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# **Guide to Retail Electricity Market Procedures**

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**4.00 Final  
March 2019**

Provides an explanation of NEM retail market  
procedures and supporting documents

# Important Notice

## **PURPOSE**

This Guide to Retail Electricity Market Procedures, prepared by the Australian Energy Market Operator (AEMO), provides guidance for MSATS under the National National Electricity Rules (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.

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## **TRADEMARK NOTICES**

None.

## **DISTRIBUTION**

Available to the public.

## **DOCUMENT IDENTIFICATION**

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IT custodian: Manager, Retail Systems  
Guide to Retail Electricity Market Procedures  
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## **VERSION HISTORY**

Version 4.00 Updated to remove B2B procedures section.  
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## **DOCUMENTS MADE OBSOLETE**

The release of this document changes any previous versions of Guide to Retail Electricity Market Procedures.

## **FURTHER INFORMATION**

For further information, please visit AEMO's website [www.aemo.com.au](http://www.aemo.com.au) or contact:  
AEMO's Support Hub Phone: 1300 AEMO 00 (1300 236 600).

## **FEEDBACK**

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

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# Introduction

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## Purpose

Provides an explanation of retail electricity market procedures and supporting documents as required by Chapter 7 of the National Electricity Rules.

## Audience

This guide is relevant to Retail Market Participants requiring an understanding of the MSATS Framework.

The secondary audience is participant administrators wanting to know the user rights management (URM) entity to create and manage Participant Users.

## How to use this guide

- This document is written in plain language for easy reading. Where there is a discrepancy between the Rules, NEL or information or a term in this document, the Rules and NEL prevail.
- If there are any inconsistencies between the MSATS Procedures and the B2B Procedures, the MSATS Procedures prevail.
- Diagrams are provided as an overview. In case of ambiguity between a diagram and the text, the text prevails.
- **Text in this format** indicates a resource on **AEMO's website**.
- **Text in this format** indicates a direct link to a section in this guide.

Providing you have the appropriate access rights, the functions discussed in this guide display in the MSATS main menu. Depending on your access rights, the menu items you see may differ. Speak with your company's participant administrator to discuss your access rights.

- Glossary terms are capitalised and have the meanings listed against them in the Guide to MSATS and B2B Terms.
- *Italicised terms* are defined in the National Electricity Rules. Any rules terms not in this format still have the same meaning.
- Actions to complete in the web portal interface are **bold and dark grey**.
- References to time in:
  - The Retail Electricity Market Procedures (except the B2B Procedures) are to Australian Eastern Standard Time (AEST).
  - The B2B Procedures refer to the local time applicable at the Site where a B2B Transaction relates.
- The expressions **within one Business Day or next Business Day** in the B2B Procedure: Service Order Process mean by 11:59 pm the next Business Day.
- References to currency are to Australian dollars.

## What's in this guide

**Chapter 2 Framework on page 3** has a diagram providing an overview of the retail electricity market procedures and a list of all procedures and supporting documents.

**Chapter 3 Metrology on page 5** explains the *metrology procedures* and supporting documents.

**Chapter 4 MSATS on page 8** explains the MSATS procedures and supporting documents.

**Chapter 5 B2B on page 13** explains the *B2B procedures* and supporting documents.

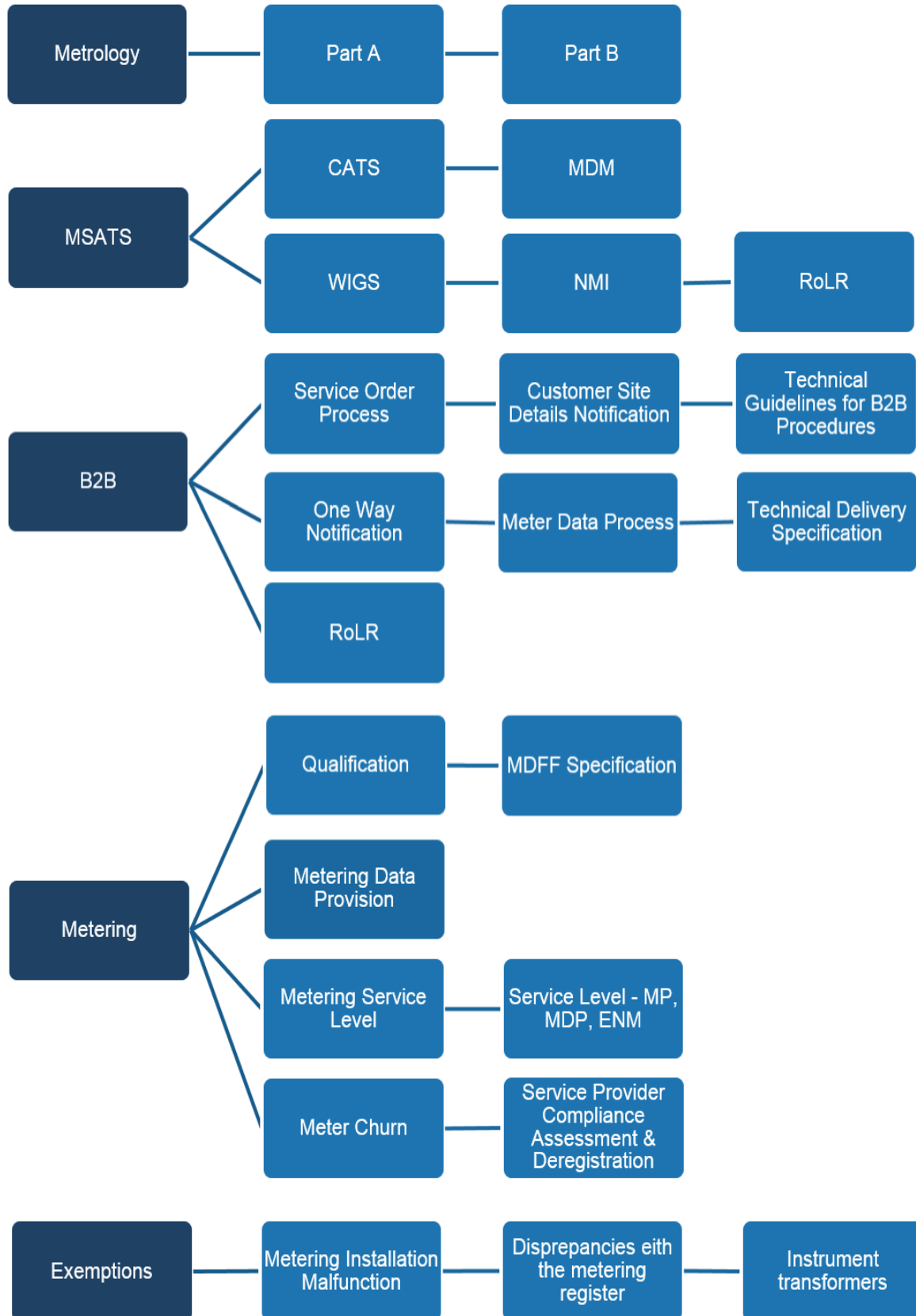
**Chapter 6 Metering on page 17** explains the Metering procedures and supporting documents.

**Chapter 7 Exemption on page 23** explains the Exemption procedures and supporting documents.

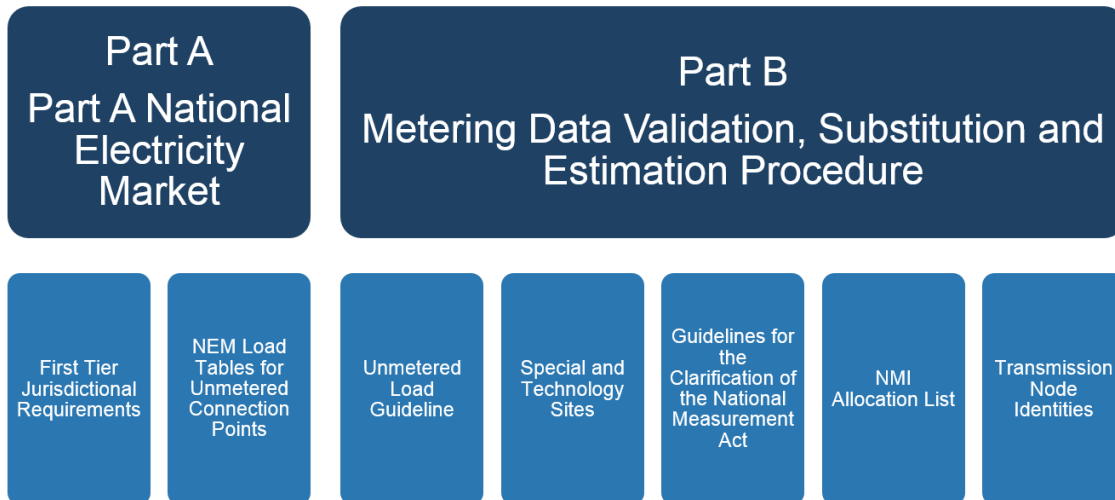
**Chapter 8 Needing Help on page 25** provides information about contacting AEMO's Support Hub and how to provide feedback.

# Chapter 2 Framework





# Chapter 3 Metrology



The *metrology procedure* applies to AEMO, registered participants, metering providers, and metering data providers, in relation to connection points in the NEM that may be classified as a first-tier load, second-tier load, market load, or intending load.

It provides information on the application of metering installations to connection points, setting out provisions for metering installations and metering data services. It is published in two parts and made in accordance with these NER clauses:

- 7.16.3 prescribing the mandatory content.
- 7.16.4 detailing the process where AEMO may include *jurisdictional metrology material* only applying to type 5, 6, and 7 *metering installations*.
- 7.16.5 detailing additional matters that may be addressed.

You can find Metrology Procedure and supporting documents on [AEMO's website](#) > Retail and Metering > Metrology Procedures and Unmetered Loads.

## Part A National Electricity Market

- Procedures relating to the minimum service specification under clause 7.8.3(b) of the NER.
- Meter churn procedures under clause 7.8.9(f) of the NER.

- Procedures relating to network devices under clause 7.8.6(i) of the NER.
- Emergency priority procedures under 7.8.5(b) of the NER.

## **Part B Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1–7**

Specifies the:

- Metering Data Provider’s obligations concerning the validation, substitution, and forward estimation of metering data to satisfy the rules and metrology procedure obligations of AEMO and the responsible person. These relate to all metering installations for first tier loads and second-tier loads where the Metering Data Provider has an obligation, as specified in AEMO’s Market Settlement and Transfer Solution (MSATS).
- Process of collating or determining type 6 and 7 metering installation data into trading intervals.

### **First Tier Jurisdictional Requirements**

AEMO is required to publish this document under clause 11.20.6 of the NER in consultation with the Jurisdictions. It contains the applicable jurisdictional requirements referred to in clauses 11.20.2, 11.20.3 and 11.20.4 of the NER.

### **NEM Load Tables for Unmetered Connection Points**

AEMO is required to publish Load Tables from various jurisdictions under clause 14.2.4(c) of the Metrology Procedure: Part B Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1 - 7. This document is a compilation of Load Tables from four jurisdictions consolidated into a single document.

### **Unmetered Load Guideline**

Published separately from the Metrology Procedure: Part B, it details the process for updating the Load Table, providing industry with assistance to determine the device load or annual energy consumption of an unmetered device.

It is not subject to consultation under the NER.

## Special and Technology Sites

Fulfills the requirement where AEMO may determine under clause 7.8.2(a) of the NER that special arrangements are required to support the integrity of the collection and processing of metering data from nominated metering installations and is required by clause 7.8.12(c) to describe and publish them, including the nomination of metering installations affected by those conditions.

## Guidelines for the Clarification of the National Measurement Act

AEMO has developed these guidelines in consultation with the National Measurement Institute to satisfy the requirement of clause 7.16.8 of the NER to establish guidelines that clarify the application of the requirements of the National Measurement Act 1960 (Cth) to *metering installations*.

## National Metering Identifier Allocation List

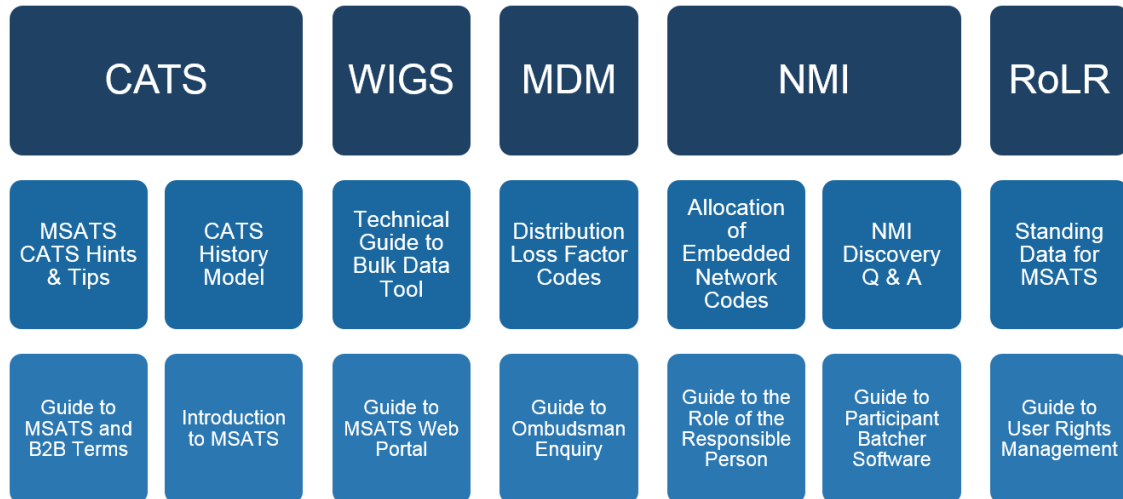
A high-level guide to the NMI ranges allocated to participants.

## Transmission Node Identities

The Transmission Node Identities (TNI) used in all registrations and transfers of connection points in the NEM, identifying the points at which the intra-regional loss factors apply.

Every registered National Metering Identifier (NMI) must be referenced to its correct TNI. Note the Power System Planning document Marginal Loss Factors and Regional Boundaries lists the TNIs against the loss factors.

# Chapter 4 MSATS



The MSATS procedures are relevant to all retail market participants and are made under clause 7.16.2 of the NER. They are published in several documents according to function.

The MSATS procedures define the roles and obligations of participants and AEMO, facilitating and supporting an efficient process for the:

- Provision and maintenance of CATS Standing Data.
- Discovery of approved *NMI Standing Data*.
- Transfer of retail customers between retailers.
- Registration of metering installations.
- Settlement and administration of NMIs.

You can find MSATS Procedures and supporting documents on [www.aemo.com.au](http://www.aemo.com.au) > Market Settlement and Transfer Solutions.

## CATS Procedures

Consumer Administration and Transfer Solution (CATS) Procedure Principles And Obligations are applicable to National Metering Identifier (NMI) small and large classifications, they:

1. Define the attributes of a connection point for the purpose of consumer transfer.
2. Provide for the registration of a NMI and associated metering installation components against that connection point.
3. Facilitate market settlements.
4. Facilitate and support an efficient industry process for:
  - a. The transfer of NMIs between retailers.
  - b. The provision and maintenance of CATS standing data.
  - c. The provision and maintenance of CATS codes and rules.
  - d. The discovery of approved *NMI Standing Data*.
5. Define the roles of CATS participants.
6. Enable Jurisdictions to convey to CATS participants the rules under which a retail transfer will be approved.

## WIGS Procedures

Procedure For The Management of Wholesale, Interconnector, Generator and Sample (WIGS) NMIs applies to wholesale, interconnector, generation connection points, and sample data used in settlements. Read these procedures in conjunction with the CATS Procedures. They

1. Define the attributes of a connection point for the purpose of consumer transfer.
2. Provide for the registration of a NMI and associated metering installation components against that connection point.
3. Facilitate market settlements.
4. Facilitate and support an efficient industry process for:
  - a. The transfer of NMIs between retailers.
  - b. The provision and maintenance of CATS standing data.
  - c. The provision and maintenance of CATS codes and rules.
  - d. The discovery of approved *NMI Standing Data*.

5. Define the roles and obligations of CATS participants.
6. Enable Jurisdictions to convey to CATS participants the rules under which a retail transfer will be approved.

## MDM Procedure

Meter Data Management (MDM) Procedure details the management of metering data to facilitate:

- The implementation of the metrology procedure into AEMO's operational procedures.
- The efficient processes for: transfer of data for market purposes, calculation and management of profiles, conversion of meter readings to half-hourly data for settlements, and reconciliation of participant data.

## NMI Procedure

National Metering Identifier (NMI) Procedure addresses the matters contemplated in clauses 7.8.2(d)(2), and 7.8.2(ea)(3) of the NER. It is published under clause 7.16.2 of the NER and sets out the structure of NMIs and the process of how they are allocated.

## NEM RoLR Processes - Part A - MSATS Procedure: RoLR Procedures

Identifies the roles and responsibilities of various parties if a RoLR event occurs that impacts MSATS. The MSATS Procedures are published in accordance with clause 7.2.8 of the National Electricity Rules (Rules).

## MSATS CATS Hints and Tips

Used as an addendum to the CATS Procedures, it provides hints and tips on ensuring requests are successfully loaded into MSATS, tips on reports, and outlines MSATS validations.

## CATS History Model

Essential reading for participants' business analysts and IT support staff involved in managing data interfaces to MSATS. It provides a detailed description of how the MSATS data model manages information that changes over time.

## Technical Guide to Bulk Data Tool

Relevant to implementers and maintainers of participant market systems interfaces in participant companies. It is a reference for the intended usage of the aseXML elements relevant to the Bulk Data Tool (BDT). It describes the BDT and shows the relationship between the aseXML data for BDT and the processing of that data.

## Distribution Loss Factor Codes

Provides an explanation of the DLF Codes and the requirements on LNSPs to maintain the DLF values against the DLF Codes in MSATS.

## NMI Discovery Questions and Answers

Contains hints and tips assisting Participant Users applying the NMI Discovery function to find the details about a *NMI*. It also contains answers to questions participants have asked about the NMI Discovery function.

## Standing Data for MSATS

Provides a detailed description of the data items populated in the MSATS *NMI Standing Data* tables and contains information on the type of data, a brief description of each data item and whether the input of that data is mandatory.

## Guide to the Role of the Responsible Person

Outlines the roles of the *responsible person*, network service provider, *Metering Provider*, *Metering Data Provider*, and *financially responsible market participant* in the NEM.



## Guide to MSATS and B2B Terms

Assists all participants of the Retail Electricity Market to understand the terms used in the *Retail Market Procedures*, MSATS, and B2B.

## Introduction to MSATS

Assists all participants of the Retail Electricity Market, providing:

- An overview of MSATS functionality and the retail participant categories using each functionality.
- An overview of the MSATS web and file interfaces and how to access them.

## Guide to MSATS Web Portal

Assists participants of the Retail Electricity Market to use the MSATS web portal functions.

## Guide to Ombudsman Enquiry

Relevant to Energy Industry Ombudsman, explaining how to use the Ombudsman Enquiry system in the MSATS web portal.

## Guide to Participant Batcher Software

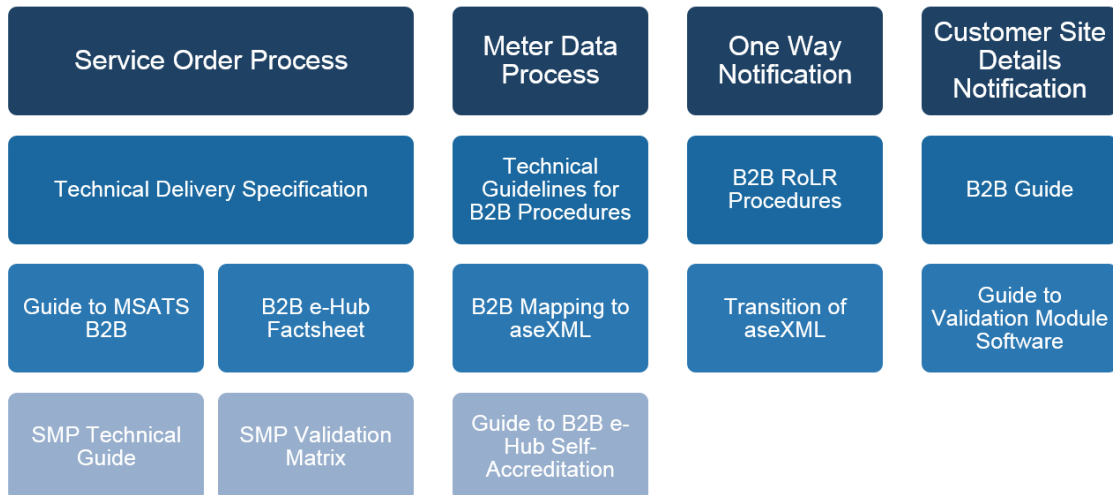
The audience for this guide is Participants' technical and software development staff responsible for systems implementation. It explains how to use the Participant Batcher software that provides a simple batch interface to MSATS and the *B2B e-hub* by permitting Participant Users to deal with the raw .zip files.

## Guide to User Rights Management

Explains to Participant Administrators how to create and maintain access rights for their company's Participant Users in the MSATS web portal.

NEM wholesale and Gas Supply Hub (GSH) Participant Administrators also use this guide.

# Chapter 5 B2B



Procedures for retail market participants performing *B2B Communications* developed and published in accordance with clause 7.17.2(i) of the NER. They are made up of a number of documents (as permitted by clause 7.17.4(g) of the NER).

Several documents make up the *B2B procedures* each prescribing the content of, the processes for, and the information to provide to support *B2B Communications*.

You can find B2B Procedures and supporting documents on [AEMO's website](#) > Business to Business Procedures.

## B2B Basic Exchange Model

The exchange of B2B Messages is based on following model:

1. The Initiator sends a B2B Communication (Business Document) to a Recipient.
2. The Recipient sends a Business Receipt to the Initiator.
3. The Recipient returns a Business Acceptance or Rejection to the Initiator.
4. The Recipient sends a response to the Initiator.
5. The Initiator sends a Business Receipt to the Recipient.
6. The Initiator returns a Business Acceptance or Rejection to the Recipient.

## B2B Procedure: Service Order Process

Defines the standard process and transaction data requirements, applying to participants in the NEM. Using a consistently understood process and transactions enables *retailers* to request Service Orders from Service Providers and to receive confirmation:

- The work will or will not be undertaken (or attempted).
- The work has or has not completed as requested.

The procedure assumes the use of automated business processes using the agreed industry standard of aseXML messaging.

## B2B Procedure: Meter Data Process

Defines the standard, participants must comply with for the Meter Data Process and transaction data requirements between participants.

## B2B Procedure: One Way Notification Process

Defines standard processes and transaction data requirements participants must comply with for one way messaging transactions between *Market Participants*.

Provides the process for participants sending messages to other participants with multiple NMIs in a single transaction.

## B2B Procedure: Customer and Site Details Notification

Defines the standard process and transaction data requirements for the communication of Customer and Site Details from the *retailer* to the DNSP to support the DNSP carrying out its obligations.

## B2B Procedure: Technical Delivery Specification

Defines:

- The technical requirements for the delivery of B2B Transactions using the MSATS B2B Handler.
- Participant interactions with the B2B infrastructure.

- Baseline configuration settings applicable to the MSATS B2B Handler for the delivery of (national) B2B Transactions, such as the configuration of the MSATS B2B Handler required by the industry to support national B2B standards.
- Contingency arrangements relevant to participants and the national B2B infrastructure.

## **NEM RoLR Processes - Part B - B2B PROCEDURE: RoLR Process**

Identifies the roles and responsibilities of various parties if a RoLR even occurs that impacts B2B communications. The B2B Procedures are published in accordance with clause 7.2A.4(i) of the Rules.

### **B2B Guide**

This document describes how *B2B communications* are typically used in standard processes in the *NEM*. It aims to provide interested parties with an understanding of how B2B communications defined in the B2B Procedures are used in the context of the broader industry scenarios, and to assist participants when forming their respective bilateral or commercial agreements.

### **Guide to MSATS B2B**

This document provides information about the B2B e-hub functions available in MSATS.

### **SMP Technical Guide**

Shared Market Protocol (SMP) Technical Guide provides participants with the technical specifications for the delivery of B2B transactions using the B2B e-Hub.

### **SMP Validation Matrix**

Explains the validations used for the Shared Market Protocol (SMP).

## Guide to B2B e-Hub Self-Accreditation

Assists intending *B2B e-Hub Participants* to understand the *B2B e-Hub* self-accreditation process.

## B2B e-Hub Fact Sheet

Explains what the e-Hub is, who is eligible, who must obtain accreditation, and how to obtain accreditation.

## B2B Mapping to aseXML

Maps the business documents, business signals, and business items to their implementations. The implementation is to aseXML, sometimes including CSV payloads.

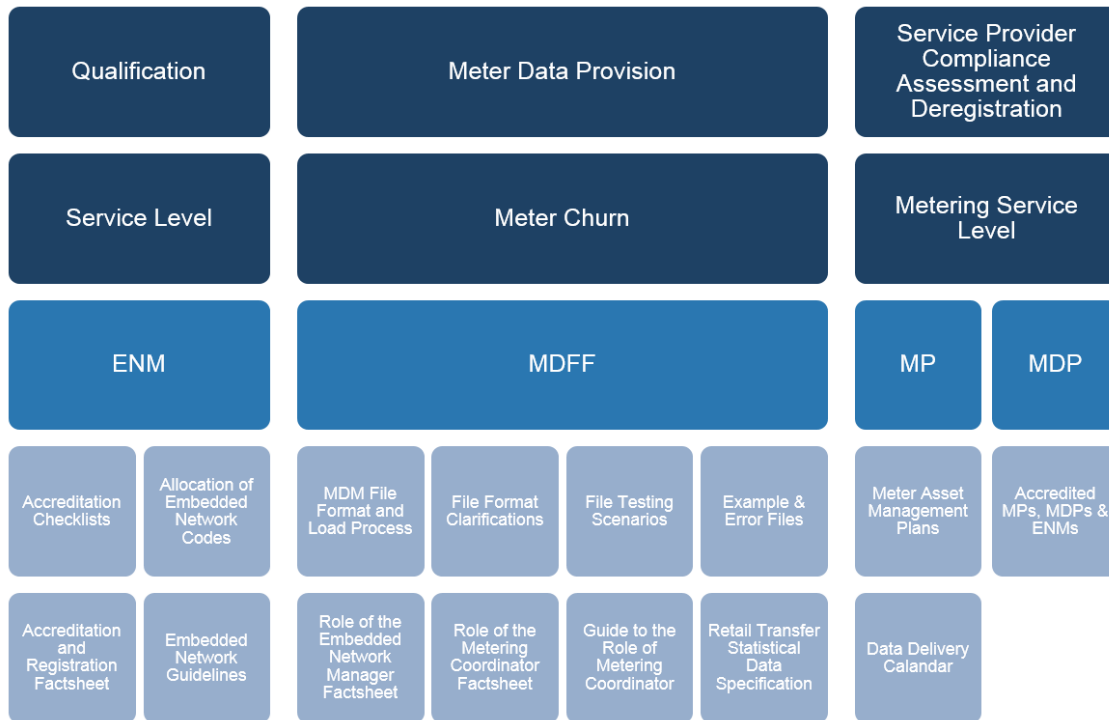
## Transition of aseXML

Provides information for participants transitioning to another B2M or B2B aseXML schema version.

## Guide to Validation Module Software

Provides assistance for *B2B e-Hub Participants* using the B2B Validation Module software. The software is a validation application participants can embed in their B2B systems allowing them to validate an XML file before it is deployed to the *B2B e-Hub*.

# Chapter 6 Metering



## Qualification Procedure

The NER require AEMO to have a qualification process for the accreditation and registration of Meter Providers (MP), Meter Data Providers (MDP), and Embedded Network Managers (ENM). It is consolidated into one document because the process is identical for each role.

You can find Service Provision procedures and supporting documents on [AEMO's website](#) > Metering Procedures, Guidelines, and Processes.

## Metering Data Provision Procedures

These procedures include the minimum requirements for the:

- Manner and form a retail customer's metering data is provided, including interval and accumulation metering data.

- Time frames for *retailers* and Distribution Network Service Providers (DNSP) to respond to a request from a *retail customer* or *customer authorised representative*.
- Minimum delivery method for the requested metering data.

## Metering Service Level Procedures

There are two metering service level procedures made under clause 7.16.6 of the NER for:

- Meter Providers (MP)
- Meter Data Providers (MDP)

### Service Level Procedure: Metering Provider (MP)

Details the obligations, technical requirements, measurement processes, and performance requirements MPs must meet in the provision, installation, and maintenance of metering installations.

### Service Level Procedure: Metering Data Provider (MDP)

Details the obligations, technical requirements, measurement processes, and performance requirements MDPs must meet in the provision of metering data services for all metering installation types and the maintenance of a metering data services database.

## Service Level Procedures: Embedded Network Managers

The Service Level Procedure Embedded Network Managers (ENM) details the obligations, technical requirements, and performance requirements ENMs must meet in the provision of embedded network management services.

## Meter Churn Procedure FRMP

Published in accordance with clause 7.3.4 (j) of the Rules, compliance to this procedure is required by all financially responsible market participants (FRMP). Meter Churn occurs where one or more meters are changed at a connection point, resulting in a misalignment between the information provided in the participant Meter Data File Format (MDFF) and the *NMI Standing Data* details in MSATS.

## **Service Provider Compliance Assessment and Deregistration Procedure**

AEMO is required to have a default and deregistration procedure for:

- MPs, MDPs, and ENMs under clause 7.4.4 of the NER.
- MCs under clause 7.7.3 of the NER.

The procedures are almost identical, so they are documented in one procedure with key differences in the treatment of different types of default highlighted.

This document details how AEMO addresses the breach and the consequences for the MP, MDP, ENM, or MC, where their performance fails to meet the NER, relevant procedures under the NER, or service level procedure.

### **Accreditation Checklists**

Contains the accreditation checklists for applicant MPs, MDPs, and ENMs, as contemplated by the Qualification Procedure.

Each accreditation checklist contains questions the applicants are required to complete as part of the qualification process. They are intended to provide verification of what is required of an applicant through demonstration of systems, processes, and procedures allowing AEMO to assess the application.

### **Accreditation and Registration Fact Sheet**

Explains accreditation and registration, who must be accredited and registered, and who is eligible.

### **Meter Asset Management Plans: Information Paper**

Provides assistance to service providers in the establishment of a Metering Asset Management Plan.

### **Accredited Metering Data Providers**

A list of Metering Providers (MDP), AEMO has given accreditation to in the National Electricity Market.



## Accredited Metering Providers

A list of Metering Data Providers (MP), AEMO has given accreditation to in the National Electricity Market.

## Accredited Embedded Network Managers

A list of Embedded Network Managers (ENM), AEMO has given accreditation to in the National Electricity Market.

## Meter Data File Format Specification

AEMO is required to publish this procedure under clause 7.8.10 of the NER. The procedure documents the process an Metering Coordinator (MC) must follow when seeking exemption from the requirement to repair a metering installation malfunction within the time frame imposed by the NER.

## MDM File Format and Load Process

Details the MDFF format and load process.

## NEM12 and NEM13 File Format Clarifications

Provides clarification from the B2B and MDM Working Group to assist participants in conforming to the technical format requirements detailed in the MDFF Specification.

## NEM12 and NEM13 File Testing

Details various implementation test scenarios required for acceptance of the NEM12 and NEM13 file format specification by MDPs.

## NEM12 and NEM13 Example Files

Details various MDP test file-build scenarios and the examples that passed and were accepted within the inter MDP test process.

## **NEM12 and NEM13 Error Files**

Contains data scenarios having deliberate file syntax and information errors. These files assist participants in the verification and build of MDFF loaders.

## **Metering Data Delivery**

A calendar of tentative dates when *Meter Data Providers* (MDP) must deliver metering data to respective settlement systems.

For exact dates, see the MSATS Settlement Case IDs and the associated run times in the MSATS web portal.

## **Role of the Metering Coordinator Fact Sheet**

Explains the role and responsibilities of the Metering Coordinator.

## **Guide to the Role of Metering Coordinator**

Explanatory material setting out the role of the Metering Coordinator (MC) under clause 7.3.1(c) of the NER.

## **Allocation of Embedded Network Codes**

Contains the embedded network identifier codes, provided to AEMO by Local Network Service Providers (LNSP), used to identify which embedded network an embedded network NMI belongs, either as a parent or a child.

## **Role of the Embedded Network Manager**

Explains Embedded Networks and the role and responsibilities of the Embedded Network Manager.

## Embedded Network Guidelines

Assists registered *Market Participants*, non-registered networks, and other parties to understand the principles and processes involved in market operations involving embedded networks. It covers:

- Establishing brownfield and greenfield embedded networks in the Market Settlement and Transfer Solutions (MSATS).
- Managing the choice of retailer for consumers who are eligible to choose their own retailer.
- Operational aspects of establishment and providing ongoing services to embedded networks, including meter provision and meter data services.

# Chapter 7 Exemption

Metering  
Installation  
Malfunctions

Discrepancies  
with the  
metering register

Instrument  
transformers

Small Customer  
Metering  
Installation

This procedure sets out the process for the *responsible person* requesting an exemption under clause 7.3.7(a), clause 7.5.2(a) and / or clause S7.2.2 (c) of the Rules may apply.

You can find the Exemption procedures and supporting documents on [AEMO's website](#) > Metering Procedures, Guidelines, and Processes.

## Metering Installation Malfunctions

Clause S7.3.7(a), where a metering installation is identified as malfunctioning, unless an exemption is obtained from AEMO, the responsible person must repair the malfunction within 2 business days for a type 1, 2, or 3 metering installation and within 10 business days for any other type of metering installation.

## Discrepancies with the Metering Register

Clause S7.5.2(b) - Where a discrepancy with the metering register under clause 7.5.2 (a) of the Rules occurs, the responsible person must arrange for correction of the discrepancy within 2 business days.

## Instrument Transformers

Clause S7.2.2(c), the use of metering class instrument transformers installed prior to 13 December 1998 that are not in accordance with Rule requirements are permitted, provided the overall accuracy requirements are achieved, or the responsible person must obtain an exemption from AEMO.

An application for an Exemption must be made using the relevant application forms. The application for extension to an existing exemption is only applicable to an exemption under clause 7.3.7(a).

## Small Customer Metering Installation exemption guideline

AEMO may exempt an Metering Coordinator (MC) from the requirement to install a type 4 *metering installation* that meets the *minimum services specification* in accordance with clause 7.8.4 of the NER.

There is no obligation to publish this procedure but it is beneficial for participants to know the process and grounds where AEMO may grant an exemption.

This Guideline is not subject to consultation under the NER.

# Chapter 8 Needing Help

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## AEMO's Support Hub

IT assistance is requested through one of the following methods:

- Phone: 1300 AEMO 00 (1300 236 600)

For non-urgent issues, normal coverage is 8:00 AM to 6:00 PM on weekdays, Australian Eastern Standard Time (AEST).

- The **Contact Us** form on AEMO's website.

### 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

AEMO recommends participants call AEMO's Support Hub for all urgent issues, whether or not you have logged a call using the contact us form.

For AEMO software-related issues please also provide:

- Version of software
- Properties or log files
- Replication Manager support dump and instance name (if Data Interchange problem)

## Feedback

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

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