



European Network of  
Transmission System Operators  
for Electricity

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**REPORTING INFORMATION  
DOCUMENT  
UML MODEL AND SCHEMA**

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2022-03-15  
APPROVED DOCUMENT  
VERSION 1.2

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## Table of Contents

1	Objective .....	5
2	ReportingInformation_MarketDocument .....	6
2.1	Reporting information contextual model .....	6
2.1.1	Overview of the model .....	6
2.1.2	IsBasedOn relationships from the European style market profile .....	7
2.2	Reporting information assembly model.....	8
2.2.1	Overview of the model .....	8
2.2.2	IsBasedOn relationships from the European style market profile .....	9
2.2.3	Detailed Reporting information assembly model.....	9
2.2.3.1	ReportingInformation_MarketDocument root class .....	9
2.2.3.2	Point .....	11
2.2.3.3	Reason .....	11
2.2.3.4	Series_Period .....	11
2.2.3.5	TimeSeries .....	12
2.2.4	Datatypes .....	13
2.2.5	ReportingInformation_MarketDocument XML schema structure .....	14
2.2.6	ReportingInformation_MarketDocument XML schema .....	15
<b>List of figures</b>		
Figure 1	- Reporting information contextual model .....	6
Figure 2	- Reporting information assembly model .....	8
Figure 3	- ReportingInformation_MarketDocument schema structure .....	14
<b>List of tables</b>		
Table 1	- IsBasedOn dependency .....	7
Table 2	- IsBasedOn dependency .....	9
Table 3	- Attributes of Reporting information assembly model::ReportingInformation_MarketDocument .....	9
Table 4	- Association ends of Reporting information assembly model::ReportingInformation_MarketDocument with other classes .....	10
Table 5	- Attributes of Reporting information assembly model::Point .....	11
Table 6	- Association ends of Reporting information assembly model::Point with other classes .....	11
Table 7	- Attributes of Reporting information assembly model::Reason .....	11
Table 8	- Attributes of Reporting information assembly model::Series_Period .....	12
Table 9	- Association ends of Reporting information assembly model::Series_Period with other classes .....	12
Table 10	- Attributes of Reporting information assembly model::TimeSeries .....	12
Table 11	- Association ends of Reporting information assembly model::TimeSeries with other classes .....	13

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61

## Revision History

Version	Release	Date	Comments
0	0	2017-01-19	First drafting of the document.
1	0	2017-01-30	Version to be submitted to Market Committee following WG EDI meeting in March 2017.
1	1	2018-11-08	XSD version 2.1: Order of the series_period class attributes now is in line with current EDI practice. Approved by MC.
1	2	2022-03-15	Updates in XSD v2.2: mRID of Document, Series and Timeseries (ID_String type) was enlarged from 35 to 60 characters. Approved by MC.

62

## 63 **Objective**

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

66 The schema of the ReportingInformation\_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.

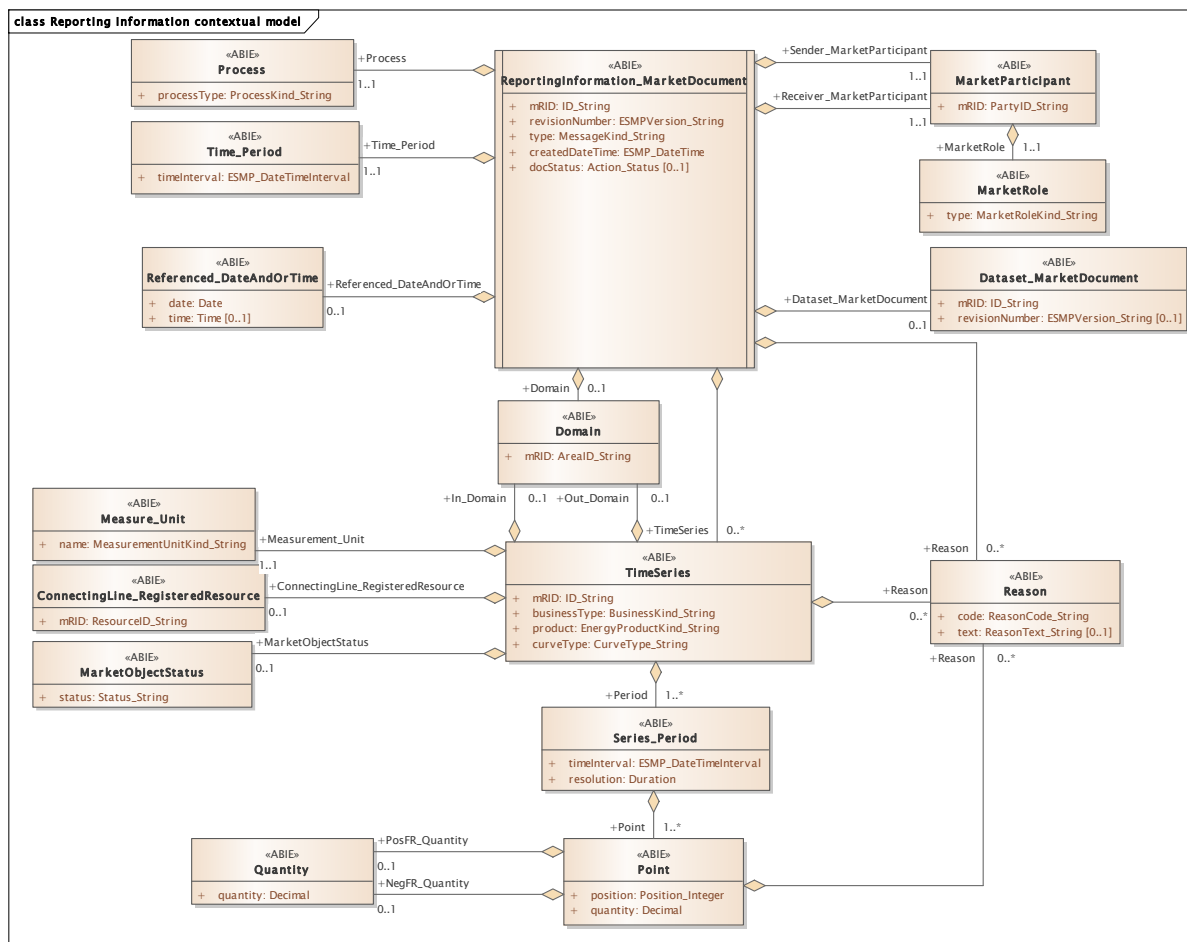
80

81 **ReportingInformation\_MarketDocument**

82 **2.1 Reporting information contextual model**

83 **2.1.1 Overview of the model**

84 Figure 1 shows the model.



85

86

**Figure 1 - Reporting information 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**

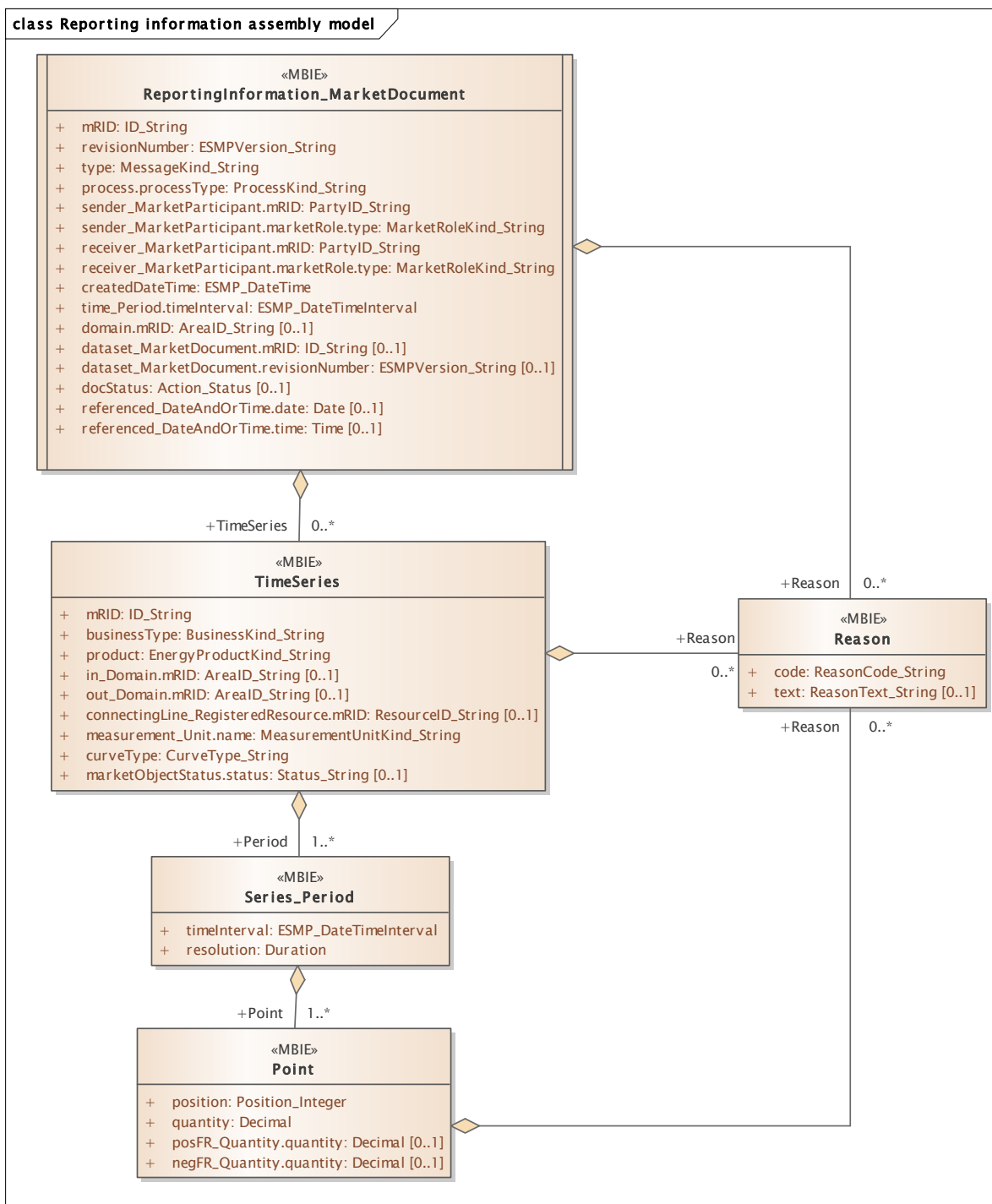
Name	Complete IsBasedOn Path
ConnectingLine_RegisteredResource	TC57CIM::IEC62325::MarketCommon::RegisteredResource
Dataset_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
Domain	TC57CIM::IEC62325::MarketManagement::Domain
MarketObjectStatus	TC57CIM::IEC62325::MarketManagement::MarketObjectStatus
MarketParticipant	TC57CIM::IEC62325::MarketCommon::MarketParticipant
MarketRole	TC57CIM::IEC62325::MarketCommon::MarketRole
Measure_Unit	TC57CIM::IEC62325::MarketManagement::Unit
Point	TC57CIM::IEC62325::MarketManagement::Point
Process	TC57CIM::IEC62325::MarketManagement::Process
Quantity	TC57CIM::IEC62325::MarketManagement::Quantity
Reason	TC57CIM::IEC62325::MarketManagement::Reason
Referenced_DateAndOrTime	TC57CIM::IEC62325::MarketManagement::DateAndOrTime
ReportingInformation_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
Series_Period	TC57CIM::IEC62325::MarketManagement::Period
Time_Period	TC57CIM::IEC62325::MarketManagement::Period
TimeSeries	TC57CIM::IEC62325::MarketManagement::TimeSeries

91

92 2.2 Reporting information assembly model

93 2.2.1 Overview of the model

94 Figure 2 shows the model.



95

96

Figure 2 - Reporting information assembly model



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
Point	TC57CIM::IEC62325::MarketManagement::Point
Reason	TC57CIM::IEC62325::MarketManagement::Reason
ReportingInformation_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
Series_Period	TC57CIM::IEC62325::MarketManagement::Period
TimeSeries	TC57CIM::IEC62325::MarketManagement::TimeSeries

101

102 **2.2.3 Detailed Reporting information assembly model**

103 **2.2.3.1 ReportingInformation\_MarketDocument root class**

104 This document provides either:

- 105 • all the information relating to a status request made by an interested party concerning  
106 aggregated netted external schedules, aggregated netted external market schedules,  
107 aggregated netted external TSO schedules, compensation program schedules, netted area  
108 position schedules and netted area AC position schedules.
- 109 • the net position for an area (scheduling area, bidding zone, NEMO trading hub, control  
110 area, ...).

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

113 Table 3 shows all attributes of ReportingInformation\_MarketDocument.

114 **Table 3 - Attributes of Reporting information assembly  
115 model::ReportingInformation\_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]	process.processType ProcessKind_String	The identification of the nature of process that the document addresses. --- The Process dealt within the document.
4	[1..1]	sender_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- The sender of the document.
5	[1..1]	sender_MarketParticipant.marketRole.type MarketRoleKind_String	The identification of the role played by a market player. --- The sender of the document. --- The role associated with a MarketParticipant.
6	[1..1]	receiver_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. --- The recipient of the document.
7	[1..1]	receiver_MarketParticipant.marketRole.type MarketRoleKind_String	The identification of the role played by a market player. --- The recipient of the document. --- The role associated with a MarketParticipant.

Order	mult.	Attribute name / Attribute type	Description
8	[1..1]	createdDateTime ESMP_DateTime	The date and time of the creation of the document.
9	[1..1]	time_Period.timeInterval ESMP_DateTimeInterval	The start and end date and time for a given interval. --- This information provides the start and end date and time of the period covered by the document.
10	[0..1]	domain.mRID AreaID_String	The unique identification of the domain. --- The identification of the domain that is covered in the reporting information market document.
11	[0..1]	dataset_MarketDocument.mRID ID_String	The identification of an individually predefined dataset in a data base system (e. g. Verification Platform). --- The identification of information in the reporting information market document that is related to a predefined dataset. In the CGMA process, the identification of the received document containing errors. Both the mRID and the revisionNumber of the received document are provided.
12	[0..1]	dataset_MarketDocument.revisionNumber ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another. --- The identification of information in the reporting information market document that is related to a predefined dataset. In the CGMA process, the identification of the received document containing errors. Both the mRID and the revisionNumber of the received document are provided.
13	[0..1]	docStatus Action_Status	The identification of the condition or position of the document with regard to its standing. A document may be intermediate or final.
14	[0..1]	referenced_DateAndOrTime.date Date	The date as "YYYY-MM-DD", which conforms with ISO 8601. --- The reference date and time for which the reporting information market document information is to be provided.
15	[0..1]	referenced_DateAndOrTime.time Time	The time as "hh:mm:ss.sssZ", which conforms with ISO 8601. --- The reference date and time for which the reporting information market document information is to be provided.

116

117 Table 4 shows all association ends of ReportingInformation\_MarketDocument with other  
118 classes.

119

**Table 4 - Association ends of Reporting information assembly model::ReportingInformation\_MarketDocument with other classes**

120

Order	mult.	Class name / Role	Description
16	[0..*]	TimeSeries TimeSeries	The time series that is associated with an electronic document. Association Based On: Reporting information contextual model::ReportingInformation_MarketDocument.[] ----- Reporting information contextual model::TimeSeries.TimeSeries[0..*]
17	[0..*]	Reason Reason	The Reason associated with the electronic document header providing different motivations for the creation of the document. Association Based On: Reporting information contextual model::ReportingInformation_MarketDocument.[] ----- Reporting information contextual model::Reason.Reason[0..*]

121

122 **2.2.3.2 Point**

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

124 Table 5 shows all attributes of Point.

125 **Table 5 - Attributes of Reporting information 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. The quantity of the product scheduled for the position within the time interval.
2	[0..1]	posFR_Quantity.quantity Decimal	The quantity value. The association role provides the information about what is expressed. --- The positive feasibility range to be used for the alignment process of the net position provided in the quantity attribute of the class Point. The Quantity information associated with a given Point.
3	[0..1]	negFR_Quantity.quantity Decimal	The quantity value. The association role provides the information about what is expressed. --- The negative feasibility range to be used for the alignment process of the net position provided in the quantity attribute of the class Point. This value shall be either zero or a negative value. The Quantity information associated with a given Point.

126

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

128 **Table 6 - Association ends of Reporting information assembly model::Point with other classes**

129

Order	mult.	Class name / Role	Description
4	[0..*]	Reason Reason	The Reason information associated with a Point providing motivation information. Association Based On: Reporting information contextual model::Point.[] ----- Reporting information contextual model::Reason.Reason[0..*]

130

131 **2.2.3.3 Reason**

132 The motivation of an act.

133 Table 7 shows all attributes of Reason.

134 **Table 7 - Attributes of Reporting information 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.

135

136 **2.2.3.4 Series\_Period**

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

138 Table 8 shows all attributes of Series\_Period.

139 **Table 8 - Attributes of Reporting information 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.

140

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

142 **Table 9 - Association ends of Reporting information assembly model::Series\_Period**  
143 **with other classes**

Order	mult.	Class name / Role	Description
2	[1..*]	Point Point	The Point information associated with a given Series_Period.within a TimeSeries. Association Based On: Reporting information contextual model::Series_Period.[] ----- Reporting information contextual model::Point.Point[1..*]

144

### 145 2.2.3.5 TimeSeries

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

147 In the ESMP profile, the TimeSeries provides not only time-ordered quantities but also time-  
148 ordered information.

149 Table 10 shows all attributes of TimeSeries.

150 **Table 10 - Attributes of Reporting information 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]	businessType BusinessKind_String	The identification of the nature of the time series.
2	[1..1]	product EnergyProductKind_String	The identification of the nature of an energy product such as power, energy, reactive power, etc.
3	[0..1]	in_Domain.mRID AreaID_String	The unique identification of the domain. --- The area where the product is being delivered.
4	[0..1]	out_Domain.mRID AreaID_String	The unique identification of the domain. --- The area where the product is being extracted.
5	[0..1]	connectingLine_RegisteredResource.mRID ResourceID_String	The unique identification of a resource. --- The identification of the DC link(s) or controllable AC link(s) between areas.
6	[1..1]	measurement_Unit.name MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure associated with the quantity in the Point class or in the Quantity class.
7	[1..1]	curveType CurveType_String	The identification of the coded representation of the type of curve being described.

Order	mult.	Attribute name / Attribute type	Description
8	[0..1]	marketObjectStatus.status Status_String	The coded condition or position of an object with regard to its standing. --- The status of an object associated with a TimeSeries. For CGMA process, it provides the status of the timeseries, e.g. input timeseries, output timeseries, substituted timeseries.

151

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

153 **Table 11 - Association ends of Reporting information assembly model::TimeSeries with**  
154 **other classes**

Order	mult.	Class name / Role	Description
9	[1..*]	Series_Period Period	The time interval and resolution for a period associated with a TimeSeries. Association Based On: Reporting information contextual model::TimeSeries.[] ----- Reporting information contextual model::Series_Period.Period[1..*]
10	[0..*]	Reason Reason	The reason information associated with a TimeSeries providing motivation information. Association Based On: Reporting information contextual model::TimeSeries.[] ----- Reporting information contextual model::Reason.Reason[0..*]

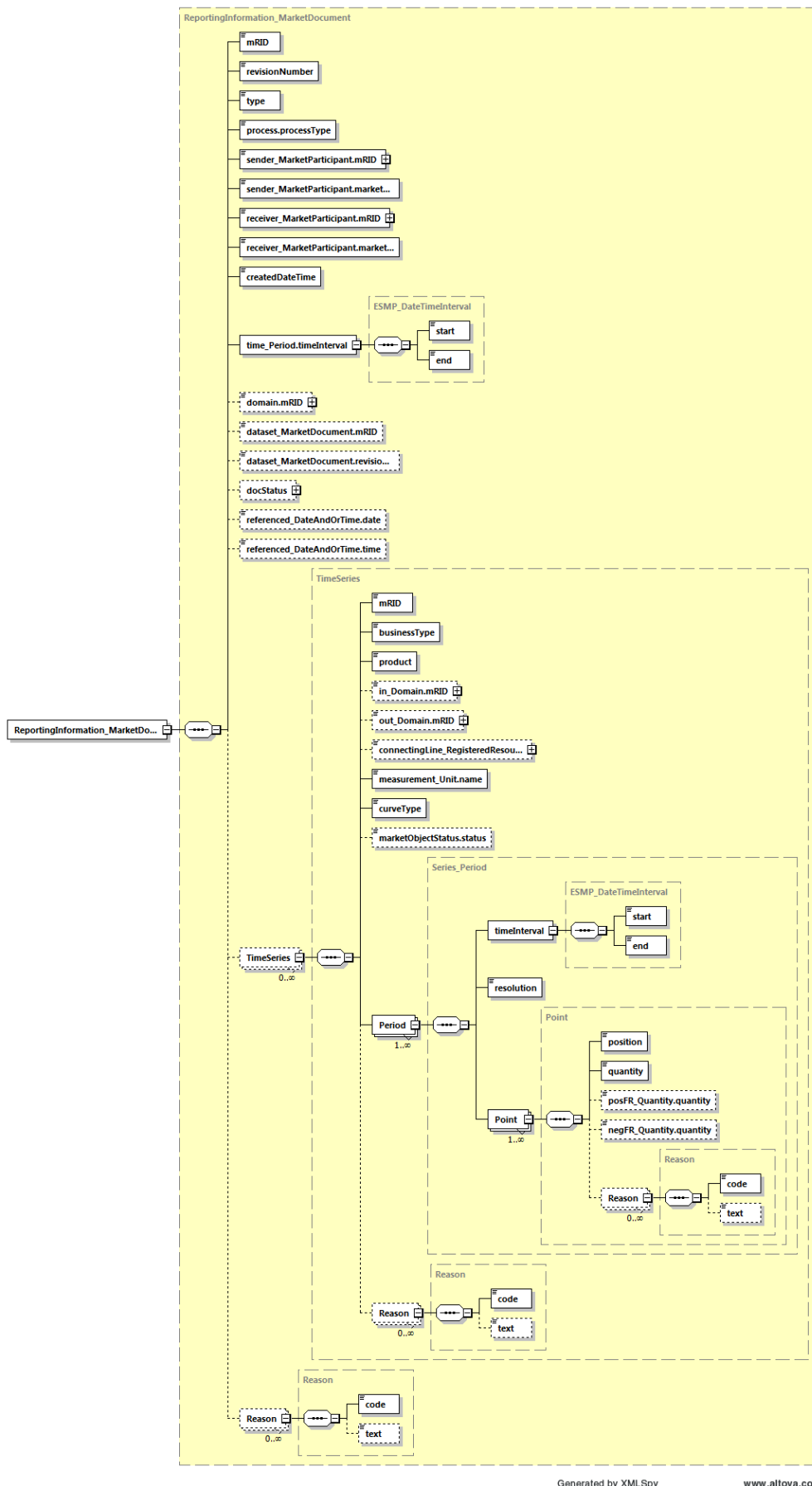
155

#### 156 2.2.4 Datatypes

157 The list of datatypes used for the Reporting information assembly model is as follows:

- 158 • Action\_Status compound
- 159 • ESMP\_DateTimeInterval compound
- 160 • AreaID\_String datatype, codelist CodingSchemeTypeList
- 161 • BusinessKind\_String datatype, codelist BusinessTypeList
- 162 • CurveType\_String datatype, codelist CurveTypeList
- 163 • EnergyProductKind\_String datatype, codelist EnergyProductTypeList
- 164 • ESMP\_DateTime datatype
- 165 • ESMPVersion\_String datatype
- 166 • ID\_String datatype
- 167 • MarketRoleKind\_String datatype, codelist RoleTypeList
- 168 • MeasurementUnitKind\_String datatype, codelist UnitOfMeasureTypeList
- 169 • MessageKind\_String datatype, codelist MessageTypeList
- 170 • PartyID\_String datatype, codelist CodingSchemeTypeList
- 171 • Position\_Integer datatype
- 172 • ProcessKind\_String datatype, codelist ProcessTypeList
- 173 • ReasonCode\_String datatype, codelist ReasonCodeTypeList
- 174 • ReasonText\_String datatype
- 175 • ResourceID\_String datatype, codelist CodingSchemeTypeList
- 176 • Status\_String datatype, codelist StatusTypeList
- 177 • YMDHM\_DateTime datatype
- 178

179 2.2.5 ReportingInformation\_MarketDocument XML schema structure



180

181

Figure 3 – ReportingInformation\_MarketDocument schema structure  
 – Page 14 of 20 –

## 182 2.2.6 ReportingInformation\_MarketDocument XML schema

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

184 urn:iec62325.351:tc57wg16:451-n:reportinginformationdocument:2:2

```

185 <?xml version="1.0" encoding="utf-8"?>
186 <xs:schema xmlns:ecl="urn:entsoe.eu:wgedi:codelists"
187 xmlns="urn:iec62325.351:tc57wg16:451-n:reportinginformationdocument:2:2"
188 xmlns:sawsdl="http://www.w3.org/ns/sawsdl"
189 xmlns:cimp="http://www.iec.ch/cimprofile"
190 xmlns:xs="http://www.w3.org/2001/XMLSchema"
191 targetNamespace="urn:iec62325.351:tc57wg16:451-n:reportinginformationdocument:2:2"
192 elementFormDefault="qualified" attributeFormDefault="unqualified">
193   <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
194 entsoe-eu-wgedi-codelists.xsd"/>
195   <xs:element name="ReportingInformation_MarketDocument"
196 type="ReportingInformation_MarketDocument"/>
197   <xs:simpleType name="Position_Integer"
198 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
199     <xs:restriction base="xs:integer">
200       <xs:maxInclusive value="999999"/>
201       <xs:minInclusive value="1"/>
202     </xs:restriction>
203   </xs:simpleType>
204   <xs:complexType name="Point"
205 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
206     <xs:sequence>
207       <xs:element name="position" type="Position_Integer"
208 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
209 schema-cim16#Point.position"/>
210       <xs:element name="quantity" type="xs:decimal" minOccurs="1"
211 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
212 cim16#Point.quantity"/>
213       <xs:element name="posFR_Quantity.quantity" type="xs:decimal"
214 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
215 schema-cim16#Quantity.quantity"/>
216       <xs:element name="negFR_Quantity.quantity" type="xs:decimal"
217 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
218 schema-cim16#Quantity.quantity"/>
219       <xs:element name="Reason" type="Reason" minOccurs="0"
220 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
221 cim16#Point.Reason"/>
222     </xs:sequence>
223   </xs:complexType>
224   <xs:simpleType name="ReasonCode_String"
225 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
226     <xs:restriction base="ecl:ReasonCodeTypeList"/>
227   </xs:simpleType>
228   <xs:simpleType name="ReasonText_String"
229 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
230     <xs:restriction base="xs:string">
231       <xs:maxLength value="512"/>
232     </xs:restriction>
233   </xs:simpleType>
234   <xs:complexType name="Reason"
235 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
236     <xs:sequence>
237       <xs:element name="code" type="ReasonCode_String" minOccurs="1"
238 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
239 cim16#Reason.code"/>

```

```

240         <xs:element name="text" type="ReasonText_String" minOccurs="0"
241 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
242 cim16#Reason.text"/>
243     </xs:sequence>
244 </xs:complexType>
245 <xs:simpleType name="ID_String"
246 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
247     <xs:restriction base="xs:string">
248         <xs:maxLength value="60"/>
249     </xs:restriction>
250 </xs:simpleType>
251 <xs:simpleType name="ESMPVersion_String"
252 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
253     <xs:restriction base="xs:string">
254         <xs:pattern value="[1-9]([0-9]){0,2}"/>
255     </xs:restriction>
256 </xs:simpleType>
257 <xs:simpleType name="MessageKind_String"
258 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
259     <xs:restriction base="ecl:MessageTypeList"/>
260 </xs:simpleType>
261 <xs:simpleType name="ProcessKind_String"
262 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
263     <xs:restriction base="ecl:ProcessTypeList"/>
264 </xs:simpleType>
265 <xs:simpleType name="PartyID_String-base"
266 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
267     <xs:restriction base="xs:string">
268         <xs:maxLength value="16"/>
269     </xs:restriction>
270 </xs:simpleType>
271 <xs:complexType name="PartyID_String"
272 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
273     <xs:simpleContent>
274         <xs:extension base="PartyID_String-base">
275             <xs:attribute name="codingScheme"
276 type="ecl:CodingSchemeTypeList" use="required"/>
277         </xs:extension>
278     </xs:simpleContent>
279 </xs:complexType>
280 <xs:simpleType name="MarketRoleKind_String"
281 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
282     <xs:restriction base="ecl:RoleTypeList"/>
283 </xs:simpleType>
284 <xs:simpleType name="ESMP_DateTime"
285 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
286     <xs:restriction base="xs:dateTime">
287         <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02]))[\-](0[1-
288 9]|12|[0-9]|3[01]))|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|12|[0-
289 9]|30))T((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-
290 9])Z)|(((13579)[26][02468][048]|13579[01345789](0)[48]|13579[01345789][2468][0
291 48]|02468[048][02468][048]|02468[1235679](0)[48]|02468[1235679][2468][048]|
292 0-9[0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-
293 5][0-9]:[0-5][0-
294 9])Z)|(((13579)[26][02468][1235679]|13579[01345789](0)[01235679]|13579[0134578
295 9][2468][1235679]|02468[048][02468][1235679]|02468[1235679](0)[01235679]|0246
296 8[1235679][2468][1235679]|0-9[0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-
297 9]|2[0-8])T((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)"/>
298     </xs:restriction>
299 </xs:simpleType>

```



```

300     <xs:simpleType name="AreaID_String-base"
301 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
302         <xs:restriction base="xs:string">
303             <xs:maxLength value="18"/>
304         </xs:restriction>
305     </xs:simpleType>
306     <xs:complexType name="AreaID_String"
307 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
308         <xs:simpleContent>
309             <xs:extension base="AreaID_String-base">
310                 <xs:attribute name="codingScheme"
311 type="ecl:CodingSchemeTypeList" use="required"/>
312             </xs:extension>
313         </xs:simpleContent>
314     </xs:complexType>
315     <xs:simpleType name="Status_String"
316 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
317         <xs:restriction base="ecl:StatusTypeList"/>
318     </xs:simpleType>
319     <xs:complexType name="Action_Status"
320 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Status">
321         <xs:sequence>
322             <xs:element name="value" type="Status_String" minOccurs="1"
323 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
324 cim16#Status.value"/>
325         </xs:sequence>
326     </xs:complexType>
327     <xs:simpleType name="YMDHM_DateTime"
328 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
329         <xs:restriction base="xs:string">
330             <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-
331 9]|12)[0-9]|3[01])|([0-9]{4})[\-](((0[469])|(11))[\-](0[1-9]|12)[0-
332 9]|30))T((([01][0-9]|2[0-3]):[0-5][0-
333 9])Z)|(((13579)[26][02468][048]|13579)[01345789](0)[48]|13579)[01345789][2468][0
334 48]|02468)[048][02468][048]|02468)[1235679](0)[48]|02468)[1235679][2468][048]|([
335 0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-
336 5][0-
337 9])Z)|(((13579)[26][02468][1235679]|13579)[01345789](0)[01235679]|13579)[0134578
338 9][2468][1235679]|02468)[048][02468][1235679]|02468)[1235679](0)[01235679]|0246
339 8)[1235679][2468][1235679]|0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-
340 9]|2[0-8])T((([01][0-9]|2[0-3]):[0-5][0-9])Z)"/>
341         </xs:restriction>
342     </xs:simpleType>
343     <xs:complexType name="ESMP_DateTimeInterval"
344 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
345         <xs:sequence>
346             <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
347 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
348 cim16#DateTimeInterval.start"/>
349             <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
350 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
351 cim16#DateTimeInterval.end"/>
352         </xs:sequence>
353     </xs:complexType>
354     <xs:complexType name="ReportingInformation_MarketDocument"
355 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
356         <xs:sequence>
357             <xs:element name="mRID" type="ID_String" minOccurs="1"
358 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
359 cim16#IdentifiedObject.mRID"/>

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360         <xs:element name="revisionNumber" type="ESMPVersion_String"
361 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
362 schema-cim16#Document.revisionNumber"/>
363         <xs:element name="type" type="MessageKind_String" minOccurs="1"
364 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
365 cim16#Document.type"/>
366         <xs:element name="process.processType"
367 type="ProcessKind_String" minOccurs="1" maxOccurs="1"
368 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
369 cim16#Process.processType"/>
370         <xs:element name="sender_MarketParticipant.mRID"
371 type="PartyID_String" minOccurs="1" maxOccurs="1"
372 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
373 cim16#IdentifiedObject.mRID"/>
374         <xs:element name="sender_MarketParticipant.marketRole.type"
375 type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
376 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
377         <xs:element name="receiver_MarketParticipant.mRID"
378 type="PartyID_String" minOccurs="1" maxOccurs="1"
379 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
380 cim16#IdentifiedObject.mRID"/>
381         <xs:element name="receiver_MarketParticipant.marketRole.type"
382 type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
383 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
384         <xs:element name="createdDateTime" type="ESMP_DateTime"
385 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
386 schema-cim16#Document.createdDateTime"/>
387         <xs:element name="time_Period.timeInterval"
388 type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
389 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
390 cim16#Period.timeInterval"/>
391         <xs:element name="domain.mRID" type="AreaID_String"
392 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
393 schema-cim16#IdentifiedObject.mRID"/>
394         <xs:element name="dataset_MarketDocument.mRID" type="ID_String"
395 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
396 schema-cim16#IdentifiedObject.mRID"/>
397         <xs:element name="dataset_MarketDocument.revisionNumber"
398 type="ESMPVersion_String" minOccurs="0" maxOccurs="1"
399 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
400 cim16#Document.revisionNumber"/>
401         <xs:element name="docStatus" type="Action_Status" minOccurs="0"
402 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
403 cim16#Document.docStatus"/>
404         <xs:element name="referenced_DateAndOrTime.date" type="xs:date"
405 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
406 schema-cim16#DateAndOrTime.date"/>
407         <xs:element name="referenced_DateAndOrTime.time" type="xs:time"
408 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
409 schema-cim16#DateAndOrTime.time"/>
410         <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
411 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
412 cim16#MarketDocument.TimeSeries"/>
413         <xs:element name="Reason" type="Reason" minOccurs="0"
414 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
415 cim16#MarketDocument.Reason"/>
416     </xs:sequence>
417 </xs:complexType>
418 <xs:complexType name="Series_Period"
419 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
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420         <xs:sequence>
421             <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
422 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
423 schema-cim16#Period.timeInterval"/>
424             <xs:element name="resolution" type="xs:duration" minOccurs="1"
425 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
426 cim16#Period.resolution"/>
427             <xs:element name="Point" type="Point" minOccurs="1"
428 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
429 cim16#Period.Point"/>
430         </xs:sequence>
431     </xs:complexType>
432     <xs:simpleType name="BusinessKind_String"
433 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
434         <xs:restriction base="ecl:BusinessTypeList"/>
435     </xs:simpleType>
436     <xs:simpleType name="EnergyProductKind_String"
437 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
438         <xs:restriction base="ecl:EnergyProductTypeList"/>
439     </xs:simpleType>
440     <xs:simpleType name="ResourceID_String-base"
441 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
442         <xs:restriction base="xs:string">
443             <xs:maxLength value="60"/>
444         </xs:restriction>
445     </xs:simpleType>
446     <xs:complexType name="ResourceID_String"
447 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
448         <xs:simpleContent>
449             <xs:extension base="ResourceID_String-base">
450                 <xs:attribute name="codingScheme"
451 type="ecl:CodingSchemeTypeList" use="required"/>
452             </xs:extension>
453         </xs:simpleContent>
454     </xs:complexType>
455     <xs:simpleType name="MeasurementUnitKind_String"
456 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
457         <xs:restriction base="ecl:UnitOfMeasureTypeList"/>
458     </xs:simpleType>
459     <xs:simpleType name="CurveType_String"
460 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
461         <xs:restriction base="ecl:CurveTypeList"/>
462     </xs:simpleType>
463     <xs:complexType name="TimeSeries"
464 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
465         <xs:sequence>
466             <xs:element name="mRID" type="ID_String" minOccurs="1"
467 maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
468 cim16#IdentifiedObject.mRID"/>
469             <xs:element name="businessType" type="BusinessKind_String"
470 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
471 schema-cim16#TimeSeries.businessType"/>
472             <xs:element name="product" type="EnergyProductKind_String"
473 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
474 schema-cim16#TimeSeries.product"/>
475             <xs:element name="in_Domain.mRID" type="AreaID_String"
476 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
477 schema-cim16#IdentifiedObject.mRID"/>

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478         <xs:element name="out_Domain.mRID" type="AreaID_String"
479 minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
480 schema-cim16#IdentifiedObject.mRID"/>
481         <xs:element name="connectingLine_RegisteredResource.mRID"
482 type="ResourceID_String" minOccurs="0" maxOccurs="1"
483 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
484 cim16#IdentifiedObject.mRID"/>
485         <xs:element name="measurement_Unit.name"
486 type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
487 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
488         <xs:element name="curveType" type="CurveType_String"
489 minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
490 schema-cim16#TimeSeries.curveType"/>
491         <xs:element name="marketObjectStatus.status"
492 type="Status_String" minOccurs="0" maxOccurs="1"
493 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
494 cim16#MarketObjectStatus.status"/>
495         <xs:element name="Period" type="Series_Period" minOccurs="1"
496 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
497 cim16#TimeSeries.Period"/>
498         <xs:element name="Reason" type="Reason" minOccurs="0"
499 maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
500 cim16#TimeSeries.Reason"/>
501     </xs:sequence>
502 </xs:complexType>
503 </xs:schema>
504
```