

aseXML Schema Change Request

ASWG Document ID	26
Document ID	WP DMS# 3019842
Title	WA Electricity Market Requirements for Changes to aseXML
Change Type	New Requirement
Date	26 April 2006
Prepared By	Anthony Popple (Western Power)

<i>Notes</i>

Document Control

Version	Date	Author	Summary of Change
1.0	26/4/2006	Anthony Popple	
1.1	27/04/2006	Anthony Popple	Western Power internal review - Expand definition of proposed changes (Submitted to ASWG)
1.2	3/5/2006	Bevan Cole	Updated following review of some in doubt items
1.3	22/5/2006	Anthony Popple	Updated following ASWG workshop on 12/5/06 and subsequent discussions at Western Power
1.4	23/05/2006	Nada Reinprecht	Approval proposal
1.5	26/05/2006	Nada Reinprecht	ASWG meeting comments included
2.0	5/7/2006	Darren Field	Version approved for release

Contents

Document Control	2
Contents	3
Tables	4
Figures	5
Glossary	6
1. Change Proposal	7
1.1. Description of the proposed change	7
1.1.1 Additional Master Standing Data elements	7
1.1.2 Additional Meter Standing Data elements	7
1.1.3 Additional Meter Register Standing Data elements	8
1.1.4 Standing Data Effective Date	8
1.1.5 Additional Site Address element	8
1.1.6 Additional Change Request Data elements	9
1.1.7 New Complex Type: Meter Reading Group	9
1.1.8 New Transaction: Meter Reading Reference Data Request	9
1.1.9 New Transaction: Meter Reading Reference Data Response	9
1.1.10 Additional Meter Data Notification element	9
1.1.11 New Enumerations: Service Order Sub Type	9
1.2. Baseline Schema	10
2. Approval Proposal	11
2.1. Proposed Change	11
2.1.1 Draft schema	11
2.1.2 Change log	11
2.1.3 Schema change description	13
2.1.4 Schema Manifest	22
2.2. Developer Test	22
2.2.1 Test Platforms	22
2.2.2 Test Cases	22
2.3. Dependency analysis	23
3. Proposal Assessment	27
3.1. Test	27
3.1.1 Test Platforms	27
3.1.2 Test Cases	27
3.1.3 Test Results	27
3.2. Conformance Report	27
4. Review Process	28
4.1. Status of Changes	28
4.1.1 First modification description	28
4.2. Supplied Documents	28
5. Resolution	29
5.1. Changes Approved and Accepted	29

Tables

Table 1-1, Proposed Changes	7
Table 2-1 Change Log	12
Table 2-2, Dependency Analysis	26
Table 3-1, Change Proposal Conformance Details.....	27
Table 4-1, Review Notes for proposed approvals.....	28
Table 5-1, Change Resolution	30

Figures

Nil

Glossary

Abbreviation	Description

1. Change Proposal

This Change Proposal defines the required changes to aseXML for the WA Electricity market.

1.1. Description of the proposed change

The proposed changes are listed in the following table.

Item#	Change Description	Change Type ¹
Business Changes		
1	Additional Master Standing Data elements	New
2	Additional Meter Standing Data elements	New
3	Additional Meter Register Standing Data elements	New
4	Standing Data effective date	New
5	Additional Site Address element	New
6	Additional Change Request Data elements	New
7	New Complex Type: Meter Reading Group	New
8	New Transaction: Meter Reading Reference Data Request	New
9	New Transaction: Meter Reading Reference Data Response	New
10	Additional Meter Data Notification element	New
11	New Enumerations: Service Order Sub Type	New

Table 1-1, Proposed Changes

1.1.1 Additional Master Standing Data elements

The following elements are required to be added to Master Standing Data:

Distance From Substation: For a number of network tariffs (generally larger customers), the distance to the zone substation is a factor in the calculation of the network access charges.

Voltage Type: Indicates whether the site is connected at High or Low voltage.

Pole Number: This information is used to help find meters that may not be easily identified by address. Often it is easier to find the site via reference to a network pole number (generally in sequence on a feeder). This is required in standing data as the Franchise market Retailer still carries responsibility for performing site activities for some areas of the network.

Site Access Instructions: Provides information regarding the access arrangements for the site.

1.1.2 Additional Meter Standing Data elements

The following elements are required to be added to Meter Standing Data:

Key Code: Identifies the type of key required to access a meter at a site. This is required in standing data as the Franchise market Retailer still carries responsibility for performing site activities for some areas of the network.

¹ Change Type can be one of

- New
- Enhancement, or
- Bug Fix

Customer Funded Meter: Identifies that the customer has funded the purchase of the meter. This leads to a reduction in the meter charges allocated to the incumbent retailer, and so is needed for the network bill reconciliation. This also has an impact on contracts that can be offered to customers by prospective retailers.

Display Type: In WA we collect readings from some customers by means of self-reader cards that have blank dials printed on them mimicking the layout of the meter display. This attribute defines the type of display on the meter and is used to define what style of self read card would be sent to the end-use customer when a retailer request them to be on a self read card arrangement. This also helps define the type of screen to display for internet captured readings.

1.1.3 Additional Meter Register Standing Data elements

The following elements are required to be added to Meter Register Standing Data:

Previous Reading: The index reading as taken from this register when it was last read (eg 000123). This is the value physically displayed on the meter. (To use the type: ElectricityMeterReadData.)

High Consumption: Based on the reading limits for this meter we would expect a maximum consumption of 400, for example.

Low Consumption: Based on the reading limits for this meter we would expect a minimum consumption of 50, for example.

1.1.4 Standing Data Effective Date

The request for dates on standing data came from Synergy Energy during workshops to develop the Metering Code Communications Rules that were held last year. They voiced concerns about their ability to correctly update their database (Synergy's REDS data warehouse) given the lack of effective dating in the standing data messages and the bulk standing data notifications from MBS.

This requirement aim to address the retailer's concern: "It is still not clear how changes to standing data, eg for a meter change, will be handled, particularly in terms of effective dates. For example, if we have a meter change how would this be represented in the standing data update? Will we ever get 'retrospective' changes to standing data (eg for error corrections), and if so how will they be represented in the standing data update?"

The retailer requires:

1. De-energisation/energisation immediately - ideally as part of service order completion
2. Then standing data update batched overnight - just after midnight covering all changes since last run combining records that have had multiple changes and sending records in chronological order
3. Multiple records within one transaction (from NMI) containing all changes to NMI that day. Effective date < retailer's record of effective date => Retrospective. In WA we store effective dates against attributes in our IT system rather than whole records. We have decided to publish, at the transaction level, the effective date and time that we store in our database against any attribute contained within that transaction. It would then be up to the retailer to decide whether to do anything with these dates or not.

It is proposed that we add an effective date time attribute to the NMI Standing Data type.

1.1.5 Additional Site Address element

The following element is required to be added to Site Address:

Customer Type: This is synonymous with the Service Order "CustomerType", and the Master standing data Property Type. We refer to it as property type as define the main purpose of the site, and is not generally affected by the change of a customer at the site. If the element is in this transaction, it could be used by retailers to notify us that the property type is incorrect. Should be optional.

1.1.6 Additional Change Request Data elements

The following elements are required to be added to CATS Change Request:

Access Contract Name: the name of the access contract that the retailer wants the transferred exit point to be registered. An access contract is an agreement between a retailer and the network operator. A retailer can have multiple access contracts.

Access Contract Date: the date the contract has become valid.

1.1.7 New Complex Type: Meter Reading Group

Meter Group Reading Type: This is a method of grouping meters that belong to either one end-use customer (NMI), one Builder via all portable meters being defined as belonging to one Site (the builders address even though these meters are temporarily installed at building sites), or finally for a large company (eg Water Corp) by grouping all the Meters into one or more Routes (Route ID). Values used by WA market are NMI, SITE or ROUTE.

Meter Reading Group Id: This element is used to define the ID associated with the Meter Reading Group Type above.

1.1.8 New Transaction: Meter Reading Reference Data Request

For a given Reading Group Type (NMI, Site or Route), this transaction is used by an external system to request details of the meters related to the group id, such that an external system can accept meter readings and perform basic validation before submission to the Meter Reading System.

Elements: Meter Reading Group

1.1.9 New Transaction: Meter Reading Reference Data Response

For a given Reading Group Type (NMI, Site or Route), this transaction is used by the meter reading system to provide an external system with details of the meters related to the group id, such that an external system can accept meter readings and perform basic validation before submission to the Meter Reading System.

Elements: Meter Reading Group, NMI Standing Data, Event.

1.1.10 Additional Meter Data Notification element

Relates to the Meter Reading Reference Data Request and Response. Following the provision of this data, depending on the external system and the data downloaded, we might capture one or more readings either via direct internet web site entry, or via capture on a spreadsheet for Route and Site groups. This transaction is then used to provide those readings back to the Meter Reading System for formal processing and release to the market. This requires the addition of Meter Reading Group to the Meter Data Notification transaction.

1.1.11 New Enumerations: Service Order Sub Type

Warning: In WA we do not use stickers. If a customer has not paid their electricity bill, we issue a warning notice prior to the disconnection.

Onsite Test: This is a service that can be requested by a Retailer, often if they are concerned that the readings may be inaccurate for a given site. In WA an onsite test costs less than a lab test so we would like to differentiate them at request time to make billing easier.

Lab Test: Similar to a Onsite Test, but the meter is removed and tested in the Lab.

1.2. Baseline Schema

The schema used as a basis for this proposal is aseXML_r17.

2. Approval Proposal

2.1. Proposed Change

2.1.1 Draft schema

Changes have been included in an r19 draft schema

2.1.2 Change log

The following changes have been implemented in this draft:

Chg No	Description	FileName	Item#
1	Namespace changed to r19	aseXML	All
2	r19 files included	aseXML	All
3	Version number r19 included	Event	All
4	ElectricityNMIMasterGroup, ElectricityNMIMeterGroup groups extended with WP required elements to achieve delivery of C4 report	CATSTableReplication	1,2,3
5	ElectricityCATSChangeRequestNMIMasterRow, ElectricityNMIMasterRow, ElectricityNMIMasterRowBDT, ElectricityCATSChangeRequestNMIMeterRow, ElectricityNMIMeterRow, ElectricityNMIMeterRowBDT version attribute updated to r19 as a result of the above changes	CATSTableReplication	1,2,3
6	NMISTandingData extended with an optional attribute 'effectiveDateTime'	Common	4
7	SiteAddressDetails extended with optional element 'CustomerType'	CustomerDetails	5
8	SiteAccessDetails version attribute updated to r19 as result of NMISTandingData change	CustomerDetails	4
9	AmendMeterRouteDetails version attribute updated to r19 as result of change in SiteAddressDetails	CustomerDetails	5
10	Added new type AccessContract	CustomerTransfer	6
11	CATSChangeRequestData extended with AccessContract	CustomerTransfer	6
12	CATSChangeRequest and CATSNotification version attribute updated to r19 as result of CATSChangeRequestData change	CustomerTransfer	6
13	New WP simple and complex types added	Electricity	1,2,3
14	ElectricityMasterStandingData, ElectricityMeter and ElectricityMeterRegisterDetail complex types extended with WP types	Electricity	1,2,3
15	ElectricityStandingData complex type version attribute updated to r19 as result of the above changes and the change in NMISTandingData	Electricity	1,2,3,4
16	ServiceOrderSubType enumerations extended with WP values	Electricity	11
17	ElectricityServiceOrderType version attribute updated to r19 as result of change in enumerations	Electricity	11

Schema Change Request
Version 2.0

Chg No	Description	FileName	Item#
18	GasStandingData (and derived GasStandingDataUpdate) version attribute updated to r19 as result of NMISstandingData change	Gas	4
19	WP Simple and complex types added	MeterDataManagement	7
20	MeterDataNotification transaction extended with optional element 'CustomerGroup'	MeterDataManagement	10
21	Version attribute of the MeterDataNotification updated to r19	MeterDataManagement	10
22	Two new transaction complex types added: MeterReadingReferenceDataRequest and MeterReadingReferenceDataResponse	MeterDataManagement	8,9
23	Transactions version attributes set to r19	MeterDataManagement	8,9
24	Two new transactions added: MeterReadingReferenceDataRequest and MeterReadingReferenceDataResponse	Transactions	8,9

Table 2-1 Change Log

2.1.3 Schema change description

Schema changes are defined below

2.1.3.1 aseXML

```
<xsd:schema targetNamespace="urn:aseXML:r18urn:aseXML:r19">
  - <xsd:include schemaLocation="Events_r18.xsdEvents_r19.xsd"/>
  - <xsd:include schemaLocation="Common_r17.xsdCommon_r19.xsd"/>
  - <xsd:include schemaLocation="MeterDataManagement_r17.xsdMeterDataManagement_r19.xsd"/>
  - <xsd:include schemaLocation="CustomerTransfer_r15.xsdCustomerTransfer_r19.xsd"/>
  - <xsd:include schemaLocation="CustomerDetails_r18.xsdCustomerDetails_r19.xsd"/>
  - <xsd:include schemaLocation="Electricity_r17.xsdElectricity_r19.xsd"/>
  - <xsd:include schemaLocation="Gas_r17.xsdGas_r19.xsd"/>
  - <xsd:include schemaLocation="Transactions_r17.xsdTransactions_r19.xsd"/>
</xsd:schema>
```

2.1.3.2 CATSTableReplication

```
- <xsd:group name="ElectricityNMIMasterGroup"... >
  - <xsd:sequence>
    - <xsd:element name="DistanceFromSubstation" type="DistanceFromSubstation" nillable="true"
      minOccurs="0"/>
    - <xsd:element name="VoltageType" type="VoltageType" nillable="true" minOccurs="0"/>
    - <xsd:element name="PoleNumber" type="PoleNumber" nillable="true" minOccurs="0"/>
    - <xsd:element name="AccessDetails" type="AccessDetail" minOccurs="0"/>
  </xsd:sequence>
</xsd:group>

- <xsd:complexType name="ElectricityNMIMasterRow" ... >
  - <xsd:complexContent>
    - <xsd:extension base="ReplicationDateRangeRow" ... >
      - <xsd:attribute name="version" use="optional" type="r12r19"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

- <xsd:group name="ElectricityNMIMeterGroup" ... >
  - <xsd:sequence>
    - <xsd:element name="KeyCode" type="KeyCode" nillable="true" minOccurs="0"/>
```

Schema Change Request
Version 2.0

```
- <xsd:element name="CustomerFundedMeter" type="CustomerFundedMeter" nillable="true"
  minOccurs="0"/>
</xsd:sequence>
</xsd:group>

- <xsd:complexType name="ElectricityNMIMeterRow" ... >
  - <xsd:complexContent>
    - <xsd:extension base="ReplicationDateRangeRow" ... >
      - <xsd:attribute name="version" use="optional" type="r19"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

- <xsd:complexType name="ElectricityNMIMasterRowBDT" ... >
  - <xsd:complexContent>
    - <xsd:extension base="ReplicationDateRangeRow" ... >
      - <xsd:attribute name="version" use="optional" type="r19"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

- <xsd:complexType name="ElectricityNMIMeterRowBDT" ... >
  - <xsd:complexContent>
    - <xsd:extension base="ReplicationDateRangeRow" ... >
      - <xsd:attribute name="version" use="optional" type="r19"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

- <xsd:complexType name="ElectricityCATSChangeRequestNMIMasterRow" ... >
  - <xsd:complexContent>
    - <xsd:extension base="ReplicationBaseRow" ... >
      - <xsd:attribute name="version" use="optional" type="r19"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

- <xsd:complexType name="ElectricityCATSChangeRequestNMIMeterRow" ... >
```

```
- <xsd:complexContent>
  - <xsd:extension base="ReplicationBaseRow" ... >
    - <xsd:attribute name="version" use="optional" type="r19"/>
  </xsd:extension>
</xsd:complexContent>
</xsd:complexType>
```

2.1.3.3 Common

```
- <xsd:complexType name="NMISstandingData" abstract="true" ... >
  - <xsd:attribute name="effectiveDateTime" type="xsd:dateTime"/>
</xsd:complexType>
```

2.1.3.4 CustomerDetails

```
- <xsd:complexType name="SiteAddressDetails" ... >
  - <xsd:sequence>
    - <xsd:element name="CustomerType" type="CustomerType" minOccurs="0"/>
  ... </xsd:sequence>
... </xsd:complexType>
```

```
- <xsd:complexType name="SiteAccessDetails" ... >
  - <xsd:complexContent>
    - <xsd:extension base="NMISstandingData" ... >
      - <xsd:attribute name="version" use="required" type="r19"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

```
- <xsd:complexType name="AmendMeterRouteDetails" ... >
  - <xsd:attribute name="version" use="required" type="r19"/>
</xsd:complexType>
```

2.1.3.5 CustomerTransfer

```
- <xsd:complexType name="CATSChangeRequestData" ... >
  - <xsd:sequence>
    - <xsd:element name="AccessContract" type="AccessContract" minOccurs="0"/>
  </xsd:sequence>
</xsd:complexType>
```

```
</xsd:sequence>
</xsd:complexType>

- <xsd:complexType name="CATSChangeRequest" ... >
  - <xsd:complexContent>
    - <xsd:extension base="CATSChangeRequestData" ... >
      - <xsd:attribute name="version" use="required" type="r4r19"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

- <xsd:complexType name="AccessContract">
  - <xsd:sequence>
    - <xsd:element name="Name" minOccurs="0">
      - <xsd:simpleType>
        - <xsd:restriction base="xsd:string">
          <xsd:maxLength value="50"/>
          <xsd:minLength value="1"/>
          <xsd:whiteSpace value="collapse"/>
        </xsd:restriction>
      </xsd:simpleType>
    </xsd:element>
    - <xsd:element name="Date" type="xsd:date" minOccurs="0"/>
  </xsd:sequence>
</xsd:complexType>
```

2.1.3.6 Electricity

```
<xsd:simpleType name="KeyCode">
  - <xsd:restriction base="xsd:string">
    <xsd:maxLength value="8"/>
    <xsd:minLength value="1"/>
    <xsd:whiteSpace value="collapse"/>
  </xsd:restriction>
</xsd:simpleType>

- <xsd:simpleType name="CustomerFundedMeter">
  <xsd:restriction base="xsd:boolean"/>
</xsd:simpleType>
```



```
- <xsd:simpleType name="DisplayType">  
  - <xsd:restriction base="xsd:string">  
    <xsd:maxLength value="20"/>  
    <xsd:minLength value="1"/>  
    <xsd:whiteSpace value="collapse"/>  
  </xsd:restriction>  
</xsd:simpleType>
```

```
<xsd:complexType name="HighLowConsumption">  
  - <xsd:sequence>  
    <xsd:element name="High" type="xsd:integer"/>  
    <xsd:element name="Low" type="xsd:integer"/>  
  </xsd:sequence>  
</xsd:complexType>
```

```
- <xsd:simpleType name="DistanceFromSubstation">  
  - <xsd:restriction base="xsd:decimal">  
    <xsd:totalDigits value="7"/>  
    <xsd:fractionDigits value="3"/>  
    <xsd:maxInclusive value="9999.999"/>  
  </xsd:restriction>  
</xsd:simpleType>
```

```
- <xsd:simpleType name="VoltageType">  
  - <xsd:restriction base="xsd:string">  
    <xsd:maxLength value="10"/>  
    <xsd:minLength value="1"/>  
    <xsd:whiteSpace value="collapse"/>  
  </xsd:restriction>  
</xsd:simpleType>
```

```
- <xsd:simpleType name="PoleNumber">  
  - <xsd:restriction base="xsd:string">  
    <xsd:maxLength value="40"/>  
    <xsd:minLength value="1"/>  
    <xsd:whiteSpace value="collapse"/>  
  </xsd:restriction>
```

</xsd:simpleType>

- <xsd:simpleType name="ServiceOrderSubType" ... >

- <xsd:restriction base="xsd:string" ... >

<xsd:enumeration value="Warning"/>

<xsd:enumeration value="Onsite Test"/>

<xsd:enumeration value="Lab Test"/>

</xsd:restriction>

</xsd:simpleType>

- <xsd:complexType name="ElectricityServiceOrderType" ... >

- <xsd:complexContent>

- <xsd:extension base="ServiceOrderTypeBase" ... >

- <xsd:attribute name="version" use="optional" type="r17r19"/>

</xsd:extension>

</xsd:complexContent>

</xsd:complexType>

- <xsd:complexType name="ElectricityMasterStandingData" ... >

- <xsd:sequence>

- <xsd:element name="DistanceFromSubstation" type="DistanceFromSubstation" nillable="true" minOccurs="0"/>

- <xsd:element name="VoltageType" type="VoltageType" nillable="true" minOccurs="0"/>

- <xsd:element name="PoleNumber" type="PoleNumber" nillable="true" minOccurs="0"/>

- <xsd:element name="AccessDetails" type="AccessDetail" minOccurs="0"/>

</xsd:sequence>

</xsd:complexType>

- <xsd:complexType name="ElectricityMeterRegisterDetail" ... >

- <xsd:sequence>

- <xsd:element name="PreviousReading" type="ElectricityMeterReadData" nillable="true" minOccurs="0"/>

- <xsd:element name="HighLowConsumption" type="HighLowConsumption" nillable="true" minOccurs="0"/>

</xsd:sequence>

</xsd:complexType>

- <xsd:complexType name="ElectricityMeter" ... >

```
- <xsd:sequence>
  - <xsd:element name="KeyCode" type="KeyCode" nillable="true" minOccurs="0"/>
  - <xsd:element name="CustomerFundedMeter" type="CustomerFundedMeter" nillable="true"
    minOccurs="0"/>
  - <xsd:element name="DisplayType" type="DisplayType" nillable="true" minOccurs="0"/>
</xsd:sequence>
</xsd:complexType>

- <xsd:complexType name="ElectricityStandingData" ... >
  - <xsd:complexContent>
    - <xsd:extension base="NMISstandingData" ... >
      - <xsd:attribute name="version" use="optional" type="r19"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.1.3.7 Events

```
<xsd:simpleType name="r19">
  <xsd:restriction base="ReleaseIdentifier">
    <xsd:enumeration value="r19"/>
  </xsd:restriction>
</xsd:simpleType>
```

2.1.3.8 Gas

```
<xsd:complexType name="GasStandingData" ... >
  - <xsd:complexContent>
    - <xsd:extension base="NMISstandingData" ... >
      - <xsd:attribute name="version" use="required" type="r19"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.1.3.9 MeterDataManagement

```
- <xsd:simpleType name="MeterReadingGroupType">
  - <xsd:restriction base="xsd:string">
```

Schema Change Request
Version 2.0

```
<xsd:enumeration value="NMI"/>
<xsd:enumeration value="Site"/>
<xsd:enumeration value="Route"/>
</xsd:restriction>
</xsd:simpleType>

- <xsd:simpleType name="MeterReadingGroupId">
  - <xsd:restriction base="xsd:string">
    <xsd:minLength value="1"/>
    <xsd:whiteSpace value="collapse"/>
  </xsd:restriction>
</xsd:simpleType>

- <xsd:complexType name="MeterReadingGroup">
  - <xsd:sequence>
    - <xsd:element name="MeterReadingGroupId" type="MeterReadingGroupId"/>
  </xsd:sequence>
  - <xsd:attribute name="context" type="MeterReadingGroupType" use="optional"/>
</xsd:complexType>

- <xsd:complexType name="MeterDataNotification" ... >
  - <xsd:sequence>
    - <xsd:element name="MeterReadingGroup" type="MeterReadingGroup" minOccurs="0"/>
  </xsd:sequence>
  - <xsd:attribute name="version" use="required" type="r17r19"/>
</xsd:complexType>

- <xsd:complexType name="MeterReadingReferenceDataRequest">
  - <xsd:sequence>
    - <xsd:element name="MeterReadingGroup" type="MeterReadingGroup"/>
  </xsd:sequence>
  <xsd:attribute name="version" type="r19"/>
</xsd:complexType>

- <xsd:complexType name="MeterReadingReferenceDataResponse">
  - <xsd:sequence>
    - <xsd:element name="MeterReadingGroup" type="MeterReadingGroup"/>
    - <xsd:element name="NMISstandingData" type="NMISstandingData"/>
  </xsd:sequence>
</xsd:complexType>
```

```
- <xsd:element name="Event" type="Event" nillable="true" minOccurs="0"/>  
</xsd:sequence>  
<xsd:attribute name="version" type="r19"/>  
</xsd:complexType>
```

2.1.3.10 Transactions

```
<xsd:complexType name="Transaction" ... >  
- <xsd:choice>  
- <xsd:element name="MeterReadingReferenceDataRequest"  
type="MeterReadingReferenceDataRequest"/>  
- <xsd:element name="MeterReadingReferenceDataResponse"  
type="MeterReadingReferenceDataResponse"/>  
</xsd:choice>  
</xsd:complexType>
```

2.1.4 Schema Manifest

The table below shows the schema files included in this release. Files that have been added, removed or modified for this release are marked.

File names	Added	Removed	Modified
Acknowledgements_r15.xsd			
aseXML_r19.xsd			X
BAR_r15.xsd			
BulkDataTool_r15.xsd			
CATSReports_r15.xsd			
CATSTableReplication_r19.xsd			X
ClientInformation_r15.xsd			
Common_r19.xsd			X
CustomerDetails_r19.xsd			X
CustomerTransfer_r19.xsd			X
Electricity_r19.xsd			X
Enumerations.xsd			
Events_r16.xsd			X
Faults_r15.xsd			
Gas_r19.xsd			X
Header_r15.xsd			
MDMTRReport_r15.xsd			
MeterDataManagement_r19.xsd			X
NetworkBilling_r15.xsd			
NMIDataAccess_r15.xsd			
NOSAssessment_r16.xsd			
NOSBooking_r16.xsd			
NOSCommon_r16.xsd			
NOSEquipment_r16.xsd			
Reports_r15.xsd			
ServiceOrder_r15.xsd			
TableReplication_r15.xsd			
Transactions_r19.xsd			X
No of files added	0		
No of files removed		0	
No of files modified			10
Total No of files			28

2.2. Developer Test

2.2.1 Test Platforms

The new schema has been tested using the following platforms as advised by ASWG:

- XMLSpy 2004
- MSXML4 SP1
- Xerces 1.4.4 and 2.2.1

2.2.2 Test Cases

No sample files provided

2.3. Dependency analysis

This table identifies the transaction types and derived types that must have their version attribute updated as the result of these changes.

Item#	Modified Types	Transactions or Derived Types Impacted	Transactions Where Potentially Used	Schema Filename
1	ElectricityCATSChangeRequestNMIMasterRow ElectricityNMIMasterRow ElectricityNMIMasterRowBDT ElectricityMasterStandingData	ElectricityCATSChangeRequestNMIMasterRow (r19) ElectricityNMIMasterRow (r19) ElectricityNMIMasterRowBDT (r19) ElectricityStandingData (r19)	AccountCreationNotification (r9) AmendMeterRouteDetails (r19) CATSBulkDataRequest (r9) CATSBulkDataResponse (r9) CATSChangeRequest (r19) CATSDataRequest (r7) CATSNotification (r19) MeterDataHistoryRequest (r9) MeterDataMissingNotification (r14) MeterDataVerifyRequest (r9) MeterDataVerifyResponse (r9) MeterReadingReferenceDataResponse (r19) MeterReadInputNotification (r9) NMIDiscoveryResponse (r17) NMISTandingDataResponse (r4) NMISTandingDataUpdateNotification (r9) ReplicationNotification (r10) ReportResponse (r10) ServiceOrderRequest (r17) ServiceOrderResponse (r17) SpecialReadRequest (r17) SpecialReadResponse (r17)	CATSTableReplication_r19.xsd Electricity_r19.xsd

Schema Change Request
Version 2.0

Item#	Modified Types	Transactions or Derived Types Impacted	Transactions Where Potentially Used	Schema Filename
2	ElectricityCATSChangeRequestNMIMeterRow ElectricityNMIMeterRow ElectricityNMIMeterRowBDT ElectricityMeter	ElectricityCATSChangeRequestNMIMeterRow (r19) ElectricityNMIMeterRow (r19) ElectricityNMIMeterRowBDT (r19) ElectricityStandingData (r19)	AccountCreationNotification (r9) AmendMeterRouteDetails (r19) CATSBulkDataRequest (r9) CATSBulkDataResponse (r9) CATSChangeRequest (r19) CATSDataRequest (r7) CATSNotification (r19) MeterDataHistoryRequest (r9) MeterDataMissingNotification (r14) MeterDataVerifyRequest (r9) MeterDataVerifyResponse (r9) MeterReadingReferenceDataResponse (r19) MeterReadInputNotification (r9) NMIDiscoveryResponse (r17) NMISTandingDataResponse (r4) NMISTandingDataUpdateNotification (r9) ReplicationNotification (r10) ReportResponse (r10) ServiceOrderRequest (r17) ServiceOrderResponse (r17) SpecialReadRequest (r17) SpecialReadResponse (r17)	CATSTableReplication_r19.xsd Electricity_r19.xsd

Schema Change Request
Version 2.0

Item#	Modified Types	Transactions or Derived Types Impacted	Transactions Where Potentially Used	Schema Filename
3	ElectricityMeterRegisterDetail	ElectricityStandingData (r19)	AccountCreationNotification (r9) AmendMeterRouteDetails (r19) CATSBulkDataRequest (r9) CATSChangeRequest (r19) CATSDataRequest (r7) CATSNotification (r19) MeterDataHistoryRequest (r9) MeterDataMissingNotification (r14) MeterDataVerifyRequest (r9) MeterDataVerifyResponse (r9) MeterReadingReferenceDataResponse (r19) MeterReadInputNotification (r9) NMIDiscoveryResponse (r17) NMISTandingDataResponse (r4) NMISTandingDataUpdateNotification (r9) ReportResponse (r10) ServiceOrderRequest (r17) ServiceOrderResponse (r17) SpecialReadRequest (r17) SpecialReadResponse (r17)	Electricity_r19.xsd

Schema Change Request
Version 2.0

Item#	Modified Types	Transactions or Derived Types Impacted	Transactions Where Potentially Used	Schema Filename
4	NMIStandingData	ElectricityStandingData (r19) GasStandingData (r19) GasStandingDataUpdate (r19) SiteAccessDetails (r19)	AccountCreationNotification (r9) AmendMeterRouteDetails (r19) CATSBulkDataRequest (r9) CATSChangeRequest (r19) CATSDataRequest (r7) CATSNotification (r19) GasMeterNotification (r9) MeterDataHistoryRequest (r9) MeterDataMissingNotification (r14) MeterDataVerifyRequest (r9) MeterDataVerifyResponse (r9) MeterReadingReferenceDataResponse (r19) MeterReadInputNotification (r9) NMIDiscoveryResponse (r17) NMIStandingDataResponse (r4) NMIStandingDataUpdateNotification (r9) ReportResponse (r10) ServiceOrderRequest (r17) ServiceOrderResponse (r17) SpecialReadRequest (r17) SpecialReadResponse (r17)	Common_r19.xsd CustomerDetails_r19.xsd Electricity_r19.xsd Gas_r19.xsd
5	SiteAddressDetails	AmendMeterRouteDetails (r19)	AmendMeterRouteDetails (r19)	CustomerDetails_r19.xsd
6	CATSChangeRequestData	CATSChangeRequest (r19) CATSNotification (r19)	CATSChangeRequest (r19) CATSNotification (r19)	CustomerTransfer_r19.xsd
10	MeterDataNotification	MeterDataNotification (r19)	MeterDataNotification (r19)	MeterDataManagement_r19.xsd
11	ServiceOrderSubType	ElectricityServiceOrderType (r19)	ServiceOrderRequest (r17) ServiceOrderResponse (r17) SpecialReadRequest (r17) SpecialReadResponse (r17)	Electricity_r19.xsd

Table 2-2, Dependency Analysis

3. Proposal Assessment

3.1. Test

The ASWG ensures that all recommended parsers on relevant platforms can successfully validate the proposed schema.

3.1.1 Test Platforms

Supplied samples have been tested using the following parsers:

- MSXML 4.0 SP1
- Xerces 1.4.1
- Xerces 2.2.1
- XMLSpy 2004

3.1.2 Test Cases

Existing B2B Electricity, NOS, VICGAS and SAWA Gas sample files have been tested.

3.1.3 Test Results

All sample files were successfully validated

3.2. Conformance Report

The ASWG completes the conformance report validating each proposed new schema file against the published aseXML guidelines.

Schema Filename	Impacted by Item #	Conformance Details
aseXML_r19.xsd	All	Conforms
CATSTableReplication_r19.xsd	1,2,3	Conforms
Common_r19.xsd	4	Conforms
CustomerDetails_r19.xsd	4,5	Conforms
CustomreTransfer_r19.xsd	6	Conforms
Electricity_r19.xsd	1,2,3,4,11	Conforms
Events_r19.xsd	All	Conforms
Gas_r19.xsd	4	Conforms
MeterDataManagement_r19.xsd	7,8,9,10	Conforms
Transactions_r19.xsd	8,9	Conforms

Table 3-1, Change Proposal Conformance Details

4. Review Process

This section describes the status of the proposed changes and any modifications that are made to the original proposal during the Change Process

4.1. Status of Changes

Item#	Review Notes	Status ²

Table 4-1, Review Notes for proposed approvals

4.1.1 First modification description

<Description of modification to Change Item>

4.2. Supplied Documents

<List any other supplied documentation>

² Status can be one of

- Accepted
- Accepted as changed
- Rejected, or
- Deferred

5. Resolution

The ASWG provides a resolution for each change item contained in the Change Log. The resolution is forwarded to the Originator for implementation considerations as required by respective Change Management Process.

5.1. Changes Approved and Accepted

The ASWG compiles the list of change items proposed for approval together with their resolution status in the table below.

Chg No	Description	Status (Approved, Rejected or Deferred)
1	Namespace changed to r19	Approved
2	r19 files included	Approved
3	Version number r19 included	Approved
4	ElectricityNMIMasterGroup, ElectricityNMIMeterGroup groups extended with WP required elements to achieve delivery of C4 report	Approved
5	ElectricityCATSChangeRequestNMIMasterRow, ElectricityNMIMasterRow, ElectricityNMIMasterRowBDT, ElectricityCATSChangeRequestNMIMeterRow, ElectricityNMIMeterRow, ElectricityNMIMeterRowBDT version attribute updated to r19 as a result of the above changes	Approved
6	NMISTandingData extended with an optional attribute 'effectiveDateTime'	Approved
7	SiteAddressDetails extended with optional element 'CustomerType'	Approved
8	SiteAccessDetails version attribute updated to r19 as result of NMISTandingData change	Approved
9	AmendMeterRouteDetails version attribute updated to r19 as result of change in SiteAddressDetails	Approved
10	Added new type AccessContract	Approved
11	CATSChangeRequestData extended with AccessContract	Approved
12	CATSChangeRequest and CATSNotification version attribute updated to r19 as result of CATSChangeRequestData change	Approved
13	New WP simple and complex types added	Approved
14	ElectricityMasterStandingData, ElectricityMeter and ElectricityMeterRegisterDetail complex types extended with WP types	Approved
15	ElectricityStandingData complex type version attribute updated to r19 as result of the above changes and the change in NMISTandingData	Approved
16	ServiceOrderSubType enumerations extended with WP values	Approved
17	ElectricityServiceOrderType version attribute updated to r19 as result of change in enumerations	Approved
18	GasStandingData (and derived GasStandingDataUpdate) version attribute updated to r19 as result of NMISTandingData change	Approved
19	WP Simple and complex types added	Approved
20	MeterDataNotification transaction extended with optional element 'CustomerGroup'	Approved

Schema Change Request
Version 2.0

Chg No	Description	Status (Approved, Rejected or Deferred)
21	Version attribute of the MeterDataNotification updated to r19	Approved
22	Two new transaction complex types added: MeterReadingReferenceDataRequest and MeterReadingReferenceDataResponse	Approved
23	Transactions version attributes set to r19	Approved
24	Two new transactions added: MeterReadingReferenceDataRequest and MeterReadingReferenceDataResponse	Approved

Table 5-1, Change Resolution