
Guide To Market Systems - NEM Change Of Ownership

2.02 Final

September 2020

This guide provides details regarding the transfer of control of electricity assets registered with AEMO.

Important Notice

PURPOSE

This Guide To Market Systems - NEM Change Of Ownership, prepared by the Australian Energy Market Operator (AEMO), provides guidance regarding transfer of control of electricity assets registered with AEMO in the National Electricity Market (NEM) and under the National Electricity Rules (NER or Rules) as at the date of this publication.

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 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.

DISTRIBUTION

Available to the public.

DOCUMENT IDENTIFICATION

Business custodian: Manager, Market Monitoring and Change

IT custodian: Team Lead, NEM Scheduling and Operations Forecasting Systems

Prepared by: AEMO Technology

Last update: Monday, 14 September 2020 12:21 PM

VERSION HISTORY

2.02 Final - Minor amendments

DOCUMENTS MADE OBSOLETE

The release of this document changes only the version of Guide To Market Systems - NEM Change Of Ownership.

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	1
Purpose	1
Audience	1
How to use this guide	2
What's in this guide	2
Chapter 2 NEM Systems	3
Pre-production versus production	3
System and business timing	3
Key cut-off times	4
Chapter 3 Ownership Change	6
New participants	6
Contacts and communications	6
Data sharing	6
Company participant ID	7
Generating unit	8
Timeline diagram	8
Diagram notes - Transferor:	10
Diagram notes - Transferee:	10
Customers	12
Example of a company taking over a participant ID	12
Pre-production setup and test	13
Production setup	13
Chapter 4 Needing Help	14
Registration	14
Support Hub	14
Information to provide	14
Feedback	14
References	15
AEMO's website	15
Rules Terms	16
Glossary	17

Chapter 1 Introduction

Purpose

This Guide summarises the procedure used by AEMO to approve transfer of registration as a *Generator* for a generating facility from one person to another in accordance with rule 2.9A of the *Rules*.

This guide provides:

- Details regarding transfer of control of electricity assets registered with AEMO.
- Basic information on some key issues that may arise from corporate actions, such as a merger or acquisition. Transition can have significant ramifications regarding network and logical secured access. In addition, many of AEMO's NEM systems have defined cut-off times for particular transactions and reports.

Audience

The primary audience for this document is those parties involved in a transfer of control of a corporate entity, participant ID or NEM unit.

In particular (mainly new) participants must understand why:

- From midnight they see the DUID they own in the drop-down, but they can only submit bids that take effect after 4:00 am.
- They own a unit from midnight on the day their registration becomes effective, but that they cannot:
 - See offers from the previous owner (they cannot see offers from anyone until the next day, even if they are from the unit they now own).
 - Have an effective bid until 4:00 am (*trading day start*).
 - See the unit in the Markets Portal until midnight.

Participants can:

- Place a bid in the Markets Portal as soon as their registration is effective once they can see the unit ID in the interface, but it must be for after 4:00 am.

How to use this guide

- The references listed throughout this document are primary resources and take precedence over this document.
- **Text in this format** indicates a reference to a document on [AEMO's website](#).
- **Text in this format** indicates a link to related information.
- This document is written in plain language for easy reading.
- 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.
- Glossary Terms are capitalised and have the meanings listed against them in the .
- References to time are Australian Eastern Standard time (AEST).
- **Text in this format** is an action to complete in the Markets Portal interface.

What's in this guide

This guide contains:

- **Chapter 2 NEM Systems:** A brief overview of AEMO's NEM systems with a summary of key cut-off times and an explanation of pre-production and production systems. See [NEM Systems](#).
- **Chapter 3 Ownership Change:** Explains relevant considerations for the ownership change of a company participant ID, generating unit or bulk customers. Also includes an example plan of a company taking over another organisation's existing participant ID and their IT functions. See [Ownership Change](#).

Chapter 2 NEM Systems

Pre-production versus production

AEMO maintains separate pre-production and production systems with new features added to pre-production ahead of production. Participants use the pre-production systems for testing and training purposes. Testing in pre-production allows identification and working-through of specific details for each particular situation.

Change notices e-mailed to participants announce the changes to pre-production and production systems.

For further information regarding AEMO's IT systems, see [NEM Guides](#).

System and business timing

Dates for *settlements* and trading purposes are separate and have different definitions in the NER.

There is no overlap between *trading intervals*. *Trading intervals* include the starting time and exclude the ending time.

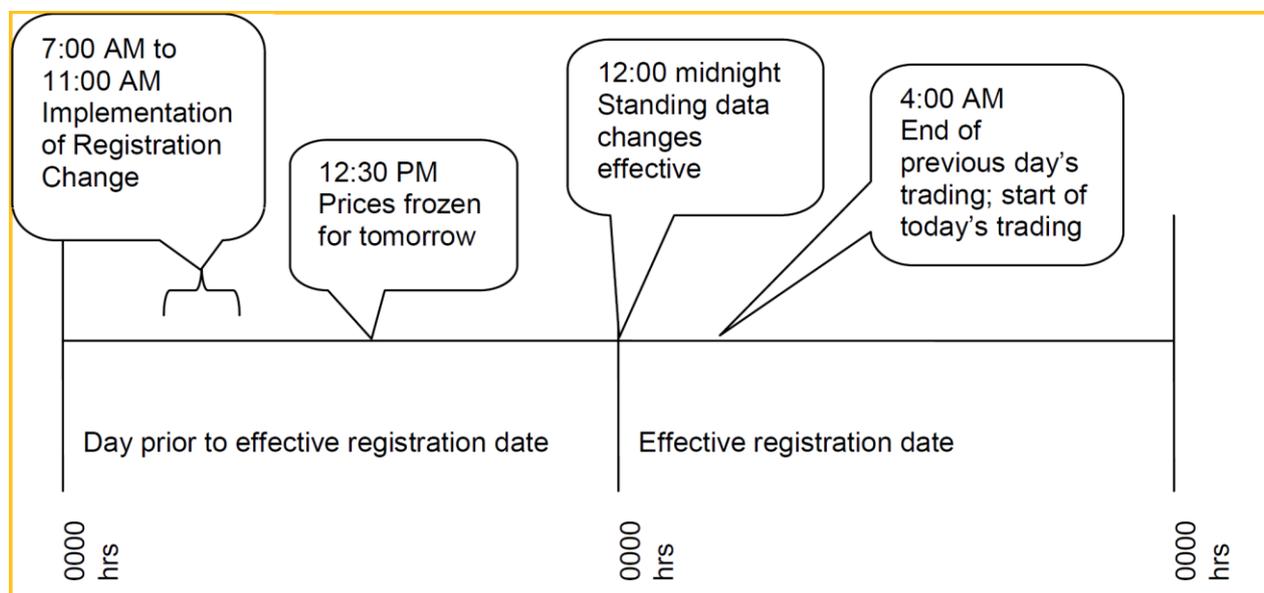
Each AEMO NEM system has a cycle time, which may or may not align with such corporate activity as transfer of ownership or control of a registration of a participant ID. For the benefit of both existing and prospective participants, the following are key cut-off times for major AEMO NEM systems and processes (times are in AEST - commonly also called "market time" within the electricity industry):

- The implementation date is usually one business day before the effective registration date of a registration change, between 7:00 am and 11:00 am. Upon special request, AEMO may agree to implementation three business days before the effective registration date, given sufficient notice time to comply with the Rules, the [Registration team](#) and IT Change Management.
- 4:00 am is the beginning of the *trading day* for the wholesale electricity markets. AEMO NEM systems are designed such that only the owner on a trading date can submit offers for the unit for that trading date. The relevant date for ownership is the effective registration date, beginning from midnight at the start of the day. The relevant date to submit an offer for a unit is the date (and time) of implementing registration into AEMO's systems.
- 12:30 pm is the latest time for changing the next day's prices, although other bid details such as quantities at each price and total availability can be *rebid* at any time. For example, when transferring control of a biddable asset (such as a *market generator*), a registration change made effective on a given day means the Transferee can be bound by the prices for that day made by the Transferor.

- Accepted bids for a unit remain active regardless of subsequent ownership and control changes.
In addition, any change of price for the following day must be accepted by AEMO NEM systems before 12:30 pm.
- Midnight is the boundary for financial reporting and deadlines in retail systems. A calendar day typically includes that day. For example, the date for objecting to a NMI transfer is based on the calendar date, so ends at 2400 hrs (12:00 midnight ending) on that date.
Changes of standing data for electricity grid assets (for example, *generating units*, and interconnectors) become effective on a calendar day (so start at 00:00 hrs or 12:00 midnight starting on the effective registration date), although bids already accepted remain in place. A new registration is effective in the first *dispatch interval* after 0000 hrs of the effective registration date (that is, for the 5-minute dispatch interval ending at 00:05 am).
- From midnight they'll see the DUID they own in the drop-down but can only submit bids that take effect after 4:00 am.

This diagram displays the key cut-off times, assuming consecutive business days, with all times being AEST.

Key cut-off times



Some particular ramifications of these cut-off times, in conjunction with control transition, include:

- When transferring control of a biddable asset (such as a *market generator*), a registration change made effective on a given day means the period from midnight to 4:00 am is still under the bidding responsibility of the registration effective on the previous day, but the financial responsibility changes at midnight.

- For a new unit, bids are not accepted between midnight and 4:00 am on the effective registration date. New units are registered in the NEM before they are commissioned with a zero MW availability.
- The Transferee can offer for future dates where the trading date is greater than or equal to the effective registration date, after AEMO implements registration into AEMO's systems.
- A Participant User can only log in to the Markets Portal if their participant ID is active according to the current market time. The NEM standing data includes participant status, so just after 12:00 midnight on the first day of being active is when the Markets Portal is able to be accessed to see current details of a new or transferred unit for that participant ID.
- The list of units a given participant can bid in the Markets Portal is determined by the current market time, so a participant cannot use the Markets Portal to manage offers for units it owns from a future effective registration date. To manage offers for units a participant owns from a future effective registration date, use the file interface.
- The Transferor and Transferee only receive acknowledgements for each of their own submissions.
- Subscribed data reports containing information for the biddable unit are only sent to the Transferee from the effective registration date, not before.

Chapter 3 Ownership Change

Change of ownership (excluding *customers*) requires consideration of the following:

New participants

- Consider the need to submit a registration application. See [Energy Market Registration](#), links to registration applications and related information.
- Consider the need to acquire a MarketNet connection, see [Data network connection - MarketNet](#).

Contacts and communications

The Transferee must be a Registered Participant.

Registered Participants must provide details of key IT contacts and email communications at [Registration](#).

If contact details change during the Registration process, contact the AEMO Registration Team via email to onboarding@aemo.com.au.

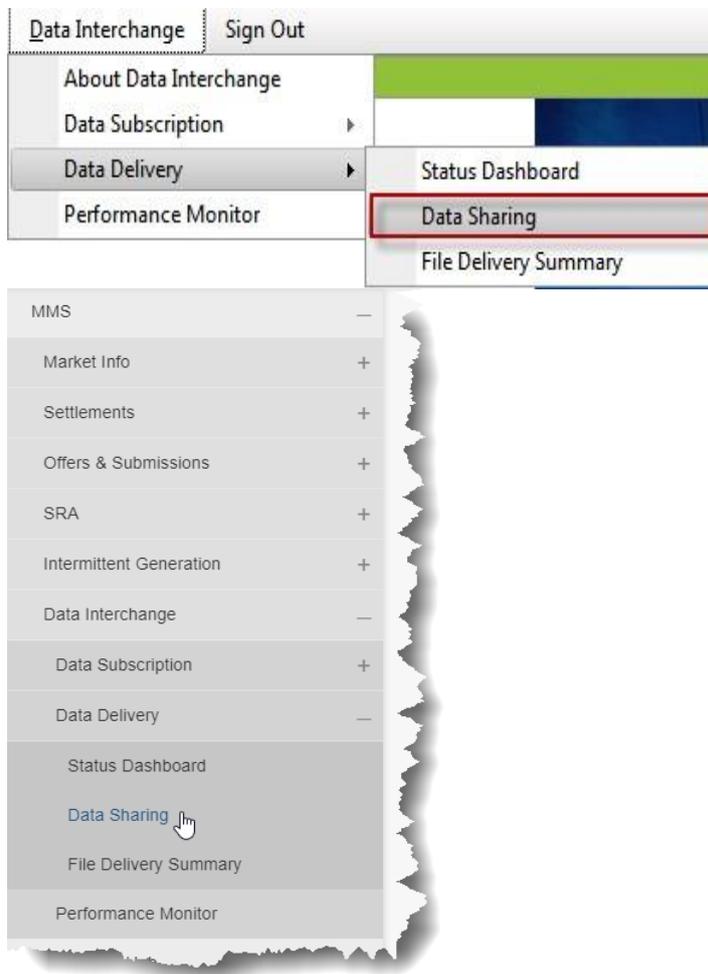
- Ensure the key IT contacts are accurately recorded at AEMO, so all parties are included for resolving unforeseen situations promptly.
- Review group email address for IT Notifications from AEMO in relation to IT changes or outages.

Data sharing

- Review agreements with other parties, such as data sharing. For information on data sharing, see the [Guide to Data Sharing](#) on the [AEMO website](#). Advise the [Support Hub](#) if and when changes are required - referring to “data sharing”.

If you are a *registered participant*, the Markets Portal displays any data sharing agreements you may have. Select Data Interchange > Data Delivery > Data Sharing.

Figure 2: Markets Portal data sharing access



Company participant ID

An ownership change of participant ID means considering the following:

- The Transferor and Transferee are reminded of the confidentiality obligations in section 8.6 of the NER and compliance with AEMO's published procedure in item 3.19 (c) of NER. For more information see the [Systems Access Policy](#).
- At an agreed time, the Transferor provides access credentials to the Transferee. Specifically:
 - The Transferor participant administrator (PA) adds a Transferee user with PA rights and advises credentials. The Transferee PA can inactivate Transferor PAs and users after ownership transfer is effective. For assistance with participant administration, see [Guide to User Rights Management](#).
 - The Transferor data manager or security contact provides the credentials for FTP access to Transferee security contact or delegate. The Transferee person

changes the password after ownership is effective. For more information see the [Guide to Electricity IT Systems](#).

Generating unit

On unit ownership change, the following considerations are relevant:

- For a smooth transition, having processes and agreements in place between the parties allows the communication of data reports and bids. Examples of overlaps in control and data access include:
 - 00:00 to 04:00 am period of the date the registration is effective.
 - Settlements are in arrears, and the Transferee can receive statements for times when the Transferor was in control.
 - Forward projections received by the Transferor are not visible to the Transferee, and new projections are generated by AEMO only when the next runs are scheduled.
- Acknowledgements of bids are always back to the sender (for both positive and negative acknowledgements).

Timeline diagram

The following timeline summarises key events and the status for the Transferee and Transferor regarding a biddable unit in the NEM. All events are fixed in time, except the time of the manual implementation of the registration (assume this is completed by 11:00 am on the day before the effective registration date).

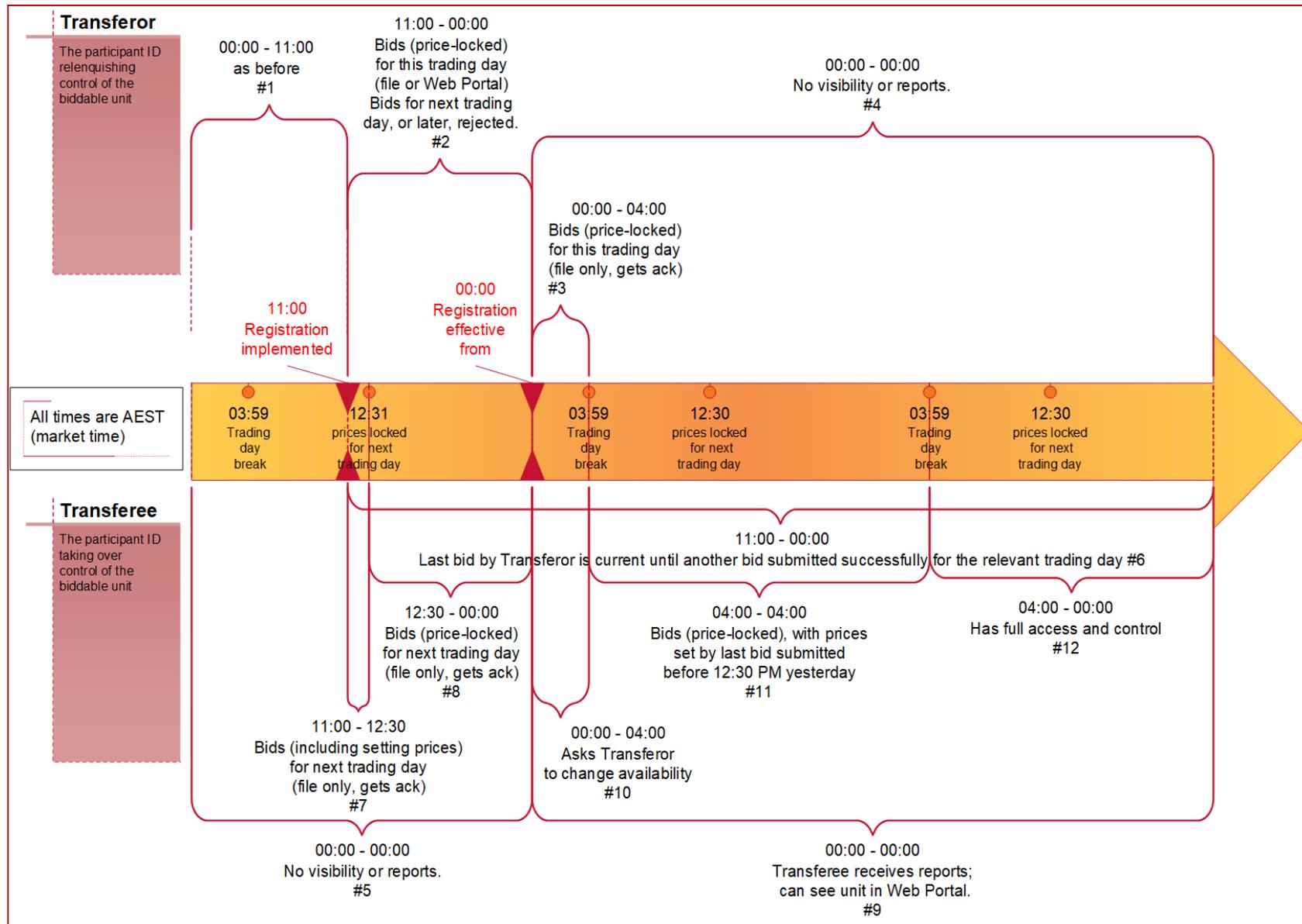


Diagram notes - Transferor:

- Prior to the implementation date, the Transferor:
 - Can submit bids (including setting prices) for future *trading days*.
 - Can submit bids (with prices locked) for current *trading days*, FTP, APIs, or the Markets Portal. Refer to the following guides:
 - FTP & API: [Format and Validation for Energy, FCAS, and MNSP Bids and Offers](#)
 - FTP: [Connecting to AEMO's electricity IT systems](#)
 - Markets Portal: [Guide to Energy and FCAS Web Bids](#)
 - API: [Guide to API Energy and FCAS Bids and Offers](#)

It is business as usual for the Transferor until the implementation of the registration into AEMO's systems, so the Transferor has exclusive access and control.

- From the implementation date to midnight, the Transferor:
 - Cannot submit a bid for any trading day on or after the registration date - doing so results in rejection.
 - Can submit a bid for any day before the registration date.
 - Can submit bids for current trading day (with prices locked) using any of the interfaces.
- From midnight to 04:00 am, the Transferor:
 - Can submit bids for current trading day (with prices locked) using files.
- From effective registration date midnight onwards, the Transferor:
 - Has no further access to information regarding the biddable unit, except as made public.

Diagram notes - Transferee:

- Prior to effective registration date midnight, the Transferee:
 - Has no access to biddable unit in the Markets Portal.
 - Cannot receive any files or data reports, regarding the biddable unit.
- From the implementation date onwards:
 - A bid for a trading day is effective for each future trading day, until another bid with a later submission date becomes effective for that trading day. This means that the Transferor's bids remain valid until another bid is received (from the Transferee) for a trading day.

- From the implementation date to 12:30 pm, the Transferee:
 - Can submit bids (including setting prices), with effect for the next trading day, using files.
 - Receives acknowledgements, but the Transferor still receives the data reports containing information for the biddable unit, according to their Data Subscriptions for their participant ID. Refer to the [Guide to Data Subscriptions](#).
 - Prices for the next trading day are set by last submitted bid before 12:30 pm on the day before the registration change (either by Transferor or Transferee).
- From the implementation date 12:30 pm to midnight, Transferee:
 - Can submit bids (with prices locked), with effect for the next trading day, using files.
 - Receives acknowledgements, but the Transferor receives the data reports containing information for the biddable unit, according to file subscriptions for their Participant ID.
- From effective registration date midnight onwards, the Transferee:
 - Receives data reports containing information for the biddable unit, according to file subscriptions for their Participant ID.
 - Can see the biddable unit in the Markets Portal.
 - Can submit bids (including setting prices), using the Markets Portal or using files, for future *trading days*, using the Markets Portal or using files.
- From effective registration date midnight to 4:00 am, the Transferee:
 - Cannot bid for period 00:00-04:00 am; can ask Transferor to submit a bid (with prices locked), such as for a change of availability.
 - Can bid (with prices locked), using FTP, or APIs, for trading day after 04:00 am.
 - Can bid (including setting prices), using FTP, or APIs, for the trading day after 04:00 am on the next day, or for any following trading day.
- From effective registration date 04:00 am to the day after effective registration date 04:00 am, the Transferee:
 - Can bid (with prices locked), using the Markets Portal, FTP or APIs for current trading day; that is, with the prices the same as set by the last submitted bid before 12:30 PM on the day before the registration change (either by Transferor or Transferee).
 - Can bid (including setting prices), using the Markets Portal, FTP or APIs for the trading day after 04:00 am on the next day, or for any following trading day.
- From the day after effective registration date onwards, the Transferee:

- Has full access and control of the biddable unit - business as usual for the Transferee.

Customers

On bulk customer ownership change, the following considerations are relevant:

- Transferring a large number of existing customer's *NMIs* to a new owner impacts the load on both, participant and AEMO's IT systems. For minimal impact, participants contact the [Support Hub](#) and request the metering team to transfer their NMIs using the [MSATS Bulk Change Tool \(BCT\)](#).

For further information on using the MSATS Bulk Change Tool see [MSATS CATS and WIGS Procedures](#).

Example of a company taking over a participant ID

This example is about a company planning to take over another organisation with an existing registration as a *generator*. The takeover includes all the IT functions. In this example, the resulting organisation is identified as JKLM, a small participant. JKLM and the current owner begin the planning for transfer of registration and IT functions in May (of an arbitrary year) for effective date of 1 July, including:

- JKLM considers their choice of interfaces to perform their functions. For more information see [NEM Guides](#).
- JKLM considers choices for their MarketNet connection, to obtain the form. For more information see [NEM Guides](#).
- JKLM seeks advice regarding registration requirements because they are acquiring an existing registered participant company. For more information see [Energy Market Registration](#).
- Current owner and JKLM review existing data sharing arrangements (see Data sharing on page 6) and decide the data sharing to apply from takeover. Changes might include revoking current owner rights to leave only JKLM to use the participant ID, and might include adding or revoking any third-party data being directed to the participant ID. The current owner advises AEMO of all access to be revoked as of a given date, and JKLM requests any additions to apply from a given date, and confirms the access by any other party, including the current owner.
- JKLM sets up their MarketNet connection, tests the connection, and confirms with AEMO.

Pre-production setup and test

- In pre-production (not production), the current owner adds another participant administrator (PA) for use by JKLM, and provides JKLM with participant ID, the PA credentials, MarketNet access credentials, and relevant IP addresses. For further information regarding NEM systems - preproduction and production, see Pre-production versus production.
- JKLM accesses pre-production (not production) Markets Portal and MSATS web portal, confirming the ability of the JKLM PA to establish and manage access rights for other JKLM staff, and full access to all functionality required for JKLM operations. JKLM does testing and training in the pre-production environment. JKLM PA inactivates the current owner's PA and users, to test the current owner can no longer access pre-production. JKLM changes the pre-production file access password, tests access and confirms current owner can no longer access AEMO's pre-production file server.

Production setup

- In production this time, the current owner repeats the steps done in pre-production (that is, adds another participant administrator (PA) for use by JKLM, and provides JKLM with participant ID, the PA credentials, MarketNet access credentials, and relevant IP addresses).
- AEMO implements the data sharing changes as advised by JKLM.
- JKLM has full control of the participant ID. JKLM PA inactivates all the previous owner's Participant ID - Participant Users - including PA and changes the production Participant ID password.

For assistance managing Participant User accounts - participant administrators create accounts in MSATS. For more information see [Guide to User Rights Management](#).

Chapter 4 Needing Help

Registration

For Registration assistance, contact onboarding@aemo.com.au.

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

Feedback

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

References

The resources listed in this section contain additional related information that may assist you.

- AEMO Support Hub - phone: 1300 236 600 (1300 AEMO 00), and follow the prompts, or e-mail: suppothub@aemo.com.au.
- National Electricity Rules (NER): see the Australian Energy Market Commission (AEMC) website <http://www.aemc.gov.au>.

AEMO's website

The following are available on AEMO's website:

CATS and WIGS Procedures:

<https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/market-operations/retail-and-metering/market-settlement-and-transfer-solutions-msats>

You can find resources on AEMO's website.

Energy Market Registration: Links to registration applications and related information: <https://aemo.com.au/energy-systems/registration>

Guide to User Rights Management, for information about managing a web portal account (accounts are created in MSATS): <https://aemo.com.au/energy-systems/market-it-systems/nem-guides/participant-administration-and-user-rights>

Systems Access Policy: <https://aemo.com.au/energy-systems/market-it-systems/nem-guides/data-network-connection-marketnet> (Home>Energy Market Registration>Understanding Energy Market Information Systems)

NEM Guides: <https://aemo.com.au/energy-systems/market-it-systems/nem-guides> - Information systems information, related documents, and access forms.

Rules Terms

The following rules terms are used throughout this guide.

Rules Terms	Rules Terms	Rules Terms
Bid	Generating Units	Registered Participant
Business Day	Generator	Rules
Customer	Market Generator	Settlements
Day	Markets Portal	Settlements Statements
Dispatch Interval	NMI	Trading Day
Dispatch Offers and Bids	Non-Dispatchable Unit Identifier	Trading Interval
Dispatchable Unit Identifier	Parties	Transferee
Effective Registration	Rebid	

Glossary

Abbreviation	Explanation
AEMO	Australian Energy Market Operator
AEST	Australian Eastern Standard Time
B2B	Business-to-business
B2M	Business-to-market
EMMS	Electricity Market Management System; software, hardware, network and related processes to implement the wholesale energy market
FCAS	Frequency Control Ancillary Services
File Interface	See Connecting to AEMO's Electricity IT Systems
FTP	File transfer protocol
MSATS	Market Settlement and Transfer Solution for retail electricity
MW	Megawatt
NEM	National Electricity Market
NER	National Electricity Rules
NMI	National Metering Identifier for electricity meters
Participant ID	Registered participant identifier; A company can have more than one Participant ID
Participant User	An end-user, using AEMO's participant energy market systems to view and retrieve information on behalf of a participant ID. The participant users access rights are created and maintained by the participant ID's Participant Administrator