRID" type="ID_String"
425 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
426 cim16#IdentifiedObject.mRID"/>
427             <xs:element name="bid_Original_MarketDocument.revisionNumber"
428 type="ESMPVersion_String" minOccurs="1" maxOccurs="1"
429 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.revisionNumber"/>
430             <xs:element name="bid_Original_MarketDocument.bid_TimeSeries.mRID"
431 type="ID_String" minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
432 cim16#IdentifiedObject.mRID"/>
433             <xs:element name="auction.mRID" type="ID_String" minOccurs="1" maxOccurs="1"
434 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
435             <xs:element name="auction.category" type="Category_String" minOccurs="0"
436 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Auction.category"/>
437             <xs:element name="businessType" type="BusinessKind_String" minOccurs="1"
438 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
439 cim16#TimeSeries.businessType"/>
440             <xs:element name="in_Domain.mRID" type="AreaID_String" minOccurs="1"
441 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
442             <xs:element name="out_Domain.mRID" type="AreaID_String" minOccurs="1"
443 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
444             <xs:element name="marketAgreement.mRID" type="ID_String" minOccurs="1"
445 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
446             <xs:element name="marketAgreement.type" type="CapacityContractKind_String"
447 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
448 cim16#Document.type"/>
449             <xs:element name="quantity_Measure_Unit.name"
450 type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
451 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
452             <xs:element name="currency_Unit.name" type="CurrencyCode_String" minOccurs="0"
453 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
454             <xs:element name="price_Measure_Unit.name" type="MeasurementUnitKind_String"
455 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
456 cim16#Unit.name"/>
457             <xs:element name="curveType" type="CurveType_String" minOccurs="0"
458 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries.curveType"/>
459             <xs:element name="Period" type="Series_Period" minOccurs="1"
460 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
461 cim16#TimeSeries.Period"/>
462             <xs:element name="Reason" type="Reason" minOccurs="0" maxOccurs="unbounded"
463 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries.Reason"/>
464         </xs:sequence>
465     </xs:complexType>
466 </xs:schema>
467

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