



European Network of
Transmission System Operators
for Electricity

CAPACITY ALLOCATION CONFIGURATION DOCUMENT UML MODEL AND SCHEMA

2020-03-18
APPROVED DOCUMENT
VERSION 1.0

2

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57

Revision History

Version	Release	Date	Comments
0	1	2019-12-23	First draft of the document.
0	2	2020-02-14	Second draft if the document. Comments from CIM EG were taken into account.
1	0	2020-03-18	Approved by MC.

58

59 1 Objective

60 The purpose of this document is to provide the contextual and assembly UML models and the
61 schema of the CapacityAllocationConfiguration_MarketDocument.

62 The schema of the CapacityAllocationConfiguration_MarketDocument could be used in various
63 business processes.

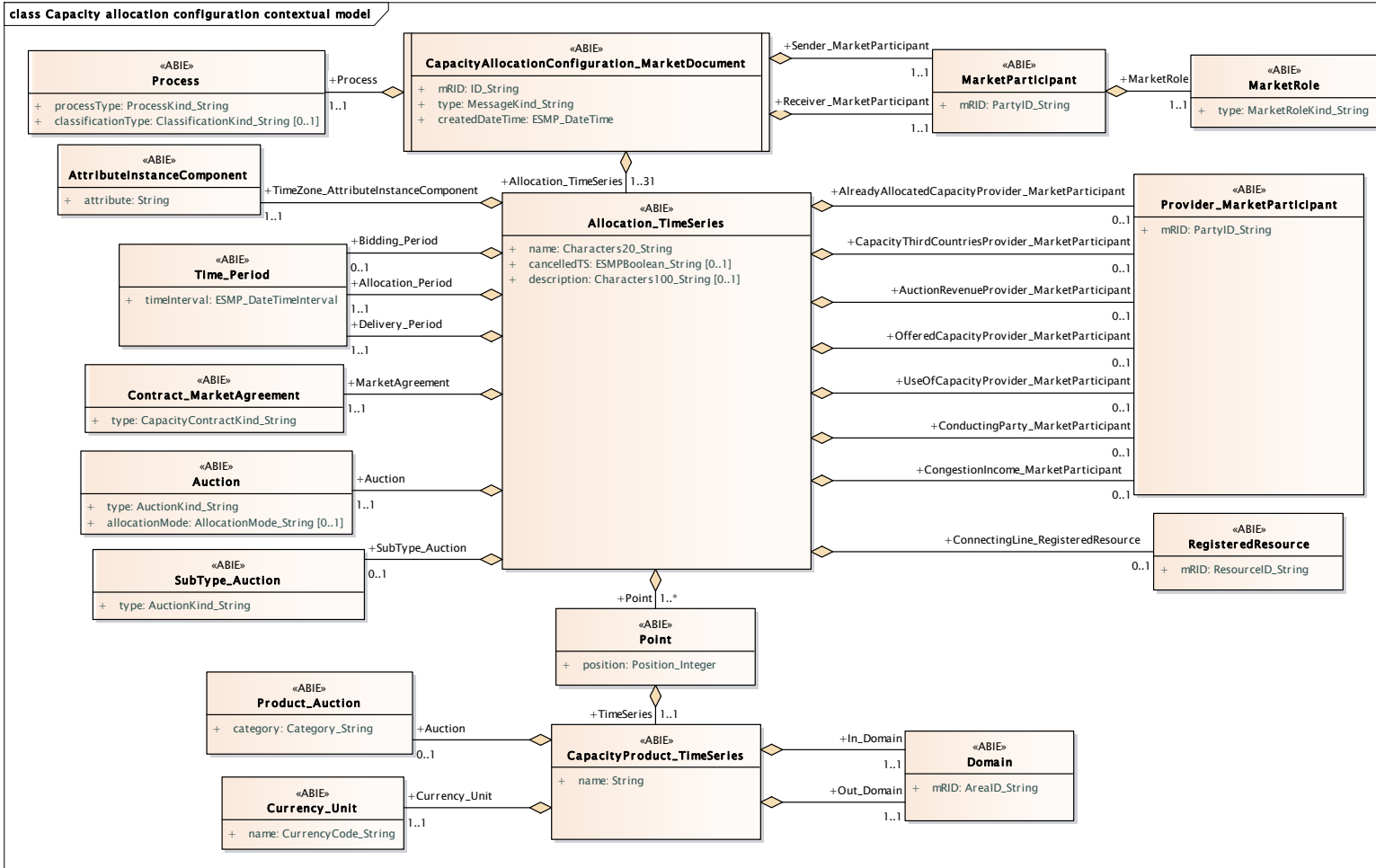
64 It is not the purpose of this document to describe all the use cases, sequence diagrams,
65 business processes, etc. for which this schema is to be used.

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

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

76

- 77 **2 CapacityAllocationConfiguration_MarketDocument**
- 78 **2.1 Capacity allocation configuration contextual model**
- 79 **2.1.1 Overview of the model**
- 80 Figure 1 shows the model.



81

82

Figure 1 - Capacity allocation configuration contextual model

83

84

85 **2.1.2** IsBasedOn relationships from the European style market profile

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

88

Table 1 - IsBasedOn dependency

Name	Complete IsBasedOn Path
Allocation_TimeSeries	TC57CIM::IEC62325::MarketManagement::TimeSeries
AttributeInstanceComponent	TC57CIM::IEC62325::MarketManagement::AttributeInstanceComponent
Auction	TC57CIM::IEC62325::MarketManagement::Auction
CapacityAllocationConfiguration_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
CapacityProduct_TimeSeries	TC57CIM::IEC62325::MarketManagement::TimeSeries
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
Point	TC57CIM::IEC62325::MarketManagement::Point
Process	TC57CIM::IEC62325::MarketManagement::Process
Product_Auction	TC57CIM::IEC62325::MarketManagement::Auction
Provider_MarketParticipant	TC57CIM::IEC62325::MarketCommon::MarketParticipant
RegisteredResource	TC57CIM::IEC62325::MarketCommon::RegisteredResource
SubType_Auction	TC57CIM::IEC62325::MarketManagement::Auction
Time_Period	TC57CIM::IEC62325::MarketManagement::Period

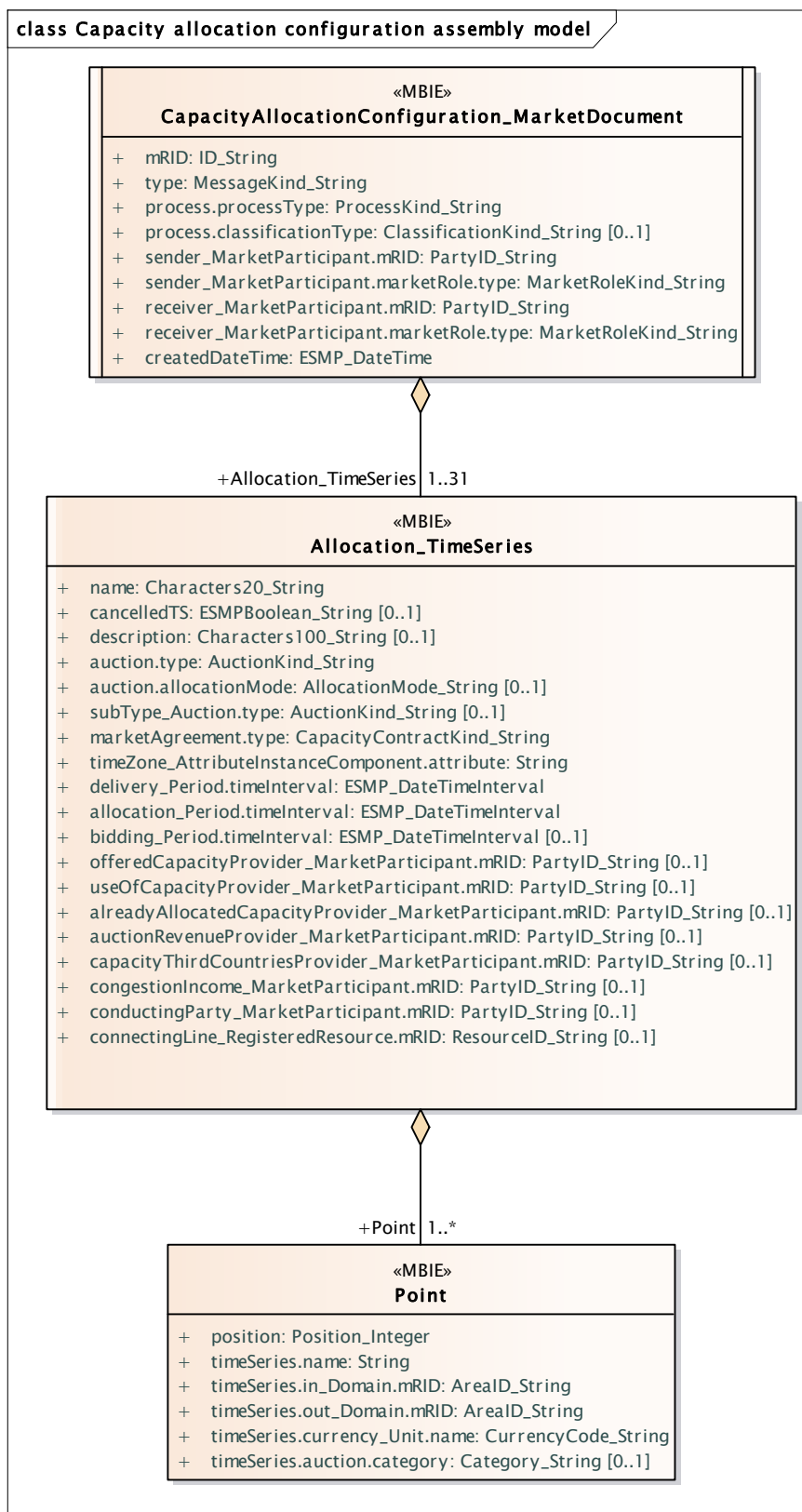
89

90

91 2.2 Capacity allocation configuration assembly model

92 2.2.1 Overview of the model

93 Figure 2 shows the model.



94

95

Figure 2 - Capacity allocation configuration assembly model

96

97 **2.2.2** IsBasedOn relationships from the European style market profile

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

100

Table 2 - IsBasedOn dependency

Name	Complete IsBasedOn Path
Allocation_TimeSeries	TC57CIM::IEC62325::MarketManagement::TimeSeries
CapacityAllocationConfiguration_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
Point	TC57CIM::IEC62325::MarketManagement::Point

101

102 **2.2.3** Detailed Capacity allocation configuration assembly model

103 2.2.3.1 CapacityAllocationConfiguration_MarketDocument root class

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

106 The CapacityAllocationConfiguration_MarketDocument is issued by the data provider to inform
107 about the transmission capacity allocation calendar

108 It provides information on the auction that will be carried out.

109 Table 3 shows all attributes of CapacityAllocationConfiguration_MarketDocument.

110

**Table 3 - Attributes of Capacity allocation configuration assembly
model::CapacityAllocationConfiguration_MarketDocument**

111

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]	type MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.
2	[1..1]	process.processType ProcessKind_String	The identification of the nature of process that the document addresses.
3	[0..1]	process.classificationType ClassificationKind_String	The classification mechanism used to group a set of objects together within a business process. The grouping may be of a detailed or a summary nature.
4	[1..1]	sender_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- Document owner.
5	[1..1]	sender_MarketParticipant.marketRole.type MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
6	[1..1]	receiver_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- Document recipient.
7	[1..1]	receiver_MarketParticipant.marketRole.type MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
8	[1..1]	createdDateTime ESMP_DateTime	The date and time of the creation of the document.

112

113 Table 4 shows all association ends of CapacityAllocationConfiguration_MarketDocument with
114 other classes.

115
116

**Table 4 - Association ends of Capacity allocation configuration assembly
model::CapacityAllocationConfiguration_MarketDocument with other classes**

Order	mult.	Class name / Role	Description
9	[1..31]	Allocation_TimeSeries Allocation_TimeSeries	The time series that is associated with an electronic document. Association Based On: Capacity allocation configuration contextual model::Allocation_TimeSeries.Allocation_TimeSeries[1..31] ----- Capacity allocation configuration contextual model::CapacityAllocationConfiguration_MarketDocument.[]

117

118 2.2.3.2 Allocation_TimeSeries

119 The Allocation_TimeSeries provide the necessary information about what is auctioned as
120 transmission capacity.

121 Table 5 shows all attributes of Allocation_TimeSeries.

122
123

**Table 5 - Attributes of Capacity allocation configuration assembly
model::Allocation_TimeSeries**

Order	mult.	Attribute name / Attribute type	Description
0	[1..1]	name Characters20_String	The name is any free human readable and possibly non unique text naming the object. This attribute identifies the allocation instance. It may be non unique; however the combination of the name and delivery_Period shall be unique.
1	[0..1]	cancelledTS ESMPBoolean_String	An indicator stating that the allocation instance is cancelled.
2	[0..1]	description Characters100_String	The description is a free human readable text describing or naming the object. It may be non unique and may not correlate to a naming hierarchy.
3	[1..1]	auction.type AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...).
4	[0..1]	auction.allocationMode AllocationMode_String	The identification of the method of allocation in an auction.
5	[0..1]	subType_Auction.type AuctionKind_String	Additional information about the auction, i.e. shadow auction.
6	[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 capacity will be allocated.
7	[1..1]	timeZone_AttributeInstanceComponent.attribute String	Definition of the time zone where the allocation is planned. This information could be used to map the UTC datetime values into the local business time. The identification of an attribute for a given request component. --- It provides the information of the local time zone where the allocation will be carried out.
8	[1..1]	delivery_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 when the capacity is to be used.

Order	mult.	Attribute name / Attribute type	Description
9	[1..1]	allocation_Period.timeInterval ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The allocation period is the period of time during an auction when capacity allocation (e.g. auction for explicit capacity) is carried out
10	[0..1]	bidding_Period.timeInterval ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the bidding period within which capacity traders can submit a bid to the transmission capacity allocator.
11	[0..1]	offeredCapacityProvider_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- The identification of a market participant associated with a TimeSeries. The party providing data describing the offered capacity.
12	[0..1]	useOfCapacityProvider_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- The identification of a market participant associated with a TimeSeries. The party providing data describing the requested and allocated capacity, the price of the capacity and possibly also the auction revenue.
13	[0..1]	alreadyAllocatedCapacityProvider_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- The identification of a market participant associated with a TimeSeries. The party providing data describing the already allocated capacity.
14	[0..1]	auctionRevenueProvider_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- The identification of a market participant associated with a TimeSeries. The party providing data describing the auction revenue.
15	[0..1]	capacityThirdCountriesProvider_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- The identification of a market participant associated with a TimeSeries. The party providing data describing the cross-zonal capacities allocated between bidding zones in Member States and third countries.
16	[0..1]	congestionIncome_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- The identification of a market participant associated with a TimeSeries. The party providing data describing the congestion income.
17	[0..1]	conductingParty_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- The identification of the party who manages the allocation process. The party conducting the capacity allocation.

Order	mult.	Attribute name / Attribute type	Description
18	[0..1]	connectingLine_RegisteredResource.mRID ResourceID_String	The unique identification of a resource. In the ESMP context, the "model authority" is defined as an authorized issuing office that provides an agreed identification coding scheme for market participant, domain, measurement point, resources (generator, lines, substations, etc.) identification. Master resource identifier issued by a model authority. The mRID is globally unique within an exchange context. Global uniqueness is easily achieved by using a UUID for the mRID. It is strongly recommended to do this. For CIMXML data files in RDF syntax, the mRID is mapped to rdf:ID or rdf:about attributes that identify CIM object elements. --- The identification of a resource associated with a TimeSeries.

124

125 Table 6 shows all association ends of Allocation_TimeSeries with other classes.

126 **Table 6 - Association ends of Capacity allocation configuration assembly**
127 **model::Allocation_TimeSeries with other classes**

Order	mult.	Class name / Role	Description
19	[1..*]	Point Point	The values and the position associated with the TimeSeries. Association Based On: Capacity allocation configuration contextual model::Point.Point[1..*] ----- Capacity allocation configuration contextual model::Allocation_TimeSeries.[]

128

129 2.2.3.3 Point

130 The identification of the values.

131 Table 7 shows all attributes of Point.

132 **Table 7 - Attributes of Capacity allocation configuration assembly model::Point**

Order	mult.	Attribute name / Attribute type	Description
0	[1..1]	position Position_Integer	A sequential value representing a relative sequence number. This defines the sequence of the capacity product within a given auction category such as Base 1 or Base 2. This corresponds to the auction round being carried out for a product category.
1	[1..1]	timeSeries.name String	The name is any free human readable and possibly non unique text naming the object. Any human readable and possibly non unique text naming the capacity product, for example EURO Base 1 FR>BE. --- TheTimeSeries provides additional information related to a Position within a given time interval.
2	[1..1]	timeSeries.in_Domain.mRID AreaID_String	The unique identification of the domain. --- TheTimeSeries provides additional information related to a Position within a given time interval. --- The identification of the area where the energy is flowing into. The identification of the area where the energy is destined for the capacity product. The codification scheme used for the coded identification is indicated by the coding scheme attribute.

Order	mult.	Attribute name / Attribute type	Description
3	[1..1]	timeSeries.out_Domain.mRID AreaID_String	The unique identification of the domain. --- TheTimeSeries provides additional information related to a Position within a given time interval. --- The identification of the area from where the energy is coming. The identification of the area where the energy is destined for the capacity product. The codification scheme used for the coded identification is indicated by the coding scheme attribute.
4	[1..1]	timeSeries.currency_Unit.name CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- TheTimeSeries provides additional information related to a Position within a given time interval. --- The currency associated with a TimeSeries.
5	[0..1]	timeSeries.auction.category Category_String	The product category of an auction. --- TheTimeSeries provides additional information related to a Position within a given time interval. --- The auction characteristics that are associated with a TimeSeries. The category of the capacity product as defined by market rules. This information describes what hours of the day are covered by the product. The following codes have been initially defined: A01: Base A02: Peak A03: Off-peak A04: Hourly

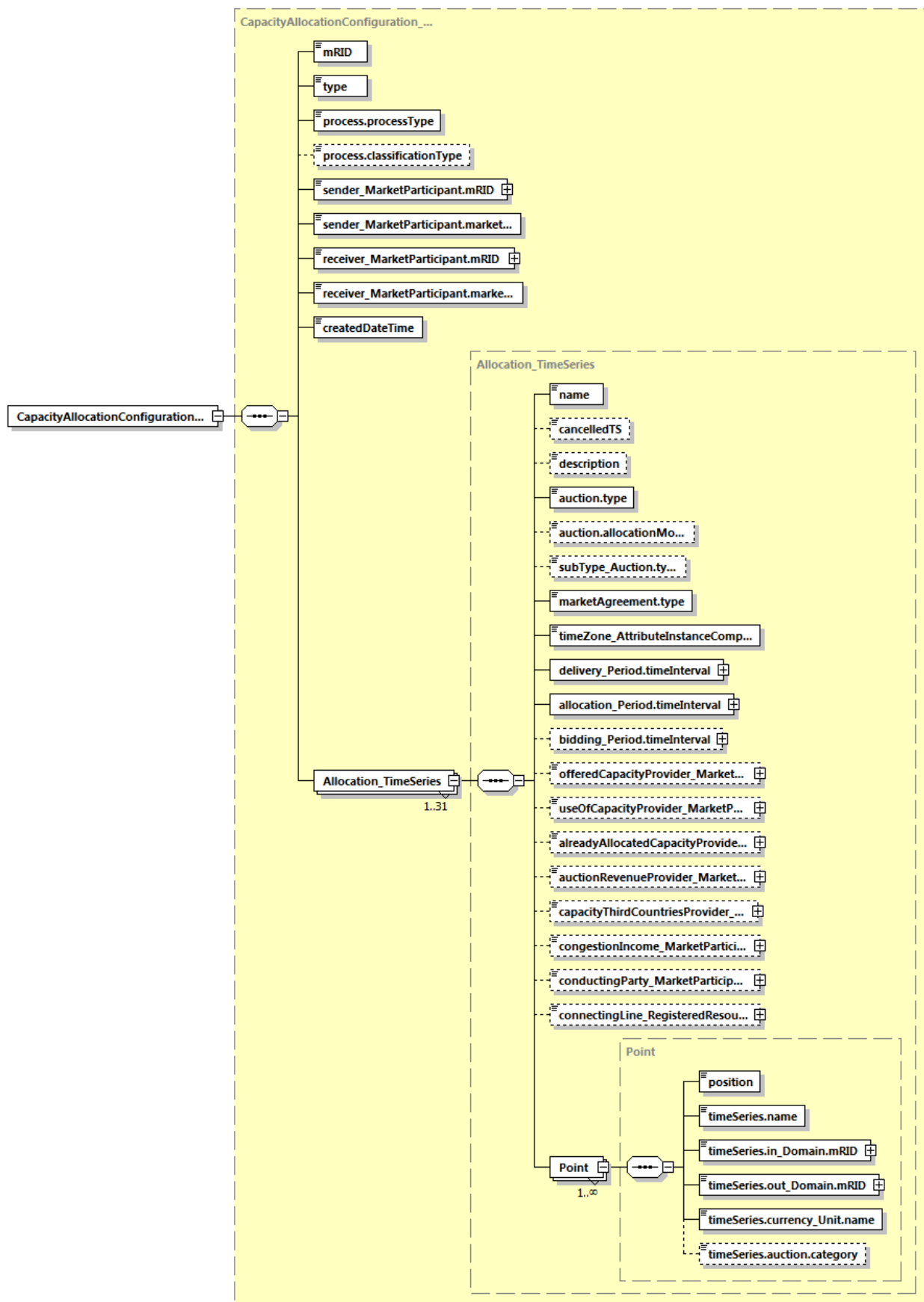
133

134 2.2.4 Datatypes

135 The list of datatypes used for the Capacity allocation configuration assembly model is as
136 follows:

- 137 • ESMP_DateTimeInterval compound
- 138 • AllocationMode_String datatype, codelist AllocationModeTypeList
- 139 • AreaID_String datatype, codelist CodingSchemeTypeList
- 140 • AuctionKind_String datatype, codelist AuctionTypeList
- 141 • CapacityContractKind_String datatype, codelist ContractTypeList
- 142 • Category_String datatype, codelist CategoryTypeList
- 143 • Characters100_String datatype
- 144 • Characters20_String datatype
- 145 • ClassificationKind_String datatype, codelist ClassificationTypeList
- 146 • CurrencyCode_String datatype, codelist CurrencyTypeList
- 147 • ESMP_DateTime datatype
- 148 • ESMPBoolean_String datatype, codelist IndicatorTypeList
- 149 • ID_String datatype
- 150 • MarketRoleKind_String datatype, codelist RoleTypeList
- 151 • MessageKind_String datatype, codelist MessageTypeList
- 152 • PartyID_String datatype, codelist CodingSchemeTypeList
- 153 • Position_Integer datatype
- 154 • ProcessKind_String datatype, codelist ProcessTypeList
- 155 • ResourceID_String datatype, codelist CodingSchemeTypeList
- 156 • YMDHM_DateTime datatype
- 157

158 2.2.5 CapacityAllocationConfiguration_MarketDocument XML schema structure



159
160

Figure 3 - CapacityAllocationConfiguration_MarketDocument schema structure

Generated by XMLSpy www.altova.com

161 **2.2.6** CapacityAllocationConfiguration_MarketDocument XML schema

162

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

164 urn:iec62325.351:tc57wg16:451-6:capacityallocationconfigurationdocument:1:2

```
165 <?xml version="1.0" encoding="utf-8"?>
166 <xs:schema xmlns:ecl="urn:entsoe.eu:wgedi:codelists"
167 xmlns="urn:iec62325.351:tc57wg16:451-
168 6:capacityallocationconfigurationdocument:1:2"
169 xmlns:sawsdl="http://www.w3.org/ns/sawsdl"
170 xmlns:cimp="http://www.iec.ch/cimprofile"
171 xmlns:xs="http://www.w3.org/2001/XMLSchema"
172 targetNamespace="urn:iec62325.351:tc57wg16:451-
173 6:capacityallocationconfigurationdocument:1:2" elementFormDefault="qualified"
174 attributeFormDefault="unqualified">
175   <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
176 entsoe-eu-wgedi-codelists.xsd"/>
177   <xs:element name="CapacityAllocationConfiguration_MarketDocument"
178 type="CapacityAllocationConfiguration_MarketDocument"/>
179   <xs:simpleType name="Characters20_String"
180 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
181     <xs:restriction base="xs:string">
182       <xs:maxLength value="20"/>
183     </xs:restriction>
184   </xs:simpleType>
185   <xs:simpleType name="ESMPBoolean_String"
186 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
187     <xs:restriction base="ecl:IndicatorTypeList"/>
188   </xs:simpleType>
189   <xs:simpleType name="Characters100_String"
190 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
191     <xs:restriction base="xs:string">
192       <xs:maxLength value="100"/>
193     </xs:restriction>
194   </xs:simpleType>
195   <xs:simpleType name="AuctionKind_String"
196 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
197     <xs:restriction base="ecl:AuctionTypeList"/>
198   </xs:simpleType>
199   <xs:simpleType name="AllocationMode_String"
200 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
201     <xs:restriction base="ecl:AllocationModeTypeList"/>
202   </xs:simpleType>
203   <xs:simpleType name="CapacityContractKind_String"
204 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
205     <xs:restriction base="ecl:ContractTypeList"/>
206   </xs:simpleType>
207   <xs:simpleType name="PartyID_String-base"
208 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
209     <xs:restriction base="xs:string">
210       <xs:maxLength value="16"/>
211     </xs:restriction>
212   </xs:simpleType>
213   <xs:complexType name="PartyID_String"
214 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
215     <xs:simpleContent>
216       <xs:extension base="PartyID_String-base">
```



```
217         <xs:attribute name="codingScheme"
218 type="ecl:CodingSchemeTypeList" use="required"/>
219         </xs:extension>
220     </xs:simpleContent>
221 </xs:complexType>
222 <xs:simpleType name="ResourceID_String-base"
223 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
224     <xs:restriction base="xs:string">
225         <xs:maxLength value="60"/>
226     </xs:restriction>
227 </xs:simpleType>
228 <xs:complexType name="ResourceID_String"
229 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
230     <xs:simpleContent>
231         <xs:extension base="ResourceID_String-base">
232             <xs:attribute name="codingScheme"
233 type="ecl:CodingSchemeTypeList" use="required"/>
234         </xs:extension>
235     </xs:simpleContent>
236 </xs:complexType>
237 <xs:simpleType name="YMDHM_DateTime"
238 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
239     <xs:restriction base="xs:string">
240         <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02]))[\-](0[1-
241 9]|12)[0-9]|3[01]))|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|12)[0-
242 9]|30))T((([01][0-9]|2[0-3]):[0-5][0-
243 9])Z)|([02468][048][02468][048]|13579[01345789](0)[48]|13579[01345789][2468][0
244 48]|02468[048][02468][048]|02468[1235679](0)[48]|02468[1235679][2468][048]|
245 0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-
246 5][0-
247 9])Z)|(((13579)[26][02468][1235679]|13579[01345789](0)[01235679]|13579[0134578
248 9][2468][1235679]|02468[048][02468][1235679]|02468[1235679](0)[01235679]|0246
249 8][1235679][2468][1235679]|0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-
250 9]|2[0-8])T((([01][0-9]|2[0-3]):[0-5][0-9])Z)"/>
251     </xs:restriction>
252 </xs:simpleType>
253 <xs:complexType name="ESMP_DateTimeInterval"
254 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
255     <xs:sequence>
256         <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
257 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
258 cim16#DateTimeInterval.start"/>
259         <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
260 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
261 cim16#DateTimeInterval.end"/>
262     </xs:sequence>
263 </xs:complexType>
264 <xs:complexType name="Allocation_TimeSeries"
265 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
266     <xs:sequence>
267         <xs:element name="name" type="Characters20_String"
268 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
269 schema-cim16#IdentifiedObject.name"/>
270         <xs:element name="cancelledTS" type="ESMPBoolean_String"
271 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
272 schema-cim16#TimeSeries.cancelledTS"/>
273         <xs:element name="description" type="Characters100_String"
274 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
275 schema-cim16#IdentifiedObject.description"/>
```



```
276         <xs:element name="auction.type" type="AuctionKind_String"
277 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
278 schema-cim16#Auction.type"/>
279         <xs:element name="auction.allocationMode"
280 type="AllocationMode_String" minOccurs="0" maxOccurs="1"
281 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
282 cim16#Auction.allocationMode"/>
283         <xs:element name="subType_Auction.type"
284 type="AuctionKind_String" minOccurs="0" maxOccurs="1"
285 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Auction.type"/>
286         <xs:element name="marketAgreement.type"
287 type="CapacityContractKind_String" minOccurs="1" maxOccurs="1"
288 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
289         <xs:element
290 name="timeZone_AttributeInstanceComponent.attribute" type="xs:string"
291 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
292 schema-cim16#AttributeInstanceComponent.attribute"/>
293         <xs:element name="delivery_Period.timeInterval"
294 type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
295 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
296 cim16#Period.timeInterval"/>
297         <xs:element name="allocation_Period.timeInterval"
298 type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
299 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
300 cim16#Period.timeInterval"/>
301         <xs:element name="bidding_Period.timeInterval"
302 type="ESMP_DateTimeInterval" minOccurs="0" maxOccurs="1"
303 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
304 cim16#Period.timeInterval"/>
305         <xs:element
306 name="offeredCapacityProvider_MarketParticipant.mRID" type="PartyID_String"
307 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
308 schema-cim16#IdentifiedObject.mRID"/>
309         <xs:element
310 name="useOfCapacityProvider_MarketParticipant.mRID" type="PartyID_String"
311 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
312 schema-cim16#IdentifiedObject.mRID"/>
313         <xs:element
314 name="alreadyAllocatedCapacityProvider_MarketParticipant.mRID"
315 type="PartyID_String" minOccurs="0" maxOccurs="1"
316 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
317 cim16#IdentifiedObject.mRID"/>
318         <xs:element
319 name="auctionRevenueProvider_MarketParticipant.mRID" type="PartyID_String"
320 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
321 schema-cim16#IdentifiedObject.mRID"/>
322         <xs:element
323 name="capacityThirdCountriesProvider_MarketParticipant.mRID" type="PartyID_String"
324 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
325 schema-cim16#IdentifiedObject.mRID"/>
326         <xs:element name="congestionIncome_MarketParticipant.mRID"
327 type="PartyID_String" minOccurs="0" maxOccurs="1"
328 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
329 cim16#IdentifiedObject.mRID"/>
330         <xs:element name="conductingParty_MarketParticipant.mRID"
331 type="PartyID_String" minOccurs="0" maxOccurs="1"
332 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
333 cim16#IdentifiedObject.mRID"/>
334         <xs:element name="connectingLine_RegisteredResource.mRID"
335 type="ResourceID_String" minOccurs="0" maxOccurs="1"/>
```

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336 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
337 cim16#IdentifiedObject.mRID"/>
338 <xs:element name="Point" type="Point" minOccurs="1"
339 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
340 cim16#TimeSeries.Point"/>
341 </xs:sequence>
342 </xs:complexType>
343 <xs:simpleType name="ID_String"
344 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
345 <xs:restriction base="xs:string">
346 <xs:maxLength value="35"/>
347 </xs:restriction>
348 </xs:simpleType>
349 <xs:simpleType name="MessageKind_String"
350 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
351 <xs:restriction base="ecl:MessageTypeList"/>
352 </xs:simpleType>
353 <xs:simpleType name="ProcessKind_String"
354 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
355 <xs:restriction base="ecl:ProcessTypeList"/>
356 </xs:simpleType>
357 <xs:simpleType name="ClassificationKind_String"
358 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
359 <xs:restriction base="ecl:ClassificationTypeList"/>
360 </xs:simpleType>
361 <xs:simpleType name="MarketRoleKind_String"
362 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
363 <xs:restriction base="ecl:RoleTypeList"/>
364 </xs:simpleType>
365 <xs:simpleType name="ESMP_DateTime"
366 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
367 <xs:restriction base="xs:dateTime">
368 <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-
369 9]|[12][0-9]|3[01])|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|12)[0-
370 9]|30))T(([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-
371 9])Z)|(((13579)[26][02468][048]|13579[01345789](0)[48]|13579[01345789][2468][0
372 48]|02468[048][02468][048]|02468[1235679](0)[48]|02468[1235679][2468][048]|
373 0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T(([01][0-9]|2[0-3]):[0-
374 5][0-9]:[0-5][0-
375 9])Z)|(((13579)[26][02468][1235679]|13579[01345789](0)[01235679]|13579[0134578
376 9][2468][1235679]|02468[048][02468][1235679]|02468[1235679](0)[01235679]|0246
377 8][1235679][2468][1235679]|0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-
378 9]|2[0-8])T(([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)"/>
379 </xs:restriction>
380 </xs:simpleType>
381 <xs:complexType name="CapacityAllocationConfiguration_MarketDocument"
382 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
383 <xs:sequence>
384 <xs:element name="mRID" type="ID_String" minOccurs="1"
385 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
386 cim16#IdentifiedObject.mRID"/>
387 <xs:element name="type" type="MessageKind_String"
388 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
389 schema-cim16#Document.type"/>
390 <xs:element name="process.processType"
391 type="ProcessKind_String" minOccurs="1" maxOccurs="1"
392 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
393 cim16#Process.processType"/>
394 <xs:element name="process.classificationType"
395 type="ClassificationKind_String" minOccurs="0" maxOccurs="1"
```

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396 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
397 cim16#Process.classificationType"/>
398     <xs:element name="sender_MarketParticipant.mRID"
399 type="PartyID_String" minOccurs="1" maxOccurs="1"
400 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
401 cim16#IdentifiedObject.mRID"/>
402     <xs:element name="sender_MarketParticipant.marketRole.type"
403 type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
404 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
405     <xs:element name="receiver_MarketParticipant.mRID"
406 type="PartyID_String" minOccurs="1" maxOccurs="1"
407 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
408 cim16#IdentifiedObject.mRID"/>
409     <xs:element name="receiver_MarketParticipant.marketRole.type"
410 type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
411 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
412     <xs:element name="createdDateTime" type="ESMP_DateTime"
413 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
414 schema-cim16#Document.createdDateTime"/>
415     <xs:element name="Allocation_TimeSeries"
416 type="Allocation_TimeSeries" minOccurs="1" maxOccurs="31"
417 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
418 cim16#MarketDocument.Allocation_TimeSeries"/>
419     </xs:sequence>
420 </xs:complexType>
421 <xs:simpleType name="Position_Integer"
422 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
423     <xs:restriction base="xs:integer">
424         <xs:maxInclusive value="999999"/>
425         <xs:minInclusive value="1"/>
426     </xs:restriction>
427 </xs:simpleType>
428 <xs:simpleType name="AreaID_String-base"
429 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
430     <xs:restriction base="xs:string">
431         <xs:maxLength value="18"/>
432     </xs:restriction>
433 </xs:simpleType>
434 <xs:complexType name="AreaID_String"
435 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
436     <xs:simpleContent>
437         <xs:extension base="AreaID_String-base">
438             <xs:attribute name="codingScheme"
439 type="ecl:CodingSchemeTypeList" use="required"/>
440         </xs:extension>
441     </xs:simpleContent>
442 </xs:complexType>
443 <xs:simpleType name="CurrencyCode_String"
444 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
445     <xs:restriction base="ecl:CurrencyTypeList"/>
446 </xs:simpleType>
447 <xs:simpleType name="Category_String"
448 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
449     <xs:restriction base="ecl:CategoryTypeList"/>
450 </xs:simpleType>
451 <xs:complexType name="Point"
452 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
453     <xs:sequence>
```

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454         <xs:element name="position" type="Position_Integer"
455 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
456 schema-cim16#Point.position"/>
457         <xs:element name="timeSeries.name" type="xs:string"
458 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
459 schema-cim16#IdentifiedObject.name"/>
460         <xs:element name="timeSeries.in_Domain.mRID"
461 type="AreaID_String" minOccurs="1" maxOccurs="1"
462 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
463 cim16#IdentifiedObject.mRID"/>
464         <xs:element name="timeSeries.out_Domain.mRID"
465 type="AreaID_String" minOccurs="1" maxOccurs="1"
466 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
467 cim16#IdentifiedObject.mRID"/>
468         <xs:element name="timeSeries.currency_Unit.name"
469 type="CurrencyCode_String" minOccurs="1" maxOccurs="1"
470 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
471         <xs:element name="timeSeries.auction.category"
472 type="Category_String" minOccurs="0" maxOccurs="1"
473 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
474 cim16#Auction.category"/>
475     </xs:sequence>
476 </xs:complexType>
477 </xs:schema>
478
```