
Technical Guide to MSATS

Version 1.00

December 2020

Supplement to the MSATS B2M policies, procedures, and guides providing an understanding of MSATS functionality and business rules



Important Notice

PURPOSE

This Technical Guide to MSATS, prepared by the Australian Energy Market Operator (AEMO), provides guidance for pdrMonitor under the National NER or NGR (Rules).

NO RELIANCE OR WARRANTY

This document does not constitute legal or business advice and should not be relied on as a substitute for obtaining detailed advice about the National Gas or Electricity Law, the Rules or any other applicable laws, procedures, or policies. While AEMO has made every effort to ensure the quality of the information in this Guide, neither AEMO, nor any of its employees, agents and consultants make any representation or warranty as to the accuracy, reliability, completeness, currency or suitability for particular purposes of that information.

LIMITATION OF LIABILITY

To the maximum extent permitted by law, AEMO and its advisers, consultants and other contributors to this Guide (or their respective associated companies, businesses, partners, directors, officers or employees) are not liable (whether by reason of negligence or otherwise) for any errors, omissions, defects or misrepresentations in this document, or for any loss or damage suffered by persons who use or rely on the information in it.

TRADEMARK NOTICES

Microsoft, Windows and SQL Server are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Oracle and Java are registered trademarks of Oracle and/or its affiliates.

UNIX is a registered trademark of The Open Group in the US and other countries.

© 2015 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Notepad++ Copyright (C) 1989, 1991 Free Software Foundation, Inc.

DISTRIBUTION

Available to the public.

DOCUMENT IDENTIFICATION

Business custodian: Manager, Metering

IT custodian: Manager, Retail Solutions

Prepared by: AEMO Technology Technical Writers and the Metering Team

Last update: Monday, 14 December 2020 3:08 PM

VERSION HISTORY

1.00 Initial creation

DOCUMENTS MADE OBSOLETE

The release of this document changes the version of Technical Guide to MSATS, and all versions of: Hints and Tips - Cats & NMI Discovery, MSATS CATS History Model, and Introduction to MSATS.

FEEDBACK

Your feedback is important and helps us improve our services and products. To suggest improvements, please contact AEMO's Support Hub.

Contents

Chapter 1 Introduction	6
Purpose	6
Audience.....	6
Out of scope	7
What's in this guide	7
How to use this guide	8
Chapter 2 About MSATS B2M.....	9
What is MSATS B2M?.....	9
Who can use MSATS B2M?.....	11
B2M roles	11
How you use MSATS B2M.....	12
Chapter 3 Participant CATS Transactions	41
Change requests	42
Rejection.....	70
Notifications.....	76
Objections.....	82
Request for data transfer.....	92
NMI discovery.....	94
NMI master	102
Chapter 4 AEMO CATS Transactions.....	106
Acknowledgement and validation	107
Response	129
Notifications.....	137
Request for data transfer.....	138
Retailer of last resort	138
Chapter 5 CATS History Model	139
Why such a complex history model?.....	139
NMI standing data master tables	140
How MSATS manages CATS history.....	144
How MSATS updates the NMI master tables.....	146
Chapter 6 Codes	169
Codes maintenance	169
Actual/cumulative indicator codes	173
Change reason codes	174
Change request status codes.....	176
Customer classification codes.....	177

Customer threshold codes	177
Datastream status codes.....	178
DLF codes	179
Embedded network identifier codes	180
Error codes	181
Field validation data source codes	182
Jurisdiction codes.....	182
Meter register status codes	183
Metering installation type codes	183
Network tariff codes.....	184
NMI classification codes	185
NMI status codes.....	185
Objection codes.....	185
Read type codes	186
Register identifier status codes	190
Role ID codes	190
TNI codes	191
Transaction type codes	192
Unit of measure codes	194
Chapter 7 Rules.....	195
Rules maintenance.....	195
Change request field validation rules	197
Change request initiation rules.....	197
Jurisdictional parameters	198
NMI discovery field access rules	199
NMI discovery search key rules	199
Change request status notification rules	200
Objection rules	200
Standing data access rules	201
Time frame rules	202
Chapter 8 FAQs.....	203
Transactions	203
Inbox, Outbox, and Archive.....	205
NMI search	207
Terms.....	217
NER terms	217
Needing Help.....	219
Support Hub	219

Information to provide..... 219

References 220

Australia post..... 220

AEMO website..... 220

Index 223

Chapter 1 Introduction

Purpose

This guide is a supplement to MSATS B2M policies, procedures, and guides providing an understanding of MSATS functionality and business rules.

Audience

The audience for this guide is:

- New participants building their IT systems to interact with AEMO's.
- Registered Participants:
 - Creating and receiving participant CATS Transactions.
 - Requiring NMI information from MSATS. Especially, the records they can expect from a NMI Discovery search.
 - IT staff involved in managing interfaces with MSATS.
- Anyone wanting an understanding of MSATS functionality, business rules, and roles.
- Support staff

Out of scope

MSATS Business-to-Business (B2B) and Enterprise Meter Data Management (eMDM) are out of scope for this guide. For details, see the following information on [AEMO's website](#):

- **Business-to-Business Procedures**
- **Metering procedures, guidelines and processes**

What's in this guide

Chapter 2 About MSATS B2M on page 9 explains B2M, the roles, functionality, interfaces, and delivery protocols.

Chapter 3 on page 38 describes participant CATS Transactions and guidelines, including tips and common NMI Discovery search errors.

Chapter 4 AEMO CATS Transactions on page 106 describes AEMO CATS Transactions.

Chapter 5 CATS History Model on page 139 is essential reading because it assists understanding of the end-to-end Change Request process and how the CATS NMI Standing Data Access Rules affect data returned from NMI Discovery or a CATS report.

Chapter 6 Codes on page 169 specifies the codes applying to Change Requests and CATS Standing Data.

Chapter 7 Rules on page 195 specifies the rules applying to Change Requests and CATS Standing Data.

Chapter 8 FAQs on page 203 has a list of commonly asked MSATS questions.

Terms on page 217 has a list of NER terms used throughout this guide and where to find MSATS terms.

Needing Help on page 219 explains how to get help from AEMO's Support Hub.

References on page 220 has a list of resources mentioned throughout this guide.

How to use this guide

- The **Retail Electricity Market Procedures – Glossary and Framework** forms part of this guide and should be read with it.
- The references listed throughout this document are primary resources and take precedence over this document.
- Where there is a discrepancy between the Rules and information or a term in this document, the Rules take precedence.
- Where there is a discrepancy between the Procedures and information or a term in this document, the Procedures take precedence.
- This guide is written in plain language for easy reading.
- **Text in this format** indicates a reference to a document on [AEMO's website](#).
- [Text in this format](#) indicates a link to related information.
- **Text in this format** is an action to complete in the Markets Portal interface.
- Glossary Terms are capitalised and have the meanings listed against them in the **Retail Electricity Market Procedures – Glossary and Framework** and **Guide to MSATS and B2B Terms**.
- NER terms are capitalised and have the meaning listed against them in the National Electricity Rules (NER). Any rules terms not capitalised still have the same meaning. NER terms are listed on page 217.
- References to time are Australian Eastern Standard time (AEST) unless otherwise specified.

Chapter 2 About MSATS B2M

This chapter explains MSATS B2M functionality, roles, interfaces, and, delivery protocols.

What is MSATS B2M?

MSATS is an IT system operated by AEMO fulfilling its obligations under the NER. The functionality available in MSATS B2M includes:

1. Participant administration and User Rights Management (URM)
2. Consumer Administration and Transfer Solution (CATS)
3. Wholesale, Interconnector, Generator and Sample (WIGS)
4. Enterprise Metering Data Management System (eMDM)

Figure 1 MSATS B2M functionality



Consumer Administration and Transfer Solution

The Consumer Administration and Transfer Solution (CATS) is based on 14 types of Transactions plus a separate RoLR function. Six Transaction types are initiated by participants with 8 initiated by MSATS.

The 2 most significant participant Transactions are Change Requests and NMI Discovery Search. For details, see Participant CATS Transactions on page 38.

The most significant AEMO Transaction is the RoLR functionality. For details, see AEMO CATS Transactions on page 106

Wholesale, Interconnector, Generator and Sample

The Wholesale, Interconnector, Generator and Sample (WIGS) govern the transfer of consumer settlements, the registration of metering installation, and the management of Standing Data for NMIs, classified as wholesale, interconnector, generator, or sample.

Enterprise Metering Data Management System

The Enterprise Metering Data Management System (eMDM) includes the Profile Preparation Service, Consumption Meter Profiling, and Data Aggregation. For details about eMDM, see Metering procedures, guidelines, and processes on [AEMO's website](#).

Who can use MSATS B2M?

Registered Participants, Energy Ombudsman, and AEMO have access to the information in the system according to the National Electricity Rules (NER).

B2M roles

Participant B2M roles include:

- Embedded Network Managers (**ENM**)
- Financially Responsible Market Participant (**FRMP**)
- Local Network Service Provider (**LNSP**)
- Local Retailer (**LR**)
- Metering Coordinator (**MC** or **RP in MSATS**)
- Metering Provider - Maintenance (**MPB**)
- Metering Provider – Data Collection (**MPC**)
- Metering Data Providers (**MDP**)
- Network Service Provider (**NSP**)
- Second Network Service Provider (**NSP2**)

How you use MSATS B2M

This section describes the MSATS B2M functionality, the B2M participant interfaces you can use to interact with it, and where to find more information.

For details about set up and access to AEMO's participant interfaces, see:

- [Connecting to AEMO's Electricity IT Systems](#)
- [Guide to Electricity Information Systems](#)

Delivery protocols

You change your message delivery protocol in the [MSATS Web Portal > Participants > Participant Schema](#) interface.

Protocol	Delivery
----------	----------

API Pull Participant API Gateway

MSATS Web Portal > Data Load Import > Participant Hub Queue > Click the File Name or Download in the Action column.

Action

Download

Accept

Reject

Participant Hub Queue

Participant ID:

NEMMCO

Participant Name:

Australian Energy

Hub Queue Contents

File Name	MessageID	Message Type	Transaction Group	Priority	Date Created	Action
cats_nemmcobatch_706568996.zip	939084340846-SOMW-4	Transaction Message	CATS	Low	Tue Feb 12 10:58:35 AEDT 2019	Download Accept Reject
cats_nemmcobatch_706569341.zip	939084340846-SOMW-4	Transaction Message	CATS	Low	Tue Feb 12 10:58:35 AEDT 2019	Download Accept Reject

API Push Participant API Gateway

Protocol	Delivery
FTP	<div>Participant File Server > Participant ID > Outbox</div> <div><div><div>Folders</div><div><div>tcamp on 'Frctest41\fs_test\fs_test' (V: ...)</div><div><div>Archive</div><div>inbox</div><div>outbox</div></div></div></div><div><div>Name</div><div><div>catsm_tcampbatch_22883789.ack</div><div>catsm_tcampbatch_22883795.ack</div><div>catsm_tcampbatch_22883801.ack</div><div>catsm_tcampbatch_22883807.ack</div><div>catsm_tcampbatch_22883825.ack</div></div></div><div><div>Size</div><div><div>1 KB</div><div>1 KB</div><div>1 KB</div><div>1 KB</div><div>1 KB</div></div></div><div><div>Type</div><div><div>ACK File</div><div>ACK File</div><div>ACK File</div><div>ACK File</div><div>ACK File</div></div></div></div>

Web MSATS Web Portal > Data Load Import > Participant Outbox













Participant Outbox - List		
Participant ID:		NEMMCO
Participant Name:		Australian Energy Market Operator Limited
<input type="button" value="Acknowledge Selected"/> <input type="button" value="Select All"/> <input type="button" value="De-select All"/>		
Outbox Contents		
File Name	Last Modified	File Size
<input type="checkbox"/> catsl_energexbatch_229638186.zip	Tue Jan 20 22:02:01 GMT+10:00 2009	8697
<input type="checkbox"/> catsl_energexbatch_229638312.zip	Wed Jan 21 22:00:43 GMT+10:00 2009	1531
<input type="checkbox"/> catsl_energexbatch_287716173.zip	Mon Feb 02 15:04:58 GMT+10:00 2009	825
<input type="checkbox"/> catsl_energexbatch_287716435.zip	Mon Feb 02 15:04:59 GMT+10:00 2009	891
<input type="checkbox"/> catsl_energexbatch_287716729.zip	Mon Feb 02 15:04:59 GMT+10:00 2009	888
<input type="checkbox"/> catsl_energexbatch_287717093.zip	Tue Feb 03 09:59:48 GMT+10:00 2009	1058
<input type="checkbox"/> catsl_energexbatch_287717265.zip	Tue Feb 03 22:00:50 GMT+10:00 2009	1062

B2M functionality, interfaces, and protocols

Functionality	Description	Interface / Delivery protocol				Reference
		e-Hub (API)	File Interface (FTP)	File upload (web)	Web portal (web)	
Administration	<p>Participant administrators (PAs) set up and maintain Participant User Rights</p> <p>Participant Users with access rights can view Codes, Rules, and the System Calendar</p>	✗	✗	✗	✓	<p>User rights access on page 18</p> <p>Guide to User Rights Management > Administration</p> <p>Codes on page 169</p> <p>System calendar on page 169</p> <p>Rules on page 195</p>
Messages – Transactions, acks & zips	<ul style="list-style-type: none"> - Participant Inbox - MDP (MTRD & MDMT) file upload - Participant Outbox - Participant Archives - Participant Hub Queue: view unacknowledged API Pull and MDMT messages - Dayzip download: zip and save files in your Participant Archive 	✓	✓	✓	✓	<p>Participant File Server on page 20</p> <p>Acknowledgement on page 107</p> <p>MDM File Format and Load Process</p> <p>Guide to MSATS Web Portal > Data Load Import</p> <p>Guide to NEM Retail B2M APIs</p>

Functionality	Description	Interface / Delivery protocol				Reference
		e-Hub (API)	File Interface (FTP)	File upload (web)	Web portal (web)	
Metering data	Metering (Datastream) Data MDMF or MDFF search	✓	✓	✗	✓	Guide to eMDM (in progress) Guide to MSATS Web Portal
NMI information	NMI Discovery search for NMIs and their associated relationships with participants	✓	✓	✗	✓	NMI Discovery and NMI Master on pages 92 & 102 Guide to MSATS Web Portal Guide to NEM Retail B2M APIs > - getNMIDetail - NMIDiscovery
Ombudsman (NMI enquiry reports)	Ombudsmen access to NMI Standing Data Participants reports on ombudsman enquiries	✗	✗	✗	✓	MSATS Ombudsman Enquiry User Interface Guide
Passwords	Participant ID and Participant User password(s) Changing a password in MSATS changes the password for NEM, GSH, OPDMS, and NOS systems	✓	✓	✗	✓	Guide to Electricity Information Systems > Participant ID password Guide to User Rights Management > Participant User password Guide to MSATS Web Portal

Functionality	Description	Interface / Delivery protocol				Reference
		e-Hub (API)	File Interface (FTP)	File upload (web)	Web portal (web)	
Participant information	<ul style="list-style-type: none"> - View participant information - Manage participant contacts for Demand Side Participation, Settlement Statements, and Market Direct notifications - Manage your B2M aseXML schema 	✗	✗	✗	✓	Guide to MSATS Web Portal > FTP System Status Guide to Transition of aseXML
Profile preparation (profile information)	Metering Data Management (eMDM) functions such as estimation and profiling	✗	✗	✗	✓	Guide to eMDM (in progress) Guide to MSATS Web Portal
Queue Monitoring	<ul style="list-style-type: none"> - Next scheduled read date change request daily count - Report scheduler queue: count of pending reports - Outbound notifications queue: Change Request Notification daily estimate - Change request queue: Change Request daily estimate 	✓	✓	✗	✓	Guide to MSATS Web Portal > Reports & Alerts > Queue Monitoring Guide to NEM Retail B2M APIs > getQueueMetaData
Reports and alerts	CATS and MDM reports Report output is File Interface or API e-Hub only	✓	✓	✗	✓	Guide to MSATS Reports Guide to NEM Retail B2M APIs > generateC4Report

Functionality	Description	Interface / Delivery protocol				Reference
		e-Hub (API)	File Interface (FTP)	File upload (web)	Web portal (web)	
Settlement data	View Settlement data					Guide to MSATS Web Portal > Settlement Data
Transactions	- B2M message exchange between MSATS and participant systems					Participant CATS Transactions on page 38
Change Requests	- Connection Point transfers and Standing Data management					Validation on page 107
Objections						Guide to MSATS Reports
Notifications	All files exchanged with MSATS B2M conform to the Australian Standard for Energy XML (aseXML)					Guide to NEM Retail B2M APIs >
Requests for data						- submitMessages
						- submitMessageAcknowledgements
						Guide to MSATS Web Portal > Transactions aseXML Standards on AEMO's website
Transaction limits	Imposed on participant interaction with MSATS to prevent overload of the system View status of participant Transaction limits					Transaction limits on page 121 Guide to MSATS Web Portal > Participants > FTP System Status Guide to NEM Retail B2M APIs > - getMSATSLimits - getAlerts - getParticipantSystemStatus

aseXML schemas

B2B schema

You change your B2B aseXML schema in the [B2B Browser > Transforms and Protocol](#) interface.

B2M schema

You change your B2M aseXML schema in the [Participants > Participant Schema](#) interface.

User rights access

To access MSATS functionality, Participant Users must have the appropriate user rights access. A Participant User who can perform Transactions using the Web Portal or API, cannot necessarily perform the same Transactions using the File Interface.

Your company's Participant Administrator (PA) gives you access using the Interactive (web) or Batch entities in the MSATS Administration menu and provides you with your access details. Your access right determines the interface, functionalities, and Transactions you can use.

Because it can take 24 hours to update in AEMO's systems, AEMO recommends Participant User rights for web and API are set up at least 24 hours in advance. If a Participant User is logged in when receiving a new right, they need to logout and login again.

Table 1 Entity types for each interface

Interface	Entity
API	Interactive
File (Batch)	Batch
File upload (web portal)	Interactive
MSATS web portal	Interactive

The initial PA is set up by the AEMO system administrator as part of the registration process. If you don't know who your company's PA is contact AEMO's Support Hub.

The [Guide to User Rights Management](#) provides details about:

- Providing access to MSATS functionality for Participant Users.
- Creating and maintaining Participant ID and Participant User passwords.

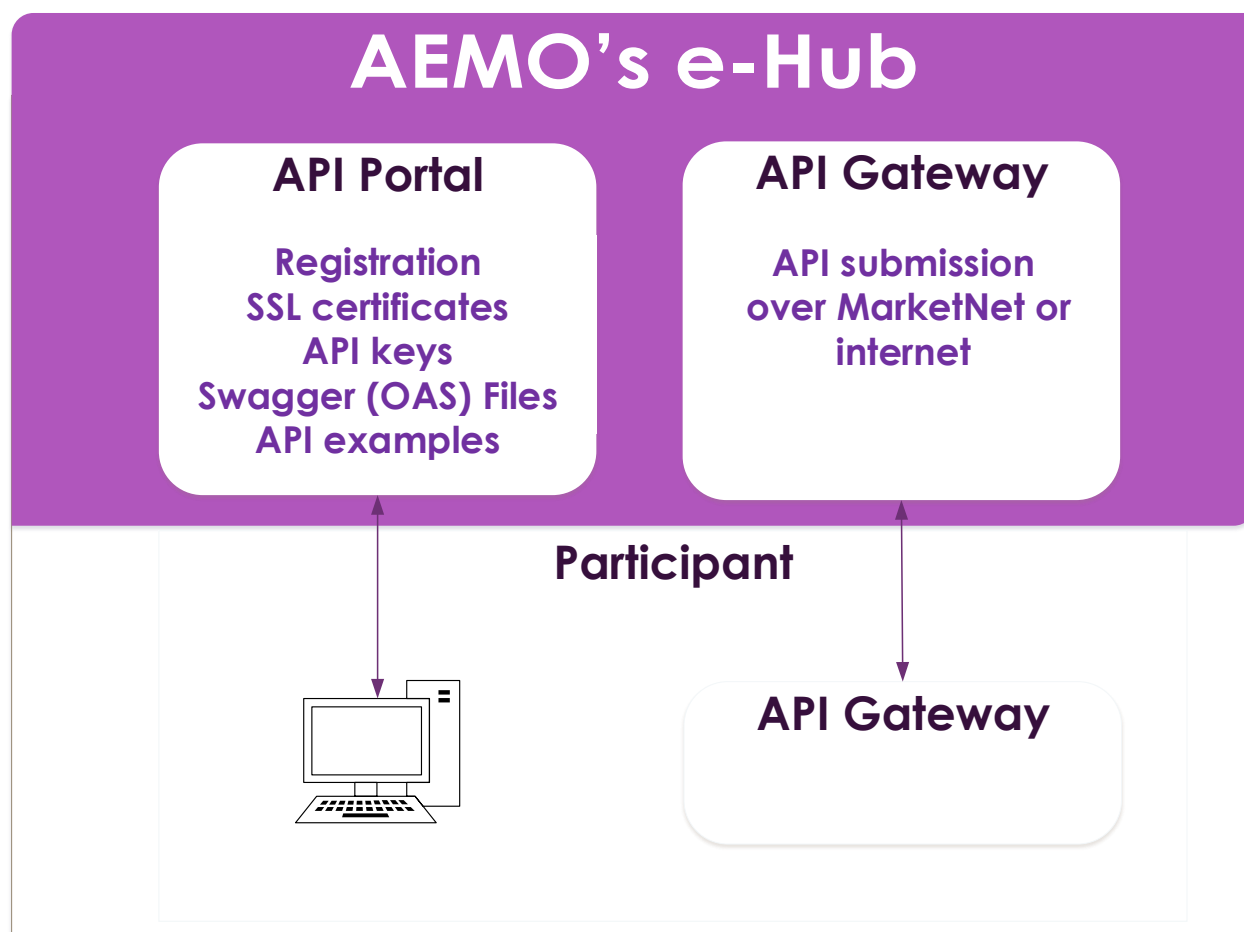
Interfaces

API e-hub

Participants can submit and receive CATS Transactions and change their Participant User password using the API Gateway. For details, see:

- [Guide to NEM Retail B2M APIs](#)
- [Guide to AEMO's e-Hub APIs](#)

Figure 2 Participant API gateway to AEMO e-Hub



Participant file server

CATS Transactions between participants and the MSATS Web Portal or File Interface are stored in the Participant File Server in two folders:

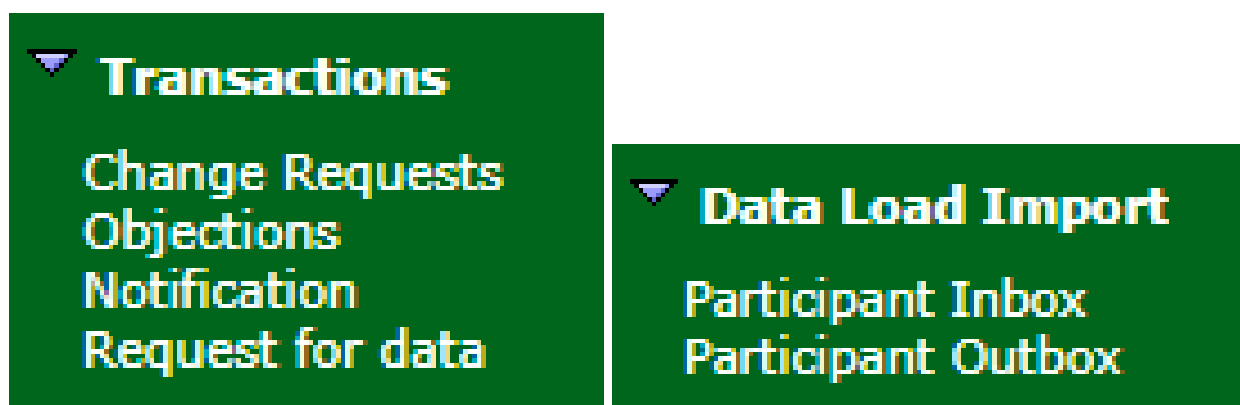
1. **INBOX:** Participants put files for MSATS in the Inbox (see Figure 3 on page 21).

Participants can place aseXML messages in zip format directly to their Participant File Server Inbox.

2. **OUTBOX:** MSATS puts aseXML messages in the Outbox (see Figure 4 on page 22).

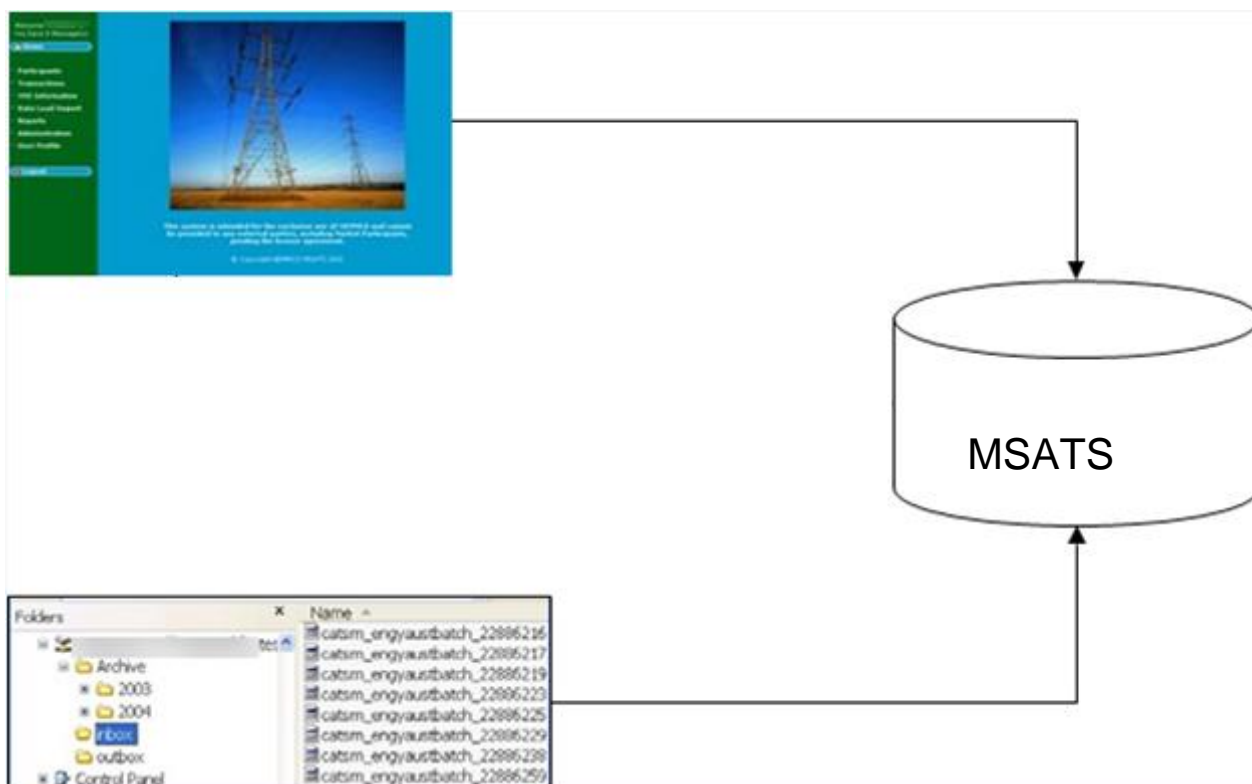
MSATS web portal

Participants can submit and receive CATS Transactions in the **MSATS Web Portal** interface. This interface is mostly used by participants having a limited number of files to process. For help, see [Guide to MSATS Web Portal](#).



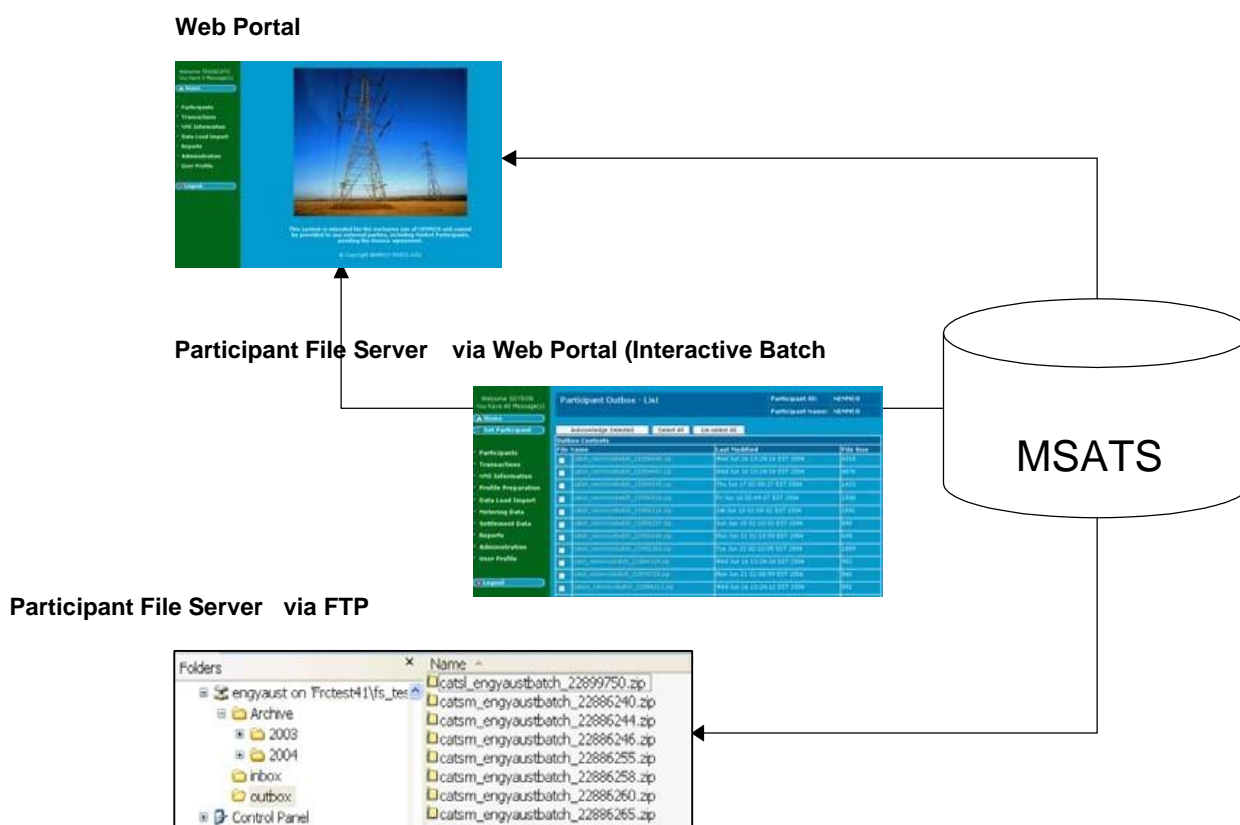
Participant file server inbox to MSATS web portal

Figure 3 Participant file server inbox to MSATS web portal



Participant file server outbox to MSATS web portal

Figure 4 Participant file server outbox to MSATS web portal



MSATS web portal file upload

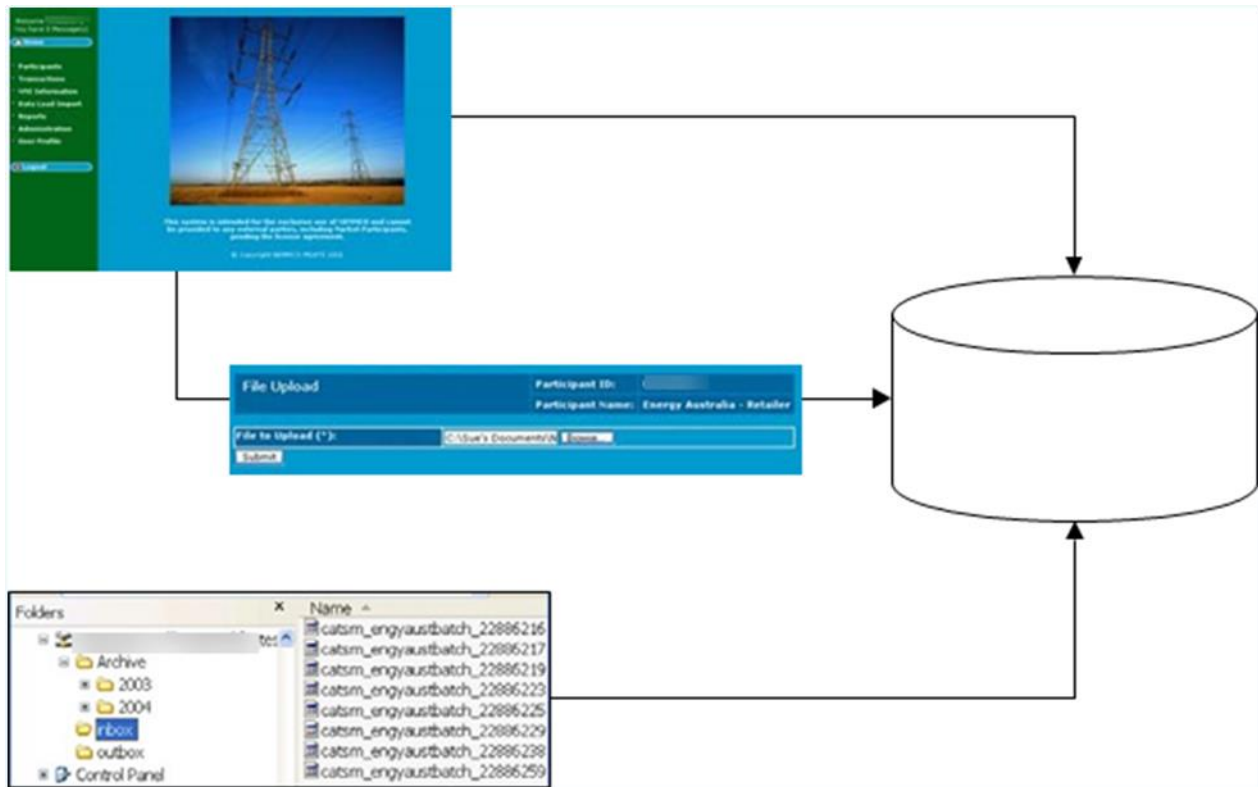
Participants can upload Batch CATS Transactions using the **Data Load Import > Participant Inbox > Upload** function. This is called Batch to Web Portal or Interactive Loading). For help, see [Guide to MSATS Web Portal](#).

Uploading Transactions using this option, places them in your Participant Inbox on the Participant File Server (see Figure 5 on page 23).

When MSATS completes validation, you receive a response Transaction zip file. If the data loaded successfully, the acknowledgement details are found within the <Acknowledgements> element, towards the end of the XML file. There is only one message acknowledgement per file. Depending on the number of transactions in the file, there can be multiple Transaction Acknowledgements. For details, see MSATS to participant on page 107.

For details about how to clean up left-over files if they are not acknowledged immediately, see Acknowledgement on page 115.

Figure 5 MSATS web portal file upload



File interface (FTP)

Participants can submit and receive CATS Transactions using FTP to the Participant File Server. This is called Batch to Participant File Server or Direct Loading.

This interface is mostly used by participants with many files to process by implementing an automated Batch File Interface. For help, see [Guide to MSATS Participant Batcher software](#).

All communications use aseXML-formatted messages. When MSATS processes Transactions using the File Interface, they undergo the same validity checks as those processed using the MSATS Web Portal.

You place the Batch files in your Participant Inbox on the Participant File Server by 1 of the following methods:

1. FTP software. For help, see Participant File Server on page 20.
2. Using a back-end process such as [MSATS Participant Batcher Software](#) to automate the FTP loading. Use this option if you have a lot of files to process.

Direct Loading is a two-stage process. You or your IT system write a TMP file to your Participant Inbox and then rename it to a zip file. You do not directly copy the zip file. For help, see Creating and submitting batch transactions on page 29.

File interface rules

To create a Change Request using the File Interface, you must adhere to the following rules:

- The Participant User ID in the header's SecurityContext element must belong to the From Participant ID.
- The Participant User ID in the header's SecurityContext element in the XML message must have access rights to submit Batch Transactions (the Batch entity for Change Requests or Change Withdrawal).

- If the Batch Transaction is submitted using the Web Portal, the Participant User ID submitting the Transaction must have the Participant Mailbox entity right.
- If the Batch Transaction is submitted using the Web Portal, the nominated Participant ID in the From element in the XML file must be the same as the logged on Participant User ID.

File name format

The file name has four sections:

Section	Description	Size
Transaction Group	For NMI Discovery, the transaction group is NMID For CATS transactions, the transaction group is CATS	4 Alphanumeric
Priority	h = High m = Medium l = Low Messages within each priority group are processed in last modified order The priority for NMI Discovery is high (h) The priority for CATS transactions is medium (m)	1 Character
Unique ID	A unique participant-generated identifier for the file. Possibly the Participant ID.	30 Alphanumeric
Extension	The zip includes the xml file	3 characters
Example	<TransactionGroup><Priority>_<uniqueId>.extension NMIDH_partID_1009.xml CATS_partID_1010.xml catsm_<Participantid>batch_<uniqueId>.zip catsm_<Participantid>_<uniqueId>.zip	n/a

Transaction format

The information in this section is a guide only. For help creating an aseXML file, see the [aseXML Guidelines](#).

Table 2 below explains the information required for each Transaction.

For examples, see:

- Change Request: Figure 6 on page 28.
- Objection: Figure 7 on page 28.

Table 2 Transaction format

Field	Format	Transaction
Participant Name	Up to 30 characters Enter in quotes between the <From description>PART LNSP</From description> element	CR
Participant ID	Up to 15 characters Must be CAPITALISED Enter in quotes between the <From>SOLARISP</From> element	CR
Message Date/Time	YYYY-MM-DDTHH:MM:SS.sss	CR
Transaction Group	4 characters Must be CAPITALISED	CR
Priority	Up to 6 characters Must be upper case Options: High (H), Medium (M), or Low (L)	CR
Security Context (User ID)	A Participant User ID belonging to the participant ID having a right to perform Batch Transactions	CR

Field	Format	Transaction
Participant Transaction ID	21 Alphanumeric characters	CR
Change Reason Code	4 Numbers	CR
Role ID	4 Characters	OBJ
Objection Code	Up to 8 Characters	OBJ
Role	Up to 4 Characters	OBJ
Proposed Date	YYYYMMDD	CR
NMI Checksum	1 Number	CR
NMI	10 Alphanumeric characters	CR

Figure 6 Change request XML file

```

<?xml version="1.0" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r10" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:aseXML:r10 http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">
- <Header>
  <From description=" " - LNSP" " </From>
  <To description="National Electricity Market Management Company">NEMMCO</To>
  <MessageID> "MSG-11234569" </MessageID>
  <MessageDate>2004-06-30T13:20:10.000+10:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>Medium</Priority>
  <SecurityContext>EAPTRAINCATS</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
- <Transaction transactionID="ENERGYAP-TNS-12348990" transactionDate="2001-10-31T13:20:09.900+10:00">
  - <CATSChangeRequest version="r4">
    <ChangeReasonCode>2500</ChangeReasonCode>
    <ProposedDate>2002-08-12</ProposedDate>
  - <NMIStandingData xsi:type="ase:ElectricityStandingData" version="r10">
    <NMI checksum="3">AAAAAAAAAAB</NMI>
  - <MasterData>
    <JurisdictionCode>NSW</JurisdictionCode>
    <NMIClassificationCode>SMALL</NMIClassificationCode>
    <TransmissionNodeIdentifier>NSYS</TransmissionNodeIdentifier>
    <DistributionLossFactorCode>JLSL</DistributionLossFactorCode>
  - <Address>
    - <StructuredAddress>
      - <FlatOrUnit>
        <FlatOrUnitType>APT</FlatOrUnitType>
        <FlatOrUnitNumber>1,2,3</FlatOrUnitNumber>
      </FlatOrUnit>
      - <FloorOrLevel>
        <FloorOrLevelType>FL</FloorOrLevelType>
        <FloorOrLevelNumber>31/32</FloorOrLevelNumber>
      </FloorOrLevel>
    </StructuredAddress>
  </Address>
  </MasterData>
</NMIStandingData>
</CATSChangeRequest>
</Transaction>
</Transactions>
</ase:aseXML>

```

Figure 7 Objection XML file

```

<?xml version="1.0" encoding="UTF-8" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r9" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:aseXML:r9 http://www.nemmco.com.au/aseXML/schemas/r9/aseXML_r9.xsd">
- <Header>
  <From description=" " " </From>
  <To description="National Electricity Market Management Company">NEMMCO</To>
  <MessageID>AAA</MessageID>
  <MessageDate>2004-06-19T12:00:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>Medium</Priority>
  <SecurityContext>TRAINCATS</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
- <Transaction transactionID="OBJECT-001" transactionDate="2004-06-19T12:00:00">
  - <CATSObjectionRequest version="r4">
    <InitiatingRequestID>8332897</InitiatingRequestID>
    <Role>FRMP</Role>
    <ObjectionCode>NOTRESP</ObjectionCode>
  </CATSObjectionRequest>
</Transaction>
</Transactions>
</ase:aseXML>

```

Creating and submitting batch transactions

All Transaction files are created in the same way although the data required differs depending on the type of Transaction you are creating. For an example of a Change Request Transaction, see Figure 6 on page 28.

You can include more than one transaction in one XML file providing they belong to the same Transaction Group. The message consists of a header, followed by the transactions. For details, see [aseXML Guidelines](#).

To submit Batch files to the Participant File Server:

1. Create an XML file according to the aseXML specification.
2. Compress the file in zip format and save it with a .TMP extension, following the MSATS filename standards. For details, see file name format on page 25.
3. FTP the .TMP file to your Participant Inbox adhering to file size limits.
4. Rename the file from TMP to zip.
5. MSATS performs validation and sends an ACK file to your Participant Outbox, either accepting or rejecting the file.

The ACK file has the same name as the zip file except for the extension. For example, if your file is catsm_12345.zip, MSATS names the ACK file catsm_12345.ACK.

6. When you receive the matching .ACK file in your Participant Outbox, delete your original zip file from your Participant Inbox.

MSATS then deletes the ACK file from your Participant Outbox.

7. The Inbox and Outbox are now empty.

This process (from step 1) is called the MSATS Hokey-Pokey Protocol.

8. When MSATS completes validation, you receive a response Transaction zip file. For details, see MSATS to participant on page 107.

Editing a batch change request

The process for editing a Change Request using Batch is almost identical to creating a Change Request. A new Change Request Transaction is submitted, which contains the correct information including one additional data element. This is the request ID of the original Change Request in the <InitiatingRequestID> element (see Figure 8 on page 31).

When you submit the second Change Request, MSATS does the following:

1. Creates a new Change Request with the status of PVAL (pending validation).
2. Determines, during the second-level validation, that this is an edit to an existing Change Request.
3. Cancels the existing Change Request (its status changes to CAN).
4. Creates a further new Change Request that is a 'merging' of the two Change Requests that has a status of REQ. (This is the Change Request that proceeds).
5. Cancels the first Change Request.

Figure 8 edited change request

```

<?xml version="1.0" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r22" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:aseXML:r22
  http://www.nemmco.com.au/aseXML/schemas/r22/aseXML_r22.xsd">
- <Header>
  <From>PPPPPP</From>
  <To description="National Electricity Market Management Company">NEMMCO</To>
  <MessageID>PPPPPP-MSG-04323</MessageID>
  <MessageDate>2009-02-07T09:20:10.000+10:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>Medium</Priority>
  <SecurityContext>PPPPPPBATCH</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
- <Transaction transactionID="PPPPPP-TNS-2501" transactionDate="2009-02-
  07T09:20:10.000+10:00">
  - <CATSChangeRequest version="r19">
    <ChangeReasonCode>2501</ChangeReasonCode>
    <ProposedDate>2009-03-10</ProposedDate>
    <InitiatingRequestID>2222</InitiatingRequestID>
  - <NMIStandingData xsi:type="ase:ElectricityStandingData">
    <NMI checksum="8">9876543210</NMI>
    - <MasterData>
      <JurisdictionCode>NSW</JurisdictionCode>
      <NMIClassificationCode>SMALL</NMIClassificationCode>
      <TransmissionNodeIdentifier>NSW1</TransmissionNodeIdentifier>
      <DistributionLossFactorCode>xyz1</DistributionLossFactorCode>
    - <Address>
      - <StructuredAddress>
        - <House>
          <HouseNumberSuffix>9</HouseNumberSuffix>
        </House>
      - <Lot>

```

For Change Requests edited using Batch, MSATS sends two Change Request Response (CRR) Transactions:

1. One for the submitted Change Request providing the correct information.
2. One for the final new Change Request MSATS creates to merge the original Change Request and the new one.

If there was a problem with the first Change Request because it failed the second-level validations and was rejected; only the first Change Request response is received.

Withdrawing a batch change request

To withdraw a Change Request using Batch, you must submit a message containing a change withdrawal Transaction. The only element supplied is the <RequestID> element (see Figure 9 below).

The Initiating participant must create the Change Request withdrawal and the user ID identified in the <SecurityContext> element must have the right to submit a change withdrawal Transaction by Batch.

For Change Requests withdrawn using Batch, MSATS sends a Change Request response (CRR) indicating if the withdrawal was successful. The CRR is identical to the CRR received when you submitted the Change Request. It does not indicate it is a response to a Change Request withdrawal rather than a response to a new Change Request. You can identify it by initiatingTransactionID, also used in the withdrawal Transaction. The Request ID is the same as the initial Change Request.

Figure 9 Change request withdrawal

```
<?xml version="1.0" encoding="UTF-8" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r9" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:aseXML:r9 http://www.nemmco.com.au/aseXML/schemas/r9/aseXML_r9.xsd">
- <Header>
  <From description="[REDACTED]">[REDACTED]</From>
  <To description="National Electricity Market Management Company">NEMMCO</To>
  <MessageID>AAA</MessageID>
  <MessageDate>2004-06-19T12:00:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>Medium</Priority>
  <SecurityContext>ENERGYAPBATCH</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
  - <Transaction transactionID="ZZZ" transactionDate="2004-06-19T12:00:00">
    - <CATSChangeWithdrawal version="r4">
      <RequestID>8332896</RequestID>
    </CATSChangeWithdrawal>
  </Transaction>
</Transactions>
</ase:aseXML>
```


Withdrawing a batch objection

The process for withdrawing an Objection using Batch is almost the same as creating an Objection using the Batch Handlers. For a successful withdrawal, the `<ObjectionID>` generated in the initial Objection is included in the file. A Batch Handler withdrawal is acknowledged by an Objection withdrawal Transaction in your Participant Outbox.

For Objections withdrawn using the Batch Handlers, MSATS sends an Objection Transaction file indicate if the withdrawal was successful. It is identical to the Objection Transaction received when you submitted the Objection. The Transaction does not state it is a response to an Objection withdrawal rather than a response to a new Objection. It contains the initiatingTransactionID from the initial withdrawal Transaction. The Objection ID is the same as the one being withdrawn.

To log an Objection withdrawal:

1. Create an XML file according to the current aseXML schema format and include the following element:

Element	Description	Example
<code><ObjectionID></code>	The ObjectionID from the initial CRR	<code><ObjectionID>76543210</ObjectionID></code>

2. Name the file according to AEMO specifications and compress the file into a zip format.
3. Access your Participant Inbox and upload your file.
4. To view the response, access your Participant Outbox.

Figure 10 on page 34 is an example of an aseXML file for withdrawing Objections. The `<Header>` information provided is the same as the standard for a CATS medium Transaction. However, in the Transactions section of the file, there is a CATS Objection withdrawal Transaction.

These fields are:

- <ObjectionID>: The ID generated when the original Objection was logged.
- <InitiatingRequestID>: The Change Request ID the Objection was logged against.
- <Role>: The role the Objection was logged for.
- <ObjectionCode>: The Objection code used by the Objection.

Figure 10 Withdrawing objection aseXML file

```
<?xml version="1.0" encoding="UTF-8" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r9" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:aseXML:r9
  http://www.nemmco.com.au/aseXML/schemas/r9/aseXML_r9.xsd">
- <Header>
  <From description="Energy Australia - Retailer">ENGYAUST</From>
  <To description="National Electricity Market Management Company">NEMMCO</To>
  <MessageID>OBJW-001</MessageID>
  <MessageDate>2002-01-01T12:00:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>Medium</Priority>
  <SecurityContext>ENGYAUSTBATCH</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
- <Transaction transactionID="OBJW-001-1" transactionDate="2002-01-01T12:00:00">
  - <CATSObjectionWithdrawal version="r4">
    <ObjectionID>19730</ObjectionID>
    <InitiatingRequestID>8332897</InitiatingRequestID>
    <Role>FRMP</Role>
    <ObjectionCode>NOTRESP</ObjectionCode>
  </CATSObjectionWithdrawal>
  </Transaction>
</Transactions>
</ase:aseXML>
```

NMI discovery type 1

To create a NMI Discovery request:

1. Create an XML file according to the current aseXML schema format. The data required differs depending on the search criteria entered (such as, Address, Meter Serial ID or DPID). To perform a successful NMI Discovery search using Batch, your XML file must contain one of the following criteria:
 - Delivery point identifier
 - Meter serial number
 - Physical address
2. Name the file according to AEMO specifications. The filename consists of the Transaction Group, Priority Level, and a Transaction ID that starts with the participant ID. Save files with an XML extension and must be in lower case.
3. Name the file according to AEMO specifications and compress the file into a zip format.
4. Access your Participant Inbox and upload your file.
5. To view the response, access your Participant Outbox.

You can include multiple Transactions in a single Batch file. Requests are processed individually and MSATS provides a single response per Transaction.

NMI discovery type 2 (obtain standing data)

To create a NMI Discovery type 2 (Obtain Standing Data) request:

1. Create an XML file according to the current aseXML schema format. The NMI and the checksum are required for a type 2 search.
2. Name the file according to AEMO specifications and compress the file into a zip format.
3. Access your Participant Inbox and upload your file.

4. To view the response, access your Participant Outbox.

NMI Discovery type 3 (Obtain Role Data)

To create a NMI Discovery type 3 (Obtain Role Data) request:

1. Create an XML file according to the current aseXML schema format with a standard NMI Discovery request header.

The Type, NMI checksum, and Reason fields are mandatory. Enter **NMID** for the **Transaction Group**.

2. Enter **ROLE_REQUEST** for the **Type**.
3. Name the file according to AEMO specifications and compress the file into a zip format.
4. Access your Participant Inbox and upload your file.
5. To view the response, access your Participant Outbox.

Notes:

- **Correct Retailer:** The Retailer listed as the FRMP for the NMI in MSATS. They are the End-use Customer's chosen Retailer.
- **Current Retailer or current FRMP:** The Retailer who is currently listed with an active role of FRMP for a NMI in MSATS.
- **Most recent previous Retailer:** The Retailer who was the FRMP before the NMI was transferred to the party listed as the current FRMP in MSATS.

Creating a report request

You can also request CATS and MDM reports using Batch. When a report is processed using Batch, it undergoes the same validity checks as a report processed using the web portal.

All reports, whether requested using the web portal or using Batch, are delivered as zip files placed in your Participant Outbox.

To create a report request:

1. Create an XML file containing the report request according to the aseXML schema format. Each report requires a different set of parameters; the easiest way to identify the parameters for each report is to request it using the web portal and check the output.
2. Name the file according to AEMO specifications: The filename consists of the Transaction Group (CATS), Priority Level (M), and the Transaction ID (unique ID that includes the participant ID). Files must be saved with an XML extension and are usually in lower case, for example, catsm_ppppppp_1000.xml (see page 25).
3. Compress the file into a zip format.
4. Access your Participant Inbox and upload your file.
5. To view the response, access your Participant Outbox.

Batch FTP system status

To create an FTP System Status request:

1. Create an XML file with the report request according to the aseXML schema format. Each report requires different parameters. The easiest way to identify the parameters for each report is to request it using the web portal and check the output.
2. Name the file according to AEMO specifications: The filename consists of the Transaction Group (CATS), Priority Level (M), and the Transaction ID (unique ID that includes the participant ID). Files must be saved with an XML extension and are usually in lower case, for example, catsm_ppppppp_1000.xml (see page 25).
3. Compress the file into a zip format.
4. Access your Participant Inbox and upload your file.
5. To view the response, access your Participant Outbox.

Set participant

Providing you have permission to do so, the Set Participant function in the web portal allows you to act for another Participant ID without having to log out, change IDs and log in again. The participant you are acting for displays at the top of the Markets Portal interface. For permission to see other participant IDs using Set Participant, see your company's Participant Administrator.

Bulk transactions

Bulk data tool (BDT)

The Bulk Data Tool (BDT) enables participants to insert and update large quantities of MSATS Standing Data. It has minimal impact on MSATS because it bypasses the Change Request process, including Objections and Notifications, and the MSATS history model.

The BDT is useful for:

- Mass correction of existing data.
- Provision of new NMs for Jurisdictions rolling out Full Retail Competition (FRC).

Updates to existing records made using the BDT:

- Are only made to the current active records (records having an end date of 31/12/9999). No active historic records are ever affected by the BDT.
- Do not conform to the CATS History model so there is no history audit trail of the replaced data. The only indication that an existing record is updated by the BDT is the MAINTUPDTID field is populated with BDT_ParticipantID, for example BDT_ACTEWNGY. The record's MAINTCREATEDT and MAINTUPDTDT are not affected.

All new records are created with a Start Date equal to the date prior to the date when the BDT was run and have a MAINTUPDTID value of BDT_ParticipantID. The MAINTCREATEDT for new records is the processing date and time.

The only records suitable for update by the BDT are ones associated with NMIs where:

- All participants attached to the NMI are related at the time the update is processed.
- The NMI is Tier 1 at the time the update is processed.
- The past Settlement runs are not affected (the proposed data cannot replace existing data used in a Settlement run). For example, it is not possible to update the DLF or TNI code for any NMI, if for any of the period covered by the Start and End Date on the NMI record, there were active Datastream records.

Who can use BDT

The allowed Roles for updating data using the BDT is based on the same rules governing Change Requests (a combination of the Change Reason Initiation Rules and the Change Request Field Validation Rules).

While an LNSP can create a NMI, all associated Metering Installation (including register identifiers) and Datastream data, if subsequent data changes are required or if additional Metering Installation and Datastream records need creation, an authorised participant must submit them (such as, the MPB for Metering Installation data and the MDP for Datastreams).

Operation

AEMO operates the BDT upon receipt of a request for update and a data file from participants. This is different from the Change Request process where participants control the change.

To request a BDT update:

1. Place an aseXML file with the standing data updates or inserts in your Participant Inbox.
2. MSATS generates an acknowledgement file.
3. When MSATS processes your file, it places a response file in your Participant Outbox.

For more BDT operation details, see [Technical Guide to Bulk Data Tool in MSATS](#).

Chapter 3 Participant CATS Transactions

This chapter describes participant CATS Transactions and guidelines for using them, including tips and common NMI Discovery search errors.

CATS allows participants to administer and transfer End-use Customer's Connection Points and their NMI information between participants. Creating and updating information about NMIs involves 4 types of Transactions:

1. Change Requests (on page 42)
2. Notifications (on page 70)
3. Objections (on page 82)
4. Requests for Data Transfer (on page 92)

CATS also includes NMI Standing Data Management:

1. NMI Discovery (on page 94)
2. NMI Master (on page 102)
3. Report Requests (see [Guide to MSATS Reports](#))

Change requests

The most significant Transaction is the Change Request used by participants to submit or update CATS Standing Data.

Participants use Change Requests to interact with MSATS for some or all aspects of information regarding a Consumer's Connection Point, including:

- The names and Roles of companies (Participant IDs) providing a Connection Point service to a Consumer.
- The technical details associated with the Consumer's Metering Installation.
- The specific information assisting Retailers to provide competitive offers to End-use Consumers.

Change requests include:

- Names and relationships of participants having Roles associated with the NMI.
- Standing details required to support:
 - The Profile Preparation Service (PPS)
 - Basic Meter Profiler (BMP)
 - Data Aggregation
 - Settlement.
 - NMI Discovery.
 - Metering Register with metering installation data.

The Transaction types required to create and manage Change Requests are:

- Change request
- Change withdrawal
- Objection
- Objection withdrawal

Change request rules

A Change Request:

- Can only have one NMI in relation to the Change Request but can have multiple NMI suffixes and multiple Meter Serial IDs.
- Is wrapped in an aseXML message format, capable of accommodating more than one Change Request. For details, see [aseXML Guidelines](#) on [AEMO's website](#).
- Can only be assigned one DLF Code.
- Is Initiated for an event using one of the Change Reason Codes on page 174.
- Has a set of CATS Standing Data items varying with the selected Change Reason Code.

Change request life cycle

A Change Request is a temporary Transaction going through a life cycle starting when it is created (Initiated) and ending when it is terminated (Completed). The completion of a Change Request and the formation of a NMI Master Record occur simultaneously.

The basic life cycle is:

1 Initiating participant

- Creates the Change Request specifying the data to change and when

2 MSATS

- Notifies other involved parties of the change details

3 Involved parties

- Can submit an Objection, otherwise the Change Request progresses

4 MSATS

- If an objection occurs, MSATS notifies involved parties, including the Initiator, according to the Change Request Status Notification Rules

5 Objecting party

- Can withdraw it before a specified number of days and the Change Request completes

6 MSATS

- If parties do not withdraw, after the Objection period passes, MSATS cancels the Change Request

Change request status

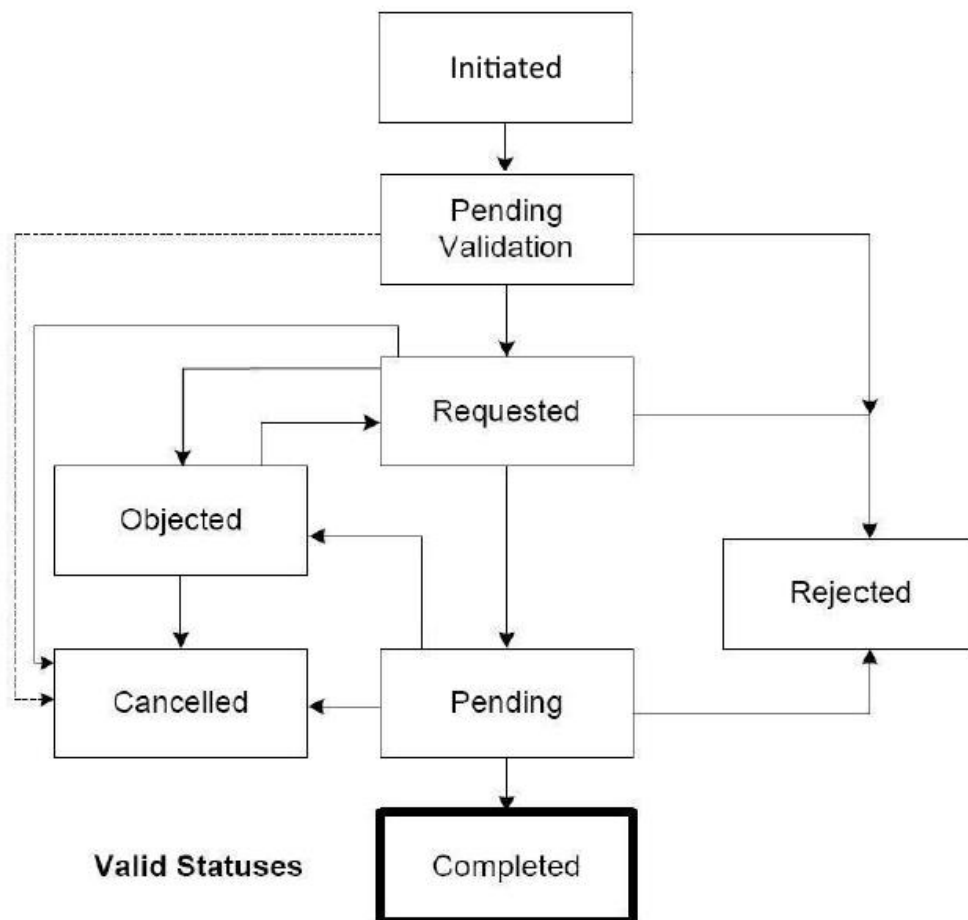


Table 3 Change request statuses

Code	Description	Notes
PVAL	Pending Validation	<p>The Transaction passed Checksum Validation.</p> <p>If the change request is awaiting missing data, MSATS updates the Proposed Change Date and Initiator when it receives the missing data</p>
REQ	Requested	<p>MSATS has sent Notifications.</p> <p>MSATS has all data required to initiate the Transaction</p>
PEND	Pending	<p>The Transaction has passed the objection period and is either:</p> <ul style="list-style-type: none"> - Awaiting final details before it can complete - Awaiting arrival of the Proposed Change Date
OBJ	Objected	<p>MSATS has received an objection and the transfer is suspended until the Objection is either:</p> <ul style="list-style-type: none"> - Withdrawn - The objection period lapses (MSATS cancels the Change Request)
CAN	Cancelled	<p>Cancellation reasons:</p> <ul style="list-style-type: none"> - The proposed new retailer is deregistered as a result of a RoLR event (the RoLR process cancels in-progress Change Requests for that Retailer) - A nominated number of days have passed since MSATS received Objections and they are not withdrawn - The initiator of the Change Request has withdrawn it
COM	Completed	<p>Completion reasons:</p> <ul style="list-style-type: none"> - There are no outstanding Objections - The Proposed Change Date is either reached or passed - All data MSATS was awaiting, e.g. an Actual Change Date from an MDP is delivered
REJ	Rejected	<p>Rejection reasons:</p> <ul style="list-style-type: none"> - Does not pass all validation rules

Initiated status

Initiation is the first step in the creation of a new Change Request where the Initiating participant:

1. Selects the Transaction Type Code CR.
2. Selects the Change Reason Code most appropriately relating to the relevant event (see page 174).
3. Populates the Change Request with the data permitted by the selected Change Reason Code.
4. Submits the Change Request to MSATS, using one of the B2M interfaces.

Participant can withdraw a Change Request until the Change Request is in Completed status.

Pending validation status (PVAL)

PVAL:

1. Commences when the Change Request passes initial MSATS validation.
2. Finalises after the Change Request has either:
 - a. Accepted: All required data is submitted.
 - b. Rejected: Data is missing or inaccurate.

Rejected status (REJ)

The Rejected (REJ) status occurs when a Change Request fails validation, either:

1. In Pending Validation status.
2. In Completed status. In rare circumstances where a change to data was made after this Change Request was submitted, making this change invalid.

Requested status (REQ)

The Requested status occurs when a Transaction is validated, for example:

1. There is no missing data.
2. The Objection Logging Period and Objection Clearing Periods are over.

Objected status (OBJ)

The Objected status occurs when one or more Objections are received:

1. Event notifications are sent to the relevant parties with details of the Objections.
2. The status changes to:
 - a. Requested: When the last Objection is withdrawn, and the Objection Logging Period has **not** expired.
 - b. Pending: When the last Objection is withdrawn, and the Objection Logging Period **has** expired.
 - c. Cancelled: When the Objection Clearing Period **has** expired and an Objection, subject to the Objection Logging Period is **not** withdrawn.

Pending status (PEND)

The Pending status:

1. Occurs when no Objections are received, or all Objections are withdrawn, and the Objection period passes.
2. Remains while any required data remains outstanding, or an Objection, not subject to the Objection Logging Period is **not** raised.
3. Changes to Completed if the Proposed Change Date is reached and all required data is present.

Completed status (COM)

The Completed status occurs when a Change Request:

1. Is Pending, the Proposed Change Date is reached, and all required data is present.
2. Is Objected, if:
 - a. No Objections are received, the Objection Logging Period has ended, and an Actual Change Date exists.
 - b. Objections are received, all Objections are withdrawn, the Objection Logging Period has ended, and an Actual Change Date exists.
3. Is simultaneous with the formation of a NMI Master Record and is effective from the Actual Change Date.

Cancelled status (CAN)

The Cancelled status occurs when:

1. The initiator of the Change Request withdraws the Transaction
2. MSATS cancels the Change Request because:
 - a. Not all Objections are withdrawn at expiry of the Objection Clearing Period.
 - b. It is in Pending status longer than seven months from the date of initiation.
 - c. A Type 2 Concurrent Transfer scenario applies.

Change request role status

The status of each Role on the NMI Master Record is classified as Current. If the Change Request to CATS Standing Data is a Role, the status of the Role is changed to New.

Change request example

To demonstrate the generic steps of a Change Request, this example uses the Change Reason Code 1000 Change of Transaction, editing the Participant Role Relationship (other categories cannot be changed for the Change Reason code 1000).

As shown in Steps 6 and 7 in Figure 11 on page 51, depending on the Change Reason Code used (see page 174), there are five categories of information (see page 102):

1. Participant Role Relationships
2. NMI Standing Data
3. NMI Datastream
4. NMI Meter Register
5. NMI Register Identifier

For each category, a list of records displays on the Change Request Transaction. If they are for a particular category, they are already linked and cannot change.

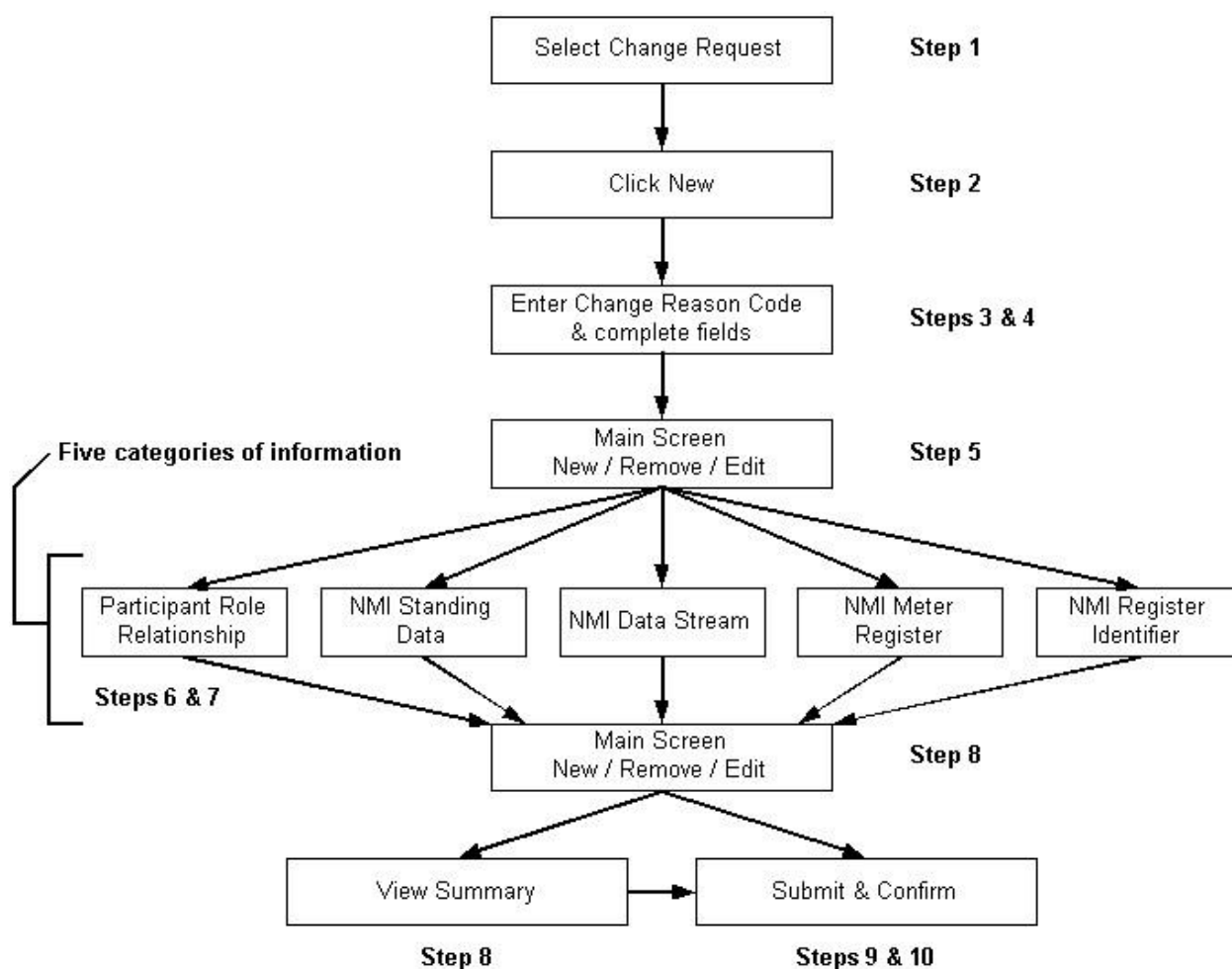
If the list is blank, participants must create new information records for the category so the Change Request can pass validation (see page 52).

A change request is not complete until all conditions are met:

1. The Proposed Date has passed.
2. The Objection Period has passed.
3. It does not have any active objections.
4. It is not waiting for an Actual Change Date from another party.

When all conditions are met, the Change Request moves to completed status and the new participant name displays as the FRMP.

Figure 11 Generic web portal change request steps



Change request errors

Table 4 below explains common Change Request errors and their possible explanations:

- The error number is the number returned in a Change Request response if a Transaction is submitted by Batch or Web Portal and fails validation.
- The error description is the message you see if you submit an invalid Change Request. It has some additional information identifying what caused the error. This additional information is not in Table 4.
- Table 4 does not include errors received from a NMI Discovery Search. If you receive an error that is not in Table 4 and require help, please contact the Support Hub (see details on page 219).

For more details about error codes, see page 181.

Table 4 Common errors and possible explanations

Number	Description	Possible explanation
1002	A duplicate row exists	<p>Check if you submitted the same data twice</p> <p>This may happen if, for example, you saved a Datastream, clicked the Back button on your browser, and then clicked Save again</p> <p>To see the duplicate entry:</p> <ol style="list-style-type: none"> 1. Return to the main screen 2. To change the data, click Edit
1101	Data fields provided are not valid for this Change Request	<p>Check the allowed fields have a Field Validation Data Source Code of RA or RQ (see page 182)</p> <p>To confirm allowed fields, check the Change Request Field Validation Rules on page 197</p> <p>Alternatively, check you entered a valid Change Reason Code (see page 174)</p>
1100	Invalid data on Change Request	<p>Check you entered a valid Embedded Network Code Identifier (CATS_EMB_NET_ID_CODES table)</p> <p>See page 179</p>

Number	Description	Possible explanation
1109	Invalid NMI Classification Code	<p>Check for a valid NMI Classification Code (CATS_NMI_CLASS_CODES table) or the Start Date for the NMI Classification Code is after the Proposed Change Date on the Change Request (see page 185)</p> <p>You also see this message if you try to change the Jurisdiction on the NMI and the NMI's Start Date is more recent than the Proposed Change Date on the Change Request</p>
1111	Invalid TNI Code (or similar, e.g. DLF Code)	<p>Check for a valid TNI Code (CATS_TNI_CODES table) or the Start Date for the TNI Code is after the Proposed Change Date on the Change Request</p>
1113	Invalid Jurisdiction Code	<p>Check if you entered an invalid Jurisdiction Code or a Jurisdiction Code with a Start Date after the Proposed Change Date on the Change Request</p> <p>You also see this message if you try to enter a Change Request where the Proposed Change Date is prior to the Start Date on the NMI</p>
1120	Invalid Participant ID	<p>Check if you nominated a participant in a Role they are not entitled to perform, either because:</p> <ol style="list-style-type: none"> 1. They are not valid for that Role 2. They were not valid for that Role for the period covered by the Change Request 3. The Participant ID you entered is not valid 4. The name you entered is not in UPPER CASE <p>See Role ID Codes (CATS_PARTICIPANT_ROLES table) on page 190</p>
1121	The participant is not valid for the given Role	<p>Check if the participant you nominated is valid for the Role.</p> <p>See Role ID Codes (CATS_PARTICIPANT_ROLES table) on page 190</p>
1122	TNI Code required for the NMI (or similar)	<p>Check if the Proposed Change Date is prior to the Start Date of the NMI</p> <p>This message is also sent if you try to remove the TNI Code from a NMI</p>
1133	Date period causes a gap in the NMI Master Record	<p>Check if you tried to make a Retrospective Change and supplied an End Date prior to the Start Date of the NMI</p>

Number	Description	Possible explanation
1134	Date period causes a gap in the records in the CATS_METER_REGISTER table	The End Date must be the Day before, on, or after, the Start Date
1135	Date period causes a gap in Roles	
1144	NMI not found for the Datastream	<p>Check the NMI Status Code is not D or X</p> <p>You must activate this NMI (i.e., change its NMI Status Code to A) before you can update any Datastreams</p> <p>You can activate a NMI using a Change Reason Code such as 5051 (see page 174)</p> <p>This Change Request must complete before you can create the Change Request to update or create the Datastream</p>
1146	Meter Serial ID must exist for Meter	<p>Check the Meter Serial ID you are updating the Next Scheduled Read Date for exists for this NMI</p> <p>You can request a NMI Master report or you can use the NMI Master Search</p>
1147	Metering Installation Type Code must exist for Meter	<p>Check you are not creating a record without specifying a Metering Installation Type Code, see page 183</p> <p>Check you are updating a valid Meter Serial ID</p> <p>If invalid, create the record using CR 3001 or CR 3000, see page 174</p>
1148	Invalid Profile Name for NMI's Jurisdiction	Check you assigned a valid Profile Name to a Datastream in the Jurisdiction where this NMI is located
1149	ADL must be less or equal to 2000 for NMIs with NMI Classification Code of SMALL	<p>Check if you are changing the Average Daily Load (ADL) on a NMI having a NMI Classification Code of SMALL and your value is greater than or equal to 2000, see page 185</p> <p>MSATS has a validation designed to ensure ADLs are reasonable</p>
1151	Not all required fields have been entered. Please ensure all fields have been completed	<p>Check you completed all required fields for the selected Change Reason Code, see page 197</p> <p>You must supply all fields on a Change Request where the Field Validation Data Source Code is RI, see page 182</p>

Number	Description	Possible explanation
1150	Initiating Participant is not an active CATS Participant	The participant submitting the Change Request is not active for the period of the Transaction
152	Initiating Participant is not a valid initiator of the Transaction.	<p>Check if you tried to initiate a Transaction where you are not a valid Initiator</p> <p>If this is a Change Request initiated by a Current Role (e.g. CR 4001), check:</p> <ol style="list-style-type: none"> 1. You are the valid participant for the Role for the period covered by this Change Request 2. The NMI exists in MSATS (If this is a Change Request initiated by the Current participant and the NMI does not exist, you get this message because MSATS cannot find the Current Participant) 3. The Proposed Change Date is after the Start Date of the NMI <p>If this is a Change Request initiated by a New Role (e.g. CR 2001), check:</p> <ol style="list-style-type: none"> 1. The Participant ID can act in the specified Role 2. The proposed participant for this Role goes back as far as the Proposed Change Date on the Change Request 3. You nominated yourself in the initiating Role
1153	Date is not in the past	Check the date entered is for a Retrospective Change
1154	NMI does not match NMI on original Change Request	<p>Check if you are trying to change an existing Change Request but the NMI you supplied is not the NMI on the original Change Request.</p> <p>If you supply an ID on a Change Request identical to an existing Change Request, MSATS assumes the Transaction is a change to the existing Change Request.</p> <p>Another possible reason is the NMIs match, but the request ID specified does not match the ID of the existing Change Request</p>
1156	NMI and NMI Checksum do not match	Check the NMI is valid
1157	Original Change Request is not found or is not active	<p>Check you supplied a valid ID on a Change Request</p> <p>Is it a CR 1500 or a change to an existing Change Request? The existing Change Request will confirm the correct ID</p>

Number	Description	Possible explanation
1160	Date is not within the allowed number of days.	<p>Check the Proposed Change Date is not too far in the past for a Retrospective Change or too far into the future for a Prospective Change</p> <p>Check the maximum allowable number of days (expressed in Business Days) in the Time Frame Rules for the Change Reason Code</p> <p>If it is a Retrospective Change, it is the Retrospective Period</p> <p>If it is a Prospective Change, it is the Prospective Period</p> <p>See page 202</p>
1168	No Jurisdictional Rules found for Change Request, NMI Classification Code	<p>Check the Change Request you are creating is valid for the NMI's Jurisdiction and NMI Classification Code</p> <p>If you are changing the Jurisdiction or NMI Classification Code you must check an entry exists for the new Jurisdiction Code or NMI Classification Code along with the Change Reason Code in the Jurisdictional Parameters, see page 198</p>
1169	Date submitted should not be in the past for this type of Change Request	Check the Prospective Change Date, you can enter tomorrow's date at the earliest
1172	Metering Installation Type Code does not exist	<p>Check if you are submitting a Prospective Change for a Change of Retailer (e.g. CR 1000 or CR 1030) and there is no Meter record for this NMI</p> <p>You can contact the Current MPB to arrange for its creation or if it is permitted in the Jurisdiction, you can wait until after the Proposed Change Date and then submit a Retrospective Change Request</p>
1178	Attempting to create a NMI that already exists	Check if you are using one of the Change Reason Codes for creating NMIs (i.e. CR 2000, CR 2001, CR 2020, CR 2021, CR 2500, CR 2501, CR 2520 and CR 2521)

Number	Description	Possible explanation
1179	Attempting to edit a NMI that does not exist. For example: NMI: 1000999900 CR 1000	<p>Check you are using one of the Change Reason Codes used to create NMIs: CR 2000, CR 2001, CR 2020, CR 2021, CR 2500, CR 2501, CR 2520 and CR 2521</p> <p>The NMI entered in the example: 1000999900 does not exist but you cannot use the Change Reason Code CR 1000 to create NMIs</p> <p>Check you entered the correct NMI. If yes, contact the relevant LNSP and arrange for the LNSP to create the NMI</p>
1198	Meter Register Status Code must be either C, R or D	Check the Meter Register Status Code is valid for the Change Request, see page 183
1280	No participant exists from whom data is to be requested for this NMI	<p>Check if the NMI exists in MSATS</p> <p>You entered a Change Reason Code having some RQ fields in its Field Validation Rules. RQ fields send a Data Request if there is missing data for the NMI</p> <p>In this case, because there is no NMI, MSATS can't find a participant in the Role to send the Data Request so instead sends this error message</p> <p>Also check, if you tried to transfer a NMI from a date prior to the Start Date of the NMI because, for this period, there is no valid participant</p>
5026	NMI extinct	<p>Check if you submitted a transfer request for a NMI with a NMI Status Code of X</p> <p>The only valid NMI statuses for transferring a NMI are G, D, N or A</p>
5028	CAN – The change dates for this Change Request conflict with another CR 1000 series Change Request in the system	<p>Your Change Request is cancelled because there is a concurrent transfer (for details, see the MSATS Procedures: CATS Procedure Principles and Obligations)</p> <p>In a Type 2 situation it means another participant submitted a Change Request to transfer Retailers with a date range matching or overlapping yours, so your Change Request is Cancelled. This can happen at any stage of the Change Request Lifecycle</p>

Number	Description	Possible explanation
5029	REJ – The change dates for this Change Request conflict with another CR 1000 series Change Request in the system	<p>Your Change Request is rejected because there is a concurrent transfer (for details, see the MSATS Procedures: CATS Procedure Principles and Obligations)</p> <p>In a Type 1 situation it means you have previously submitted a Change Request for this NMI that hasn't reached COM status, so your subsequent Change Request is Rejected</p> <p>In a Type 2 situation it means an existing Change Request from another participant exists with a date matching or overlapping yours, so your Change Request is Rejected</p>
5032	CAN – Change Request has been cancelled	MSATS has automatically Cancelled your Change Request because it remained incomplete longer than 7 months
5036	Invalid combination of Change Reason Code for Read Type Code	<p>Check if your transfer request has an invalid Change Reason Code and Read Type Code</p> <p>For example, you may have submitted a Retrospective Change with a Read Type Code of NS (Next Scheduled Read Date) or you may have submitted a Prospective Change with Read Type Code of PR (Previous Read)</p>
5038	FRMP cannot be Current FRMP	Check if you are transferring a NMI to a participant where the Participant ID is the current FRMP in the CATS_NMI_PARTICIPANT_RELATIONS table
5039	MDP cannot be Current MDP	<p>Check if your nominated MDP is the same party as the Current MDP</p> <p>You only nominate the MDP if it is changing from the Current MDP</p>
5041	Invalid Transaction. Must nominate at least one of New MDP, MPB or MPC	<p>Check if you have nominated the Roles you want to update</p> <p>You are required to nominate the New MC and at least one of either the New MDP, New MPB, or the New MPC</p>
5042	The LR for a Child NMI must be the FRMP of the Parent NMI	Check if you are changing the LR on a Child NMI not matching the Participant ID assigned as the Parent FRMP

Number	Description	Possible explanation
5044	The minimum mandatory data must be populated	Check you provided all mandatory data
5045	The Change Request initiator must be a Current Participant	You are not the Current Participant assigned to the Role required to submit this Change Request
5046	The Change Request must only be used on NMIs in the status of <status>	Check if you are submitting a Change Request for a NMI with an invalid NMI Status Code
5059	MDM Contributory Suffix is mandatory	You did not provide the MDM Contributory Suffix in the Change Request or at the completion of the Change Request
5060	Network Tariff Code is mandatory	You did not provide the Network Tariff Code in the Change Request or the result of completion of Change Request results in the Network Tariff Code as null
5120	No NMI range is assigned for the Participant ID	You tried to create a NMI when there is no NMI range assigned to you
5121	NMI falls within an excluded NMI range	You tried to create a NMI from an excluded NMI range.
5122	Proposed NMI is outside the allocated NMI range for the Participant ID	You tried to create a NMI outside the allocated NMI range for your Participant ID.
5047	Meter Serial ID does not exist	Check the Meter Serial ID exists
5048	Register ID does not exist	Check the Meter Register record exists
5049	Datastream does not exist	Check the Datastream exists
5050	The Change Request must be used to remove at least one Meter with a Meter Register Status Code of current or remotely disconnected	To remove a Meter, check the Meter Register Status Code is C or D

Number	Description	Possible explanation
5051	The Change Request must be used to create at least one Meter with a Meter Register Status Code of current	To create a Meter, check the Meter Register Status Code is C
5052	The Change Request must be used to remove at least one Register ID with a Meter Register status code of current	To remove a Register ID, check the Meter Register Status Code is C
5053	The Change Request must be used to create at least one Register ID with a Meter Register Status Code of current	To create a Register ID, check the Meter Register Status Code is C
5054	The Change Request must be used to deactivate at least one Datastream with an existing Datastream Status Code of active	To make a Datastream inactive (I), check the Datastream Status Code is A
5055	The Change Request must be used to create at least one Datastream with a Datastream Status Code of active	To create a Datastream, check the Datastream Status Code is A

Actual change date

The change is effective from the Actual Change Date. A Change Request Initiated to create a NMI uses the Proposed Change Date to populate the Actual Change Date allowing the Change Request to complete.

Change request completion

Providing MSATS does not receive Objections and an Actual Change Date exists it completes the Day after the Objection Logging Period ends.

If MSATS receives an Objection it completes the Day after all Objections are withdrawn, the Objection Logging Period has ended, and an Actual Change Date exists.

Change of retailer

MSATS does not notify the LR at the time a change of FRMP occurs.

Standing data requirements for a Tier 2 Site

If a retail transfer Change Request is complete and an End-use Customer has transferred to a second tier Retailer (such as, the FRMP is not equal to the LR):

- The LNSP or the ENM in the case of Child Connection Points, must ensure the NMI Status Code is A.
- The MDP must ensure there is a Datastream with a Datastream Status Code of A covering the period from the date of the retail transfer.
- If the Datastream Status Code is A, the MDP must submit Metering Data to MSATS regardless of the Site status.

NMI creation

After a NMI is created, and prior to the Actual Change Date:

- The Meter(s) and default NMI Datastreams may be set up by whoever is nominated as the default party, even if it is a Tier 1 Site NMI and not needed for profiling (according to Jurisdictional requirements).
- If a Datastream is not set up, the entry of the NMI into MSATS is not delayed.

Retrospective change requests

For a Retrospective change, the Proposed Change Date must be either:

1. The date the Change Request is raised.
2. The date in the past and within the number of days allowed by the Time Frame Rules, Change Reason Code, and NMI Classification Code on the Change Request.
The maximum number of days is the value stored in Retrospective Days.

Retrospective changes with an end date

If you want to make a Retrospective Change, applying to a specific period, you **must** enter a date for the ActualEndDate, so the change doesn't overwrite current values.

This scenario describes a common Retrospective Change problem:

1. A NMI with an inactive Datastream is transferred to a New FRMP from 04 April 2002. The NMI is now Tier 2 so you must change the Datastream Status Code from I to A.
2. The MDP activates the Datastream from 01 April 2002. Assuming the NMI's Start Date was 22 December 2001, the CATS_NMI_DATA_STREAM table look like Table 5 on page 63.

3. The MDP's Change Request made the original record redundant (MaintActFlg = I) and created two new records to replace it.
4. Realising the error, the MDP creates another Transaction to make the Datastream Status Code Inactive (I) from 01 April 2002 until 03 April 2002.
5. Table 6 below displays what happens to the CATS_NMI_DATA_STREAM table once the Change Request completes, if the MDP submitted a Change Request to make the Datastream Status Inactive from 01 April 2002 and **NOT** put in an ActualEndDate. As you can see, this change does not give the correct result.
6. To fix the problem using the data in Table 5 below, the MDP must submit a Change Request with a ProposedDate of 01 April 2002 and an ActualEndDate of 03 April 2002. This change results in the correct result, see Table 7 on page 64.

Table 5 CATS_NMI_DATA_STREAM table with incorrect data

NMI	Suffix	Datastream status	Start date	End date	MaintActFlg
1XXXXXXX11	11	I	22-Dec-2001	31 Dec 9999	I
1XXXXXXX11	11	I	22-Dec-2001	31 Mar 2002	A
1XXXXXXX11	11	A	01-Apr-2002	31 Dec 9999	A

Table 6 CATS_NMI_DATA_STREAM table with more incorrect data

NMI	Suffix	Datastream status	Start date	End date	MaintActFlg
1XXXXXXX11	11	I	22-Dec-2001	31 Dec 9999	I
1XXXXXXX11	11	I	22-Dec-2001	31 Mar 2002	A
1XXXXXXX11	11	A	01-Apr-2002	31 Dec 9999	I
1XXXXXXX11	11	I	01-Apr-2002	31 Dec 9999	A

Table 7 CATS_NMI_DATA_STREAM table with correct data

NMI	Suffix	Datastream status	Start date	End date	MaintActFlg
1XXXXXXX11	11	I	22-Dec-2001	31-Dec-9999	I
1XXXXXXX11	11	I	22-Dec-2001	31-Mar-2002	A
1XXXXXXX11	11	A	01-Apr-2002	31-Dec-9999	I
1XXXXXXX11	11	I	01-Apr-2002	03-Apr-9999	A
1XXXXXXX11	11	A	04-Apr-2002	31-Dec-9999	A

Prospective change requests

For a Prospective change, the Proposed Change Date must be either:

1. The Day following the date when the Change Request is submitted
2. A date after the Change Request is submitted.

The maximum number of days for a Prospective change depends on the Time Frame Rules, Change Reason Code, and NMI Classification Code for the relevant Change Request. The maximum number of days is the value stored in Prospective Days.

Change request withdrawal

The Initiating participant can Cancel (withdraw) a Change Request at any time prior to Completion. The status is then changed to cancelled (CAN) and other parties are informed according to the applicable Change Request Status Notification Rules.

Participants cannot withdraw a Change Request if it is in Completed (COM), Cancelled (CAN), or rejected (REJ) status.

Concurrent retail transfers

Concurrent retail transfers are where there is more than one change of Retailer for a NMI at the same time. There are two types of concurrent retail transfers, Type 1 and Type 2.

Streamlined change requests

MSATS includes a category of streamlined Change Requests (see Table 8 on page 66), only used with Tier 1 NMIs. Tier 1 NMIs are NMIs where, for the whole period covered by the Proposed Change Request, the FRMP, and the Local Retailer are the same participant.

Streamlined Change Requests do not have Notification rules. It is the responsibility of the Initiating participant to ensure all related participants are advised of the change.

If someone tries to submit a Change Request for a NMI not meeting these business rules the Change Request is Rejected.

Table 8 Streamlined change requests

CR code	Description
2003	Create NMI Details – Retrospective
3003	Create Meter Details – Retrospective
3053	Change Meter Details – Retrospective
4003	Create MDM Datastream – Retrospective
4053	Change MDM Datastream – Retrospective
5053	Change NMI Details – Retrospective

Type 1 Concurrent Retail Transfers

Type 1 is where **the same FRMP** submits more than one Change of Retailer Change Request for the one NMI. MSATS:

1. Identifies type 1 concurrent retail transfers and the FRMP initiating the Change Requests.
2. Rejects the newly submitted Change Request and sends a Change Request Notification to the initiating FRMP with the reason for the rejection.
3. Retains the existing Change Request which is unaffected and still active.

Type 2 Concurrent Retail Transfers

Type 2 is where **more than one FRMP** submits a Change of Retailer Change Request for one NMI. MSATS:

1. Identifies type 2 concurrent retail transfers and the FRMPs initiating them.
2. Rejects the newly submitted Change Request and sends a Change Request Notification to the initiating participant with the reason for the rejection.
3. Cancels the existing Change Request to the Retailer and sends a Change Request Notification with the reason for the cancellation to all parties related to the Change of Retailer Request (in line with normal notifications, such as: FRMP, MDP, MC etc).

Affected FRMPs

1. The affected FRMPs determine the reason for the concurrent retail transfers and investigate who is the preferred FRMP for the End-use Customer, consistent with relevant Jurisdictional requirements.
2. The preferred FRMP initiates a single valid transfer Change Request.

Editing change requests

MSATS web portal change request edit

To edit a Change Request in the MSATS Web Portal:

1. Find the Change Request.
2. Next to the Change Request, in the **Actions**, click **Edit**.

How MSATS handles the edited change request

When MSATS detects an edit to an existing Change Request, it does the following:

1. Creates a new Change Request (with a new Request ID) containing:
 - a. Data in the original Change Request.
 - b. Data in the new Change Request.

If you supply data in the new Change Request also in the original one, MSATS replaces the old value with the new value.

If you supply different data in the new Change Request not in the original one, MSATS includes the additional data in the new Change Request.

Cancels the original Change Request.

2. Cancels the Change Request you submitted.
3. The new Change Request status is set to REQ and the Objection Logging Period begins again (the edited Change Request starts its life cycle again).

API and batch change request edit

To edit a Change Request submitted by API or Batch:

1. Withdraw the initial change request.
2. Submit a new change request.

For more details about editing a Batch Change Request, see page 30.

Editing the proposed date

Most Change Requests require a Proposed Change Date. The only exception is a CR1500 where only the ActualChangeDate is supplied.

After checking for a valid date, MSATS either:

1. Copies the value in the ProposedDate field to the ActualChangeDate field.
2. If the Field Validation Rules state another participant must supply the Actual Change Date, it sends a Data Request.

This processing is part of the Change Request's initial validation. If, when you edit a Change Request you change the Proposed Date, MSATS replaces the new value you supplied in the Proposed Date field.

Change request with a data request

If the Change Request sent a Data Request, the Actual Change Date is still determined by the date supplied by the MDP, so your change to the Proposed Change Date does not have an effect.

If you need to change the Proposed Change Date on a Change Request still in progress and the Change Request does not send a Data Request to the MDP, you must withdraw the original Change Request and submit a new one:

- No delay is caused because editing a Change Request restarts the Objection Logging Period
- It ensures the ActualChangeDate is what you intend.

Change request without a data request

If the Change Request did not send a Data Request (for example, CR1020) the original Proposed Change Date is copied into the ActualChangeDate field. Changing the Proposed Change Date does not affect the original Actual Change Date.

You cannot edit the ActualChangeDate because it is not an editable field. So, even though you as the initiator, changed the Proposed Change Date, the Actual Change Date remains the same.

Rejection

Rejection reasons

The most common causes for rejected Transactions are:

- Invalid data fields in Change Requests.
- Change Requests are missing mandatory field data.
- The participant initiating a Change Request is not a valid initiator of the Transaction.
- Attempting to create a NMI already existing
- Change Requests are missing mandatory field data.

When you submit a Change Request:

1. It goes through several validations (like the MSATS Web Portal validations when you click Submit) to check if it is valid.
2. You receive an ACK file and a Change Request Response confirming the file passed validation.
If MSATS rejects it, the reason for the rejection is communicated in the Change Request Response. For details, see page 92.

Rejection avoidance

How to avoid rejected Transactions:

- Ensure Change Request Field Validation Rules are applied (see page 197).
- In a Change Request, only include fields having a Field Validation Data Source Code of RI or OI.
- Complete all mandatory fields (RI fields).
- Ensure you are a valid Initiator of a Transaction from at least the Proposed Change Date on the Change Request. Valid Initiators are:
 - **Current Role:** If it is initiated by a participant in a Current Role, the participant must have been in that Role for the period covered by the Change Request (for example, from at least the proposed date on the Change Request).
 - **New Role:** If it is initiated by a participant in a New Role, the participant must be in that Role at least from the proposed date on the Change Request.
- You can only use Codes to create NMIs (for example, CR 2001 or CR 2500) if the NMI is **not** already in MSATS.
- Do not attempt to update Meter records that are not registered in MSATS. For example, a CR 3051 for a new Meter is rejected if it has no Metering Installation Type Code and no Meter Register Status Code.
- Ensure the Proposed Change Date for a Transaction is within the allowable number of days:
 - For a Retrospective Change, it must be between today and no further into the past than the Retrospective Period for the relevant Change Request.
 - For a Prospective Change, it must be between tomorrow and no further into the future than the Prospective Period for the Change Request.
- If you are updating a Meter record, ensure it is registered in MSATS.
- For a new Meter record (CR 3051), ensure the Metering Installation Type Code and the Meter Register Status Code are included.
- Ensure the Proposed Change Date for a Transaction is within the allowable number of days:

- For a Retrospective Change Request: between today and the Retrospective Period.
- For a Prospective Change Request: between tomorrow and the Prospective Period.

Finding why MSATS rejected your transaction

To find why MSATS rejected your Transaction, you run a **Data Replication (C1) Report** to obtain:

1. The Request and Transaction ID from the CATS_OUTBOUND_CHANGE_REQUESTS Table.
2. The rejection reason from the CATS_OUTBOUND_ERRORS table.

Obtain the request and Transaction ID

1. Run a Data Replication (C1) report for CATS_OUTBOUND_CHANGE_REQUESTS.

There is a limit to how many Transactions can return so it is important not to make the range too broad. To limit the number of search results:

- a. If you know the rejection date, enter it as the **Start** and **End Date**.
- b. Enter a **Time From** and **To** range.

Report - Data Replication Resynchronisation Report (C1)

Participant ID:	NEMMCO
Participant Name:	Australian Energy Market Operator Limited

Start Date (*) (dd-mmm-yyyy): **a** 1-Jul-2020 End Date (*) (dd-mmm-yyyy): 7-Jul-2020

Time From (hh:mm:ss): **b** 00:00:00 Time To (hh:mm:ss): 23:59:59

Tables (*): CATS_OUTBOUND_CHANGE_REQUESTS (PART Repl. Allowed) ▼

Report Last Sequence Number (*): 0

Maximum Rows: 200 ROWLIMITS: Minimum: 100 Maximum: 30000

Save **Clear**

2. When you receive the report, open it, and look for the **Request ID**.

For easy searching, extract the content from the zip file and copy it to a text editor such as Microsoft Word or NotePad++.

The content looks like the example below, where the Request ID is 4.

3. To find the rejection reason you need the **Transaction ID** which is under the Request ID. In the example below it is 29.

```
<ReplicationBlock tableName='CATSChangeResponses'>
  <Row xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance' xsi:type='ase:CATSChangeResponseRow'>
    <SequenceNumber>3</SequenceNumber>
    <CreationDate>2002-01-13T00:08:50+10:00</CreationDate>
    <MaintenanceDate>2002-01-13T00:14:00+10:00</MaintenanceDate>
    <RowStatus>A</RowStatus>
    <RequestID>4</RequestID>
    <NMI>1234567890</NMI>
    <Participant>XXXXXX</Participant>
    <InitiatingTransactionID>PTH-4038a-20020112000000-00</InitiatingTransactionID>
    <TransactionID>29</TransactionID>
    <Status>R</Status>
  </Row>
</ReplicationBlock>
```

RequestID

TransactionID

Obtain the rejection reason

1. Run a Data Replication (C1) report for CATS_OUTBOUND_ERRORS. Your request should look like this:

Report - Data Replication Resynchronisation Report (C1)		Participant ID:	NEMMCO
		Participant Name:	Australian Energy Market Operator Limited
Start Date (*) (dd-mmm-yyyy):	<input type="text" value="1-Jul-2020"/>	End Date (*) (dd-mmm-yyyy):	<input type="text" value="7-Jul-2020"/>
Time From (hh:mm:ss):	<input type="text" value="00:00:00"/>	Time To (hh:mm:ss):	<input type="text" value="23:59:59"/>
Tables (*):	<input type="text" value="CATS_OUTBOUND_ERRORS (PART Repl. Allowed)"/>		
Report Last Sequence Number (*):	<input type="text" value="0"/>		
Maximum Rows:	<input type="text" value="200"/>	ROWLIMITS: Minimum: 100 Maximum: 30000	
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

2. When you receive the report, open it, and look for the **TransactionID** you obtained above.

The rejection reason is under the TransactionID in the **Code** and **Explanation** tags (see Figure 12 on page 74). For other common errors, see page 71.

Figure 12 Find TransactionID

<ReplicationBlock tableName='CATSErrors'>	
<Row xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance' xsi:type='ase:CATSErrorsRow'>	
<SequenceNumber>2</SequenceNumber>	
<CreationDate>2002-01-13T00:08:50+10:00</CreationDate>	
<MaintenanceDate>2002-01-13T00:08:50+10:00</MaintenanceDate>	
<RowStatus>A</RowStatus>	
<TransactionID>29</TransactionID>	TransactionID
<Code>1101</Code>	
<Explanation>Data fields provided that are not valid for this Change Request Type.</Explanation>	
</Row>	
</ReplicationBlock>	

Editing a rejected change request

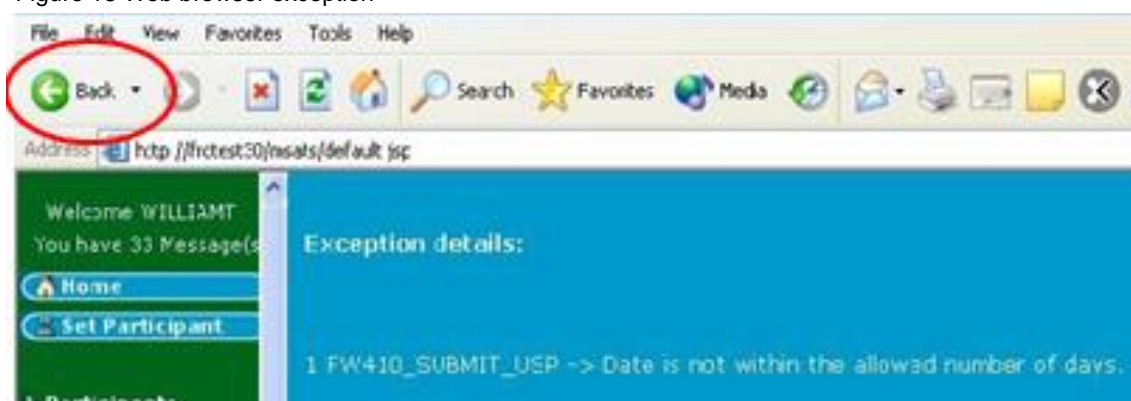
Occasionally, when you enter a Change Request in the MSATS web portal, it is rejected because, either:

1. The Proposed Change Date is not within the Prospective or Retrospective Period (see Figure 13 below).
2. The data in the Change Request is incorrect or missing.

To fix the error without having to re-enter the data:

1. In your browser interface, once only, click the **Back** arrow (see Figure 13 below).

Figure 13 Web browser exception



2. The Change Request – Main interface displays.
Do not click the Back arrow in the web browser or you lose your data. Click **Edit.**

- The Change Request – Edit interface displays. If required, edit the **Proposed Start Date** and click **Next**.

- The Change Request information displays, where you can edit any other required fields and click **Submit**.
- If the Change Request passes validation, MSATS accepts the Transaction. Otherwise follow these steps again to fix the error.

Notifications

Notifications occur when there is a change to the status of a Change Request or when an Objection is lodged or withdrawn. A Notification includes information about what is proposed to change or what has changed, in the case of a COM (complete) Notification.

Notifications are sent to relevant parties throughout the different stages of the Transaction process as determined by the notification rules. Current and new Roles are notified of a change in Change Request status according to the Notification Rules (see page 199).

Notifications are placed in your Participant Outbox regardless of how you created them (web portal or Batch). MSATS puts each Notification in a separate XML message in a separate .ZIP file. Participants can request outbound messages bundled by calling the Support Hub.

You can view Notifications in the web portal or download the .XML message from your Participant Outbox.

The process involves:

1. Determining who is notified.
2. Determining what is in the Notification.
3. Creating the Notification ready for distribution.
4. Keeping an audit trail of Notifications.

New parties

Notifications serve an important purpose for nominated new parties for an existing NMI who do not currently act in the Role. When the Notification for a status COM is sent to new parties, it includes the NMI master data required by the new party.

It includes all active records, (active historic and/or current), depending on the period covered by the Change Request. The reason for supplying this information is to make it easy for parties acquiring a new relationship to update their own systems with the NMI information.

New parties on a Change Request in certain roles (FRMP, LNSP, LR, MDP, MBP, and RP) receive these special notifications for the COM status. If the old and new parties are the same for a Role, the special Notification for the COM status is not sent.

Some Change Requests require the specification of the Role party, even the Role is not changing.

NMI master data in notifications

Generally, a Notification only includes information about:

- The Proposed change.
- For a COM Notification, what has changed.

For new parties nominated on a Change Request, Batch Notifications serve an additional purpose for an existing NMI. When the Notification for status COM (such as, Completed) is sent to the new parties, it includes all NMI master data for the NMI the new participant is entitled to. It can also include active Current and active Historical Data, depending on the period covered by the Change Request.

Supplying this information make it easy for new parties to update their own systems with all current NMI information they acquired a relationship with.

The NMI master data applies to Notifications for Roles: FRMP, LNSP (including ENSP), LR, MDP, MBP and RP. All Roles other than MPC or RoLR receive these special Notifications for the COM status when there is a change of Role.

If a participant is nominated in a new role on the Change Request but the same participant also occupies the existing role, the master data is not included. This is the case for Change Requests where a new MDP is specified but there is no change because it is the same party.

Batch notifications

A Batch Notification contains the same information as the MSATS Web Portal, except:

- The status shows on the initiating Notification only. The web portal shows all Notification status.
- Each Notification includes the Jurisdiction, NMI Classification Code, and Objection End Date.
- It is easier to determine if an Objection-related Notification is an Objection or Objection Withdrawal, because the <ObjectionAction> element contains **Raised** or **Withdrawn**.
- A Notification associated with an Objection includes the Objection date.

The COM Notification sent to participants nominated as new parties and who are new participants in that Role includes a complete set of the active NMI Master Records the participant requires for each of the master tables.

Batch submitted next scheduled read date

Updates to the Next Scheduled Read Date (NSRD) submitted by File Interface (Batch) (such as CRs 5070 or 5071) do not obey the CATS History Model (see page 18).

If a Meter's NSRD is updated by Batch, the current active record on the CATS_METER_REGISTER Table for the supplied Meter Serial on the Change Request is updated.

This is the existing Meter Serial record, where the:

- MaintActFlg = A and the EndDate = 31-Dec-9999.
- MaintUpdtDt is 31-Dec-9999.

This record is updated with the new NSRD but the MaintUpdtDt is not changed from the high date.

Batch next scheduled read date updates

Notifications to FRMPs and Change Request responses to MDPs for updates to Next scheduled read dates (NSRDs) submitted by Batch are sent out in batches of up to 500 at a time. If MSATS has more than 500 other Transactions in outbound tables awaiting sending to you, no NSRD Notifications or Change Request responses are sent.

You cannot identify how many Transactions MSATS has waiting to send you, but if your Participant Outbox remains full (for example, soon after you acknowledge a file, MSATS sends you another one), you can assume MSATS still has files to send you.

If your Participant Outbox is empty or has less than 30 catsm files, you can assume MSATS has no Transactions waiting to send you.

The processing to send these files is run every five minutes in three time blocks each Day (AEST):

Block	Time
1	4 am – 7 am
2	12 noon – 1 pm
3	9 pm – 11 pm

For example, if you submit NSRD updates at 08:00 Market time, the earliest you can expect to see the Change Request responses is midday.

Retrospective notifications

MSATS can also send Notifications to participants Retrospectively. If a participant selects a Retrospective Change Reason Code, the participants associated with the Change Request (such as, they held a current Role against the NMI during the Retrospective period) receive notifications.

In the example in Table 9 below, assuming:

- A Retrospective Change Reason Code is created with a Proposed Date of 12 March 2008.
- The active participants hold a relationship with NMI 6001000100.

Table 9 Retrospective notification example

Active participants	NMI	Role	Start date	End date	Flag	Explanation
FRMP1	6001000100	FRMP	1/7/2000	19/10/2008	A	FRMP1 receives the notification since it is the active FRMP at the time of the proposed change
FRMP2	6001000100	FRMP	20/10/2008	31/12/9999	A	If the Proposed Date changes to 5-Nov-2008, FRMP2 receives the FRMP notification for the current FRMP
LNSPLNSP	6001000100	LNSP	1/7/2000	31/12/9999	A	
LRLRLR	6001000100	LR	1/7/2000	31/12/9999	A	
MDPMDP	6001000100	MDP	1/7/2000	31/12/9999	A	

Notification role status

MSATS allows multiple participants to have a role status of Current against a NMI.

When a Notification or Objection rule is defined for Current on a Retrospective Change Reason Code, it means any current participants during the Change Request period. Allowing participants having no Current relationship with a NMI, but who did at the time of the change, to be notified and have the right to object.

The notification rule only applies if the Retrospective participant is still an Active participant in MSATS. If the Retrospective participant becomes Inactive, they do not receive the notification.

It excludes participants having a Current relationship with the NMI but had none at the time of the Retrospective change.

An active history record is maintained since the NMI began its existence because many MSATS Settlement operations, for example Revisions, occur a long time after the Settlement period.

Web portal notifications search

The web portal Notifications interface allows participants to search for Notifications and view their details. There is also a link to the related Change Request and Objections.

The screenshot shows the 'Notifications - Search' interface. On the left is a green sidebar with navigation links: Welcome, Owned By-NEMMCO, You have 0 Message(s), Home, Set Participant, Ombudsman, Participants, Transactions (with sub-links for Change Requests, Objections, Notification, Request for data, Bulk Updates), NMI Information, and Profile Preparation. The main content area has a blue header with 'Notifications - Search' and participant details: Participant ID: NEMMCO and Participant Name: Australian Energy Market Operator Limited. Below this is a search form with fields for Change Request ID, Change Request Status (dropdown), Role Being Notified (dropdown), NMI Range From (text), Notification Date (*) (dd-mmm-yyyy) (text), Notification Time From (*) (dropdown), and To (text). There are also 'Search' and 'Clear' buttons at the bottom.

Objections

A participant can raise an Objection to a Change Request according to:

- The Objection rules defining, for each Change Request type, which participant roles can object with which Objection codes.
- The Jurisdiction rules defining, the length of the Objection Logging and Clearing Periods.

The MSATS Web Portal > Administration > Rules Maintenance has a list of Objection Rules and Jurisdictional Parameters for each Change Request type.

Other participants are informed according to the applicable Notification Rules (see page 199). The ability to object to a Transaction is determined by the Objection Rules and Jurisdictional Parameters.

You can log Objections with Prospective and Retrospective Change Reason Codes. When a participant has the right to object in a Current Role, any participant acting in that Role for the period covered by the Change Request (such as, at the Proposed Date or Actual Change Date) may object.

If the change request has a proposed and end date, where both are in the past (updating active historic data only), it is possible the participant in the Current Role for that period may be a different participant.

More than one participant may be acting in the Current Role for any Change Request so MSATS allows multiple participants to have a role status of Current against a NMI.

For Table 10 on page 83 the NMI 6001000100 has two Active FRMPs assigned to it; PART1 and PART2:

- Only PART1 can object to any Retrospective Change Requests having a Proposed Date or “Actual Change Date of 1st July 2000 and End Date of 19th October 2001.
- Only PART2 can object to any Retrospective Change Requests having an Actual Change Date of 20th October 2001 and an End Date up to and including the present day or no End Date, in which case the change is assumed to apply into the future (the high date: 31/12/9999).

- Only PART2 can object to any Prospective change requests.
- Both PART2 and PART1 can object if the Proposed Date or Actual Change Date was before 20th October 2001 and the End Date was after 19th October 2001 or there was no end date because both are current FRMPs for the period covered by the proposed change.

The Objection Rules define, for each type of Change Request (Change Reason Code), which Participant Roles can object using the Objection codes, this includes the Role and the Role Status (a current or proposed role).

Each Objection submitted against a Change Request must meet certain criteria:

- Identify the related Change Request ID.
- Identify the participant making the Objection.
- Identify the Role the Participant is acting for.
- Provide an Objection Code

The Jurisdictional rules determine the length of the Objection period. You can only log an Objection within the Objection Logging Period for the Change Request.

Table 10 Current role relationships for NMI 6001000100

Participant ID	NMI	Role	Start date	End date	Active flag
PART1	6001000100	FRMP	1/7/2000	19/10/2001	A
PART2	6001000100	FRMP	20/10/2001	31/12/9999	A
PART3	6001000100	LNSP	1/7/2000	31/12/9999	A
PART4	6001000100	LR	1/7/2000	31/12/9999	A
PART5	6001000100	MDP	1/7/2000	31/12/9999	A

Objection summary

- You can log an Objection even if another party has logged a valid Objection.
- If a Change Request is in a status of Objected for a specified number of days, MSATS changes the status to Cancelled.
- If the Change Request status changes to Cancelled, MSATS retains the history.
- If the Change Request status changes to Cancelled, all parties receiving the original Notification (including the Initiator) are notified.

NOACC objection

NOACC Objection rules:

- Only MDPs can submit a NOACC code.
- It can move to PEND status. This is the only Objection code with this functionality.
- It does not recognise the Objection Logging Period.

Objection logging prerequisites

Before logging an Objection, you require the following information:

- The Change Request ID you are objecting to.
- The Objection status either: Requested or Objected.
- The Objection Logging Period must be open and current (not closed).
- You are acting in a Role allowing this type of Objection for the Change Reason Code.

For a new Objection, MSATS captures the information in Table 11 on page 85. For more details, see [CATS Procedure Principles and Obligations](#).

Table 11 Initial objection information

Field	Field code	Description
Participant Transaction ID	PARTTRANSACTIONID	Participant provided Transaction ID for each submitted transaction
Change Request ID	REQUESTID	The unique ID of the Change Request you are objecting to.
Objection Code	OBJECTIONCODE	The Objection code identifying the Objection reason
Role ID	ROLEID	The permitted Objection Role to object for the Objection Code.

Objection logging period

If there are no outstanding Objections to a Current Change of Retailer Transaction after the Objection Logging Period expires, the Change Request proceeds to Completed and the information in the Transaction becomes the NMI Master Record.

Objection validation

To ensure Objections comply with the MSATS rules, once it is logged it passes through validation. The Objection is not fully processed until it passes all validations.

For each Objection logged, MSATS validates:

- The Objection is linked to an active Change Request ID.
- The Change Request is within its Objection Logging Period.
- For Objections not subject to the Objection Logging Period, the Change Request is in a valid status: PEND, REQ, OBJ.
- The Role the participant is acting in.

- The participant is Active in MSATS.
- The Objection is not a duplicate of an existing Objection by the participant.
- An active Objection Code is supplied.
- The Objection Code is valid for the Role the participant is acting in.

According to the Objection rules in the **CATS Procedure Principles and Obligations**.

- The objection was received within the cut-off time allowed for Objections for this Jurisdiction and Change Reason Code.

According to the Jurisdictional Rules in the **CATS Procedure Principles and Obligations**.

Accepted objection

For an accepted Objection:

- MSATS updates the status of the Change Request to OBJ.
- MSATS sends XML notifications to participants in line with the Notification Rules. Usually the Initiator of the Objection, the Initiator of the Change Request, and other concerned parties.

Accepted objection response

The Objection Response Transaction for an accepted Objection has:

- **Information** in the Event severity element
- **0** (zero) in the Code element.

```

<?xml version="1.0" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r10" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:aseXML:r10
    http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">
- <Header>
  <From description="NEMMCO">NEMMCO</From>
  <To description="Energy Australia - Retailer">ENGYAUST</To>
  <MessageID>NEMMCO-MSG-22886169</MessageID>
  <MessageDate>2004-06-19T15:07:21+10:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>Medium</Priority>
  <SecurityContext>NEMMCOBATCH</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
- <Transaction transactionID="CATS-22886169" transactionDate="2004-06-19T15:07:21+10:00"
  initiatingTransactionID="OBJECT-001">
  <CATSObjectResponse>
  <ObjectID>19730</ObjectID>
  <Event severity="Information">
    <code>0</code>
  </Event>
  </CATSObjectResponse>
  </Transaction>
</Transactions>
</ase:aseXML>

```

Rejected objection

For a rejected Objection, MSATS:

- Does not update the status of the Change Request.
- Does not send Notifications to other parties.

Rejected objection response

The Objection Response Transaction for a rejected Objection has:

- An error code in the Event > Code element.

For help with error codes, see MSATS Web Portal > Administration > Codes Maintenance.

- An explanation explaining the rejection details.

```

<CA:5ObjectionResponse version="1.1">
  <ObjectionID>19733</ObjectionID>
  - <Event>
    <Code>1253</Code>
    <Explanation>PartTransID = OBJECT-001. ObjID = 19733. ObjCode = BADDEBT. RequestID =
      8332897. RoleID = FRMP</Explanation>
  </Event>

```

Objection notifications

- When MSATS receives an Objection, it notifies the Objection Initiator of acceptance or rejection by placing the Objection Response zip file in the Participant Outbox.
- MSATS sends XML notifications to other participants in line with the Notification Rules. Usually the Initiator of the Change Request and other concerned parties.

When MSATS sends a Notification for an Objection or Objection Withdrawal, along with the usual information, it has a section describing the Objection with:

- The Objection Role
- The Objection Code
- Objection date (the date MSATS received the Objection).
- The **ObjectionAction**: Raised.

```

- <Objection>
  <Participant>[REDACTED]</Participant>
  <ObjectionID>19730</ObjectionID>
  <ObjectionAction>Raised</ObjectionAction>
  - <ObjectionData>
    <InitiatingRequestID>8332897</InitiatingRequestID>
    <Role>FRMP</Role>
    <ObjectionCode>NOTRESP</ObjectionCode>
  </ObjectionData>
  <ObjectionDate>2004-06-19</ObjectionDate>
</Objection>

```


Objection withdrawal

The Initiating participant can withdraw their own Objection. Other participants are informed according to the applicable Change Request Status Notification Rules.

You can withdraw an Objection if:

- The provided Objection ID is valid.
- You are the Initiator of the Objection.
- The related Change Request is not cancelled.

If the objection withdrawal is valid, MSATS cancels the Objection and updates the Change Request status to Requested or it remain Objected if other participants have raised Objections still pending.

Change Requests having their status updated to Requested are updated during the Overnight Processing to Pending if the Objection Logging Period has passed.

Table 12 Objection withdrawal fields

Field	Field code	Description
Change Request ID	REQUESTID	The unique identifier of the Change Request relating to the objection
Participant Transaction ID	PARTTRANSACTIONID	The participant transaction identifier provided by the participant for each Transaction they submit
Participant ID	PARTICIPANTID	The participant ID of the participant initiating the withdrawal
Objection Code	OBJECTIONCODE	The objection code identifying the previously entered objection the participant wants to withdraw
Role ID	ROLEID	The Role permitted to object

Objection withdrawal notifications

After Objection withdrawal, depending on the Notification rules, participants are informed of the Objection withdrawal and the Change Request status. Usually, all participants receiving an Objected Notification receive the Objection Withdrawal Notification.

A web portal withdrawal receives immediate Notification on the interface, while a Batch withdrawal is acknowledged by an Objection Withdrawal Response in the participant's Outbox.

If the Objection withdrawal is successful, the participant withdrawing the Objection is notified of its success:

- If there are active objections, the Notification has an OBJ status.
- If all objections are cleared, the Notification has a REQ status.

The Notification includes an Objection section with the Objection details where the ObjectionAction is Withdrawn (see Figure 14 on page 91).

MSATS records an error and the Objection Withdrawal Response indicates the withdrawal is rejected if an Objection withdrawal request is not valid such as:

- The objection record does not exist.
- The withdrawing participant is not the Initiating party.
- The Change Request has an invalid status.

Figure 14 Withdrawn objection notice

```
- <Objection>
  <Participant>ENGYAUST</Participant>
  <ObjectionID>19734</ObjectionID>
  <ObjectionAction>Withdrawn</ObjectionAction>
- <ObjectionData>
  <InitiatingRequestID>8332897</InitiatingRequestID>
  <Role>FRMP</Role>
  <ObjectionCode>NOTRESP</ObjectionCode>
</ObjectionData>
  <ObjectionDate>2004-06-19</ObjectionDate>
</Objection>
```

Request for data transfer

In the [MSATS Web Portal](#) > [Transactions](#) > [Request for data](#) interface, you can search, view current and historical, and respond to requests for data transfer (RDAT).

The records you have access to in this interface are limited to your user rights.

Receiving an RDAT

You receive RDATs in your Participant Outbox. The information is in an XML message compressed in a zip file and the required data fields have NULL="TRUE".

To respond to an RDAT, in the MSATS Web Portal, click [Respond](#) (see Figure 15 on page 93). The Change Request – New screen displays where you select the Change Request type.

The Change Request type depends on the data request. The most common RDAT is to MDPs to provide the Actual Change Date for a Change of Retailer Transaction. The date you supply is normally the Actual Meter Read Date (CR1500) or for a new Interval Meter installation, the date it was National Electricity Rules (NER) compliant.

For help, see [Guide to MSATS Web Portal](#).

Where a proposed Transfer of Retailer Change Request does not have any register level Metering records or is missing data on an existing NMI record, an RDAT is also sent to the MPB. Before the Transfer of Retailer Change Request can complete, the MPB must submit a CR3001 or CR3000 to create register identifier details for the NMI.

Figure 15 Participant data requests

Participant Data Requests - View

Participant ID:

Participant Name:

Participant Data Requests - 8332645

Respond

Transaction ID:

16719482

Date:

4-Jun-2004

To:

Participant ID:

Role ID:

MDP

Request Information:

Participant ID:

Request ID:

8332645

Participant Transaction Code:

MSATS Training

NMI:

DCSS001133

Checksum:

8

XML:

XMLParticipantRequest:

<?xml version="1.0" ?>

<ase:aseXML xmlns:ase="urn:aseXML:r10"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="urn:aseXML:r10

http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">

<Header>

<From description="NEMMCO">NEMMCO</From>

<To description="Testing and Certification Austral MDP">TCAUSTM</To>

<MessageID>NEMMCO-MSG-22883966</MessageID>

<MessageDate>2004-06-04T11:38:31+10:00</MessageDate>

<TransactionGroup>CATS</TransactionGroup>

<Priority>Medium</Priority>

<SecurityContext>NEMMCOBATCH</SecurityContext>

<Market>NEM</Market>

</Header>

<Transactions>

<Transaction transactionID="CATS-22883966" transactionDate="2004-06-04T11:38:31+10:00">

<CATSDataRequest version="r7">

<Role>MDP</Role>

NMI discovery

A NMI (National Meter Identifier) is used for recording the energy usage for a specific consumer. Examples of consumers are houses, apartments and streetlights.

Using NMI Discovery you can identify a specific NMI for settlement, auditing, and discovery purposes:

1. End-use Customer's NMI and NMI Checksum if they cannot provide it.
2. Enough Standing Data about the NMI to provide a quote for the End-use Customer.
3. For NSPs or ENMs, confirm the details returned are correct as identified by the Change Request.

NSPs are restricted to performing NMI Discovery to those NMIs for which they have the LNSP Role, and ENMs are restricted to those Child NMIs where they have an LNSP Role.

The examples in this section use the MSATS Web Portal NMI Discovery, they assume you are familiar with the NMI Discovery interface.

Access to NMI data depends on the NMI Discovery Field Access Rules and the Search Key Rules. For details, see Rules on page 195.

There are three types of NMI Discovery:

1. [NMI Discovery Search 1 \(NMID1\)](#)

Find a NMI and the NMI Checksum using one or any combination of: End-use Customer's address, the address's DPID, or Meter Serial ID.

2. [NMI Discovery Search 2 \(NMID2\)](#)

Enter a NMI and NMI Checksum to obtain Standing Data about the NMI. The returned information assists new Retailers to prepare a quote for the End-use Customer.

3. [NMI Discovery Search 3 \(NMID3\)](#)

Find a NMI and Reason Code to obtain the details of the previous FRMP for the NMI.

Used when there is a transfer error and the current FRMP wants to revert the site to the previous FRMP.

Structured and unstructured addresses

MSATS supports two types of address formats:

1. Structured (based on an Australian Standard)
2. Unstructured

Most MSATS addresses are Structured, so when you search by address, use this format first. If MSATS cannot find a Structured address, it uses your values to search the Unstructured address fields.

NMI discovery search 1 – NMI discovery

This search is used to identify the NMI characters assigned to a Connection Point.

NMI discovery search 1 is only successful if information in MSATS supports one of the following options. Participants can use any, or all these options in the following order:

1. DPID
2. Meter Serial ID:

The state, locality, and postcode are not required.

If a NMI Master Record does not contain DPID or address information, the NMI search is only successful if a Meter Serial ID is provided.

3. Address (without DPID)

For step-by-step instructions about using the MSATS Web Portal NMI Discovery, see [Guide to MSATS Web Portal](#).

With this option, you must provide the state and locality (or state and postcode). You can provide either a Structured or Unstructured address:

- a. For the first level search, all input information is expected in the Structured format.
- b. If the first level search is unsuccessful, you can do a second search on Unstructured format.
- c. MSATS identifies a unique Metering Installation which can be co-located with a postal delivery point but there are instances where it has no postal delivery point, so MSATS allows either a Structured or Unstructured Address. The Unstructured Address does not contain state and postcode information.

Jurisdictions decide the search criteria. Currently, the rules are identical in each Jurisdiction.

NMI discovery search 1 returned information

The following information returns for each matching NMI:

1. NMI
2. NMI Checksum
3. Parent Name (if exists)
4. Child Name (if exists)
5. The full address (only if the Jurisdiction allows. Currently, all Jurisdictions allow the full address).

NMI discovery search 2 – obtain standing data

This search is used to identify the NMI Standing Data recorded for the Connection Point (NMI) and the data available for release in accordance with the NMI Standing Data Access Rules. For details, see page 201.

Use the NMI and NMI Checksum found in your NMI Discovery Search 1 search to find the NMI Standing Data. The data is available to Retailers and NSPs not having Explicit Informed Consent from an End-use Customer.

The returned information assists new Retailers to prepare quotes for End-Use Customers.

NMI discovery search 3 – obtain role data

This search is used by Retailers to:

1. Progress error correction Change Requests
2. Identify the previous FRMP
3. For seeking agreement to raise a Retrospective alignment with Meter read transfers.

The valid Standing Data items returned to the initiating Role in all Jurisdictions for a successful NMI Discovery Search 3 request are specified in Table 13 on page 98.

The NMI Standing Data Access Rules for this Transaction define which:

1. Role can initiate a request for NMI Standing Data.
2. Standing Data items are returned when a request is submitted.

When initiating a NMI Discovery Search 3, a Retailer must ensure:

1. When using the reason of TRI (Transferred In Error), they are the Current FRMP or the most recent previous FRMP for the NMI.
This applies where:
 - a. The Current FRMP needs to request a Retailer to transfer back a NMI transferred in error.
 - b. The most recent previous FRMP has identified another Retailer has transferred the NMI in error and is seeking to transfer it back.
2. When using the reason of NNS (New NMI Setup Error (see Table 13 below), the NMI was created in the past 130 Business Days from the NMI Discovery Search 3 date.

Table 13 NMI discovery search 3 standing data items returned for all jurisdictions per change reason code

Change reason code	Description	Standing data	Standing data description
	All	NMI	A 10-digit National Metering Identifier
NNS	New NMI Setup Error	FRMP	Up to 10-character code representing the identity of the Current FRMP
OTR	Other Transfer Error	FRMP	Up to 10-character code representing the identity of the Current FRMP
SAB	Site Abolishment	FRMP Start Date	Up to 10-character code representing the identity of the Current FRMP Start Date of the Current FRMP record
TRI	Transferred In Error	FRMP Start Date	Up to 10-character code representing the identity of the Current FRMP Start Date of the Current FRMP record
TRI	Transferred In Error	FRMP End Date	Up to 10-character code representing the identity of the most recent previous FRMP End Date of the most recent previous FRMP record

Finding a NMI tips

For a successful NMI search, enter as much as information as you know:

1. For each field.
2. In the Structured Address fields.
3. In the correct field. For example, often the Suburb/Locality and House Number are put in the incorrect fields. Many searches fail because the Flat/Unit Number or Floor/Level Number is used in this field.

Suburb/Locality:	<input type="text" value="CROYDON"/>	Street	House Number:
			<input type="text" value="36"/>

Address field tips

DPID

The fastest search is to use the NMI's DPID (providing it is in MSATS). So, if you know the DPID, try it first without any additional information.

Once the record is returned, be sure to check that it is the correct address.

Only a very small percentage of NMIs in MSATS have the DPID field populated, thus making a search using this parameter unreliable.

Street type

If you are confident your address is correct, save some time by not entering the Street type because it is a long list to select from. Excluding it still gives you the same result. If the information returned isn't what you expected, you can enter it and search again.

Locality or post code

If you're not sure how to spell a Locality or think the address is unstructured (see [Is the address I'm searching for unstructured?](#) on page 211), leave it out and search by Postcode.

The search uses adjacent postcodes if it cannot find a match for the specified postcode.

Common NMI discovery errors

Table 14 Common NMI discovery error messages

Code	Description	Explanation
0	Success	<p>If it is an NMID1 it means records are returned but may not exactly match your search criteria</p> <p>If it is an NMID2, it means the NMI and NMI Checksum you entered were valid and the Standing Data you are entitled to is returned</p>
1403	NMI Discovery. No Access Rule for Jurisdiction Code	<p>NMI Discovery is not allowed for the Role you are acting in.</p> <p>It could be NMI Discovery:</p> <ul style="list-style-type: none"> - Is allowed in the Jurisdiction but not for your Role - Is not allowed in this Jurisdiction at all
1404	NMI Discovery. No Data Found	There are no matches for your search criteria

Code	Description	Explanation
1410	More data available. Current search exceeds Jurisdictional limit	<p>Your search found some matches and returned the maximum number of records allowed by the Jurisdiction</p> <p>Not all matching data returned, there are more matches</p>
1411	NMI Discovery. Locality or Postcode required	Either the Locality or Postcode is mandatory in NMID1
1412	NMI Discovery. State required	The State is mandatory for NMID1
1451	NMI Standing Data: Checksum Wrong	<p>The NMI Checksum does not match the NMI</p> <p>Either the NMI or NMI Checksum is incorrect</p>
1452	NMI Standing Data: No Access Rule	<p>NMI Discovery is not allowed for the Role you are acting in.</p> <p>It could be NMI Discovery:</p> <ul style="list-style-type: none"> - Is allowed in the Jurisdiction but not for your Role - Is not allowed in this Jurisdiction at all
1454	NMI Standing Data: No NMI or Jurisdiction Code	MSATS cannot find the NMI or it is not included in the Batch file

NMI master

In the NMI Master – Search interface, in the MSATS Web Portal, you can locate and view the following NMI information:

1. All active and inactive records for a single NMI without being restricted by a from and to date range.
2. All NMIs having or having had a relationship with the Role during a nominated date range.

To use this interface, you must specify:

1. The Role you are searching for.

This must be a valid Role for the Participant ID you are logged on as.

2. The participant acting in the LNSP role.

3. The enquiry Start and End Date.

The allowable date range is seven days.

Optional parameters are a NMI Range From and To. To return all records for a single NMI, leave the To field blank.

NMI Master - Search		Participant ID:	NEMMCO
		Participant Name:	Australian Energy Market Operator Limited
NMI Range From:	<input type="text"/>	To:	<input type="text"/>
(To return all records for a single NMI leave the To: field empty)			
Participant:	<input type="text"/>		
Exists In Role:	LNSP		
Participant:	<input type="text"/>		
Exists In Role:	<input type="text"/>		
Participant:	<input type="text"/>		
Exists In Role:	<input type="text"/>		
Date Range From (*) (dd-mmm-yyyy):	<input type="text" value="7-Aug-2020"/>	To (*) (dd-mmm-yyyy):	<input type="text" value="7-Aug-2020"/>
<input type="button" value="Search"/> <input type="button" value="Clear"/>			

After entering the search parameters, MSATS checks if you have a relationship with the NMI in the selected Role within the Date Range From entered. If you do not have a relationship during that period, no results return.

This means MSATS only looks to see if you had a relationship during the period. If you did and it is superseded by another participant with a Retrospective Change you won't see any results.

NMI relationship rules

To have a relationship with the NMI, there must be a record on the CATS_NMI_PARTICIPANT_RELATIONS Table where:

1. The Role ID is the Role you nominated.
2. You are the nominated Participant ID.
3. The record's Start Date is \leq the record's End Date of a relationship record you have with this NMI.
4. The record's EndDate is \geq the record's Start Date of a relationship record you have with this NMI.
5. The MAINTACTFLG = A.

NMI master – list

Assuming there is at least one record on the CATS_NMI_PARTICIPANT_RELATIONS Table matching your criteria, the NMI Master – List interface displays showing all active and inactive records matching your criteria and the NMI relationship rules on page 103 from the CATS_NMI_DATA Table.

Not included in the results is the MaintActFlg so it's not obvious which are the inactive or active records. However, based on the history model you can work this out. The date in the **Updated On** column is the MAINTUPDTDT (see Figure 16 below), so:

If the updated on date is

The activity status (maintactflg) is

The high date – 31-Dec-9999 Active

Any other date

Inactive

Figure 16 NMI Master – List interface

NMI Master - List						Participant ID:	NEMMCO
						Participant Name:	NEMMCO
NMI Standing Data							
NMI	Checksum	LNSP	Start Date	End Date	Updated On	Action	
4-32	9	INTEGP - Integral Energy - LNSP	20-Mar-2002	31-Dec-9999	31-Dec-9999	<ul style="list-style-type: none"> View View Data Streams View Relationships View Meter Registers Show All 	
4-32	9	INTEGP - Integral Energy - LNSP	1-Jul-2001	31-Dec-9999	21-Mar-2002	<ul style="list-style-type: none"> View View Data Streams View Relationships View Meter Registers Show All 	

Active Record

←

Inactive Record

←

Show all records

To see all records you are entitled to view overlapping your participant relationship, not only the ones matching the initial date parameters, click **Show All** in the **Action** column (see Figure 16 on page 104).

In Show All view, you can see the **Activity Status** (MAINTACTFLG) for these records.

For any record in these interfaces, you can click **View** in the **Action** column to see the record content.

NMI Standing Data: 4 2						
Checksum	LNSP	Start Date	End Date	Activity Status	Updated On	Action
9	INTEGP-Integral Energy - LNSP	1-Jul-2001	4-Feb-2002	A	31-Dec-9999	• View
9	INTEGP-Integral Energy - LNSP	5-Feb-2002	19-Mar-2002	A	31-Dec-9999	• View
9	INTEGP-Integral Energy - LNSP	20-Mar-2002	31-Dec-9999	A	31-Dec-9999	• View
9	INTEGP-Integral Energy - LNSP	1-Jul-2001	31-Dec-9999	I	21-Mar-2002	• View

View information categories

To view a list of records overlapping the report date parameters and the participant relationship records click **View Datastreams**, **View Relationships**, or **View Meter Registers**.

You can use the **Updated On** date in any of these interfaces to work out which records are active or inactive.

Chapter 4 AEMO CATS Transactions

This chapter describes the CATS Transactions used by AEMO, including Acknowledgement and validation and how to update large quantities of MSATS Standing Data.

CATS Transactions used by AEMO are:

1. Acknowledgment and Validation (on page 107)
2. Change Request Response (on page 131)
3. Objection Response (on page 133)
4. NMI Discovery Response (on page 133)
5. Report Data Response (on page 137)
6. Notifications (on page 137)
7. Request for Data Transfer (on page 138)
8. Retailer of Last Resort (on page 138)

Acknowledgement and validation

MSATS validates and responds to ALL Transactions with an acknowledgment of receipt (ACK). Acknowledgement Transactions depend on the interface used: API, Batch, or web. This section describes validation, ACK files and how to acknowledge one for each interface.

MSATS to participant

MSATS does the following when submitting Transactions to participants:

1. Sends a zip file to your Participant Outbox.

If you do not have a back-end system to process incoming files, AEMO recommends you save the file and look at the contents before acknowledging.

To save the zip file, right-mouse click, select Save Target As, and save it to your local drive.

2. Once you acknowledge the file, MSATS moves the zip file into your Participant Archive.

Access to the Participant Archive depends on the rights assigned to you by your company's Participant Administrator.

3. MSATS deletes the zip file from your Participant Outbox.

Validation

Transactions Initiated by participants undergo several validations prior to moving to the Requested status.

Level 1

MSATS performs the following 1st level validations:

1. The user ID nominated in the <SecurityContext> element of the file is permitted to perform each type of batch transaction submitted.
2. The XML is well formed (meaning that it meets the rules defined for writing XML).
3. The file is valid according to the rules specified in the aseXML schema.
4. The schema and transaction versions are supported by MSATS.
5. The number of transactions in the file do not exceed the transaction limits for the transaction group imposed by MSATS.

Level 2

For each Transaction that is accepted, MSATS performs 2nd level validations and processes the request. These second level validations include business-level validations such as checking:

1. The initiator of the Transaction can or is acting in a Role that is entitled to submit a transaction for the nominated change reason code.
2. All required fields for this change reason code, as required by the Field Validation Rules, are provided.
3. Only fields valid for this change reason code, as required by the Field Validation Rules, are provided.

4. The Change Reason Code is valid for use in the jurisdiction in which the NMI is located.

Subsequent change request validation

After the Change Request is submitted, any subsequent Change Requests submitted by the Initiating participant is validated as follows:

1. The NMI on the subsequent Change Request is checked against the NMI on the initial Change Request.
2. The Participant ID on the subsequent Change Request is checked against the Participant ID on the initial Change Request.

Validation checks

Validation checks in order of priority are:

1. Codes and dates comply with the codes and rules look-up tables in the [MSATS Web Portal > Administration > Codes and Rules Maintenance](#).
The following data is validated:

- a. Change Request ID
- b. Jurisdiction
- c. Role ID
- d. NMI Status Code
- e. Read Type Code
- f. Change Request Code
- g. TNI Code
- h. DLF Code
- i. Metering Installation Type Code
- j. Parent Name
- k. Child Name

- I. Proposed Change Date
2. Change Reason Codes and Field Validation Rules comply:
 - a. Change Reason Codes, see page 174.
 - b. Field Validation Rules: RI, OI, RQ, RD, RA.
3. NMI characters against the NMI Checksum.
4. The Initiating participant is an active participant and can act in the Role to initiate the Transaction.
The following data is validated:
 - a. Participant ID
 - b. Participant Status
 - c. Participant Roles
5. The Proposed Change Date and the Actual Change Date are within the range allowed by the Change Reason Code.
6. The Proposed Change Date, the Actual Change Date, and the Actual End Date against the Timeframe Rules.
7. Information regarding Embedded Networks:
 - a. The codes comply with the [MSATS Web Portal > Administration > Codes Maintenance > Embedded Network Identifier Codes](#).
 - b. The Parent and Child Connection Point names are not identical for the same NMI.
 - c. The Child NMI is checked against the Parent NMI.
 - d. There are no circular relationships.
 - e. Prevent Local Retailer changes on a Child NMI.
 - f. If a Parent NMI is not active, there are no active Child NMIs.

Validation explanations

Table 15 below summarises the validations MSATS performs when checking a Change Request in PVAL status. If any of these validations fail, the Change Request moves to REJ status. For Change Request lifecycle details, see page 43.

Table 15 Validations and explanations

Validation	Check
Actual Change Date	<p>If the Change Reason Code is one submitting an ACTUALCHANGEDATE (CR 1500), if the participant submitting is where the Data Request was sent. Use the initiating Request ID to identify the original Change Request</p> <p>If the ActualChangeDate is within the Retrospective Period</p>
Changes to Change Requests	<p>If the participant submitting the updated Change Request is the same participant who submitted the original Change Request and the original Change Request status is not CAN, REJ, or COM</p> <p>For Change Request lifecycle details, see page 43</p>
Checksum	<p>If the NMI Checksum is valid for the NMI supplied</p>
Date	<p>For a Prospective Change:</p> <ul style="list-style-type: none"> - The Proposed Change Date is tomorrow or later - The Proposed Change Date is not after the Prospective Period <p>For a Retrospective Change:</p> <ul style="list-style-type: none"> - The Proposed Change Date is today or earlier - The Proposed Change Date is not prior to the Retrospective Period - If an ActualEndDate is submitted, ensure it is either today or prior to today
Embedded Network	<p>If the Embedded Network Code is valid for the period covered</p> <p>The EmbedNetParent and EmbedNetChild fields in the CATS_NMI_DATA table are not the same</p> <p>If a Child NMI is being created, a Parent NMI has been identified for the Embedded Network</p> <p>The change does not produce an Embedded Network circular relationship</p> <p>It is not a change of LR on a Child NMI (unless the Transaction is creating the Child NMI)</p> <p>It does not create an orphan (i.e. if a parent is removed, there are no more parents or children)</p>

Validation	Check
Field Completeness	<p>For the Change Reason Code:</p> <ul style="list-style-type: none"> - All fields in the Field Validation Rules with a Data Source Code of RI are supplied - All fields have a Data Source Code of either RI or OI
Field-level	<ul style="list-style-type: none"> - If it includes fields held in lookup tables and the value supplied for each field is a valid code on the lookup table - If it was valid for the whole period covered by the Change Request
Initiating Party	<ul style="list-style-type: none"> - If the participant submitting the Change Request is currently active and was active from the period covered by the Change Request - For a Change Request submitted by a New Role, if the participant submitting the Change Request is entitled to act in that Role for the period covered by the Change Request and the participant submitting the Change Request is the participant nominated in that New Role - For a Change Request submitted by a Current Role, if the participant submitting the Change Request is acting in that Role for the entire period covered by the Change Request
Jurisdictional Rules	<ul style="list-style-type: none"> - For the combination of the Jurisdiction and NMI Classification on the NMI Master Record or Change Request and for the Change Reason Code on the Change Request, if there is a Jurisdictional rule. In the MSATS Web Portal, see Administration > Rules Maintenance > Jurisdictional Parameters - If the NMI already exists (i.e. there is a NMI Master Record) and there is a NMI Classification Code, Jurisdiction Code, or both, the NMI Classification Code and Jurisdiction Code take precedence in determining whether Jurisdictional rules exist

Validation	Check
MDM	<p>Some of these validations also apply at the time it is about to move to COM status. The context for this validation is if the it completes, the configuration as of the Day after the Actual Change Date or, for the period covered by the Proposed Change Date, must not break these rules:</p> <ul style="list-style-type: none"> - The NMI must have a valid NMI Classification Code, Jurisdiction Code, DLF Code, NMI Status Code, TNI Code, LR, FRMP, RP, ROLR, MDP, and MPB - It must not cause any gaps in the NMI's history (on any of the master tables) - Every time a Datastream record is created or updated, it must have a Datastream Status Code, that is NOT NULL for the ADL, a valid value in DataStreamType and a valid Profile Name - Every time a Datastream is created or updated there must be an active NMI covering the period when the Datastream is active - Every time a Meter is created or changed it must always have a Metering Installation Type Code and a Meter Register Status Code - The Profile Name assigned to a Datastream must be valid in that NMI's Jurisdiction - If the NMI Classification Code is Small, the ADL must be <=2000 - If the Datastream Type is C, the Profile Name cannot be NOPROF
New NMI	<p>If the Change Reason Code is 2000, 2001, 2020, 2021, 2100, 2500, or 2501, there isn't an existing record on the CATS_NMI_ DATA table for this NMI</p>
RA	<p>If, in the Field Validation Rules there are RA fields, there is a participant to send the Data Request for the missing data to on the NMI Master Record for the period covered</p>
RQ	<p>If, in the Field Validation Rules there are RQ fields and no data on the NMI Master Record for those fields, there is a participant to send the Data Request for the missing data to on the NMI Master Record for the period covered</p>

Two-stage batch validation process

Whenever you submit a Transaction by Batch it goes through two levels of validation, MSATS conveys:

1. First level validation in an .ACK file placed in your Participant Outbox.

If you submit the Batch file using the Web Portal you also see it on the interface.

If the Transaction passes the first level validation, it passes to second level validation.

2. Second level validation in a Response Transaction.

The type of Response Transaction you receive depends on the submitted Transaction:

Type	Response
Change Request (CR)	Change Request Response (CRR)
Objection (OBJ)	Objection Response (OBJR)
NMI Discovery Request (NMID)	NMI Discovery Response (NMIR)
Report Request (RPTD)	Report Response
Meter Data Notification (MDN)	Meter Data Response

3. The Response Transaction contains the result of your request, Request IDs, or the results of the validation. For example, Change Request, Objection, Meter Data Notifications.

Acknowledgement

ACK files

The ACK file includes:

1. The results of the 1st level validation.
2. The status: Accept or Reject.
3. The Receipt IDs: one for the message and one for each Transaction.

Different Transactions have different content in their ACK files.

Change requests

For Change Requests, the numeric part of the Receipt ID corresponds to the MSATS assigned Request ID. In Figure 17 on page 116, the Receipt ID is CATS-CR8335806, so 8335806 is the Request ID.

You can use the Request ID to search for the Change Request and check the status of the Transaction.

Figure 17 Transaction ACK file

The file "catsm_energyap_1013.zip" has been successfully processed.
Please check your Outbox for results.

The "catsm_energyap_1013.ack":

```

xsi:schemaLocation="urn:aseXML:r10
http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">
  <Header>
    <From description="National Electricity Market Management
Company">NEMMCO</From>
    <To description="Energy Australia - LNSP">ENERGYAP</To>
    <MessageID>CATS-CR8335806</MessageID>
    <MessageDate>2004-06-22T13:47:13+10:00</MessageDate>
    <TransactionGroup>CATS</TransactionGroup>
    <Priority>Medium</Priority>
    <SecurityContext>NEMMCO</SecurityContext>
  </Header>
  <Acknowledgements>
    <MessageAcknowledgement initiatingMessageID="ENERGYAP-MSG-11234569"
receiptDate="2004-06-22T13:47:13+10:00" receiptID="CATS-CR8335806" status="Accept"/>
    <TransactionAcknowledgement initiatingTransactionID="ENERGYAP-TNS-
12348990" receiptDate="2004-06-22T13:47:13+10:00" receiptID="CATS-CR8335806"
status="Accept"/>
  </Acknowledgements>
</ase:aseXML>

```

Return to "Participant Inbox - List" screen.

NMI discovery

For NMI Discovery the receipt ID identifies the corresponding file in your Participant Outbox (see Figure 18 below and Figure 19 on page 118).

Figure 18 NMI discovery ACK



Figure 19 Participant outbox filename

<input type="button" value="Acknowledge Selected"/>			<input type="button" value="Select All"/>	<input type="button" value="De-select All"/>
Outbox Contents				
File Name		Last Modified	File Size	
<input type="checkbox"/>	catsl_engyaustbatch_22899750.zip	Mon Jun 21 22:09:18 EST 2004	877	
<input type="checkbox"/>	catasm_engyaustbatch_22886240.zip	Sat Jun 19 17:30:14 EST 2004	1386	
<input type="checkbox"/>	catasm_engyaustbatch_22886244.zip	Sat Jun 19 17:30:14 EST 2004	1475	
<input type="checkbox"/>	catasm_engyaustbatch_22886246.zip	Sat Jun 19 17:30:14 EST 2004	1477	
<input type="checkbox"/>	catasm_engyaustbatch_22886255.zip	Sat Jun 19 20:34:38 EST 2004	921	
<input type="checkbox"/>	catasm_engyaustbatch_22886258.zip	Sun Jun 20 20:24:05 EST 2004	885	
<input type="checkbox"/>	catasm_engyaustbatch_22886260.zip	Sun Jun 20 20:27:46 EST 2004	880	
<input type="checkbox"/>	catasm_engyaustbatch_22886265.zip	Sun Jun 20 20:32:04 EST 2004	876	
<input type="checkbox"/>	catasm_engyaustbatch_22903733.zip	Tue Jun 22 09:09:27 EST 2004	721	
<input type="checkbox"/>	nmidh_traincats_22905281.zip	Tue Jun 22 13:35:58 EST 2004	924	
<input type="button" value="Acknowledge Selected"/>			<input type="button" value="Select All"/>	<input type="button" value="De-select All"/>

Objections

For Objections, the numeric value of the Receipt ID corresponds to the MSATS assigned Objection ID. In Figure 20 below the Receipt ID is CATS-OBJ19735, so the Objection ID is 19735. You can use the Objection ID to search and check the status of the Objection.

Figure 20 Objection Transaction ACK



Reports

For reports, the numeric value of the Receipt ID corresponds to the MSATS assigned Report Request ID. In Figure 21 below the ID is CATS-215731, so the Report Request ID 215731.

Figure 21 Report ACK



Transaction limits

Transaction limits allow participants to manage the submission and receipt of MSATS files to prevent the application of stop files.

When the number of unacknowledged outbound files in your Participant Outbox exceeds the upper or lower limit, a Stop File is imposed on your Participant Outbox Transactions. Once imposed no more processing on inbound or outbound Transactions occurs until the file numbers fall below the Lower Limit.

Stop file rules

If a participant is stopped for any of the following reasons, MSATS stops processing files for that Transaction:

- Change Request or Change Request Notification. Other Transactions are processed.
- NSRD Notification or Response reasons. MSATS does not process any CATS Change Request transactions with Change Reason Codes: 5070 or 5071. Other Transactions are processed.
- Outbox files. MSATS only processes Meter Data Notification Transactions.
- Report requests. MSATS does not process any Report Request Transactions. Other Transactions are processed.

Viewing limits

Where a participant belongs to a group, the limits apply to the group not to the individual Participant ID.

You can view your limits (upper and lower) for the accumulation of Change Request Response and notification messages to monitor how many Transactions are currently queued:

- In the [MSATS Web Portal > Reports and Alerts > Queue Monitoring](#). For help, see [Guide to MSATS Web Portal](#).
- Using the MSATS Limits API. For help, see [Guide to NEM Retail B2M APIs](#).

Increasing limits

Participants can temporarily increase their Change Request and Change Request Notifications Upper Limits to the maximum allowed in the [MSATS Web Portal > Reports and Alerts > Queue Monitoring](#).

If you cannot see the [Increase](#) option, the functionality is unavailable to you. All Upper Limits are reset at midnight.

Acknowledgement – API

Sending and receiving acknowledgements using an API differs according to the type of API you use. For details, see [Guide to NEM Retail B2M APIs > Participant Implementation](#).

Participants can nominate the outbound protocol for B2M messages by transaction group, so acknowledged messages can be your Participant Hub Queue and your B2M Outbox.

Acknowledgement – batch

When you submit a Transaction using the File Interface it is validated and an Acceptance or Rejection response returned with the Change Request Response (CRR) Transaction Type Code.

To acknowledge a zip file in your Participant File Server Outbox, write an ACK file with the same name as the zip file. For help, see Creating and submitting batch transactions on page 29.

Acknowledgement - web portal

To acknowledge a zip file in the web portal:

1. Login to the web portal, click [Data Load Import > Participant Outbox](#).
2. Select the relevant zip files and click [Acknowledge Selected](#).
 - a. MSATS writes an .ACK file to your Participant Inbox and deletes the zip file.
 - b. MSATS detects the zip file is deleted so deletes the .ACK file it created in your Participant Inbox.

Participant Outbox - List		Participant ID:	TCAMP
		Participant Name:	Testing and Certification Australia (Meter Provi)
Acknowledge Selected		Select All	De-select All
Outbox Contents			
File Name	Last Modified	File Size	
<input checked="" type="checkbox"/> catsl_tcampbatch_22883116.zip	Thu Jun 03 09:39:34 EST 2004	914	
<input checked="" type="checkbox"/> catsl_tcampbatch_22883983.zip	Fri Jun 04 22:07:37 EST 2004	901	
<input checked="" type="checkbox"/> catsl_tcampbatch_22884295.zip	Fri Jun 11 22:07:25 EST 2004	940	
<input checked="" type="checkbox"/> catsm_tcampbatch_22883343.zip	Thu Jun 03 09:39:34 EST 2004	1604	
<input checked="" type="checkbox"/> catsm_tcampbatch_22883377.zip	Thu Jun 03 09:39:35 EST 2004	1627	
<input type="checkbox"/> catsm_tcampbatch_22883383.zip	Thu Jun 03 09:39:35 EST 2004	1627	
<input type="checkbox"/> catsm_tcampbatch_22883394.zip	Thu Jun 03 09:39:35 EST 2004	2574	

3. If within 30 seconds you see the following message, MSATS is unable to delete the zip file. Follow the steps below to delete the ACK and zip files.

```

The following records could not be deleted successfully:
x:\fs_test\TCAMP\OUTBOX\catsm_tcampbatch_22883789.zip
x:\fs_test\TCAMP\OUTBOX\catsm_tcampbatch_22883795.zip
x:\fs_test\TCAMP\OUTBOX\catsm_tcampbatch_22883801.zip
x:\fs_test\TCAMP\OUTBOX\catsm_tcampbatch_22883807.zip
x:\fs_test\TCAMP\OUTBOX\catsm_tcampbatch_22883825.zip

```

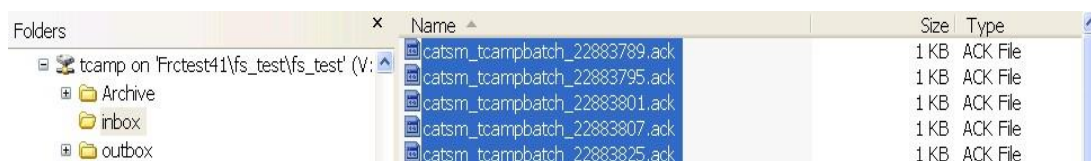
ACK deletion -API

Follow the steps for Batch or web portal ACK deletion.

ACK deletion - batch

To delete an the ACK from the Participant File Server:

1. Login to the Participant File Server and highlight the ACK file.
2. On your keyboard, press Delete.
3. Check the Inbox and Outbox are empty.



ACK deletion - web portal

To delete an ACK from the web portal:

1. Login to the web portal and navigate to **Data Load Import > Participant Inbox**.
2. Select the check box next to the ACK file and click **Delete Selected**.



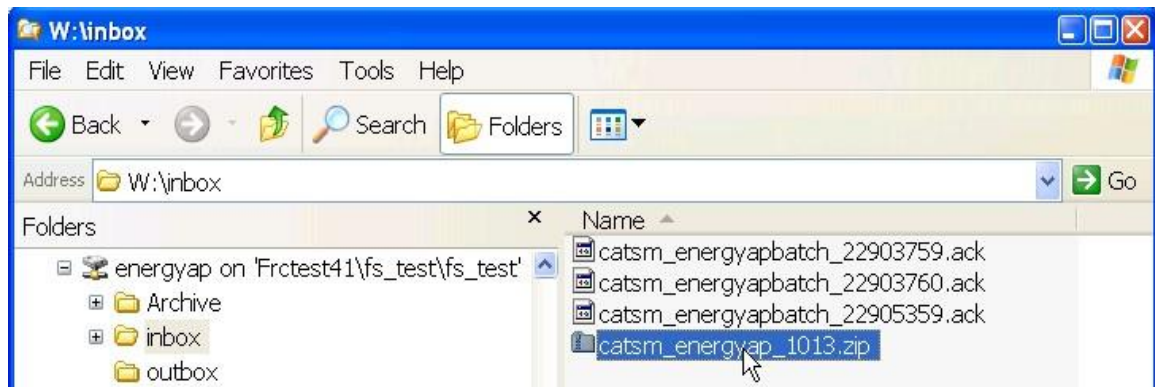
Zip deletion – API

Follow the steps for Batch or web portal zip deletion.

Zip deletion – batch

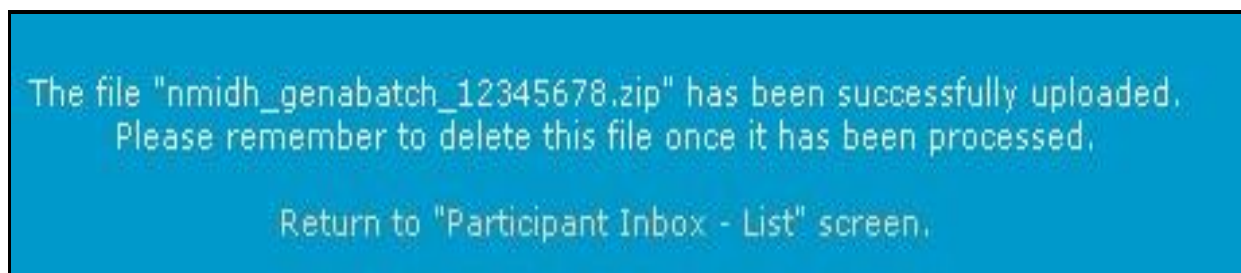
To delete the zip from the Participant File Server:

1. Login to the Participant File Server.
2. Select the zip file and on your keyboard press delete.



Zip deletion - web portal

Sometimes, the MSATS Web Portal cannot complete the Hokey-Pokey Protocol on your behalf (producing the ACK file and deleting your zip file) so the following message displays:



MSATS allows you to continue using the web portal for other tasks but the zip file is sitting in your Participant Inbox and there is no ACK file in your Participant Outbox.

When MSATS completes the Hokey-Pokey Protocol there is an ACK file in your Participant Outbox, so you must delete your zip file. You can do this in the web portal or Participant File Server.

Make sure you save the relevant information from the .ACK file before you delete the zip file because MSATS is not monitoring the processing for you.

When MSATS detects you deleted your zip file it deletes the ACK file in your Participant Outbox, so the file handling cycle is complete.

To delete the zip file from the web portal:

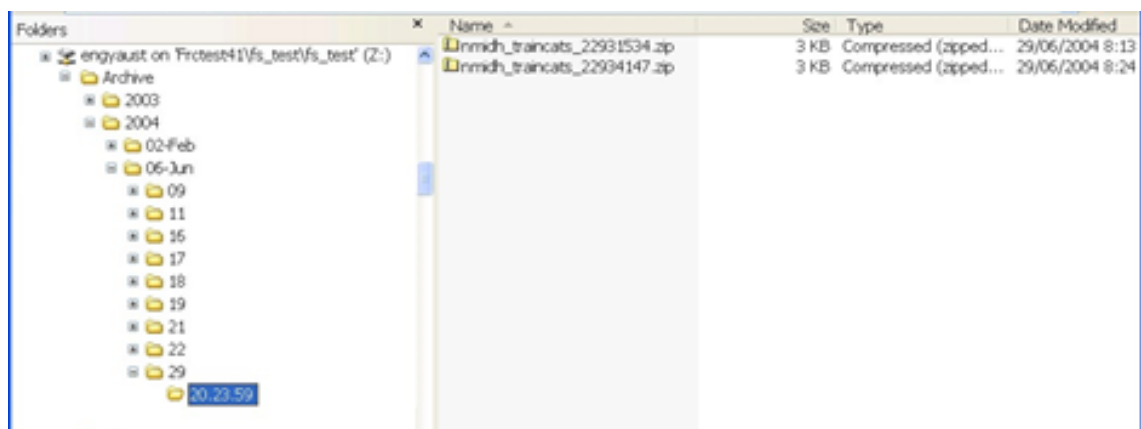
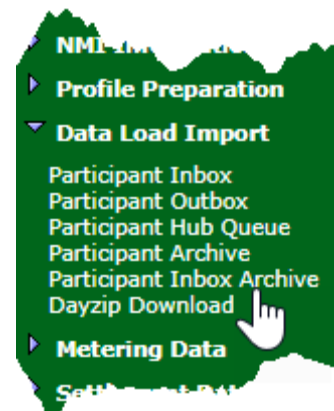
- In **Data Load Import > Participant Inbox**, select the check box next to the File Name and click the Delete Selected.

Participant Inbox - List		
		Participant ID: <input type="text"/>
		Participant Name: <input type="text"/>
<input type="button" value="Delete Selected"/> <input type="button" value="Select All"/> <input type="button" value="De-select All"/>		
Inbox Contents		Upload
File Name	Last Modified	File Size
<input checked="" type="checkbox"/> catsm_1012.zip	Tue Jun 22 13:56:48 EST 2004	1292
<input type="button" value="Delete Selected"/> <input type="button" value="Select All"/> <input type="button" value="De-select All"/>		

MSATS zip file deletion

Before MSATS deletes a zip file, it is copied to your Participant Archive on the Participant File Server. The time a file stays in the archive is about six months to one year. Participant Users with access rights can view the Participant Archive in the following interfaces.

1. The **web portal > Data Load Import**. For help, see [Guide to MSATS Web Portal](#).
- **Participant File Server > Archive**.

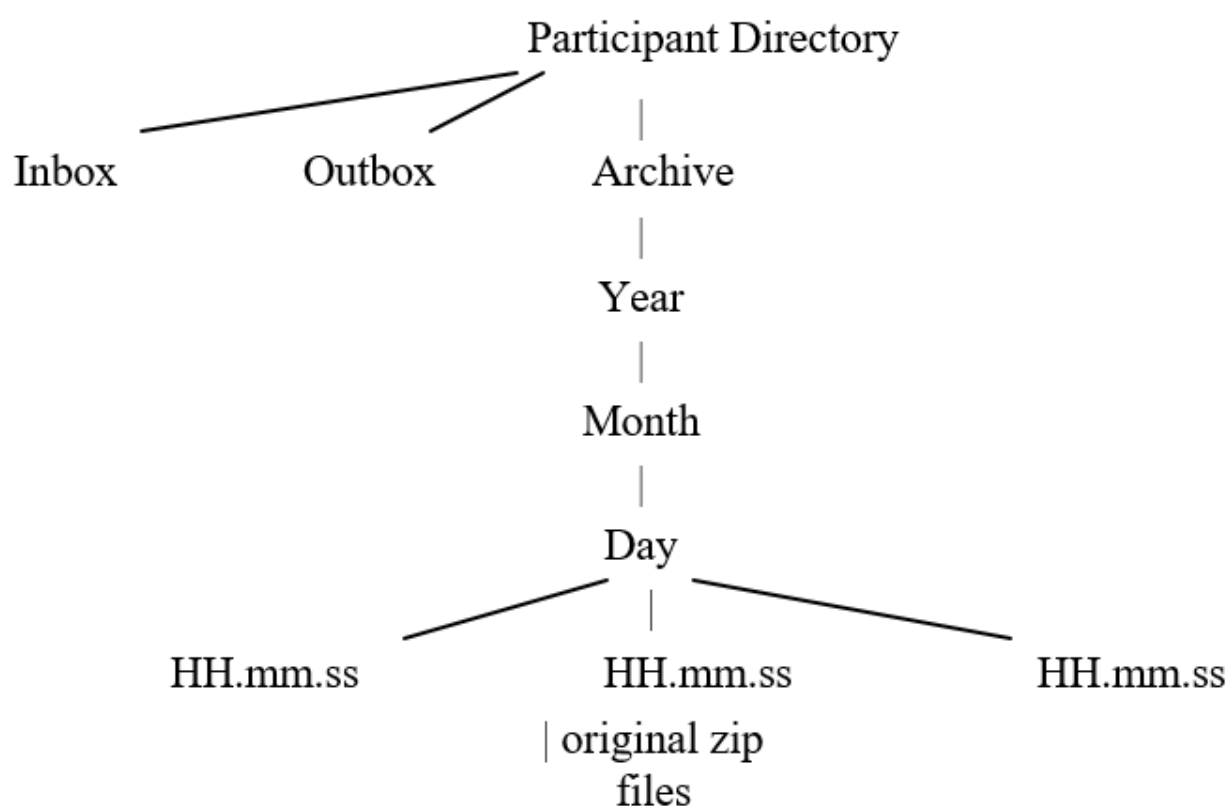


The folder structure follows the model in Figure 22 below. For example, the full path and name of an archived file might be:

X:\PARTID\Archive\2003\4-Apr\07\15.22.03\catsm_abcde_123456zip

The folders underneath Day contain a maximum of 500 files. The names of these folders correspond to the time when the first file in the folder was archived and follow each other chronologically. The Last Modified date of each file in the directory is the original date the file was first created in your Participant Outbox and remains unchanged.

Figure 22 Participant archive structure



View outstanding messages and acks

You can view your outstanding Messages and ACKS in the [MSATS Web Portal > Participants > Participant Schema](#) interface.

Response

Zip files generated due to a Change Request, Notification, Objection and so on are always sent to the <ParticipantID> Batch. To see these messages login with the Batch Participant ID.

To see the responses to requests for information you initiated, such as NMI Discovery and report requests, login with your individual Participant User ID.

If your Participant User ID access right includes the Participant Mailbox - All entity, you may also see messages sent to the Batch Participant ID and messages sent to other Participant User IDs.

The MSATS generated aseXML response file has (see Figure 23 on page 130):

- The <Event> code
A successful response is 0. An error is any other number (for error help, see page Error codes on page 70).
- The rejection <Explanation>

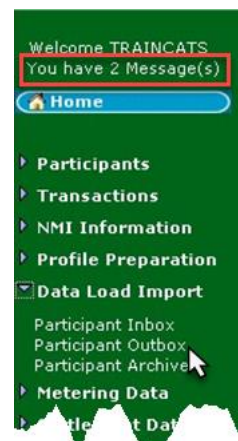


Figure 23 Change request response with an error

```

<?xml version="1.0" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r10" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:aseXML:r10 http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">
- <Header>
  <From description="NEMMCO">NEMMCO</From>
  <To description="*">*</To>
  <MessageID>NEMMCO-MSG-22884562</MessageID>
  <MessageDate>2004-06-18T14:21:49+10:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>Medium</Priority>
  <SecurityContext>NEMMCOBATCH</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
- <Transaction transactionID="CATS-22884562" transactionDate="2004-06-18T14:21:49+10:00"
  initiatingTransactionID="*-TNS-12348990">
- <CATSChangeResponse version="r4">
  <RequestID>8332684</RequestID>
  - <Event>
    <Code>1151</Code>
    <Explanation>Module Name: BV130_FIELD_COMPLETENESS_SSP Not all required fields have been
      entered. Please ensure all fields have been completed. Request ID: 8332684 Field: ACTCUMIND
      Table: CATS_INBOUND_REGISTER_ID</Explanation>
  </Event>
  </CATSChangeResponse>
</Transaction>
</Transactions>
</ase:aseXML>

```

Change request response

MSATS responds to a Change Request with an approval or rejection as it reaches the Pending Validation status.

For each approved Change Request, a change request response (CRR) transaction is generated. By default, each response transaction is in a separate .XML file in a separate .ZIP file. Therefore, if there are multiple transactions in the one batch file, multiple .ZIP files are placed into the participant outbox.

Because the response is sent to the <PARTICIPANTID>batch user ID, only someone logged on to the MSATS web portal with that user ID (or with a right that provides access to all items in the participant's outbox) can see the response message. That is, the originator of the change request may not necessarily see it.

Depending on the notification rules, the <PARTICIPANTID>BATCH user ID and other parties' equivalent user IDs may also receive notifications to indicate the status of the change request (Administration).

Participants can request Bundling from AEMO for some types of outbound Transactions (contact the AEMO's Support Hub). 'Bundling' is the term used when there are many transactions in a single .XML file. When notifications are bundled, there is no longer a one-to-one relationship between an outbound transaction, message and .ZIP file.

Change request response example

```

<?xml version="1.0" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r10" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:aseXML:r10
    http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">
- <Header>
  <From description="NEMMCO">NEMMCO</From>
  <To description="[REDACTED]">[REDACTED]</To>
  <MessageID>NEMMCO-MSG-22884583</MessageID>
  <MessageDate>2004-06-18T17:11:31+10:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>Medium</Priority>
  <SecurityContext>NEMMCOBATCH</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
  - <Transaction transactionID="CATS-22884583" transactionDate="2004-06-18T17:11:31+10:00"
    initiatingTransactionID="ENERGYAP-TNS-12348990">
    - <CATSChangeResponse version="r4">
      <RequestID>8332687</RequestID>
      - <Event severity="Information">
        <Code>0</Code>
      </Event>
    </CATSChangeResponse>
  </Transaction>
</Transactions>
</ase:aseXML>

```

Objection response

MSATS responds to an Objection with an approval or rejection. MSATS informs other participants according to the applicable Change Request Status Notification Rules.

Objection Response example

```
<?xml version="1.0" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r10" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:aseXML:r10
    http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">
- <Header>
  <From description="NEMMCO">NEMMCO</From>
  <To description="Energy Australia - Retailer">ENGYAUST</To>
  <MessageID>NEMMCO-MSG-22886169</MessageID>
  <MessageDate>2004-06-19T15:07:21+10:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>Medium</Priority>
  <SecurityContext>NEMMCOBATCH</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
  - <Transaction transactionID="CATS-22886169" transactionDate="2004-06-19T15:07:21+10:00"
    initiatingTransactionID="OBJECT-001">
    - <CATSObjectionResponse version="r4">
      <ObjectionID>19730</ObjectionID>
      - <Event severity="Information">
        <Code>0</Code>
      </Event>
    </CATSObjectionResponse>
  </Transaction>
</Transactions>
</ase:aseXML>
```

NMI discovery response

MSATS sends information to the Initiating party in response to a NMI Discovery Search, containing the following information:

- The code within the <Event> element provides useful information. For a NMI Discovery a code of 0 (zero) means the result was successful but is not necessarily an exact match.
- A four-digit code indicates an error. For example, 1404 indicates that no data was found matching the search criteria.

- Assuming the response indicates success, the information returned depends on the jurisdictional rules. The same data is returned if the search is done in the web portal.
- All NMIs matching the search criteria are returned up to the jurisdictional limit.

NMI discovery response example

```
<?xml version="1.0" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r10" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:aseXML:r10 http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">
- <Header>
  <From description="NEMMCO">NEMMCO</From>
  <To description="[REDACTED]">[REDACTED]</To>
  <MessageID>NEMMCO-MSG-22884515</MessageID>
  <MessageDate>2004-06-17T15:12:34+10:00</MessageDate>
  <TransactionGroup>NMID</TransactionGroup>
  <Priority>High</Priority>
  <SecurityContext>NEMMCOBATCH</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
- <Transaction transactionID="NMID-22884515" transactionDate="2004-06-17T15:12:34+10:00" initiatingTransactionID="EA-MSG-00001019">
- <NMIDiscoveryResponse version="r4">
- <NMISTandingData xsi:type="ase:ElectricityStandingData" version="r10">
  <NMI checksum="6">4508012629</NMI>
- <MasterData>
- <Address>
- <StructuredAddress>
- <Street>
  <StreetName>BROKEN HILL</StreetName>
  <StreetType>RD</StreetType>
</Street>
</StructuredAddress>
  <SuburbOrPlaceOrLocality>MENINDEE RURAL</SuburbOrPlaceOrLocality>
  <StateOrTerritory>NSW</StateOrTerritory>
  <PostCode>2879</PostCode>
  <DeliveryPointIdentifier>99999999</DeliveryPointIdentifier>
</Address>
</MasterData>
- <RoleAssignments>
- <RoleAssignment>
  <Party />
  <Role>LNSP</Role>
</RoleAssignment>
</RoleAssignments>
</NMISTandingData>
- <Event severity="Information">
  <Code>0</Code>
</Event>
</NMIDiscoveryResponse>
</Transaction>
</Transactions>
</ase:aseXML>
```

NMI discovery type 2 response example

```

<!-- Transaction ID -->
<AdditionalSiteInformation>19 Longer Rd</AdditionalSiteInformation>
</Meter>
- <Meter>
  <SerialNumber>1</SerialNumber>
  - <RegisterConfiguration>
    - <Register>
      <RegisterID>A123</RegisterID>
      <NetworkTariffCode>EA025</NetworkTariffCode>
      <NetworkAdditionalInformation>Sample data for training - this field is generally
        available for NMI Discovery</NetworkAdditionalInformation>
    </Register>
  </RegisterConfiguration>
</Meter>
</MeterRegister>
</NMISTandingData>
➔ - <Event severity="Information">
  <Code>0</Code>
</Event>
</NMISTandingDataResponse>
</Transaction>
</Transactions>
</ase:aseXML>

```


NMI master report response

A report response Transaction returns the results from the report parameters you selected. All report output is delivered via Batch file even if you submit the report request from the web portal.

```
<?xml version="1.0" ?>
- case:aseXML xmlns:ase="urn:aseXML:r10" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:aseXML:r10
http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">
+ <Header>
+   <From description="NEMMCO">NEMMCO</From>
+   <To description="1"></To>
+   <MessageID>NEMMCO-MSG-22914180</MessageID>
+   <MessageDate>2004-06-23T18:12:08+10:00</MessageDate>
+   <TransactionGroup>CATS</TransactionGroup>
+   <Priority>High</Priority>
+   <SecurityContext>NEMMCOBATCH</SecurityContext>
+   <Market>NEM</Market>
+ </Header>
+ <Transactions>
+   <Transaction transactionID="CATS-22914180" transactionDate="2004-06-23T18:12:08+10:00" initiatingTransactionID="1">
+     <ReportResponse version="r10">
+       <ReportParameters xsi:type="ase:CATSMasterReportParameters">
+         <ReportName>Master</ReportName>
+         <FromDate>2004-06-21</FromDate>
+         <ToDate>9999-12-31</ToDate>
+         <AsAtDate>2004-06-23</AsAtDate>
+         <LastSequenceNumber>0</LastSequenceNumber>
+         <EMI>1700000000</EMI>
+         <ExcludeParticipant>No</ExcludeParticipant>
+         <Participant></Participant>
+         <ExcludeRole>No</ExcludeRole>
+         <Role>FRMP</Role>
+         <ReportType>Detailed</ReportType>
+       </ReportParameters>
+       <ReportResults xsi:type="ase:ReplicationReportFormat">
+         <ReplicationBlock tableName="ElectricityNMI Master">
+           <Row xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ase:ElectricityNMI MasterRow">
+             </ReplicationBlock>
+           <ReplicationBlock tableName="ElectricityNMI Roles">
+             </ReplicationBlock>
+         </ReportResults>
+         <Event severity="Information">
+           <Code>0</Code>
+           <Explanation>Success</Explanation>
+         </Event>
+       </ReportResponse>
+     </Transaction>
+ </Transactions>
</ase:aseXML>
```


Report data response

The data generated for a participant report request. For more details, see [Guide to MSATS Reports](#).

Notifications

Codes update

MSATS notifies participants of any changes to codes, rules, or participant data.

Change request status notification

The Change Request Status Notification Rules define which Roles are advised when a Change Request undergoes a change in status. For details, see page 200.

Jurisdictions specify rules to control:

1. The period when MSATS can accept retrospective information.
2. The period when participants can log an Objection.

Request for data transfer

When MSATS receives a Change Request, it checks the existing data, ensuring it can proceed through the Validation process. If some data required to complete the Change Request is missing from the NMI Master Record, MSATS send a Request for Data Transfer (RDAT) to the appropriate participants according to the Change Request Field Validation Rules (see page 197).

The nominated parties provide the requested data in a new Change Request. For more details, see Receiving on page 92.

Retailer of last resort

The NEM Retailer of Last Resort (RoLR) Processes define the processes participants and AEMO must follow to manage Market Transactions and communicate customer and site information if a RoLR event is invoked in the NEM. For details see [NEM RoLR Processes, Part A and B](#).

Chapter 5 CATS History Model

This chapter is essential reading for anyone wanting familiarity with the CATS history model because it assists understanding of the end-to-end Change Request process and how the CATS NMI Standing Data Access Rules affect data returned from NMI Discovery or a CATS report.

It explains:

- The 5 key master tables containing the NMI Standing Data and how MSATS manages its history.
- How MSATS supports Retrospective changes to NMI Standing Data, specifically because each billing period is settled after the Market trades occur.

Why such a complex history model?

Settlements occur on a weekly basis, but a Billing Period is settled at least four times over approximately 30 weeks (Preliminary, Final, Revision 1 and Revision 2). So MSATS must facilitate Settlements by Billing Period, not just using the data for a certain Billing Period but also at any nominated date in the past. This is necessary, for example, for a dispute.

The CATS history model must be complex enough to identify:

- As of today, what the NMI Standing Data looked like over time.
For example, when a Revision 2 Settlement run is initiated (30 weeks after the Settlements week), as well as using the latest available Metering Data, MSATS uses the version of NMI Standing Data for the Settlement period.

- As of any date in the past, what the NMI Standing Data looked like on that date and on any date prior.

For example, if between the Final and Revision 1, there are Retrospective changes to a NMI's TNI or DLF, Revision 1 uses the new version of NMI Standing Data.

MSATS must work out the following for any NMI:

For details about the data stored in the MSATS master tables, see [Standing Data for MSATS](#).

- As of today, what is the NMI Standing Data for today.
- As of today, what is the NMI Standing Data for Settlement Week 1.
- As of 31-Jan-2002, what **did** the NMI Standing Data for Settlement Week 1 look like (such as, ignore all changes made since 31-Jan-2002 to the NMI Standing Data for the Settlement week 1 period).

NMI standing data master tables

This section describes how and when MSATS updates the five NMI Standing Data master tables when participants submit Change Requests. It includes an explanation of the relationship between the dates supplied with a Change Request and the dates on the NMI Master Record.

Table 16 on page 141 describes the five MSATS master tables containing the Standing Data stored for each NMI.

To ensure there is a complete history for these tables, each time there is a change, MSATS:

1. Makes old records inactive.
2. Creates new records.

Table 16 NMI standing data master tables

Database table	MSATS name	Summary
CATS_NMI_DATA	NMI Standing Data	Address, TNI Code, DLF Code, Aggregate Flag, Embedded Network IDs, Jurisdiction, NMI Status Code, etc
CATS_NMI_PARTICIPANT_RELATIONS	Participant Role Relationships	Roles and associated participants. Separate records are maintained for each Role and participant relationship
CATS_NMI_DATA_STREAM	NMI Datastreams	Suffix, ADL, Profile Name, Datastream Type and Datastream Status of each MDM Datastream
CATS_METER_REGISTER	NMI Metering Installation	Meter Serial ID, Meter type, Meter manufacturer, test results, etc
CATS_REGISTER_IDENTIFIER	NMI Register Identifier	Meter Serial ID, Network Tariff Code, Unit of Measure etc

Mandatory NMI standing data

To be valid, a NMI used in MSATS must have the following minimum data:

- At least one record on the CATS_NMI_DATA table.
- At least eight records on the CATS_NMI_PARTICIPANT_RELATIONS table. One for each of the mandatory Role ID Codes (See page 190).

Other NMI standing data

A NMI can also have:

- At least one record on the CATS_METER_REGISTER table.

- At least one record on the CATS_REGISTER_IDENTIFIER table.
- If Metering Data is submitted to MDM, at least one valid record on the CATS_NMI_DATA_STREAM table.

NMI standing data

NMI Standing Data is the information captured against a NMI, including its NMI classification, TNI, DLF codes, and physical location details.

Participant role relationship

Participant Role Relationships define the roles played by Market Participants against a NMI record (see page 190).

During the Change Request process, participants nominate and modify Roles for assignment to a NMI. These changes are not permanent until the Change Request is in **Completed (COM)** status. However, if information in a Change Request is modified while it is in progress, it is assigned a new Request ID and the life cycle restarts.

When a NMI is created, all Roles must be allocated on the Change Request. This Change Request is usually created by the LNSP and all nominated parties are sent a Notification informing them of the NMI and the role the LNSP has asked them to undertake. The parties can object to this nomination.

Once a NMI is created, Change Requests are submitted to change Roles or groups of Roles. For example, there is a specific Change Reason Code to change only the Local Retailer. The Change Retailer (for example, CR1000) generally allow nomination of a new FRMP, MDP, RP, MPB, or MPC.

NMI datastreams

NMI Datastreams define the Metering Data MSATS expects to receive for any NMI. Datastreams are Metering Data associated with a Connection Point represented by a NMI. A NMI can have multiple Datastreams (for example, from one or more Meters, Channels, or Registers comprising a single Meter). Each Datastream is identified by a suffix.

NMI metering installation

NMI Meter Register records contain data stored about Meters for each NMI. Some of the details recorded are the Next Scheduled Read Date (if it is manually read), the Metering Installation Type, the physical location, and the manufacturer's details.

NMI register identifier

NMI Register Identifier records contain data stored against Meter Register identifiers for a Metering Installation associated with a NMI. These records contain information such as, the register ID, Network Tariff Code and a code representing the unit of measure. Each Metering Installation can have multiple registers.

How MSATS manages CATS history

Table 17 below describes the key fields every record has in the five NMI Standing Data tables. MSATS uses these fields to manage NMI history.

The start and end dates are referred to as the Trading Date. The record's NMI Standing Data, including its Start and End Dates never change. MSATS only updates an existing record if the data becomes redundant due to a change and only the MaintUpdtDt and the Maintactflg change.

Table 17 Key NMI standing data fields

Field name	Description	Data type
StartDate	The start of a Billing Period (i.e. the Settlement date) for the version of NMI Standing Data this record applies to The data applies from the beginning of this date (the start of the Day, i.e. 00:00)	Trading Date
EndDate	The end of the Billing Period for the version of NMI Standing Data this record applies to The data applies until the end of this date (the end of the Day, i.e. 23:59)	Trading Date
MaintActFlg	The status of the record, either: - A (active): When MSATS creates a new record, its status is A - I (Inactive): When the record becomes redundant due to a data change, MSATS changes the MaintActFlg to I	Code
MaintCreatedt	The date MSATS created the record	Database date
MaintUpdtDt	The date MSATS creates or updates the record: - On record creation, it sets the MaintUpdtDt to 31-Dec-9999. If a record's MaintUpdtDt is 31-Dec-9999, its MaintActFlg is always A - On record change, it changes the MaintUpdtDt to the date and time it changed If a record's MaintUpdtDt is any other date, its MaintActFlg is always I	Database date

Different field names

In MSATS, the NMI Master tables, web portal, and report XML fields have different names. So, when you view records in these interfaces, there are different names for the same field. Table 18 below explains the different names for the same field.

Table 18 Different naming standards

NMI master tables	Report XML fields	Web portal
StartDate	FromDate	Start Date
EndDate	ToDate	End Date
MaintCreateDt	CreationDate	This date is not supplied on the NMI Master screens
MaintUpdtDt	MaintenanceDate	Updated On
MaintActFlg	RowStatus	Activity Status

How MSATS updates the NMI master tables

Changing NMI standing data

Participants entitled to change data in any of the five NMI Master tables, for example, the LNSP if it is the TNI Code or the new Retailer if it is a change of FRMP, must submit a Change Request.

Proposed versus actual change date

When submitting a Change Request, the Initiator specifies a Proposed Date. This date is the start of the Billing Period when the new version of NMI Standing Data applies. But the date when it applies is the Actual Change Date on the Change Request.

Sometimes, for example a Change of Retailer Transaction – CR 1000 and 1030, another participant (the MDP in this example) is requested to supply the Actual Change Date, which is usually the date of an Actual Meter Reading. Until the MDP submits a Transaction to supply the date the Initiator's Change Request cannot complete.

If there is no requirement for another participant to supply the Actual Change Date, MSATS inserts the Proposed Date into the Actual Change Date field when it does its initial Change Request validation.

Processing the updates to master records

Change Requests are completed and NMI Master Records updated as part of an overnight process. The process runs after midnight and after the end-of-day processing.

End-of-day process

The end-of-day process starts at 00:10 am every day and runs for around two hours.

BU500 processes pending CRs that have reached their actual start date.

Overnight process

The overnight process completes all Change Requests satisfying these three criteria:

1. The Objection Logging Period is complete.
2. There are no outstanding Objections.
3. The Actual Change Date has passed.

For example, if the Actual Change Date on a Change Request is 08-Mar-2002 and the Objection Logging Period is complete, the overnight process completes the Change Request at about 01:00 on 09-Mar-2002.

A Change Request never completes until after the Actual Change Date passes.

When the overnight process updates the NMI Master Record, for records it makes inactive due to a change, it updates its MaintUpdtDt with the date and time of the change.

For any new record it creates due to a change, it makes its MaintCreateDt the date and time it made the changes to the newly Inactive records. Normally, the MaintCreateDt on any new records are the same as the MaintUpdtDt on the records made inactive.

Retrospective or prospective change

Depending if it is a Retrospective or Prospective Change, the Proposed Date or Actual Change Date is in the past or future.

A Retrospective Change can use today's date. Optionally, for some types of Retrospective Changes, it is possible to specify an Actual End Date. If you supply an Actual End Date, it is the date the new version of the NMI Standing Data applies.

For details about data in CATS_NMI_DATA, see page 141.

If you don't supply an Actual End Date, MSATS assumes it is an open-ended change (for example, applying in the future) and overnight populates the End Date on the new NMI Master Record with 31-Dec-9999.

These examples describe how MSATS updates data in the CATS_NMI_DATA table for Prospective and Retrospective Change Requests.

Prospective and retrospective change request examples

The examples in Table 19 below, change the CATS_NMI_DATA table and describe of how MSATS updates data.

Table 19 Prospective and retrospective Change Requests

Step	Process	Proposed change date	Completion date	Explanation
1.	Create the NMI	01-Feb-2002	02-Feb-2002	These two Transactions are Change Requests with Prospective changes for the effective date change so, are part of the overnight process.
2.	Change the TNI Code	01-Mar-2002	02-Mar-2002	For details, see Processing the updates to master records on page 147.

Step	Process	Proposed change date	Completion date	Explanation
3.	Change the DLF Code	01-Jul-2002	11-Jul-2002	This is a Retrospective Transaction entered on 10-Jul-2002. Because there are no allowable Objections for this type of Change Request used to update the DLF Code, it is processed during the overnight process for that date (about 01:00 on 11-Jul-2002).

Create the NMI

The Change Request to create the NMI includes the following fields:

Field	Value
TNICODE	VTT2
DLFCODE	LELS
ActualChangeDate	01-Feb-2002
ActualEndDate	Null

In the overnight processing for 1-Feb-2002 (approximately 01:00 on 2-Feb-2002), the record shown in Table 20 on page 150 is created in the CATS_NMI_DATA table with the following details:

- The EndDate is the high date because this record is active into the future.
- The MaintActFlg is A.
- The MaintUpdtDt is the high date because that is what it defaults to when the record is created.
- The ID_ND is a unique identifier MSATS assigns to each record.

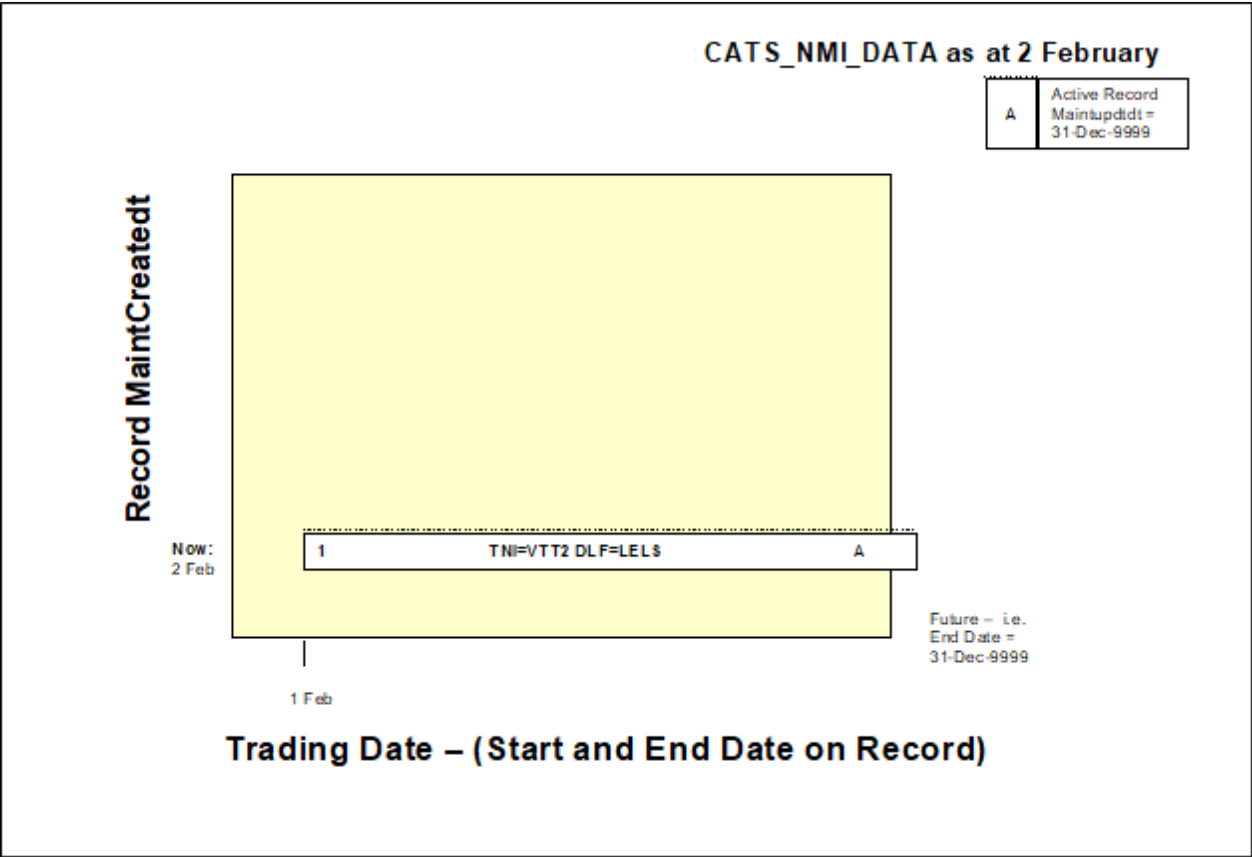
Table 20 CATS_NMI_Data after NMI creation

ID_ND	NMI	TNI code	DLF code	Start Date	End Date	MAINTUPDTDT	MAINTACTFLG	MAINTCREATEDT
1	XXXXXXXX24	VTT2	LELS	01-Feb-2002	31-Dec-9999	31-Dec-9999	A	02-Feb-2002 1:05

The table above represents the same record as a diagram with the following details:

1. The dotted line at the top of an active record is used to indicate the MaintUpdtDt is the high date (31-Dec-9999). Otherwise, the MaintUpdtDt is the date MSATS made the record inactive.
2. If the record extends into the future on the Trading Date axis, it means its EndDate is the high date.

Figure 24 CATS_NMI_Data diagram after NMI creation



Change the TNI code

The Change Request to change the TNI includes the following fields:

Field	Value
TNICODE	VHTS
ActualChangeDate	01-Mar-2002
ActualEndDate	Null

The overnight process for 1-Mar-2002 (approx. 01:00 on 2-Mar-2002), does the following:

1. Makes the existing record on the CATS_NMI_DATA table, (made redundant by this change), Inactive and updates its MaintUpdtDt with the system date and time.

The data in an existing MSATS record, including its start date and end date, can never change, so once the data is superseded by an update, MSATS makes the original record Inactive.

2. Creates two new active records:
 - a. One for the period up to the Day before the Change Request's Actual Change Date, containing the superseded data.
 - b. One for the period starting from the Actual Change Date.

The CATS_NMI_DATA table now contains the records shown in Table 21 on page 153 with the following details:

1. For the original record, record 1 (ID_ND = 1), MSATS changes:
 - a. Its MaintUpdtDt to 02-Mar-2002 1:02:00 AM.
 - b. The MaintActFlg to I, making it redundant.

When MSATS makes active records redundant, it must create new active records covering the Billing Period the original records covered. Record 1 covered 01-Feb-2002 to 31-Dec-9999.

2. Now record 1 (ID_ND = 1) is incorrect because its End Date is wrong. But the data in record 1, including its End Date, cannot change so MSATS creates two new records, records 2 and 3 (ID_ND = 2 and 3), both with MaintActFlg = A.
3. Record 2 (ID_ND = 2):
 - a. Has the original Standing Data and its End Date is the day before the Actual Change Date. This becomes the active record covering the period from the record's start date until 28-Feb-2002. Apart from its End Date, record 2 is a copy of Record 1.
 - b. Has its MaintUpdtDt is 31-Dec-9999, because this is the value inserted into this field whenever a new record is created.
 - c. Is created to cover the Billing Period from 01-Feb-2002 to 28-Feb-2002.

4. Record 3 (ID_ND = 3):

- a. Has the Standing Data after the update, with the new TNI Code.
- b. Has its StartDate is the Actual Change Date.
- c. Has its End Date is the high date because it becomes the active record covering the period from 01-Mar-2002 into the future.
- d. Has its MaintUpdtDt is also 31-Dec-9999.
- e. Has the new TNI Code.
- f. Covers the Billing Period from 01-Mar-2002 to 31-Dec-9999.

Table 21 CATS_NMI_Data after TNI creation

- Blue shading = fields updated on an existing record.

- Purple shading = fields changed leading to the creation of the two new records.

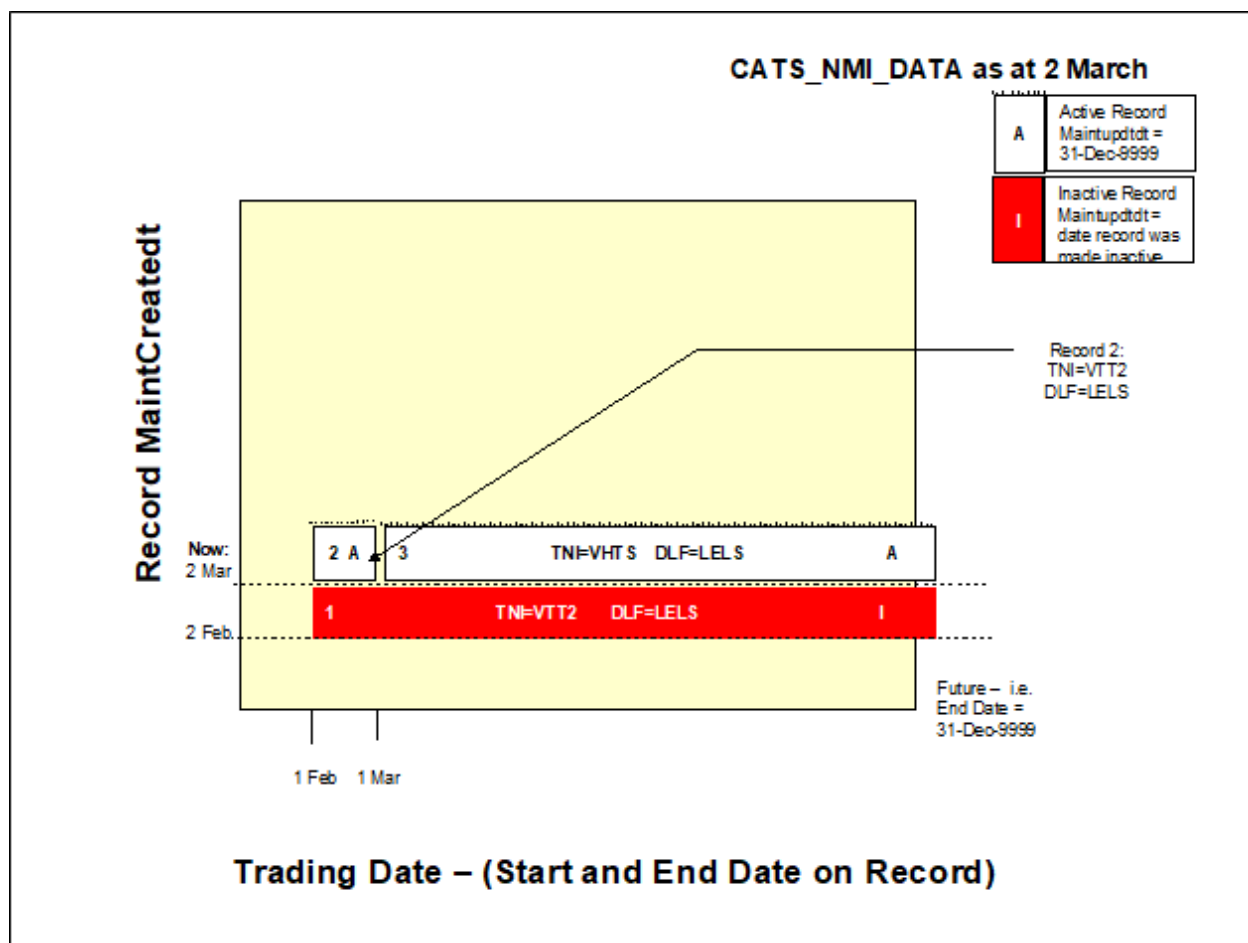
ID_ND	NMI	TNI code	DLF code	Start Date	End Date	MAINTUPDTDT	MAINTACTFLG	MAINTCREATEDT
1	XXXXXXXXX24	VTT2	LELS	01-Feb-2002	31-Dec-9999	02-Mar-2002 1:02	I	02-Feb-2002 1:05
2	XXXXXXXXX24	VTT2	LELS	01-Feb-2002	28-Feb-2002	31-Dec-9999	A	02-Mar-2002 1:02
3	XXXXXXXXX24	VHTS	LELS	01-Mar-2002	31-Dec-9999	31-Dec-9999	A	02-Mar-2002 1:02

Figure 25 on page 154 represents the same record as a diagram with the following details:

1. Record 1 is now inactive, so it is only needed if there is an **as at** Settlements run for any Billing Period before 02-Mar-2002.

2. Record 2 is the active record covering the Billing Period 01-Feb-2002 until 28-Feb-2002. It is used for any future settlements runs for Billing Periods falling in that period.
3. Record 3 is the active record covering the period from 01-Mar-2002 into the future.

Figure 25 CATS_NMI_Data diagram after TNI code change



Change the DLF code

The Change Request to change the DLF Code will include the following data:

Field	Value
DLFCode	LRLS
ActualChangeDate	01-Jul-2002
ActualEndDate	Null

The overnight processing for 10-Jul-2002 (approx. 01:00 on 11-Jul-2002) does the following:

1. Makes record 3 (ID_ND = 3) inactive and updates the MaintUpdtDt with the system time and date.
2. Creates two new active records (ID_ND = 4 and 5):
 - a. One for the period prior to the Change Request's Actual Change Date, containing the old version of the record 3 data.
 - b. One for the period starting from the Actual Change Date.

The CATS_NMI_DATA table now contains the records shown in Table 22 on page 156, remember:

1. The data in an existing record, including its End Date, cannot change. So, record 3 is in correct because from 1 July onwards, the DLF Code is different.

To fix this, MSATS makes the record redundant by changing its MaintActFlg to I and updating its MaintUpdtDt.

2. Record 4 (ID_ND = 4) covers the rest of the period originally covered by Record 3 (from 01-Mar-2002 until 30-Jun-2002). It contains the same data originally in Record 3 apart from the End Date.
3. Record 5 (ID_ND = 5) is the new record with the new DLF Code, starting from 01-Jul-2002.

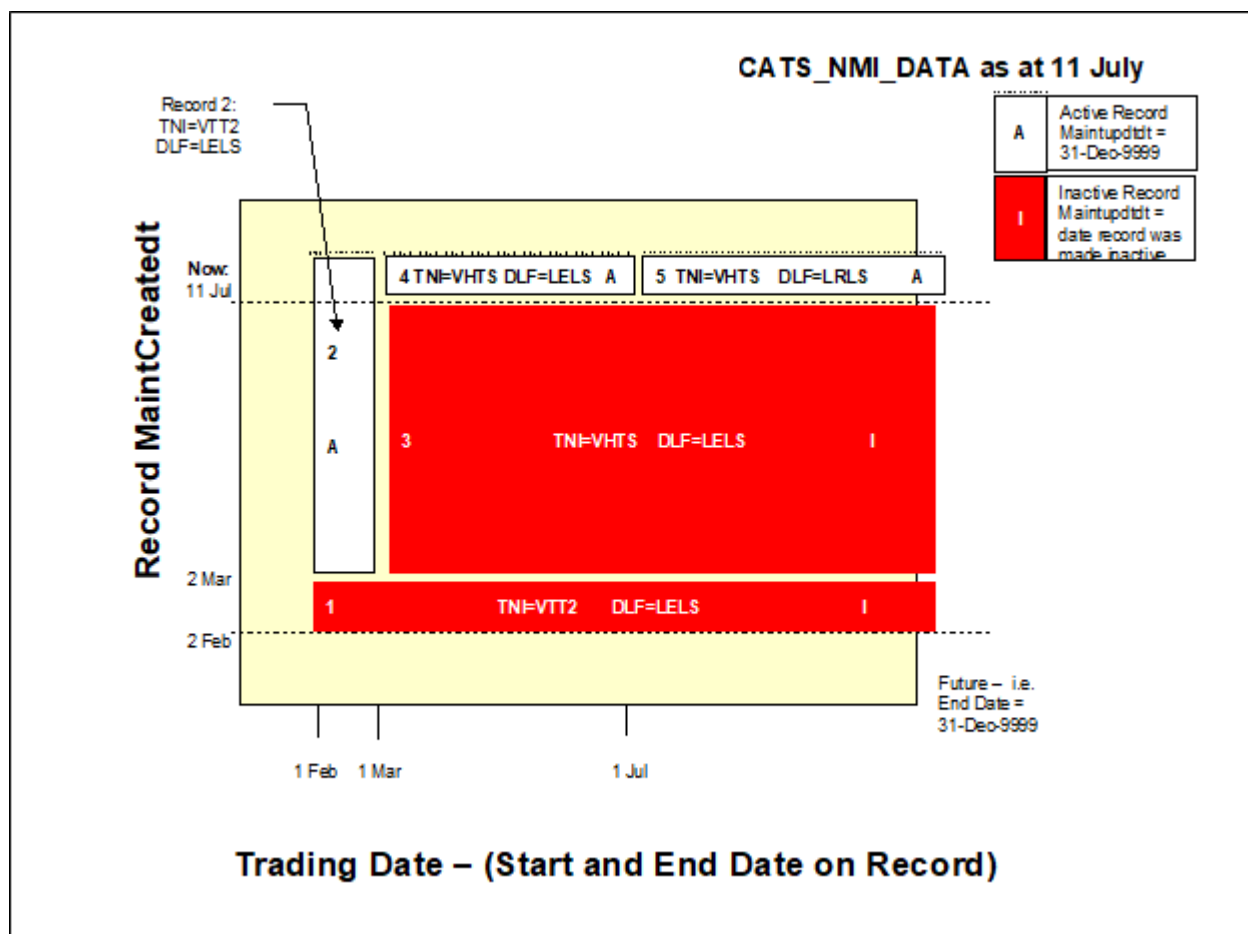
Figure 26 on page 157 represents the same data as a diagram.

Table 22: CATS_NMI_Data with changed DLF code

- Blue shading = fields updated on an existing record.
- Purple shading = fields changed leading to the creation of the two new records.

ID_ND	NMI	TNI code	DLF code	Start Date	End Date	MAINTUPDTDT	MAINTACTFLG	MAINTCREATEDT
1	XXXXXXXXX24	VTT2	LELS	1-Feb-2002	31-Dec-9999	2-Mar-2002 1:02	I	2-Feb-2002 1:05
2	XXXXXXXXX24	VTT2	LELS	1-Feb-2002	28-Feb-2002	31-Dec-9999	A	2-Mar-2002 1:02
3	XXXXXXXXX24	VHTS	LELS	1-Mar-2002	31-Dec-9999	11-Jul-2002 1:02	I	2-Mar-2002 1:02
4	XXXXXXXXX24	VHTS	LELS	1-Mar-2002	30-Jun-2002	31-Dec-9999	A	11-Jul-2002 1:02
5	XXXXXXXXX24	VHTS	LRLS	1-Jul-2002	31-Dec-9999	31-Dec-9999	A	11-Jul-2002 1:02

Figure 26 CATS_NMI_Data diagram with changed DLF code



Retrospective change to the TNI with an end date

In the previous examples, the Change Requests submitted to change the TNI Code and then the DLF Code were to change the data from the nominated date into the future. This example is more complicated and describes:

1. What happens if you submit a Change Request with a Start and an End Date.
2. Where another Change Request is submitted to change the TNI to VER2 for the period 01-May-2002 to 31-Aug-2002.

Figure 27 on page 158 describes the NMI's active TNI Code after completion of the Change Request over time.

Figure 27 Active TNI code over time

Start Date	End Date	TNI
01-Feb-2002	28-Feb-2002	VTT2
01-Mar-2002	30-Apr-2002	VHTS
01-May-2002	31-Aug-2002	VER2 (New)
01-Sep-2002	31-Dec-9999	VHTS

The Change Request to change the TNI to VER2, submitted on 12-Sep-2002, includes the following data:

Field	Value
TNICODE	VER2
ActualChangeDate	01-May-2002
ActualEndDate	31-Aug-2002

In the overnight processing for 12-Sep-2002 (approx. 01:00 on 13-Sep-2002), the following happens:

1. The two existing active records (ID_ND = 4 and 5) are made inactive.
2. In addition to the active records covering the period from 01-Feb-2002 to 28-Feb-2002, not affected by this change, MSATS creates four new active records with the following Start and End Dates.

Start Date	End Date
01-Mar-2002	30-Apr-2002
01-May-2002	30-Jun-2002

Start Date	End Date
01-Jul-2002	31-Aug-2002
01-Sep-2002	31-Dec-9999

The CATS_NMI_DATA Table now contains the records shown in Table 23 below with the following details:

1. Because the period covered by the Change Request overlaps two existing active records: 4 and 5 (ID_ND = 4 and 5), both are made redundant.

Remember, when MSATS makes records redundant, it must create new active records, covering the entire Billing Period covered by the original redundant records.

2. MSATS creates Records 6 and 7 (ID_ND = 6 and 7). Between them, they cover the original record 4 Billing Period.
3. Records 8 and 9 (ID_ND = 8 and 9) cover the period originally covered by record 5 (ID_ND 5).

Figure 28 on page 161 represents this data as a diagram.

Table 23 CATS_NMI_Data for active TNI code over time

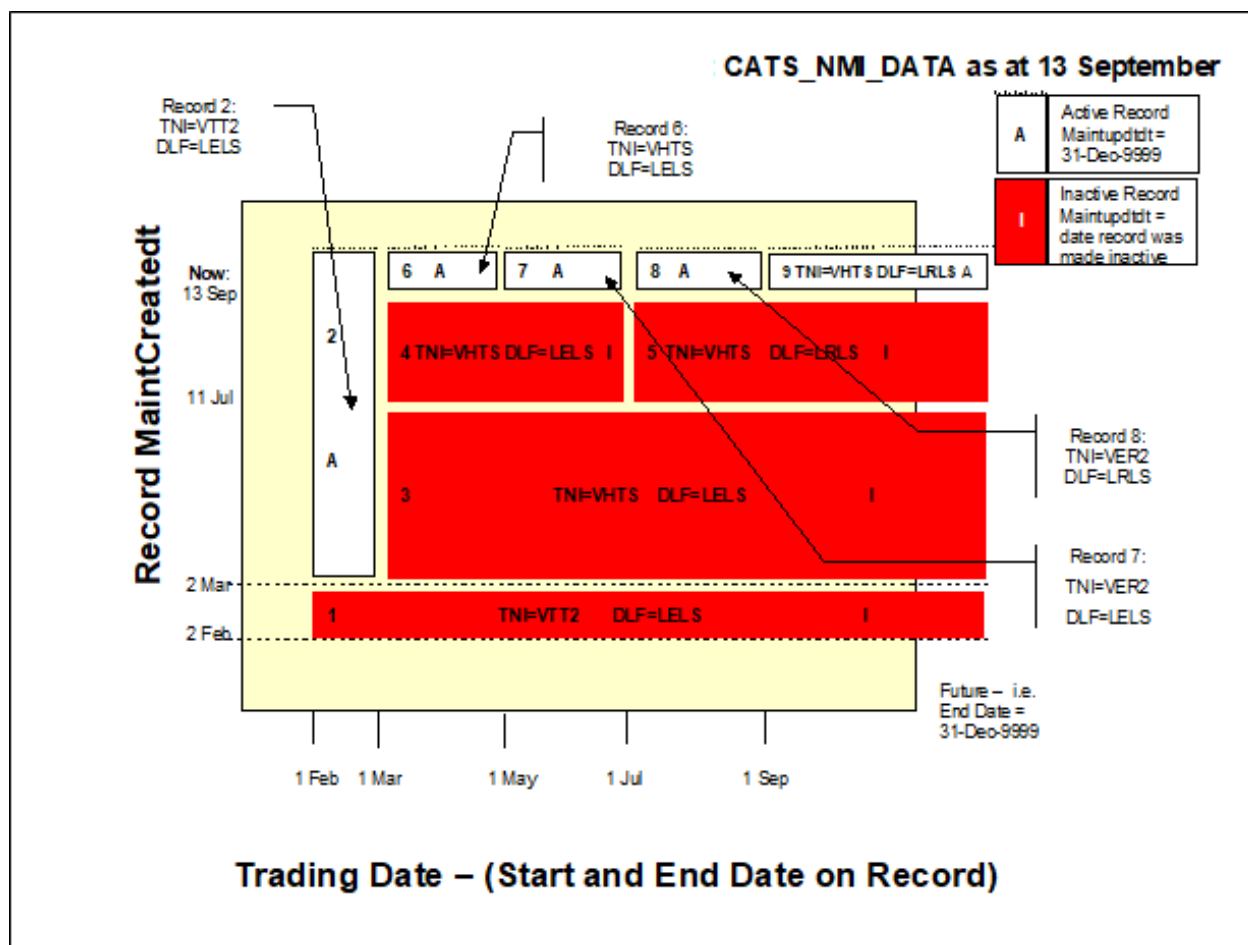
- Blue shading = fields updated on an existing record.

- Purple shading = fields changed leading to the creation of the two new records.

ID_ND	NMI	TNI code	DLF code	Start Date	End Date	MAINTUPDTDT	MAINTACTFL G	MAINTCREATEDT
1	XXXXXXXXX24	VTT2	LELS	1-Feb-2002	31-Dec-9999	2-Mar-2002 1:02	I	2-Feb-2002 1:05
2	XXXXXXXXX24	VTT2	LELS	1-Feb-2002	28-Feb-2002	31-Dec-9999	A	2-Mar-2002 1:02

ID_ND	NMI	TNI code	DLF code	Start Date	End Date	MAINTUPDTDT	MAINTACTFL G	MAINTCREATEDT
3	XXXXXXXXX24	VHTS	LELS	1-Mar-2002	31-Dec-9999	11-Jul-2002 1:02	I	2-Mar-2002 1:02
4	XXXXXXXXX24	VHTS	LELS	1-Mar-2002	30-Jun-2002	13-Sep-2002 1:02	I	11-Jul-2002 1:02
5	XXXXXXXXX24	VHTS	LRLS	1-Jul-2002	31-Dec-9999	13-Sep-2002 1:02	I	11-Jul-2002 1:02
6	XXXXXXXXX24	VHTS	LELS	1-Mar-2002	30-Apr-2002	31-Dec-9999	A	13-Sep-2002 1:02
7	XXXXXXXXX24	VER2	LELS	1-May-2002	30-Jun-2002	31-Dec-9999	A	13-Sep-2002 1:02
8	XXXXXXXXX24	VER2	LRLS	1-Jul-2002	31-Aug-2002	31-Dec-9999	A	13-Sep-2002 1:02
9	XXXXXXXXX24	VHTS	LRLS	1-Sep-2002	31-Dec-9999	31-Dec-9999	A	13-Sep-2002 1:02

Figure 28 CATS_NMI_Data diagram for active TNI code over time



Changing a NMI's FRMP

The CATS_NMI_PARTICIPANT_RELATIONS table has significance because it is the basis for determining the records from any of the five NMI Master tables, participants are entitled to view.

This example traces the effect of the changes to this NMI's FRMP with the following Transactions:

1. Create the NMI on page 162.
2. A prospective change to the NMI's FRMP on page 164.

3. A retrospective change to a NMI's FRMP to correct an error on page 166.

Create the NMI

Part of the process of creating a NMI record includes specifying the mandatory Role Codes: LR, FRMP, LNSP, MDP, MPB, ROLR, MPC, and RP.

The example in Table 24 below explains what the CATS_NMI_PARTICIPANT_RELATIONS table looks like when the NMI record is created as a First Tier NMI. This table has the same key fields as CATS_NMI_DATA: StartDate, EndDate, MaintActFlg, MaintCreateDt and MaintUpdtDt.

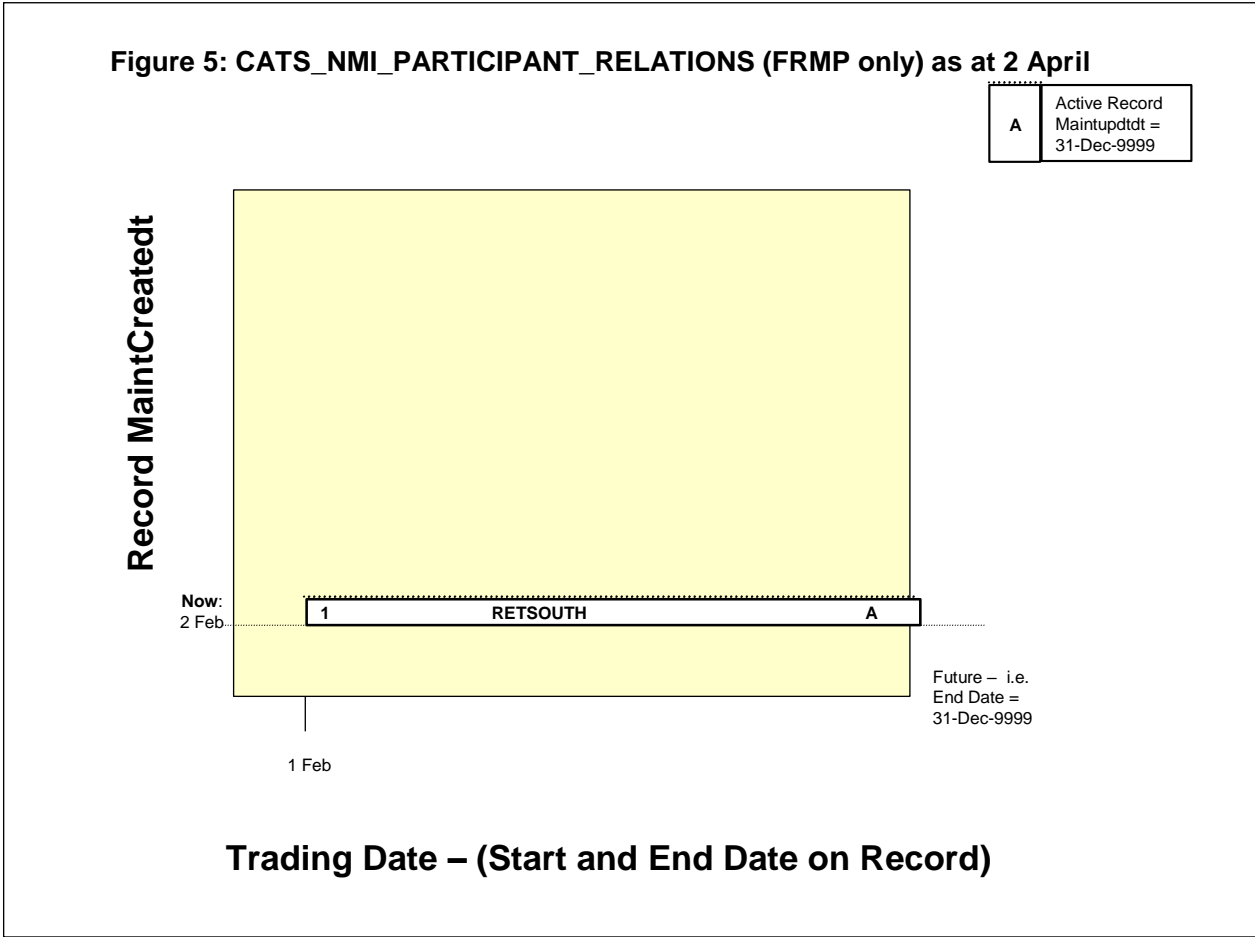
At the start of life for the FRMP NMI record, it looks like Figure 29 on page 163.

Table 24 Changing a NMI's FRMP table

Participant ID	NMI	Role ID	Start date	End date	MAINTACTFLG	MAINTUPDT DT	MAINTCREATE DT
RETSOUTH	XXXXXXXXX 24	FRMP	1-Feb-2002	31-Dec-9999	A	31-Dec-9999	2-Feb-2002 1:44
NETSOUTH	XXXXXXXXX 24	LNSP	1-Feb-2002	31-Dec-9999	A	31-Dec-9999	2-Feb-2002 1:44
RETSOUTH	XXXXXXXXX 24	LR	1-Feb-2002	31-Dec-9999	A	31-Dec-9999	2-Feb-2002 1:44
MDPSOUTH	XXXXXXXXX 24	MDP	1-Feb-2002	31-Dec-9999	A	31-Dec-9999	2-Feb-2002 1:44
MPSOUTH	XXXXXXXXX 24	MPB	1-Feb-2002	31-Dec-9999	A	31-Dec-9999	2-Feb-2002 1:44
RETSOUTH	XXXXXXXXX 24	ROLR	1-Feb-2002	31-Dec-9999	A	31-Dec-9999	2-Feb-2002 1:44
MCSOUTH	XXXXXXXXX 24	RP	1-Feb-2002	31-Dec-9999	A	31-Dec-9999	2-Feb-2002 1:44

Participant ID	NMI	Role ID	Start date	End date	MAINTACTFLG	MAINTUPDT DT	MAINTCREATE DT
RETSOUTH	XXXXXXXX24	MPC	1-Feb-2002	31-Dec-9999	A	31-Dec-9999	2-Feb-2002 1:44

Figure 29 Changing a NMI's FRMP diagram



A prospective change to the NMI's FRMP

In this example, RETEAST submitted a CR1000 to change the NMI's FRMP with a Proposed Date of 30-Mar-2002:

1. After reading the Meter on 01-Apr-2002, the MDP submitted a Transaction on 02-Apr-2002 to update the original Change Request with an Actual Change Date of 01-Apr-2002.
2. The overnight process for 02-Apr-2002 (approximately 01:00 on 03-Apr-2002) processes the Change of Retailer Transaction with an Actual Change Date of 01-Apr-2002.
3. Now, the records on the CATS_NMI_PARTICIPANT_RELATIONS table, where the Role ID is FRMP, look like Table 25 below.

Other Role IDs exist in this table but for simplicity, only the FRMP is shown.

Figure 30 on page 165 represents the same data a diagram.

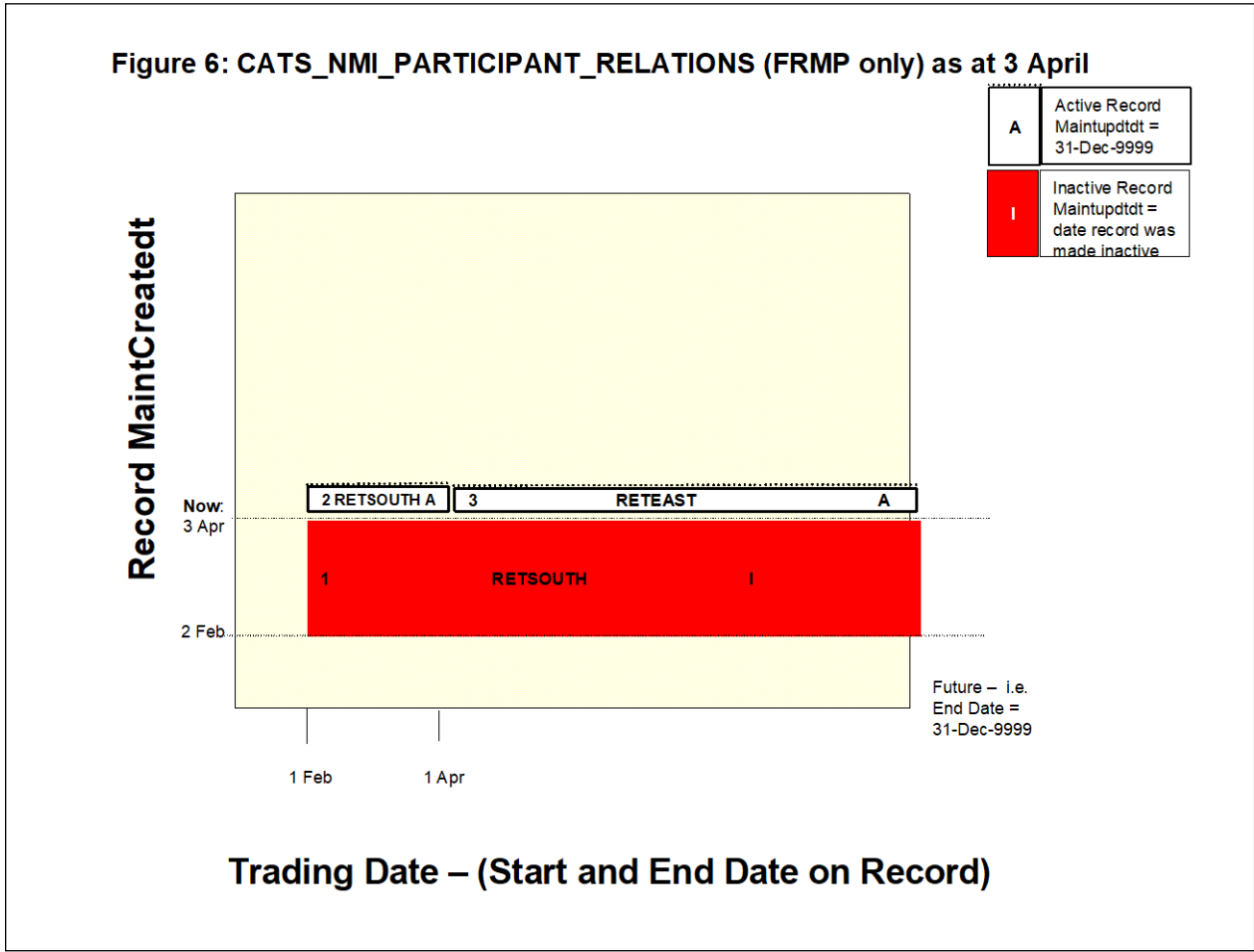
Table 25 A prospective change to the NMI's FRMP table

- Blue shading = fields updated on an existing record.

- Purple shading = fields changed leading to the creation of the two new records.

ID_NPR	Participant ID	NMI	Role ID	Start date	End date	MAINTACTFL	MAINTUPDT DT	MAINTCREAT EDT
1	RETSOUT H	XXXXXXXX 24	FRM P	1-Feb- 2002	31-Dec- 9999	I	03-Apr- 2002 1:04	2-Feb-2002 1:44
2	RETSOUT H	XXXXXXXX 24	FRM P	1-Feb- 2002	31-Mar- 2002	A	31-Dec- 9999	3-Apr-2002 1:04
3	RETEAST	XXXXXXXX 24	FRM P	1-Apr- 2002	31-Dec- 9999	A	31-Dec- 9999	3-Apr-2002 1:04

Figure 30 A prospective change to the NMI's FRMP diagram



A retrospective change to a NMI's FRMP to correct an error

In this final example for this NMI, a Retrospective change is submitted to correct an error.

There was a period when the NMI was with another FRMP, but not recorded in MSATS. The affected Retailers have agreed to fix the problem on-market:

1. RETWEST submits a CR1020 on Friday 01-Nov-2002 to change the NMI's FRMP for the Billing Period from 01-Mar-2002 to 15-Aug-2002.

They submit the Change Request with a Proposed Date of 01-Mar-2002 and an Actual End Date of 15-Aug-2002. No Request for Data is sent to the MDP for the Actual Change Date for this type of Change Request so the Proposed Date of 01-Mar-2002 becomes the Actual Change Date.

2. The time for overnight processing of this Transaction depends on the Objection Logging Period allowed for the CR1020.

Assuming there is a five-day Objection Logging Period and there are no Objections, this Transaction is processed after five full Business Days elapse. Meaning it completes in the overnight process for 08-Nov-2002 (approx. 01:00 on 09-Nov-2002) with an Actual Change Date of 01-Mar-2002.

3. Now, the records in the CATS_NMI_PARTICIPANT_RELATIONS Table where the RoleID is FRMP look like the data in Table 26 on page 167.

Each previously active record is treated individually and split up as required so record 2 is split in two and Record 3 is split in two.

Figure 31 on page 168 represents the same data a diagram.

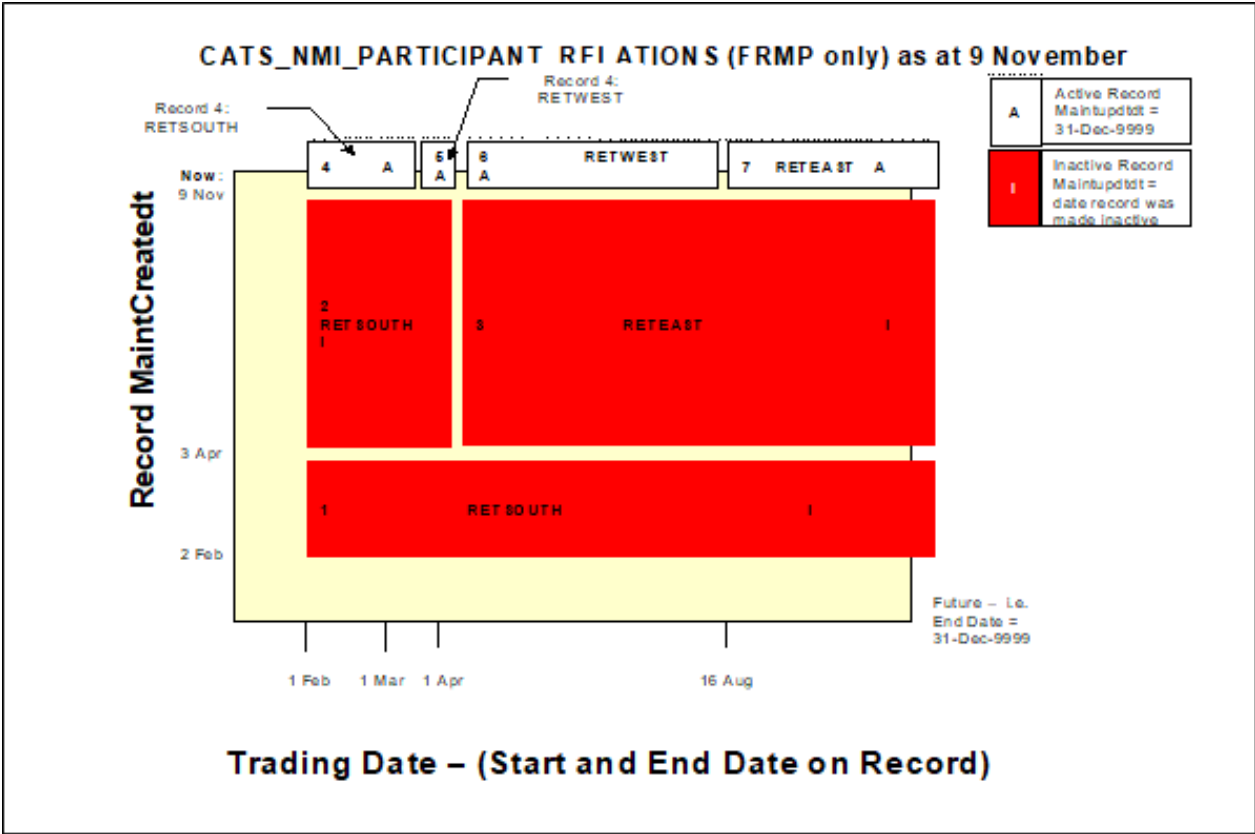
Table 26 A retrospective change to a NMI's FRMP to correct an error table

- Blue shading = fields updated on an existing record.

- Purple shading = fields changed leading to the creation of the two new records.

ID_NPR	Participant ID	NMI	Role ID	Start date	End date	MAINTACTFL	MAINTUPDT DT	MAINTCREAT EDT
1	RETSOUTH	XXXXXXXXX24	FRMP	1-Feb-2002	31-Dec-9999	I	03-Apr-2002 1:04	2-Feb-2002 1:44
2	RETSOUTH	XXXXXXXXX24	FRMP	1-Feb-2002	31-Mar-2002	I	9-Nov-2002 1:20	2-Feb-2002 1:44
3	RETEAST	XXXXXXXXX24	FRMP	1-Apr-2002	31-Dec-9999	I	9-Nov-2002 1:20	3-Apr-2002 1:04
4	RETSOUTH	XXXXXXXXX24	FRMP	1-Feb-2002	28-Feb-2002	A	31-Dec-9999	9-Nov-2002 1:20
5	RETWEST	XXXXXXXXX24	FRMP	1-Mar-2002	31-Mar-2002	A	31-Dec-9999	9-Nov-2002 1:20
6	RETWEST	XXXXXXXXX24	FRMP	1-Apr-2002	15-Aug-2002	A	31-Dec-9999	9-Nov-2002 1:20
7	RETEAST	XXXXXXXXX24	FRMP	16-Aug-2002	31-Dec-9999	A	31-Dec-9999	9-Nov-2002 1:20

Figure 31 A retrospective change to a NMI's FRMP to correct an error diagram



Chapter 6 Codes

This chapter specifies the codes applying when participants submit a Change Request or seek access to CATS Standing Data.

For valid combinations of read type codes, metering installation type codes, and change reason codes, see [CATS Procedure Principles and Obligations](#).

Codes maintenance

AEMO updates the codes tables in MSATS, as required and if a change is made sends a message to all participants in the [Data Replication Resynchronisation \(C1\) Report](#).

You can find codes in the MSATS Web Portal > Administration > Codes Maintenance.

You can download individual tables from the MSATS Web Portal > Reports and Alerts > CATS > [C1 Data Replication Resynchronisation Report](#)

For details about the use of codes. See [MSATS Procedures: CATS Procedure Principles and Obligations](#).

Table 27 below explains the CATS Configuration Codes and where you can find them.

Table 27 CATS configuration codes

Name	Description	Table or reference	More details
Actual/cumulative indicator codes	Identifies the type of Meter Reading	CATS_REGISTER_IDENTIFIER	Page 173
Change Reason Codes	Change Request codes	CATS_CHANGE_REASON_CODES	Page 174

Name	Description	Table or reference	More details
Change Request Status Codes	Codes notifying relevant participants of the progression of a Change Request	CATS_CR_STATUS_CODES	Page 176
Customer Classification Codes	End-User Classification	n/a	Page 177
Customer Threshold Codes	The level of an End-Use Customer's electricity consumption	n/a	Page 177
Datastream Status Codes	Determine if a Datastream is used in Settlements	MSATS Procedures: CATS Procedure Principles and Obligations	Page 178
Deregistration Code	Denotes if a participant is deregistered	CATS_DEREG_CODES	MSATS Web Portal > Administration > Codes Maintenance
DLF Codes	Distribution Loss Factor codes and their relevant values	CATS_DLF_CODES	Page 179
Embedded Network Identifier Codes	Identify the Embedded Network a NMI belongs to	CATS_EMB_NET_ID_CODES	Page 180
Error Codes	Error codes and their descriptions used in B2M, eMDM, and B2B	CATS_ERROR_CODES	Page 52 Page 181
Field Validation Data Source Codes	Defines the source of the data	CATS_DATA_SOURCE_CODES	Page 182

Name	Description	Table or reference	More details
Jurisdiction Codes	Identify the Jurisdiction where a NMI is situated	CATS_JURISDICTION_CODES	Page 182
Meter Register Status Codes	Denotes the status of the Meter	CATS_METER_REGISTER	Page 183
Metering Installation Type Codes	The type of Metering Installation as specified in the NER	CATS_METER_INSTALL_TYPE_CODES	Page 183
MSATS System Calendar	Working and non-working days in the NEM	MSATS_NATIONAL_CALENDAR	MSATS Web Portal > Administration > System Calendar
Network Tariff Codes	The tariff applying to a Meter Register	CATS_NETWORKTARIFF_CODES	Page 184
NMI Classification Codes	Define the flow of electricity at the Connection Point	CATS_NMI_CLASS_CODES	Page 185
NMI Ranges	Participant IDs and their NMI Ranges	CATS_NMI_RANGES	MSATS Web Portal > Administration > Codes Maintenance
NMI Status Codes	Determine if a NMI is used for a Retail transfer	CATS_NMI_STATUS_CODES	Page 185
Objection Codes	Used to object to Change Request	CATS_OBJECTION_CODES	Page 185
Parent Name Codes	Embedded Network Identifier Codes	CATS_EMB_NET_ID_CODES	Page 180

Name	Description	Table or reference	More details
Read Type Codes	Signal if a Meter is read on a particular Proposed Change Date	CATS_READ_TYPE_CODES	Page 186
Register Identifier Status Codes	Indicate if a Meter Register is active	CATS_REGISTER_IDENTIFIER	Page 190
Registered Participant IDs	List of Registered Participant IDs	CATS_PARTICIPANTS	n/a
Role ID Codes	Participant IDs and their Role	CATS_PARTICIPANT_ROLES	Page 190
Roles	MSATS roles	CATS_ROLES	B2M rolesPage 11
TNI Codes	Transmission Connection Point Identifier codes	CATS_TNI_CODES	Page 191
Transaction Type Codes	MSATS Transaction types	CATS_TRANS_TYPE_CODES	Page 192
Unit of measure Codes	Meter Register measure Energy Consumption	n/a	Page 194

Actual/cumulative indicator codes

The Actual/Cumulative (ActCumInd) Code is an attribute of a Meter Register ID, identifying if the reading is actual or cumulative (see Table 28 below):

For more details, see [MSATS Procedures: CATS Procedure Principles and Obligations](#)

- **Actual:** Implies a volume of energy metered between two dates.
- **Cumulative:** Indicates a Meter Reading for a specific date.

MSATS requires a second Meter Reading to determine the consumption between the two read dates.

Table 28 Actual/cumulative indicator codes

Code	Description	Type
A	Actual	Interval
C	Cumulative	Consumption

Change reason codes

Change Reason Codes govern the population of data in a Change Request. All Change Requests require a Change Reason Code:

- Identifying the type of Transaction (for example, Change of Retailer, Creation of a NMI, and so on)
- Defining the reason for the Transaction.

You can find a list of Change Reason Codes in the MSATS Web Portal > Administration > Codes Maintenance > Change Reason Codes

For specific requirements for each Change Reason Code, see [CATS Procedure Principles and Obligations](#).

For any Change Reason Code, some elements are defined globally. For example, they apply in all Jurisdictions. While others are defined separately for each Jurisdiction (see page 198).

Change Reason Codes are separated into groups of events and contain rules specifying:

- Which participant(s) must provide the data and when.
- Which data must exist in the NMI Master Record before the Change Request can complete.

Change reason code parameters

Each Change Reason Code has the following parameters:

1. The participants permitted to initiate a Change Request.
2. The data items in the Change Request.
3. The data that must already be present in MSATS before the Change Request can complete.

4. Whether another participant must supply the exact date of the change. For example, is the MDP required to supply the date of the Actual Meter Reading to Complete the Change Request.
5. The date range window.
6. The Roles notified of a Change Request each stage they are notified.
7. The Objection Logging Period.
8. The Objection Clearing Period.
9. The participants who can Object to Change Request and the basis for Objection.

Change reason code rules

The Change Reason Codes control the following information:

Controls	Rule
The role / role status that can initiate the CR	CR Initiation
Whether it is retrospective	Jurisdictional
The number of days into the past or future when the change can be made	Jurisdictional
The number of days allowed for objections	Jurisdictional
The number of days after when an objected to CR is cancelled	Jurisdictional
The valid Objection codes (by NMI classification / Role and Role Status)	Objection
The mandatory and optional data provided by the Initiating participant	Field Validation
The mandatory and optional data provided by another party (e.g. LNSP or MDP) before the change can complete	Field Validation

Controls	Rule
Which parties are notified during each stage of the CR lifecycle	Notification

Address information

For certain Change Reason Codes, participants must provide data items associated with address information, as either:

1. Mandatory information, including locality (suburb), state, and postcode.
2. Optional information, including information in the Unstructured Address format, except for state and postcode information, or other information participants can provide in the Structured Address format, which is mandatory in this format.

Change request status codes

Code	Description	Code	Description	Code	Description
CAN	Cancelled	PEND	Pending	REJ	Rejected
COM	Completed	PVAL	Pending validation	REQ	Requested
OBJ	Objected				

Customer classification codes

The Customer Classification Codes in Table 29 below relate to an End-Use Customer or previous End-Use Customer at a single Connection Point where the NMI applies. See relevant Jurisdictional regulation for full details of Customer Classification Codes.

Table 29 Customer classification codes

Code	Description
BUSINESS	The End-Use Customer has identified the primary use of the Connection Point is for business purposes.
RESIDENTIAL	The End-Use Customer has identified the primary use of the Connection Point is for residential purposes.

Customer threshold codes

The Customer Threshold Codes in Table 30 below are used to indicate the level of an End-Use Customer's electricity consumption at a single Connection Point where a NMI applies. They are based on the LNSP's determination of the annualised consumption for an End-Use Customer at a single Connection Point.

A Customer Threshold Code is mandatory for all NMIs with a NMI Status Code of A or D, and a Customer Classification Code of BUSINESS.

Table 30 Customer threshold codes

- These codes are defined in the [National Energy Retail Regulations](#).

Customer Threshold Code	Description
LOW	Consumption is less than the Lower Consumption Threshold

Customer Threshold Code	Description
MEDIUM	Consumption is equal to or greater than the Lower Consumption Threshold, but less than the Upper Consumption Threshold
HIGH	Consumption is equal to or greater than the Upper Consumption Threshold

Datastream status codes

Datastreams are Metering Data associated with a Connection Point (NMI). A NMI can have multiple Datastreams, for example, from one or more Meters or from one or more channels or Meter Registers, comprising a single Meter. Each Datastream is identified by a suffix, associated to the NMI. The type is dependent on the Metering Installation Type.

Datastreams define the data the MDM can expect from each NMI. They are used to determine if a Datastream is used in the Settlements process, because the NMI is Tier 2 or the Metering Data is required as part of the Load Profile process. In the MDM process, the Datastream Status Code is.

You can find Datastream Status Codes in [MSATS Procedures: CATS Procedure Principles and Obligations](#).

For example, if the Metering Installation Type is:

- Consumption, the Datastream Type is C (Basic).
- COMMSn or MRIM, the Datastream Type is I.

The definition of the Datastream also includes the profile name it is associated with and if the Datastream is active (if metering data must be supplied).

This information is useful to the Metering Provider (MP), Profile Preparation Service (PPS), and Basic Meter Profiler (BMP) as they determine the relevant data for use in creating a Profile or which profile it is applied.

Datastream Status Codes are part of **Standing Data for MSATS**. They manage Metering Data and determine if the Datastream is used in the Settlements process, either because:

- The NMI is Tier 2.
- Metering Data is required for the NMI as part of the creating a Load Profile process.

When required by a Change Reason Code, participants must nominate the Datastream Status Code for the selected NMI on the Change Request.

If a Datastream Status Code is set to A (active), MSATS uses this flag to indicate Metering Data is expected for the NMI for:

- Aggregation in the Settlements process.
- Netting off in the determination of a Profile shape.

DLF codes

Distribution Loss Factors (DLF) Codes are three- or four-character defined by LNSPs. To avoid duplication of codes, the first character of the code, identifies the LNSP area.

Each DLF code has:

- An associated Jurisdiction: The LNSP must obtain the regulatory approval necessary under the Jurisdictional Rules for their network before requesting entry in MSATS.
- A value: consisting of a leading numeral of 1 or 0, a decimal place, and up to five numerals following the decimal place.
- A description.

Embedded network identifier codes

Embedded Network Identifier Codes define the relationships between child and parent NMIs in an Embedded Network. In MSATS, each Embedded Network is allocated an Embedded Network Identifier Code:

- The parent NMI for the Embedded Network (the one connected to the Distribution Network) has the Embedded Network Identifier Code recorded in the Embedded Network ID Parent field.
- All direct child NMIs have the same Embedded Network ID Code recorded in the Embedded Network ID Child field.
- If this field is not populated in a NMI record, it is assumed it is not the Child of any Parent

Error codes

You can find MSATS and B2B error codes in the following resources. For details, see References on page 220.

B2B validation module matrix

You use the [B2B Validation Module Matrix](#) to use with the [Validation Module Software](#) to ensure B2B message content in your systems aligns with the [B2B Procedures](#).

Data replication resynchronisation (C1) report

Download the [Data Replication Resynchronisation \(C1\) Report](#) from [MSATS Web Portal > Reports and Alerts > Table > CATS_ERROR_CODES](#). For help, see [Guide to MSATS Reports](#).

Report - Data Replication Resynchronisation Report (C1)		Participant ID:	NEMMCO
		Participant Name:	Australian Energy Market Operator Limited
Start Date (*) (dd-mmm-yyyy):	<input type="text" value="26-Nov-2020"/>	End Date (*) (dd-mmm-yyyy):	<input type="text" value="2-Dec-2020"/>
Time From (hh:mm:ss):	<input type="text" value="00:00:00"/>	Time To (hh:mm:ss):	<input type="text" value="23:59:59"/>
Tables (*):	<input type="text" value="CATS_ERROR_CODES (FULL Repl. Allowed)"/>		
Report Last Sequence Number (*):	<input type="text" value="0"/>		
Maximum Rows:	<input type="text" value="200"/>	ROWLIMITS: Minimum: 100 Maximum: 30000	
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

Meter data validation matrix

You use the [Meter Data Validation Matrix](#) to link B2M and eMDM validation codes to their respective error codes.

MSATS web portal

You can copy and paste a table of error codes and their messages to a spreadsheet from [MSATS Web Portal > Administration > Codes Maintenance > Error Codes](#).

SMP validation matrix

The [SMP Validation Matrix](#) covers the errors related to receiving and processing messages by the e-Hub. It also covers the associated NACK errors, descriptions, and HTTP error codes.

Field validation data source codes

The Data Source Code is a field in the Field Validation Rules table (see page 197) defining the source of the data.

Jurisdiction codes

The Jurisdiction Codes:

- Identify the Jurisdiction where a NMI is situated.

- Are used to apply Jurisdiction-based business rules.
- Is associated with each NMI in MSATS.
- Is used in many rules and many validations to enforce correct transactions.

Meter register status codes

The Meter Register Status Codes identify:

- The status of the Meter.
- The status of the Meter Register.

Metering installation type codes

The Metering Installation Type Codes identify the type of Metering Installation as specified in the NER. They indicate if a Meter is manually or remotely read.

This affects the transfer transaction process flow because:

- If a Meter is manually read, the Metering Data Provider (MDP) must supply the Actual Change Date before the transaction completes.

If manually read (MSATS flag is set to Y) and the Change Request Field Validation Rules are set up to request a date, MSATS sends requests the nominated party to provide it (for example the new MDP).

For Interval meters, the Manually Read Field, indicates MDPs must supply the date of change manually. It does not indicate the Metering type. This confirms the Metering Installation is National Electricity Rules (NER) compliant.

- If it is remotely read, the transaction completes at the requested transfer date.

Allocating metering installation codes

For more details, see **DataStreamType** in **Standing Data for MSATS**

Consequences of allocating certain Metering Installation Codes:

1. If the Metering Installation Type Code is COMMSx, COMMS4C, COMMS4D, MRIM, MRAM, VICAMI, or UMCP:
 - a. If the Datastream Suffix is Nx (for example, N1), the DataStreamType must be I (Interval) or P (P = Profile Area, Sample Meters only).
 - b. The ProfileName must be NOPROF
2. If the Metering Installation Type Code is BASIC:
 - a. The DataStreamType must be C.
 - b. In Victoria, Tasmania, and ACT: The ProfileName must be NSLP.
 - c. In NSW, QLD, and SA: The ProfileName must be NSLP or the relevant Controlled Load Profile (CLP).
 - d. The Datastream Suffix must be numeric (for example, 11).

Network tariff codes

Network Tariff codes represent the tariff applying to a nominated Meter Register. These are the fees charged by the Distribution Network, passed on to the End-use Customer by the Retailer.

Network Tariff codes do not support the Settlement of the wholesale NEM. They are included in MSATS because they can assist Retailers to prepare quotes.

If the NMI is known and the Jurisdiction allows, a new Retailer can view the Network Tariff Code using NMI Discovery.

NMI classification codes

NMI Classification Codes:

- Define, for retail Connection Points, the volume of energy consumed.
- Identify Wholesale, Generator, and Directional Interconnector Connection Points. Informing MSATS of the flow of electricity at the Connection Point.
- Are based on the total annual load of the NMI.

The NMI Classification Codes LARGE and SMALL are used in the [CATS Procedure Principles and Obligations](#) and are parameters for defining Change Reason Codes, Time Frame Rules, and Objection Rules.

NMI status codes

The NMI Status Codes determine if a NMI is used for a retail transfer. The NMI Status Code X is the only status not allowing NMI transfers between Retailers.

Objection codes

Participants use Objection Codes to object to a Change Request. They are applied to each Jurisdiction and each Change Reason Code in accordance with the following Objection Rules:

- Identify the reason a participant has objected to a Change Request.
- Are used within the Objection Rules table.

See the relevant Jurisdictional regulation for full details of the NMI Classification Codes.

- Specify the business rules for Objections, under what circumstances, and by which roles.

The **MSATS Procedures: CATS Procedure Principles and Obligations** defines the use of each Read Type Code with certain combinations of Change Reason and Metering Installation Codes.

Read type codes

The Read Type codes relate to the Proposed Change Date and are used to signal if a Meter is read on:

1. The Next Scheduled Read Date.
2. A Special Read Date
3. Or is an Estimated Read.
4. No Meter Reading is required

Read type code scenarios

Table 31 below assists participants to understand the consequences and permissible actions for different combinations of Change Requests, Read Type Codes, and Metering Installation Types. Also, which Read Type Code are used for a Change Request and what communications between participants, if any, are expected.

Table 31 Consequences and permissible actions for different combinations of Change Requests, read type codes, and metering installation types

Change Reason Code	Read Type Code	Metering Installation Types	Consequences and permissible actions
1000	NS	4A, 5 & 6	<p>The MDP must advise by Objection Transaction if the Proposed Change Date is not within the NSRD allowable window (-3/+2 days)</p> <p>If no Actual Meter Reading was obtained during the NSRD allowable window, the MDP must advise the reason by an Objection Transaction</p> <p>The Transfer can only complete on a Day that an Actual Meter Reading is taken</p> <p>The Actual Change Date submitted by the MDP can only be within the NSRD allowable window</p>
	RR	4A, 5 & 6	<p>The Proposed Change Date serves no purpose for this Change Request and Read Type Code combination, because:</p> <ul style="list-style-type: none"> - The MDP is not required to advise if no Actual Meter Reading was obtained - The Transfer can only complete on a Day when an Actual Meter Reading is taken, which can be any Day

Change Reason Code	Read Type Code	Metering Installation Types	Consequences and permissible actions
	SP	4A, 5 & 6	<p>The Transfer can only complete on a Day an Actual Meter Reading is taken. The MDP may perform a Special Meter Reading on receipt of REQ Notification</p> <p>If no Actual Meter Reading was obtained during the NSRD allowable window, the MDP must advise the reason by an Objection Transaction</p>
1010 1040	PR	4A, 5 & 6	<p>If the Proposed Change Date is not the date when an Actual Meter Reading takes place, the MDP must advise the reason by an Objection Transaction</p> <p>The Transfer can only complete on a Day that an Actual Meter Reading is taken.</p> <p>The Actual Completion Date must align with the Proposed Change Date or be within a date range agreed between the New FRMP and the MDP</p> <p>The CR 1040 Meter Reading must be a move-in Meter Reading</p> <p>The CR 1010 is any Meter Reading</p>
102X	PR	4A, 5 & 6	<p>If the Proposed Change Date is not the date when an Actual Meter Reading is taken, the MDP advises the reason by an Objection Transaction</p> <p>The Proposed date is always the Actual Change Date (e.g. the MDP does not submit the CR 1500 with an Actual Change Date)</p>
1030	SP	4A, 5 & 6	<p>The MDP may perform a Special Meter Reading on receipt of REQ Notification and a corresponding B2B Service Order Request</p> <p>The Transfer can only complete on a Day when an Actual Meter Reading is taken</p>

Change Reason Code	Read Type Code	Metering Installation Types	Consequences and permissible actions
All	UM	UMCP only	<p>If no Interval Metering Data is available (i.e. because of an inventory/load data problem) for the Proposed Change Date, the MDP must advise the reason by an Objection Transaction</p> <p>The Actual Change Date submitted by the MDP aligns with the Proposed Change Date unless otherwise agreed between the New FRMP and the MDP</p>
	EI (comms only)	1, 2, 3 & 4	<p>If no Interval Metering Data is available for a Proposed Change Date, the MDP must advise the reason by an Objection Transaction</p> <p>The Actual Change Date submitted by the MDP aligns with the Proposed Change Date unless otherwise agreed between the New FRMP and the New MDP</p>

Register identifier status codes

The Register Identifier Status Code in Table 32 below indicate if a Meter Register is active.

For Roles and responsibilities, see [MSATS Procedures: CATS procedure, principles, and obligations](#).

Table 32 Register identifier status codes

Code	Name	Description
C	Current	Applies when a Meter Register at the NMI is current, i.e. connected to a Connection Point
R	Removed	Applies when a Meter Register at the NMI is removed, i.e. not connected to a Connection Point

Role ID codes

Participants are assigned a relationship to a NMI in a nominated Role, identifying their responsibility. Each Role associated with a NMI has obligations associated with that NMI. For example, if a participant is assigned the Role of LNSP, that participant takes on LNSP responsibilities for the NMI.

For any NMI, you can identify the participant allocated to each Role, for example, who is the LNSP, FRMP, RP, MDP, and so on.

The NMI Master Record contains each Current Role for each NMI. Each proposed Role for a NMI is referred to as a New Role.

The Role ID Codes are used to define:

- Which participants can initiate a Change Request.
- Which participants can supply data when needed to complete a Change Request.
- The Change Request Status Notification Rules.
- The Objection Rules.
- The access rights to CATS Standing Data.

TNI codes

Transmission Node Identifier (TNI) Codes in Table 33 below are four-character codes conceptually representing a Transmission Connection Point (or several at the same bus), where the Distribution Network meets the Transmission Network.

All NMIs with the same TNI code belong to a part of the Distribution Network receiving Energy through the same Transmission Connection Point(s).

In CATS, a TNI code consists of a code and a description. Each TNI code is assigned a Transmission Loss Factor (TLF).

Table 33 TNI codes

The first character of the code identifies the Jurisdiction where the TNI is located:

TNI code first letter	Jurisdiction
A	Australian Capital Territory
N	New South Wales
Q	Queensland
S	South Australia

TNI code first letter	Jurisdiction
-----------------------	--------------

V Victoria

Transaction type codes

Code	Transaction name	Initiated	Description
ACK	Acknowledgment	MSATS	Response to ALL Transactions with an acknowledgment of receipt
CODE	Codes Update	MSATS	Notification to participants of any changes to codes, rules, or participant data
CR	Change Request	Participant	A request from a participant to create or update CATS Standing Data
CRR	Change Request Response	MSATS	Response to a Change Request with an approval or rejection as it reaches the Pending Validation status
NMID	NMI Discovery Request	Participant	A request to view CATS Standing Data.
NMIR	NMI Discovery Response	MSATS	CATS Standing Data information sent to a participant in response to a NMI Discovery Request
NOT	Change Request Status Notification	MSATS	Notifies a participant of a change in Change Request status according to the applicable Change Request Status Notification Rules
OBJ	Objection	Participant	An Objection to a Change Request according to the applicable Objection Rules. Other participants are informed according to the applicable Change Request Status Notification Rules
OBJR	Objection Response	MSATS	A response to an Objection with an approval or rejection. Other participants are informed according to the applicable Change Request Status Notification Rules

Code	Transaction name	Initiated	Description
RDAT	Request for Participant data	MSATS	A request to a participant for missing NMI Master Record data according to the applicable Field Validation Rules
RPTD	Report Data	MSATS	The data generated by a report request
RPTR	Report Request	Participant	Report request
WCR	Change Request Withdrawal	Initiating participant	Cancel a Change Request to Completion. Other participants are informed according to the applicable Change Request Status Notification Rules
WOBJ	Objection Withdrawal	Initiating participant	Withdraw an Objection. Other participants are informed according to the applicable Change Request Status Notification Rules

Unit of measure codes

Table 34 below defines the units of measure the Meter Register uses to measure Energy Consumption.

Table 34 Unit of measure codes

Code	Description	Code	Description
PF	Power Factor	VA	VA
A	Current - amps	KA	Current - kiloamps
MWH	Megawatt hours	KV	kilo Volts
MVARH	Megavar hours	MVAH	Million VA Hours
WH	Watt hours	VAR	var
V	Volts	MVAR	Megavar
KVARH	Kilo var Hours	MW	Mega Watts
KWH	Kilowatt Hours	W	Watts
KVAR	Kilo var	KW	Kilo Watts
KVA	Thousand VA		
KVAH	Thousand VA hours		
VARH	var hours		
MVA	Million VA		
VAH	VA hours		

Chapter 7 Rules

This chapter specifies the rules applying when participants submit a Change Request or seek access to CATS Standing Data.

Rules maintenance

AEMO updates the following codes tables in MSATS, sending a message via the **Data Replication Resynchronisation (C1) Report** to all participants when it makes a change.

You can find rules in the MSATS Web Portal > Administration > Rules Maintenance.

You can download individual tables from the MSATS Web Portal > Reports and Alerts > CATS > **C1 Data Replication Resynchronisation Report**

AEMO only makes changes after a formal consultation process with participants and the outcome is a new version of the **MSATS Procedures: CATS Procedure Principles and Obligations**, describing all the rules.

Table 35 below explains the CATS Configuration Rules and where you can find them.

Table 35 CATS configuration rules

Name	Description	Table or reference	More details
Change Request Initiation Rules	Roles permitted to Initiate Change Requests	CATS_CR_INITIATION_RULES	Page 197
Change Request Field Validation Rules	Govern the data required for a Change Request	CATS_TRANS_FIELD_VALIDATION	Page 197

Name	Description	Table or reference	More details
Change Request Status Notification Rules	Govern the Roles notified at each stage of the Change Request	CATS_NOTIFICATION_RULES	Page 199
Jurisdictional Parameters	Govern Change Request Initiation	CATS_JURISDICTIONAL_RULES	Page 198
NMI Discovery Field Access Rules	Govern NMI Discovery Search	CATS_DISCOVERY_ACCESS_RULES	Page 199
NMI Discovery Search Key Rules	Define if the Site address is returned in NMI Discovery Search	CATS_DISCOVERY_SEARCH_RULES	Page 199
Objection Rules	Govern the use of Change Request Objections	CATS_OBJECTION_RULES	Page 200
Standing Data Access Rules	Govern the CATS Standing Data available for each Role in each Jurisdiction	CATS_STANDING_DATA_ACCESS_RULES	Page 201
Time Frame Rules	Govern Proposed Change Dates between the Prospective and Retrospective Periods	MSATS Procedures: CATS Procedure Principles and Obligations	Page 202

Change request field validation rules

The Field Validation Codes are based on Data Source Codes. For any Change Reason Code, the Field Validation Rules specify:

1. Which fields are mandatory when the Transaction is Initiated.
2. Which fields are optional when the Transaction is Initiated.
3. Which fields must be in the NMI Master Record for the Transaction to proceed from Pending Validation to Requested.
If they are not present, which Participant must supply them
4. If the Actual Change Date must be obtained from another participant for NMIs where the Metering Installations are manually read.
If yes, who must supply it.

The obligations on participants arising from the allocation of the Field Validation Rules, are detailed in the section where the Change Reason Code applies.

Change request initiation rules

1. Initiation Rules are defined for each Change Reason Code.
2. New and Current Roles can Initiate a Change Request.
3. Participants can only enter a New Role on a Change Request.

Jurisdictional parameters

The type of information, search criteria, and number of results returned from the NMI Discovery or Standing Data Search is governed by the NMI Discovery Search Key Rules and the NMI Discovery Field Access Rules, defined by each Participating Jurisdiction.

If there are no NMI Discovery Search Key Rules or NMI Discovery Field Access Rules defined for a Jurisdiction, it means the jurisdiction does not allow NMI Discovery for their Jurisdiction.

Jurisdictional updates to the NMI Discovery Access and Search Key Rules are included in a report that is sent to participants whenever there are changes.

Jurisdictions specify rules to control:

- When MSATS can accept a Retrospective Change.
- When participants can log an Objection.
If an Objection to the Change of Retailer Transaction is submitted by a participant within the Objection Logging Period (see page 85), the transfer cannot proceed until the Objection is cleared. If the Objection is not cleared, the Change of Retailer Transaction expires (Cancelled) and MSATS notifies all relevant Participants.
- The date range for lodging and clearing objections.
- The date range for lodging the Change Request.
The number of days into the future or past the Proposed Change Date can be.
- Who can object or Initiate a Change Request Reversal, the reason for the Objection or Reversal, and the NMI Classification Code appropriate to the Objection or Reversal.

NMI discovery field access rules

A NMI Discovery search returns NMI information based on the Discovery Field Access Rules. Information included is the Network Tariff Code, TNI code, DLF code, Metering configuration. These rules are governed by the NMIs Jurisdiction.

For details about what is returned for multiple matches, see [MSATS Procedures: CATS Procedure Principles and Obligations](#).

NMI discovery search key rules

The NMI Discovery Search Key Rules define which search parameters participants can use in a Jurisdiction.

The entire set of CATS and NMI Standing Data for NMI Discovery Searches is the specified subset of CATS Standing Data.

Separate rules apply to CATS Standing Data available for NMI Discovery Searches and CATS Standing Data accessed by participants with a NMI relationship.

NMI discovery search multiple match rules

The NMI Discovery Search Key Rules define how many matches are returned if there are multiple.

There is a further Jurisdictional rule determining if, in the event of multiple matches, the address of each matching NMI returned. The rule is set to Yes for all jurisdictions allowing NMI Discovery.

Jurisdictions configure the maximum number of records returned for multiple matches. Currently, all Jurisdictions allow up to 99 matching records.

Change request status notification rules

MSATS initiates the Notification process when there is a change to the status of a Change Request, or when an Objection is received or withdrawn.

The Notification Rules determine when notifications are sent. The rules are based on the following fields:

1. Transaction type
2. Change Request status
3. Change reason
4. Affected Role type
5. Role status

Objection rules

The Objection Rules:

- Are applied to each Jurisdiction and each Change Reason Code in accordance with the Objection Rules.
- Specify the way participants can use Objection Codes for each Change Reason Code and Role.
- Apply in every Jurisdiction (unless stated otherwise).

Standing data access rules

The CATS Standing Data Access Rules specify which items each Role within a Jurisdiction can access. The items are grouped by the following:

1. Meter Register
2. NMI Data
3. NMI Datastream
4. NMI Participant Relations
5. Register ID

They define:

1. Which Role can initiate a request for NMI Standing Data.
2. Which NMI Standing Data items return for a request.
3. The NMI Data Access Rules may be defined by Jurisdiction.
4. The NMI Standing Data items returned to a FRMP or LNSP in all Jurisdictions on a successful request. For more details, see [Standing Data for MSATS](#).

To fully understand the standing data access rules, you must understand the CATS History Model, see page on page 139.

Metering coordinator standing data search

Metering Coordinators (MC) can access NMI Standing Data to identify a LARGE NMI Classification to arrange a change of MC. For details about the NMI Standing Data items returned to an MC, see [MSATS Procedures: CATS Procedure Principles and Obligations](#).

Time frame rules

The Time Frame Rules specify if a Jurisdiction, Change Reason Code, and NMI Classification Code are a valid combination.

A Jurisdiction may specify the Time Frame Rules. Unless stated otherwise, the Time Frame Rules apply to all Jurisdictions.

The Time Frame Rules specify:

1. If the Change Reason Code can make a Prospective or Retrospective Change.
2. The number of days in the future (Prospective Days) or the past (Retrospective Days) allowable for the Proposed Change Date.
3. The number of days allowed for Objections (Objection Logging Period), commencing from the next Business Day after the date the Change Request is Initiated
4. The number of days after an Objected Change Request is Cancelled (Objection Clearing Period), commencing from the next Business Day after the date the Change Request is Initiated.

Chapter 8 FAQs

Transactions

When does a change request complete?

A Change Request cannot complete until all conditions below are met:

- The proposed date has passed.
- The Objection period has passed.
- There are no active Objections lodged against it.
- It is not awaiting an Actual Change Date from another party.

How do I update NMI standing data?

Updates to NMI Standing Data require a Change Request so the process can start. Change Requests are the main Transactions participants use in MSATS.

How do I create a change request?

[MSATS Web Portal](#) > [Transactions](#) > [Change Requests](#) > [New](#).

How do I find a previous change request?

In the [MSATS Web Portal](#) > [Transactions](#) > [Change Request – Search](#) interface, enter the known details: proposed date range (required), Change Request ID, NMI range, participant details, or request details.

How do I object to a change request?

In the [MSATS Web Portal](#) > [Transactions](#) > [Objections](#) > [New](#) interface.

How do I find a previous objection?

In the [MSATS Web Portal](#) > [Transactions](#) > [Objections – Search](#) interface, enter the known details: Date Range (required), Change Request ID, Objection Raised By, Objection Code, or NMI Range.

How do I find a previous notification?

In the [MSATS Web Portal > Transactions > Notifications – Search](#) interface enter the known details: Notification Date (required), Change Request ID, Change Request Status, Role Being Notified, or NMI Range.

What do I do if I receive a request for data?

Either read the message in your Participant Outbox or in the [MSATS Web Portal > Transactions > Request for data](#) search, click [Respond](#) and create new Change Request with the data.

How do I make changes to a large number of Tier 1 NMIs?

You can use the Bulk Data Tool (BDT) instead of change requests in the [MSATS Web Portal > Transactions > Bulk Updates](#).

Inbox, Outbox, and Archive

Why didn't I receive my zip file?

Check your Participant Inbox to see if you have reached the maximum allowed number of files sent from MSATS. If yes, you need to acknowledge them so MSATS can send more.

Each Transaction Group or Transaction Priority (for example, cats and nmidh files), cannot receive more than 30 files at a time. Once you receive 30 files, MSATS stops sending more until you or your system acknowledge the files you have.

Sometimes, the number is higher than 30 files because the MSATS Batch Handlers lose contact with the database (for example, if there is a fail-over because the database is unavailable). When this happens, the Batch Handler starts counting again so you could get an additional 30 files.

Why are files not picked up from my inbox?

Delete any zip files from your Participant Inbox corresponding to ACK files so MSATS can process new .zip files.

If you allow more than 20 ACK files to accumulate in your Participant Outbox (for example, MSATS has acknowledged 20 files you have not deleted from your Participant Inbox), it stops processing files you submit to your Participant Inbox.

Why are the ACK files in my inbox not processed

Starting from the oldest ACK file in your Participant Inbox, check if they are valid. If you find an invalid one you must remove it so MSATS can continue processing the next one in the queue. Then write a valid ACK file to replace the original invalid one.

MSATS stops processing the ACK files in your Participant Inbox if it detects an ACK file it cannot read (for example, the ACK file is not well-formed). Until the invalid ACK file is cleared MSATS cannot process ACK files.

Why are zip files no longer in my outbox

Once you acknowledge zip files received from MSATS in your Participant Outbox, the files are copied into your Participant Archive. You can drill through the Participant Archive by years, months, and days.

If you submitted the search by Batch, check the Error Code in the Event tag.

computer.

Files are deleted from the Participant Archive after approximately 13 months.

You can access the Participant Archive from the [MSATS Web Portal > Data Load Import](#) menu. If you cannot see the menu item, contact your company's Participant Administrator for access rights.

For help with user access rights, see [Guide to User Rights Management](#).

NMI search

My search only found one NMI. How do I know if it is a match?

If your search only returns one record that does not contradict what the End-use Customer provided, you can assume it is the correct record. Otherwise you cannot be certain you have found the correct NMI. For help, see Table 36 on page 208.

Table 36 Common NMI search errors

Error	Explanation
n/a	<p>You have 1 record returned but it may not be an exact match to your search criteria.</p> <p>MSATS may have used the wider address search because it couldn't find an exact address match for the criteria you provided</p> <p>For help, see I didn't get an exact match. What do I do now? below</p>
1404	No records matched your search criteria using either an exact address search or a wider address search
1410	<p>There are more NMIs matching your search criteria, but you exceeded the Jurisdictional limit of 99 records.</p> <p>I didn't get an exact match. What do I do now? below</p>

I didn't get an exact match. What do I do now?

If you received a message advising there is more data available, but you have reached the Jurisdictional limit (99), you must find a way to refine your search.

Look at the returned data to see if it contains any clues, for example:

1. In Figure 32 on page 209, a search for 6060 High St returned one record with a message advising there are more matching records.

Notice there is a Flat Number and a Flat Type suggesting you need to check if the address you are looking for is a flat.
2. If you entered a house number and street address and one record returns with a message advising there is more than one record matching your address, perhaps your address is a suffix, for example: 60A.
3. It is possible you cannot not uniquely identify your NMI. If you've exhausted all options and are certain the address is correct see, Is the NMI I'm looking for nearly impossible to find?

Figure 32 returned search criteria

Address			
Flat Number:	2	Flat Type:	F
Floor Number:		Floor Type:	
Building Name:			
Location Descriptor:			
House Number:	6060	House Number Suffix:	
Lot Number:			
Street Name:	HIGH	Street Type:	ST
Street Suffix:			
DPID Number:			

Is the NMI I'm looking for nearly impossible to find?

Yes, and there are several reasons why:

1. Some NMIs in office towers are created with a value in the Floor Type but no Floor Number in the Location Descriptor field.

For example, for address 96 Elizabeth St, the Floor Type is FL, other Location Descriptor stored data is FL 2 RM 224. So, to find the NMI, you must know how the data is stored.

Searching for 96 Elizabeth St only provides a match.

2. Some addresses have a Street Name but no Street Number.

There may be supplementary information to identify the NMI in the Location Descriptor field, but it is impossible to find unless it is the first one returned when you search with only the street name and no address.

3. Some data was entered incorrectly during the original data load with a forward slash (/) in the Flat Number field, for example: 6/1. You cannot find these NMIs using NMI Discovery because:
 - a. You cannot enter 6/1 in the Flat Number field.
 - b. If you enter 6 and 1 in the Flat and Floor Number fields, the data is not in those fields.

4. Sometimes, it is impossible to find a NMI with an Unstructured Address because the Structured Address fields do not allow you to enter text exactly matching what is stored in the Unstructured Address fields.

What if I don't get any matches?

If you see the message **0 records found** or using Batch, you get the Error 1404, meaning: no data found, complete the steps below.

Eventually, you should get at least one match. If it is not exact, the data returned may provide some hints, for example, the record returned may have a flat or unit number. You can then add back your original search criteria a bit at a time. If you find a problem (like no records returned), you can assume there is something wrong with the latest criteria you entered.

If you still can't find a match (for example, with only the street name, postcode, and jurisdiction or the street name, locality, and Jurisdiction), either the information the End-use Customer provide is incorrect or you might be working with an unusual Unstructured Address.

Steps to try if you don't get matches

1. Check your spelling is correct, for example:
 - Is the street name spelt correctly?
 - Have you spelt the name correctly?
 - Is the address Unstructured?
2. Check [Australia Post Address Data](#) to confirm the Locality and the Postcode spelling.
3. Check the White Pages to confirm the End-use Customer provided the correct address spelling.
4. Try removing some criteria (the minimum data to supply is the State and either Locality or Postcode), for example:
 - Street Type

- Flat/Unit Type or Floor/Level Type (check you have the number and type correct).
- If all the above fails, remove firstly: The Locality and then the Postcode (MSATS uses adjacent postcodes if no match is found).

Is the address I'm searching for unstructured?

How can you find an Unstructured Address when you must complete the Structured Address fields?

Most MSATS addresses are Structured, but there are some Unstructured. Most are in country locations.

Even if you only complete the Structured Address fields MSATS looks in both the Structured and Unstructured fields. Initially, it searches the Structured Address fields and if there is no match, it searches the Unstructured Address fields.

MSATS has three Unstructured Address fields and there may be data in any or all of them. MSATS takes the values entered in these fields and combines them:

Flat Number	Location Descriptor	Street Name
Floor Type	House Number	Street Type
Floor Number	House Number Suffix	Street Suffix
Building Name	Lot Number	

Then, uses the combined value to search each of the three Unstructured Address fields, including the data you entered for Locality, Postcode and State. (for these three fields MSATS does not search the Unstructured Address). This works well if the Unstructured Addresses has values in Locality, Postcode, and State.

Often, the Locality in Unstructured Address fields is not populated as a separate field so is only part of the Unstructured Address. Including it in the search causes the search to fail.

For example, if you entered the data in Table 37 below.

Table 37 Search criteria

Field	Value	Field	Value	Field	Value
House Number	105	Street Type	St	Postcode	2800
Street Name	Sunny	Locality	Orange	State	NSW

After completing a Structured Address search, MSATS searches for:

1. NMIs with the value 105 Sunny St in one of the Unstructured Address fields (it does an Oracle-like '%105 SUNNY ST%' search).
2. Orange in Locality.
3. 2800 in Postcode.
4. NSW in State.

If you think an address is unstructured:

1. Try removing Locality from your search and just enter the postcode in the Postcode field.
2. Start with a broad search and gradually add more criteria.

What are valid values for address fields?

Using the File Interface, you must use the correct enumeration values in Structured Address fields. Otherwise your Transaction doesn't pass validation and is rejected. See Address fields requiring valid values below.

You can check valid values in the [Index of Schema Releases](#) on AEMO's website.

Doing a NMI Discovery Search using the MSATS Web Portal means you don't have to worry about valid codes because you select them from the drop-down lists.

Address fields requiring valid values

- Flat Type
- Floor or Level Type
- State Code
- Street Suffix
- Street Type

This is an example for the AustralianFloorOrLevelType (Floor or Level Type). The valid values in this example are B, FL, G, L, LG, M or UG.

```
- <xsd:simpleType name='AustralianFloorOrLevelType'>
- <xsd:annotation>
  <xsd:documentation>Purpose - Define floor or level types as per Australian Standard AS4590</xsd:documentation>
</xsd:annotation>
- <xsd:restriction base='xsd:string'>
  <xsd:enumeration value='B' />
  <xsd:enumeration value='FL' />
  <xsd:enumeration value='G' />
  <xsd:enumeration value='L' />
  <xsd:enumeration value='LG' />
  <xsd:enumeration value='M' />
  <xsd:enumeration value='UG' />
```

Does it matter if I use upper or lower case?

No, data in MSATS address fields is stored in upper case, but if you use lower case, MSATS converts it to upper case.

Why must I select a state after I've already chosen the Jurisdiction?

The Jurisdiction is used to check the NMI Discovery Key Search Rules and NMI Standing Data Access Rules to determine which of the following search options you can select from (depending on the Jurisdiction, different options display on the NMI Discovery Search interface):

- Address
- DPID
- Meter Serial ID

The State is part of the NMI's address, so the value is matched against the State field in the CATS_NMI_DATA table. It is completely different information.

Why do I get the error 'No access rule'?

You may see multiple items for the Meter Register and MDM Datastream fields because a NMI can have multiple Meters and multiple Datastreams.

This means either:

1. You are searching for a NMI in a Jurisdiction not allowing NMI Discovery.
2. The Participant ID you are logged on as is not entitled to do NMI Discovery. Currently, only FRMPs, LNSPs, or ENMs can do NMI Discovery.

What data can I see for NMID2?

Currently, NMI Discovery is available for NMIs in all Jurisdictions. Table 38 below describes the data returned for the selected NMI.

The NMI Discovery Field Access Rules define what you can see. Jurisdictions can either increase or decrease the types of data available. For more details, see NMI discovery field access rules on page 199.

Table 38 NMID2 information

- * Items with an asterisk always display. Other items display if there is stored data in MSATS.

Element	Data		
NMI	NMI*	FLATNUMBER	LOTNUMBER
	NMICLASSCODE*	FLATTYPE	POSTCODE
	NMISTATUSCODE*	FLOORNUMBER	STATE

Element	Data		
	TNICODE*	FLOORTYPE	STREETNAME
	DLFCODE*	HOUSENUM	STREETSUFFIX
	EMBNETPARENT	HOUSENUMSUFFIX	STREETTYPE
	EMBNETCHILD	JURISDICTIONCODE	UNSTRUCTUREDADDRESS1
	LNSP*	LOCALITY	UNSTRUCTUREDADDRESS2
	BUILDINGNAME	LOCATIONDESCRIPTOR	UNSTRUCTUREDADDRESS3
Meter Register	METERINSTALLCODE	NEXTSCHREADDATE	METERSERIAL
	ADDLSITEINFO		
MDM Datastream	SUFFIX	PROFILENAME	STREAM STATUS CODE
	DATASTREAM TYPE		
Register Identifier	METERSERIAL	REGISTERID	DIAL FORMAT
	NETWORKTARIFFCODE	TIME OF DAY	CONTROLLED LOAD
	NTADDLINFO	MULTIPLIER	ACT/CUMID

What data can I see for NMID3?

The Standing Data items returned for a NMI Discovery Search 3 are explained in the [CATS Procedure Principles and Obligations](#).

Terms

For a list of terms used throughout this guide, see:

- [Retail Electricity Market Procedures – Glossary and Framework](#)
- [Guide to MSATS and B2B Terms](#)

NER terms

Billing Period

Business Day(s)

Child Connection Point(s)

Connection Point(s)

Day

Directional Interconnector

Distribution Network(s)

Eastern Standard Time

Embedded Network Connection

Embedded Network Manager

Embedded Network(s)

Energy

Energy Ombudsman

Estimated Metering Data

Final Aggregation

Financially Responsible Market Participant

High Voltage

Interval Metering Data

Large Customer

Local Network Service Provider

Local Retailer

Market

Meter(s)

Metering

Metering Coordinator

Metering Data

Metering Data Provider

Metering Installation

Minimum Services Specification

NEM

NERL

NERR

Net System Load Profile

Network

Network Connection

Network Service Provider

NMI

NMI Standing Data

Parent Connection Point

Participating Jurisdiction

Profile

Registered Participant(s)

Retailer(s)

Retail Customers

Retail Market Procedures

RoLR

Settlements

Settlements Ready Data

Settlement Statements

Small Customer

Small Customer Metering
Installation

Trading Day

Transmission

Transmission Lines

Transmission Network(s)

Transmission Node

Voltage

Needing Help

Support Hub

For non-urgent issues, normal coverage is 8:00 AM to 6:00 PM on weekdays, Australian Eastern Standard Time (AEST).

IT assistance is requested through one of the following methods:

- Phone: 1300 AEMO 00 (1300 236 600)
- [Contact Us](#) form on AEMO's website

AEMO recommends participants call AEMO's Support Hub for all urgent issues.

Information to provide

Please provide the following information when requesting IT assistance from AEMO:

- Your name
- Organisation name
- Participant ID
- System or application name
- Environment: production or pre-production
- Problem description
- Screenshots

References

Australia post

Australia Post Address Data: Access to a database of over 13 million Australian addresses.

AEMO website

You can find references in the following places on [AEMO's website](#).

aseXML standards

aseXML Guidelines: Guidelines for the Development of A Standard for Energy Transactions in XML (aseXML) provides guidance and advice for developing aseXML documents (Messages and Acknowledgments).

aseXML Schemas: Index of schema releases.

Business-to-business procedures

SMP Validation Matrix: covers the errors related to receiving and processing messages by the e-Hub.

Guide to Transition of aseXML: provides information and guidance for participants transitioning to another B2M or B2B asexml schema.

Electricity system guides > participant IT interfaces

Connecting to AEMO's Electricity IT Systems: Explains the IT interfaces available for electricity participants and how to connect to them.

Guide to AEMO's e-Hub APIs: Provides details about using AEMO's e-Hub as an interface to communicate information with AEMO. It assists Wholesale electricity and gas participants developing their own APIs.

Guide to Electricity Information Systems: Provides guidance for Registered Participants and interested parties about AEMO's participant electricity market systems.

Guide to NEM Retail B2M APIs: Explains how to build B2M retail metering APIs.

Market Settlement and Transfer Solutions

B2B Validation Module Matrix: Links validations with respective error codes for B2B.

Guide to MSATS and B2B Terms: Assists readers to understand the terms used in the retail electricity market procedures and MSATS.

Guide to Participant Batcher Software: Covers the setup and use of the MSATS Participant Batcher software.

Guide to User Rights Management: Explains the user rights management functions in AEMO's Market Systems.

MSATS Ombudsman Enquiry User Interface Guide: Provides guidance for using the MSATS Ombudsman Enquiry system.

MSATS Participant Batcher Software: Sample software to exchange data with MSATS using the File Interface.

Technical Guide to Bulk Data Tool in MSATS: Describes the Bulk Data Tool (BDT), the relationship between aseXML data and the processing of that data.

Retail and metering

Retail Electricity Market Glossary and Framework: assist participants of the Retail Electricity Market to understand the overall framework. It also contains a list of terms used in the Retail Electricity Market Procedures and a full list of NEM procedures, guidelines, and documents.

Metering procedures, guidelines and processes

MDM File Format and Load Process: Specifies the Meter Data Management (MDM) Format used by MDPs for the provision of Metering Data to AEMO.

Meter Data File Format Specification NEM12 & NEM13: specifies the Meter Data File Format (MDFF) used by MDPs for the provision of Metering Data.

Meter Data Validation Matrix: Links validations with respective error codes for B2M and eMDM.

Coming soon

Guide to eMDM: Describes the Enterprise Meter Data Management System.

Guide to MSATS Reports: Explains MSATS reports and their data.

Index

1

1st level validations, 108

2

2nd level validations, 108

A

Accepted objection, 86

Accepted objection response, 86

ACK deletion - batch, 124

ACK deletion - web portal, 125

ACK deletion -API, 124

ACK files, 115

Acknowledgement – API, 123

Acknowledgement - batch, 123

Acknowledgement - web portal, 123

acks & zips, 14

ActCumInd, 173

Actual change date, 61

Actual End Date, 148

Address (without DPID), 95

Address field tips, 99

Address information, 176

Administration, 14

Allocating metering installation codes, 184

API and Batch change request edit, 68

API e-Hub, 19

aseXML, 17

aseXML schemas, 18

AustralianFloorOrLevelType, 214

B

B2B message content, 181

B2B Procedures, 181

B2B schema, 18

B2B Validation Module Matrix, 181

B2M and eMDM validation codes, 182

B2M aseXML schema, 16

B2M functionality, 9

B2M functionality, interfaces, and protocols, 14

B2M message exchange, 17

B2M participant interfaces, 12

B2M roles, 11

B2M schema, 18

Batch, 18

Batch File Interface, 24

Batch files, 24

Batch notifications, 78

Batch Participant System Status, 37

Batch to Participant File Server, 24

Batch to Web Portal, 22

Bulk data tool (BDT), 38

Bulk transactions, 38

Bundling, 131

C

Cancelled status (CAN), 49

CATS, 10

CATS configuration codes, 169

CATS configuration rules, 195

CATS Transactions used by AEMO, 106

Change of retailer, 61

Change reason code parameters, 174

Change reason code rules, 175

Change reason codes, 174

Change request completion, 61

Change request errors, 52

Change request example, 50

Change request field validation rules, 197

Change request initiation rules, 197

Change request life cycle, 43

Change request response, 131

Change request response example, 132

Change request role status, 50

Change request rules, 43

Change request status, 45

Change request status codes, 176

Change request status notification, 137

Change request status notification rules, 200

Change request with a data request, 69

Change request withdrawal, 65

Change request without a data request, 70

Change requests, 42

Change Requests, 17

Changing a NMI's FRMP, 161

Changing NMI standing data, 146

Changing the CATS_NMI_DATA table, 148

Changing your Participant ID and Participant User password(s), 15

Codes maintenance, 169

Codes update, 137

Common NMI discovery errors, 100

Common NMI search errors, 208

common Retrospective Change problem, 62

Completed status (COM), 49

Concurrent retail transfers, 65

Connection Point transfers, 17

Consumer Administration and Transfer Solution (CATS), 10

Consumption Meter Profiling, 10

Creating a report request, 36

Creating and submitting batch transactions, 29

Customer classification codes, 177

Customer threshold codes, 177

D

Data Aggregation, 10

Data Replication Resynchronisation (C1) Report, 181

Data Source Code, 182

Datastream status codes, 178

Dayzip download, 14

Delivery, 12

Different field names, 145

Direct Loading, 24

DLF codes, 179

Does it matter if I use upper or lower case?, 214

DPID, 95, 99

E

Editing a batch change request, 30

Editing a rejected change request, 74

Editing change requests, 67

Editing the Change Request proposed date, 69

Embedded network identifier codes, 180

eMDM, 10

end-of-day process, 147

Enterprise Metering Data Management System (MDM), 10

Error codes, 181

F

Field validation data source codes, 182

File Interface FTP, 24

File interface rules, 24

File name format, 25

File upload, 22

Finding a NMI tips, 99

Finding why MSATS rejected your transaction, 72

Floor or Level Type, 214

FTP, 24

H

Hokey-Pokey Protocol, 29

How do I create a change request?, 204

How do I find a previous change request?, 204

How do I find a previous notification?, 205

How do I find a previous objection?, 204

How do I make changes to a large number of Tier 1 NMIs?, 205

How do I object to a change request?, 204

How do I update NMI standing data?, 204

How MSATS handles the edited change request, 68

HTTP error codes, 182

I

I didn't get an exact match. What do I do now?, 208

Increasing limits, 122

Initiated status, 47

Interactive, 18

Interactive Loading, 22

Is the address I'm searching for unstructured?, 211

Is the NMI I'm looking for nearly impossible to find?, 209

J

Jurisdiction codes, 182

Jurisdictional parameters, 198

L

Locality or post code, 100

M

Mandatory NMI standing data, 141

MDFF, 15

MDMF, 15

MDMT, 14

Messages – acks & zips, 14

Meter Data Validation Matrix, 182

Meter register status codes, 183

Meter Serial ID, 95

Metering coordinator standing data search, 202

Metering data, 15

Metering installation type codes, 183

MSATS B2M functionality, 9

MSATS to participant, 107

MSATS Web Portal, 21

MSATS web portal change request edit, 67

MSATS zip file deletion, 127

MTRD, 14

My search only found one NMI. How do I know if it is a match?, 207

N

NACK errors, 182

Network tariff codes, 184

New NMI Setup Error, 98

NMI classification codes, 185

NMI creation, 62

NMI datastreams, 143

NMI discovery field access rules, 199

NMI discovery response, 133

NMI discovery response example, 134

NMI Discovery search, 15

NMI discovery search 1 – NMI discovery, 95

NMI discovery search 1 returned information, 96

NMI discovery search 2 - obtain standing data, 97

NMI discovery Search 3 - obtain role data, 97

NMI discovery search key rules, 199

NMI Discovery Search Key Rules, 199

NMI discovery search multiple match rules, 199

NMI discovery type 1, 35

NMI discovery type 2 (obtain standing data), 35

NMI discovery type 2 response example, 135

NMI Discovery type 3 (Obtain Role Data), 36

NMI enquiry reports, 15

NMI information, 15

NMI master, 102

NMI master data in notifications, 77

NMI master report response, 136

NMI metering installation, 143

NMI register identifier, 143

NMI relationship rules, 103

NMI search FAQs, 207

NMI standing data, 142

NMI standing data master tables, 141

NMI status codes, 185

NMID2 information, 215

NMIs and their associated relationships with participants, 15

NNS, 98

NOACC objection, 84

Notification role status, 81

Notifications, 17, 76

O

Objected status (OBJ), 48

Objection codes, 185

Objection logging period, 85

Objection logging prerequisites, 84

Objection notifications, 88

Objection response, 133

Objection Response example, 133

Objection rules, 200

Objection summary, 84

Objection validation, 85

Objection withdrawal, 33, 89

Objections, 17, 82

Obtain the rejection reason, 73

Obtain the request and Transaction ID, 72

Ombudsman, 15

Other NMI standing data, 141

OTR, 98

overnight process, 147

P

participant administrators, 14

Participant API gateway to AEMO e-Hub, 20

Participant Archives, 14

participant contacts, 16

Participant file server, 20

Participant File Server, 24

Participant file server inbox to MSATS web portal, 21

Participant file server outbox to MSATS web portal, 22

Participant Hub Queue, 14

Participant Inbox, 14

Participant information, 16

Participant Outbox, 14

Participant role relationship, 142

Participant User Rights, 14

Participants reports on ombudsman enquiries, 15

Passwords, 15

Pending status (PEND), 48

Pending validation status (PVAL), 47

Processing the updates to master records, 147

profile information, 16

Profile preparation, 16

Profile Preparation Service, 10

Proposed versus actual change date, 146

Prospective and retrospective Change Request examples, 148

Prospective change requests, 64

Protocol, 12

Q

Queue Monitoring, 16

R

RDAT, 138

Read type code scenarios, 187

Read type codes, 186

reason of NNS, 98

reason of TRI, 98

Receipt IDs, 115

Receiving an RDAT, 92

Register identifier status codes, 190

Rejected objection, 87

Rejected objection response, 87

Rejected status (REJ), 47

Rejection avoidance, 71

Rejection reasons, 70

Report data, 137

Reports and alerts, 16

Request for data transfer, 138

Requested status (REQ), 48

requests for data, 17

Response, 129

Retailer of Last Resort, 138

Retrospective change requests, 62

Retrospective change to the TNI with an end date,
157

Retrospective changes with an end date, 62

Retrospective notification example, 80

Retrospective notifications, 80

Retrospective or prospective change, 148

Role ID codes, 190

Rules maintenance, 195

S

SAB, 98

Set participant, 38

Settlement data, 17

SMP Validation Matrix, 182

Standing data access rules, 201

Standing Data management, 17

Standing data requirements for a Tier 2 Site, 61

Stop file rules, 121

stop files, 121

Streamlined change requests, 65

Street type, 100

Structured and unstructured addresses, 95

Subsequent change request validation, 109

T

three types of NMI Discovery, 94

Time frame rules, 202

TNI codes, 191

Transaction ACK file, 116

Transaction format, 26

Transaction limits, 17, 121

Transaction type codes, 192

Transactions, 14, 17

Transferred In Error, 98

TRI, 98

Two-stage batch validation process, 114

U

User rights access, 18

V

Validation checks, 109

Validation Module Software, 181

Validations explanations, 111

View information categories, 105

View outstanding messages and acks, 129

Viewing limits, 122

W

Web portal notifications search, 81

What are valid codes for address fields?, 213

What data can I see for NMID2?, 215

What data can I see for NMID3?, 216

What do I do if I receive a request for data?, 205

What if I don't get any matches?, 210

When does a change request complete?, 203

Wholesale, Interconnector, Generator and Sample (WIGS), 10

Why are files not picked up from my inbox?, 206

Why are the ACK files in my inbox not processed, 206

Why are zip files no longer in my outbox, 207

Why didn't I receive my zip file?, 205

Why do I get the error 'No access rule'?, 215

Why must I select a state after I've already chosen the Jurisdiction?, 214

WIGS, 10

Withdrawing a batch change request, 32

Withdrawing a batch objection, 33

Z

Zip deletion – API, 125

Zip deletion - batch, 125

Zip deletion - web portal, 126