RIGHTS DOCUMENT
UML MODEL AND SCHEMA

2017-01-19
VERSION 1.0
Table of Contents

1 Objective ........................................................................................................... 5
2 Rights_MarketDocument.................................................................................. 6
  2.1 Rights 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 Rights 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 Rights assembly model ............................................................ 9
  2.2.3.1 Rights_MarketDocument root class ................................................. 9
  2.2.3.2 Point ............................................................................................... 10
  2.2.3.3 Reason ............................................................................................ 10
  2.2.3.4 Series_Period .................................................................................. 11
  2.2.3.5 TimeSeries ..................................................................................... 11
  2.2.4 Datatypes .............................................................................................. 13
  2.2.5 Rights_MarketDocument XML schema structure ................................ 14
  2.2.6 Rights_MarketDocument XML schema ............................................... 16

List of figures

23 Figure 1 - Rights contextual model ............................................................... 6
24 Figure 2 - Rights assembly model ................................................................. 8
25 Figure 3 - Rights_MarketDocument schema structure 1/3 ............................. 14
26 Figure 4 - Rights_MarketDocument schema structure 2/3 ............................. 15
27 Figure 5 - Rights_MarketDocument schema structure 3/3 ............................. 16

List of tables

29 Table 1 - IsBasedOn dependency ................................................................. 7
30 Table 2 - IsBasedOn dependency ................................................................. 9
31 Table 3 - Attributes of Rights assembly model::Rights_MarketDocument .... 9
32 Table 4 - Association ends of Rights assembly model::Rights_MarketDocument with other classes ................................................................. 10
34 Table 5 - Attributes of Rights assembly model::Point .................................. 10
35 Table 6 - Attributes of Rights assembly model::Reason ................................ 11
36 Table 7 - Attributes of Rights assembly model::Series_Period ................. 11
37 Table 8 - Association ends of Rights assembly model::Series_Period with other classes ................................................................. 11
39 Table 9 - Attributes of Rights assembly model::TimeSeries .......................... 11
40 Table 10 - Association ends of Rights assembly model::TimeSeries with other classes ........... 12
Copyright notice:

Copyright © ENTSO-E. All Rights Reserved.

This document and its whole translations may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this paragraph are included on all such copies and derivative works. However, this document itself may not be modified in any way, except for literal and whole translation into languages other than English and under all circumstances, the copyright notice or references to ENTSO-E may not be removed.

This document and the information contained herein is provided on an "as is" basis.

ENTSO-E DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Maintenance notice:

This document is maintained by the ENTSO-E WG EDI. Comments or remarks are to be provided at EDI.Library@entsoe.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>0</td>
<td>2017-01-19</td>
<td>First drafting of the document.</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>2017-01-30</td>
<td>Version to be submitted to Market Committee following WG EDI meeting in March 2017.</td>
</tr>
</tbody>
</table>
1 Objective

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

The schema of the Rights_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 Rights_MarketDocument

2.1 Rights contextual model

2.1.1 Overview of the model

Figure 1 shows the model.
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 1 - IsBasedOn dependency**

<table>
<thead>
<tr>
<th>Name</th>
<th>Complete IsBasedOn Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auction</td>
<td>TC57CIM::IEC62325::MarketManagement::Auction</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>MarketAgreement</td>
<td>TC57CIM::IEC62325::MarketManagement::MarketAgreement</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>Previous_MarketAgreement</td>
<td>TC57CIM::IEC62325::MarketManagement::MarketAgreement</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>Rights_MarketDocument</td>
<td>TC57CIM::IEC62325::MarketManagement::MarketDocument</td>
</tr>
<tr>
<td>Rights_MarketParticipant</td>
<td>TC57CIM::IEC62325::MarketCommon::MarketParticipant</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 Rights assembly model

2.2.1 Overview of the model

Figure 2 shows the model.

Figure 2 - Rights 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>Point</td>
<td>TC57CIM::IEC62325::MarketManagement::Point</td>
</tr>
<tr>
<td>Reason</td>
<td>TC57CIM::IEC62325::MarketManagement::Reason</td>
</tr>
<tr>
<td>Rights_MarketDocument</td>
<td>TC57CIM::IEC62325::MarketManagement::MarketDocument</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 Rights assembly model

#### 2.2.3.1 Rights_MarketDocument root class

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

The rights document may be sent by a capacity trader to inform the auction office of a transfer of rights.

It may also be sent by the auction office to inform the nomination validator of the parties who have transmission rights for a given period.

The nomination validator may also use this document to inform an interconnection trade responsible of the rights he may use for nomination.

Table 3 shows all attributes of Rights_MarketDocument.

<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 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>
<tr>
<td>3</td>
<td>[1..1]</td>
<td>sender_MarketParticipant.mRID PartyID_String</td>
<td>The identification of a party in the energy market. --- Document owner.</td>
</tr>
<tr>
<td>4</td>
<td>[1..1]</td>
<td>sender_MarketParticipant.marketRole.type MarketRoleKind_String</td>
<td>The identification of the role played by a market player. --- Document owner.</td>
</tr>
<tr>
<td>5</td>
<td>[1..1]</td>
<td>receiver_MarketParticipant.mRID PartyID_String</td>
<td>The identification of a party in the energy market. --- Document recipient.</td>
</tr>
<tr>
<td>6</td>
<td>[1..1]</td>
<td>receiver_MarketParticipant.marketRole.type MarketRoleKind_String</td>
<td>The identification of the role played by a market player. --- Document recipient.</td>
</tr>
<tr>
<td>7</td>
<td>[1..1]</td>
<td>createdDateTime ESMP_DateTime</td>
<td>The date and time of the creation of the document.</td>
</tr>
<tr>
<td>8</td>
<td>[1..1]</td>
<td>period.timeInterval ESMP_DateTimeInterval</td>
<td>The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.</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>9</td>
<td>[1..1]</td>
<td>domain.mRID</td>
<td>The unique identification of the domain. --- The domain covered within the rights document.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ArealID_String</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>[1..1]</td>
<td>docStatus</td>
<td>The identification of the condition or position of the document with regard to its standing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Action_Status</td>
<td></td>
</tr>
</tbody>
</table>

Table 4 shows all association ends of Rights_MarketDocument with other classes.

**Table 4 - Association ends of Rights assembly model::Rights_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>11</td>
<td>[0..*]</td>
<td>TimeSeries</td>
<td>Association Based On: Rights contextual model::TimeSeries.TimeSeries[0..*] Rights contextual model::Rights_MarketDocument.[]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TimeSeries</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>[0..*]</td>
<td>Reason</td>
<td>Association Based On: Rights contextual model::Reason.Reason[0..*] Rights contextual model::Rights_MarketDocument.[]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reason</td>
<td></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 Rights 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</td>
<td>A sequential value representing the relative position within a given time interval.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Position_Integer</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>[1..1]</td>
<td>quantity</td>
<td>This information defines the quantity that has been assigned to the nomination party for the interval in question and that is expressed in the measurement unit. The principal quantity identified for a point.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decimal</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>[0..1]</td>
<td>price.amount</td>
<td>A number of monetary units specified in a unit of currency. --- The price expressed for each unit of quantity as the minimum selling price. The price indicated in a resale document equal to or above which the quantity may be sold. This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. The price amount is mandatory in the case of the resale of capacity for a minimum price depending on local market rules.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amount.Decimal</td>
<td></td>
</tr>
</tbody>
</table>

2.2.3.3 **Reason**

The motivation of an act.

Table 6 shows all attributes of Reason.
2.2.3.4 Series_Period

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

Table 7 shows all attributes of Series_Period.

Table 7 - Attributes of Rights 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>

2.2.3.5 TimeSeries

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

Table 9 shows all attributes of TimeSeries.

Table 9 - Attributes of Rights 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>[1..1]</td>
<td>businessType</td>
<td>The identification of the nature of the time series.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BusinessKind_String</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>[1..1]</td>
<td>m_Domain.mRID</td>
<td>The unique identification of the domain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AreaID_String</td>
<td>--- The area where the energy is to be put.</td>
</tr>
<tr>
<td>3</td>
<td>[1..1]</td>
<td>out_Domain.mRID</td>
<td>The unique identification of the domain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AreaID_String</td>
<td>--- The area where the energy is coming from.</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>holder_Rights_MarketParticipant.mRID PartyID_String</td>
<td>The identification of a party in the energy market. --- Identification of the party who is owner of, or has the right to use, the transmission rights in question. Whenever rights are transferred, the rights holder is the transferor of the rights.</td>
</tr>
<tr>
<td>5</td>
<td>[0..1]</td>
<td>transferee_Rights_MarketParticipant.mRID PartyID_String</td>
<td>The identification of a party in the energy market. --- Identification of the party to whom the rights are being transferred or the Interconnection Trade Responsible designated by the transferor (as designated in the RightsHolder attribute) to use the rights. In certain cases the transferee party also acts as Interconnection Trade Responsible.</td>
</tr>
<tr>
<td>6</td>
<td>[1..1]</td>
<td>marketAgreement.mRID ID_String</td>
<td>The unique identification of the agreement.</td>
</tr>
<tr>
<td>7</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.</td>
</tr>
<tr>
<td>8</td>
<td>[0..1]</td>
<td>previous_MarketAgreement.mRID ID_String</td>
<td>The unique identification of the agreement. --- The identification of a previous contract used to identify the transfer rights.</td>
</tr>
<tr>
<td>9</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>10</td>
<td>[0..1]</td>
<td>auction.mRID ID_String</td>
<td>The unique identification of the auction. --- The identification linking the capacity rights to a set of specifications created by the transmission capacity allocator. A unique identification of the set of specifications that clearly defines the auction to which the capacity rights submitted by the capacity trader are to be re-auctioned.</td>
</tr>
<tr>
<td>11</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>12</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 (MW per unit, MWh per unit, etc.).</td>
</tr>
<tr>
<td>13</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 10 shows all association ends of TimeSeries with other classes.

### Table 10 - Association ends of Rights 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>
<tbody>
<tr>
<td>14</td>
<td>[1..*]</td>
<td>Series_Period Period</td>
<td>Association Based On: Rights contextual model::Series_Period.Period[1..*] Rights contextual model::TimeSeries.[]</td>
</tr>
<tr>
<td>15</td>
<td>[0..*]</td>
<td>Reason</td>
<td>Association Based On: Rights contextual model::Reason.Reason[0..*] Rights contextual model::TimeSeries.[]</td>
</tr>
</tbody>
</table>
The list of datatypes used for the Rights assembly model is as follows:

- Action_Status compound
- ESMP_DateTimeInterval compound
- Amount_Decimal datatype
- AreaID_String datatype, codelist CodingSchemeTypeList
- BusinessKind_String datatype, codelist BusinessTypeList
- CapacityContractKind_String datatype, codelist ContractTypeList
- 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
- Status_String datatype, codelist StatusTypeList
- YMDHM_DateTime datatype
2.2.5 Rights_MarketDocument XML schema structure

Figure 3 to Figure 5 provide the structure of the schema.

Figure 3 - Rights_MarketDocument schema structure 1/3
Figure 4 - Rights_MarketDocument schema structure 2/3
2.2.6 Rights_MarketDocument XML schema

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

urn:iec62325.351:tc57wg16:451-3:rightsdocument:7:0

<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:rightsdocument:7:0"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:import schemaLocation="urn:entsoe-eu-wgedi-codelists.xsd"
namespace="urn:entsoe.eu:wgedi:codelists" />
<xs:element name="Rights_MarketDocument" type="Rights_MarketDocument" />
<xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
<xs:restriction base="xs:integer">
<xs:minInclusive value="1" />
<xs:maxInclusive value="999999" />
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
<xs:restriction base="xs:decimal">
<xs:totalDigits value="17" />
</xs:restriction>
</xs:simpleType>
<xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
<xs:sequence>
<xs:element minOccurs="1" maxOccurs="1" name="position" type="Position_Integer"
sawsdl:modelReference="http://iec/ch/TC57/2013/CIM-schema-cim16#Point.position" />
<xs:element minOccurs="1" maxOccurs="1" name="quantity" type="xs:decimal"
sawsdl:modelReference="http://iec/ch/TC57/2013/CIM-schema-cim16#Point.quantity" />
<xs:element minOccurs="0" maxOccurs="1" name="price.amount" type="Amount_Decimal"
</xs:sequence>
</xs:complexType>
<xs:element minOccurs="1" maxOccurs="1" name="type" type="MessageKind_String"
</xs:element>

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

<xs:element minOccurs="1" maxOccurs="1" name="sender_MarketParticipant.marketRole.type" type="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type">
</xs:element>

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

<xs:element minOccurs="1" maxOccurs="1" name="receiver_MarketParticipant.marketRole.type" type="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type">
</xs:element>

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

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

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

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

</xs:element>

</xs:element>

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

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

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

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

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

<xs:simpleType name="CurrencyCode_String">
  <xs:restriction base="cl:CurrencyTypeList" />
</xs:simpleType>

<xs:simpleType name="CurveType_String">
  <xs:restriction base="cl:CurveTypeList" />
</xs:simpleType>

<xs:complexType name="TimeSeries">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="mRID" type="ID_String"/>
    <xs:element minOccurs="1" maxOccurs="1" name="businessType" type="BusinessKind_String"/>
    <xs:element minOccurs="1" maxOccurs="1" name="in_Domain.mRID" type="AreaID_String"/>
    <xs:element minOccurs="1" maxOccurs="1" name="out_Domain.mRID" type="AreaID_String"/>
    <xs:element minOccurs="1" maxOccurs="1" name="holder_Rights_MarketParticipant.mRID" type="PartyID_String"/>
    <xs:element minOccurs="0" maxOccurs="1" name="transferee_Rights_MarketParticipant.mRID" type="PartyID_String"/>
    <xs:element minOccurs="1" maxOccurs="1" name="marketAgreement.mRID" type="ID_String"/>
    <xs:element minOccurs="1" maxOccurs="1" name="quantity_Measure_Unit.name" type="MeasurementUnitKind_String"/>
    <xs:element minOccurs="0" maxOccurs="1" name="auction.mRID" type="ID_String"/>
    <xs:element minOccurs="0" maxOccurs="1" name="currency_Unit.name" type="CurrencyCode_String"/>
    <xs:element minOccurs="0" maxOccurs="1" name="price_Measure_Unit.name" type="MeasurementUnitKind_String"/>
  </xs:sequence>
</xs:complexType>