



European Network of
Transmission System Operators
for Electricity

**TOTAL ALLOCATION RESULT
DOCUMENT
UML MODEL AND SCHEMA**

2022-02-01
APPROVED DOCUMENT
VERSION 1.1

2

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48	other classes	15
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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.
1	1	2022-02-01	Updates in total allocation document XSD v7.1 <ul style="list-style-type: none"> Quantity_Measure_Unit.name & Price_Measure_Unit.name attributes were renamed to Quantity_Measurement_Unit.name & Price_Measurement_Unit.name to be compliant with the ESMP. mRID of Document, Series and Timeseries (ID_String type) was enlarged from 35 to 60 characters. Approved by MC.

68

69 **Objective**

70 The purpose of this document is to provide the contextual and assembly UML models and the
71 schema of the TotalAllocationResult_MarketDocument.

72 The schema of the TotalAllocationResult_MarketDocument could be used in various business
73 processes.

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

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

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

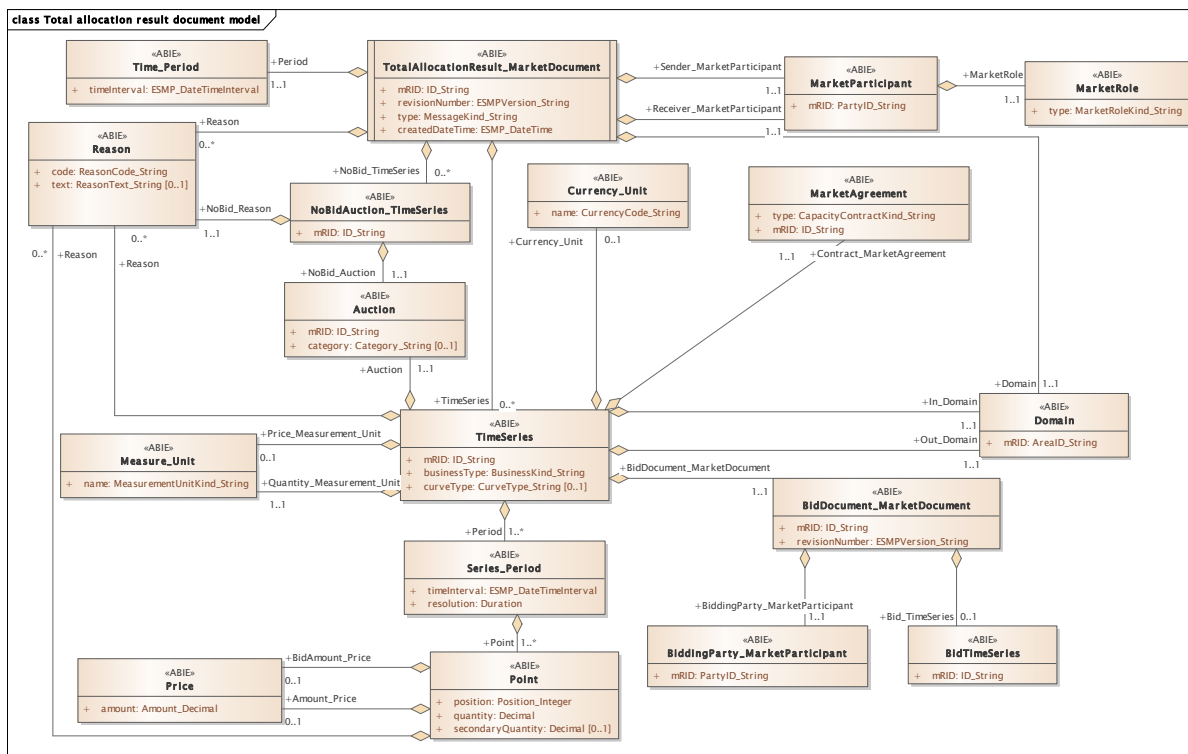
86

87 **TotalAllocationResult_MarketDocument**

88 **2.1 Total allocation result contextual model**

89 **2.1.1 Overview of the model**

90 Figure 1 shows the model.



91

92

Figure 1 - Total allocation result contextual model

93

94

95 **2.1.2 IsBasedOn relationships from the European style market profile**

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

98

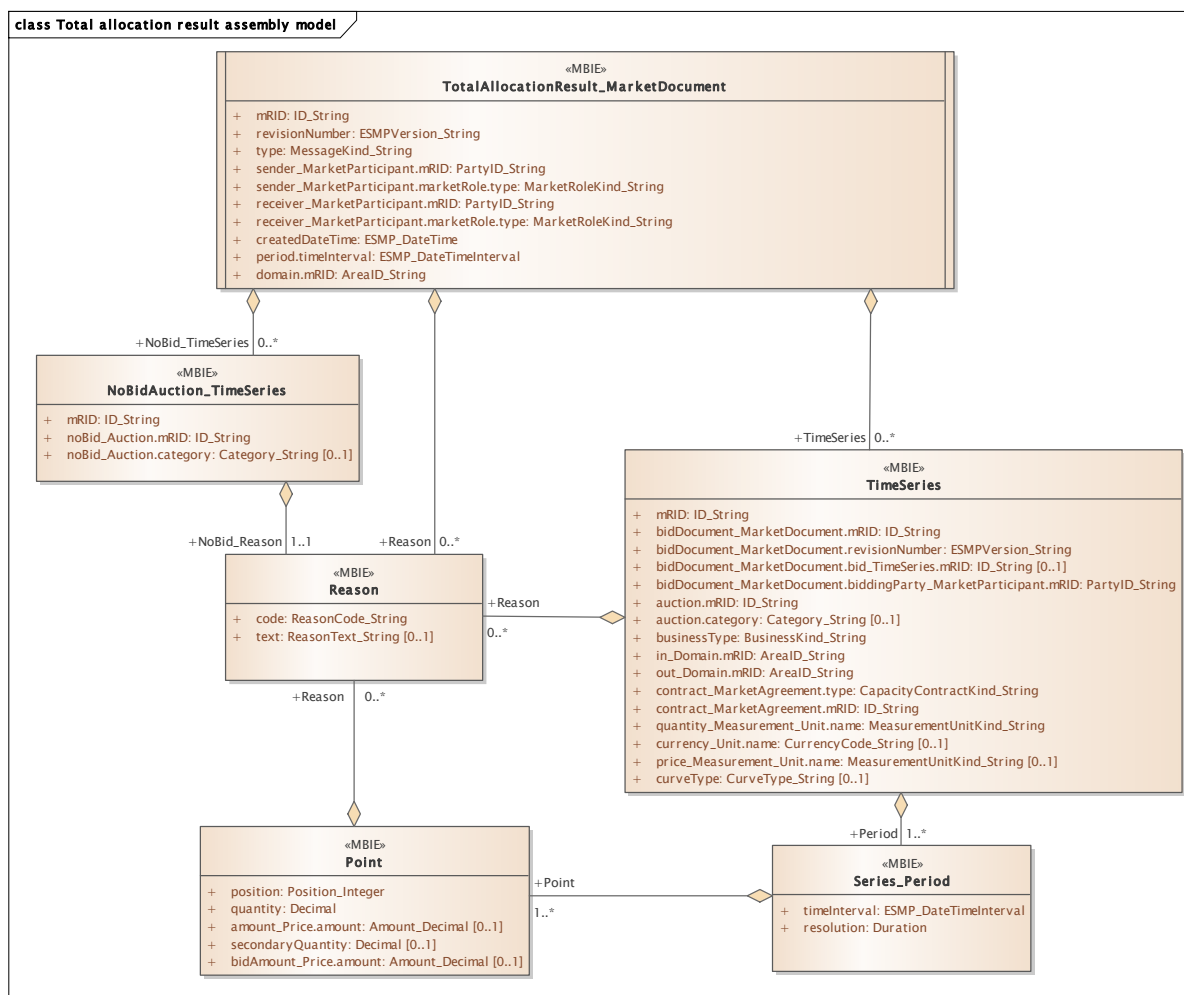
Table 1 - IsBasedOn dependency

Name	Complete IsBasedOn Path
Auction	TC57CIM::IEC62325::MarketManagement::Auction
BiddingParty_MarketParticipant	TC57CIM::IEC62325::MarketCommon::MarketParticipant
BidDocument_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
BidTimeSeries	TC57CIM::IEC62325::MarketManagement::BidTimeSeries
Currency_Unit	TC57CIM::IEC62325::MarketManagement::Unit
Domain	TC57CIM::IEC62325::MarketManagement::Domain
MarketAgreement	TC57CIM::IEC62325::MarketManagement::MarketAgreement
MarketParticipant	TC57CIM::IEC62325::MarketCommon::MarketParticipant
MarketRole	TC57CIM::IEC62325::MarketCommon::MarketRole
Measure_Unit	TC57CIM::IEC62325::MarketManagement::Unit
NoBidAuction_TimeSeries	TC57CIM::IEC62325::MarketManagement::TimeSeries
Point	TC57CIM::IEC62325::MarketManagement::Point
Price	TC57CIM::IEC62325::MarketManagement::Price
Reason	TC57CIM::IEC62325::MarketManagement::Reason
Series_Period	TC57CIM::IEC62325::MarketManagement::Period
Time_Period	TC57CIM::IEC62325::MarketManagement::Period
TimeSeries	TC57CIM::IEC62325::MarketManagement::TimeSeries
TotalAllocationResult_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument

99

100

101
102 **2.2 Total allocation result assembly model**
103 **2.2.1 Overview of the model**
104 Figure 2 shows the model.



105
106 **Figure 2 - Total allocation result assembly model**

107 **2.2.2 IsBasedOn relationships from the European style market profile**

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

110 **Table 2 - IsBasedOn dependency**

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

112 **2.2.3 Detailed Total allocation result assembly model**

113 **2.2.3.1 TotalAllocationResult_MarketDocument root class**

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

116 The total allocation result document contains the results of the auction for all the bidding parties
117 with the same granularity information as the allocation result document.

118 Table 3 shows all attributes of TotalAllocationResult_MarketDocument.

119 **Table 3 - Attributes of Total allocation result assembly**
120 **model::TotalAllocationResult_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.
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, i.e. the border.

121
122 Table 4 shows all association ends of TotalAllocationResult_MarketDocument with other
123 classes.

124 **Table 4 - Association ends of Total allocation result assembly**
125 **model::TotalAllocationResult_MarketDocument with other classes**

Order	mult.	Class name / Role	Description
10	[0..*]	TimeSeries TimeSeries	Association Based On: Total allocation result contextual model::TimeSeries.TimeSeries[0..*] ----- Total allocation result contextual model::TotalAllocationResult_MarketDocument.[]

Order	mult.	Class name / Role	Description
11	[0..*]	Reason Reason	Association Based On: Total allocation result contextual model::Reason.Reason[0..*] ----- Total allocation result contextual model::TotalAllocationResult_MarketDocument.[]
12	[0..*]	NoBidAuction_TimeSeries NoBid_TimeSeries	This specific time series is to be used when there is no bid submitted at an auction. In such a case, the time series provides the identification of the cancelled auction. A reason class is to be provided with the value corresponding to the information "no bid". Association Based On: Total allocation result contextual model::NoBidAuction_TimeSeries.NoBid_TimeSeries[0..*] ----- Total allocation result contextual model::TotalAllocationResult_MarketDocument.[]

126

127 2.2.3.2 NoBidAuction_TimeSeries

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

129 Table 5 shows all attributes of NoBidAuction_TimeSeries.

130 **Table 5 - Attributes of Total allocation result assembly**
131 **model::NoBidAuction_TimeSeries**

Order	mult.	Attribute name / Attribute type	Description
0	[1..1]	mRID ID_String	A unique identification of the time series.
1	[1..1]	noBid_Auction.mRID ID_String	The unique identification of the auction. --- It provides the auction identification when there is no bid submitted.
2	[0..1]	noBid_Auction.category Category_String	The product category of an auction. --- It provides the auction identification when there is no bid submitted.

132

133 Table 6 shows all association ends of NoBidAuction_TimeSeries with other classes.

134 **Table 6 - Association ends of Total allocation result assembly**
135 **model::NoBidAuction_TimeSeries with other classes**

Order	mult.	Class name / Role	Description
3	[1..1]	Reason NoBid_Reason	Association Based On: Total allocation result contextual model::Reason.NoBid_Reason[1..1] ----- Total allocation result contextual model::NoBidAuction_TimeSeries.[]

136

137 2.2.3.3 Point

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

139 Table 7 shows all attributes of Point.

140

Table 7 - Attributes of Total 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 principal quantity identified for a point.
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 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.

141

142 Table 8 shows all association ends of Point with other classes.

143 **Table 8 - Association ends of Total allocation result assembly model::Point with other**
144 **classes**

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

145

146 2.2.3.4 Reason

147 The motivation of an act.

148 Table 9 shows all attributes of Reason.

149 **Table 9 - Attributes of Total 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.

150

151 2.2.3.5 Series_Period

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

153 Table 10 shows all attributes of Series_Period.

154 **Table 10 - Attributes of Total 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.

155

156 Table 11 shows all association ends of Series_Period with other classes.

157 **Table 11 - Association ends of Total allocation result assembly model::Series_Period**
158 **with other classes**

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

159

160 2.2.3.6 TimeSeries

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

162 Table 12 shows all attributes of TimeSeries.

163 **Table 12 - Attributes of Total 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]	bidDocument_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]	bidDocument_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]	bidDocument_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.

Order	mult.	Attribute name / Attribute type	Description
4	[1..1]	bidDocument_MarketDocument.biddingParty_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries. --- The identification of the party who bid for the capacity or resold it.
5	[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.
6	[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.
7	[1..1]	businessType BusinessKind_String	The identification of the nature of the time series.
8	[1..1]	in_Domain.mRID AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
9	[1..1]	out_Domain.mRID AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
10	[1..1]	contract_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.

Order	mult.	Attribute name / Attribute type	Description
11	[1..1]	contract_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.
12	[1..1]	quantity_Measurement_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.
13	[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.
14	[0..1]	price_Measurement_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
15	[0..1]	curveType CurveType_String	The identification of the coded representation of the type of curve being described.

164

165 Table 13 shows all association ends of TimeSeries with other classes.

166 **Table 13 - Association ends of Total allocation result assembly model::TimeSeries with**
167 **other classes**

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

168

169 2.2.4 Datatypes

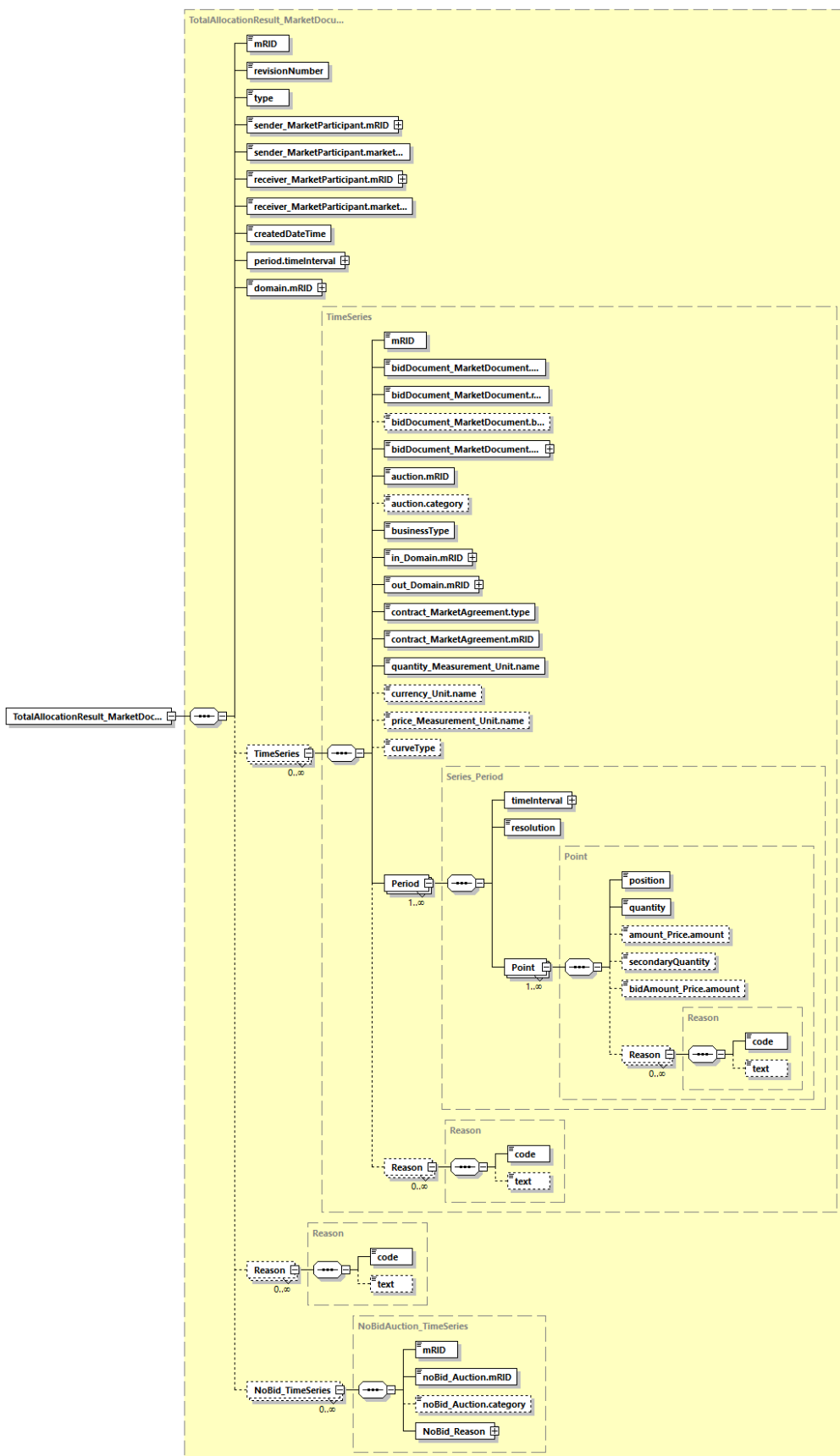
170 The list of datatypes used for the Total allocation result assembly model is as follows:

- 171 • ESMP_DateTimeInterval compound
172 • Amount_Decimal datatype

- 173 • ArealID_String datatype, codelist CodingSchemeTypeList
- 174 • BusinessKind_String datatype, codelist BusinessTypeList
- 175 • CapacityContractKind_String datatype, codelist ContractTypeList
- 176 • Category_String datatype, codelist CategoryTypeList
- 177 • CurrencyCode_String datatype, codelist CurrencyTypeList
- 178 • CurveType_String datatype, codelist CurveTypeList
- 179 • ESMP_DateTime datatype
- 180 • ESMPVersion_String datatype
- 181 • ID_String datatype
- 182 • MarketRoleKind_String datatype, codelist RoleTypeList
- 183 • MeasurementUnitKind_String datatype, codelist UnitOfMeasureTypeList
- 184 • MessageKind_String datatype, codelist MessageTypeList
- 185 • PartyID_String datatype, codelist CodingSchemeTypeList
- 186 • Position_Integer datatype
- 187 • ReasonCode_String datatype, codelist ReasonCodeTypeList
- 188 • ReasonText_String datatype
- 189 • YMDHM_DateTime datatype
- 190

191 2.2.5 TotalAllocationResult_MarketDocument XML schema structure

192



193
 194
 195

Figure 3 - TotalAllocationResult_MarketDocument XML schema structure

Generated by XMLSpy www.altova.com

196 2.2.6 TotalAllocationResult_MarketDocument XML schema

197

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

199 urn:iec62325.351:tc57wg16:451-3:totalallocationresultdocument:7:1

```
200 <?xml version="1.0" encoding="utf-8"?>
201 <xs:schema xmlns:ecl="urn:entsoe.eu:wgedi:codelists"
202 xmlns="urn:iec62325.351:tc57wg16:451-3:totalallocationresultdocument:7:1"
203 xmlns:sawsdl="http://www.w3.org/ns/sawsdl"
204 xmlns:cimp="http://www.iec.ch/cimprofile"
205 xmlns:xs="http://www.w3.org/2001/XMLSchema"
206 targetNamespace="urn:iec62325.351:tc57wg16:451-
207 3:totalallocationresultdocument:7:1" elementFormDefault="qualified"
208 attributeFormDefault="unqualified">
209   <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
210 entsoe-eu-wgedi-codelists.xsd"/>
211   <xs:element name="TotalAllocationResult_MarketDocument"
212 type="TotalAllocationResult_MarketDocument"/>
213   <xs:simpleType name="ID_String"
214 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
215     <xs:restriction base="xs:string">
216       <xs:maxLength value="60"/>
217     </xs:restriction>
218   </xs:simpleType>
219   <xs:simpleType name="Category_String"
220 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
221     <xs:restriction base="ecl:CategoryTypeList"/>
222   </xs:simpleType>
223   <xs:complexType name="NoBidAuction_TimeSeries"
224 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
225     <xs:sequence>
226       <xs:element name="mRID" type="ID_String" minOccurs="1"
227 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
228 cim16#IdentifiedObject.mRID"/>
229       <xs:element name="noBid_Auction.mRID" type="ID_String"
230 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
231 schema-cim16#IdentifiedObject.mRID"/>
232       <xs:element name="noBid_Auction.category"
233 type="Category_String" minOccurs="0" maxOccurs="1"
234 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
235 cim16#Auction.category"/>
236       <xs:element name="NoBid_Reason" type="Reason" minOccurs="1"
237 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
238 cim16#TimeSeries.NoBid_Reason"/>
239     </xs:sequence>
240   </xs:complexType>
241   <xs:simpleType name="Position_Integer"
242 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
243     <xs:restriction base="xs:integer">
244       <xs:maxInclusive value="999999"/>
245       <xs:minInclusive value="1"/>
246     </xs:restriction>
247   </xs:simpleType>
248   <xs:simpleType name="Amount_Decimal"
249 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
250     <xs:restriction base="xs:decimal">
251       <xs:totalDigits value="17"/>
252     </xs:restriction>
```

```

253     </xs:simpleType>
254     <xs:complexType name="Point"
255     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
256         <xs:sequence>
257             <xs:element name="position" type="Position_Integer"
258     minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
259     schema-cim16#Point.position"/>
260             <xs:element name="quantity" type="xs:decimal" minOccurs="1"
261     maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
262     cim16#Point.quantity"/>
263             <xs:element name="amount_Price.amount" type="Amount_Decimal"
264     minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
265     schema-cim16#Price.amount"/>
266             <xs:element name="secondaryQuantity" type="xs:decimal"
267     minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
268     schema-cim16#Point.secondaryQuantity"/>
269             <xs:element name="bidAmount_Price.amount" type="Amount_Decimal"
270     minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
271     schema-cim16#Price.amount"/>
272             <xs:element name="Reason" type="Reason" minOccurs="0"
273     maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
274     cim16#Point.Reason"/>
275         </xs:sequence>
276     </xs:complexType>
277     <xs:simpleType name="ReasonCode_String"
278     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
279         <xs:restriction base="ecl:ReasonCodeTypeList"/>
280     </xs:simpleType>
281     <xs:simpleType name="ReasonText_String"
282     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
283         <xs:restriction base="xs:string">
284             <xs:maxLength value="512"/>
285         </xs:restriction>
286     </xs:simpleType>
287     <xs:complexType name="Reason"
288     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
289         <xs:sequence>
290             <xs:element name="code" type="ReasonCode_String" minOccurs="1"
291     maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
292     cim16#Reason.code"/>
293             <xs:element name="text" type="ReasonText_String" minOccurs="0"
294     maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
295     cim16#Reason.text"/>
296         </xs:sequence>
297     </xs:complexType>
298     <xs:simpleType name="YMDHM_DateTime"
299     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
300         <xs:restriction base="xs:string">
301             <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02]))[\-](0[1-
302     9]|12|[0-9]|3[01])|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|12|[0-
303     9]|30))T((([01][0-9]|2[0-3]):[0-5][0-
304     9])Z)|(((13579)[26][02468][048]|13579)[01345789](0)[48]|13579)[01345789][2468][0
305     48]|02468[048][02468][048]|02468[1235679](0)[48]|02468[1235679][2468][048]|[
306     0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-
307     5][0-
308     9])Z)|(((13579)[26][02468][1235679]|13579)[01345789](0)[01235679]|13579)[0134578
309     9][2468][1235679]|02468[048][02468][1235679]|02468[1235679](0)[01235679]|0246
310     8[1235679][2468][1235679]|0-9[0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-
311     9]|2[0-8])T((([01][0-9]|2[0-3]):[0-5][0-9])Z)"/>
312         </xs:restriction>

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313         </xs:simpleType>
314         <xs:complexType name="ESMP_DateTimeInterval"
315 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
316             <xs:sequence>
317                 <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
318 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
319 cim16#DateTimeInterval.start"/>
320                 <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
321 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
322 cim16#DateTimeInterval.end"/>
323             </xs:sequence>
324         </xs:complexType>
325         <xs:complexType name="Series_Period"
326 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
327             <xs:sequence>
328                 <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
329 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
330 schema-cim16#Period.timeInterval"/>
331                 <xs:element name="resolution" type="xs:duration" minOccurs="1"
332 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
333 cim16#Period.resolution"/>
334                 <xs:element name="Point" type="Point" minOccurs="1"
335 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
336 cim16#Period.Point"/>
337             </xs:sequence>
338         </xs:complexType>
339         <xs:simpleType name="ESMPVersion_String"
340 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
341             <xs:restriction base="xs:string">
342                 <xs:pattern value="[1-9]([0-9]){0,2}"/>
343             </xs:restriction>
344         </xs:simpleType>
345         <xs:simpleType name="PartyID_String-base"
346 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
347             <xs:restriction base="xs:string">
348                 <xs:maxLength value="16"/>
349             </xs:restriction>
350         </xs:simpleType>
351         <xs:complexType name="PartyID_String"
352 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
353             <xs:simpleContent>
354                 <xs:extension base="PartyID_String-base">
355                     <xs:attribute name="codingScheme"
356 type="ecl:CodingSchemeTypeList" use="required"/>
357                 </xs:extension>
358             </xs:simpleContent>
359         </xs:complexType>
360         <xs:simpleType name="BusinessKind_String"
361 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
362             <xs:restriction base="ecl:BusinessTypeList"/>
363         </xs:simpleType>
364         <xs:simpleType name="AreaID_String-base"
365 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
366             <xs:restriction base="xs:string">
367                 <xs:maxLength value="18"/>
368             </xs:restriction>
369         </xs:simpleType>
370         <xs:complexType name="AreaID_String"
371 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
372             <xs:simpleContent>

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373         <xs:extension base="AreaID_String-base">
374             <xs:attribute name="codingScheme"
375 type="ecl:CodingSchemeTypeList" use="required"/>
376         </xs:extension>
377     </xs:simpleContent>
378 </xs:complexType>
379 <xs:simpleType name="CapacityContractKind_String"
380 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
381     <xs:restriction base="ecl:ContractTypeList"/>
382 </xs:simpleType>
383 <xs:simpleType name="MeasurementUnitKind_String"
384 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
385     <xs:restriction base="ecl:UnitOfMeasureTypeList"/>
386 </xs:simpleType>
387 <xs:simpleType name="CurrencyCode_String"
388 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
389     <xs:restriction base="ecl:CurrencyTypeList"/>
390 </xs:simpleType>
391 <xs:simpleType name="CurveType_String"
392 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
393     <xs:restriction base="ecl:CurveTypeList"/>
394 </xs:simpleType>
395 <xs:complexType name="TimeSeries"
396 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
397     <xs:sequence>
398         <xs:element name="mRID" type="ID_String" minOccurs="1"
399 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
400 cim16#IdentifiedObject.mRID"/>
401         <xs:element name="bidDocument_MarketDocument.mRID"
402 type="ID_String" minOccurs="1" maxOccurs="1"
403 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
404 cim16#IdentifiedObject.mRID"/>
405         <xs:element name="bidDocument_MarketDocument.revisionNumber"
406 type="ESMPVersion_String" minOccurs="1" maxOccurs="1"
407 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
408 cim16#Document.revisionNumber"/>
409         <xs:element
410 name="bidDocument_MarketDocument.bid_TimeSeries.mRID" type="ID_String"
411 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
412 schema-cim16#IdentifiedObject.mRID"/>
413         <xs:element
414 name="bidDocument_MarketDocument.biddingParty_MarketParticipant.mRID"
415 type="PartyID_String" minOccurs="1" maxOccurs="1"
416 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
417 cim16#IdentifiedObject.mRID"/>
418         <xs:element name="auction.mRID" type="ID_String" minOccurs="1"
419 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
420 cim16#IdentifiedObject.mRID"/>
421         <xs:element name="auction.category" type="Category_String"
422 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
423 schema-cim16#Auction.category"/>
424         <xs:element name="businessType" type="BusinessKind_String"
425 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
426 schema-cim16#TimeSeries.businessType"/>
427         <xs:element name="in_Domain.mRID" type="AreaID_String"
428 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
429 schema-cim16#IdentifiedObject.mRID"/>
430         <xs:element name="out_Domain.mRID" type="AreaID_String"
431 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
432 schema-cim16#IdentifiedObject.mRID"/>

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433         <xs:element name="contract_MarketAgreement.type"
434 type="CapacityContractKind_String" minOccurs="1" maxOccurs="1"
435 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
436         <xs:element name="contract_MarketAgreement.mRID"
437 type="ID_String" minOccurs="1" maxOccurs="1"
438 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
439 cim16#IdentifiedObject.mRID"/>
440         <xs:element name="quantity_Measurement_Unit.name"
441 type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
442 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
443         <xs:element name="currency_Unit.name"
444 type="CurrencyCode_String" minOccurs="0" maxOccurs="1"
445 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
446         <xs:element name="price_Measurement_Unit.name"
447 type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
448 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
449         <xs:element name="curveType" type="CurveType_String"
450 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
451 schema-cim16#TimeSeries.curveType"/>
452         <xs:element name="Period" type="Series_Period" minOccurs="1"
453 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
454 cim16#TimeSeries.Period"/>
455         <xs:element name="Reason" type="Reason" minOccurs="0"
456 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
457 cim16#TimeSeries.Reason"/>
458     </xs:sequence>
459 </xs:complexType>
460 <xs:simpleType name="MessageKind_String"
461 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
462     <xs:restriction base="ecl:MessageTypeList"/>
463 </xs:simpleType>
464 <xs:simpleType name="MarketRoleKind_String"
465 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
466     <xs:restriction base="ecl:RoleTypeList"/>
467 </xs:simpleType>
468 <xs:simpleType name="ESMP_DateTime"
469 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
470     <xs:restriction base="xs:dateTime">
471         <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-
472 9]|12)[0-9]|3[01])|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|12)[0-
473 9]|30)T((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-
474 9])Z)|(((13579)[26][02468][048]|13579)[01345789](0)[48]|13579)[01345789][2468][0
475 48]|02468)[048][02468][048]|02468)[1235679](0)[48]|02468)[1235679][2468][048]|([
476 0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-
477 5][0-9]:[0-5][0-
478 9])Z)|(((13579)[26][02468][1235679]|13579)[01345789](0)[01235679]|13579)[0134578
479 9][2468][1235679]|02468)[048][02468][1235679]|02468)[1235679](0)[01235679]|0246
480 8)[1235679][2468][1235679]|0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-
481 9]|2[0-8])T((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)"/>
482     </xs:restriction>
483 </xs:simpleType>
484 <xs:complexType name="TotalAllocationResult_MarketDocument"
485 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
486     <xs:sequence>
487         <xs:element name="mRID" type="ID_String" minOccurs="1"
488 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
489 cim16#IdentifiedObject.mRID"/>
490         <xs:element name="revisionNumber" type="ESMPVersion_String"
491 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
492 schema-cim16#Document.revisionNumber"/>

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493         <xs:element name="type" type="MessageKind_String" minOccurs="1"
494 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
495 cim16#Document.type"/>
496         <xs:element name="sender_MarketParticipant.mRID"
497 type="PartyID_String" minOccurs="1" maxOccurs="1"
498 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
499 cim16#IdentifiedObject.mRID"/>
500         <xs:element name="sender_MarketParticipant.marketRole.type"
501 type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
502 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
503         <xs:element name="receiver_MarketParticipant.mRID"
504 type="PartyID_String" minOccurs="1" maxOccurs="1"
505 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
506 cim16#IdentifiedObject.mRID"/>
507         <xs:element name="receiver_MarketParticipant.marketRole.type"
508 type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
509 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
510         <xs:element name="createdDateTime" type="ESMP_DateTime"
511 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
512 schema-cim16#Document.createdDateTime"/>
513         <xs:element name="period.timeInterval"
514 type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
515 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
516 cim16#Period.timeInterval"/>
517         <xs:element name="domain.mRID" type="AreaID_String"
518 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
519 schema-cim16#IdentifiedObject.mRID"/>
520         <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
521 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
522 cim16#MarketDocument.TimeSeries"/>
523         <xs:element name="Reason" type="Reason" minOccurs="0"
524 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
525 cim16#MarketDocument.Reason"/>
526         <xs:element name="NoBid_TimeSeries"
527 type="NoBidAuction_TimeSeries" minOccurs="0" maxOccurs="unbounded"
528 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
529 cim16#MarketDocument.NoBid_TimeSeries"/>
530     </xs:sequence>
531 </xs:complexType>
532 </xs:schema>
533
```