1

European Network of
Transmission System Operators
for Electricity

BID AVAILABILITY DOCUMENT
UML MODEL AND SCHEMA

2022-09-06
AGREED DOCUMENT
VERSION 1.1

Table of Contents

Copyright notice:

Maintenance notice:

51

52 **This document is maintained by the ENTSO-E CIM EG. Comments or remarks are to be**
53 **provided at cim@entsoe.eu**

ENTSO-E Bid availability document – UML model and
schema
VERSION 1.1

European Network of
Transmission System Operators
for Electricity

54

Revision History

Version	Release	Date	Comments
0	1	2020-10-15	First draft of the document.
1	0	2020-12-15	Approved by MC.
1	1	2022-09-06	Updates in schema 'urn:iec62325.351:tc57wg16:451-n:bidavailabilitydocument:1:1': • RequestingParty_MarketParticipant.mRID becomes optional Agreed by CIM EG.

55

56 **Objective**

57 The purpose of this document is to provide the contextual and assembly UML models and the
58 schema of the BidAvailability_MarketDocument.

59 The schema of the BidAvailability_MarketDocument could be used in various business
60 processes.

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

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

65 • Description of the business process;

66 • Use case of the business process;

67 • Sequence diagrams of the business process;

68 • List of the schema (XSD) to be used in the business process and versions of the
69 schema;

70 • For each schema, dependency tables providing the necessary information for the
71 generation of the XML instances, i.e. when the optional attributes are to be used, which
72 codes from which ENTSO-E codelist are to be used.

73

74   **BidAvailability_MarketDocument**

75   2.1   **Bid availability contextual**

76   **2.1.1   Overview of the model**

77   Figure 1 shows the model.
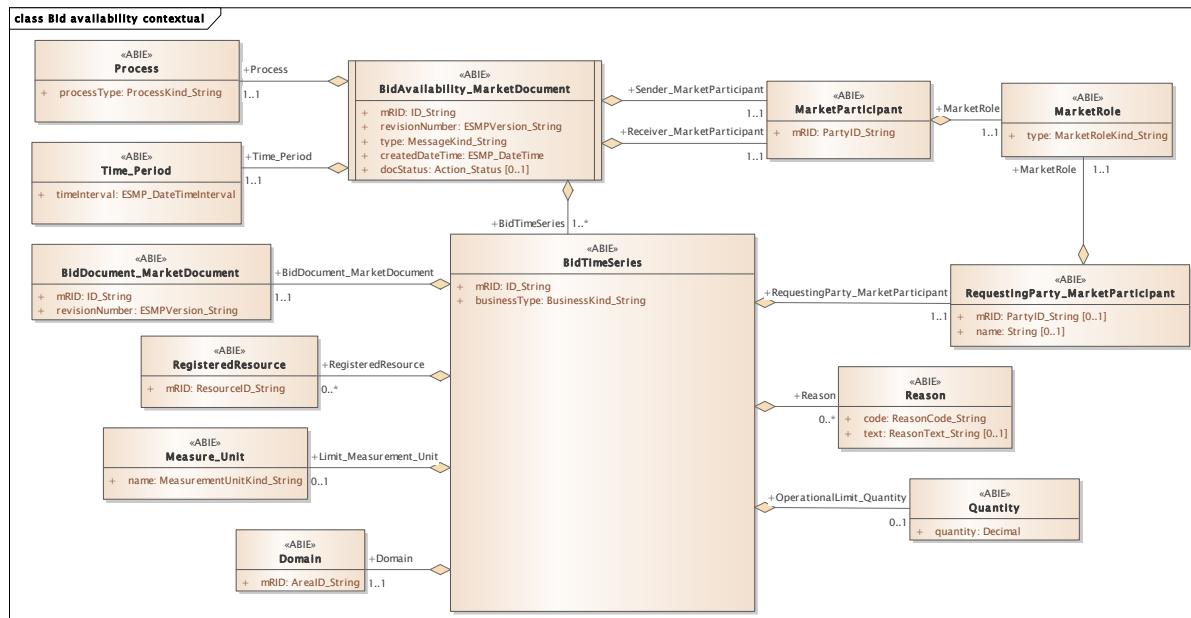
78

79   **Figure 1 - Bid availability contextual**

80   **2.1.2   IsBasedOn relationships from the European style market profile**

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

83   **Table 1 - IsBasedOn dependency**

Name	Complete IsBasedOn Path
BidAvailability_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
BidDocument_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
BidTimeSeries	TC57CIM::IEC62325::MarketManagement::BidTimeSeries
Domain	TC57CIM::IEC62325::MarketManagement::Domain
MarketParticipant	TC57CIM::IEC62325::MarketCommon::MarketParticipant
MarketRole	TC57CIM::IEC62325::MarketCommon::MarketRole
Measure_Unit	TC57CIM::IEC62325::MarketManagement::Unit
Process	TC57CIM::IEC62325::MarketManagement::Process
Quantity	TC57CIM::IEC62325::MarketManagement::Quantity
Reason	TC57CIM::IEC62325::MarketManagement::Reason
RegisteredResource	TC57CIM::IEC62325::MarketCommon::RegisteredResource
RequestingParty_MarketParticipant	TC57CIM::IEC62325::MarketCommon::MarketParticipant
Time_Period	TC57CIM::IEC62325::MarketManagement::Period

84

85   2.2   **Bid availability assembly**

86   **2.2.1   Overview of the model**

87   Figure 2 shows the model.
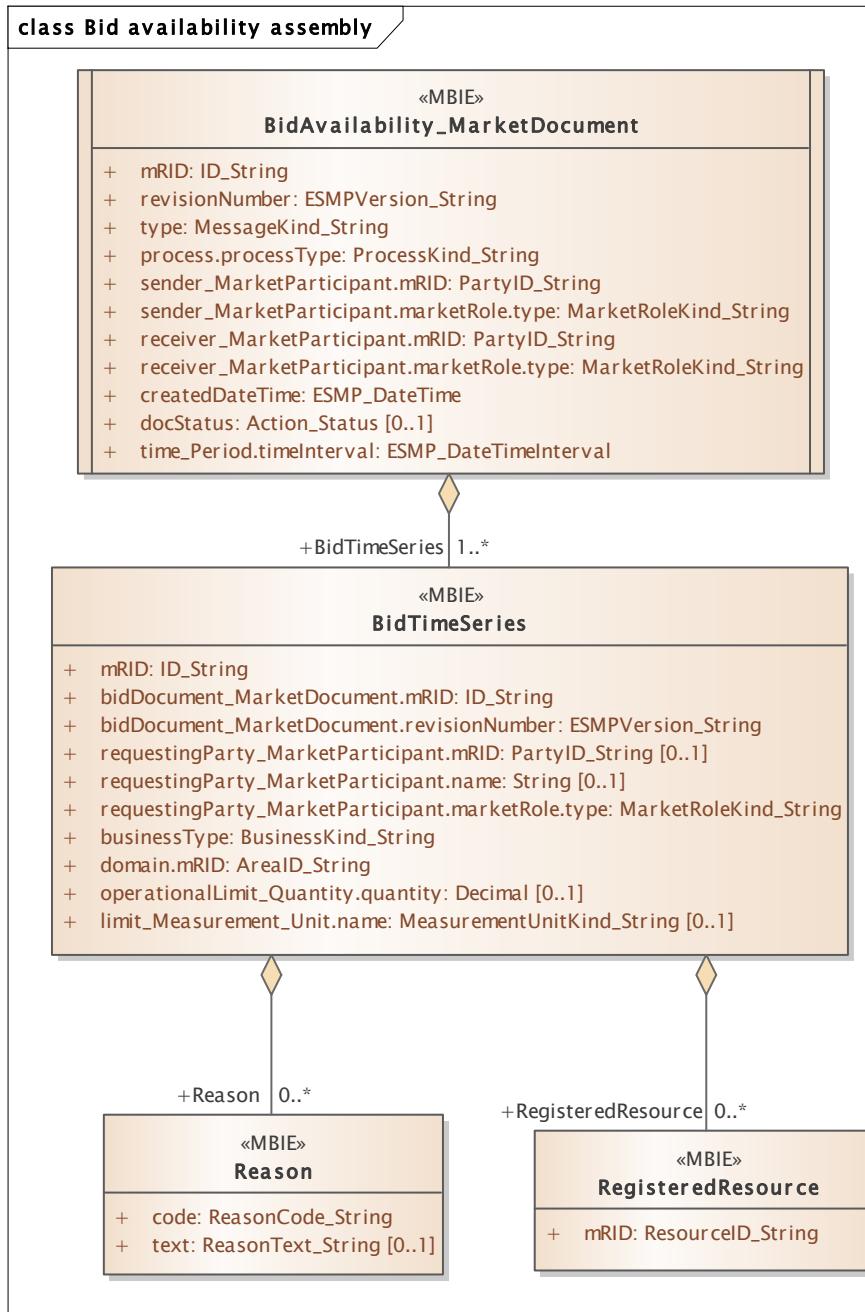
88

89   **Figure 2 - Bid availability assembly**

90   **2.2.2   IsBasedOn relationships from the European style market profile**

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

93   **Table 2 - IsBasedOn dependency**

Name	Complete IsBasedOn Path
BidAvailability_MarketDocument	TC57CIM::IEC62325::MarketManagement::MarketDocument
BidTimeSeries	TC57CIM::IEC62325::MarketManagement::BidTimeSeries

ENTSO-E Bid availability document – UML model and schema
VERSION 1.1

European Network of
Transmission System Operators
for Electricity

entsoe

Name	Complete IsBasedOn Path
Reason	TC57CIM::IEC62325::MarketManagement::Reason
RegisteredResource	TC57CIM::IEC62325::MarketCommon::RegisteredResource

94

## 2.2.3   Detailed Bid availability assembly

2.2.3.1   BidAvailability_MarketDocument root class

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

99 Table 3 shows all attributes of BidAvailability_MarketDocument.

100 **Table 3 - Attributes of Bid availability assembly::BidAvailability_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 associated with an electronic document header that is valid for the whole document.
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.
9	[0..1]	docStatus Action_Status	The identification of the condition or position of the document with regard to its standing.
10	[1..1]	time_Period.timeInterval ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The time interval that is associated with an electronic document and which is valid for the whole document.

101

102 Table 4 shows all association ends of BidAvailability_MarketDocument with other classes.

ENTSO-E Bid availability document – UML model and schema
VERSION 1.1

European Network of
Transmission System Operators
for Electricity

entsoe

103 **Table 4 - Association ends of Bid availability**
104 **assembly::BidAvailability_MarketDocument with other classes**

Order	mult.	Class name / Role	Description
11	[1..*]	BidTimeSeries BidTimeSeries	The time series that is associated with an electronic document. Association Based On: Bid availability contextual::BidTimeSeries.BidTimeSeries[1..*] ----- Bid availability contextual::BidAvailability_MarketDocument.[]

105

2.2.3.2   BidTimeSeries

107 The formal specification of specific characteristics related to a bid.

108 Table 5 shows all attributes of BidTimeSeries.

109 **Table 5 - Attributes of Bid availability assembly::BidTimeSeries**

Order	mult.	Attribute name / Attribute type	Description
0	[1..1]	mRID ID_String	A unique identification of the time series. In the ESMP context, the "model authority" is defined as a party (originator of the exchange) that provides a unique identification in the context of a business exchange such as time series identification, bid 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.
1	[1..1]	bidDocument_MarketDocument.mRID ID_String	The unique identification of the document being exchanged within a business process flow. In the ESMP context, the "model authority" is defined as a party (originator of the exchange) that provides an identification in the context of a business exchange such as document 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 an electronic document associated with a TimeSeries.
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 an electronic document associated with a TimeSeries.

Order	mult.	Attribute name / Attribute type	Description
3	[0..1]	requestingParty_MarketParticipant.mRID PartyID_String	The identification of a party in the energy market. 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 market participant associated with a TimeSeries.
4	[0..1]	requestingParty_MarketParticipant.name String	The name is any free human readable and possibly non unique text naming the object. --- The identification of a market participant associated with a TimeSeries.
5	[1..1]	requestingParty_MarketParticipant.marketRole.type MarketRoleKind_String	The identification of the role played by a market player. --- The identification of a market participant associated with a TimeSeries. --- The role associated with a MarketParticipant.
6	[1..1]	businessType BusinessKind_String	The identification of the nature of the time series.
7	[1..1]	domain.mRID AreaID_String	The unique identification of the domain. 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 domain associated with a TimeSeries.
8	[0..1]	operationalLimit_Quantity.quantity Decimal	The quantity value. The association role provides the information about what is expressed. --- The quantity information associated to a TimeSeries.
9	[0..1]	limit_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 quantities in a TimeSeries.

110

111 Table 6 shows all association ends of BidTimeSeries with other classes.

112 **Table 6 - Association ends of Bid availability assembly::BidTimeSeries with other**
113 **classes**

Order	mult.	Class name / Role	Description
10	[0..*]	RegisteredResource RegisteredResource	The identification of a resource associated with a TimeSeries. Association Based On: Bid availability contextual::RegisteredResource.RegisteredResource[0..*] ----- Bid availability contextual::BidTimeSeries.[]
11	[0..*]	Reason Reason	The reason information associated with a TimeSeries providing motivation information. Association Based On: Bid availability contextual::Reason.Reason[0..*] ----- Bid availability contextual::BidTimeSeries.[]

114

2.2.3.3   Reason

116 The motivation of an act.

117 Table 7 shows all attributes of Reason.

118 **Table 7 - Attributes of Bid availability assembly::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.

119

2.2.3.4   RegisteredResource

121 A resource that is registered through the market participant registration system. Examples
122 include generating unit, load, and non-physical generator or load.

123 Table 8 shows all attributes of RegisteredResource.

124 **Table 8 - Attributes of Bid availability assembly::RegisteredResource**

Order	mult.	Attribute name / Attribute type	Description
0	[1..1]	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.

125

2.2.4   Datatypes

127 The list of datatypes used for the Bid availability assembly is as follows:

128 • Action_Status compound
129 • ESMP_DateTimeInterval compound

130	•	AreaID_String datatype, codelist CodingSchemeTypeList
131	•	BusinessKind_String datatype, codelist BusinessTypeList
132	•	ESMP_DateTime datatype
133	•	ESMPVersion_String datatype
134	•	ID_String datatype
135	•	MarketRoleKind_String datatype, codelist RoleTypeList
136	•	MeasurementUnitKind_String datatype, codelist UnitOfMeasureTypeList
137	•	MessageKind_String datatype, codelist MessageTypeList
138	•	PartyID_String datatype, codelist CodingSchemeTypeList
139	•	ProcessKind_String datatype, codelist ProcessTypeList
140	•	ReasonCode_String datatype, codelist ReasonCodeTypeList
141	•	ReasonText_String datatype
142	•	ResourceID_String datatype, codelist CodingSchemeTypeList
143	•	Status_String datatype, codelist StatusTypeList
144	•	YMDHM_DateTime datatype
145		

ENTSO-E Bid availability document – UML model and schema
VERSION 1.1

European Network of
Transmission System Operators
for Electricity

entsoe

146

2.2.5 BidAvailability_MarketDocument XML schema structure

Generated by XMLSpy   www.altova.com
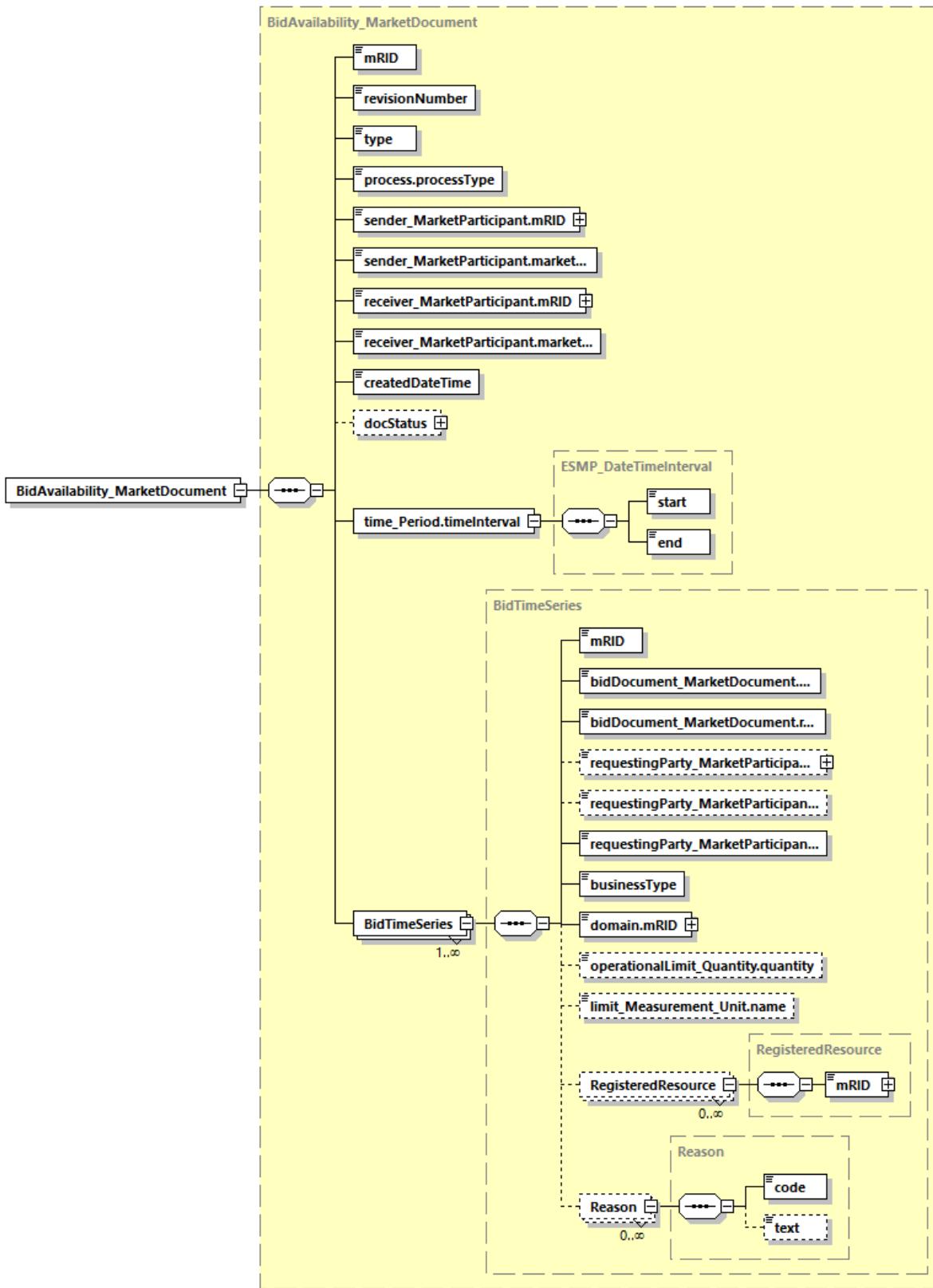
148
149   **Figure 3 – BidAvailability_MarketDocument schema structure**

ENTSO-E Bid availability document – UML model and schema
VERSION 1.1

European Network of
Transmission System Operators
for Electricity

entsoe

150 **2.2.6   BidAvailability_MarketDocument XML schema**

151

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

153 urn:iec62325.351:tc57wg16:451-n:bidavailabilitydocument:1:1

```xml
154 <?xml version="1.0" encoding="utf-8"?>
155 <xs:schema xmlns:ecl="urn:entsoe.eu:wgedi:codelists"
156 xmlns="urn:iec62325.351:tc57wg16:451-n:bidavailabilitydocument:1:1"
157 xmlns:sawsdl="http://www.w3.org/ns/sawsdl"
158 xmlns:cimp="http://www.iec.ch/cimprofile"
159 xmlns:xs="http://www.w3.org/2001/XMLSchema"
160 targetNamespace="urn:iec62325.351:tc57wg16:451-n:bidavailabilitydocument:1:1"
161 elementFormDefault="qualified" attributeFormDefault="unqualified">
162     <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
163 entsoe-eu-wgedi-codelists.xsd"/>
164     <xs:element name="BidAvailability_MarketDocument"
165 type="BidAvailability_MarketDocument"/>
166     <xs:simpleType name="ID_String"
167 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
168         <xs:restriction base="xs:string">
169             <xs:maxLength value="60"/>
170         </xs:restriction>
171     </xs:simpleType>
172     <xs:simpleType name="ESMPVersion_String"
173 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
174         <xs:restriction base="xs:string">
175             <xs:pattern value="[1-9]([0-9]){0,2}"/>
176         </xs:restriction>
177     </xs:simpleType>
178     <xs:simpleType name="MessageKind_String"
179 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
180         <xs:restriction base="ecl:MessageTypeList"/>
181     </xs:simpleType>
182     <xs:simpleType name="ProcessKind_String"
183 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
184         <xs:restriction base="ecl:ProcessTypeList"/>
185     </xs:simpleType>
186     <xs:simpleType name="PartyID_String-base"
187 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
188         <xs:restriction base="xs:string">
189             <xs:maxLength value="16"/>
190         </xs:restriction>
191     </xs:simpleType>
192     <xs:complexType name="PartyID_String"
193 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
194         <xs:simpleContent>
195             <xs:extension base="PartyID_String-base">
196                 <xs:attribute name="codingScheme"
197 type="ecl:CodingSchemeTypeList" use="required"/>
198             </xs:extension>
199         </xs:simpleContent>
200     </xs:complexType>
201     <xs:simpleType name="MarketRoleKind_String"
202 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
203         <xs:restriction base="ecl:RoleTypeList"/>
204     </xs:simpleType>
205     <xs:simpleType name="ESMP_DateTime"
206 sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
```

ENTSO-E Bid availability document – UML model and schema
VERSION 1.1

European Network of
Transmission System Operators
for Electricity

entsoe

```
207                    <xs:restriction base="xs:dateTime">
208                        <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-
209    9]|[12][0-9]|3[01])|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|[12][0-
210    9]|30))T(([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-
211    9])Z)|((([13579][26][02468][048]|[13579][01345789](0)[48]|[13579][01345789][2468][0
212    48]|[02468][048][02468][048]|[02468][1235679](0)[48]|[02468][1235679][2468][048]|[
213    0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T(([01][0-9]|2[0-3]):[0-
214    5][0-9]:[0-5][0-
215    9])Z)|(([13579][26][02468][1235679]|[13579][01345789](0)[01235679]|[13579][0134578
216    9][2468][1235679]|[02468][048][02468][1235679]|[02468][1235679](0)[01235679]|[0246
217    8][1235679][2468][1235679]|[0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-
218    9]|2[0-8])T(([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)"/>
219                    </xs:restriction>
220            </xs:simpleType>
221            <xs:simpleType name="Status_String"
222    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
223                    <xs:restriction base="ecl:StatusTypeList"/>
224            </xs:simpleType>
225            <xs:complexType name="Action_Status"
226    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Status">
227                    <xs:sequence>
228                        <xs:element name="value" type="Status_String" minOccurs="1"
229    maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
230    cim16#Status.value"/>
231                    </xs:sequence>
232            </xs:complexType>
233            <xs:simpleType name="YMDHM_DateTime"
234    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
235                    <xs:restriction base="xs:string">
236                        <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-
237    9]|[12][0-9]|3[01])|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|[12][0-
238    9]|30))T(([01][0-9]|2[0-3]):[0-5][0-
239    9])Z)|((([13579][26][02468][048]|[13579][01345789](0)[48]|[13579][01345789][2468][0
240    48]|[02468][048][02468][048]|[02468][1235679](0)[48]|[02468][1235679][2468][048]|[
241    0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T(([01][0-9]|2[0-3]):[0-
242    5][0-
243    9])Z)|(([13579][26][02468][1235679]|[13579][01345789](0)[01235679]|[13579][0134578
244    9][2468][1235679]|[02468][048][02468][1235679]|[02468][1235679](0)[01235679]|[0246
245    8][1235679][2468][1235679]|[0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-
246    9]|2[0-8])T(([01][0-9]|2[0-3]):[0-5][0-9])Z)"/>
247                    </xs:restriction>
248            </xs:simpleType>
249            <xs:complexType name="ESMP_DateTimeInterval"
250    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
251                    <xs:sequence>
252                        <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
253    maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
254    cim16#DateTimeInterval.start"/>
255                        <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
256    maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
257    cim16#DateTimeInterval.end"/>
258                    </xs:sequence>
259            </xs:complexType>
260            <xs:complexType name="BidAvailability_MarketDocument"
261    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
262                    <xs:sequence>
263                        <xs:element name="mRID" type="ID_String" minOccurs="1"
264    maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
265    cim16#IdentifiedObject.mRID"/>
```

ENTSO-E Bid availability document – UML model and schema
VERSION 1.1

European Network of
Transmission System Operators
for Electricity

entsoe

```
266                         <xs:element name="revisionNumber" type="ESMPVersion_String"
267     minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
268     schema-cim16#Document.revisionNumber"/>
269                         <xs:element name="type" type="MessageKind_String" minOccurs="1"
270     maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
271     cim16#Document.type"/>
272                         <xs:element name="process.processType"
273     type="ProcessKind_String" minOccurs="1" maxOccurs="1"
274     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
275     cim16#Process.processType"/>
276                         <xs:element name="sender_MarketParticipant.mRID"
277     type="PartyID_String" minOccurs="1" maxOccurs="1"
278     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
279     cim16#IdentifiedObject.mRID"/>
280                         <xs:element name="sender_MarketParticipant.marketRole.type"
281     type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
282     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
283                         <xs:element name="receiver_MarketParticipant.mRID"
284     type="PartyID_String" minOccurs="1" maxOccurs="1"
285     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
286     cim16#IdentifiedObject.mRID"/>
287                         <xs:element name="receiver_MarketParticipant.marketRole.type"
288     type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
289     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
290                         <xs:element name="createdDateTime" type="ESMP_DateTime"
291     minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
292     schema-cim16#Document.createdDateTime"/>
293                         <xs:element name="docStatus" type="Action_Status" minOccurs="0"
294     maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
295     cim16#Document.docStatus"/>
296                         <xs:element name="time_Period.timeInterval"
297     type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
298     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
299     cim16#Period.timeInterval"/>
300                         <xs:element name="BidTimeSeries" type="BidTimeSeries"
301     minOccurs="1" maxOccurs="unbounded"
302     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
303     cim16#MarketDocument.BidTimeSeries"/>
304                 </xs:sequence>
305         </xs:complexType>
306         <xs:simpleType name="BusinessKind_String"
307     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
308             <xs:restriction base="ecl:BusinessTypeList"/>
309         </xs:simpleType>
310         <xs:simpleType name="AreaID_String-base"
311     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
312             <xs:restriction base="xs:string">
313                 <xs:maxLength value="18"/>
314             </xs:restriction>
315         </xs:simpleType>
316         <xs:complexType name="AreaID_String"
317     sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
318             <xs:simpleContent>
319                 <xs:extension base="AreaID_String-base">
320                     <xs:attribute name="codingScheme"
321     type="ecl:CodingSchemeTypeList" use="required"/>
322                 </xs:extension>
323             </xs:simpleContent>
324         </xs:complexType>
```

ENTSO-E Bid availability document – UML model and schema
VERSION 1.1

European Network of
Transmission System Operators
for Electricity

entsoe

```xml
325          <xs:simpleType name="MeasurementUnitKind_String"
326    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
327              <xs:restriction base="ecl:UnitOfMeasureTypeList"/>
328          </xs:simpleType>
329          <xs:complexType name="BidTimeSeries"
330    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#BidTimeSeries">
331              <xs:sequence>
332                  <xs:element name="mRID" type="ID_String" minOccurs="1"
333    maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
334    cim16#IdentifiedObject.mRID"/>
335                  <xs:element name="bidDocument_MarketDocument.mRID"
336    type="ID_String" minOccurs="1" maxOccurs="1"
337    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
338    cim16#IdentifiedObject.mRID"/>
339                  <xs:element name="bidDocument_MarketDocument.revisionNumber"
340    type="ESMPVersion_String" minOccurs="1" maxOccurs="1"
341    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
342    cim16#Document.revisionNumber"/>
343                  <xs:element name="requestingParty_MarketParticipant.mRID"
344    type="PartyID_String" minOccurs="0" maxOccurs="1"
345    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
346    cim16#IdentifiedObject.mRID"/>
347                  <xs:element name="requestingParty_MarketParticipant.name"
348    type="xs:string" minOccurs="0" maxOccurs="1"
349    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
350    cim16#IdentifiedObject.name"/>
351                  <xs:element
352    name="requestingParty_MarketParticipant.marketRole.type"
353    type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
354    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
355                  <xs:element name="businessType" type="BusinessKind_String"
356    minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
357    schema-cim16#TimeSeries.businessType"/>
358                  <xs:element name="domain.mRID" type="AreaID_String"
359    minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
360    schema-cim16#IdentifiedObject.mRID"/>
361                  <xs:element name="operationalLimit_Quantity.quantity"
362    type="xs:decimal" minOccurs="0" maxOccurs="1"
363    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
364    cim16#Quantity.quantity"/>
365                  <xs:element name="limit_Measurement_Unit.name"
366    type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
367    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
368                  <xs:element name="RegisteredResource" type="RegisteredResource"
369    minOccurs="0" maxOccurs="unbounded"
370    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
371    cim16#BidTimeSeries.RegisteredResource"/>
372                  <xs:element name="Reason" type="Reason" minOccurs="0"
373    maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
374    cim16#BidTimeSeries.Reason"/>
375              </xs:sequence>
376          </xs:complexType>
377          <xs:simpleType name="ReasonCode_String"
378    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
379              <xs:restriction base="ecl:ReasonCodeTypeList"/>
380          </xs:simpleType>
381          <xs:simpleType name="ReasonText_String"
382    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
383              <xs:restriction base="xs:string">
384                  <xs:maxLength value="512"/>
```

ENTSO-E Bid availability document – UML model and
schema
VERSION 1.1

European Network of
Transmission System Operators
for Electricity

```
385                </xs:restriction>
386            </xs:simpleType>
387            <xs:complexType name="Reason"
388    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
389                <xs:sequence>
390                    <xs:element name="code" type="ReasonCode_String" minOccurs="1"
391    maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
392    cim16#Reason.code"/>
393                    <xs:element name="text" type="ReasonText_String" minOccurs="0"
394    maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
395    cim16#Reason.text"/>
396                </xs:sequence>
397            </xs:complexType>
398            <xs:simpleType name="ResourceID_String-base"
399    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
400                <xs:restriction base="xs:string">
401                    <xs:maxLength value="60"/>
402                </xs:restriction>
403            </xs:simpleType>
404            <xs:complexType name="ResourceID_String"
405    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
406                <xs:simpleContent>
407                    <xs:extension base="ResourceID_String-base">
408                        <xs:attribute name="codingScheme"
409    type="ecl:CodingSchemeTypeList" use="required"/>
410                    </xs:extension>
411                </xs:simpleContent>
412            </xs:complexType>
413            <xs:complexType name="RegisteredResource"
414    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
415    cim16#RegisteredResource">
416                <xs:sequence>
417                    <xs:element name="mRID" type="ResourceID_String" minOccurs="1"
418    maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
419    cim16#IdentifiedObject.mRID"/>
420                </xs:sequence>
421            </xs:complexType>
422    </xs:schema>
423
```