

Electric Quarterly Reporting XML Validation

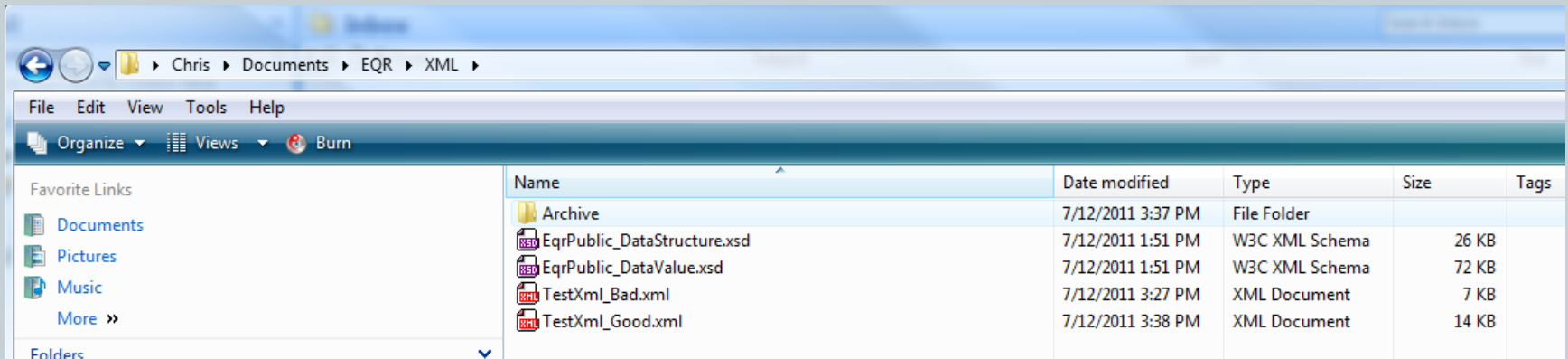


**CLIENT SIDE VALIDATION AGAINST EQR
XML FILES SCHEMA FROM AN XML EDITOR**

Files used for demonstration



- 1.) EqrPublic_DataStructure.xsd
- 2.) EqrPublic_DataValue.xsd
- 3.) TestXml_Good.xml
- 4.) TestXml_Bad.xml



XML File opened with an XML Editor



Altova XMLSpy - [TestXml_Good.xml]

File Edit Project XML DTD/Schema Schema design XSL/XQuery Authentic DB Convert View Browser WSDL SOAP XBRL Tools Window Help

Project

- Examples
 - PF (Portable)
 - Expense Rept
 - Authentic Scr
 - International
 - Purchase Ord
 - SOAP Debug
 - WSDL Editor
 - MapForce
 - IndustryStand
 - XBRL Exampk
 - XML-based W
 - ZIP Archives
 - XQuery
 - XSLT2
 - Office2007

Info

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```
1 <?xml version="1.0" encoding="utf-16"?>
2 <Filing
3   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4   xmlns:xsd="http://www.w3.org/2001/XMLSchema"
5   xmlns="http://ferc.gov/forms/eqr2011"
6   xsi:schemaLocation="http://ferc.gov/forms/eqr2011 EqrPublic_DataStructure.xsd"
7   Guid="fbfe63da-2cf2-411a-a393-28e6db9f6daf"
8   PeriodType="Quarter" Year="2011" Quarter="Second" SubmissionDate="" Type="New" Note="EQR Test: Use Case - Good" IsTest="true" >
9   <Contracts>
10    <Contract Guid="3fcb8ce5-65a8-42d3-b5fe-0beac6ec5261" SellerGuid="3ae85061-bd2f-4037-b4f2-dc265af28cfe" BuyerGuid="17872523-5406-4424-b136-41e6256f7f36"
11     FercTariffReference="qwer2FercTariffReference" ContractServiceAgreement="A112233441234" ExecutionDate="4/1/2011 12:00:00 AM" CommencementDate="
12     12/17/2010 12:00:00 AM" TerminationDate="4/1/2011 12:00:00 AM" ActualTerminationDate="4/1/2011 12:00:00 AM" ExtensionProvisionDescription="Extensions provision
13     of some sort">
14     <ContractProducts>
15      <ContractProduct Guid="01d78c47-bbe0-4bd4-b091-cc8ad8af0313" ProductType="CB" ProductName="FUEL CHARGE" Class="F" Term="N/A" Increment="D"
16      IncrementPeaking="OP" Quantity="100" Units="KW-MO" PointOfReceiptBalancingAuthority="AESO" PointOfReceiptSpecificLocation="ADHUB"
17      PointOfDeliveryBalancingAuthority="AECI" PointOfDeliverySpecificLocation="ADHUB" StartDate="4/1/2011 12:00:00 AM" EndDate="6/1/2011 12:00:00 AM" TimeZone="
18      EST">
19       <Rate Value="1234.56" Minimum="100.00" Maximum="10000.00" Description="Rate Description Text" Units="$/KW-DAY"/>
20      </ContractProduct>
21     </ContractProducts>
22     <Transactions>
23      <Transaction Guid="511890b1-ee9e-40ab-8b58-6c4796c27489" TransactionGroupRef="aaa123456" StartDate="4/1/2011 12:00:00 AM" EndDate="4/3/2011
24      12:00:00 AM" TimeZone="EST" TradeDate="2011-04-01T00:00:00.000-06:00" TradeTimeZone="EST" PointOfDeliveryBalancingAuthority="ALTE"
25      PointOfDeliverySpecificLocationHub="ADHUB" PointOfDeliverySpecificLocation="" Class="NF" Term="ST" Increment="H" IncrementPeaking="FP" ProductName="
26      EMERGENCY ENERGY" Quantity="10" Price="11111.10" StandardizedPrice="100000" RateUnits="$/MW-WK" RateType="Index" TotalTransmissionCharge="111111"
27      TransactionCharge="111110" BrokerExchangeName="Power Broker Exchange XYZ" ETagId="12345ABCDE">
28       <IndexPublishers>
29        <IndexPublisher>XYZ Index Publisher</IndexPublisher>
30        <IndexPublisher>ABC Index Publisher</IndexPublisher>
31       </IndexPublishers>
32      </Transaction>
33     <Transaction Guid="0b7d2b7d-f518-48b7-bd0f-ae1734c15ee5" TransactionGroupRef="aaa123456" StartDate="4/1/2011 12:00:00 AM" EndDate="4/4/2011
34     12:00:00 AM" TimeZone="EST" TradeDate="2011-04-01T00:00:00.000-06:00" TradeTimeZone="EST" PointOfDeliveryBalancingAuthority="EPE"
35     PointOfDeliverySpecificLocationHub="ADHUB" PointOfDeliverySpecificLocation="" Class="NF" Term="ST" Increment="H" IncrementPeaking="FP" ProductName="
36     EMERGENCY ENERGY" Quantity="10" Price="11111.10" StandardizedPrice="100000" RateUnits="$/MW-WK" RateType="Index" TotalTransmissionCharge="111111"
37     TransactionCharge="111110" BrokerExchangeName="Power Broker Exchange XYZ" ETagId="12345ABCDE">
38      <IndexPublishers>
39       <IndexPublisher>XYZ Index Publisher</IndexPublisher>
40       <IndexPublisher>ABC Index Publisher</IndexPublisher>
41      </IndexPublishers>
42     </Transaction>
43   </Contract>
44 </Contracts>
45 </Filing>
```

Elements

- address
- contact
- Contract
- ContractProduct
- Filing
- Organization
- Transaction

Attributes

- FilingType
- PointOfDeliverySpecific
- PointOfReceiptSpecific
- xsi:type
- Class
- EndDate
- Guid
- Increment
- IncrementPeaking
- PointOfDeliveryBalancing
- PointOfDeliverySpecific
- PointOfReceiptBalancing

Entities

- Ent amp
- Ent apos
- Ent gt
- Ent lt
- Ent quot

Messages

File C:\Users\Chris\Documents\EQR\XML\TestXml_Good.xml is valid.

XMLSpy Enterprise Edition v2011 rel. 3 (x64) Registered to Chris Folkes (Custom Software, Inc.) ©1998-2011 Altova GmbH

Ln 12, Col 300 CAP NUM SCRL

Schema Namespace and Location



- Schema Namespaces are identified with "xmlns"
- Schema location are identified with "xsi:schemaLocation"

```
1 <?xml version="1.0" encoding="utf-16"?>
2 <Filing
3   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4   xmlns:xsd="http://www.w3.org/2001/XMLSchema"
5   xmlns="http://ferc.gov/forms/eqr2011"
6   xsi:schemaLocation="http://ferc.gov/forms/eqr2011 EqrPublic_DataStructure.xsd"
7   Guid="fbfe63da-2cf2-411a-a393-28e6db9f6daf"
8   PeriodType="Quarter" Year="2011" Quarter="Second" SubmissionDate="" Type="New" Note="EQR Test: Use Case - Good" IsTest="true" >
9   <Contract>
```

Validation: XML is Valid



Altova XMLSpy - [TestXml_Good.xml *]

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Info

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```
1 <?xml version="1.0" encoding="utf-1" (Validate(F8))
2 <Filing
3   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4   xmlns:xsd="http://www.w3.org/2001/XMLSchema"
5   xmlns="http://ferc.gov/forms/eqr2011"
6   xsi:schemaLocation="http://ferc.gov/forms/eqr2011 EqrPublic_DataStructure.xsd"
7   Guid="fbfe63da-2cf2-411a-a393-28e6db9f6daf"
8   PeriodType="Quarter" Year="2011" Quarter="Second" SubmissionDate="" Type="New" Note="EQR Test: Use Case - Good" IsTest="true" >
9   <Contracts>
10    <Contract Guid="3fcb8ce5-65a8-42d3-b5fe-0beac6ec3261" SellerGuid="3ae85061-bd2f-4037-b4f2-dc265af28cfe" BuyerGuid="17872523-5
11     FercTariffReference="qwer2FercTariffReference" ContractServiceAgreement="A112233441234" ExecutionDate="4/1/2011 12:00:00 AM" Comr
12     of some sort">
13     <ContractProducts>
14      <ContractProduct Guid="01d78c47-bbe0-4bd4-b091-cc8a18af0313" ProductType="CB" ProductName="FUEL CHARGE" Class="F"
15       IncrementPeaking="OP" Quantity="100" Units="KW-MO" PointOfReceiptBalancingAuthority="AESO" PointOfReceiptSpecificLocation="ADHU
16       PointOfDeliveryBalancingAuthority="AECI" PointOfDeliverySpecificLocation="ADHUB" StartDate="4/1/2011 12:00:00 AM" EndDate="6/1/2011
17       EST">
18       <Rate Value="1234.56" Minimum="100.00" Maximum="10000.00" />
19     </ContractProduct>
20   </ContractProducts>
21   <Transactions>
22    <Transaction Guid="511890b1-ee9e-40ab-8b58-6c4796c27489" TransactionGroupRef="aaa123456" StartDate="4/1/2011 12:00:00 A
23     12:00:00 AM" TimeZone="EST" TradeDate="2011-04-01T00:00:00.000-06:00" TradeTimeZone="EST" PointOfDeliveryBalancingAuthority="ALTE
24     PointOfDeliverySpecificLocationHub="ADHUB" PointOfDeliverySpecificLocation="" Class="NF" Term="ST" Increment="H" IncrementPeaking="I
25     EMERGENCY ENERGY" Quantity="10" Price="11111.10" StandardizedPrice="100000" RateUnits="$/MW-WK" RateType="Index" TotalTrans
26     TransactionCharge="111110" BrokerExchangeName="Power Broker Exchange XYZ" ETagId="12345ABCDE">
27     <IndexPublishers>
28      <IndexPublisher>XYZ Index Publisher</IndexPublisher>
29      <IndexPublisher>ABC Index Publisher</IndexPublisher>
30    </IndexPublishers>
31   </Transaction>
32   <Transaction Guid="0b7d2b7d-f518-48b7-bd0f-ae1734c15ee5" TransactionGroupRef="aaa123456" StartDate="4/1/2011 12:00:00 AM
33     12:00:00 AM" TimeZone="EST" TradeDate="2011-04-01T00:00:00.000-06:00" TradeTimeZone="EST" PointOfDeliveryBalancingAuthority="EPE
34     PointOfDeliverySpecificLocationHub="CB" PointOfDeliverySpecificLocation="" Class="NF" Term="ST" Increment="H" IncrementPeaking="E
35     EMERGENCY ENERGY" Quantity="10" Price="11111.10" StandardizedPrice="100000" RateUnits="$/MW-WK" RateType="Index" TotalTrans
36     TransactionCharge="111110" BrokerExchangeName="Power Broker Exchange XYZ" ETagId="12345ABCDE">
37     <IndexPublishers>
38      <IndexPublisher>XYZ Index Publisher</IndexPublisher>
39      <IndexPublisher>ABC Index Publisher</IndexPublisher>
40    </IndexPublishers>
41   </Transaction>
42 </Contracts>
43 </Filing>
```

Validate and Review Message

TestXml_Good.xml *

Messages

File C:\Users\Chris\Documents\EQR\XML\TestXml_Good.xml is valid.

XML is not Valid



The screenshot displays the Altova XMLSpy interface. The main editor shows an XML document with the following structure:

```
<?xml version="1.0" encoding="utf-16"?>
<Filing
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns="http://ferc.gov/forms/eqr2011"
  xsi:schemaLocation="http://ferc.gov/forms/eqr2011 FqrPublic_DataStructure.xsd"
  Guid="05fa5f9d-bcf5-4f39-b2dc-bae80b2d58b" PeriodType="Quarter" Year="2011" Quarter="Second" SubmissionDate="" Type="New" Note="EQR Test: Use Case - Good"
  IsTest="true" >
  <Contracts>
    <Contract Guid="0760eef7-7de8-4e04-b2e3-81f6a8edeb20" BuyerGuid="25e15d35-bdfd-48c3-8e6b-73fb78fcd44d" FercTariffReference="" qwer2FercTariffReference"
      ContractServiceAgreement="A112233441234" ExecutionDate="4/1/2011 12:00:00 AM" CommencementDate="12/17/2010 12:00:00 AM" TerminationDate="4/1/2011
      12:00:00 AM" ActualTerminationDate="4/1/2011 12:00:00 AM" ExtensionProvisionDescription="Extensions provision of some sort" >
      <ContractProducts>
        <ContractProduct Guid="8039b757-9e0f-4b0b-87ec-3546a7e0843" ProductType="CB" ProductName="FUEL CHARGE" Class="F" Term="N/A" Increment="D"
          IncrementPeaking="OP" Quantity="100" Units="KW-MO" PointOfReceiptBalancingAuthority="AFESD" PointOfReceiptSpecificLocation="ADHUB"
          PointOfDeliveryBalancingAuthority="AECI" PointOfDeliverySpecificLocation="ALHUB" TradeTimezone="EST"
          <Rate Value="1234.56" Minimum="100.00" Maximum="10000.00" >
            </ContractProduct>
          </ContractProducts>
        <Transactions>
          <Transaction Guid="c23d397f-074b-4123-b0ce-079d19cfec88" TransactionTimezone="EST" TradeDate="2011-04-01T00:00:00.000-06:00" TradeTimezone="EST" PointOfDeliveryBalancingAuthority="ALTE"
            PointOfDeliverySpecificLocationHub="ADHUB" PointOfDeliverySpecificLocation="" Class="NF" Term="ST" Increment="H" IncrementPeaking="FP" ProductName="
            EMERGENCY ENERGY" Quantity="10" Price="11111.10" StandardizedPrice="100000" RateUnits="$/MW-WK" RateType="Index" TotalTransmissionCharge="111111"
            TransactionCharge="111110" BrokerExchangeName="Power Broker Exchange XYZ" ETagId="12345ABCDE" >
          <IndexPublishers>
            <IndexPublisher>XYZ Index Publisher</IndexPublisher>
            <IndexPublisher>ABC Index Publisher</IndexPublisher>
          </IndexPublishers>
        </Transactions>
      </Contract>
    </Contracts>
  </Filing>
```

The Messages pane at the bottom shows the following error:

```
File C:\Users\Chris\Documents\EQR\XML\TestXml_Bad.xml is not valid.
Attribute 'SellerGuid' is required in element <Contracts:Contract>.
Error location: Filing / Contracts / Contract
Details
  cvc-complex-type.4: Required attribute 'SellerGuid' is missing from element <Contracts:Contract>.
  cvc-elt.5.2.1: The element <Contracts:Contract> is not valid with respect to the actual type definition '(anonymous)'.
```

The 'Validate and Review Message' button is highlighted in blue in the main editor area.