ALLOCATION RESULT DOCUMENT
UML MODEL AND SCHEMA

2022-02-01
APPROVED DOCUMENT
VERSION 1.2
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This document is maintained by the ENTSO-E CIM EG. Comments or remarks are to be provided at cim@entso.eu
## Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Release</th>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2018-03-12</td>
<td>First drafting of the document.</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>2018-05-08</td>
<td>Document approved by MC</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2021-04-20</td>
<td>Title changed to Allocation Result document UML and schema instead of Allocation document. Changes in XSD v7.1: Reason is to align the market document name with the schema name. Cardinality of Bid_Original_MarketDocument association was changed from [1] to [0..1]. Approved by MC.</td>
</tr>
</tbody>
</table>
| 1       | 2       | 2022-02-01 | Updates in allocation result document XSD v7.2  
- Quantity_Measure_Unit.name & Price_Measure_Unit.name attributes were renamed to Quantity_Measurement_Unit.name & Price_Measurement_Unit.name to be compliant with the ESMP. Approved by MC. |
Objective

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

The schema of the AllocationResult_MarketDocument could be used in various business processes.

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

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

- Description of the business process;
- Use case of the business process;
- Sequence diagrams of the business process;
- List of the schema (XSD) to be used in the business process and versions of the schema;
- For each schema, dependency tables providing the necessary information for the generation of the XML instances, i.e. when the optional attributes are to be used, which codes from which ENTSO-E codelist are to be used.
2.1 Allocation result contextual model

2.1.1 Overview of the model

Figure 1 shows the model.

![Figure 1 - Allocation result contextual model](image-url)
2.1.2 IsBasedOn relationships from the European style market profile

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Complete IsBasedOn Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>AllocationResult_MarketDocument</td>
<td>TC57CIM::IEC62325::MarketManagement::MarketDocument</td>
</tr>
<tr>
<td>Auction</td>
<td>TC57CIM::IEC62325::MarketManagement::Auction</td>
</tr>
<tr>
<td>BidDocument_MarketDocument</td>
<td>TC57CIM::IEC62325::MarketManagement::MarketDocument</td>
</tr>
<tr>
<td>BidTimeSeries</td>
<td>TC57CIM::IEC62325::MarketManagement::BidTimeSeries</td>
</tr>
<tr>
<td>Contract_MarketAgreement</td>
<td>TC57CIM::IEC62325::MarketManagement::MarketAgreement</td>
</tr>
<tr>
<td>Currency_Unit</td>
<td>TC57CIM::IEC62325::MarketManagement::Unit</td>
</tr>
<tr>
<td>Domain</td>
<td>TC57CIM::IEC62325::MarketManagement::Domain</td>
</tr>
<tr>
<td>MarketParticipant</td>
<td>TC57CIM::IEC62325::MarketCommon::MarketParticipant</td>
</tr>
<tr>
<td>MarketRole</td>
<td>TC57CIM::IEC62325::MarketCommon::MarketRole</td>
</tr>
<tr>
<td>Measure_Unit</td>
<td>TC57CIM::IEC62325::MarketManagement::Unit</td>
</tr>
<tr>
<td>Point</td>
<td>TC57CIM::IEC62325::MarketManagement::Point</td>
</tr>
<tr>
<td>Price</td>
<td>TC57CIM::IEC62325::MarketManagement::Price</td>
</tr>
<tr>
<td>Reason</td>
<td>TC57CIM::IEC62325::MarketManagement::Reason</td>
</tr>
<tr>
<td>Series_Period</td>
<td>TC57CIM::IEC62325::MarketManagement::Period</td>
</tr>
<tr>
<td>Time_Period</td>
<td>TC57CIM::IEC62325::MarketManagement::Period</td>
</tr>
<tr>
<td>TimeSeries</td>
<td>TC57CIM::IEC62325::MarketManagement::TimeSeries</td>
</tr>
</tbody>
</table>
2.2 Allocation result assembly model

2.2.1 Overview of the model

Figure 2 shows the model.
Figure 2 - Allocation result assembly model
2.2.2 IsBasedOn relationships from the European style market profile

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Complete IsBasedOn Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>AllocationResult_MarketDocument</td>
<td>TC57CIM::IEC62325::MarketManagement::MarketDocument</td>
</tr>
<tr>
<td>Point</td>
<td>TC57CIM::IEC62325::MarketManagement::Point</td>
</tr>
<tr>
<td>Reason</td>
<td>TC57CIM::IEC62325::MarketManagement::Reason</td>
</tr>
<tr>
<td>Series_Period</td>
<td>TC57CIM::IEC62325::MarketManagement::Period</td>
</tr>
<tr>
<td>TimeSeries</td>
<td>TC57CIM::IEC62325::MarketManagement::TimeSeries</td>
</tr>
</tbody>
</table>

2.2.3 Detailed Allocation result assembly model

2.2.3.1 AllocationResult_MarketDocument root class

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

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

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

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

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

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

Table 3 shows all attributes of AllocationResult_MarketDocument.

<table>
<thead>
<tr>
<th>Order</th>
<th>mut.</th>
<th>Attribute name / Attribute type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>[1..1]</td>
<td>mRID ID_String</td>
<td>The unique identification of the document being exchanged within a business process flow.</td>
</tr>
<tr>
<td>1</td>
<td>[1..1]</td>
<td>revisionNumber ESMPVersion_String</td>
<td>The identification of the version that distinguishes one evolution of a document from another.</td>
</tr>
</tbody>
</table>
Table 4 shows all association ends of AllocationResult_MarketDocument with other classes.

Table 4 - Association ends of Allocation result assembly
model::AllocationResult_MarketDocument with other classes

<table>
<thead>
<tr>
<th>Order</th>
<th>mult.</th>
<th>Class name / Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>[0..*]</td>
<td>TimeSeries</td>
<td>Association Based On: Allocation result contextual model::TimeSeries.TimeSeries[0..*] Association Based On: Allocation result contextual model::AllocationResult_MarketDocument[]</td>
</tr>
<tr>
<td>13</td>
<td>[0..*]</td>
<td>Reason</td>
<td>Association Based On: Allocation result contextual model::Reason.Reason[0..*] Association Based On: Allocation result contextual model::AllocationResult_MarketDocument[]</td>
</tr>
</tbody>
</table>

2.2.3.2 Point

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

Table 5 shows all attributes of Point.
Table 5 - Attributes of Allocation result assembly model::Point

<table>
<thead>
<tr>
<th>Order</th>
<th>mult.</th>
<th>Attribute name / Attribute type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>[1..1]</td>
<td>position Position_Integer</td>
<td>A sequential value representing the relative position within a given time interval.</td>
</tr>
<tr>
<td>1</td>
<td>[1..1]</td>
<td>quantity Decimal</td>
<td>The quantity that has been allocated or resold in the auction. The principal quantity identified for a point.</td>
</tr>
<tr>
<td>2</td>
<td>[0..1]</td>
<td>amount_Price.amount Amount_Decimal</td>
<td>A number of monetary units specified in a unit of currency. The price expressed for each unit of quantity allocated.</td>
</tr>
<tr>
<td>3</td>
<td>[0..1]</td>
<td>secondaryQuantity Decimal</td>
<td>The quantity that was in the original bid or resale document. The secondary quantity identified for a point.</td>
</tr>
<tr>
<td>4</td>
<td>[0..1]</td>
<td>bidAmount_Price.amount Amount_Decimal</td>
<td>A number of monetary units specified in a unit of currency. The original price expressed in the original bid or resale for each unit of quantity requested.</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Order</th>
<th>mult.</th>
<th>Class name / Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>[0..*]</td>
<td>Reason Reason</td>
<td>Association Based On: Allocation result contextual model::Reason.Reason[0..*] Allocation result contextual model::Point[.]</td>
</tr>
</tbody>
</table>

2.2.3.3 Reason

The motivation of an act.

Table 7 shows all attributes of Reason.

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

<table>
<thead>
<tr>
<th>Order</th>
<th>mult.</th>
<th>Attribute name / Attribute type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>[1..1]</td>
<td>code ReasonCode_String</td>
<td>The motivation of an act in coded form.</td>
</tr>
<tr>
<td>1</td>
<td>[0..1]</td>
<td>text ReasonText_String</td>
<td>The textual explanation corresponding to the reason code.</td>
</tr>
</tbody>
</table>

2.2.3.4 Series_Period

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

Table 8 shows all attributes of Series_Period.
Table 8 - Attributes of Allocation result assembly model::Series_Period

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

Table 9 shows all association ends of Series_Period with other classes.

Table 9 - Association ends of Allocation result assembly model::Series_Period with other classes

<table>
<thead>
<tr>
<th>Order</th>
<th>mult.</th>
<th>Class name / Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>[1..*]</td>
<td>Point</td>
<td>Association Based On: Allocation result contextual model::Point.Point[1..*]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Allocation result contextual model::Series_Period.[]</td>
</tr>
</tbody>
</table>

2.2.3.5 TimeSeries

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

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

Table 10 shows all attributes of TimeSeries.

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

<table>
<thead>
<tr>
<th>Order</th>
<th>mult.</th>
<th>Attribute name / Attribute type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>[1..1]</td>
<td>mRID</td>
<td>A unique identification of the time series.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ID_String</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>[0..1]</td>
<td>bid_Original_MarketDocument.mRID</td>
<td>The unique identification of the document being exchanged within a business process flow.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ID_String</td>
<td>--- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.</td>
</tr>
<tr>
<td>2</td>
<td>[0..1]</td>
<td>bid_Original_MarketDocument.revisionNumber</td>
<td>The identification of the version that distinguishes one evolution of a document from another.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ESMPVersion_String</td>
<td>--- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ID_String</td>
<td>--- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>--- The identification of the time series that was used in the original bid or resale. This is the unique number that is assigned by the bidder when he made his original bid or resale.</td>
</tr>
<tr>
<td>Order</td>
<td>mult.</td>
<td>Attribute name / Attribute type</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>---------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>4</td>
<td>[1..1]</td>
<td>auction.mRID/ID_ String</td>
<td>The unique identification of the auction. The identification linking the allocation to a set of specifications created by the auction operator.</td>
</tr>
<tr>
<td>5</td>
<td>[0..1]</td>
<td>auction.category/Category_String</td>
<td>The product category of an auction. The identification linking the allocation to a set of specifications created by the auction operator.</td>
</tr>
<tr>
<td>6</td>
<td>[1..1]</td>
<td>businessType/BusinessKind_String</td>
<td>The identification of the nature of the time series.</td>
</tr>
<tr>
<td>7</td>
<td>[1..1]</td>
<td>in_Domain.mRID/AreaID_String</td>
<td>The unique identification of the domain. The area where the energy is to be put.</td>
</tr>
<tr>
<td>8</td>
<td>[1..1]</td>
<td>out_Domain.mRID/AreaID_String</td>
<td>The unique identification of the domain. The area where the energy is coming from.</td>
</tr>
<tr>
<td>9</td>
<td>[1..1]</td>
<td>marketAgreement.mRID/ID_String</td>
<td>The unique identification of the agreement. The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.</td>
</tr>
<tr>
<td>10</td>
<td>[1..1]</td>
<td>marketAgreement.type/CapacityContractKind_String</td>
<td>The specification of the kind of the agreement, e.g. long term, daily contract. The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.</td>
</tr>
<tr>
<td>11</td>
<td>[1..1]</td>
<td>quantity_Measurement_Unit.name/MeasurementUnitKind_String</td>
<td>The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW.</td>
</tr>
<tr>
<td>12</td>
<td>[0..1]</td>
<td>currency_Unit.name/CurrencyCode_String</td>
<td>The identification of the formal code for a currency (ISO 4217). The currency in which the monetary amount is expressed.</td>
</tr>
<tr>
<td>13</td>
<td>[0..1]</td>
<td>price_Measurement_Unit.name/MeasurementUnitKind_String</td>
<td>The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). The unit of measure in which the price in the time series is expressed.</td>
</tr>
<tr>
<td>14</td>
<td>[0..1]</td>
<td>curveType/CurveType_String</td>
<td>The identification of the coded representation of the type of curve being described.</td>
</tr>
</tbody>
</table>
Table 11 shows all association ends of TimeSeries with other classes.

### Table 11 - Association ends of Allocation result assembly model::TimeSeries with other classes

<table>
<thead>
<tr>
<th>Order</th>
<th>mult.</th>
<th>Class name / Role</th>
<th>Description</th>
</tr>
</thead>
</table>
| 15    | [1..*] | Series_Period | Period | Association Based On: Allocation result contextual model::Series_Period.Period[1..*]  
|       |       |                   |           | Allocation result contextual model::TimeSeries.[] |
| 16    | [0..*] | Reason | Reason | Association Based On: Allocation result contextual model::Reason.Reason[0..*]  
|       |       |                   |           | Allocation result contextual model::TimeSeries.[] |

#### 2.2.4 Datatypes

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

- ESMP_DateTimeInterval compound
- Amount_Decimal datatype
- AreaID_String datatype, codelist CodingSchemeTypeList
- BusinessKind_String datatype, codelist BusinessTypeList
- CapacityContractKind_String datatype, codelist ContractTypeList
- Category_String datatype, codelist CategoryTypeList
- CurrencyCode_String datatype, codelist CurrencyTypeList
- CurveType_String datatype, codelist CurveTypeList
- ESMP_DateTime datatype
- ESMPVersion_String datatype
- ID_String datatype
- MarketRoleKind_String datatype, codelist RoleTypeList
- MeasurementUnitKind_String datatype, codelist UnitOfMeasureTypeList
- MessageKind_String datatype, codelist MessageTypeList
- PartyID_String datatype, codelist CodingSchemeTypeList
- Position_Integer datatype
- ReasonCode_String datatype, codelist ReasonCodeTypeList
- ReasonText_String datatype
- YMDHM_DateTime datatype
2.2.5 AllocationResult_MarketDocument XML schema structure

Figure 3 - AllocationResult_MarketDocument schema structure
2.2.6 AllocationResult_MarketDocument XML schema

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

```xml
```

```xml
<xs:complexType name="AllocationResult_MarketDocument">
    <xs:simpleType name="ID_String">
        <xs:restriction base="xs:string">
            <xs:maxLength value="60"/>
        </xs:restriction>
    </xs:simpleType>

    <xs:complexType name="ESMPVersion_String">
        <xs:restriction base="xs:string">
            <xs:pattern value="[1-9][0-9]{0,2}"/>
        </xs:restriction>
    </xs:simpleType>

    <xs:complexType name="MessageKind_String">
        <xs:restriction base="ecl:MessageTypeList"/>
    </xs:simpleType>

    <xs:complexType name="PartyID_String-base">
        <xs:restriction base="xs:string">
            <xs:maxLength value="16"/>
        </xs:restriction>
    </xs:simpleType>

    <xs:complexType name="PartyID_String">
        <xs:extension base="PartyID_String-base" type="ecl:CodingSchemeTypeList" use="required"/>
    </xs:simpleType>

    <xs:complexType name="MarketRoleKind_String">
        <xs:restriction base="ecl:RoleTypeList"/>
    </xs:simpleType>

    <xs:complexType name="ESMP_DateTime">
        <xs:restriction base="ecl:dateTime"/>
    </xs:simpleType>
```

```xml
<xs:element name="AllocationResult_MarketDocument">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="id" type="ID_String"/>
            <xs:element name="esmpVersion" type="ESMPVersion_String"/>
            <xs:element name="messageKind" type="MessageKind_String"/>
            <xs:element name="marketRoleKind" type="MarketRoleKind_String"/>
            <xs:element name="partyID" type="ESMP_DateTime"/>
        </xs:sequence>
        <xs:attribute name="urn:entsoe:eu-wgedi-codelists" type="urn:entsoe:eu-wgedi-codelists" schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd"/>
    </xs:complexType>
</xs:element>
```
<xs:restriction base="xs:dateTime">
  <xs:pattern value="((((0-9){4})[-](0[13578][102])(-)(0-9){3})[01][0-9])">
  <xs:maxOccurs value="50"/>
</xs:restriction>

<sawsdl:modelReference "http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxlength value="18"/>
</xs:restriction>
</sawsdl:modelReference>

<sawsdl:modelReference "http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:dateTime">
    <xs:pattern value="((((0-9){4})[-](0[13578][102])(-)(0-9){3})[01][0-9])">
    <xs:maxOccurs value="50"/>
  </xs:restriction>
</sawsdl:modelReference>

<sawsdl:modelReference "http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxOccurs value="18"/>
  </xs:restriction>
</sawsdl:modelReference>

<sawsdl:modelReference "http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:dateTime">
    <xs:pattern value="((((0-9){4})[-](0[13578][102])(-)(0-9){3})[01][0-9])">
    <xs:minOccurs value="1"/>
    <xs:maxOccurs value="50"/>
  </xs:restriction>
</sawsdl:modelReference>

<sawsdl:modelReference "http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:dateTime">
    <xs:pattern value="((((0-9){4})[-](0[13578][102])(-)(0-9){3})[01][0-9])">
    <xs:minOccurs value="1"/>
    <xs:maxOccurs value="50"/>
  </xs:restriction>
</sawsdl:modelReference>
<xs:complexType name="AllocationResult_MarketDocument">
  <xs:complexContent>
    <xs:extension base="cim16#MarketDocument">
      <xs:sequence>
        <xs:element name="mRID" type="ID_String" minOccurs="1" maxOccurs="1" sawsd1:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument"/>
        <xs:element name="receiver_MarketParticipant.mRID" type="cim16#IdentifiedObject.mRID" minOccurs="1" maxOccurs="1" sawsd1:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument"/>
        <xs:element name="sender_MarketParticipant.marketRole.type" type="MarketRoleKind_String" minOccurs="1" maxOccurs="1" sawsd1:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument"/>
        <xs:element name="createdDateTime" type="ESMP_DateTime" minOccurs="1" maxOccurs="1" sawsd1:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument"/>
        <xs:element name="period.timeInterval" type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1" sawsd1:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument"/>
        <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1" maxOccurs="1" sawsd1:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument"/>
        <xs:element name="subjectParty_MarketParticipant.mRID" type="cim16#IdentifiedObject.mRID" minOccurs="1" maxOccurs="1" sawsd1:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument"/>
        <xs:element name="subjectParty_MarketParticipant.marketRole.type" type="MarketRoleKind_String" minOccurs="1" maxOccurs="1" sawsd1:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument"/>
        <xs:element name="Reason" type="Reason" minOccurs="0" maxOccurs="unbounded" sawsd1:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:minInclusive value="1"/>
</xs:restriction>
</xs:simpleType>

<sawsdl:modelReference http://iec.ch/TC57/2013/CIM-schema-cim16#Point>  
<xs:element name="position" type="Position_Integer"
minOccurs="1" maxOccurs="1"/>
</sawsdl:modelReference>

<sawsdl:modelReference http://iec.ch/TC57/2013/CIM-schema-cim16#Point.quantity>  
<xs:element name="quantity" type="xs:decimal"
minOccurs="1" maxOccurs="1"/>
</sawsdl:modelReference>

<sawsdl:modelReference http://iec.ch/TC57/2013/CIM-schema-cim16#Point.amount_price>  
<xs:element name="amount_price" type="Amount_Decimal"
minOccurs="0" maxOccurs="1"/>
</sawsdl:modelReference>

<sawsdl:modelReference http://iec.ch/TC57/2013/CIM-schema-cim16#PointsecondaryQuantity>  
<xs:element name="secondaryQuantity" type="xs:decimal"
minOccurs="0" maxOccurs="1"/>
</sawsdl:modelReference>

<sawsdl:modelReference http://iec.ch/TC57/2013/CIM-schema-cim16#Point.bidAmount_Price.amount>  
<xs:element name="bidAmount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1"/>
</sawsdl:modelReference>

<sawsdl:modelReference http://iec.ch/TC57/2013/CIM-schema-cim16#PointReason>  
<xs:element name="Reason" type="Reason"
maxOccurs="unbounded"/>
</sawsdl:modelReference>

<xs:complexType name="ReasonCode_String">  
<sawsdl:modelReference http://iec.ch/TC57/2013/CIM-schema-cim16#String>  
<xs:restriction base="ecl:ReasonCodeTypeList"/>
</sawsdl:modelReference>

<xs:complexType name="ReasonText_String">  
<sawsdl:modelReference http://iec.ch/TC57/2013/CIM-schema-cim16#String>  
<xs:restriction base="xs:string" maxOccurs="0"/>
</sawsdl:modelReference>

<xs:complexType name="Reason">  
<sawsdl:modelReference http://iec.ch/TC57/2013/CIM-schema-cim16#Reason>  
<xs:sequence>
  <xs:element name="code" type="ReasonCode_String" maxOccurs="1"/>
  <xs:element name="text" type="ReasonText_String" maxOccurs="0"/>
</xs:sequence>
</sawsdl:modelReference>

<xs:complexType name="Series_Period">  
<sawsdl:modelReference http://iec.ch/TC57/2013/CIM-schema-cim16#Period>  
<xs:sequence/>
</sawsdl:modelReference>
<xs:element name="timeInterval" type="ESMP_DateTimeInterval"
  minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
  schema-cim16#Period.timeInterval"/>

<xs:element name="resolution" type="xs:duration" minOccurs="1"
  maxOccurs="1" sawsdl:modelReferences="http://iec.ch/TC57/2013/CIM-schema-
  cim16#Period.resolution"/>

<xs:element name="Point" type="Point" minOccurs="1"
  maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
  cim16#Period.Point"/>

</xs:complexType>
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<xs:complexType name="Category_String"
  sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="ecl:CategoryTypeList"/>
</xs:complexType>

<xs:complexType name="BusinessKind_String"
  sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="ecl:BusinessTypeList"/>
</xs:complexType>

<xs:complexType name="CapacityContractKind_String"
  sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="ecl:ContractTypeList"/>
</xs:complexType>

<xs:complexType name="MeasurementUnitKind_String"
  sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="ecl:UnitOfMeasureTypeList"/>
</xs:complexType>

<xs:complexType name="CurrencyCode_String"
  sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="ecl:CurrencyTypeList"/>
</xs:complexType>

<xs:complexType name="CurveType_String"
  sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="ecl:CurveTypeList"/>
</xs:complexType>

<xs:complexType name="TimeSeries"
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
      maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
      cim16#IdentifiedObject.mRID"/>
    <xs:element name="bid_Original_MarketDocument.mRID"
      type="ID_String" minOccurs="0" maxOccurs="1"
      sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
      cim16#IdentifiedObject.mRID"/>
    <xs:element name="bid_Original_MarketDocument.revisionNumber"
      type="ESMPVersion_String" minOccurs="0" maxOccurs="1"
      sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
      cim16#Document.revisionNumber"/>
    <xs:element
      name="bid_Original_MarketDocument.bid_TimeSeries.mRID" type="ID_String"
      minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
      schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="1"
      maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
      cim16#IdentifiedObject.mRID"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="auction.category" type="Category_String"
    minOccurs="0" maxOccurs="1"/>

<xs:element name="businessType" type="BusinessKind_String"
    minOccurs="1" maxOccurs="1"/>

<xs:element name="in_Domain.mRID" type="AreaID_String"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID</sawsdl:modelReference/>

<xs:element name="out_Domain.mRID" type="AreaID_String"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID</sawsdl:modelReference/>

<xs:element name="marketAgreement.mRID" type="ID_String"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID</sawsdl:modelReference/>

<xs:element name="marketAgreement.type"
    minOccurs="1" maxOccurs="1"/>

<xs:element name="CapacityContractKind_String"
    minOccurs="0" maxOccurs="1"/>

<xs:element name="currency_Unit.name"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name</sawsdl:modelReference/>

<xs:element name="measurement_Unit.name"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name</sawsdl:modelReference/>

<xs:element name="price_Measurement_Unit.name"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name</sawsdl:modelReference/>

<xs:element name="areaID" type="AreaID_String"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID</sawsdl:modelReference/>

<xs:element name="in_Domain.mRID" type="AreaID_String"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID</sawsdl:modelReference/>

<xs:element name="out_Domain.mRID" type="AreaID_String"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID</sawsdl:modelReference/>

<xs:element name="in_Domain.mRID" type="AreaID_String"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID</sawsdl:modelReference/>

<xs:element name="currency_Unit.name"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name</sawsdl:modelReference/>

<xs:element name="price_Measurement_Unit.name"
    minOccurs="1" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name</sawsdl:modelReference/>

<xs:element name="marketAgreement.type" type="Category_String"
    minOccurs="1" maxOccurs="1"/>

<xs:element name="currency_Unit.name" type="CurrencyCode_String"
    minOccurs="0" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name</sawsdl:modelReference/>

<xs:element name="price_Measurement_Unit.name" type="CurrencyCode_String"
    minOccurs="0" maxOccurs="1"/>
<sawsdl:modelReference>http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name</sawsdl:modelReference/>

<xs:element name="curveType" type="CurveType_String"
    minOccurs="0" maxOccurs="1"/>

<xs:element name="Period" type="Series_Period" minOccurs="1"
    maxOccurs="unbounded"/>

<xs:element name="Reason" type="Reason"
    minOccurs="0" maxOccurs="1"/>

<xs:sequence/>
</xs:complexType>
</xs:schema>