NTESMO

Standing Data for Market Settlement and Transform Solution (MSATS)

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Version release history

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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	www.ntesmo.com.au/library/procedures
CATS Procedures	www.ntesmo.com.au/library/procedures
WIGS Procedures	Not used in the NT Procedures
MDM Procedures	Not used in the NT Procedures
MSATS CATS history Model	http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Retail-and-metering/Market-Settlement-and-Transfer-Solutions
MSATS guides	http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Retail-and-metering/Market-Settlement-and-Transfer-Solutions

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
MANDATORY	Transfer, Validation or processing cannot proceed without this data.
REQUIRED	This data must be provided if this information is available.
OPTIONAL	This data is not required, but will be accepted if delivered.
Address Option 1	AEMO's preferred address option. If the applicable fields labelled "Address Option 1" cannot be provided, "Address Option 2" is MANDATORY.
Address Option 2	AEMO'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
CurrentTransformerLocation	A free text field to indicate the location of the current transformer at the site.	REQUIRED	MPB
CurrentTransformerType	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
CurrentTransformerRatioAvailable	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
CurrentTransformerRatioConnected	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
CurrentTransformerAccuracyClass	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

Data Element Name	Description	Standing Data Required	Party to Provide
CurrentTransformerTest	Type of test performed on metering installation with Current Transformer which can be one of the following: • TESTED (definition – part of 100% testing) • SAMPLE TESTED (definition – tested as part of a sample plan) • SAMPLE (definition – part of an approved sample plan) This value must correspond to a valid transformer test value in the Valid Transformer Test Values reference table listed in section 11.	REQUIRED	MPB
CurrentTransformerTestDate	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
Not used in the NT Procedures	-	-	-
Not used in the NT Procedures	-	-	-
LastTestDate	The date on which the *metering installation* was last tested or inspected by the Metering Provider "B".	REQUIRED	MPB
Hazard	Free text or code identifying hazards associated with reading, maintaining or installing the *meter*. If the following are present at the *metering installation*, they should be listed in this field: Asbestos	REQUIRED	MPB
InstallationTypeCode	The InstallationTypeCode may identify attributes of a physical *metering installation*, *metering data* collection methods or *metering data* calculation methods. This value must correspond to a valid Meter Installation Type Code as referenced in NT MSATS Procedures: CATS Procedures.	MANDATORY	MPB
Location	Free text descriptive material identifying the relationship between the location of the *metering point* and the *connection point* or secondary settlement points	REQUIRED	MPB

Data Element Name	Description	Standing Data Required	Party to Provide
Manufacturer	Free text field to identify the manufacturer of the installed *meter*. 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
Model	Free text field to identify the *meter* manufacturer's designation for the *meter* 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
ReadTypeCode	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 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 = • A – 5 minute • B – 15 minute • C – 30 minute • D – Cannot convert to 5-minute (i.e. due to metering installation de-energised • F – Not used in the NT Procedures	REQUIRED	MPB

Data Element Name	Description	Standing Data Required	Party to Provide
	• G – Not used in the NT Procedures • H – Not used in the NT Procedures • J – Not used in the NT Procedures • M – Manually Read Accumulation Meter 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').		
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), logical (meters) and *non-contestable unmetered loads*. Except for UMCP, SerialNumber should be as displayed on the physical device (also known as property number). SerialNumber to be property number if exists, otherwise the *meter* manufacturer's serial number, otherwise dummy number.	MANDATORY	MPB
Status	A code to denote the status of the *meter*. This value must correspond to a valid Meter Register Status as specified in the NT MSATS Procedures: CATS Procedures.	MANDATORY	MPB
Use	A code identifying how the *meter* 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
NextScheduledReadDate	Indicates the Scheduled Next Read Date for the *meter* 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
NMI	*NMI*. This number is unique for each *connection point* within the *NEM*.	MANDATORY	LNSP

Data Element Name	Description	Standing Data Required	Party to Provide
TestResult	The result from the test perfomed 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
VoltageTransformerLocation	A free text field to indicate the location of the voltage transformer at the site.	REQUIRED	MPB
VoltageTransformerType	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
VoltageTransformerRatio	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
VoltageTransformerAccuracyClass	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
VoltageTransformerTest	Type of test performed on metering installation with Voltage Transformer which can be one of the following: • TESTED (definition – part of 100% testing) • SAMPLE TESTED (definition – tested as part of a sample plan) • SAMPLE (definition – part of an approved sample plan) This value must correspond to a valid transformer test value in the Valid Transformer Test Values reference table listed in section 11.	REQUIRED	MPB
VoltageTransformerTestDate	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
FromDate	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

Data Element Name	Description	Standing Data Required	Party to Provide
ToDate	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.
RowStatus	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
MaintenanceDate	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
CreationDate	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 4 CATS_Meter_Register – Browser Cross Reference

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

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
Meter Hazard	Hazard	ElectricityMeter/Hazard	VARCHAR2(100)	xsd:string maxLen = 100
Meter Installation Type Code	InstallationTypeCode	ElectricityMeter/InstallationType Code	VARCHAR2(8)	xsd:string maxLen = 8
Meter Location	Location	ElectricityMeter/Location	VARCHAR2(200) See AddlSiteInfo (above)	xsd:string maxLen = 200
Meter Manufacturer	Manufacturer	ElectricityMeter/Manufacturer	VARCHAR2(15)	xsd:string maxLen = 15
Meter Model	Model	ElectricityMeter/Model	VARCHAR2(12)	xsd:string maxLen = 12
Meter Read Type	ReadTypeCode	ElectricityMeter/ReadTypeCode	VARCHAR(4)	xsd:string maxLen = 4
Meter Serial ID Meter ID (Different on two screens)	SerialNumber	ElectricityMeter/SerialNumber	VARCHAR2(12)	xsd:string maxLen = 12
Status Code	Status	ElectricityMeter/Status	CHAR(1)	xsd:string with enumeration
Meter Use	Use	ElectricityMeter/Use	VARCHAR2(10)	xsd:string maxLen = 10
Next Scheduled Read Date	NextScheduled ReadDate	ElectricityMeter/NextScheduled ReadDate	dd-mmm-yyyy	xsd:date
NMI	NMI	NMI	CHAR(10)	xsd:string maxLen = 10
Test Result	TestResult	ElectricityMeter/TestResult	VARCHAR2(4)	xsd:string maxLen = 4
Voltage Transformer Location	VoltageTransformerLocation	ElectricityMeter/VoltageTransformerLocation	VARCHAR(50)	xsd:string maxLen = 50
Voltage Transformer Type	VoltageTransformerType	ElectricityMeter/VoltageTransformerType	VARCHAR(50)	xsd:string maxLen = 50
Voltage Transformer Ratio	VoltageTransformerRatio	ElectricityMeter/VoltageTransformerRatio	VARCHAR(50)	xsd:string maxLen = 50
Voltage Transformer Accuracy Class	VoltageTransformerAccuracyClass	ElectricityMeter/VoltageTransformerAccuracyClass	VARCHAR(20)	xsd:string maxLen = 20
Voltage Transformer Test	VoltageTransformerTest	ElectricityMeter/VoltageTransformerTest	VARCHAR2(20)	xsd:string maxLen = 20

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
Voltage Transformer Test Date	VoltageTransformerTestDate	ElectricityMeter/VoltageTransformerTestDate	dd-mmm-yyyy	xsd:date
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

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 *NMIs* must be assigned a DLF Code. Refer to AEMO Distribution Loss Factor documents for each financial year..	MANDATORY	AEMO
DistributionLossFactorDescription	Description of the DLF Code and value.	MANDATORY	AEMO
DistributionLossFactor Value	Numeric value up to 5 decimal places, reflecting the value of the DLF Code.	MANDATORY	AEMO
JurisdictionCode	Jurisdiction code to which the *NMI* belongs. This value must correspond to Jurisdiction Code values as specified in the MSATS Procedures: CATS Procedures.	MANDATORY	AEMO
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
FromDate	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	AEMO
ToDate	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
MaintenanceDate	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
CreationDate	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
DLF Code	DistributionLossFactorCode	DistributionLossFactorCode	VARCHAR2(4)	xsd:string maxLen = 4

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
Description	DistributionLossFactorDescription	DistributionLossFactorDescription	VARCHAR2(50	xsd:string maxLen = 50
DLF Value	DistributionLossFactorValue	DistributionLossFactorValue	NUMBER(6,5)	xsd:decimal minIncl = 0 maxIncl = 6 totdig = 6 fracdig = 5
Jurisdiction	JurisdictionCode	ElectricityStandingData/MasterData/JurisdictionCode	VARCHAR2(3)	xsd:string maxLen = 3
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
Updated On	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
DistributionLossFactorCode	DLF Code	NHV1
DistributionLossFactorDescription	Description	UMPLP - High Voltage
DistributionLossFactorValue	[The actual DLF value]	1.11111
JurisdictionCode	Jurisdiction Code	SA
RowStatus	Activity Status	A
FromDate	Start Date	01-07-1999
ToDate	End Date	30-06-2000
MaintenanceDate	Updated On	31-05-2000 00:30:27
CreationDate		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	-	-
EmbeddedNetworkDescription	Not used in the NT Procedures	-	-
SuburbOrPlaceOrLocality	Locality to which the embedded network identifier belongs.	MANDATORY	AEMO
PostCode	Postcode for the locality to which the embedded network identifier belongs.	MANDATORY	AEMO
StateOrTerritory	State or Territory abbreviation in accordance with AS 4590.	MANDATORY	AEMO
RowStatus	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
FromDate	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	AEMO
ToDate	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
MaintenanceDate	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
CreationDate	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 maxLen = 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
Updated On	MaintenanceDate	MaintenanceDate	dd-mmm-yyyy (summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	xsd:dateTime

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
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
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	-	-
IsPCP	Not used in the NT Procedures	-	-
PremisesNMI	Not used in the NT Procedures	-	-

Data Element Name	Description	Standing Data Required	Party to Provide
MeterMalfunctionExemptionNumber	Not used in the NT Procedures.	-	-
MeterMalfunctionExemptionExpiryDate	Not used in the NT Procedures	-	-
JurisdictionCode	Jurisdiction code to which the *NMI* belongs. This code defines the jurisdictional rules which apply to the transfer of this *NMI*. This value must correspond to Jurisdiction Code values as specified in the MSATS Procedures: CATS Procedures.	MANDATORY	LNSP
DistributionLoss FactorCode	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 theconnection point or secondary settlement point. First Character = Connection Type. H = *High voltage* (as defined in the NER) L = Low voltage (lower than the threshold defined for *high* *voltage* 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
ChildEmbedded NetworkIdentifier	Not used in the NT Procedures	-	-
ParentEmbedded NetworkIdentifier	Not used in the NT Procedures	-	-

Data Element Name	Description	Standing Data Required	Party to Provide
BuildingOrProperty Name	Defines the primary building or property name per Australian Standard AS4590.1:2017 5.8 Address site name. 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". For example, BuildingOrPropertyName = HAPPY VALLEY RETIREMENT VILLAGE BuildingOrPropertyName2 = ROSE COTTAGE.	REQUIRED	LNSP
BuildingOrProperty Name2	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. 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". For example: BuildingOrPropertyName2 = ROSE COTTAGE, BuildingOrPropertyName = HAPPY VALLEY RETIREMENT VILLAGE.	REQUIRED	LNSP
LotNumber	The lot reference number allocated to an address prior to street numbering. The word 'LOT' is not required.	REQUIRED	LNSP
FlatOrUnitNumber	Specification of the number of the flat or unit which is a separately identifiable portion within a building/complex.	REQUIRED	LNSP
FlatOrUnitType	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
FloorOrLevelNumber	Floor Number is used to identify the floor or level of a multi-storey building/complex.	REQUIRED	LNSP
FloorOrLevelType	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
HouseNumber	The numeric reference of a house or property. Specifically the house number.	REQUIRED	LNSP

Data Element Name	Description	Standing Data Required	Party to Provide
HouseNumberSuffix	The numeric reference of a house or property. Specifically the single character identifying the house number suffix.	REQUIRED	LNSP
HouseNumberTo	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
HouseNumberToSuffix	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
StreetName	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
StreetSuffix	Records street suffixes. This value must correspond to a valid Street Suffix Code, reference AS4590.	REQUIRED	LNSP
StreetType	Records the street type abbreviation. This value must correspond to a valid Street Type Code, reference AS4590.	REQUIRED	LNSP
SuburbOrPlaceOrLocality	The full name of the general locality containing the specific address.	MANDATORY	LNSP
LocationDescriptor	A general field to capture various references to address locations alongside another physical location.	REQUIRED	LNSP
PostCode	The descriptor for a postal delivery area, aligned with locality, suburb or place.	MANDATORY	LNSP
StateOrTerritory	Defined State or Territory abbreviation.	MANDATORY	LNSP
GNAFPID	The Geocoded National Address File (G-NAF) Persistent Identifier (PID) for a given address.	REQUIRED	LNSP/ AEMO

Data Element Name	Description	Standing Data Required	Party to Provide
SectionNumber	Not used in the NT Procedures	-	-
DPNumber	Not used in the NT Procedures	-	-
DeliveryPointIdentifier	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/ AEMO
Aggregate	This flag determines whether the energy at this *connection point* or secondary settlement point is to be treated as consumer *load* or as a *generating unit* (this may include *generator* 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', AEMO updates to 'N' as required)
Feeder Class	Not used in the NT Procedures	-	-
Customer Classification Code	A code that defines the consumer class as defined in the MSATS Procedures, or in overriding Jurisdictional instruments.	MANDATORY	Current FRMP
Customer Classification Threshold Code	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
Last Consumer Change Date	The date a consumer starts or ends as the account holder for a premises.	MANDATORY	Current FRMP
Defect Flag	A flag that identifies a defect at site which prevents a metering upgrade	MANDATORY	MC
Defect Type	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
Originating MC	The MC that raised the defect flag	MANDATORY	MC
Legacy Meter Replacement Plan	Not used in the NT Procedures	-	-

Data Element Name	Description	Standing Data Required	Party to Provide
FromDate	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
ToDate	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.
RowStatus	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
MaintenanceDate	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
CreationDate	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
NMI	NMI	NMI	CHAR(10)	xsd:string maxLen = 10
NMI Classification Code	NMIClassificationCode	ElectricityStandingData/MasterData/ NMIClassificationCode	VARCHAR2(8)	xsd:string maxLen = 8
Status Code	Status	ElectricityStandingData/MasterData/Status	CHAR(1)	xsd:string maxLen = 1
TNI Code	TransmissionNodeIdentifier	ElectricityStandingData/MasterData/TransmissionNodeIdentifi er	VARCHAR2(4)	xsd:string maxLen = 4
TNI Code 2	TransmissionNodeIdentifier2	ElectricityStandingData/MasterData/TransmissionNodeIdentifi er2	VARCHAR2(4)	xsd:string maxLen = 4
Shared Isolation Point Flag	SharedIsolationPointFlag	ElectricityMeter/ SharedIsolationPointFlag	CHAR(1)	xsd:string maxLen = 1
Meter Malfunction Exemption Number	MeterMalfunctionExemptionNu mber	ElectricityMeter/MeterMalfunctionExemptionNumber	VARCHAR2(15)	xsd:string maxLen = 15
Meter Malfunction Exemption Expiry Date	MeterMalfunctionExemptionExp iry Date	ElectricityMeter/MeterMalfunctionExemptionExpiryDate	dd-mmm-yyyy	xsd:date
Jurisdiction Code	JurisdictionCode	JurisdictionCode	VARCHAR2(3)	xsd:string maxLen = 3
Connection Configuration	ConnectionConfiguration	ElectricityMeter/ConnectionConfiguration	VARCHAR2(2)	xsd:string maxLen = 2
DLF Code	DistributionLossFactorCode	ElectricityStandingData/MasterData/DistributionLossFactorCo de	VARCHAR2(4)	xsd:string maxLen = 4
Embedded Network ID (Child)	Not used in the NT Procedures	-	-	-
Embedded Network (Parent)	Not used in the NT Procedures	-	-	-
Building / Property Name	BuildingOrPropertyName	ElectrictyStandingData/MasterData/Address/AustralianAddres s/StructuredAddress/BuildingOrPropertyName	VARCHAR2(50)	xsd:string maxLen = 50

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
Building / Property Name2	BuildingOrPropertyName2	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/BuildingOrPropertyName2	VARCHAR2(50)	xsd:string maxLen = 50
Lot Number	LotNumber	ElectricityStandingData/MasterData/ Address/AustralianAddress/StructuredAddress/Lot/LotNumbe r	VARCHAR2(6)	xsd:string pattern: [\p{L}\p{N}\p{P}\s]{1,6}
Flat/Unit Number	FlatOrUnitNumber	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/FlatOrUnit/FlatOrUnitNumber	VARCHAR2(7)	xsd:string pattern: [\p{L}\p{N}\p{P}\s]{1,7}
Flat/Unit Type	FlatOrUnitType	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/FlatOrUnit/FlatOrUnitType	VARCHAR2(4)	xsd:string with enumerations
Floor/Level Number	FloorOrLevelNumber	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/FloorOrLevel/FloorOrLevelNumber	VARCHAR2(5)	xsd:string [\p{L}\p{N}\p{P}\s]{1,5}
Floor/Level Type	FloorOrLevelType	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/FloorOrLevel/FloorOrLevelType	VARCHAR2(4)	xsd:string with enumerations
House Number	HouseNumber	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/House/HouseNumber	NUMBER(5)	xsd:nonNegativeInteger maxIncl = 99999
House Number Suffix	HouseNumberSuffix	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/House/HouseNumberSuffix	VARCHAR2(1)	xsd:string pattern: [\p{L}\p{N}]{1}
House Number To	HouseNumberTo	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/House/HouseNumberTo	NUMBER(5)	xsd:nonNegativeInteger maxIncl = 99999
House Number To Suffix	HouseNumberToSuffix	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/House/HouseNumberSuffixTo	VARCHAR2(1)	xsd:string pattern: [\p{L}\p{N}]{1}
Street Name	StreetName	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/Street/StreetName	VARCHAR2(45)	xsd:string pattern: [\p{L}\p{N}\s\-']{1,45}
Street Name Suffix	StreetSuffix	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/Street/StreetSuffix	VARCHAR2(2)	xsd:string with enumerations

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
Street Type	StreetType	ElectricityStandingData/MasterData/Address/AustralianAddress/StructuredAddress/Street/StreetType	VARCHAR2(4)	xsd:string with enumerations
Suburb/Locality	SuburbOrPlaceOrLocality	ElectricityStandingData/MasterData/Address/AustralianAddress/SuburbOrPlaceOrLocality	VARCHAR2(46)	xsd:string maxLen = 46
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/AustralianAddress/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	xsd:dateTime

Browser Field Name	aseXML Data Element Name	aseXML Path	Browser Format	aseXML Data Type
			(summary screen) dd-mmm-yyyy hh:mm:ss (detail screen)	
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
Feeder Class	Feeder Class	ElectricityStandingData/MasterData/FeederClass	VARCHAR2(15)	xsd:string maxLen = 15
Customer Classification Code	CustomerClassificationCode	ElectricityStandingData/MasterData/CustomerClassificationCo de	VARCHAR2(20)	xsd:string maxLen = 20
Last Consumer Change Date	LastConsumerChangeDate	ElectricityStandingData/MasterData/LastConsumerChangeDat e	dd-mmm-yyyy	xsd:date
Customer Classification Threshold Code	CustomerThresholdCode	ElectricityStandingData/MasterData/CustomerThresholdCode	VARCHAR2(20)	xsd:string maxLen = 20
Defect Flag	DefectFlag	ElectricityStandingData/MasterData/DefectFlag	CHAR(1)	xsd:string maxLen = 1
Defect Type	DefectType	ElectricityStandingData/MasterData/DefectType	CHAR(15)	xsd:string maxLen = 15
Originating MC	OriginatingMC	ElectricityStandingData/MasterData/OriginatingMC	VARCHAR2 CHAR(10)	xsd:string maxLen = 10
Legacy Meter Replacement Plan	Not used in the NT Procedures	-	-	-
IsPCP	IsPCP	ElectricityStandingData/MasterData/IsPCP	CHAR(1)	xsd:string maxLen = 1
Premises NMI	Premises NMI	ElectricityStandingData/MasterData/PremisesNM I	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
NMI	NMI	122334451	1122334455
NMIClassificationCode	NMI Classification Code	SMALL	LARGE
MasterData/Status	Status Code	A	G
Data Element Name	Browser Field Name	Basic Example	Interval Example
TransmissionNodeIdentifier	TNI Code	NRGE	SBER
TransmissionNodeIdentifier2	TNI Code 2		SORA
SharedIsolationPointFlag	Shared Isolation Point Flag	NO	YES
MeterMalfunctionExemption Number	Meter Malfunction Exemption Number	ERF 0001	ERF 0001
MeterMalfunctionExemptionExpiry Date	Meter Malfunction Exemption Expiry Date	07-05-2020	07-05-2020
JurisdictionCode	Jurisdiction Code	NSW	SA
ConnectionConfiguration	Connection Configuration	L1	H3
DistributionLossFactorCode	DLF Code	NRGE	NLV2
ChildEmbeddedNetworkIdentifier	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 INSTITUTEBP	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

Data Element Name	Browser Field Name	Basic Example	Interval Example
PostCode	Postcode	2211	5333
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

Data Element Name	Browser Field Name	Basic Example	Interval Example
DefectType	Defect Type	NOSPACE	NOSPACE
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

Data Element Name	Description	Standing Data Required	Party to Provide
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
NetworkTariffCode	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
NetworkAdditional Information	Free text field.	REQUIRED	MPB
UnitOfMeasure	Code to identify the unit of measure for data held in this register.	MANDATORY	MPB
TimeOfDay	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
Multiplier	Multiplier required to take a register value and turn it into a value representing billable energy	MANDATORY	MPB
DialFormat	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

Data Element Name	Description	Standing Data Required	Party to Provide
Suffix	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
ControlledLoad	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
RegisterDetail/ Status	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
ConsumptionType	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
FromDate	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

Data Element Name	Description	Standing Data Required	Party to Provide
ToDate	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.
RowStatus	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
MaintenanceDate	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
CreationDate	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
NMI	NMI	NMI	CHAR(10)	xsd:string maxLen = 10
Meter Serial ID Meter ID (Different on two screens)	SerialNumber	SerialNumber	VARCHAR2(12)	xsd:string maxLen = 12
Register ID	RegisterID	ElectricityMeterRegisterDetail/RegisterID	VARCHAR2(10)	xsd:string maxLen = 10
Network Tariff Code	NetworkTariffCode	ElectricityMeterRegisterDetail/NetworkTariffCode	VARCHAR2(10)	xsd:string maxLen = 10
Network Tariff Additional Information	NetworkAdditional Information	ElectricityMeterRegisterDetail/ NetworkAdditionalInformation	VARCHAR2(4000)	xsd:string
Unit of Measure	UnitOfMeasure	ElectricityMeterRegisterDetail/ UnitOfMeasure	VARCHAR2(5)	xsd:string maxLen = 5
Time of Day	TimeOfDay	ElectricityMeterRegisterDetail/ TimeOfDay	VARCHAR2(10)	xsd:string maxLen = 10
Multiplier	Multiplier	ElectricityMeterRegisterDetail/Multiplier	Number(13,5)	xsd:decimal
Dial Format	DialFormat	ElectricityMeterRegisterDetail/DialFormat	Number(4,2)	xsd:decimal minIncl = 0 maxIncl = 9999.99 totdig = 4 fracdig = 2
Suffix	Suffix	ElectricityMeterRegisterDetail/Suffix	VARCHAR2(2)	xsd:string maxLen = 2
Controlled Load	ControlledLoad	ElectricityMeterRegisterDetail/ControlledLoad	VARCHAR2(100)	xsd:string maxLen = 100
Status Code	Status	ElectricityMeterRegisterDetail/ Status	CHAR(1)	xsd:string with enumeration
Actual/Cumulative Indicator	ConsumptionType	ElectricityMeterRegisterDetail/ConsumptionTy pe	CHAR(1)	xsd:string with enumeration
Start Date	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

Data Element Name	Browser Field Name	Basic Example	Interval Example
NetworkTariffCode	Network Tariff Code	BLNB2CO	MB2RI
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
Party	The Participant ID whose relationship (Role) with the *NMI* is defined in this table.	MANDATORY	LNSP
NMI	NMI. This number is unique for each *connection point*.	MANDATORY	LNSP
Role	This defines the relationship (Role) of the Participant with the *NMI* in this table.	MANDATORY	LNSP
FromDate	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
ToDate	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.
RowStatus	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
MaintenanceDate	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 maxLen = 10
Role	Role	Role	VARCHAR2(4)	xsd:string maxLen = 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:

MSATS Meter Register Enumerations

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.
UNKNOWN	Unknown meter use code.

Table 30 Valid Time of Day Codes

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

Table 31 Valid Controlled Load Codes

ControlledLoad	Description
NO	No controlled load
YES	There is controlled load associated with a controlled load network tariff on this register
EXT	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
PASS	Test has passed
FAIL	Test has failed

Table 33 Valid Transformer Test Values

Test Result	Description
TESTED	Part of 100% testing
SAMPLE TESTED	Tested as part of a sample plan
SAMPLE	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.

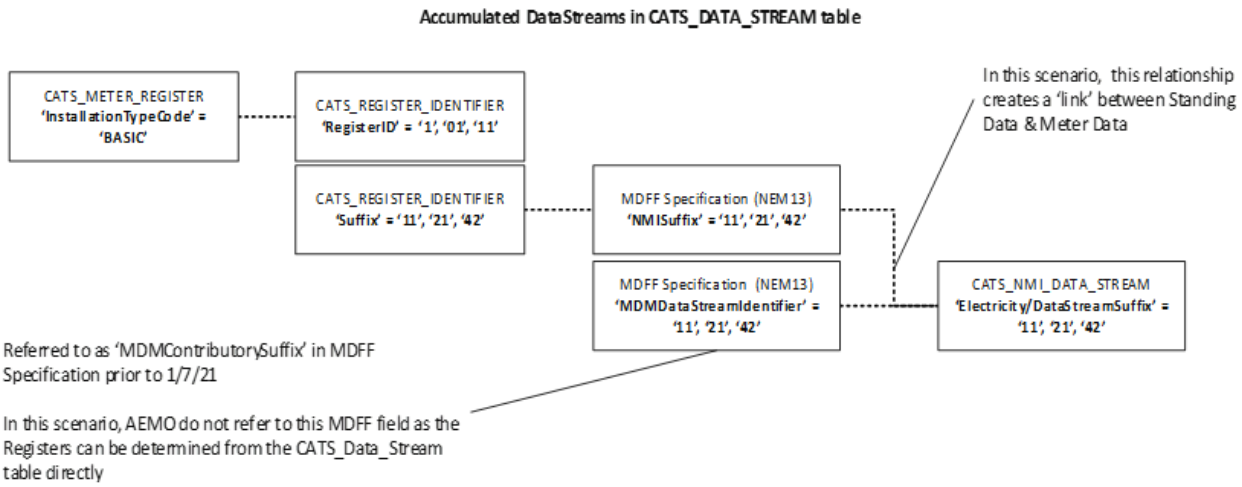
12 Use of NMI suffix to populate CATS_REGISTER_IDENTIFIER

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.

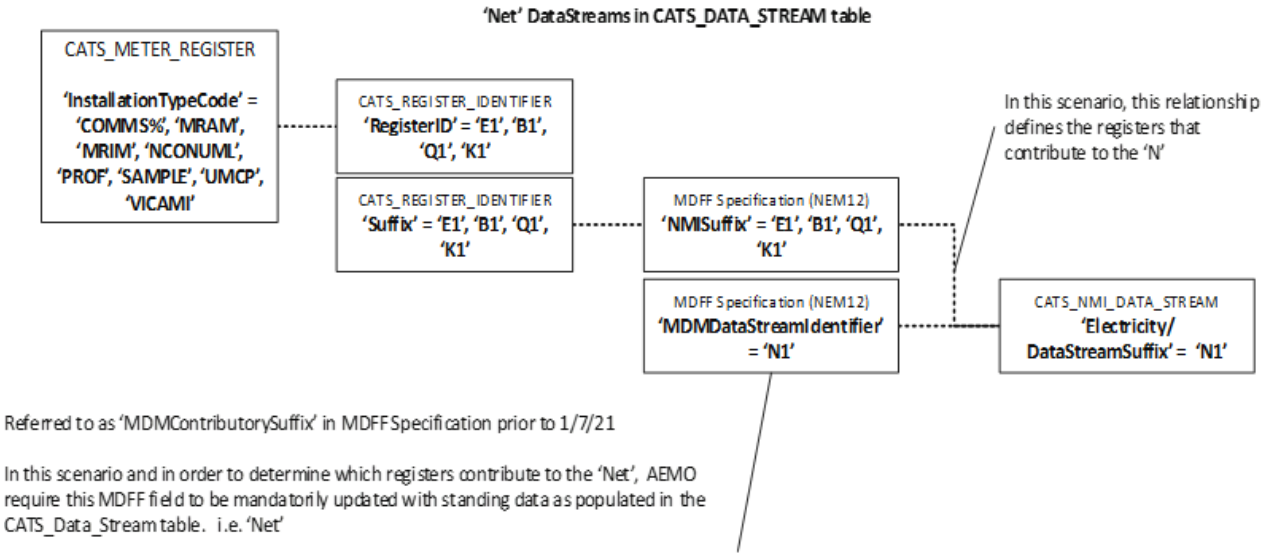
The NMI Procedure includes the requirements for structure of the Suffix populated in the CATS_REGISTER_IDENTIFIER table..

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

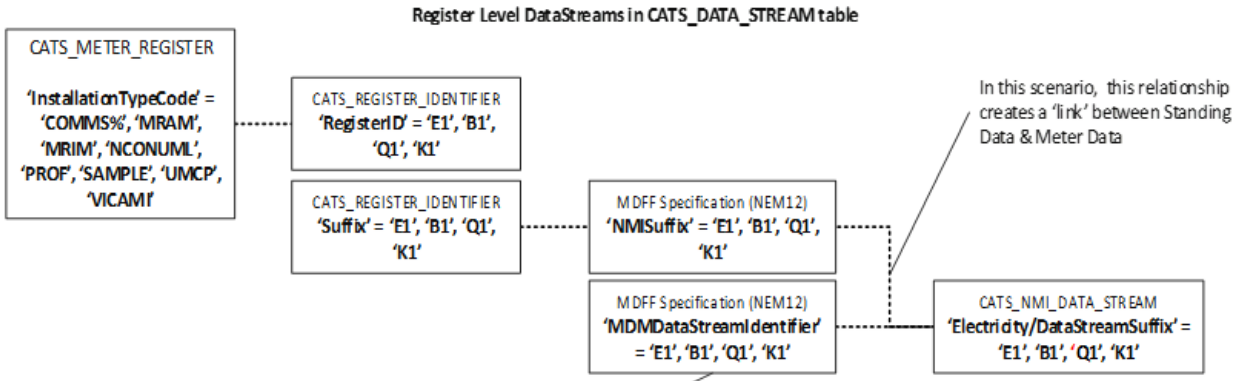


Referred to as 'MDMContributorySuffix' in MDFF Specification prior to 1/7/21

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



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
Values	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
Values	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
Values	ABCD1111	01	KWH	PEAK	11	NO
Values	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
Values	ABCD1111	02	KWH	SHOULDER	21	NO
Values	ABCD1111	03	KWH	OFFPEAK	31	NO
Values	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

Values	ABCD1111	02	KWH	OFFPEAK	21	NO
Values	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
Values	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

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
Values	ABCD1111	B1	KWH	INTERVAL	B1
Values	ABCD1111	Q1	KVARH	INTERVAL	Q1
Values	ABCD1111	K1	KVARH	INTERVAL	K1
Values	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
Values	AB888888	E2	KWH	INTERVAL	E2
Values	AB888888	11	KWH	PEAK	11
Values	AB888888	21	KWH	SHOULDER	21
Values	AB888888	31	KWH	OFFPEAK	31
Values	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 to the following webpage

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).

Contact

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