

**NTESMO**

**Standing Data for  
Market Settlement  
and Transform  
Solution (MSATS)**

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# 1 Introduction

## 1.1 Purpose and scope

This document details the data requirements for the various data elements comprising the CATS Standing Data stored for each *NMI*, together with relevant examples and definitions.

This document forms part of the MSATS procedures in the Communications Guideline and will be amended when required. The consultation process applicable to the Communications Guideline will also apply to the necessary amendments to this document.

## 1.2 Definitions and interpretation

The Communications Guideline:

- a. is incorporated into and forms part of this document; and
- b. should be read with this document.

Table numbering through this document matches the equivalent NEM procedure. Missing table numbers have been omitted from this procedure as not applicable in the NT.

The NT Procedures are based on the equivalent MSATS and B2B procedure documents from the National Electricity Market (NEM). To maintain document alignment where a section or element of the NEM MSATS and B2B procedures is not used in the NT procedures this has been replaced with the phrase 'Not used in the NT Procedures' rather than that section or element be deleted from the NT Procedures.

## 1.3 Related documents

Title	Location
Communications Guideline	<a href="http://www.ntesmo.com.au/library/procedures">www.ntesmo.com.au/library/procedures</a>
CATS Procedures	<a href="http://www.ntesmo.com.au/library/procedures">www.ntesmo.com.au/library/procedures</a>
WIGS Procedures	Not used in the NT Procedures
MDM Procedures	Not used in the NT Procedures
MSATS CATS history Model	<a href="http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Retail-and-metering/Market-Settlement-and-Transfer-Solutions">http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Retail-and-metering/Market-Settlement-and-Transfer-Solutions</a>
MSATS guides	<a href="http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Retail-and-metering/Market-Settlement-and-Transfer-Solutions">http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Retail-and-metering/Market-Settlement-and-Transfer-Solutions</a>

## 2 Background

The five MSATS master tables contain the standing data stored for each *NMI*. They are the following:

Table 1 MSATS Master Tables

Table	Summary of Contents
CATS_NMI_DATA	Address, TNI Code, DLF Code, aggregate flag, embedded network names, Jurisdiction, NMI status code, etc.
CATS_NMI_PARTICIPANT_RELATIONS	Roles and associated Participants. Separate records are maintained for each Role/Participant relationship.
CATS_NMI_DATA_STREAM	Not used in the NT Procedures
CATS_METER_REGISTER	Meter Serial ID, meter type, meter manufacturer, test results, etc.
CATS_REGISTER_IDENTIFIER	Meter Serial ID, Network Tariff Code, unit of measure etc.

For a *NMI* to be capable of being used in MSATS, it must have the following minimum set of data:

- a. At least one record on the CATS\_NMI\_DATA table; and
- b. At least eight records on the CATS\_NMI\_PARTICIPANT\_RELATIONS table, one for each of the mandatory roles (ROLR, LNSP, LR, RP, FRMP, MDP, MPC and MPB).

It will also normally have:

- a. At least one record on each of the CATS\_METER\_REGISTER and CATS\_REGISTER\_IDENTIFIER (there should be at least one record for each *meter* and register associated with the *NMI*) tables.

NMIs may or may not have:

- a. Records on the CATS\_NMI\_DATA\_STREAM table. This table is not used in the NT Procedures

Every time a change is made to any of the data in any of these tables, the old records are made inactive and new records are created, thus ensuring that there is a complete history of all changes.

# 3 Conventions used within this document

The format of the data fields in the ‘Browser Format Column’ column of Tables is as defined in Section 16.

The following information defines the coded entries in columns used in Tables 3, 6, 9, 12, 15, 18 and 21.

## 3.1 Column Headed: Standing Data Required

The column indicates the requirement to provide this data to MSATS.

Table 2 Explanation of Standing Data Requirements

Requirement	Description
<b>MANDATORY</b>	Transfer, Validation or processing cannot proceed without this data.
<b>REQUIRED</b>	This data must be provided if this information is available.
<b>OPTIONAL</b>	This data is not required, but will be accepted if delivered.
<b>Address Option 1</b>	NTESMO’s preferred address option. If the applicable fields labelled “Address Option 1” cannot be provided, “Address Option 2” is MANDATORY.
<b>Address Option 2</b>	NTESMO’s non-preferred address option. If Address Option 1 is provided, these fields are not to be supplied.

## 3.2 NMIs Affected

Data must be provided for every *NMI* in MSATS. The *NMIs* that must be registered in MSATS are:

- a. All *connection points* where a *transmission network* connects to another *transmission network*.
- b. All *connection points* where a *transmission network* connects to a *distribution network*, i.e. *bulk supply connection points*.
- c. All *transmission network connection points* where *energy* is directly purchased from the *spot market* by a *Market Customer*, i.e. *wholesale connection points*.
- d. All *distribution network connection points* where *energy* is directly purchased from the *spot market* by a *Market Customer*.
- e. All *connection points* on a *distribution network* that connect that *distribution network* to an adjacent *distribution network* (other than an *embedded network*), i.e. *cross boundary connection points*.
- f. Sample meters as required by Metrology Procedures Part A to calculate CLP for participating jurisdictions.
- g. All *connection points* associated with a registered *integrated resource system* that is connected to the *transmission network*, i.e. *transmission-connected integrated resource system*.
- h. All *connection points* associated with a registered *integrated resource system* that is connected to the *distribution network*, i.e. *distribution-connected integrated resource system*.
- i. All *connection points* associated with a *generating unit* classified by a *Market Generator* connected to a registered *network other than a transmission network or embedded network*, i.e., *distribution-connected generating system*
- j. All *connection points* associated with a *generating unit* classified by a *Market Generator* connected to a *transmission network*, i.e. *transmission-connected generating system*.

- k. *All connection points that are small resource connection points that are not a micro DER connection, i.e. non-registered connection points*
- l. All type 7 loads.
- m. All *non-contestable unmetered loads*.
- n. All *distribution network connection points* where there is a *market connection point*.
- o. Not used in the NT procedures
- p. Not used in the NT procedures

## 4 CATS\_METER\_REGISTER

### 4.1 Field Definitions

The CATS\_Meter\_Register table is a NMI master table containing data that is stored at the Meter Register level. Information stored at this level includes the NSRD. It is updated whenever a Change Request containing inbound Meter Register data is completed.

Table 3 CATS\_METER\_REGISTER – Field Definitions

Data Element Name	Description	Standing Data Required	Party to Provide
<b>CurrentTransformerLocation</b>	A free text field to indicate the location of the current transformer at the site.	REQUIRED	MPB
<b>CurrentTransformerType</b>	Whether the current transformer at the metering installation is single phase or three phase. This value must correspond to a valid Current Transformer Type value in the Valid Transformer Fields values reference table listed in section 11.	REQUIRED	MPB
<b>CurrentTransformerRatioAvailable</b>	The available ratio of the current transformer at the metering installation. This value must correspond to a valid Current Transformer Ratio (Available) value in the Valid Transformer Fields values reference table listed in section 11.	REQUIRED	MPB
<b>CurrentTransformerRatioConnected</b>	The connected ratio of the current transformer at the metering installation. This value must correspond to a valid Current Transformer Ratio (Connected) value in the Valid Transformer Fields values reference table listed in section 11.	REQUIRED	MPB
<b>CurrentTransformerAccuracyClass</b>	The accuracy class of the current transformer at the metering installation. This value must correspond to a valid Current Transformer Accuracy Class value in the Valid Transformer Fields values reference table listed in section 11.	REQUIRED	MPB
<b>CurrentTransformerTest</b>	Type of test performed on metering installation with Current Transformer which can be one of the following: <ul style="list-style-type: none"> <li>TESTED (definition – part of 100% testing)</li> <li>SAMPLE TESTED (definition – tested as part of a sample plan)</li> <li>SAMPLE (definition – part of an approved sample plan)</li> </ul> This value must correspond to a valid transformer test value in the Valid Transformer Test Values reference table listed in section 11.	REQUIRED	MPB

Data Element Name	Description	Standing Data Required	Party to Provide
<b>CurrentTransformerTestDate</b>	A date that represents actual test date for metering installations with Current Transformer tested or date represents family expiry date for those included in an approved sample plan.	REQUIRED	MPB
<b>Not used in the NT Procedures</b>	-	-	-
<b>Not used in the NT Procedures</b>	-	-	-
<b>LastTestDate</b>	The date on which the <i>metering installation</i> was last tested or inspected by the Metering Provider “B”.	REQUIRED	MPB
<b>Hazard</b>	Free text or code identifying hazards associated with reading, maintaining or installing the <i>meter</i> . If the following are present at the <i>metering installation</i> , they should be listed in this field: Asbestos	REQUIRED	MPB
<b>InstallationTypeCode</b>	The <i>InstallationTypeCode</i> may identify attributes of a physical <i>metering installation</i> , <i>metering data</i> collection methods or <i>metering data</i> calculation methods. This value must correspond to a valid Meter Installation Type Code as referenced in NT MSATS Procedures: CATS Procedures.	MANDATORY	MPB
<b>Location</b>	Free text descriptive material identifying the relationship between the location of the <i>metering point</i> and the <i>connection point</i> or secondary settlement points	REQUIRED	MPB
<b>Manufacturer</b>	Free text field to identify the manufacturer of the installed <i>meter</i> . This field will be an enumerated list of values corresponding to current Meter Manufacturers in the industry with the options of UNMETERED and UNKNOWN.	MANDATORY	MPB
<b>Model</b>	Free text field to identify the <i>meter</i> manufacturer’s designation for the <i>meter</i> model. This field will be an enumerated list of values corresponding to current Meter Models in the industry with the options of UNMETERED and UNKNOWN.	MANDATORY	MPB
<b>ReadTypeCode</b>	Code to denote the method and frequency of Meter Readings and the metering installation capability First Character = Remote (R) or Manual (M); Second Character = Mode T = telephone	REQUIRED	MPB

Data Element Name	Description	Standing Data Required	Party to Provide
	<p>W = wireless  P = powerline  I = infra-red  G = galvanic  V = visual  Third Character = Frequency of Scheduled Meter Readings  1 = Twelve times per year  2 = Six times per year  3 = Four times per year  D = Daily or weekly  Fourth Character =</p> <ul style="list-style-type: none"> <li>• A – 5 minute</li> <li>• B – 15 minute</li> <li>• C – 30 minute</li> <li>• D – Cannot convert to 5-minute (i.e. due to metering installation de-energised)</li> <li>• F – Not used in the NT Procedures</li> <li>• G – Not used in the NT Procedures</li> <li>• H – Not used in the NT Procedures</li> <li>• J – Not used in the NT Procedures</li> <li>• M – Manually Read Accumulation Meter</li> </ul> <p>For example, MV3M = Manual, Visual, Quarterly, Manually Read Accumulation Meter;  RWDC = Remote, Wireless, Daily, 30 minutes interval, RWD = Remote, Wireless, Daily  (applicable for Vic AMI metering installations where InstallationTypeCode = 'MRIM' and  JurisdictionCode = 'Victoria').</p>		
<b>SerialNumber</b>	<p>The Meter Serial ID uniquely identifies a <i>meter</i> for a given <i>NMI</i>. Maximum 12 Characters (alpha numeric). Unique for <i>NMI</i>.</p> <p>Use dummy for UMCP (Type 7), logical (meters) and <i>non-contestable unmetered loads</i>.  Except for UMCP, SerialNumber should be as displayed on the physical device (also known as property number).</p> <p>SerialNumber to be property number if exists, otherwise the <i>meter</i> manufacturer's serial number, otherwise dummy number.</p>	MANDATORY	MPB
<b>Status</b>	<p>A code to denote the status of the <i>meter</i>.</p> <p>This value must correspond to a valid Meter Register Status as specified in the NT</p>	MANDATORY	MPB

Data Element Name	Description	Standing Data Required	Party to Provide
	MSATS Procedures: CATS Procedures.		
<b>Use</b>	A code identifying how the <i>meter</i> is used. This value must correspond to a valid Meter Use value in the Valid Meter Use Codes reference table listed in section 11.	MANDATORY	MPB
<b>NextScheduledReadDate</b>	Indicates the Scheduled Next Read Date for the <i>meter</i> if a manual Meter Reading is required.	MANDATORY for manually read meters, REQUIRED for Type 7 metering installations with calculated metering data where the forward estimate process is using a BLOCK methodology, and NOT USED for remotely read meters =	MPB initially, then MDP for updates
<b>NMI</b>	<i>NMI</i> . This number is unique for each <i>connection point</i> within the <i>NEM</i> .	MANDATORY	LNSP
<b>TestResult</b>	The result from the test performed on the date indicated in the LastTestDate field. This value must correspond to a valid Test Result value in the Valid Test Result Codes reference table listed in section 11.	REQUIRED	MPB
<b>VoltageTransformerLocation</b>	A free text field to indicate the location of the voltage transformer at the site.	REQUIRED	MPB
<b>VoltageTransformerType</b>	Whether the voltage transformer at the metering installation is single phase or three phase. This value must correspond to a valid Voltage Transformer Type value in the Valid Transformer Fields values reference table listed in section 11.	REQUIRED	MPB
<b>VoltageTransformerRatio</b>	The available or connected ratio of the voltage transformer at the metering installation. This value must correspond to a valid Voltage Transformer Ratio value in the Valid Transformer Fields values reference table listed in section 11.	REQUIRED	MPB
<b>VoltageTransformerAccuracyClass</b>	The accuracy class of the voltage transformer at the metering installation. This value must correspond to a valid Voltage Transformer Type value in the Valid Transformer Fields values reference table listed in section 11.	REQUIRED	MPB
<b>VoltageTransformerTest</b>	Type of test performed on metering installation with Voltage Transformer which can be one of the following: <ul style="list-style-type: none"> <li>TESTED(definition – part of 100% testing)</li> <li>SAMPLE TESTED (definition – tested as part of a sample plan)</li> <li>SAMPLE (definition – part of an approved sample plan)</li> </ul>	REQUIRED	MPB

Data Element Name	Description	Standing Data Required	Party to Provide
	This value must correspond to a valid transformer test value in the Valid Transformer Test Values reference table listed in section 11.		
<b>VoltageTransformerTestDate</b>	A date that represents actual test date for metering installation with Voltage Transformer tested or date represents family expiry date for those included in an approved sample plan.	REQUIRED	MPB
<b>FromDate</b>	Start date of the record. This indicates the date on which the parameters of this particular record apply from. The data applies from the beginning of this date (the start of the day, i.e. 00:00).	MANDATORY	Participant sending transaction
<b>ToDate</b>	End date of the record. This indicates the date on which the parameters of this particular record end. The data applies until the end of this date (the end of the day, i.e. 23:59). A default date of 9999-12-31 is recorded if EndDate is not provided.	MANDATORY (Defaults to high date unless supplied)	System generated unless supplied.
<b>RowStatus</b>	Indicates whether the record is active or inactive. Whenever a new record is created, it will be A (Active). A change to the data will make this record redundant and its MaintActFlg is changed to I (Inactive).	MANDATORY	System generated
<b>MaintenanceDate</b>	Date and time the record was updated. A default date of 9999-12-31 is used when the record is created initially. If the record is subsequently updated, its MaintUpdtDt is changed to the date and time the record was updated.	MANDATORY	System generated
<b>CreationDate</b>	Date and time the record was created.	MANDATORY	System generated

## 4.2 Cross Reference of Browser and aseXML Data Elements

The table below lists the names that are used in the MSATS browser. The table also provides the aseXML data element names and the respective formats used in each context.

In some cases, such as date fields, the format of the field is shown differently in the Browser to that used in the related aseXML transactions. Also, aseXML uses full words throughout, rather than the coded values used in the Browser.

Section 16 provides data type conventions of the Browser formats shown in this section.

Table 4CATS\_Meter\_Register – Browser Cross Reference

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
<b>Current Transformer Location</b>	CurrentTransformerLocation	ElectricityMeter/CurrentTransformerLocation	VARCHAR(50)	xsd:string maxLen = 50
<b>Current Transformer Type</b>	CurrentTransformerType	ElectricityMeter/CurrentTransformerType	VARCHAR(20)	xsd:string maxLen = 20
<b>Current Transformer RatioAvailable</b>	CurrentTransformerRatio	ElectricityMeter/CurrentTransformerRatioAvailable	VARCHAR(50)	xsd:string maxLen = 50
<b>Current Transformer RatioConnected</b>	CurrentTransformerRatio	ElectricityMeter/CurrentTransformerRatioConnected	VARCHAR(20)	xsd:string maxLen = 20
<b>Current Transformer Accuracy Class</b>	CurrentTransformerAccuracyClass	ElectricityMeter/CurrentTransformerAccuracyClass	VARCHAR(50)	xsd:string maxLen = 50
<b>Current Transformer Test</b>	CurrentTransformerTest	ElectricityMeter/CurrentTransformerTest	VARCHAR2(20)	xsd:string maxLen = 20
<b>Current Transformer Test Date</b>	CurrentTransformerTestDate	ElectricityMeter/LastTestDate	dd-mmm-yyyy	xsd:date
<b>– Not used in the NT Procedures</b>				
<b>– Not used in the NT Procedures</b>				
<b>Last Test Date</b>	LastTestDate	ElectricityMeter/LastTestDate	dd-mmm-yyyy	xsd:date
<b>Meter Hazard</b>	Hazard	ElectricityMeter/Hazard	VARCHAR2(100)	xsd:string maxLen = 100

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
<b>Meter Installation Type Code</b>	InstallationTypeCode	ElectricityMeter/InstallationType Code	VARCHAR2(8)	xsd:string maxLen = 8
<b>Meter Location</b>	Location	ElectricityMeter/Location	VARCHAR2(200) See AddSiteInfo (above)	xsd:string maxLen = 200
<b>Meter Manufacturer</b>	Manufacturer	ElectricityMeter/Manufacturer	VARCHAR2(15)	xsd:string maxLen = 15
<b>Meter Model</b>	Model	ElectricityMeter/Model	VARCHAR2(12)	xsd:string maxLen = 12
<b>Meter Read Type</b>	ReadTypeCode	ElectricityMeter/ReadTypeCode	VARCHAR(4)	xsd:string maxLen = 4
<b>Meter Serial ID Meter ID (Different on two screens)</b>	SerialNumber	ElectricityMeter/SerialNumber	VARCHAR2(12)	xsd:string maxLen = 12
<b>Status Code</b>	Status	ElectricityMeter/Status	CHAR(1)	xsd:string with enumeration
<b>Meter Use</b>	Use	ElectricityMeter/Use	VARCHAR2(10)	xsd:string maxLen = 10
<b>Next Scheduled Read Date</b>	NextScheduled ReadDate	ElectricityMeter/NextScheduled ReadDate	dd-mmm-yyyy	xsd:date
<b>NMI</b>	NMI	NMI	CHAR(10)	xsd:string maxLen = 10
<b>Test Result</b>	TestResult	ElectricityMeter/TestResult	VARCHAR2(4)	xsd:string maxLen = 4
<b>Voltage Transformer Location</b>	VoltageTransformerLocation	ElectricityMeter/VoltageTransformerLocation	VARCHAR(50)	xsd:string maxLen = 50
<b>Voltage Transformer Type</b>	VoltageTransformerType	ElectricityMeter/VoltageTransformerType	VARCHAR(50)	xsd:string maxLen = 50
<b>Voltage Transformer Ratio</b>	VoltageTransformerRatio	ElectricityMeter/VoltageTransformerRatio	VARCHAR(50)	xsd:string maxLen = 50
<b>Voltage Transformer Accuracy Class</b>	VoltageTransformerAccuracyClass	ElectricityMeter/VoltageTransformerAccuracyClass	VARCHAR(20)	xsd:string maxLen = 20

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
<b>Voltage Transformer Test</b>	VoltageTransformerTest	ElectricityMeter/VoltageTransformerTest	VARCHAR2(20)	xsd:string maxLen = 20
<b>Voltage Transformer Test Date</b>	VoltageTransformerTestDate	ElectricityMeter/VoltageTransformerTestDate	dd-mmm-yyyy	xsd:date
<b>Start Date</b>	FromDate	FromDate	dd-mmm-yyyy	xsd.dateTime
<b>End Date</b>	ToDate	ToDate	dd-mmm-yyyy	xsd.dateTime
<b>Updated On</b>	MaintenanceDate	MaintenanceDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd.dateTime
<b>Created On</b>	CreationDate	CreationDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd.dateTime
<b>Activity Status</b>	RowStatus	RowStatus	CHAR(1)	xsd:string with enumeration

## 4.3 Field value examples

This section provides examples of typical sets of data element values associated with different types of *connection points* or *secondary settlement points*.

The data shown in each example is as shown in the Browser. This reverses the sequence of the day-month-year communicated via aseXML transactions.

Table 5 MSATS\_Meter\_Register – Example

Data Element Name (as it appears in XML documents)	Browser Field Name (as it appears in MSATS Browser)	Basic Example	Interval Example	Data Element Name
CurrentTransformerLocation	Current Transformer Location		BEHIND DOOR	CurrentTransformerLocation
CurrentTransformerType	Current Transformer Type		A	CurrentTransformerType
CurrentTransformerRatioAvailable	Current Transformer Ratio Available		20/50/100:5	CurrentTransformerRatio
CurrentTransformerRatioConnected	Current Transformer Ratio Connected		400:5	CurrentTransformerRatio
CurrentTransformerAccuracyClass	Current Transformer Accuracy Class		0.2M	CurrentTransformerAccuracyClass
CurrentTransformerTest	Current Transformer Test		Tested	CurrentTransformerTest
CurrentTransformerTestDate	Current Transformer Test Date		01-01-2020	CurrentTransformerTestDate
– Not used in the NT Procedures				
– Not used in the NT Procedures				
LastTestDate	Last Test Date	07-05-2004	07-03-2004	LastTestDate
Hazard	Meter Hazard		Asbestos	Hazard
InstallationTypeCode	Meter Installation Type Code	BASIC	COMMS4	InstallationTypeCode
Location	Meter Location	ON SUB POLE	BEHIND DOOR	Location

Data Element Name (as it appears in XML documents)	Browser Field Name (as it appears in MSATS Browser)	Basic Example	Interval Example	Data Element Name
Manufacturer	Meter Manufacturer	EMAIL	EDMI	Manufacturer
Model	Meter Model	Q3	Q4	Model
ReadTypeCode	Meter Read Type	MV3M	RTDA	ReadTypeCode
SerialNumber	Meter Serial ID, Meter ID (Different on two screens)	525811	201000299	SerialNumber
Status	Status Code	C	C	Status
Use	Meter Use	REVENUE	REVENUE	Use
NextScheduledReadDate	Next Scheduled Read Date	04-10-2006		NextScheduledReadDate
NMI	NMI	1122334455	1122334455	NMI
TestResulty	Test Result Accuracy	-0.20000	-0.11000	TestResult
VoltageTransformerLocation	Voltage Transformer Location		BEHIND DOOR	VoltageTransformerLocation
VoltageTransformerType	Voltage Transformer Type		IVT	VoltageTransformerType
VoltageTransformerRatio	Voltage Transformer Ratio		3300:110	VoltageTransformerRatio
VoltageTransformerAccuracyClass	Voltage Transformer Accuracy Class		0.01M	VoltageTransformerAccuracyClass
VoltageTransformerTest	Voltage Transformer Test		TESTED	VoltageTransformerTest
VoltageTransformerTestDate	Voltage Transformer Test Date		01-01-2020	VoltageTransformerTestDate
FromDate	Start Date	14-03-1990	16-03-2002	FromDate
ToDate	End Date	31-12-9999	18-07-2006	ToDate

Data Element Name (as it appears in XML documents)	Browser Field Name (as it appears in MSATS Browser)	Basic Example	Interval Example	Data Element Name
MaintenanceDate	Updated On	31-12-999 00:00:00	31-12-999 00:00:00	MaintenanceDate
CreationDate	Created On	19-03-1990 00:01:00	18-03-2002 00:01:00	CreationDate

## 5 CATS\_DLF\_CODES

### 5.1 Field Definitions

The CATS\_DLF\_Codes table contains a list of DLF Codes and their relevant values. The StartDate and DLFCODE fields will need to be provided for settlements calculations.

Note: References to 'LNSP' include the ENM for child connection points.

Table 6 CATS\_DLF\_CODES – Field Definitions

Data Element Name	Description	Standing Data Required	Party to Provide
DistributionLossFactorCode	A four character alpha-numeric code used to identify DLF values. All <i>NMIs</i> must be assigned a DLF Code. Refer to AEMO Distribution Loss Factor documents for each financial year..	MANDATORY	NTESMO
DistributionLossFactorDescription	Description of the DLF Code and value.	MANDATORY	NTESMO
DistributionLossFactor Value	Numeric value up to 5 decimal places, reflecting the value of the DLF Code.	MANDATORY	NTESMO
JurisdictionCode	Jurisdiction code to which the <i>NMI</i> belongs. This value must correspond to Jurisdiction Code values as specified in the MSATS Procedures: CATS Procedures.	MANDATORY	NTESMO
RowStatus	Indicates whether the DLF Code is active or inactive.  Whenever a new record is created, it will be A (Active). A change to the data will make this record redundant and its MaintActFlg is changed to I (Inactive).	MANDATORY	System generated

Data Element Name	Description	Standing Data Required	Party to Provide
<b>FromDate</b>	Start date of the record. This indicates the date on which the parameters of this particular record apply from. The data applies from the beginning of this date (the start of the day, i.e. 00:00).	MANDATORY	NTESMO
<b>ToDate</b>	End date of the record. This indicates the date on which the parameters of this particular record end. The data applies until the end of this date (the end of the day, i.e. 23:59). A default date of 9999-12-31 is recorded if EndDate is not provided.	MANDATORY	System generated
<b>MaintenanceDate</b>	Date and time the record was updated. A default date of 9999-12-31 is used when the record is created initially. If the record is subsequently updated, its MaintUpdtDt is changed to the date and time the record was updated.	MANDATORY	System generated
<b>CreationDate</b>	Date and time the record was created.	MANDATORY	System generated

## 5.2 Cross Reference of Browser and aseXML Data Elements

The table below lists the names that are used in the MSATS browser. The table also provides the aseXML data element names and the respective formats used in each context.

In some cases, such as date fields, the format of the field is shown differently in the Browser to that used in the related aseXML transactions. Also, aseXML uses full words throughout, rather than the coded values used in the Browser.

Section 16 provides data type conventions of the Browser formats shown in this section.

Table 7 CATS\_DLF\_Codes - Browser Cross Reference

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
<b>DLF Code</b>	DistributionLossFactorCode	DistributionLossFactorCode	VARCHAR2(4)	xsd:string maxLen = 4
<b>Description</b>	DistributionLossFactorDescription	DistributionLossFactorDescription	VARCHAR2(50)	xsd:string maxLen = 50

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
<b>DLF Value</b>	DistributionLossFactorValue	DistributionLossFactorValue	NUMBER(6,5)	xsd:decimal minIncl = 0 maxIncl = 6 totdig = 6 fracdig = 5
<b>Jurisdiction</b>	JurisdictionCode	ElectricityStandingData/MasterData/JurisdictionCode	VARCHAR2(3)	xsd:string maxLen = 3
<b>Activity Status</b>	RowStatus	RowStatus	CHAR(1)	xsd:string with enumeration
<b>Start Date</b>	FromDate	FromDate	dd-mmm-yyyy	xsd:dateTime
<b>End Date</b>	ToDate	ToDate	dd-mmm-yyyy	xsd:dateTime
<b>Updated On</b>	MaintenanceDate	MaintenanceDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd:dateTime
	CreationDate	CreationDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd:dateTime

## 5.3 Field value examples

This section provides examples of typical sets of data element values associated with different types of *connection points* or secondary settlement points.

The data shown in each example is as shown in the Browser. This reverses the sequence of the day-month-year communicated via aseXML transactions.

Table 8 CATS\_DLF\_Codes - Example

Data Element Name	Browser Field Name	Basic & Interval Example
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<b>DistributionLossFactorCode</b>	DLF Code	NHV1
<b>DistributionLossFactorDescription</b>	Description	UMPLP - High Voltage
<b>DistributionLossFactorValue</b>	[The actual DLF value]	1.11111
<b>JurisdictionCode</b>	Jurisdiction Code	SA
<b>RowStatus</b>	Activity Status	A
<b>FromDate</b>	Start Date	01-07-1999
<b>ToDate</b>	End Date	30-06-2000
<b>MaintenanceDate</b>	Updated On	31-05-2000 00:30:27
<b>CreationDate</b>		01-06-1999 00:23:32

## 6 CATS\_EMB\_NET\_ID\_CODES

### 6.1 Field Definitions

The CATS\_EMB\_NET\_ID\_CODES table contains embedded network identifier codes, which are used to identify which *embedded network* a *NMI* belongs to, either as a Parent NMI or a Child NMI.

Note: References to 'LNSP' include the LNSP for *child connection points*.

Table 9 CATS\_EMB\_NET\_ID\_CODES – Field Definitions

Data Element Name	Description	Standing Data Required	Party to Provide
EmbeddedNetworkIdentifier	Not used in the NT Procedures	-	-

Data Element Name	Description	Standing Data Required	Party to Provide
	Not used in the NT Procedures		
<b>SuburbOrPlaceOrLocality</b>	Locality to which the embedded network identifier belongs.	MANDATORY	NTESMO
<b>PostCode</b>	Postcode for the locality to which the embedded network identifier belongs.	MANDATORY	NTESMO
<b>StateOrTerritory</b>	State or Territory abbreviation in accordance with AS 4590.	MANDATORY	NTESMO
<b>RowStatus</b>	Indicates whether the code is active or inactive. Whenever a new record is created, it will be A (Active). A change to the data will make this record redundant and its MaintActFlg is changed to I (Inactive).	MANDATORY	System generated
<b>FromDate</b>	Start date of the record. This indicates the date on which the parameters of this particular record apply from. The data applies from the beginning of this date (the start of the day, i.e. 00:00).	MANDATORY	NTESMO
<b>ToDate</b>	End date of the record. This indicates the date on which the parameters of this particular record end. The data applies until the end of this date (the end of the day, i.e. 23:59). A default date of 9999-12-31 is recorded if EndDate is not provided.	MANDATORY	System generated
<b>MaintenanceDate</b>	Date and time the record was updated. A default date of 9999-12-31 is used when the record is created initially. If the record is subsequently updated, its MaintUpdtDt is changed to the date and time the record was updated.	MANDATORY	System generated
<b>CreationDate</b>	Date and time the record was created.	MANDATORY	System generated

## 6.2 Cross Reference of Browser and aseXML Data Elements

The table below lists the names that are used in the MSATS browser. The table also provides the aseXML data element names and the respective formats used in each context.

In some cases, such as date fields, the format of the field is shown differently in the Browser to that used in the related aseXML transactions. Also, aseXML uses full words throughout, rather than the coded values used in the Browser.

Section 16 provides data type conventions of the Browser formats shown in this section.

Table 10 CATS\_Emb\_Net\_ID\_Codes - Browser Cross Reference

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
Code	Not used in the NT Procedures			
Description	Not used in the NT Procedures			
Locality/Suburb	SuburbOrPlaceOrLocality	ElectricityStandingData/MasterData/Address/AustralianAddress/SuburbOrPlaceOrLocality	VARCHAR2(46)	xsd:string maxLength = 46
Postcode	PostCode	ElectricityStandingData/MasterData/Address/AustralianAddress/PostCode	VARCHAR2(4)	xsd:string pattern: [\p{N}]{4}
State	StateOrTerritory	ElectricityStandingData/MasterData/Address/AustralianAddress/StateOrTerritory	VARCHAR2(3)	xsd:string with enumerations
Activity Status	RowStatus	RowStatus	CHAR(1)	xsd:string with enumeration
Start Date	FromDate	FromDate	dd-mmm-yyyy	xsd:dateTime
End Date	ToDate	ToDate	dd-mmm-yyyy	xsd:dateTime

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
Updated On	MaintenanceDate	MaintenanceDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd:dateTime
Created On	CreationDate	CreationDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd:dateTime

## 6.3 Field value examples

This section provides examples of typical sets of data element values associated with different types of *connection points*.

The data shown in each example is as shown in the Browser. This reverses the sequence of the day-month-year communicated via aseXML transactions.

Table 11 CATS\_Emb\_Net\_ID\_Codes - Example

Data Element Name	Browser Field Name	Basic & Basic Example
EmbeddedNetworkIdentifier	Not used in the NT Procedures	-
EmbeddedNetworkDescription	Not used in the NT Procedures	-
SuburbOrPlaceOrLocality	Suburb / Locality	Kingston-On-Murray
PostCode	Postcode	5331
StateOrTerritory	State	SA
RowStatus	Activity Status	A
FromDate	Start Date	5/04/2003
ToDate	End Date	31/12/9999

Data Element Name	Browser Field Name	Basic & Basic Example
MaintenanceDate	Updated On	31/12/9999
CreationDate	Creation On	1/04/2003 13:23

## 7 CATS\_NMI\_DATA

### 7.1 Field Definitions

The CATS\_NMI\_DATA table records Master NMI Record data information. It is updated whenever a Change Request containing data in the CATS\_INBOUND\_NMI\_DATA table is completed.

Table 12 CATS\_NMI\_DATA – Field **Definitions**

Data Element Name	Description	Standing Data Required	Party to Provide
NMI	NMI. All alpha characters are Upper Case	MANDATORY	LNSP
NMI ClassificationCode	Code used to indicate the NMI Classification Code of this NMI. This value must correspond to NMI Classification Code values as specified in the MSATS Procedures: CATS Procedures.	MANDATORY	LNSP
MasterData/ StatusCode	Code used to indicate the status of the NMI. This value must correspond to NMI Status Code values as specified in the MSATS Procedures: CATS Procedures.	MANDATORY	LNSP
TransmissionNode Identifier	This value must correspond to a valid code in the CATS_TNI_Codes table.	MANDATORY	LNSP
TransmissionNode Identifier2	Not used in the NT Procedures		
SharedIsolationPointFlag	Set to N in the NT as field is not used in the NT		

Data Element Name	Description	Standing Data Required	Party to Provide
IsPCP	Not used in the NT Procedures		
PremisesNMI	Not used in the NT Procedures		
MeterMalfunctionExemptionNumber	Not used in the NT Procedures.		
MeterMalfunctionExemptionExpiryDate	Not used in the NT Procedures		
JurisdictionCode	Jurisdiction code to which the <i>NMI</i> belongs. This code defines the jurisdictional rules which apply to the transfer of this <i>NMI</i> . This value must correspond to Jurisdiction Code values as specified in the MSATS Procedures: CATS Procedures.	MANDATORY	LNSP
DistributionLossFactorCode	Distribution Loss Factor Code. Must be a valid code in the CATS_DLF_Codes table.	MANDATORY	LNSP
ConnectionConfiguration	Two-character code to denote information about the configuration of the connection point or secondary settlement point. First Character = Connection Type. H = <i>High voltage</i> (as defined in the NER) L = Low voltage (lower than the threshold defined for <i>high voltage</i> in the NER) Second Character = Phases In Use. This refers to phases to the NMI. 1 = Single Phase 2 = Two-Phase 3 = Three-Phase Information registered with a Greenfield NMI may be subject to change during the connection process. Information may be subject to change during the NMI lifecycle.	MANDATORY	LNSP
ChildEmbeddedNetworkIdentifier	Not used in the NT Procedures		

Data Element Name	Description	Standing Data Required	Party to Provide
<b>ParentEmbedded NetworkIdentifier</b>	Not used in the NT Procedures		
<b>BuildingOrProperty Name</b>	<p>Defines the primary building or property name per Australian Standard AS4590.1:2017 5.8 Address site name.</p> <p>The official place name or culturally accepted common usage name for an address site, including the name of a building, homestead, building complex agricultural property – for scenarios where the address is similar to “Rose Cottage, 9 Garden Walk, Happy Valley Retirement Village, 75 Davis Steet, NORWOOD SA 5067 Building 4A-4B Smith St”.</p> <p>For example, BuildingOrPropertyName = HAPPY VALLEY RETIREMENT VILLAGE BuildingOrPropertyName2 = ROSE COTTAGE.</p>	REQUIRED	LNSP
<b>BuildingOrProperty Name2</b>	<p>Defines the secondary building or property name within a complex site as per Australian Standard AS4590.1:2017 5.6.5.4 Secondary complex (or utility) name.</p> <p>The name given to an entire building or area within an address site that has its own separate address — for scenarios where the address is similar to “Rose Cottage, 9 Garden Walk, Happy Valley Retirement Village, 75 Davis Steet, NORWOOD SA 5067 Building 4A-4B Smith St”.</p> <p>For example: BuildingOrPropertyName2 = ROSE COTTAGE, BuildingOrPropertyName = HAPPY VALLEY RETIREMENT VILLAGE.</p>	REQUIRED	LNSP
<b>LotNumber</b>	The lot reference number allocated to an address prior to street numbering. The word ‘LOT’ is not required.	REQUIRED	LNSP
<b>FlatOrUnitNumber</b>	Specification of the number of the flat or unit which is a separately identifiable portion within a building/complex.	REQUIRED	LNSP
<b>FlatOrUnitType</b>	Specification of the type of flat or unit which is a separately identifiable portion within a building/complex. This value must correspond to a valid Flat Type Code, reference AS4590.	REQUIRED	LNSP
<b>FloorOrLevelNumber</b>	Floor Number is used to identify the floor or level of a multi-storey building/complex.	REQUIRED	LNSP
<b>FloorOrLevelType</b>	Floor Type is used to identify the floor or level of a multi-storey building/complex. This value must correspond to a valid Floor Type Code in the Floor Type Codes, reference AS4590.	REQUIRED	LNSP
<b>HouseNumber</b>	The numeric reference of a house or property. Specifically the house number.	REQUIRED	LNSP
<b>HouseNumberSuffix</b>	The numeric reference of a house or property. Specifically the single character identifying the house number suffix.	REQUIRED	LNSP

Data Element Name	Description	Standing Data Required	Party to Provide
<b>HouseNumberTo</b>	The numeric reference of a house or property for scenarios where the address is similar to 4-10 Smith St. For example, HouseNumber = 4 and HouseNumberTo = 10 where the address is 4-10 Smith St.	REQUIRED	LNSP
<b>HouseNumberToSuffix</b>	The numeric reference of a house or property. Specifically the single character identifying the house number suffix to for scenarios where the address is similar to 4A-4B Smith St. For examples, HouseNumber = 4, HouseNumberSuffix = A, HouseNumberTo = 4 and HouseNumberToSuffix = B where the address is 4A-4B Smith St.	REQUIRED	LNSP
<b>StreetName</b>	Defines the street name per Australian Standard AS4590.1:2017 5.6.5.1 Complex road name and 5.10.1 Road name. The combination of Street Name, Street Type and Street Suffix may occur up to two times. This field may only contain letters, numbers, hyphens ('-') and spaces. Records the thoroughfare name. See notes at end of table for more information on Structured Addresses	REQUIRED	LNSP
<b>StreetSuffix</b>	Records street suffixes. This value must correspond to a valid Street Suffix Code, reference AS4590.	REQUIRED	LNSP
<b>StreetType</b>	Records the street type abbreviation. This value must correspond to a valid Street Type Code, reference AS4590.	REQUIRED	LNSP
<b>SuburbOrPlaceOrLocality</b>	The full name of the general locality containing the specific address.	MANDATORY	LNSP
<b>LocationDescriptor</b>	A general field to capture various references to address locations alongside another physical location.	REQUIRED	LNSP
<b>PostCode</b>	The descriptor for a postal delivery area, aligned with locality, suburb or place.	MANDATORY	LNSP
<b>StateOrTerritory</b>	Defined State or Territory abbreviation.	MANDATORY	LNSP
<b>GNAFPID</b>	The Geocoded National Address File (G-NAF) Persistent Identifier (PID) for a given address.	REQUIRED	LNSP/ NTESMO
<b>SectionNumber</b>	Not used in the NT Procedures		
<b>DPNumber</b>	Not used in the NT Procedures		

Data Element Name	Description	Standing Data Required	Party to Provide
<b>DeliveryPointIdentifier</b>	Delivery point identifier - the numeric descriptor for a postal delivery point which is equal to a physical address. The values are in the range 10000000 – 99999999.	REQUIRED	LNSP/ NTESMO
<b>Aggregate</b>	This flag determines whether the energy at this <i>connection point</i> or secondary settlement point is to be treated as consumer <i>load</i> or as a <i>generating unit</i> (this may include <i>generator</i> auxiliary loads). MSATS will initially set this field to “Y” This value must correspond to a valid Aggregate value in the Aggregate Codes reference table listed in section 11.	OPTIONAL	(Defaults to ‘Y’, NTESMO updates to ‘N’ as required)
<b>Feeder Class</b>	Not used in the NT Procedures		
<b>Customer Classification Code</b>	A code that defines the consumer class as defined in the MSATS Procedures, or in overriding Jurisdictional instruments.	MANDATORY	Current FRMP
<b>Customer Classification Threshold Code</b>	A code that defines the consumption threshold as defined in the MSATS Procedures, or in overriding Jurisdictional instruments.	MANDATORY (except for SSP NMI’s then OPTIONAL)	LNSP
<b>Last Consumer Change Date</b>	The date a consumer starts or ends as the account holder for a premises.	MANDATORY	Current FRMP
<b>Defect Flag</b>	A flag that identifies a defect at site which prevents a metering upgrade	MANDATORY	MC
<b>Defect Type</b>	A defect within the end users housing of the metering installation or electrical wiring preventing a metering installation replacement or repair of a legacy meter.	MANDATORY	MC
<b>Originating MC</b>	The MC that raised the defect flag	MANDATORY	MC
<b>Legacy Meter Replacement Plan</b>	Not used in the NT Procedures		
<b>FromDate</b>	Start date of the NMI Data record. This indicates the date on which the parameters of this particular NMI data record apply from. The data applies from the beginning of this date (the start of the day, i.e. 00:00).	MANDATORY	LNSP

Data Element Name	Description	Standing Data Required	Party to Provide
<b>ToDate</b>	End date of the record. This indicates the date on which the parameters of this particular record end. The data applies until the end of this date (the end of the day, i.e. 23:59). A default date of 9999-12-31 is recorded if EndDate is not provided.	MANDATORY (Defaults to high date unless supplied)	System generated unless supplied.
<b>RowStatus</b>	Indicates whether the record is active or inactive. Whenever a new record is created, it will be A (Active). A change to the data will make this record redundant and its MaintActFlg is changed to I (Inactive).	MANDATORY	System generated
<b>MaintenanceDate</b>	Date and time the record was updated. A default date of 9999-12-31 is used when the record is created initially. If the record is subsequently updated, its MaintUpdtDt is changed to the date and time the record was updated.	MANDATORY	System generated
<b>CreationDate</b>	Date and time the record was created.	MANDATORY	System generated

## 7.2 Cross Reference of Browser and aseXML Data Elements

The table below lists the names that are used in the MSATS browser. The table also provides the aseXML data element names and the respective formats used in each context.

In some cases, such as date fields, the format of the field is shown differently in the Browser to that used in the related aseXML transactions. Also, aseXML uses full words throughout, rather than the coded values used in the Browser.

Section 16 provides data type conventions of the Browser formats shown in this section.

Table 13 CATS\_NMI\_Data

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
<b>NMI</b>	NMI	NMI	CHAR(10)	xsd:string maxLength = 10
<b>NMI Classification Code</b>	NMClassificationCode	ElectricityStandingData/MasterData/ NMClassificationCode	VARCHAR2(8)	xsd:string maxLength = 8
<b>Status Code</b>	Status	ElectricityStandingData/MasterData/Status	CHAR(1)	xsd:string maxLength = 1

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
<b>TNI Code</b>	TransmissionNodeIdentifier	ElectricityStandingData/MasterData/TransmissionNodeIdentifier	VARCHAR2(4)	xsd:string maxLength = 4
<b>TNI Code 2</b>	TransmissionNodeIdentifier2	ElectricityStandingData/MasterData/TransmissionNodeIdentifier2	VARCHAR2(4)	xsd:string maxLength = 4
<b>Shared Isolation Point Flag</b>	SharedIsolationPointFlag	ElectricityMeter/ SharedIsolationPointFlag	CHAR(1)	xsd:string maxLength = 1
<b>Meter Malfunction Exemption Number</b>	MeterMalfunctionExemptionNumber	ElectricityMeter/MeterMalfunctionExemptionNumber	VARCHAR2(15)	xsd:string maxLength = 15
<b>Meter Malfunction Exemption Expiry Date</b>	MeterMalfunctionExemptionExpiryDate	ElectricityMeter/MeterMalfunctionExemptionExpiryDate	dd-mmm-yyyy	xsd:date
<b>Jurisdiction Code</b>	JurisdictionCode	JurisdictionCode	VARCHAR2(3)	xsd:string maxLength = 3
<b>Connection Configuration</b>	ConnectionConfiguration	ElectricityMeter/ConnectionConfiguration	VARCHAR2(2)	xsd:string maxLength = 2
<b>DLF Code</b>	DistributionLossFactorCode	ElectricityStandingData/MasterData/DistributionLossFactorCode	VARCHAR2(4)	xsd:string maxLength = 4
<b>Embedded Network ID (Child)</b>	Not used in the NT Procedures			
<b>Embedded Network (Parent)</b>	Not used in the NT Procedures			
<b>Building / Property Name</b>	BuildingOrPropertyName	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/BuildingOrPropertyName	VARCHAR2(50)	xsd:string maxLength = 50
<b>Building / Property Name2</b>	BuildingOrPropertyName2	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/BuildingOrPropertyName2	VARCHAR2(50)	xsd:string maxLength = 50
<b>Lot Number</b>	LotNumber	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/Lot/LotNumber	VARCHAR2(6)	xsd:string pattern: [\p{L}\p{N}\p{P}]s{1,6}

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
<b>Flat/Unit Number</b>	FlatOrUnitNumber	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/FlatOrUnit/FlatOrUnitNumber	VARCHAR2(7)	xsd:string pattern: [\p{L}\p{N}\p{P}]s{1,7}
<b>Flat/Unit Type</b>	FlatOrUnitType	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/FlatOrUnit/FlatOrUnitType	VARCHAR2(4)	xsd:string with enumerations
<b>Floor/Level Number</b>	FloorOrLevelNumber	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/FloorOrLevel/FloorOrLevelNumber	VARCHAR2(5)	xsd:string [\p{L}\p{N}\p{P}]s{1,5}
<b>Floor/Level Type</b>	FloorOrLevelType	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/FloorOrLevel/FloorOrLevelType	VARCHAR2(4)	xsd:string with enumerations
<b>House Number</b>	HouseNumber	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/House/HouseNumber	NUMBER(5)	xsd:nonNegativeInteger maxIncl = 99999
<b>House Number Suffix</b>	HouseNumberSuffix	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/House/HouseNumberSuffix	VARCHAR2(1)	xsd:string pattern: [\p{L}\p{N}]{1}
<b>House Number To</b>	HouseNumberTo	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/House/HouseNumberTo	NUMBER(5)	xsd:nonNegativeInteger maxIncl = 99999
<b>House Number To Suffix</b>	HouseNumberToSuffix	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/House/HouseNumberSuffixTo	VARCHAR2(1)	xsd:string pattern: [\p{L}\p{N}]{1}
<b>Street Name</b>	StreetName	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/Street/StreetName	VARCHAR2(45)	xsd:string pattern: [\p{L}\p{N}]s-[']{1,45}
<b>Street Name Suffix</b>	StreetSuffix	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/Street/StreetSuffix	VARCHAR2(2)	xsd:string with enumerations
<b>Street Type</b>	StreetType	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/Street/StreetType	VARCHAR2(4)	xsd:string with enumerations
<b>Suburb/Locality</b>	SuburbOrPlaceOrLocality	ElectricityStandingData/MasterData/Address/AustralianAddresses/StructuredAddress/SuburbOrPlaceOrLocality	VARCHAR2(46)	xsd:string maxLen = 46

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
Location Descriptor	LocationDescriptor	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/LocationDescriptor	VARCHAR2(30)	xsd:string pattern: [\p{L}\p{N}\p{P}]s{1,30}
Postcode	PostCode	ElectricityStandingData/MasterData/Address/AustralianAddress/PostCode	VARCHAR2(4)	xsd:string pattern: [\p{N}]{4}
State	StateOrTerritory	ElectricityStandingData/MasterData/Address/AustralianAddresses/StateOrTerritory	VARCHAR2(3)	xsd:string with enumerations
DPID	DeliveryPointIdentifier	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/DeliveryPointIdentifier	NUMBER(8)	xsd:nonNegativeInteger minIncl = 10000000 maxIncl = 99999999
GNAF PID	GNAFPID	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/GNAFPID	VARCHAR2(20)	xsd:string maxLen = 20
Section Number	SectionNumber	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/SectionNumber	VARCHAR2(20)	xsd:string maxLen = 20
DP Number	DPNumber	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/DPNumber	VARCHAR2(20)	xsd:string maxLen = 20
Aggregate Flag	Aggregate	ElectricityStandingData/MasterData/Aggregate	CHAR(1)	xsd:string with enumeration
Start Date	FromDate	FromDate	dd-mmm-yyyy	xsd:dateTime
End Date	ToDate	ToDate	dd-mmm-yyyy	xsd:dateTime
Updated On	MaintenanceDate	MaintenanceDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd:dateTime
Created On	CreationDate	CreationDate	dd-mmm-yyyy (summary screen)	xsd:dateTime

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
			dd-mmm-yyyy hh:mm:ss (detail screen)	
<b>Activity Status</b>	RowStatus	RowStatus	CHAR(1)	xsd:string with enumeration
<b>Feeder Class</b>	Feeder Class	ElectricityStandingData/MasterData/FeederClass	VARCHAR2(15)	xsd:string maxLen = 15
<b>Customer Classification Code</b>	CustomerClassificationCode	ElectricityStandingData/MasterData/CustomerClassificationCode	VARCHAR2(20)	xsd:string maxLen = 20
<b>Last Consumer Change Date</b>	LastConsumerChangeDate	ElectricityStandingData/MasterData/LastConsumerChangeDate	dd-mmm-yyyy	xsd:date
<b>Customer Classification Threshold Code</b>	CustomerThresholdCode	ElectricityStandingData/MasterData/CustomerThresholdCode	VARCHAR2(20)	xsd:string maxLen = 20
<b>Defect Flag</b>	DefectFlag	ElectricityStandingData/MasterData/DefectFlag	CHAR(1)	xsd:string maxLen = 1
<b>Defect Type</b>	DefectType	ElectricityStandingData/MasterData/DefectType	CHAR(15)	xsd:string maxLen = 15
<b>Originating MC</b>	OriginatingMC	ElectricityStandingData/MasterData/OriginatingMC	VARCHAR2 CHAR(10)	xsd:string maxLen = 10
<b>Legacy Meter Replacement Plan</b>	Not used in the NT Procedures			
<b>IsPCP</b>	IsPCP	ElectricityStandingData/MasterData/IsPCP	CHAR(1)	xsd:string maxLen = 1
<b>Premises NMI</b>	Premises NMI	ElectricityStandingData/MasterData/PremisesNMI	CHAR(10)	xsd:string maxLen = 10

## 7.3 Field value examples

This section provides examples of typical sets of data element values associated with different types of *connection points*.

The data shown in each example is as shown in the Browser. This reverses the sequence of the day-month-year communicated via aseXML transactions.

Table 14 CATS\_NMI\_Data Field value examples

Data Element Name	Browser Field Name	Basic Example	Interval Example
<b>NMI</b>	NMI	122334451	1122334455
<b>NMIClassificationCode</b>	NMI Classification Code	SMALL	LARGE
<b>MasterData/Status</b>	Status Code	A	G
Data Element Name	Browser Field Name	Basic Example	Interval Example
<b>TransmissionNodeIdentifier</b>	TNI Code	NRGE	SBER
<b>TransmissionNodeIdentifier2</b>	TNI Code 2		SORA
<b>SharedIsolationPointFlag</b>	Shared Isolation Point Flag	NO	YES
<b>MeterMalfunctionExemption Number</b>	Meter Malfunction Exemption Number	ERF 0001	ERF 0001
<b>MeterMalfunctionExemptionExpiry Date</b>	Meter Malfunction Exemption Expiry Date	07-05-2020	07-05-2020
<b>JurisdictionCode</b>	Jurisdiction Code	NSW	SA
<b>ConnectionConfiguration</b>	Connection Configuration	L1	H3
<b>DistributionLossFactorCode</b>	DLF Code	NRGE	NLV2
<b>ChildEmbeddedNetworkIdentifier</b>	Not used in the NT Procedures		

Data Element Name	Browser Field Name	Basic Example	Interval Example
ParentEmbeddedNetworkIdentifier	Not used in the NT Procedures		
BuildingOrPropertyName	Building / Property Name	BLAMEY RESEARCH INSTITUTE BP	HAPPY VALLEY RETIREMENT VILLAGESHELL
BuildingOrPropertyName2	Building / Property Name2	BIOLOGY BUILDING B	ROSE COTTAGE
LotNumber	Lot Number	22	23
FlatOrUnitNumber	Flat/Unit Number	1	2
FlatOrUnitType	Flat/Unit Type	U	U
FloorOrLevelNumber	Flat/Unit Number	1	1
FloorOrLevelType	Floor/Level Type	FL	FL
HouseNumber	House Number	6	10
HouseNumberSuffix	House Number Suffix	A	B
HouseNumberTo	House Number To	10	17
HouseNumberToSuffix	House Number To Suffix	B	C
StreetName	Street Name	BORIS	DORIS
StreetSuffix	Street Name Suffix	N	W
StreetType	Street Type	DR	ST
SuburbOrPlaceOrLocality	Suburb/Locality	ORANGE	LOXTON
LocationDescriptor	Location Descriptor	CNR FRED ST	SHELL SERVICE STATION
PostCode	Postcode	2211	5333

Data Element Name	Browser Field Name	Basic Example	Interval Example
StateOrTerritory	State	NSW	SA
DeliveryPointIdentifier	DPID	01234567	12345678
GNAFPID	GNAF PID	GDA2020	GDA2020
SectionNumber	Section Number	Section 23K	Section 23K
DPNumber	DP Number	DP 825310	DP 825310
Aggregate	Aggregate Flag	Y	Y
FromDate	Start Date	01-06-2004	01-06-2001
ToDate	End Date	31-12-9999	01-01-2003
MaintenanceDate	Updated On	31-12-9999 00:00:00	05-01-2003 00:01:00
CreationDate	Created On	04-01-2004 09:31:00	01-06-2001 00:01:00
RowStatus	Activity Status	A	A
FeederClass	Feeder Class	ERGUD	ERGUD
Customer ClassificationCode	Customer Classification Code	RESIDENTIAL	BUSINESS
Last Consumer Change Date	LastConsumerChangeDate	01-05-2023	01-05-2023
CustomerThresholdCode	Customer Threshold Code	LOW	HIGH
OriginatingMC	Originating MC		
DefectFlag	Defect Flag	Y	Y
DefectType	Defect Type	NOSPACE	NOSPACE

Data Element Name	Browser Field Name	Basic Example	Interval Example
LegacyMtrReplacementPlan	Not used in the NT Procedures		
IsPCP	Not used in the NT Procedures		
PremisesNMI	Not used in the NT Procedures		

## 8 Not used in the NT Procedures

## 9 CATS\_Register\_identifier

### 9.1 Field Definitions

The CATS\_Register\_Identifier table contains data that is stored at the register identifier level. Information stored at this level includes the Network Tariff Code. It is updated whenever a Change Request containing inbound register identifier data is completed.

Table 18 CATS\_REGISTER\_IDENTIFIER – Field Definitions

Data Element Name	Description	Standing Data Required	Party to Provide
NMI	NMI. This number is unique for each connection point within the NEM.	MANDATORY	MPB
SerialNumber	The Meter Serial ID uniquely identifies a meter for a given NMI. Maximum 12 Characters (alpha numeric). Unique for NMI. Use dummy for UMCP (Type 7),.. Except for UMCP, logical, and non-contestable unmetered loads, MeterSerial should be displayed on physical device also known as property number). SerialNumber to be property number if exists, otherwise the meter manufacturers' serial number, otherwise dummy number.	MANDATORY	MPB
RegisterID	The RegisterID is used to identify a data source that is obtained from the meter. A single meter may provide multiple data sources.	MANDATORY	MPB

Data Element Name	Description	Standing Data Required	Party to Provide
<b>NetworkTariffCode</b>	The Network Tariff Code is a free text field required. The text must match the Network Tariff Codes supplied and published by the LNSP. Must be a valid code from the CATS_Network_Tariff_Codes table. SSP NMI default value is 'Unit'.	MANDATORY	MPB
<b>NetworkAdditional Information</b>	Free text field.	REQUIRED	MPB
<b>UnitOfMeasure</b>	Code to identify the unit of measure for data held in this register.	MANDATORY	MPB
<b>TimeOfDay</b>	Code to identify the time validity of register contents. As published by each LNSP. This value must correspond to a valid Time of Day value in the Time of Day Codes reference table listed in section 11. For Interval meters, use code "INTERVAL".	MANDATORY	MPB
<b>Multiplier</b>	Multiplier required to take a register value and turn it into a value representing billable energy	MANDATORY	MPB
<b>DialFormat</b>	Describes the register display format. First number is the number of digits to the left of the decimal place, and the second number is the number of digits to the right of the decimal place.	MANDATORY	MPB
<b>Suffix</b>	The Suffix field in the CATS_REGISTER_IDENTIFIER table is used to identify a physical data source that is obtained from the meter. The value must match the value provided in the MDFF File. The Suffix value must be unique for each meter register. The Suffix in the CATS_REGISTER_IDENTIFIER table must be valid specified in the NT NMI Procedure.  For Basic Meters, the Suffix in the CATS_REGISTER_IDENTIFIER table need not match the RegisterID in the CATS_REGISTER_IDENTIFIER table. For basic data streams, the value will be identical to the related Suffix value in the CATS_NMI_DataStream table.  For Interval Meters, the Suffix in the CATS_REGISTER_IDENTIFIER table will indicate the individual datastreams: contributing to the Nx Suffix value in the CATS_NMI_DataStream table, or associated with the individual register level interval datastream records.	MANDATORY	MPB
<b>ControlledLoad</b>	Indicates whether the energy recorded by this register is created under a Controlled Load regime ControlledLoad field will have "NO" if register does not relate to a Controlled Load. If the register relates to a Controlled Load, it must correspond to a valid Controlled Load value in the Controlled Load Codes reference table listed in section 11.	MANDATORY	MPB

Data Element Name	Description	Standing Data Required	Party to Provide
<b>RegisterDetail/ Status</b>	Lookup code to indicate if register is active. Must ensure that RegisterDetail/Status is not Current when ElectricityMeter/Status is Removed (R). This value must correspond to a valid Register Identifier Status as specified in the MSATS Procedures: CATS Procedures.	MANDATORY	MPB
<b>ConsumptionType</b>	Actual/Subtractive Indicator. Actual (A) implies volume of energy actually metered between two dates. Cumulative (C) indicates a Meter Reading for a specific date. A second Meter Reading is required to determine the consumption between those two Meter Reading dates. For an Interval Meter, ActCumInd = A. This value must correspond to a valid ConsumptionType from the Consumption Type Codes reference table listed in section 11.	MANDATORY	MPB
<b>FromDate</b>	Start date of the NMI data record. This indicates the date on which the parameters of this particular NMI data record apply from. The data applies from the beginning of this date (the start of the day, i.e. 00:00).	MANDATORY	Participant sending transaction
<b>ToDate</b>	End date of the record. This indicates the date on which the parameters of this particular record end. The data applies until the end of this date (the end of the day, i.e. 23:59). A default date of 9999-12-31 is recorded if EndDate is not provided.	MANDATORY (Defaults to high date unless supplied)	System generated unless supplied.
<b>RowStatus</b>	Indicates whether the record is active or inactive. Whenever a new record is created, it will be A (Active). A change to the data will make this record redundant and its MaintActFlg is changed to I (Inactive).	MANDATORY	System generated
<b>MaintenanceDate</b>	Date and time the record was updated. A default date of 9999-12-31 is used when the record is created initially. If the record is subsequently updated, its MaintUpdtDt is changed to the date and time the record was updated.	MANDATORY	System generated
<b>CreationDate</b>	Date and time the record was created.	MANDATORY	System generated

## 9.2 Cross Reference of Browser and aseXML Data Elements

The table below lists the names that are used in the MSATS browser. The table also provides the aseXML data element names and the respective formats used in each context.

In some cases, such as date fields, the format of the field is shown differently in the Browser to that used in the related aseXML transactions. Also, aseXML uses full words throughout, rather than the coded values used in the Browser.

Section 16 provides data type conventions of the Browser formats shown in this section.

Table 19 CATS\_Register\_Identifier - Browser Cross Reference

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
<b>NMI</b>	NMI	NMI	CHAR(10)	xsd:string maxLen = 10
<b>Meter Serial ID Meter ID (Different on two screens)</b>	SerialNumber	SerialNumber	VARCHAR2(12)	xsd:string maxLen = 12
<b>Register ID</b>	RegisterID	ElectricityMeterRegisterDetail/RegisterID	VARCHAR2(10)	xsd:string maxLen = 10
<b>Network Tariff Code</b>	NetworkTariffCode	ElectricityMeterRegisterDetail/NetworkTariffCode	VARCHAR2(10)	xsd:string maxLen = 10
<b>Network Tariff Additional Information</b>	NetworkAdditional Information	ElectricityMeterRegisterDetail/ NetworkAdditionalInformation	VARCHAR2(4000)	xsd:string
<b>Unit of Measure</b>	UnitOfMeasure	ElectricityMeterRegisterDetail/ UnitOfMeasure	VARCHAR2(5)	xsd:string maxLen = 5
<b>Time of Day</b>	TimeOfDay	ElectricityMeterRegisterDetail/ TimeOfDay	VARCHAR2(10)	xsd:string maxLen = 10
<b>Multiplier</b>	Multiplier	ElectricityMeterRegisterDetail/Multiplier	Number(13,5)	xsd:decimal
<b>Dial Format</b>	DialFormat	ElectricityMeterRegisterDetail/DialFormat	Number(4,2)	xsd:decimal minIncl = 0 maxIncl = 9999.99 totdig = 4 fracdig = 2
<b>Suffix</b>	Suffix	ElectricityMeterRegisterDetail/Suffix	VARCHAR2(2)	xsd:string maxLen = 2
<b>Controlled Load</b>	ControlledLoad	ElectricityMeterRegisterDetail/ControlledLoad	VARCHAR2(100)	xsd:string maxLen = 100
<b>Status Code</b>	Status	ElectricityMeterRegisterDetail/ Status	CHAR(1)	xsd:string with enumeration
<b>Actual/Cumulative Indicator</b>	ConsumptionType	ElectricityMeterRegisterDetail/ConsumptionTy pe	CHAR(1)	xsd:string with enumeration
<b>Start Date</b>	FromDate	FromDate	dd-mmm-yyyy	xsd:dateTime

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
End Date	ToDate	ToDate	dd-mmm-yyyy	xsd:dateTime
Updated On	MaintenanceDate	MaintenanceDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd:dateTime
Created On	CreationDate	CreationDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd:dateTime
Activity Status	RowStatus	RowStatus	CHAR(1)	xsd:string with enumeration

### 9.3 Field value examples

This section provides examples of typical sets of data element values associated with different types of *connection points* or secondary settlement points.

The data shown in each example is as shown in the Browser. This reverses the sequence of the day-month-year communicated via aseXML transactions.

Table 20 CATS\_Register\_Identifier - Example

Data Element Name	Browser Field Name	Basic Example	Interval Example
NMI	NMI	1100445566	2211335544
SerialNumber	Meter Serial ID Meter ID (Different on two screens)	000012345	112258
RegisterID	Register ID	1	E1
NetworkTariffCode	Network Tariff Code	BLNB2CO	MB2RI

Data Element Name	Browser Field Name	Basic Example	Interval Example
NetworkAdditionalInformation	Network Tariff Additional Information	All day tariff	LV TOU Demand Eligible
UnitOfMeasure	Unit of Measure	KWH	KWH
TimeOfDay	Time of Day	ALLDAY	INTERVAL
Multiplier	Multiplier	1.00000	120.00000
DialFormat	Dial Format	5.00	5.10
Suffix	Suffix	11	E1
ControlledLoad	Controlled Load	YES	NO
Status	Status Code	C	C
ConsumptionType	Actual/Cumulative Indicator	C	A
FromDate	Start Date	01-08-2004	01-06-2005
ToDate	End Date	31-12-9999	31-12-9999
MaintenanceDate	Updated On	31-12-9999	31-12-9999
CreationDate	Created On	01-11-2005 22:30:30	05-06-2005 09:09:09
RowStatus	Activity Status	A	A

# 10 CATS\_NMI\_PARTICIPANT\_RELATIONS

## 10.1 Field Definitions

The CATS\_NMI\_Participant\_Relations table is a NMI master table containing data that stores the Roles that Participants play for each *NMI*. It is updated whenever a Change Request containing inbound Roles is completed. Each Role record, which contains a single Role code and a single Participant ID, has a start date and an end date, as well as information about when it was created and when it became inactive if it is no longer an active record.

Table 21 CATS\_NMI\_PARTICIPANT\_RELATIONS – Field Definitions

Data Element Name	Description	Standing Data Required	Party to Provide
<b>Party</b>	The Participant ID whose relationship (Role) with the <i>NMI</i> is defined in this table.	MANDATORY	LNSP
<b>NMI</b>	NMI. This number is unique for each <i>connection point</i> .	MANDATORY	LNSP
<b>Role</b>	This defines the relationship (Role) of the Participant with the <i>NMI</i> in this table.	MANDATORY	LNSP
<b>FromDate</b>	Start date of the record. This indicates the date on which the parameters of this particular record apply from. The data applies from the beginning of this date (the start of the day, i.e. 00:00).	MANDATORY	Party sending transaction
<b>ToDate</b>	End date of the record. This indicates the date on which the parameters of this particular record end. The data applies until the end of this date (the end of the day, i.e. 23:59). A default date of 9999-12-31 is recorded if EndDate is not provided.	MANDATORY (Defaults to high date unless supplied)	System generated unless supplied.
<b>RowStatus</b>	Indicates whether the record is active or inactive. Whenever a new record is created, it will be A (Active). A change to the data will make this record redundant and its MaintActFlg is changed to I (Inactive).	MANDATORY	System generated
<b>MaintenanceDate</b>	Date and time the record was updated. A default date of 9999-12-31 is used when the record is created initially. If the record is subsequently updated, its MaintUpdtDt is changed to the date and time the record was updated.	MANDATORY	System generated

Data Element Name	Description	Standing Data Required	Party to Provide
CreationDate	Date and time the record was created.	MANDATORY	System generated

## 10.2 Cross Reference of Browser and aseXML Data Elements

The table below lists the names that are used in the MSATS browser. The table also provides the aseXML data element names and the respective formats used in each context.

In some cases, such as date fields, the format of the field is shown differently in the Browser to that used in the related aseXML transactions. Also, aseXML uses full words throughout, rather than the coded values used in the Browser.

Section 16 provides data type conventions of the Browser formats shown in this section.

Table 22 CATS\_NMI\_Participant\_Relations - Browser Cross Reference

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
Participant ID	Party	Party	VARCHAR2(10)	xsd:string
NMI	NMI	NMI	CHAR(10)	xsd:string maxLength = 10
Role	Role	Role	VARCHAR2(4)	xsd:string maxLength = 4
Start Date	FromDate	FromDate	dd-mmm-yyyy	xsd:dateTime
End Date	ToDate	ToDate	dd-mmm-yyyy	xsd:dateTime
Updated On	MaintenanceDate	MaintenanceDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd:dateTime
Created On	CreationDate	CreationDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd:dateTime
Activity Status	RowStatus	RowStatus	CHAR(1)	xsd:string with enumeration

# 11 Reference tables

Table 23 Valid Aggregate Codes

Aggregate	Description
Y	Customer load.
N	Generator NMI.

Table 24 Valid Consumption Type Codes

Consumptiontype	Description
ACTUAL	Actual Consumption.
CUMULATIVE	Cumulative Consumption.

Table 25 Not used in the NT Procedures

Table 26 Not used in the NT Procedures

Table 27 Not used in the NT Procedures

Table 28 Valid Transformer Fields values

Valid Transformer fields values can be found at the following location:

[https://markets-portal-help.docs.public.aemo.com.au/Content/MSATSuserGuides/UpdateMeteringData.htm?TocPath=MSATS%7CMetering%20Data%7C\\_\\_\\_\\_\\_5](https://markets-portal-help.docs.public.aemo.com.au/Content/MSATSuserGuides/UpdateMeteringData.htm?TocPath=MSATS%7CMetering%20Data%7C_____5)

Table29 Valid Meter Use Codes

Meter Use	Description
REVENUE	Revenue meter. or unmetered load.
CHECK	Check meter.
STATISTICAL	Statistical meter.
TUOS	TUOS meter.
LOGICAL	Logical meter.
SAMPLE	Sample meter.
AVERAGE	Average meter.
PREPAID	Prepaid meter.
INFORMATION	Information meter.

<b>UNKNOWN</b>	Unknown meter use code.
----------------	-------------------------

Table 30 Valid Time of Day Codes

TimeOfDay	Description
<b>ALLDAY</b>	All day
<b>INTERVAL</b>	Interval time of day, used for all Interval metering
<b>PEAK</b>	Peak time of day
<b>BUSINESS</b>	Business time of day
<b>SHOULDER</b>	Shoulder time of day
<b>EVENING</b>	Evening time of day
<b>OFFPEAK</b>	Off peak time of day
<b>CONTROLLED</b>	Controlled time of day
<b>DEMAND</b>	Demand is used for describing a register

Table 31 Valid Controlled Load Codes

ControlledLoad	Description
<b>NO</b>	No controlled load
<b>YES</b>	There is controlled load associated with a controlled load network tariff on this register
<b>EXT</b>	There is controlled load which is externally switched by the LNSP associated with a controlled load network tariff on this register

Table 32 Valid Test Result Codes

Test Result	Description
<b>PASS</b>	Test has passed
<b>FAIL</b>	Test has failed

Table 33 Valid Transformer Test Values

Test Result	Description
<b>TESTED</b>	Part of 100% testing
<b>SAMPLE TESTED</b>	Tested as part of a sample plan
<b>SAMPLE</b>	Part of an approved sample plan

Table 34 Valid Shared Isolation Point Flag Values

SharedIsolationPointFlag	Description
Y	Indicates that a Shared Fuse Arrangement is present
N	Indicates that no Shared Fuse Arrangement is present
I	Indicates the metering installation is Isolated independently but still part of a Shared Fuse Arrangement
U	Indicates that the presence of a Shared Fuse Arrangement is Unknown

Note: Refer to the MSATS CATS Procedure section 4 for details on the valid codes for the following:

- Jurisdiction Codes
- Metering Installation Type Codes
- NMI Classification Codes
- NMI Status Codes

Table 35 Defect at the metering installation

Defect codes are used by the MC where it identifies a defect at the metering installation during a site visit to replace a meter.

Code	Description
ASBESTOS	Friable asbestos is present and must be removed
BOXDAMAGED	The meter box is damaged or not weatherproof.
ISONCOM	An isolation device (non-service fuse) is present but cannot be operated.
LIVEWIRING	Suspected exposed terminals or parts behind panel making opening of panel unsafe.
NOSPACE	The existing metering installation cannot accommodate all metering equipment and must be upgraded.
PANELLOC	The current location of meter panel is non-complaint and must be relocated.
PANELNCOM	Meter panel is non-compliant and must be upgraded.
WIRINGDET	Damaged or deteriorated wiring; includes presence of Vulcanised Indian Rubber (VIR) cables.
WIRINGNCOM	Non-compliant wiring identified including earthing system issues that must be repaired.

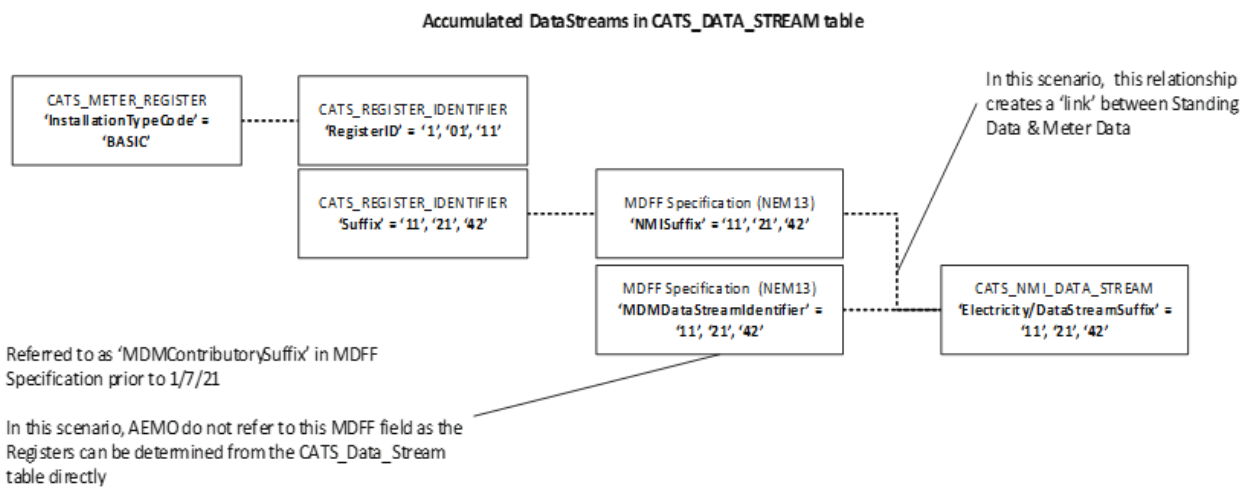
## 12 Use of NMI suffix to populate CATS\_REGISTER\_IDENTIFIER

For any particular *connection point* or secondary settlement point there may be multiple *energy* measurement elements and data recorders with multiple channels. Accurate identification of Datastreams is essential.

The NMI Procedure includes the requirements for structure of the Suffix populated in the CATS\_REGISTER\_IDENTIFIER table..

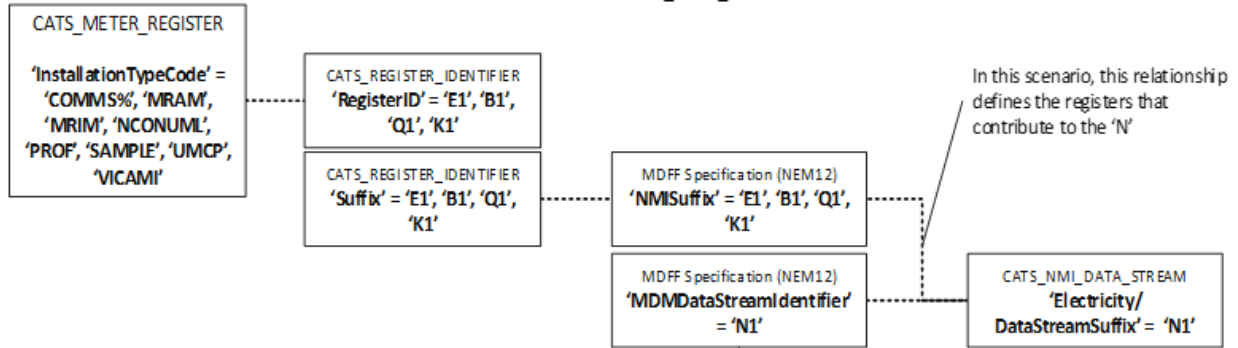
The illustrations below provide context to the relationships between 'Suffix' across the MDFF Specification and CATS Procedures (specifically the CATS\_REGISTER\_IDENTIFIER table and CATS\_DATA\_STREAM tables).

Example of an Accumulated Meter 'Suffix'



Example of an Interval Meter 'Suffix'

**'Net' DataStreams in CATS\_DATA\_STREAM table**



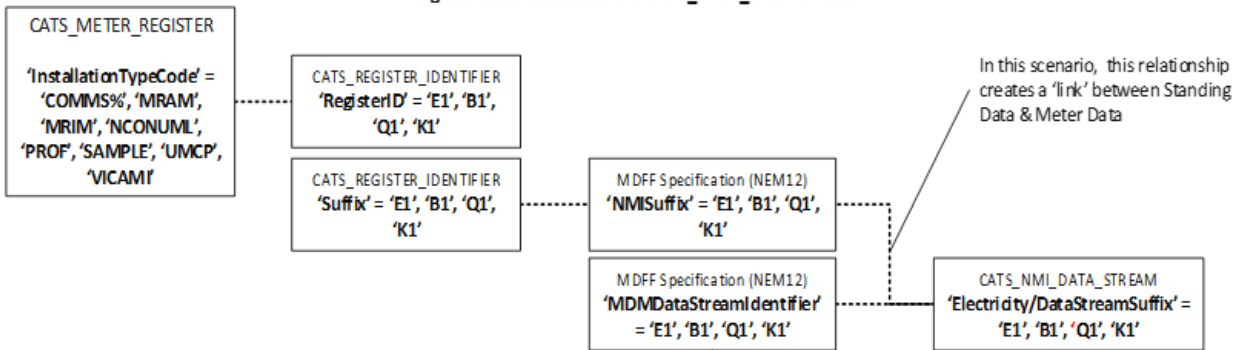
Referred to as 'MDMContributorySuffix' in MDFFSpecification prior to 1/7/21

In this scenario and in order to determine which registers contribute to the 'Net', AEMO require this MDFF field to be mandatorily updated with standing data as populated in the CATS\_Data\_Stream table. i.e. 'Net'

In this scenario and where the content of the CATS\_DATA\_STREAM 'DataStreamSuffix' and MDFF Specification 'MDMDataStreamIdentifier' fields do not match, AEMO will disregard any meter data sent and will estimate data for NEM Settlements. Standing Data 'Mismatches' will be reported in the RM39 'Orphaned Reads' report.

**Example of an Interval Meter "Suffix" – Register Level**

**Register Level DataStreams in CATS\_DATA\_STREAM table**



Referred to as 'MDMContributorySuffix' in MDFF Specification prior to 1/7/21

In this scenario, AEMO do not refer to this MDFF field as the Registers can be determined from the CATS\_Data\_Stream table directly

## 12.1 Not used in the NT Procedures

# 13 Assignment of data – ACCUMULATION meters

This section details examples of the assignment of data for various basic *metering installations*. For Accumulation Meters, the Suffix values in CATS\_REGISTER\_IDENTIFIER and CATS\_NMI\_DATA\_STREAM tables are always numeric.

## 13.1 Single Meter, no controlled load

The CATS\_REGISTER\_IDENTIFIER table indicates that the *meter* has only one register. The Suffix in the CATS\_REGISTER\_IDENTIFIER '11' denotes that data from RegisterID 01.

Table 37 Example CATS\_REGISTER\_IDENTIFIER

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix	Controlled Load
Value	ABCD1111	01	KWH	ALLDAY	-	NO

## 13.2 Two Single Element Meters, no controlled load

The NMI has two Accumulation Meters, each meter with single register. The data from submitted to MSATS as two suffixs.

Table 39 Example CATS\_REGISTER\_IDENTIFIER

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix	Controlled Load
Values	ABCD1111	01	KWH	ALLDAY	11	NO
	XYZA1112	01	KWH	ALLDAY	12	NO

## 13.3 Two Single Element Meters, one with controlled load

A NMI has two Accumulation Meters, each *meter* has a single register, and one *meter* is measuring a Controlled Load. The data from the two *meters* is submitted to MSATS as two Suffixes.

Table 41 Example CATS\_REGISTER\_IDENTIFIER

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix	Controlled Load
Values	ABCD1111	01	KWH	ALLDAY	11	NO

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix	Controlled Load
	XYZA1112	01	KWH	CONTROLLED	42	EXT

## 13.4 One Meter with Two Registers, one measuring a controlled load

NMI has one Accumulation Meter with two registers. The second register is measuring a Controlled Load.

Table 43 Example CATS\_REGISTER\_IDENTIFIER

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix	Controlled Load
Value	ABCD1111	01	KWH	PEAK	11	NO
	ABCD1111	02	KWH	CONTROLLED	41	YES

## 13.5 Single Multi-function Meter

Accumulation Meter has 4 registers, one register being a Controlled Load.

Table 45 Example CATS\_REGISTER\_IDENTIFIER

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix	Controlled Load
Values	ABCD1111	01	KWH	PEAK	11	NO
	ABCD1111	02	KWH	SHOULDER	21	NO
	ABCD1111	03	KWH	OFFPEAK	31	NO
	ABCD1111	04	KWH	CONTROLLED	41	YES

## 13.6 Two meters, three registers. One register measures a controlled load

Table 47 Example CATS\_REGISTER\_IDENTIFIER

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix	Controlled Load
Values	ABCD1111	01	KWH	PEAK	11	NO
	ABCD1111	02	KWH	OFFPEAK	21	NO
	XYZA1112	01	KWH	CONTROLLED	42	EXT

# 14 Assignment of data – interval meters

This section details examples of the assignment of data for various Interval Meters.

## 14.1 One meter

The CATS\_Register\_Identifier table indicates that the meter has only one register. The Suffix in the CATS\_REGISTER\_IDENTIFIER [E1] denotes that data from RegisterID 01 contributes to the Suffix identified by Suffix E1

Table 49 Example CATS\_REGISTER\_IDENTIFIER

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix
Value	ABCD1111	01	KWH	INTERVAL	E1

E1 indicates that it is a single element measuring export.

## 14.2 Import/Export meter

Interval Meter has a two registers, registering import and export energy. Multiple ElectricityDataStream Suffixes (E1 and B1) are defined for the NMI.

The CATS\_REGISTER\_IDENTIFIER table indicates that the meter has two registers, one for IMPORT and one for EXPORT.

Table 51 Example CATS\_REGISTER\_IDENTIFIER

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix
Values	ABCD1111	E1	KWH	INTERVAL	E1
	ABCD1111	B1	KWH	INTERVAL	B1

Only one RegisterID with the Suffix 'E1' permitted per meter in CATS\_REGISTER\_IDENTIFIER. Only one RegisterID with the Suffix 'B1' permitted per meter in CATS\_REGISTER\_IDENTIFIER.

## 14.3 One meter: multiple registers

Interval Meter has a single measurement element registering import and export *energy*, reactive and *voltage*.

The CATS\_Register\_Identifier table indicates that the *meter* has five registers: two for IMPORT of *energy* and reactive; two for EXPORT of *energy* and reactive; and one for *voltage* monitoring.

Table 53 Example CATS\_REGISTER\_IDENTIFIER

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix
Values	ABCD1111	E1	KWH	INTERVAL	E1

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix
	ABCD1111	B1	KWH	INTERVAL	B1
	ABCD1111	Q1	KVARH	INTERVAL	Q1
	ABCD1111	K1	KVARH	INTERVAL	K1
	ABCD1111	V1	VOLTS	INTERVAL	V1

## 14.4 One meter: Twin Measurement Elements

Certain multifunction *meters* have the capability for initial installation as an Accumulation Meter, but can be re-programmed to provide *interval metering data*.

The NT NER do not permit the use of two different types of *metering installation* on the one *NMI*, and therefore these two *metering* functions MUST NOT be active simultaneously in MSATS.

The CATS\_REGISTER\_IDENTIFIER can be used to record the *meter* capability.

The CATS\_REGISTER\_IDENTIFIER table values for this *meter* when it is operated as an Interval Meter are shown below. The RegisterID for the Accumulation Meter registers in this type of *meter* are user defined. The Interval Meter suffixes must be added to the *NMI* and made active, and the basic Suffixes made inactive at the same date.

Table54 Example CATS\_REGISTER\_IDENTIFIER

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix
Values	AB888888	E1	KWH	INTERVAL	E1
	AB888888	E2	KWH	INTERVAL	E2
	AB888888	11	KWH	PEAK	11
	AB888888	21	KWH	SHOULDER	21
	AB888888	31	KWH	OFFPEAK	31
	AB888888	41	KWH	CONTROLLED	41

## 14.5 UMCP

Table 56 Example CATS\_REGISTER\_IDENTIFIER

Data Element:	Serial Number	RegisterID	UnitOfMeasure	TimeOfDay	Suffix
Values	Dummy Value	E1	KWH	INTERVAL	E1

**14.6 Not used in the NT Procedures**

**14.7 Not used in the NT Procedures**

**15 Not used in The NT procedures**

# 16 Data type conventions

The Browser formats used in section 16 are as defined in the following table.

The value of “x” must be positive and cannot be zero.

For explanation of the aseXML data types shown in section 16 refer <http://www.w3.org/TR/xmlschema-0/#simpleTypesTable>

Table 61 BROWSER FORMATS

	Format	Definition
1	CHAR(x)	Indicates a field that can only contain alphanumeric characters and must contain exactly "x" characters. Note that leading and trailing "spaces" are considered significant (i.e. form part of the "x" characters for the field).
2	VARCHAR2(x)	Indicates a character field containing up to "x" characters.
3	NUMBER(x)	Indicates a positive integer (zero or above) up to "x" significant digits long; any leading zeroes are not significant and hence "050" is equivalent to "50".
4	NUMBER(x.y)	Indicates a positive number with up to "x" significant characters to the left of the decimal point and "y" decimal places after the decimal point (trailing zeros are optional). In other words, the maximum length of the field as a whole is "x"+"y"+1 characters (the +1 reserving space for the decimal point).

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## Contact

Power and Water – 1800 245 092 from 8am to 5pm weekdays.

Market Operator – 08 8985 8566

Email: [market.operator@powerwater.com.au](mailto:market.operator@powerwater.com.au)

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