WA RETAIL FORUM

Overview of:

- MSATS Procedures. CATS Procedures Principles & Obligations
- Standing Data
- Bulk Data Tool

March 2017

PRESENTED BY ALLICIA VOLVRICHT,
RETAIL WORKSTREAM LEAD

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

AGENDA

1. Workshop Objectives
2. Overview of current WA Arrangements
3. Assumptions for Future WA Arrangements
4. MSATS Related Documents
5. MSATS (Market Settlement and Transfer System)
6. Roles
7. Standing Data
8. Bulk Data Tool Overview
9. NMI Discovery
10. Change Requests
11. Change Reason Codes
12. Read Type Codes
13. Objections
14. Change Retailer
15. Next Steps
16. Questions

OBJECTIVES

Provide participants with:

- NEM vs WA – High level comparison of Transactions
- NEM vs WA Standing Data Comparison
- High-level understanding of the role of MSATS in the NEM Retail Market
- Overview of AEMO's Bulk Data Tool
- An overview of MSATS System which includes:
  - MSATS Interfaces
  - MSATS Functions
  - MSATS Roles
- Understanding of MSATS Procedures which include;
  - MSATS CATS Procedure Rules and Codes
  - MSATS CATS Transactions

ASSUMPTIONS FOR FUTURE WA ARRANGEMENTS AND OBJECTIVES

If the Policy option is endorsed, it is anticipated to see AEMO and the Electricity Market Review proceed on the assumption that the transfer of retail market functions could be delivered by applying detail of Chapter 7 of the National Electricity Rules into local WA instruments.

Anticipated elements of the local approach from 1 July 2019 could be:

Element	Approach
Primary legislation	*Electricity Industry Act 2004*. Either modify and extend Part 9 or insert Part 9B to cover retail market functions. It's likely that this could be more expansive than Part 9 was in respect of wholesale functions (Section 124 simply delegated everything to regulation, including the granting of statutory functions).
Subordinate instruments	*Wholesale Electricity Market (WEM) Rules*. Embed Chapter 7 into the WEM Rules, verbatim wherever possible. Other Instruments may also require a review to determine changes (e.g.. Elec Corp Act 2005, Code of Conduct, Metering code, Transfer code etc.)
Procedures	Local facsimiles of AEMO's procedures under Chapter 7.

ASSUMPTIONS FOR FUTURE WA ARRANGEMENTS AND OBJECTIVES

- Implement a similar NER framework in WA Retail Market (Chapter 7 and relevant/related framework)
- Maintain Retail contestability for WA customers >50Mwh.
- Prepare for a future implementation of Metering Competition in WA.
- Prepare for a future implementation of Full Retail Contestability.
- Embedded Networks are not in current scope.
- Western Power will take on the role and responsibilities of a Metering Co-ordinator (even if Meter Competition is not implemented initially)

CURRENT WA REGULATORY FRAMEWORK

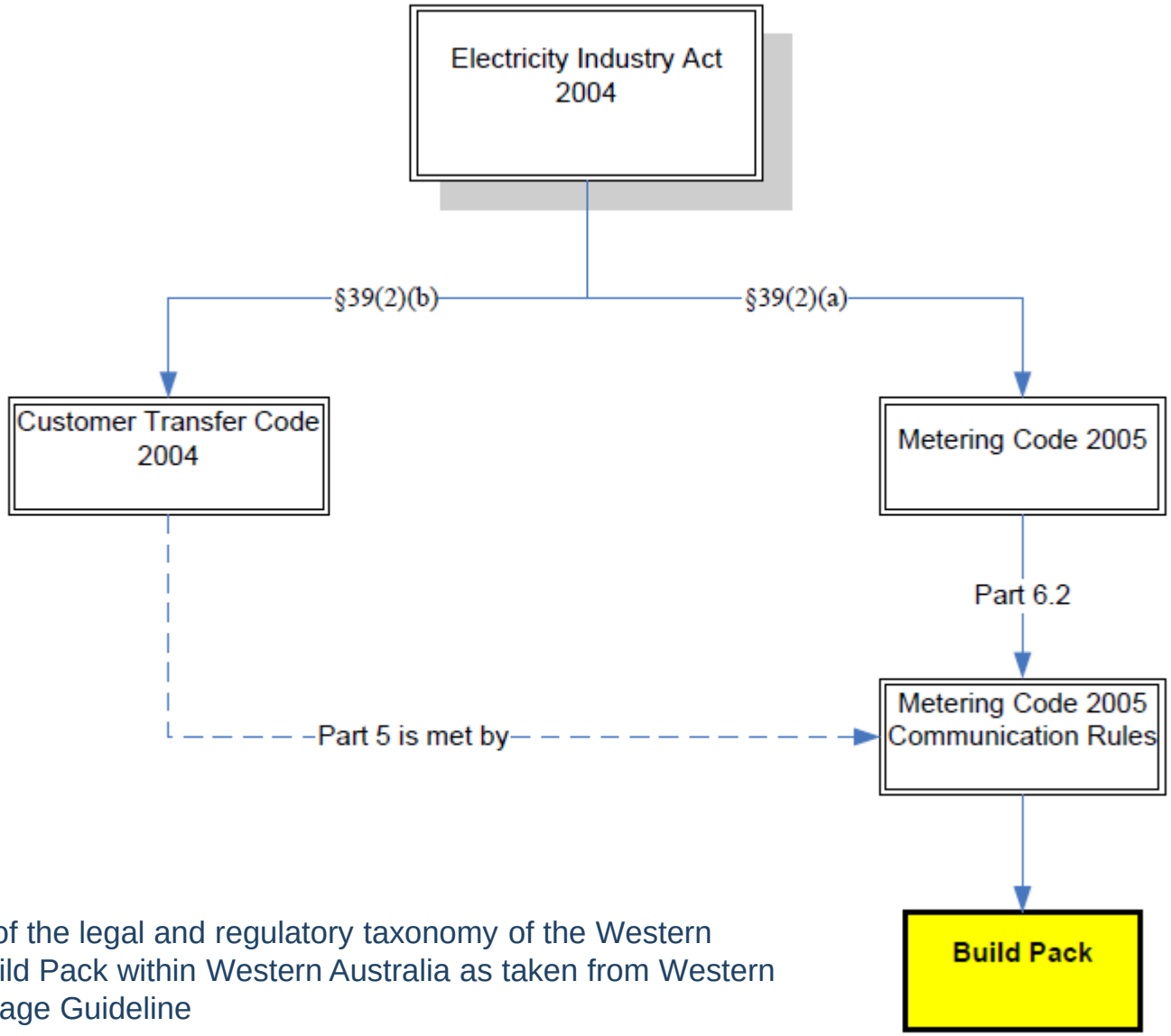


Illustration of the legal and regulatory taxonomy of the Western Power's Build Pack within Western Australia as taken from Western Power's Usage Guideline

CURRENT WA ARRANGEMENTS

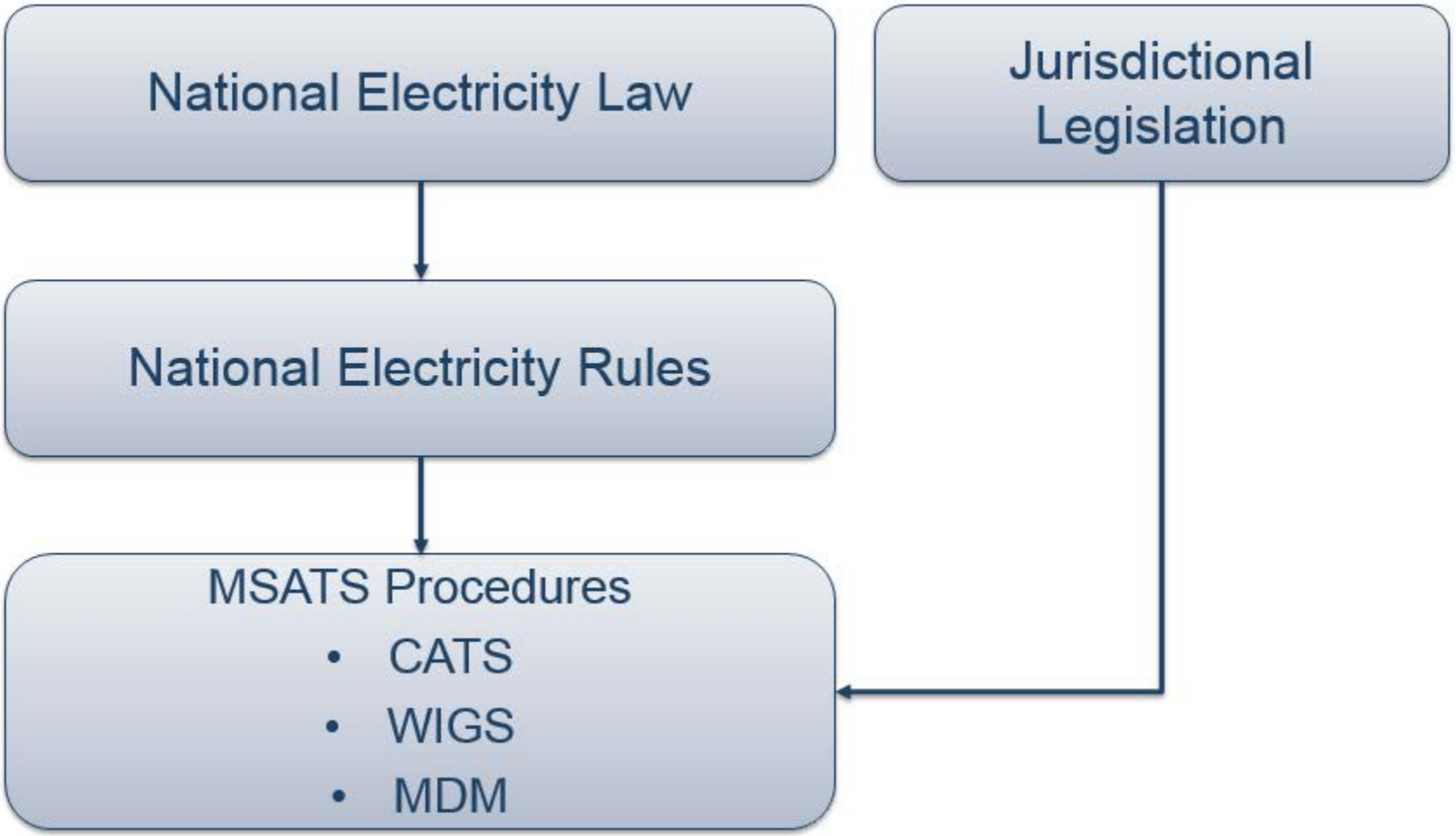
Legislation and Codes - The Minister for Energy is responsible for administering legislation in Western Australia. The Coordinator of Energy supports the Minister in this role.

- Electricity Industry Act 2004
- WEM Rules

Industry Codes - The following Codes were established under the *Electricity Industry Act 2004* and have the force of law in Western Australia.

- Code of Conduct for the Supply of Electricity to Small user customers
- Electricity Industry Transfer Code
- Electricity Industry Metering Code
- Electricity Industry Network Reliability and Quality of Supply code
- Electricity Networks Access Code

CURRENT NEM ARRANGEMENTS



MSATS RELATED DOCUMENTS

The following documents should be read in conjunction with MSATS CATS & WIGS Procedures:

- NEM Retailer of Last Resort (RoLR Processes)
- Validation Model for B2B
- MSATS Participant Batch Software
- GUIDE TO PARTICIPANT BATCHER SOFTWARE
- Service Level Procedure (MDP)
- Distribution Loss Factors in MSATS
- NMI Standing Data Schedule
- MSATS Ombudsman Enquiry User Interface Guide
- Guide to MSATS B2B
- Guide to User Rights Management
- Guide to MSATS Web Portal
- Introduction to MSATS

Documents can be found on AEMO's website, some are still being reviewed and updated as part of Power of Choice

MSATS RELATED DOCUMENTS CONT

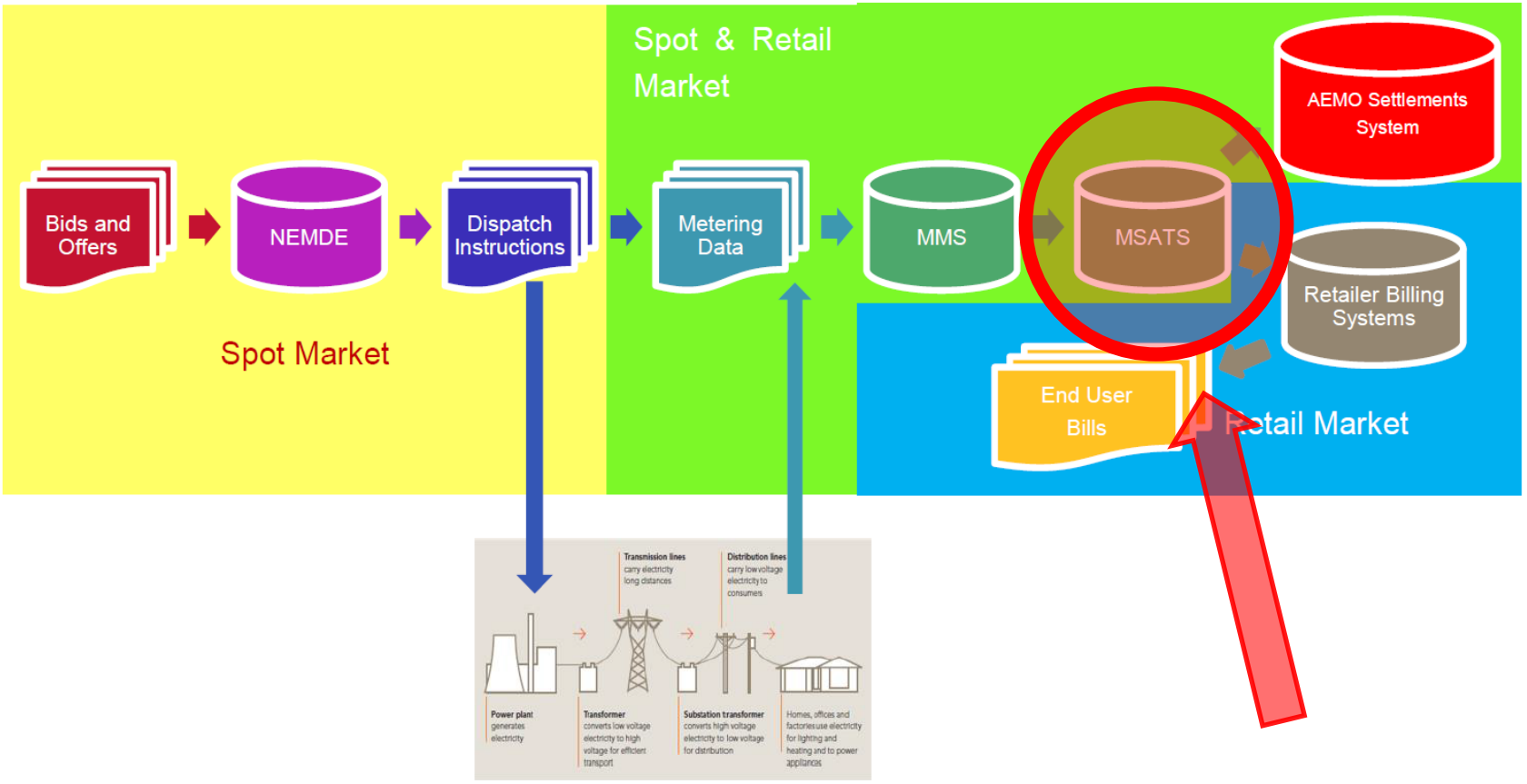
The following documents should be read in conjunction with MSATS CATS & WIGS Procedures:

- Retail Electricity Market Procedures – Glossary and Framework
- WIGS PROCEDURES
- MDM PROCEDURES
- METROLOGY PROCEDURE: PART A
- METROLOGY PROCEDURE: PART B
- CATS HINTS AND TIPS
- MSATS Procedure – National Metering Identifiers
- Standing Data for MSATS
- Allocation of Embedded Network Codes
- Technical Guide to Bulk Data Tool in MSATS
- NMI Discovery and Questions and Answers
- MSATS CATS HISTORY MODEL

Documents can be found on AEMO's website, some are still being reviewed and updated as part of Power of Choice

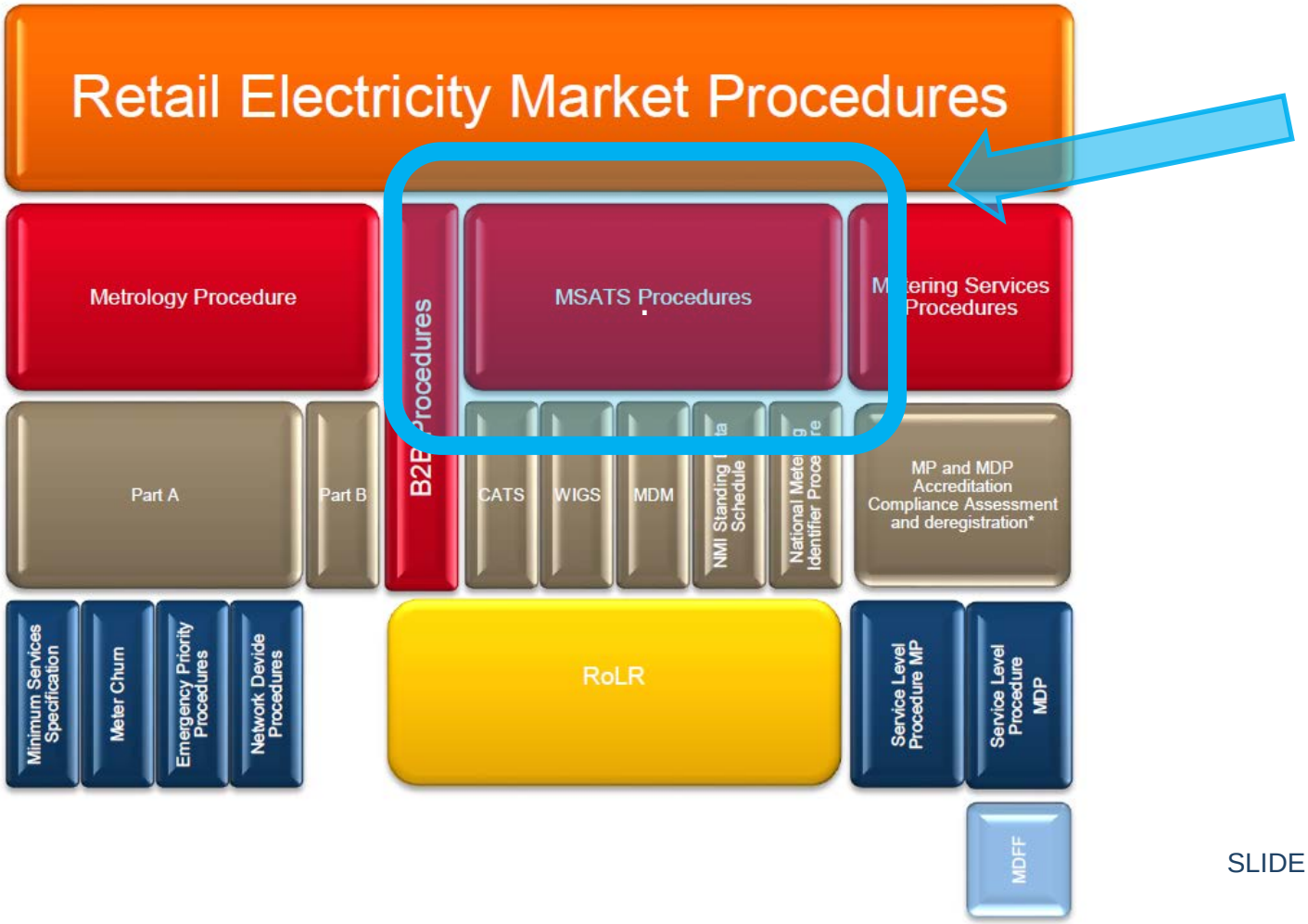
HIGH LEVEL VIEW OF THE NEM RETAIL ELECTRICITY RETAIL MARKET PROCESSES

The retail market processes and systems are designed to operate alongside the *spot market* processes. The below figure contains a high-level view (but by no means comprehensive) of these processes and systems:



RETAIL ELECTRICITY MARKET PROCEDURES

Retail Electricity Market Procedures refers to a number of procedures that govern the operation of the retail market. The below figure depicts how the Retail Electricity Market Procedures fit together.



MSATS (MARKET SETTLEMENT AND TRANSFER SYSTEM)

AGENDA

1. Current WA Market Transactions
2. MSATS System Overview
3. Function of MSATS
4. MSATS Transaction Types
5. MSATS Notification Rules
6. MSATS Interfaces
7. MSATS Backend Processes
8. MSATS Application Screens and tasks
9. File Transfer & XML file format
10. Who can use the Portal

CURRENT WA MARKET TRANSACTIONS

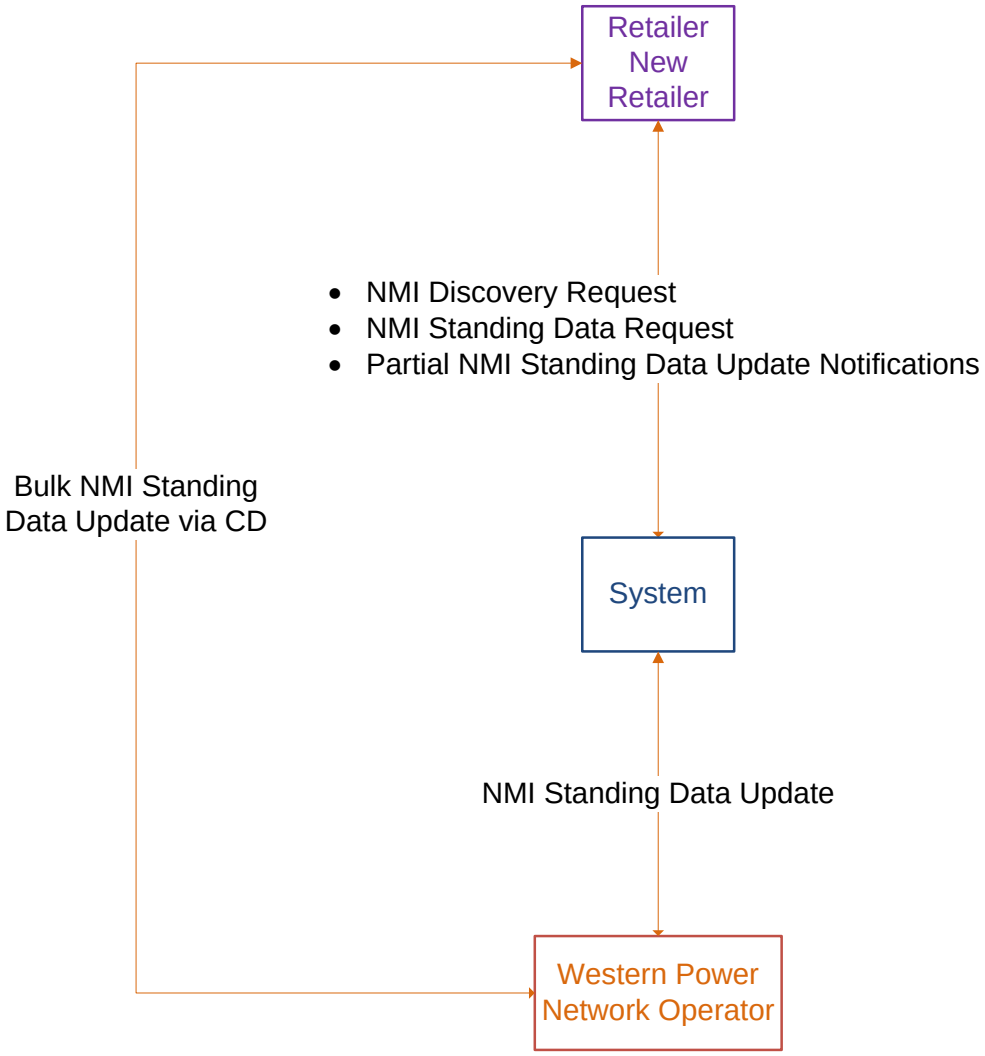


Diagram as illustrated in Western Power's build pack usage guidelines

MSATS SYSTEM OVERVIEW

MSATS is a system operated by AEMO to fulfil its obligations under the NER. CATS is a part of MSATS.

The MSATS Procedures:

- Facilitate and support an efficient process for the:
  - provision and maintenance of CATS Standing Data;
  - discovery of approved *NMI Standing Data*;
  - transfer of End Users between *retailers;*
  - registration of *metering installations*;
  - *settlements* and the administration of *NMIs;* and
- Define the roles and obligations of Participants and AEMO.

MSATS SYSTEM OVERVIEW

The MSATS Procedures are made under clause 7.16.2 of the NER and are *published* as separate documents along functional lines:

(a) CATS Procedures

The CATS Procedures apply to End User transactions.

(b) WIGS Procedures

The WIGS Procedures apply to those *connection points* that do not involve an End User transaction, namely, wholesale, *interconnector* and *generation connection points* and sample data used in *settlements*.

Assumption: 7.16.2 of the NER will be applicable to WA.

(c) MDM Procedures

The MDM Procedures detail the management of *metering data* within MSATS in order to facilitate:

- the implementation of the *metrology procedure* into AEMO's operational procedures;
- 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.

(d) NMI Standing Data Schedule

This document is *published* under clauses 3.13.12 and 3.13.12A of the NER. It details the data items that make up the *NMI Standing Data*.

Assumption as discussed in October 2016 Retail Forum: WA Rules will need to consider components of the NER Chapter 3, In particular the NMI Standing Data Schedule and related clauses.

(e) National Metering Identifier Procedure

- This document sets out the structure of *NMIs*. It is not required to be *published* under the NER, yet it is a critical explanatory document.

- The MSATS and WIGS Procedures currently used for the NEM have undergone formal consultation as part of the Power of Choice Program. The versions to be effective from 1 December 2017 can be found on AEMO's consultation section. Refer to AEMO POC Procedure Change Package 1

MSATS SYSTEM OVERVIEW

- Market Settlement and Transfers Systems (MSATS) is a software system operated by AEMO.
- Comprises a suite of databases, currently:
  - 1 CATS server which stores connection point configuration data
  - 2 MDM Servers (the arrangement is to facilitate expansion of processing requirements) which stores actual and aggregated metering data
- A software application that performs various functions

FUNCTIONS OF MSATS

- Consumer transfers (changing a NMI's FRMP)
- Updating configuration data (e.g.. DLF, TNI)
- NMI Discovery - finding a NMI so that a consumer transfer can be initiated
- Submit meter data
- On-screen enquiries and reporting
- Run settlement cases (AEMO only):
  - Profiling of basic meter data into deemed energy usage for each 30 minute interval
  - Substituting missing data
  - Submission of aggregated energy data to AEMO's Settlement system

MSATS – FUNCTIONALITY OVERVIEW

- The operation of CATS is based on 14 different types of transactions and a separate RoLR function.

- Six transaction types are initiated by Participants, whilst eight are initiated by MSATS.

- Assumption: the Transaction Types used by the NEM will be applicable to WA

MSATS TRANSACTION TYPES

Type	Name of Transaction	Initiated by	Description
CR	Change Request	Participant	Used to initiate a Change Request. Submitted by a Participant anytime they wish to create or update any standing data.
NOT	Change Request Status Notification	MSATS	Notifies a Participant of a Change Request's change in status in accordance with the applicable Change Request Status Notification Rules.
RDAT	Request for Participant Data	MSATS	A request by MSATS to a Participant for provision of the necessary data in a Change Request in accordance with the applicable Field Validation Rules it that data is not already contained in the NMI Master Record.
OBJ	Objection	Participant	A Participant can raise an Objection to a Change Request in accordance with the applicable Objection Rules. Other Participants will be informed in accordance with the applicable Change Request Status Notification Rules.
WCR	Change Request Withdrawal	Participant	The initiating Participant may Cancel a Change Request at any time prior to Completion. Other Participants will be informed in accordance with the applicable Change Request Status Notification Rules.

MSATS TRANSACTION TYPES

Type	Name of Transaction	Initiated by	Description
WOBJ	Objection Withdrawal	Participant	The initiating Participant may withdraw an Objection. Other Participants will be informed in accordance with the applicable Change Request Status Notification Rules.
NMID	NMI Discovery Request	Participant	A Participant wants to view CATS Standing Data. Further particulars of the search types can be found in section 43.
NMIR	NMI Discovery Response	MSATS	MSATS sends a Participant information in response to a NMI Discovery Search
CRR	Change Request Response	MSATS	MSATS response to a Change Request with an approval or rejection as it reaches the Pending Validation status.
OBJR	Objection Response	MSATS	MSATS response to an Objection with an approval or rejection. Other Participants will be informed in accordance with the applicable Change Request Status Notification Rules.
ACK	Acknowledgement	MSATS	MSATS responds to ALL transactions with an acknowledgment of receipt.
CODE	Code Updates	MSATS	MSATS notifies Participants of any changes to codes, rules or Participant data.
RPTR	Report Request	Participant	Participant requests a report.
RPTD	Report Data	MSATS	The data generated by a report request

MSATS NOTIFICATION RULES

Whenever a status is changed, a notification is sent to interested parties. This table shows which rules are notified per event and by Role

Status Change	FRMP		LR		LNSP		MDP		MPB		RoLR (=SoLR)		RP (=MC)	
N = New C = Current	N	C	N	C	N	C	N	C	N	C	N	C	N	C
CANCELLED	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes
COMPLETED	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes
OBJECTED	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes
PENDING	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes
REJECTED	Yes	Yes	-	-	-	Yes	Yes	Yes	-	-	-	-	Yes	Yes
REQUESTED	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes

Assumption: The same NEM notification rules will be applied to WA
Note: RoLR will equate to SoLR in WA.

MSATS - INTERFACES

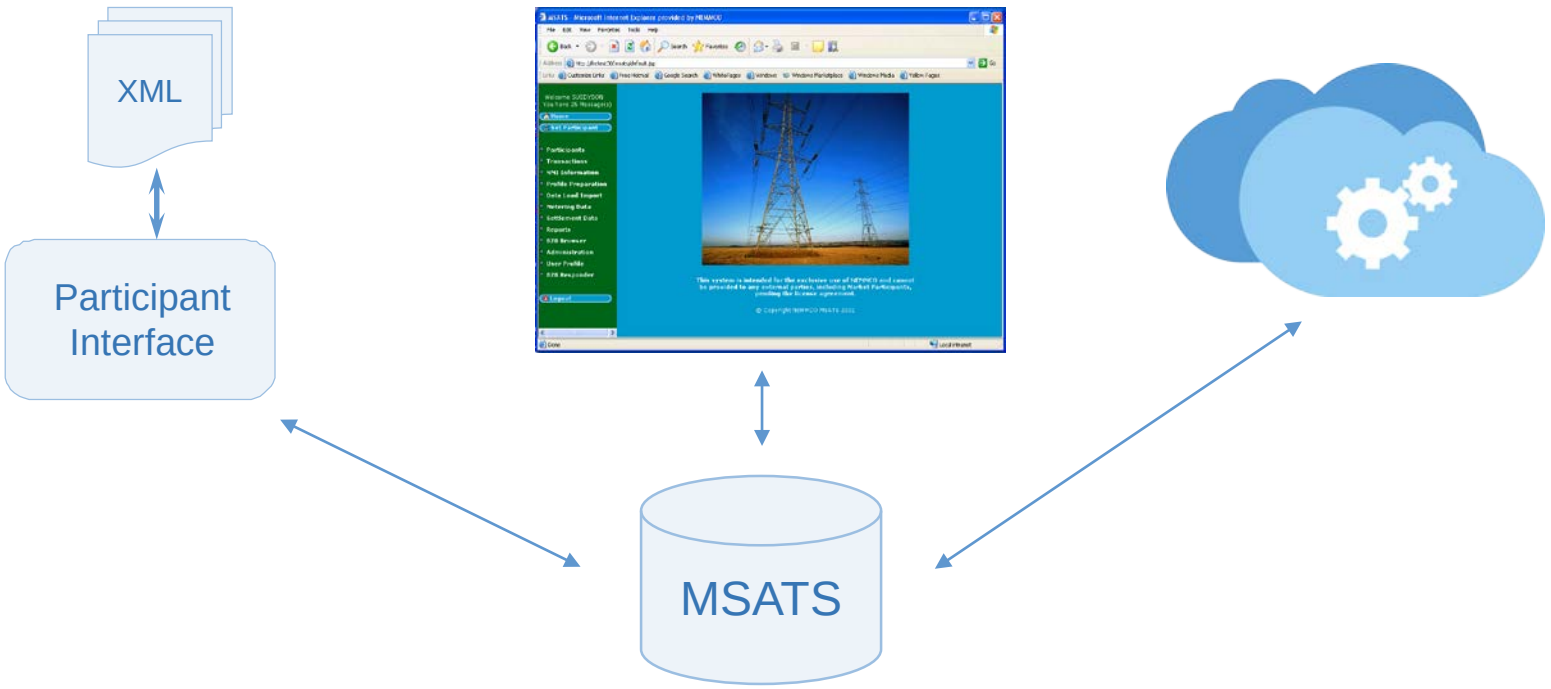
There are three ways to access MSATS:

- File transfer
- Web browser
- Web services (C4 and NMID only)

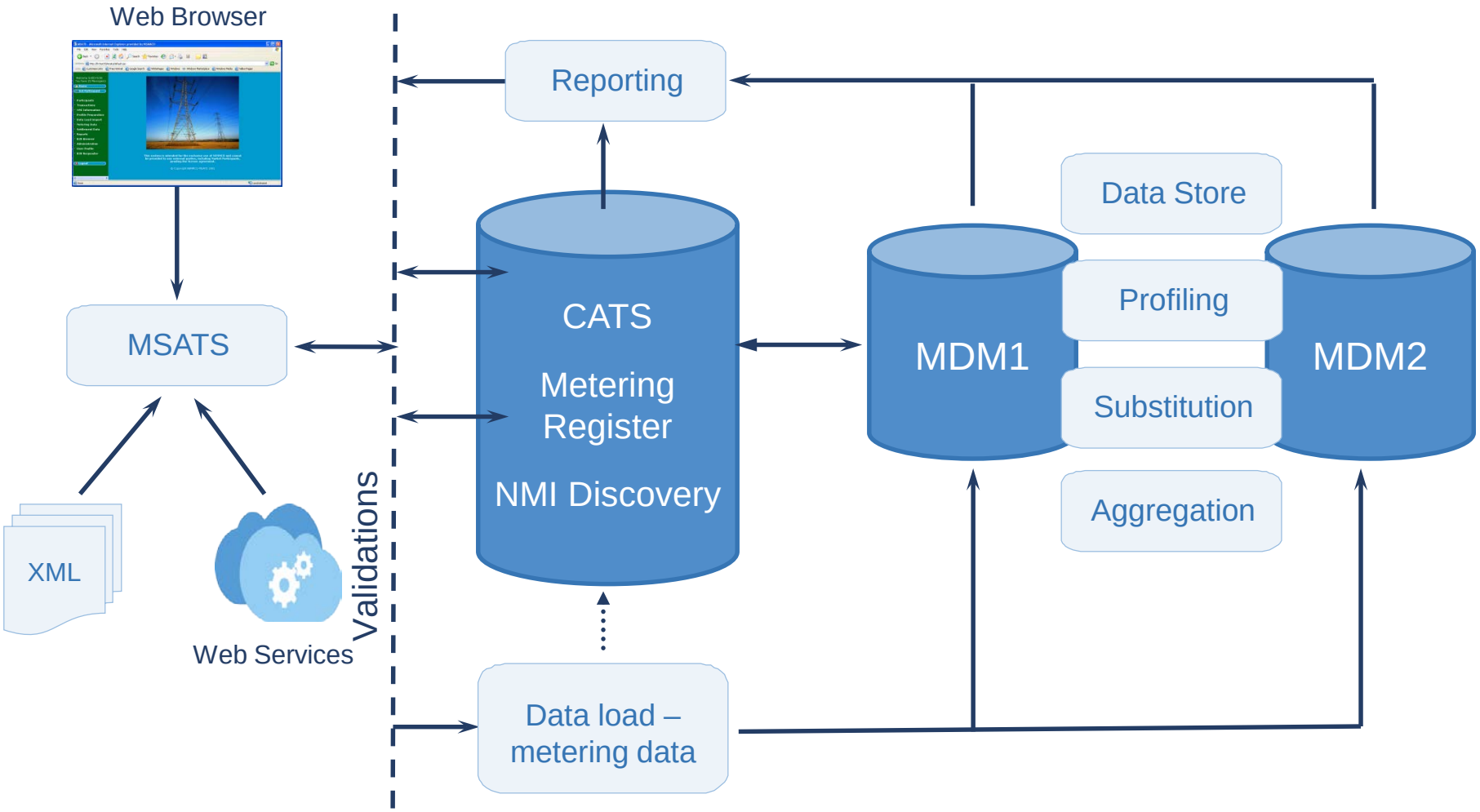
File Transfer

Web Browser

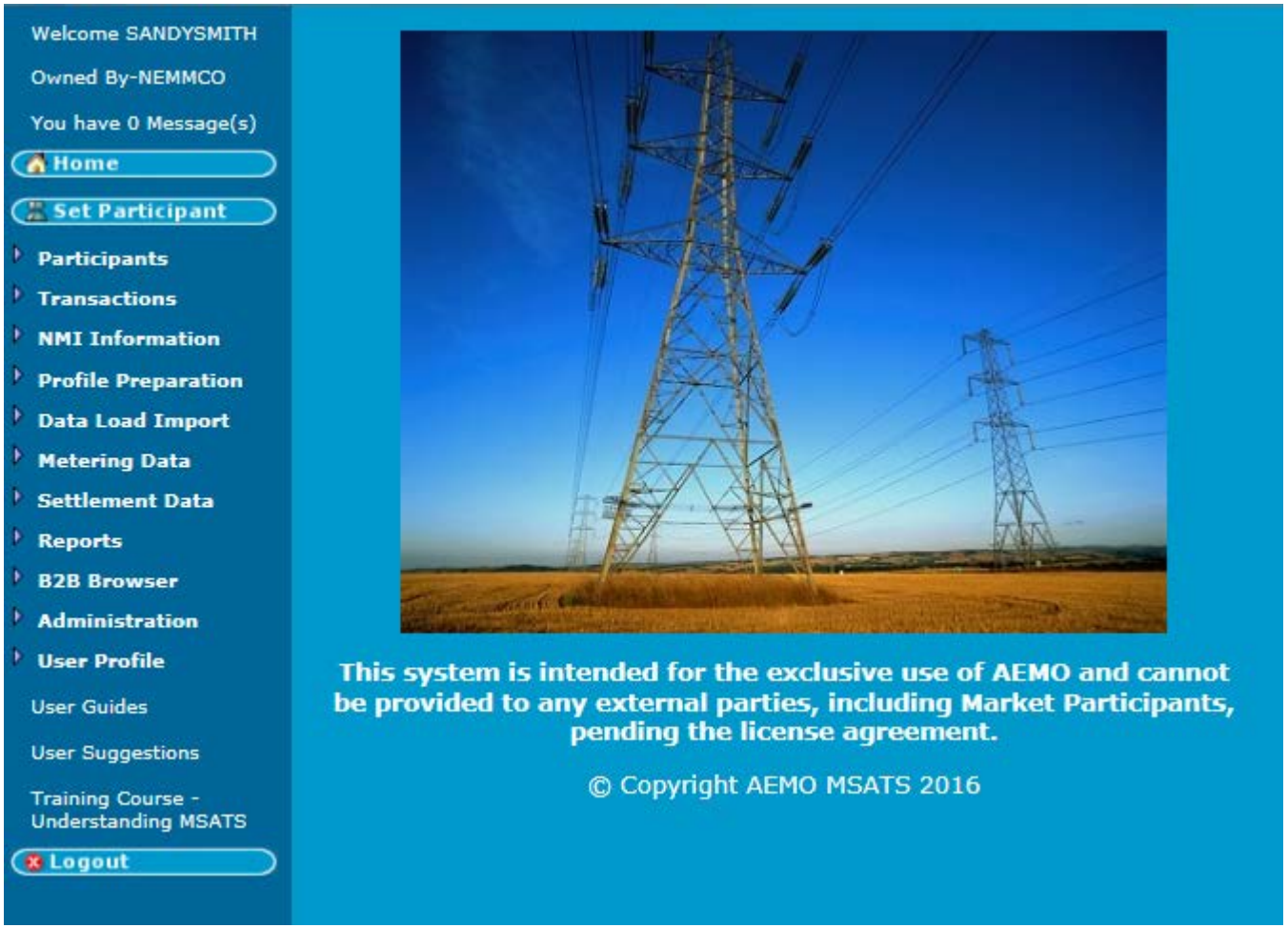
Web Services



MSATS - BACKEND PROCESSES

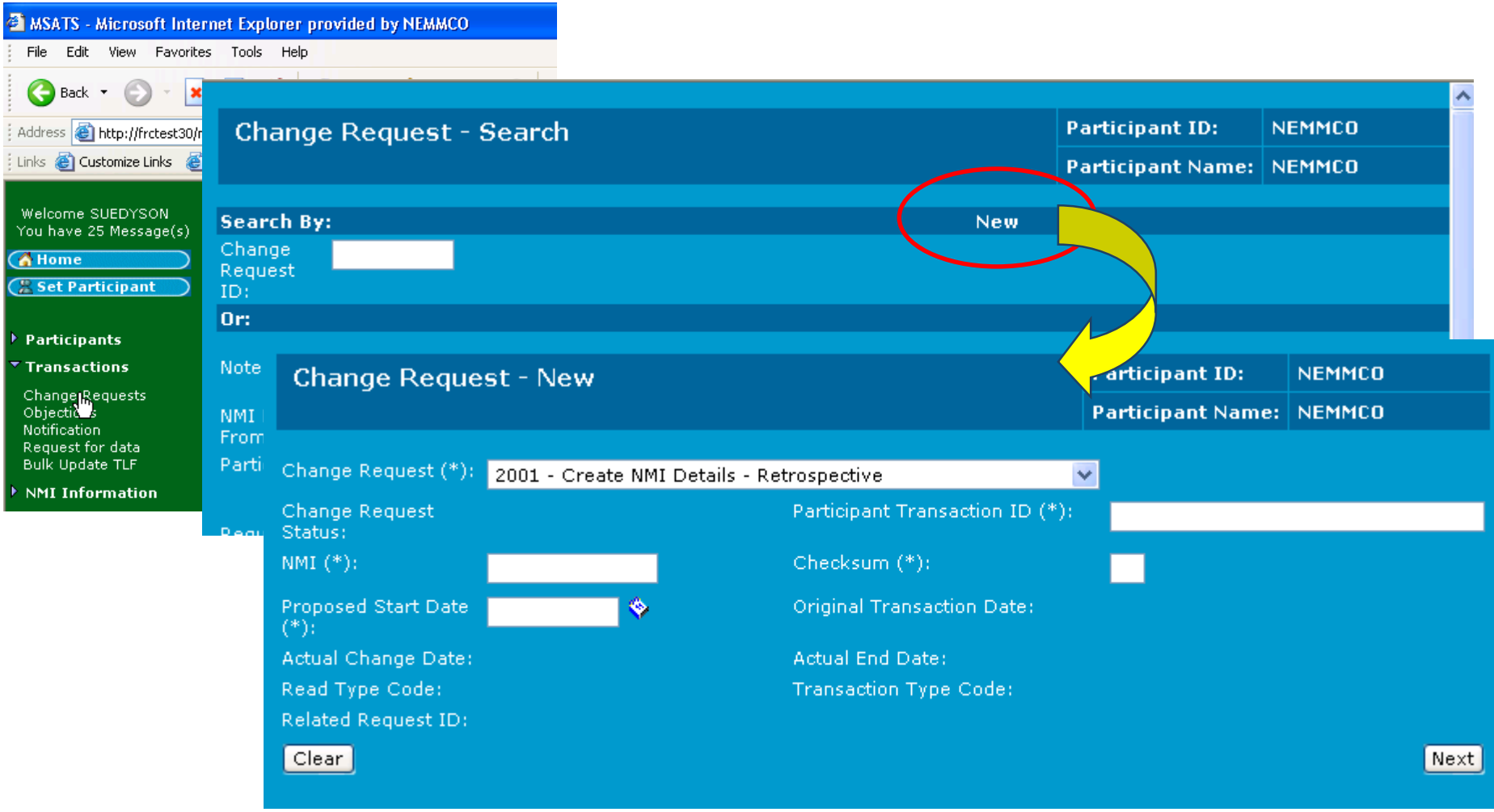


WHAT DOES MSATS LOOK LIKE?



MSATS Training Course – Understanding MSATS will be considered as part of Market Readiness Activities.

NEW CHANGE REQUEST - MSATS



MSATS FUNCTIONS: NOTIFICATION SCREEN

Notifications - View

Participant ID: [redacted]

Participant Name: [redacted]

Notification :

Notification Transaction ID:	299030709	Notification Date/Time:	11-Feb-2007 09:10:44
Role Being Notified:	FRMP	Role Status:	N

Objection:

Objection ID:		Objection Code:	
Objecting Participant:		Objection Description:	

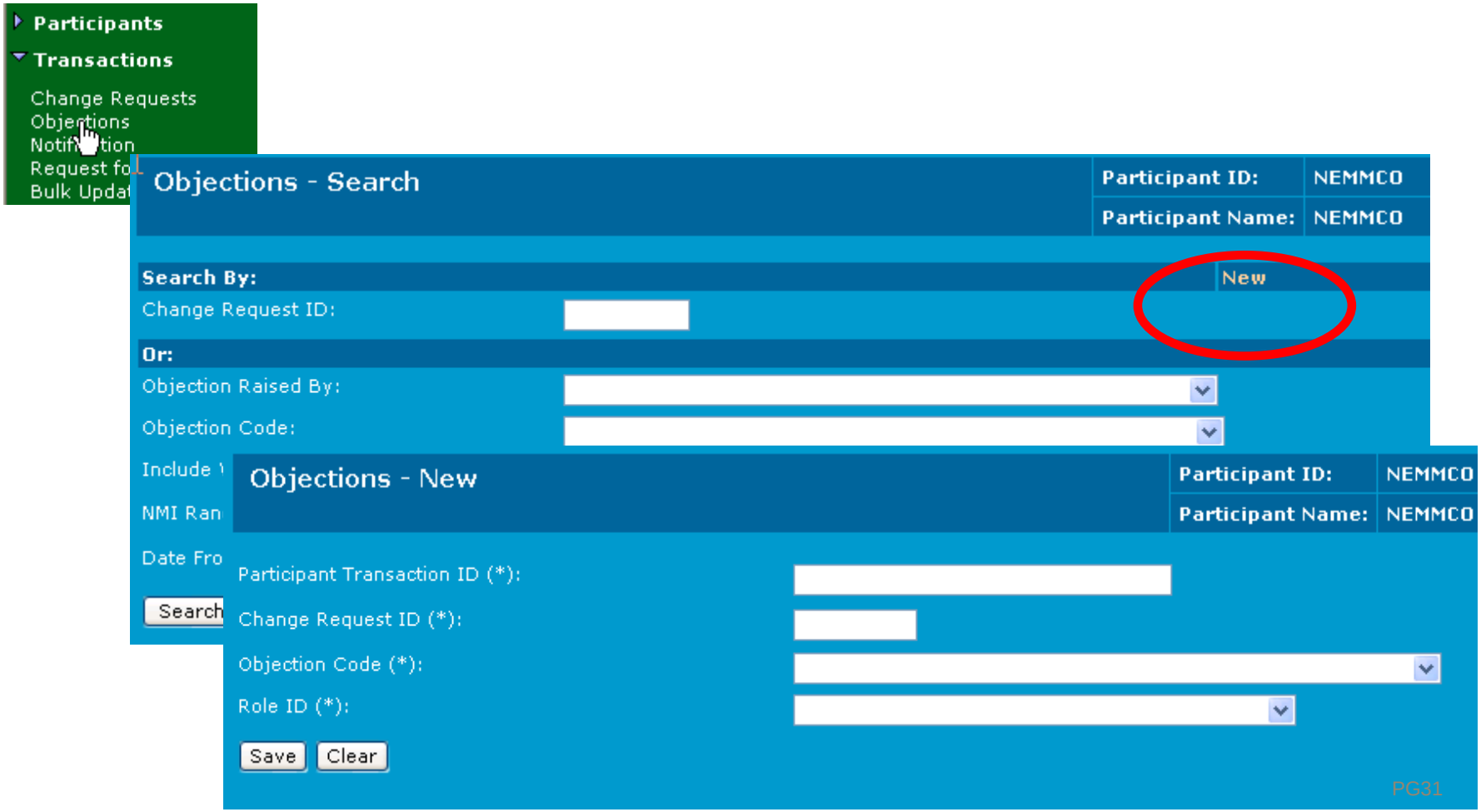
Change Request:

Change Request ID:	38935497	Change Reason Code:	1000
Change Request Status:	COM	Participant Transaction ID	[redacted]TNS-111258969
NMI:	4310033867	Checksum:	6
Proposed Start Date:	1-May-2007	Original Transaction Date:	
Actual Change Date:	2-May-2007	Actual End Date:	
Read Type Code:	RR	Trans Type Code:	CR

Change Request - Participant Role Relationships:

Role ID:	FRMP
Participant ID:	[redacted]
Role ID:	MDP
Participant ID:	[redacted]
Role ID:	RP
Participant ID:	[redacted]

MSATS FUNCTIONS: CREATE OBJECTION SCREEN



FILE TRANSFER & XML FILES

- Both NEM and WEM use XML file format
- WEM currently uses **WAEXML r17**
- NEM currently uses **aseXML r31 for B2M and r32 for B2B**
- Assumption is that WEM Participants will move to the latest **aseXML version available at the time**
- From 1st Dec 2017 a new aseXML version will be released to reflect changes to the NEM for Power Of Choice.
- aseXML files can either be:
  - Automated from participant's system to and from MSATS
  - Uploaded manually using the MSATS Browser

WHO CAN USE THE MSATS PORTAL

- AEMO participants, Ombudsman organisations and AEMO have access to the information in the system in accordance with clause 7.7(a) of the National Electricity Rules (NER).
- Participant Administrator (PA) authorise participant user access to their organisation's data in MSATS, see the Guide to User Rights Management.
- The initial PA is set up by the AEMO system administrator as part of the registration process.
- Where a participant user has user rights assigned by more than one participant organisation, the user interactively chooses the participant they represent, using the **Set Participant** option on the MSATS main menu.
- For more details regarding the registration process and access to AEMO's web portals, see the Guide to Information Systems.

ROLES

AGENDA

1. Role Codes
2. MSATS Procedures Overview Role Codes
3. Obligations by Role
    1. CATS FRMP Obligations in the NEM
    2. CATS LNSP Obligations in the NEM
    3. CATS MC Obligations in the NEM
    4. ROLR and NSP2 Obligations in the NEM
    5. CATS MDP Obligations in the NEM
    6. CATS MP Obligations in the NEM
    7. CATS AEMO Obligations

ROLE CODES

- As part of the accreditation process, participants are assigned relevant roles in which they are licenced to operate within the market.
- There are 10 Role Codes. They are used to define:
  - Which Change Requests a Participants can initiate;
  - Which Participants must supply data when it is needed to Complete a Change Request;
  - Which Participants receive a Change Request Status Notification;
  - Which Objection actions are Participant may perform; and
  - What information is accessible from the CATS Standing Data.

- The NMI Master Record will contain each ‘Current’ Role for each NMI.
- Proposed Role is referred to as a ‘New’ Role.

MSATS PROCEDURES OVERVIEW
ROLE CODES

Code	Description
FRMP	Financially Responsible Market Participant
LNSP	Local Network Service Provider or Embedded Network Manager for child connection points
LR	Local Retailer
MDP	Metering Data Provider – Category D
MPB	Metering Provider – Category B
MPC	Metering Data Provider – Category C
NEMM	National Electricity Market Operator
ROLR	Retailer of Last Resort (In WA, Supplier of Last Resort)
RP	Metering Coordinator
NSP2	Second Network Service Provider (For Wholesale NMIs only)

Per current WA build pack, only the Roles FRMP, LR, RoLR and LNSP are mentioned.

Assumption: Western Power will be assigned the equivalent roles in the NEM (e.g. LNSP, MDP, MPB, MPC, RP (MC). Obligations by Role will largely align with the NEM, however this cannot be confirmed until proposed draft rules are finalised.

OBLIGATIONS BY ROLE

- Each Transaction Type within MSATS has obligations at the Role level.

- Some examples of this would be:
  - Objections can only be raised by certain roles
  - Some reports may only be accessed by certain roles
  - Updates to standing data may only be performed by certain roles

OBLIGATIONS BY ROLE:
CATS FRMP OBLIGATIONS IN THE NEM

- **New FRMP's obligations include:**
  - Initiation of a Change Request for the transfer of a NMI.
  - Management of the transfer process.
  - Withdrawal of any Pending retail transfers.
  - Withdrawal of a Change Request if transfer cannot occur.

- **Current FRMP's obligations include:**
  - Responsibility for the NMI until the actual date of the NMI transfer.
  - Provision of the customer's Average Daily Load to the LNSP and the MDP for new connections.
  - Providing updates of the Average Daily Load.
  - Establishment and maintenance of the Customer Classification Code.

OBLIGATIONS BY ROLE:
CATS LNSP OBLIGATIONS IN THE NEM

- **New LNSP's obligations include:**
  - Initiation of a Create NMI Change Request in MSATS for each connection point supplied within its area.

- **Current LNSP's obligations include:**
  - Allocation of NMI and NMI Checksum.
  - Monitoring and updating customer's Average Daily Load.
  - Maintenance of:
    - Customer Threshold Code
    - Distribution Lost Factor Code
    - NMI Status Code
    - Customer Classification Code
  - Ensuring Network Tariff Code is correctly stored in MSATS.
  - Provision of NMI Standing Data (other than data available via NMI Discovery Search or MSATS C7 report).

OBLIGATIONS BY ROLE:
CATS MC OBLIGATIONS IN THE NEM

- **MC's obligations include:**
  - appointment of an MDP and an MP for a connection point.

- **Current MC is responsible for ensuring:**
  - CATS Standing Data (other than NMI data access information) is provided to the New FRMP where applicable.
  - Meter Register data regarding the metering installation that is not recorded in MSATS is provided to the LNSP.

- **New MC is responsible for ensuring:**
  - MP and MDP Roles nominated in a Change Request are correct.
  - metering installation meets all requirements.
  - the Meter Reading is available in relation to the Actual Change Date.
  - final Meter Reading is obtained where required.
  - metering data is provided to registered participants.
  - metering installation and the communication facilities to the metering. installation are in place and remain in place.

OBLIGATIONS BY ROLE:
ROLR AND NSP2 OBLIGATIONS IN THE NEM

- **Retailer of Last Resort:**
  - As the ROLR for a ROLR Event is determined and appointed by a Regulator, the ROLR Role in MSATS is for indicative purposes only.

- **Second Network Service Provider:**
  - The NSP2 must notify and request the relevant Participant (LNSP, MPB or MDP) to correct any data inconsistency that may exist in MSATS within two *business days* of becoming aware of the error.

OBLIGATIONS BY ROLE:
CATS MDP OBLIGATIONS IN THE NEM

- **Metering Data Provider's obligations include:**
  - Provision of metering data to new FRMP.
  - Provision of historical data to current FRMP.
  - Maintenance of NMI Data-stream status.

- **New Meter Data Provider's obligations include:**
  - Provision of the Actual Change Date associated with customer transfers.
  - Provision of Reads (actual/estimate where applicable according to jurisdictional requirements)
  - Register/calculate Datastream/s as per Service Level Procedure.
  - Provision of CATS Standing Data to the New FRMP.
  - Provision of NMI suffix information as applicable.
  - Entry and update of customer's Average Daily Load in MSATS.
  - Periodic re-calculation and update of the Average Daily Load for each active Datastream.
  - Update NSRD for metering installations manually read.

OBLIGATIONS BY ROLE:
CATS MP OBLIGATIONS IN THE NEM

- **Current Meter Provider's obligations include:**
  - Provision of Meter Register data regarding the *metering installation* that is not recorded in MSATS within two *business days* of request to LNSP
  - Provision of additional *metering installation* details to MSATS within two *business days* of receiving a Data Request.
  - Action request to correct erroneous details relating to the Meter Register and Register Identifier Status Code within five *business days* of notification.
  - Update MSATS with Meter Register data, as agreed with the MDP within five *business days* of performing a metering configuration change.
  - Update Meter Register Status Code to reflect the status of the *meter*.

- **New Meter Provider's obligations include:**
  - For *metering installation* types 1-4 and 4A, contact the MDP and agree the *NMI* suffix information prior to updating MSATS with all Meter Register data.
  - (b) Upon the installation or re-configuration of the *metering installation*, update MSATS with all Meter Register data, as agreed with the MDP within five *business days* of becoming the MPB.
  - (c) Provision to the MC and the Current LNSP any additional technical information regarding the *metering installation* within five *business days* of becoming the Current MPB

OBLIGATIONS BY ROLE:
CATS AEMO OBLIGATIONS

- **AEMO's current obligations in the NEM include:**
  - Invoicing the Current FRMP for a Tier 2 Site.
  - Maintenance of:
    - Distribution Loss Factor codes in MSATS.
    - codes and rules in MSATS.
    - TNI records in MSATS.
  - Management of customer transfers during a Retailer/Supplier of Last Resort event.
  - Raising appropriate objections where required.
  - Cancellation of any incomplete retail transfers after 7 months from the date of Initiation. Note: An automatic nightly MSATS process will Cancel / Withdraw dormant Change Requests that exceed 220 *days*.
  - There may be additional obligations imposed on AEMO for Western Australia. (e.g. block transfers for non contestable NMI's)

STANDING DATA

AGENDA

1. What is NMI Standing Data?
2. MSATS Standing Data Master Tables
3. MSATS Codes and Variances
4. MSATS Transaction Date Requirements
5. WA Standing Data not in MSATS
6. Standing Data Migration
7. Bulk Data Tool Automated Updated Fields

WHAT IS NMI STANDING DATA?

NMI Standing Data is the information related to the physical and virtual location and properties of a customer's connection point.

It is used:

- By retailers to obtain accurate customer details for acquisition activities
- By retailers for customer transfers to verify or determine customer transfer dates
- By the designated Retailer of Last Resort (RoLR) following a RoLR

Metering Settlement and Transfer Solution (MSATS) stores a NMI’s current (active) and historical (inactive) transactional records between market participants.

MSATS STANDING DATA MASTER TABLES

There are 5 Master MSATS Tables utilised for Standing Data transactions

Table Name	Example of contents
CATS_NMI_DATA	NMI, Address, TNI, DLF, Aggregate Flag, Jurisdiction, NMI Status, NMI Classification, Customer Classification, Customer Threshold.
CATS_NMI_PARTICIPANTS_RELATIONS	NMI, Participant ID, Role ID
CATS_NMI_DATA_STREAM	NMI, Profile Name, Metering Data Stream Suffix, ADL, Data Stream Type.
CATS_METER_REGISTER	NMI, Meter Serial Number, Next Scheduled Read Date, Meter Location, Meter Model, Meter Use, Meter Status.
CATS_REGISTER_IDENTIFIER	NMI, Meter Serial Number, Register ID, Network Tariff Code, Use Of Meter, Time of Day.

A NMI can only exist in MSATS if it has the following:

- At least one record in the CATS_NMI_Data table
- At a minimum 1 record for each of the mandatory participant roles in the CATS_NMI_Participant_Relations table

MSATS CODES

- AEMO is responsible for maintaining the NEM Codes and Rules in MSATS – Many which makes up part of a Standing Data response.

Change Reason Codes	Role Codes	Customer Classification Codes
Jurisdiction Codes	Timeframe Rules	Objection Codes
Metering Installation Type Codes	Read Type Codes	Customer Threshold Codes
NMI Status Codes	Network Tariff Code	NMI Classification Code
Meter Install Codes	Meter Read Type Codes	Data Stream Status Codes
Register Identifier Codes	Consumption Type	DataStream Type
Meter Status Code	NMI Class Code	Error Code
Change Request Status Notification Rules	NMI Discovery Search – NMI Search Rules	NMI Discovery Search – NMI Discovery Search – NMI Data Access Rules
Field Validation Rules	NMI & CATS Standing Data Access Rules	Initiation Rules

- If a change is made to a code and rule MSATS will notify Participants.

JURISDICTION CODES

- The Jurisdiction Codes identifies the Jurisdiction in which a NMI is situated.
- The Jurisdiction Code is used to apply Jurisdiction-based business rules.

Code	Description
ACT	Australian Capital Territory
ALL	All Jurisdictions
NEM	National Electricity Market
NSW	New South Wales
QLD	Queensland
TAS	Tasmania
SA	South Australia
VIC	Victoria
WA	Western Australia

Assumption: MSATS will be configured to include Western Australia

MARKET PARTICIPANT

The NER explains that a *Market Participant* is a person registered by *AEMO* as any one or more of the following categories:

(1) *Market Customer*

(1A) *Market Small Generation Aggregator*

(2) *Market Generator*

(3) *Market Network Service Provider*.

A *Market Participant* may only participate in the *market* in the category in which it has been registered.

Each Market Participant is provided with a unique Participant ID code.

Note: A Review of the NEM Registration Procedures will be undertaken when WA policy is certain to ascertain how the NEM Procedures will interlink with WA Registration requirements, it will also be listed as a Market Readiness Activity

PARTICIPANT ID CODE VARIANCES

Analysis has determined that there is a minor difference between the WA and MSATS Participant ID format length.

Source	Field Name	Format
MSATS	Party	Varchar2 (50)
WP	Party	Varchar2 (12)

Assumptions:

- WA Participant ID's will be included in MSATS
- As part of the Accreditation Process WA Participants will be assigned a Participant ID (applicable to their Role) using the NER format used in MSATS.

NMI CLASSIFICATION CODE

Code	Description	
EPROFILE	External profile shape	
GENERATR	Generator	
INTERCON	Interconnector	
LARGE (1)	Victoria: >=160 MWh NSW: >=160 MWh ACT: >= 160 MWh QLD: >=100 MWh	SA: >=160 MWh TAS: >=150 MWh WA: >160 MWh
SAMPLE	Sample Meter	
SMALL	Victoria: <160 MWh NSW: <160 MWh ACT: < 160 MWh QLD: < 100 MWh	SA: <160 MWh TAS: <150 MWh WA: ≤160 MWh
WHOLESAL	Wholesale Transmission Node Identifier	

NMI CLASSIFICATION CODE CONT

A NMI Classification Code:

- Identifies the nature of the flow of electricity through a connection point.
- Based on the total annual load of the NMI.
- Determines which Change Reason Codes, application timeframes and Objection Rules can be used.
- AEMO is responsible for maintaining MSATS codes and notifying participants of any changes.
- WA currently determines NMI classification as:
  - LARGE > 160MWh
  - SMALL ≤ 160MWh

Assumption: WA will follow MSATS Classification codes

NMI STATUS CODE

Each NMI has a NMI Status Code to define the state of the NMI, and what actions may be performed.

- Used to determine if a NMI can be used for a retail transfer.
- X' is the only status that does not allow NMI transfers between retailers.

Code	Name of Code	Description
A	Active NMI	Applies when a NMI is energised
D	Not Energised NMI	Applies when a NMI exists in MSATS and the connection point is de-energised
X	Extinct NMI	Applies when the *network connection* has been permanently removed from the *connection point*. Under this condition the existing *NMI* will not be reallocated to any other *connection point* in the future. A *NMI* with this status can never be transferred.
G	Greenfield site NMI	Applies to a Site that has never been energised. The connection point may require further Site works to be undertaken and will also require energisation. Once the NMI Status Code is changed from 'G', it cannot revert to 'G'.
N	Off Market Child NMI	Applies when a child connection point is no longer settled in the NEM.

Assumption: New NMI Status Code - N is not applicable for WA as Embedded Networks are not currently in scope.

CUSTOMER CLASSIFICATION CODES

The MSATS Customer Classification Code was introduced as part of NECF (National Energy Customer Framework) in 2012.

NECF Customer Classification Codes are:

- BUSINESS
- RESIDENTIAL

- Relates to an End User, or previous End User, at a single *connection point* to which the *NMI* applies.

- Is maintained and provided by the FRMP and a mandatory field in MSATS

Rules that govern the usage of this code are within the NERR, Part 1, Division 3

CUSTOMER CLASSIFICATION CODE VARIANCES

Analysis between WA and MSATS Customer Classification Codes have found the following variances:

Source	Table Field Name	Format	Content
MSATS	Customer Classification	Varchar (500)	Residential, Business
Western Power	Customer Class	Varchar (11)	Industrial, Commercial, Domestic, Farm, Lighting

Assumptions:

- The NEM Customer Classification codes in MSATS (in field name, format and content) will be utilised for WA.
- Currently WA appears to have a classification ‘Street Lighting’ - MSATS does not maintain a classification for Street Lighting data, it is identified through metering installation type code UMCP unmetered supply.
- Street lighting – There is currently a csv file sent from WP to Synergy with billing details via ftp process and this will continue. There is no NEM equivalent

CUSTOMER THRESHOLD CODES

Analysis has shown that WA does not use Customer Threshold Codes

Customer Threshold Code:

- Code used to indicate the level of an End User's electricity consumption at a single connection point
- Mandatory for all *NMIs* with a NMI Status Code of 'A' or 'D', and a Customer Classification Code of 'BUSINES

Name of Code	Description
Low	Consumption is less than the 'lower consumption threshold' as defined in the National Energy Retail Regulations
Medium	Consumption is equal to or greater than the 'lower consumption threshold', but less than the 'upper consumption threshold', as defined in the National Energy Retail Regulations
High	Consumption is equal to or greater than the 'upper consumption threshold' as defined in the National Energy Retail Regulations

Assumption: The NEM Customer Threshold codes (including MSATS in field name, format and content) will be available for use in WA

METERING INSTALLATION TYPE CODES

Metering Installation Type Codes:

- Identify the type of metering installation as specified in the NER.
- Indicate whether the Actual Change Date must be input by a Participant other than the initiator of the Change Request.
  - If the Manually Read Flag is set to Y and the Change Request Field Validation Rules have been set up to request a date, a request will be sent to the nominated Participant to provide it.

Name of Code	Description	Manually Read flag	IN WA
BASIC	Basic Consumption Meter – Type 6	Y	Y
COMMS1	Interval Meter with communications – Type 1	Y	Y
COMMS2	Interval Meter with communications – Type 2	Y	Y
COMMS3	Interval Meter with communications – Type 3	Y	Y
COMMS4	Interval Meter with communications – Type 4	Y	Y

- As part of POC implementation COMMS4 is used for a large customer with type 4 metering installations and for small customer type 4 metering installation installed before 1 December 2017

METERING INSTALLATION TYPE CODES (CONT.)

Name of Code	Description	Manually Read flag	IN WA
MRIM	Manually Read Interval Meter – Type 5	Y	Y
UMCP	Unmetered Supply – Type 7	N	N
PROF	For Profile Setup	N	N
SAMPLE	Sample Meter	Y	N
COMMS4D	Whole current metering installation that meets the minimum services specifications	Y	N
COMMS4C	CT connected metering installation that meets the minimum services specifications	Y	N
MRAM	Small customer metering installation – Type 4A	Y	N
VICAMI	A relevant metering installation as defined in clause 9.9C of the NER.	Y	N

Assumptions:

- The same codes will be available for use for WA where applicable (e.g. VICAMI not applicable and others introduced as part of POC not applicable until Meter Competition is introduced)
- Based on results of analysis the table highlights Meter Installation Types not used in WA currently (N)

METER REGISTER STATUS CODES

- The Meter Register Status Codes denotes the status of a meter in MSATS.

Code	Name of Code	Description
C	Current	meter at the NMI is current.
R	Removed	meter at the NMI is removed.
D	Remotely Disconnected	meter at the NMI is remotely disconnected.

- As part of the POC implementation due December 2017 a new Meter Register Status Code of D (Remotely Disconnected) will be introduced.

Assumption:

- WA will utilise the NEM Meter Register Status codes as the NEM

REGISTER IDENTIFIER CODES

- The Register Identifier Status Code indicates if a Meter Register is active

Code	Name of Code	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.

- Analysis has shown that although WA uses same codes there is a slight variance in terminology where 'Register Status Code' is used.

Assumption: WA will follow the Register Identifier Codes naming convention.

DATASTREAM TYPE CODES

A Datastream Type Code is used to indicate the type of data that the Datastream will report - includes interval and basic.

NEM Codes:

Code	Description
I	Interval
C	Basic
P	Profile Data
1	Non Market Active Import
2	Non-Market Active
3	Non Market Reactive Import
4	Non-Market Reactive

DATASTREAM TYPE VARIANCES

Analysis has highlighted variances between WA and MSATS Datastream Types:

Source	Name of Code	Format	Code
MSATS	DataStream Type	Char (1)	I, C, P, 1, 2, 3
Western Power	DataStream Type	Varchar2 (12)	Interval, Non Interval, Profile, Consumption

- MSATS requires:
  - Single character format
  - Char format rather than VarChar2

- Valid MSATS Datastream Type codes are:
  - I – Interval
  - C – Basic
  - P – Profile Data
  - 1 – Non-Market Active Import
  - 2 – Non-Market Active
  - 3 – Non-Market Reactive Import
  - 4 – Non-Market Reactive

Assumptions: WA DataStream Type will match the NEM MSATS format and content.

WP will need to convert their current NMI Data records to match the same datatypes utilised in MSATS when providing Standing Data to AEMO via Bulk Data Tool.

DATASTREAM STATUS CODES

Datastream Status Codes are:

- Used to determine whether a Datastream is to be used in the settlements process either because the NMI is Tier 2
- Or where metering data is required from a NMI as part of the Load Profile creation process

Code	Name of Code	Description
A	Active NMI Datastream	Applies when an NMI Datastream is to be used in settlements.
I	Inactive NMI Datastream	Applies when the NMI Datastream is not to be used in settlements.

Assumption: WA currently uses the same Datastream Status Codes

MSATS TRANSACTION DATE REQUIREMENTS

MSATS Standing Data requires all records to have valid Start Dates to maintain correct historical data

- A Start Date is a parameter date of when a particular standing data record is applicable

Assumptions:

- WA currently stores Start Date information
- This field may be known as ‘Effective Date’ in WA current terminology.

Technical note:

This date needs to follow the concept where the earliest Start Date of the child tables (Meters, Register, Data Streams) must be on or greater than the earliest date of their parent record (Data Stream to parent NMI, Meter to Parent NMI, Register to parent Meter)

WA STANDING DATA NOT IN MSATS

- There are 18 WA Standing Data fields per our analysis that are not in MSATS.
- This information is not required for Settlement and Transfer purposes, hence not stored in MSATS.
- This data will not need to be provided as part of the Bulk Data Tool data migration as doing so will invalidate the upload and be rejected by MSATS
- If there is a requirement for this data to be maintained, WP in their role as Network Operator will need to consider maintaining it in their operating system and some fields may rather be exchanged via B2B Transactions as information (e.g. reading instructions)

WA STANDING DATA NOT IN MSATS (CONT.)

Customer Funded Meter	Meter Requirement for Transfer
Direction Indicator	Party Description (Participant)
Voltage	Installation Type Code Effective Date
Distance from Substation	Distance from Substation Effective Date
Pole Number	Network Tariff Code Effective Date
Key Code	Status Effective Date
Location Number	Transmission Node Identifier Effective Date
Use Effective Date	Distribution Less Factor Code Effective Date

Assumptions:

- Effective dates for the above are not required in MSATS as CATS Transactions provides completion dates (e.g. change in network tariff, DLF) Networks can continue to also store this information in their systems
- Network related functions relating to e.g. Meter Reading (e.g. Location of Pole Number, Key Code, Location Number) in the NEM is stored in Networks Systems and not as standing data in MSATS. Some of this information could be exchanged as free text format via B2B transaction if required. (e.g. Meter Requirement for Transfer, Customer Funded Meter) if required for Service Requests.
- Note, in the NEM Network Billing is managed directly between Networks and Retailers and there is currently no national standard or B2B transactions. If some of this information is required for Network Billing purposes it is assumed that the network will be able to continue to exchange this commercially. (e.g. distance from sub-station?)

STANDING DATA MIGRATION

Data migration of Western Power's Standing Data will occur via the MSATS Bulk Data Tool

Known Western Power and MSATS Standing Data anomalies include:

- MSATS Standing Data fields which are not available in WP Standing Data
- Formatting differences
- Differences in field naming conventions
- Some WP data fields cannot be migrated to MSATS

AEMO will require a minimum of 2 years of historical data for Settlement and RCM purposes.

BULK DATA TOOL AUTOMATIC UPDATED FIELDS

The AEMO Bulk Data Tool (BDT) will automatically update the following mandatory transactional fields:

- ENDDATE - set to default date of 31-12-9999
- MAINTACTFLG – set to A
- MAINTCREATEDT - sysdate
- MAINTRECLOCK – set to 0
- MAINTUPDTDT – set to default date of 31-12-9999
- MAINTUPDTID – automatic ID allocated

BULK DATA TOOL OVERVIEW

LOADING STANDING DATA INTO MSATS VIA AEMO'S BULK DATA TOOL (BDT)

AGENDA SLIDE

1. Data Migration Plan
2. What is the Bulk Data Tool (BDT)
3. WEM Standing Data
4. Bulk Data Tool (BDT)
5. BDT Operation
6. BDT Load Process
7. Validation Event Codes
8. Strategic Use of BDT
9. Resolution of Data Issues
10. AEMO Support Info
11. Questions

DATA MIGRATION PLAN

- AEMO will develop a Data Migration Plan as part of Market Readiness Activities which will include: Loading of Standing Data via AEMO's Bulk Data Tool and historic Meter Data via existing meter data loading process (i.e. MDP provides metering data to MSATS in MDFF format)
- The purpose is to ensure all Market Participants, who are directly impacted by the Market Reform, have full understanding of the changes and related impacts, and have made the necessary changes to their systems, process, and people to adequately support the launch of the New Market arrangements.

WHAT IS THE BULK DATA TOOL (BDT)

- **Populate NMI standing data into MSATS in bulk**

- The BDT directly inserts the standing data into the MSATS database with no Change Requests or Notifications generated

WEM Standing Data needs to be loaded in MSATS

- Western Power will provide AEMO with the Standing Data for all required NMI's in the WEM.
- Current Standing Data in the WEM may be different to Standing Data in the NEM.
- Where there is missing, erroneous or differently-formatted data, Western Power will work with Participants to obtain/correct/re-format the data where required.

WEM STANDING DATA (CONT.)

Some potential differences between NEM and WEM Standing Data:

- Fields that exist in NEM but don't exist in WEM
- Fields that are mandatory in the NEM but are Optional in WEM.
- Fields that are formatted differently in NEM vs WEM

BULK DATA TOOL (BDT)

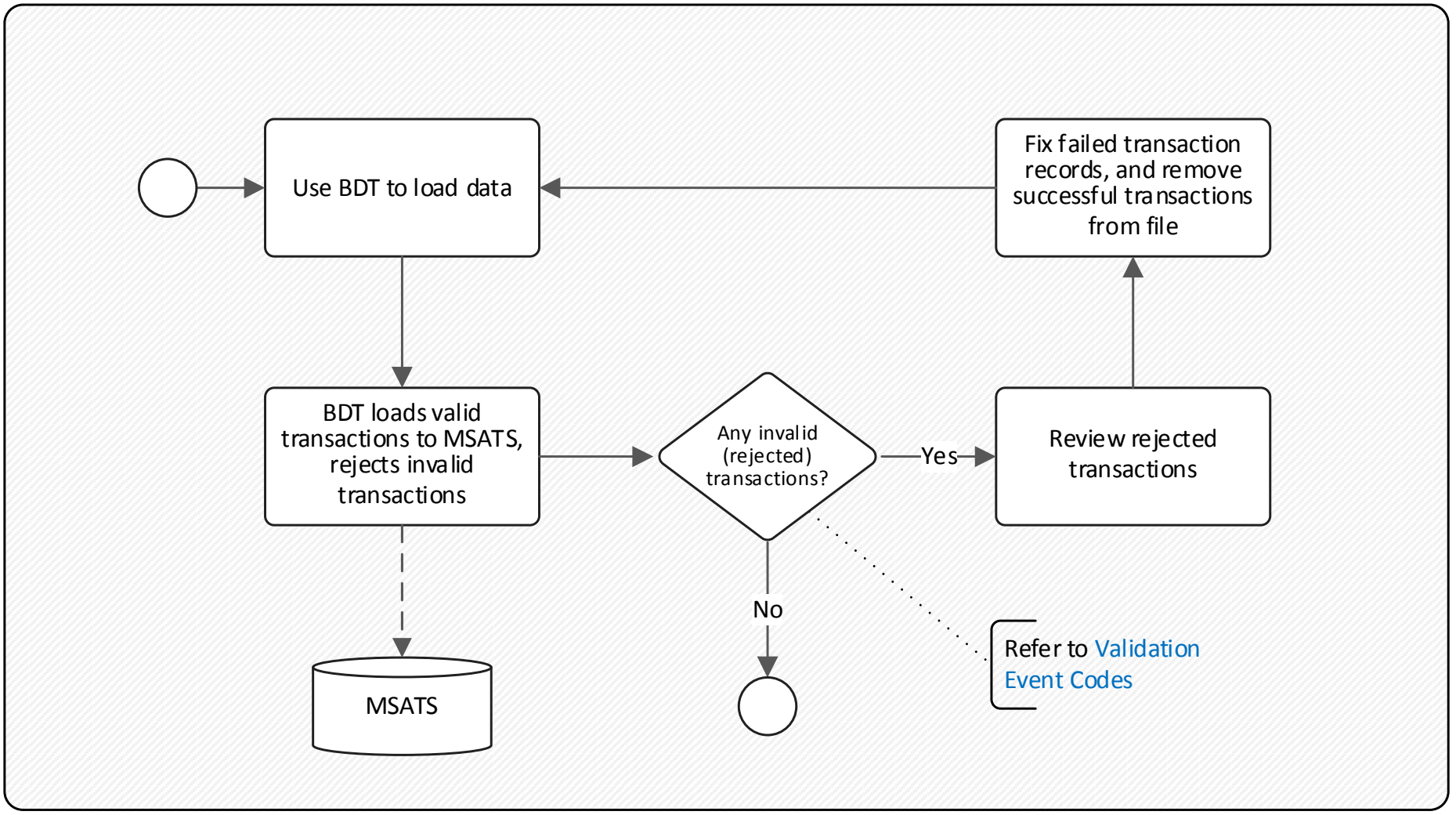
Once Standing data transactional records are prepared, Western Power will use the Bulk Data Tool (BDT) to load the data into MSATS.

- The BDT is used to upload multiple NMI standing data records into the MSATS database within one transactional file without the need for Change Requests
- This process will enable WP to upload historical Standing Data into the MSATS Database efficiently
- The BDT utilises aseXML formatted files for this process

BULK DATA TOOL (BDT) (CONT.)

- Will enable Western Power the opportunity to test use of the BDT in preparation for go live.
- Usage of BDT into pre-production environment will trigger validations and generate event codes.
- Event codes can be used to determine if further action is needed to prepare dataset for loading into production environment at Go Live.

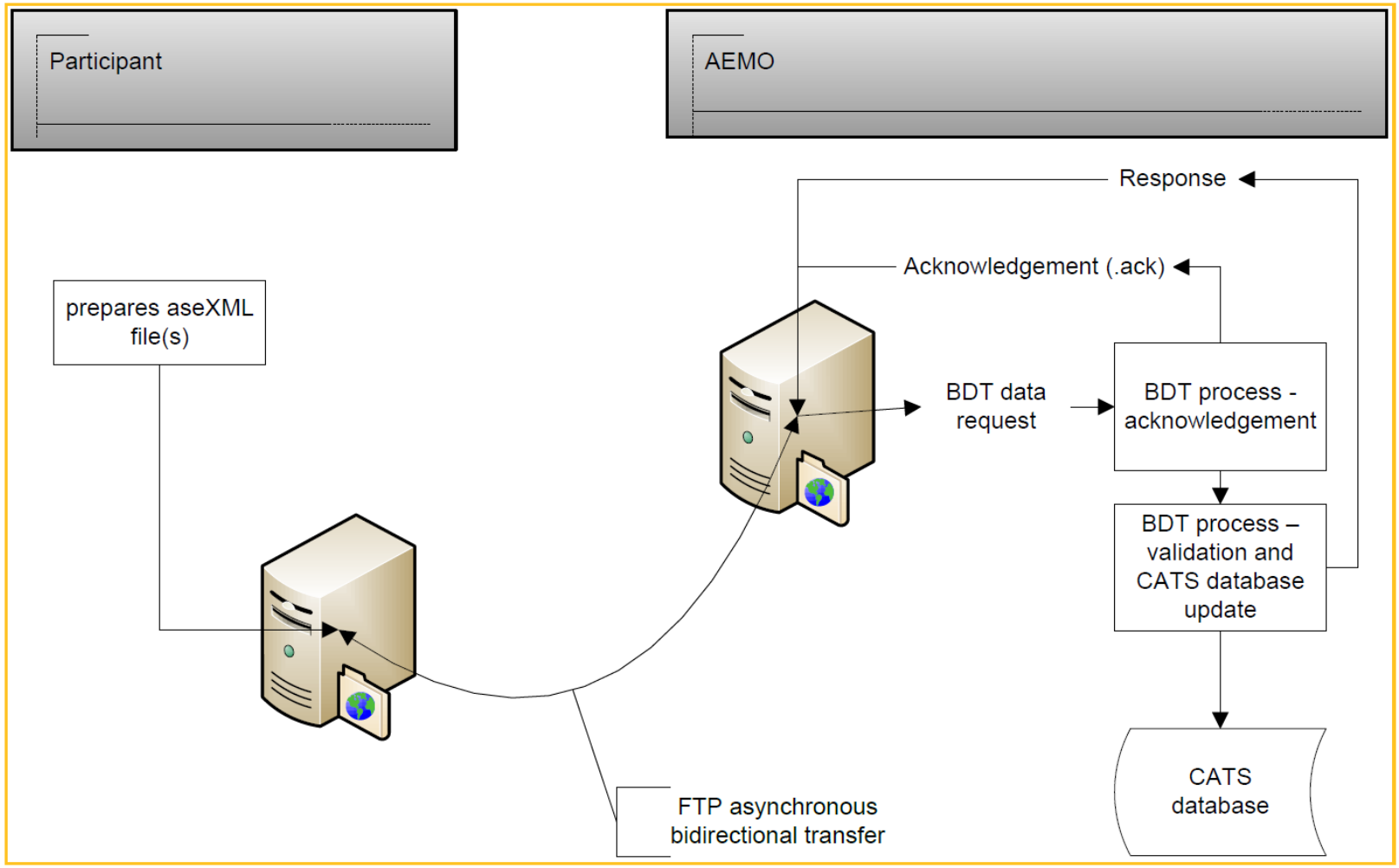
BDT OPERATION



OVERVIEW – HOW TO USE THE BDT

- Using the Bulk Data Tool (BDT):
  - Participant submits the BDT file to MSATS via the file share
  - BDT Inserts NMI Standing Data into MSATS
  - BDT delivers a response file back to the participant via the file share
  - Removes the need for change requests (CR)
  - Avoids issue of notifications

BDT LOAD PROCESS



BDT LOAD PROCESS (CONT.)

- Place a .ZIP file in the inbox for MSATS. Each .ZIP file contains one file with one CATSBulkDataRequest transaction (transactions can contain multiple NMIs, typically up to 10,000 NMIs).
- The initial processing validates the aseXML file for validity against the schema.
- The BDT process puts the acknowledgement files in the outbox for the submitting participant.

BDT LOAD PROCESS (CONT.)

- Once processed, the response file appears in the outbox, containing a CATSBulkDataResponse transaction in response to each input transaction. Each NMI is accepted or rejected independently of other NMIs in the transaction.
- Files go through the normal MSATS acknowledgement process, but without archiving by AEMO in the visible archive files on the file server.

VALIDATION EVENT CODES

For every attempted record load, an event code is used to indicate the outcome.

Some example Event Codes are:

Code	Description
0	OK
5009	No MeterRegister Records
5011	Invalid Jurisdiction Code
5014	NMI Checksum Invalid
5015	Pending Change Request
5022	Required Field not Present
5086	Field value must be comprised only of alphabetic characters
5087	Field value must be comprised only of alphanumeric characters

*Full list can be found in the Technical Guide to Bulk Data Tool in MSATS

STRATEGIC USE OF BDT

Can be actioned today:

Load:

Dummy Data

Into:

Pre-production

- Test BDT
- Test data structures
- Discover potential data issues

Can be actioned when legislatively permitted:

Load:

Real Data

Into:

Pre-Production

- Test with real data
- Discover real data issues with time to resolve
- Rehearse Go Live load

Can be actioned at Go Live:

Load:

Real Data

Into:

Production

- Bulk load WEM standing data to MSATS

RESOLUTION OF DATA ISSUES

Assumptions:

- Western Power will be responsible for resolving data issues as part of the Bulk Data Tool load process
- Western Power will work with Participants where needed to:
  - obtain missing data, or
  - replace erroneous data

AEMO SUPPORT INFO

- Direct support will be provided
- Technical Guide to Bulk Data Tool
  - Available on AEMO's website: http://www.aemo.com.au/-/media/Files/PDF/06400087pdf.pdf
  - Alternatively, please request a copy from an AEMO representative

QUESTIONS

For further questions and feedback: WAMRPRetail@aemo.com.au

NMI DISCOVERY

AGENDA SLIDE

1. What is MSATS NMI Discovery?
2. MSATS NMI Discovery Transaction Code Variances
3. MSATS NMI Discovery Types
4. MSATS NMI Discovery Type 1
5. MSATS NMI Discovery Type 2
6. MSATS NMI Discovery Type 3
7. MSATS NMI Discovery Response Error Codes
8. Response Error Code Variances
9. UMI vs NMI
10. Questions

WHAT IS MSATS NMI DISCOVERY?

MSATS NMI Discovery allows:

- Any financially responsible Market Participant (FRMP) can request relevant information about a prospective customer
- A Network Service Provider (LNSP) to obtain information about customers that falls under their NMI jurisdiction

A NMI Discovery does not provide consumption data information.

NMI Discovery occurs via:

- Web browser
- Bulk requests via aseXML
- The MSATS web interface Web Service

Analysis has shown that WA use waeXML format

Assumption: WA will adopt aseXML format guidelines

MSATS NMI DISCOVERY TRANSACTION CODE VARIANCES

MSATS uses the following codes for NMI Discovery:

- NMID is the transaction code used for a NMI Discovery request.
- NMIR is the transaction code used for a NMI Discovery response and is initiated by MSATS.

WP currently only use NMID as a transaction code for NMI Data request and response purposes.

Assumption: WA will adopt the NEM MSATS codes for NMI Discovery requests and responses.

MSATS NMI DISCOVERY TYPES

A CATS participant can use 3 types of NMI Discovery requests (NMID):

- NMI Discovery 1: used to identify the NMI characters assigned to an end users connection point
- NMI Discovery 2: used to identify NMI standing data assigned to an end user's connection point.
- NMI Discovery 3: used by a Retailer to:
  - aid in error correction transfers,
  - seek previous FRMP details to win back a NMI won in error,
  - where they are not the current FRMP and received a request for end user site abolishment,
  - identify and seek agreement for retrospective transfers to align with a previous meter reading date.

Note: WA and NEM Explicit informed consent from the end user is not required.

MSATS NMI DISCOVERY TYPE 1 REQUEST

MSATS NMI Discovery Type 1:

- Who can request? The NMI's assigned LNSP and any accredited FRMP

- The available search options are:
  1. Delivery Point Identifier (DPI)
  2. Meter serial number
  3. Address (state and locality or postcode must be provided)

Analysis has shown that WA only requires meter number and or street address and does not allow DPI.

Assumption: WA will adopt NEM MSATS request variable search requirements.

MSATS NMI DISCOVERY TYPE 1 RESTRICTIONS

For a MSATS Discovery Type 1 the LNSP is bound by the following restrictions:

- A LNSP can only carry out a NMI Discovery Type 1 if they are assigned the role as the current LNSP for the NMI

- A LNSP can only perform a Type1 request for the purpose of
    1. Responding to a retailer request for assistance in the resolution of a NMI issue or
    2. To perform a quality check on MSATS system data

MSATS NMI DISCOVERY TYPE 1 RESPONSE

NMI Discovery Type 1 Response returns the following:

NMI	Feeder Class
NMI Checksum	Customer Classification Code
LNSP	Customer Threshold Code
Address	Embedded Network Parent
DPID Number	Embedded Network Child

A maximum of 99 records will be returned if there is a multiple match

If there are > 99 records the NMI Discovery Response will provide a 1410 notification code highlighting that more records are available.

Assumption: WA will follow NEM NMI Discovery response codes

MSATS NMI DISCOVERY TYPE 2 REQUEST

NMI Discovery Type 2

Who can request?

- Only the current LNSP of the NMI and FRMP

What is required?

1. NMI and
2. NMI Checksum

MSATS NMI DISCOVERY TYPE 2 RESTRICTIONS

For a MSATS Discovery Type 2 the LNSP and ENM is bound by the following restrictions:

An LNSP must:

- Only perform a NMI Discovery Search 2 activity within their jurisdiction for the purpose of responding to a request from a retailer to assist in the resolution of a NMI Standing Data problem or
- to perform quality checks of data within MSATS within their jurisdictional boundaries.

A Embedded Network Manager (ENM) must:

- Only carry out a NMI Discovery Search 2 on a NMI where they are the Current ENM.
- This will relate to Child connection points

Assumption: WA Embedded Networks are not in scope and will not be discoverable in MSATS.

MSATS NMI DISCOVERY TYPE 2 RESPONSE

NMI Discovery 2 Standing Data Response:

NMI	NMI Checksum	NMI Classification Code
NMI Status Code	DLF Code	DataStream
DataStream Status Code	Embedded Network Code	Jurisdiction Code
LNSP	Meter Serial ID	Meter Register Status Code
Metering Installation Type Code	Network Tariff Code	NSRD
Profile Name	Register Identifier	Register Identifier Status Code
Address	Time Of Day	TNI Code
Unit of Measure		

Assumptions:

WA will adopt the MSATS NMID response as defined in the NEM Rules chapter 7.7 and the AEMO NMI Standing Data Schedule as outlined in Chapter 3 of the NER . Currently WA provides all standing data in the response for NMID.

Embedded Networks are currently not in scope.

MSATS NMI DISCOVERY TYPE 3 REQUEST

NMI Discovery Type 3

Who can request?

Any FRMP

What is required?

1. NMI and
2. NMI Checksum

MSATS NMI DISCOVERY TYPE 3 RESTRICTIONS

A MSATS NMI Discovery Type 3 request can only be performed by an FRMP for the following reasons:

- To progress error correction transfers
- When seeking agreement for a retrospective transfer to align with a previous meter read date
- When requirement for a previous FRMP to win back a NMI that was won in error
- When they are not the FRMP and have a customer request for site abolishment.

Analysis has shown that WA does not currently have NMI Discovery Type 3.

Assumption: WA will adopt NEM MSATS NMI Discovery Type 3 processes.

MSATS NMI DISCOVERY TYPE 3 RESPONSE

The NMI Discovery Type 3 response is dependant on what is provided as the NMI Discovery Type 3 Request Code:

NMI Discovery Request Reason Code	Description	NMID Standing Data Response
MCR	Missed CR1500 Error	Current FRMP
ITD	Incorrect Transfer Date Error	FRMP and End Date of most recent previous FRMP record
NNS	New NMI Setup Error	Current FRMP
TRM	Transfer Missed Error	Current FRMP
TRI	Transferred In Error	FRMP and Start Date of current FRMP record
TRI	Transferred In Error	FRMP and End Date of most recent previous FRMP record
OTR	Other Transfer Error	Current FRMP
SAB	Site Abolishment	FRMP and Start Date of current FRMP record

MSATS NMI DISCOVERY RESPONSE ERROR CODES

A MSATS NMI Discovery request will return a success or error code response

Error Code	Error Description	Error Code	Error Description
1402	Invalid Jurisdiction Code	1411	Locality or Postcode required
1403	No Access Rule for Jurisdiction Code	1412	State required
1404	No Data Found	1450	NMI Standing Data: Successful
1405	Other Fatal Error	1451	NMI Standing Data: Checksum wrong
1406	Error creating XML Clob Header Record	1452	NMI Standing Data: No Access Rule
1407	Error creating XML Clob Record	1453	NMI Standing Data: Search Failed
1408	Other error in call to search SSP	1454	NMI Standing Data: No NMI or Jurisdiction Code
1409	NMI Discovery Successful	1455	NMI Standing Data: Other Error
1410	More data available. Current search exceeds jurisdictional limits (99 results)		

RESPONSE ERROR CODE VARIANCES

Analysis has highlighted the following:

- MSATS NMI Discovery response codes not used in WA

Error Code	Error Description	Error Code	Error Description
1402	Invalid Jurisdiction Code	1408	Other error in call to search SSP
1405	Other Fatal Error	1409	NMI Discovery Successful
1406	Error creating XML Clob Header Record	1450	NMI Standing Data: Successful
1407	Error creating XML Clob Record	1455	NMI Standing Data: Other Error

- WA NMI Discovery response codes not used in MSATS

Error Code	Error Description	Error Code	Error Description
1404	NMI Discovery / NMI Standing Data / Historical Data Process – NMI is not Contestable	1404	NMI Discovery / NMI Standing Data / Historical Data Process – NMI Status is Extinct

- WA has 3 different error descriptions for code 1404

Assumption: WA will follow MSATS NMI Discovery Response Codes

UMI VS NMI

Analysis has shown reference to UMI instead of NMI in the WA Government Gazette Electricity Industry Act 2004 document:

- *UMI Definition: "UMI" or "unique market identifier" means the unique market identifier assigned to an exit point.*

WEM definition:

- *NMI: National Metering Identifier, the unique market identifier assigned to an exit point or embedded network child.*

NER NMI definition:

- *A National Metering Identifier as described in clause 7.3.1(d).*

Assumption: WA Government Gazette Electricity Industry Act 2004 may need to be reviewed to consider if changes necessary.

QUESTIONS

For further questions and feedback: WAMRPRetail@aemo.com.au

CHANGE REQUESTS

AGENDA

- Change Request Life Cycle
- Change Status Codes
- Validations

MSATS PROCEDURES OVERVIEW
CHANGE REQUESTS

Change Requests are the transaction types participants submit to MSATS to create or update NMI Standing Data.

- Allows Participant to effect a change in data/information associated with a connection point in MSATS. Data/information includes:
  - roles of organisations providing services
  - the technical details of metering installation
  - specific information that would assist retailers in providing competitive offers to End Users.
- Is initiated by selecting the:
  - Transaction Type Code CR, and
  - appropriate Change Reason Code.
- Can be performed on-line interactive mode or an off-line batch mode.

CURRENT WEM CTR LIFE CYCLE

As taken from Western Power's Customer Transfer and Standing Data Procedure V1.6

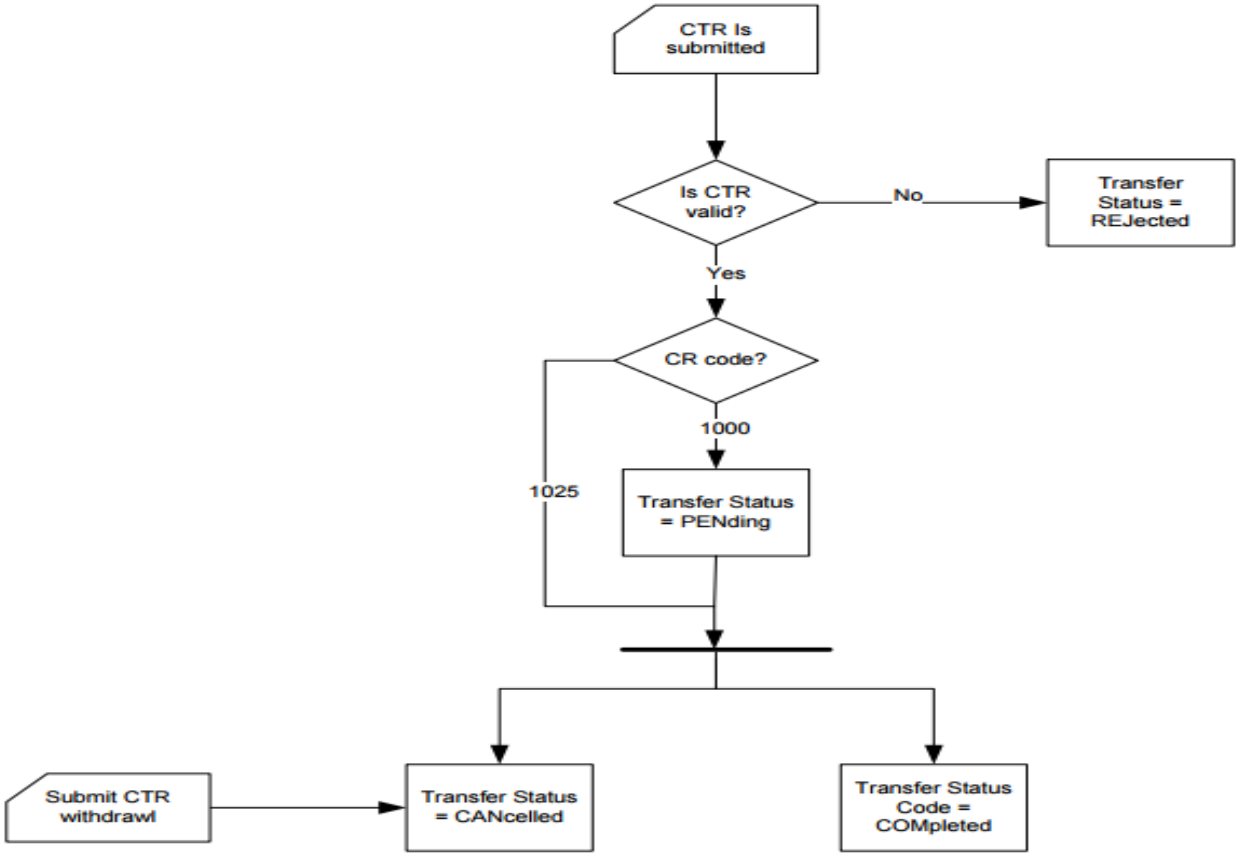


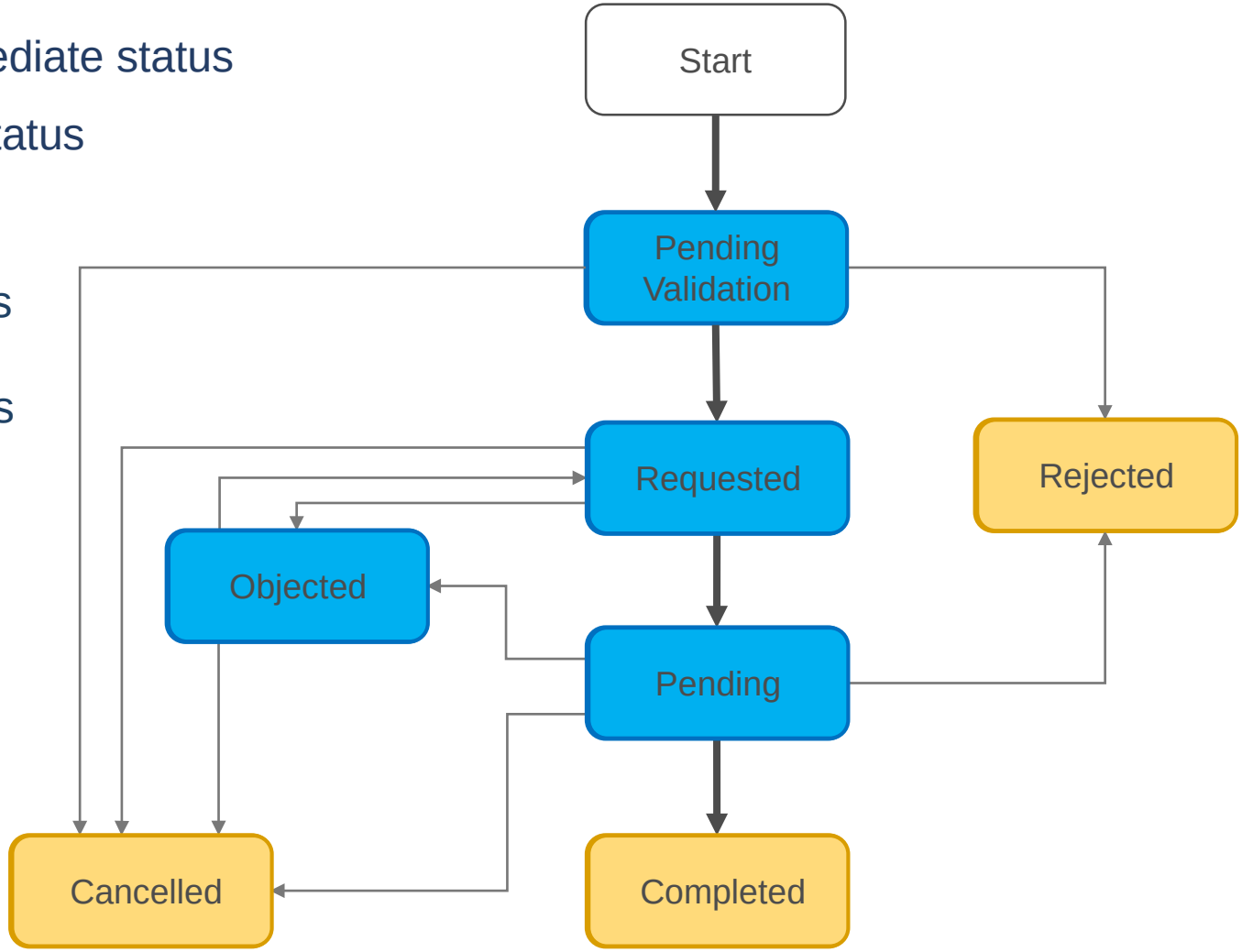
Figure 1: Customer Transfer Request status lifecycle

NEM CR LIFE CYCLE

Intermediate status

Final status

NEM Model includes status of Requested and Objections in comparison to WEM model.



MSATS PROCEDURES OVERVIEW
CHANGE REQUEST STATUS LIFE CYCLE

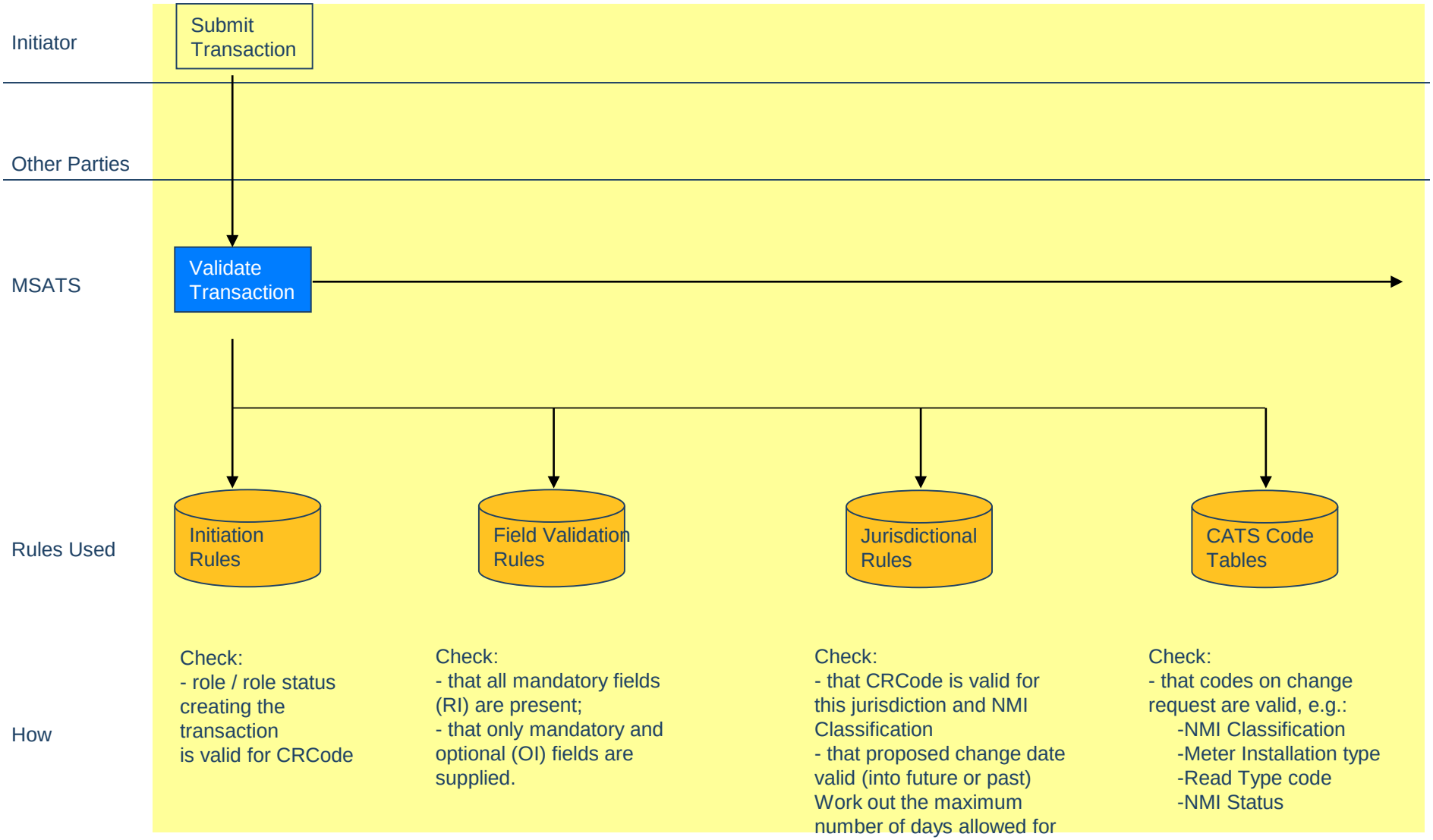
Change Status	Description
Pending Validation	Pass initial validation – further validation to complete
Requested	Objection period has been identified
Pending	Has passed the period allowed for lodging an objection and there are no objections. Waiting for proposed date to pass or actual change date to be supplied
Objected	An objection received - transfer suspended until objection withdrawn
Cancelled	Transaction withdrawn by the initiator or AEMO, or has lapsed (e.g.. objection not cleared in the time allowed)
Completed	Change request has completed and the master data has been updated

MSATS PROCEDURES OVERVIEW
TRANSACTION VALIDATIONS

- For actions that occur during a Change Request, Validation Rules confirm their validity, and determine which roles are notified of Status changes.
  - Validation rules include:
    - Field Validation Rules
    - Initiation Rules
    - Jurisdictional rules
    - Objection rules
    - Notification rules

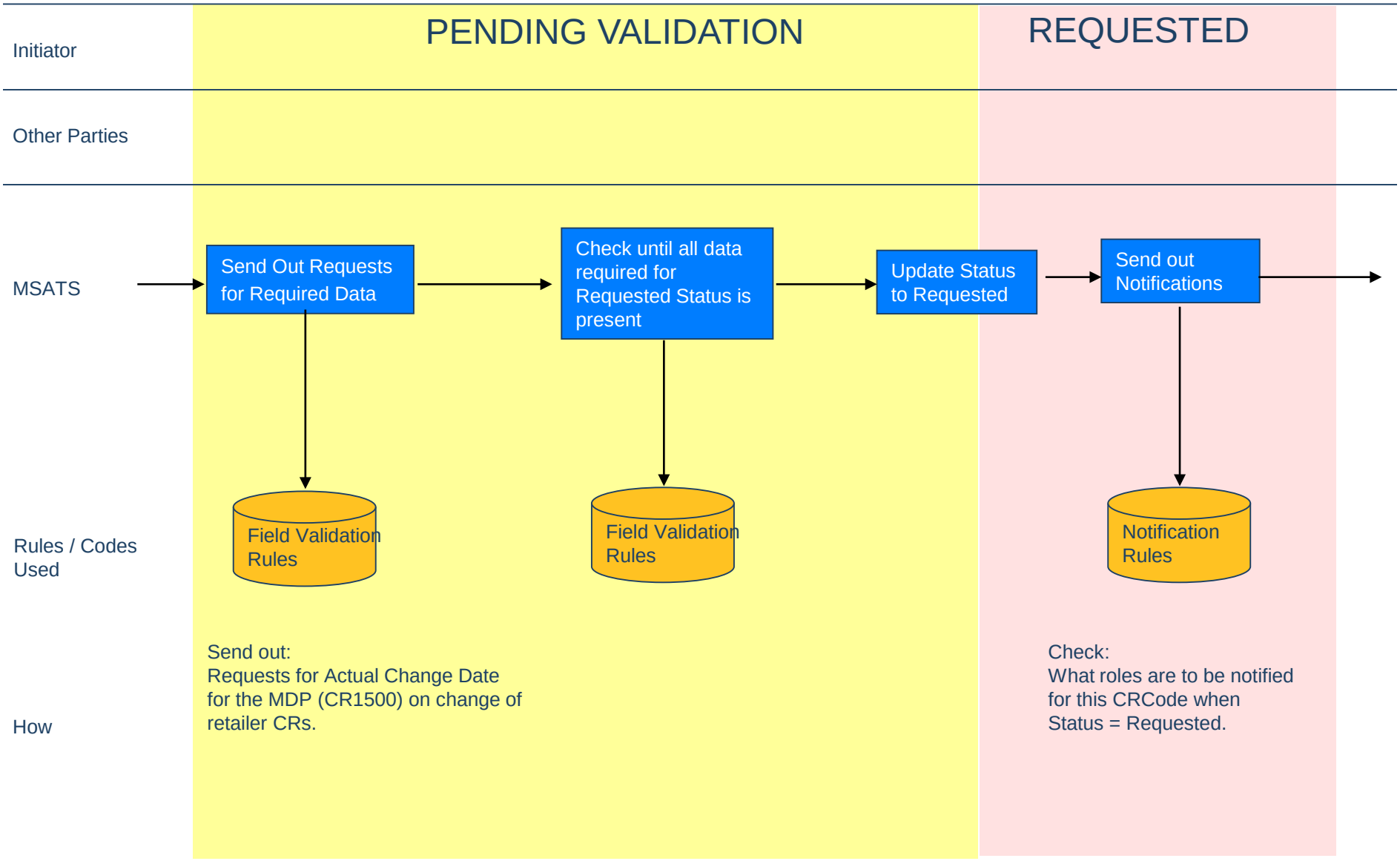
The following slides step through the Change Request process, and indicate which Validation Rules are used, and when.

MSATS PROCEDURES OVERVIEW
TRANSACTION VALIDATIONS

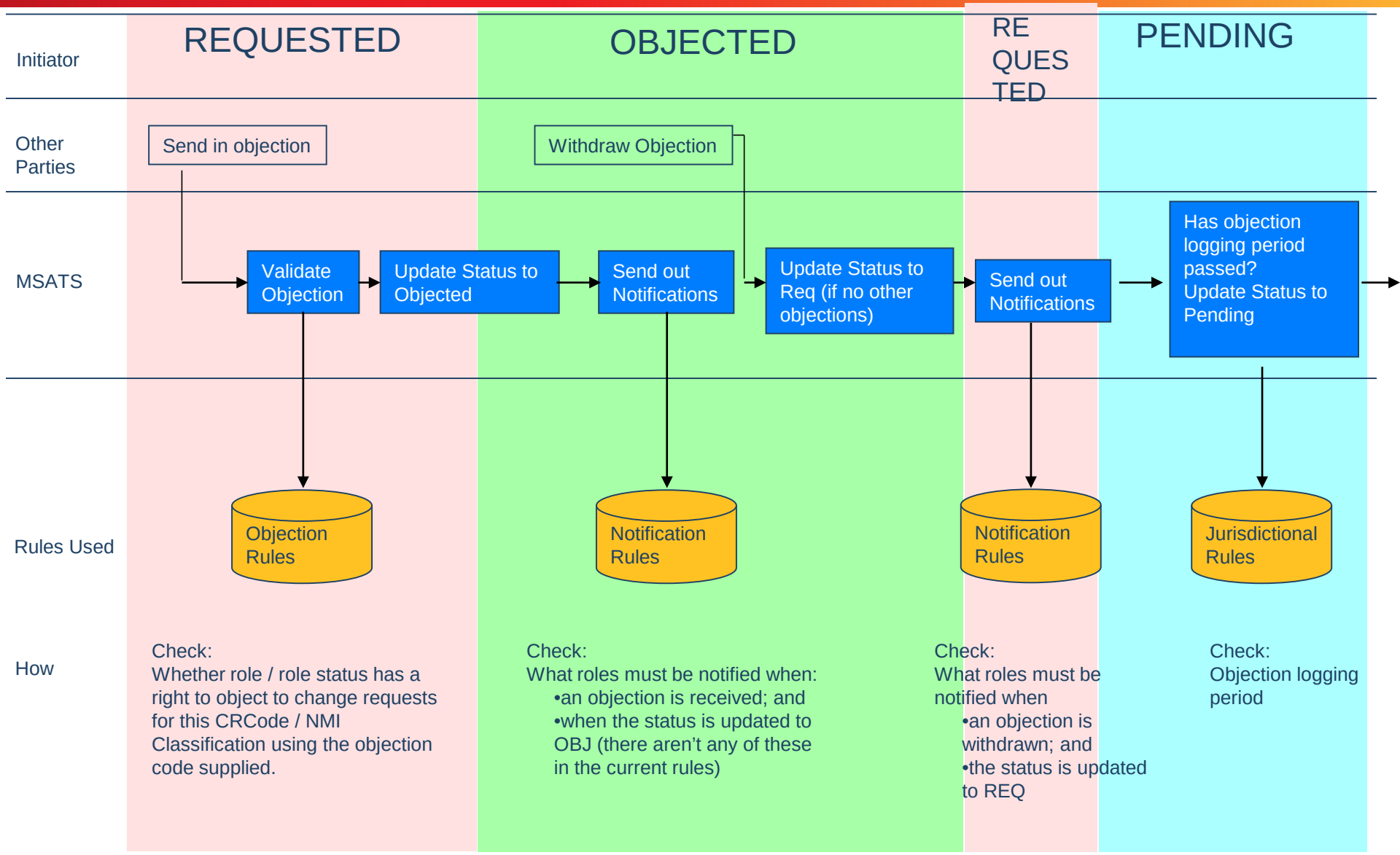


CRCode = Change Reason Code

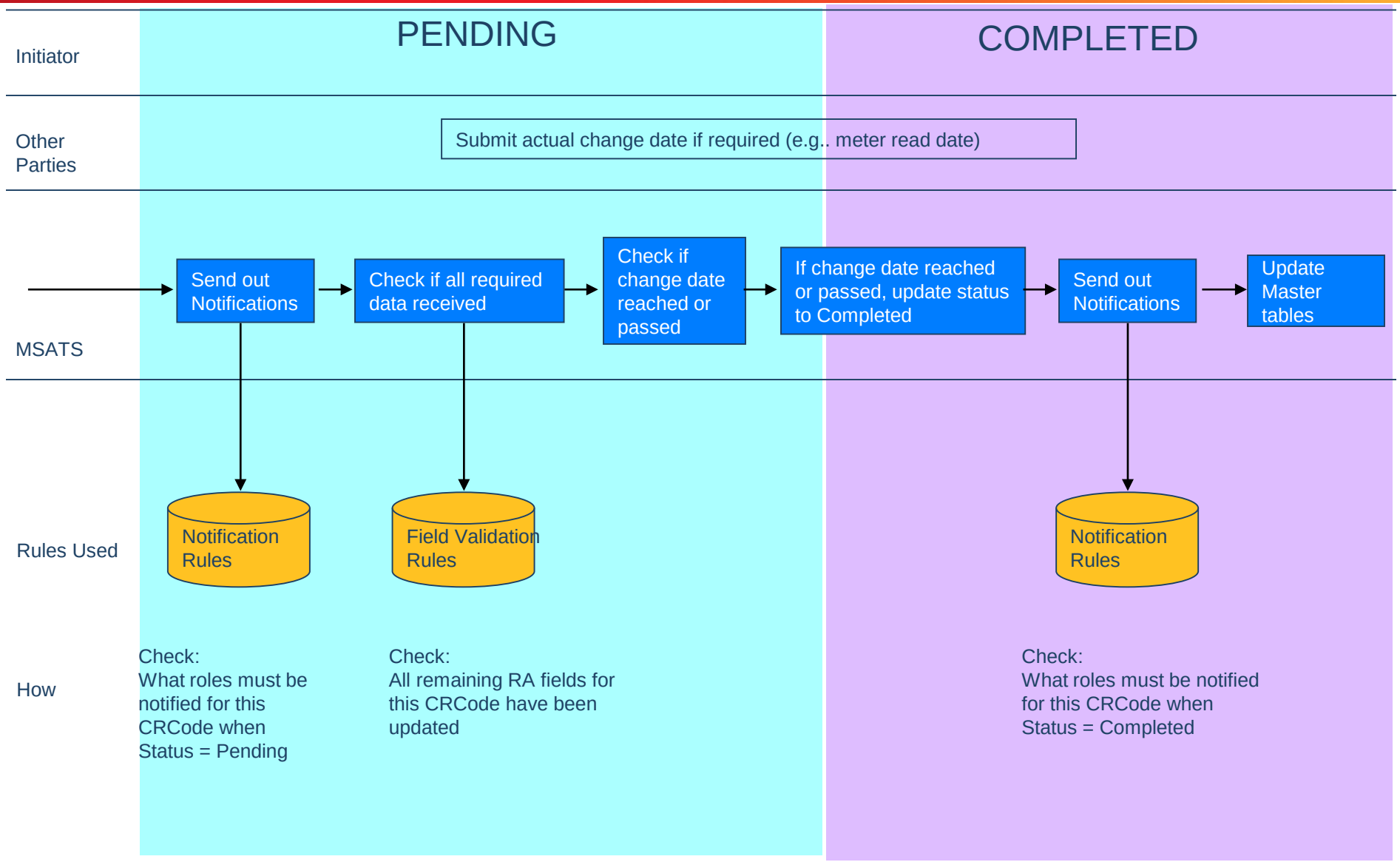
MSATS PROCEDURES OVERVIEW
TRANSACTION VALIDATIONS



MSATS PROCEDURES OVERVIEW
TRANSACTION VALIDATIONS



MSATS PROCEDURES OVERVIEW
TRANSACTION VALIDATIONS



QUESTIONS

For further questions and feedback: WAMRPRetail@aemo.com.au

CHANGE REASON CODES

AGENDA

- MSATS Change Reason Codes
- NEM Prospective Change Reason Codes
- NEM versus WA Retrospective Change Reason Codes
- NEM Timeframe Rules
- MSATS Procedures Overview Initiation Rules
- Notification Rules
- Questions

MSATS CHANGE REASON CODES

- The Change Reason Codes govern the population of data in a Change Request.
- Change Reason Code – defined parameters:
  - Participants permitted to initiate a Change Request.
  - Mandatory and optional data items
  - MSATS data pre-requisite
  - Exact date of change/Actual Meter Reading
  - The date range window
  - The Objection Logging Period
  - The Objection Clearing Period
  - Notification rules
  - Objection rules
  - Jurisdiction rules if applicable

MSATS CHANGE REASON CODES (CONT.)

Analysis has shown that WA utilises only two Change Reason Codes

- 1000 – Change Retailer
- 1025 – Transferred in Error

MSATS has over 100

- 1000 series for Change Retailer(FRMP)
- 1500 – Provide Data (new MDP)
- 2000 series – Create NMI
- 3000 series – Maintain Metering
- 4000 series – Maintain Data Stream
- 5000 series – Maintain NMI
- 6000 series – Change Roles (excluding FRMP)

Assumption: WA will be adopting NEM MSATS Change Reason Codes

MSATS CHANGE REASON CODES (CONT.)

Group of events	Initiator	Change Reason Code Assignment
1000-1100	New FRMP	Change FRMP and related roles
1500	MDP	Special – supply actual change date
2000-2499	LNSP	Create NMI and relationships
2500-2999	LNSP	Create NMI and relationships, metering installation(s) and MDM datastream(s)
3000-3999	MP	Create and update metering installations
4000-4999	MDP	Create and update MDM DataStream
5000-5091	MDP	Update connection point details (NMI-level data) Except for 5070 and 5071 – meter-level data
5100-5200	AEMO	AEMO only – corrections without objections or manage external profile shapes (not currently used)
6000-6999	FRMP, MC, MP MDP	Change of roles other than FRMP

Assumption: The NEM CATS Change Reason Codes will apply to WA

NEM PROSPECTIVE CHANGE REASON CODES

Change Retailer	Create NMI	Maintain Metering	Maintain Datastream	Maintain NMI	Change Roles
1000	2000	3000	4000	5050	6100
1030	2020	3004	4004	5054	6200
1080	2100	3050	4050	5060	6300
1083	2500	3080		5070	6400
	2520	3090		5080	6500
		3100		5090	6700
				5100	6800
				5110	

Reason Codes highlighted in red are utilised currently in WA

NEM VERSUS WA RETROSPECTIVE CHANGE REASON CODES

Change Retailer	Provide Data	Create NMI	Maintain Metering	Maintain Datastream	Maintain NMI	Change Roles
1010	1500	2001	3001	4001	5001	6110
1020		2021	3005	4005	5021	6210
1021		2101	3051	4051	5051	6301
1022		2501	3081		5055	6401
1023		2521	3091		5061	6421
1024			3101		5071	6501
1025					5081	6701
1026					5091	6801
1027					5101	
1028					5111	
1029						
1040						
1081						
1082						
1084						

Reason Codes highlighted in red are utilised currently in WA

NEM TIMEFRAME RULES

Timeframe Rules specify:

- Whether a Jurisdiction, Change Reason Code and NMI Classification Code are a valid combination.
- The number of days into the future/past allowable for the Proposed Change Date.

- Objection Logging Period
  - The number of days allowed for Objections (Objection Logging Period), which commences from the next business day after the date that the Change Request is Initiated.

- Objection Clearing Period
  - The number of days after which a Change Request that has been objected to will be cancelled (Objection Clearing Period), which commences from the next business day after the date that the Change Request is Initiated.

MSATS PROCEDURES OVERVIEW
INITIATION RULES

- The Initiation Rules specify the Roles permitted to Initiate Change Requests.
- A Change Request may be Initiated by both ‘New’ or ‘Current’ Roles.
- Only a ‘New’ Role can be entered on a Change Request. (e.g. Prospective FRMP = New)

NOTIFICATION RULES

- When the status of a change request is updated, notifications are sent to participants acting in relevant roles.
- This table shows which rules are notified per event.

Status Change	FRMP		LR		LNSP		MDP		MPB		RoLR (= Supplier of last resort)		RP (= Metering Coordinator)	
	New	Current	New	Curr-ent	New	Current	New	Current	New	Current	New	Current	New	Current
CANCELLED	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes
COMPLETED	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes
OBJECTED	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes
PENDING	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes
REJECTED	Yes	Yes	-	-	-	Yes	Yes	Yes	-	-	-	-	Yes	Yes
REQUESTED	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes

QUESTIONS

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READ TYPE CODES

AGENDA

- Read Type Codes
- Valid Code Combinations
- Questions

READ TYPE CODES

Read Type Codes:

- An instruction from the requesting FRMP to the MDP, nominated in the Change Request, relating to the date in the Proposed Change Date. (e.g. PR = Previous Read Date)
- Signal when a meter should be read, whether an alternative arrangement is to be used, or whether no read is required.
- An indication as to whether a meter may be read on the Next Scheduled Read Date (NS) or on a Special Read Date (SP).
- An Estimated Reading (ER) may be provided in place of the Actual Meter Reading.

READ TYPE CODES (CONT.)

No.	Code	Read Type Code Description
1	NS	Next Scheduled Read Date Advice from New FRMP to MDP that the Proposed Change Date for the End User transfer is the Next Scheduled Read Date, which is, therefore, a date in the future. No other Meter Reading is required. Applies to types 4A, 5 and type 6 *metering installations*.
2	RR	Next Read Date Advice from New FRMP to MDP that the Proposed Change Date for the End User transfer is to be the date the *meter* is next read, which is, therefore, a date in the future. Applies to types 4A, 5 and type 6 *metering installations*.
3	SP	Special Read Advice from New FRMP to MDP that the Proposed Change Date for the End User transfer is a date that does not align with the scheduled reading cycle. Applies to type 4A, 5 and type 6 *metering installations*.
4	ER	Estimated Read Available if approved by Jurisdictional policy. Advice from the New FRMP to MDP that the End User has agreed to transfer on an Estimated Reading. No Meter Reading is required for this transfer. MDP is to provide an Estimated Reading. Applies to type 4A, 5 and type 6 *metering installations*.

READ TYPE CODES (CONT.)

No.	Code	Read Type Code Description
5	CR	Consumer Read Available if approved by Jurisdictional policy. End User - agreed to transfer on a Meter Reading it provides. MDP/MPC is not required to undertake a Special Meter Reading. Applies to type 6 *metering installations*.
6	PR	Previous Read Date(2) Available if approved by Jurisdictional policy Transfer is to occur on the previous Meter Reading Applies to type 5 and type 6 *metering installations*
7	UM	Unmetered Connection Point Used when the *NMI* being transferred is an unmetered *connection point* Applies to type 7 *metering installations*
8	EI	Existing Remotely-Read Interval Meter Existing remotely-read Interval Meter exists and will continue to be used after the transfer. Applies to type 1 to 4 *metering installations* only.

READ TYPE CODES (CONT.)

No.	Code	Read Type Code Description
9	NI	New Interval Meter New Interval Meter is to be installed at the Site Final Meter Reading is to be taken if active *meter* exists Applies to type 1 to 5 *metering installations* and type 6 *metering installations* being replaced with an Interval Meter.
10	NB	Future Move In (Basic) A new Accumulation Meter is to be installed at the Site No existing *meter* at this Site to be read Applies to type 6 *metering installations*.

- As part of POC Read Type of NI – New Interval Meter will be removed and NB – Future Move In (Basic) will be introduced

Assumptions:

- Meter Read type NB is not applicable for WA until meter contestability comes in to effect.
- The same Read Type Codes will be available for use in WA

VALID CODE COMBINATIONS

Valid combinations of Read Type Codes, Metering Installation Type Codes and Change Reason Codes:

CR Code		1000		1010, 102X, 1040		1030		All CR Codes	
Metering Installation Type Code		BASIC	MRIM / MRAM	BASIC	MRIM / MRAM	BASIC	MRIM / MRAM	COMMSx / VICAMI	UMCP
NS	Next Scheduled Read Date	Yes	Yes						
RR	Next Read Date	Yes	Yes			Yes	Yes		
SP	Special Read	Yes	Yes			Yes	Yes		
ER	Estimated Read	Yes	Yes	Yes		Yes	Yes		
CR	Consumer Read	Yes							
PR	Previous Read Date			Yes	Yes				
UM	Unmetered Connection Pt								Yes
EI	Existing Interval Meter							Yes	

Assumption: The NEM Valid Combinations will also be utilised in WA where applicable

QUESTIONS

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OBJECTIONS

AGENDA SLIDE

- NEM VERSUS WEM CURRENT ARRANGEMENTS
- OBJECTIONS OVERVIEW
- VALIDATIONS
- OBJECTION CODES

NEM VERSUS WEM CURRENT ARRANGEMENTS

As outlined in Western Powers Build Pack:

- There is no provision for an objection to a transfer in the WA Customer Transfer Code. However, the Incoming Retailer can submit a Cancel Request transaction at any time before the transfer date.

- With respect to other transactions, there also appears to be no ability to object, rather if a transaction doesn't meet certain criteria Western Power may reject the transaction.

- In the NEM Objections to Change Requests are permitted. Rules can vary by Jurisdiction, Change Reason Code and by NMI Classification Code.

- Jurisdictions will specify rules to control the period in which an Objection may be logged. (e.g. 1 – 5 business days)

NEM OBJECTIONS

- **Objection Codes:**
  - Basis on which Participants can object to a Change Request
- **Objection Rules specify:**
  - The way in which Objection Codes can be used for each Change Reason Code and Role.
  - Rules can vary by Jurisdiction, Change Reason Code and by NMI Classification Code. (e.g. OBJ for DEBT jurisdictional rules in QLD and VIC)
  - A Participant must not raise an Objection Code unless the Objection is fair and reasonable,; for example, when an Objection is made using a specific Objection Code, the Participant who made the Objection must be able to produce evidence upon request to substantiate it.
- **Key Assumptions**:
  - NEM Objection Codes will be available to be utilised in the WEM.
  - Subject to the WA policy outcomes for managing transfers of non-contestable sites and obligations placed on AEMO, the BLOCK objection code may be an option utilised by AEMO to prevent transfer of non-contestable sites.
  - WA Transfer Codes does not currently provide provisions for objecting to DEBT, assumption is this provision will remain the same

NEM OBJECTIONS

- If an Objection to the change of *retailer* transaction is submitted by a Participant within the Objection Logging Period, the transfer will not proceed until the Objection is cleared. If the objection is not cleared, the transfer transaction will expire and be Cancelled and all relevant Participants will be notified.
- Jurisdictions will specify rules to control the period in which an Objection may be cleared.
- If there are no outstanding Objections to a current change of *retailer* transaction after the Objection Logging Period has passed, the Change Request will proceed to Completed and the information contained in the transaction will become the NMI Master Record.
- Jurisdictions will specify rules to control who is allowed to Object to a Change Request, the reason for the Objection and the NMI Classification Code appropriate to be assigned to that Objection.

OBJECTION VALIDATIONS

An Objection will be validated against general conditions and rule based conditions, as follows:

- The Participant submitting the Objection is an active Participant;
- The Objection is not a duplicate of an existing Objection by that Participant;
- The Role of the Participant is in accordance with the Objection Rules;
- The Objection is linked to an active Change Request ID;
- The status of the Change Request is either Requested or Objected.

OBJECTION VALIDATIONS

Rule-based conditions against which a validation of an Objection is performed are as follows:

- The Participant can make the Objection in accordance with its status.
- The Objection Code is permitted for the Role .
- The Change Request is within its Objection Logging Period.
- The Change Request is valid (PEND, REQ, OBJ) for Objections that are not subject to the Objection Logging Period.

NEM OBJECTION CODES

The Objection Codes are applied to each Jurisdiction and each Change Reason Code in accordance with the Objection Rules.

No	Code	Objection Reason
1	BADDATA	Confirmation of incorrect data
2	BADMETER	Read Type Code not compatible with the collection method.
3	BADPARTY	MDP, MPB, or MPC nominated is incorrect.
4	DATEBAD	The proposed date in the Change Request does not align with the date the Metering Reading is scheduled to be taken.
		The Proposed Change Date, or Actual End Date is incorrect.
5	DECLINED	Nominated participant does not wish to perform the Role
6	NOACC (1)	Unable to access metering installation to perform the manual collection
7	NOTAPRD	Participant is not accredited or authorised to operate within the LNSP area, most typically applying to the Role of MP.
8	NOTPRUD	No prudential approval. AEMO has not approved the transaction for prudential reasons.
9	NOTRESP	Not responsible for NMI in the identified Role.
10	BLOCK	AEMO Objection - Jurisdiction request or for operational reasons

NEM OBJECTION CODES (CONT.)

No	Code	Objection Reason	NMI Class	Jurisdiction
11	NOTRANS	No previous change of retailer request exists for the error correction change of retailer.		
12	NOTAWARE	Used by the Current FRMP when no communication has been received from the New FRMP confirming that an error correction transaction will be processed. Used by the Current LNSP when no communication has been received from the FRMP.		
13	CRCODE	Change Reason Code does not apply to the NMI		
14	DEBT	There is an aged debt reaching Jurisdictional limits.	ALL	QLD
			SMALL	VIC
15	CONTRACT	Existing contractual obligation takes precedence over the proposed change	LARGE	QLD
		Existing contractual obligation takes precedence over the proposed change or a change of MC is proposed and the Current MC has been appointed in the Role of MC by a large End User.	LARGE	ALL

QUESTIONS

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CHANGE RETAILER

AGENDA SLIDE

1. WA Scope and Assumptions
2. Current WA Arrangements
3. WA vs NEM Key Differences
4. Overview of Current WA vs NEM Arrangements
5. MSATS Change Retailer Codes
6. CATS Transaction Structure
7. Change Retailer
8. Provide Data
9. Questions

WA SCOPE AND ASSUMPTIONS

The analysis in these slides is based on WA:

- Adopting the Metering Competition Rule change and the procedures amended coming into effect 1 December 2017.
- Utilising the MSATS reason codes, except the embedded network change reason codes.
- MSATS changes taking place at 00:00hrs Western Standard Time (WST).
- No longer using the WA Transfer Code for the SWIS.

WA SCOPE AND ASSUMPTIONS (CONT.)

The analysis in these slides is based on WA:

- Using the following NMI classification codes as parameters for defining Change Reason Codes, application timeframes and Objection Rules:
  - SMALL – consumes ≤160MWh annually
  - LARGE – consumes >160MWh annually.
- Confirming the following WA Policy:
  - Needing a flag in MSATS to identify whether a NMI is contestable (>50 MWh) or non-contestable (≤ 50MWh). Only NMI's flagged as contestable will be able to transfer
  - WP (as the LNSP) being responsible for providing and maintaining the "contestable flag".

CURRENT WA ARRANGEMENTS

- The Electricity Industry Customer Transfer Code 2004 allows “contestable” customers to be transferred. It:

  - Establishes the process for transfer from one retailer to another
  - Outlines the obligations of retailers and the network operator regarding transfers
  - Requires the customers provide verifiable consent.

CURRENT WA ARRANGEMENTS (CONT.)

- Western Power Build Pack – section 2.6.2 of the Customer Transfer and Standing Data Procedure states an XML transaction is used for transferring customers.
- Transfer types: customer transfer (1000) and to reverse an erroneous transfer (1025).
- Transfers are effective 8am on the transfer date.
- Appendix D identifies the Customer Transfer Request (CTR) transaction elements.

- Transaction types used:
  - WAElectricityCustomerTransferRequest: Incoming retailer to WP that initiates a customer transfer. WP validates the request content and sends an accept/reject
  - WAElectricityCustomerTransferResponse. WP to incoming retailer and includes a Request ID for future reference
  - WAElectricityCustomerTransferNotification. WP to retailers regarding transfer details and status.
  - WAElectricityCustomerTransferCancelRequest. Incoming retailer to WP must be made prior to transfer date. WP validates the request content and sends an accept/reject.

WA VS NEM KEY DIFFERENCES

The main differences include:

- WA participants to submit CR via MSATS
- MSATS has more transfer transaction types codes
- The MSATS objection process is relevant for more than just the Network Operator and objection codes are different.
- For CR 1000 in MSATS:
  - The nominated change date (or transfer date) can be up to 65 business days versus 50 business days for WA.
  - No requirement for change dates to be after a certain number of days (i.e., 3 metro and 5 non-metro). Transfers become effective the day after the 100 business day objection clearing period has ended.
- The change is effective from the Actual Change Date.

WA VS NEM KEY DIFFERENCES (CONT.)

The main differences include:

- For CR 1000, (1020) and 1025, the objection logging period for the NEM is 1 business day, not 2.
- In the NEM, there's no limit on the number of change requests (CR) per business day or nominated transfer date.
- In WA, where an incoming retailer changes a contestable customer's basic meter to an interval this can be completed prior to the transfer. In the NEM, from 1 December 2017 meter churn must occur after the transfer is completed. See Meter Replacement Processes clause 7.8.9(e)(2).

OVERVIEW OF CURRENT WA VS NEM ARRANGEMENTS

Obligation – CTR/CR Requirements	WA	NEM
Publish and amend CTR/CR requirements	WP build Pack	AEMO
Transferrable	Contestable customers only (>50MWh annually) - CTR	All customers – MSATS
CTR/CR Codes	1000 (transfer) or 1025 (reverse erroneous)	More, to be discussed later
CTR/CR Submission	Electronically to WP using WAEXML transaction	Electronically through MSATS
CTR/CR limit	100 per business day or with the same nominated transfer date (unless otherwise agreed)	None

OVERVIEW OF CURRENT WA VS NEM ARRANGEMENTS (CONT.)

Retailer Obligations	WA	NEM
Incoming retailer is responsible for supply from the transfer date	Yes, except for erroneous transfers	Yes
Retailer must have verifiable consent or explicit informed consent	Yes	Yes
Retailer must withdraw CTR/CR if customer consent ceases prior to the transfer date	Yes	Yes – must have explicit informed consent and withdraw within 2 business days if the transfer cannot occur
Nomination of the transfer date or proposed change date	Incoming retailer	Incoming retailer

OVERVIEW OF CURRENT WA VS NEM ARRANGEMENTS (CONT.)

Network Operator (WP) Obligations	NEM
Within one business day of CTR receipt, must notify the retailer of the transfer	No need as status of CR is updated in MSATS
Ensure any new metering installation or new service installation is undertaken that would affect the transfer	Metering Coordinator's role and responsibility
Ensure a scheduled read or nominated read is done on the transfer date	MDP responsibility, discussed later
If the CTR timeframes cannot be met, notify the retailer within two business days after the transfer.	Subject to the timeframe rules, discussed later

OVERVIEW OF CURRENT WA VS NEM ARRANGEMENTS (CONT.)

Transfer date requirements	WA	NEM
From submission date to proposed transfer date	Maximum 50 business days	Maximum 65 business days – relevant for prospective CR 1000 and 1030
	For metro exit points, minimum 3 business days after the CTR is submitted	N/A
	For non-metro exit points, minimum 5 business days after the CTR is submitted	N/A

OVERVIEW OF CURRENT WA VS NEM ARRANGEMENTS (CONT.)

CTR/CR Withdrawal	WA	NEM
A CTR/CR can be withdrawn before the time of the transfer	Yes, until any time prior to completion. Note, an incoming retailer must pay any reasonable costs incurred by WP for either or both of providing and installing a meter (see s.4.8(2) of the CT Code.	Yes, until any time prior to completion. In the NEM, costs associated with services offered by a network are usually in the Networks User System Agreements. Not covered in AEMO's Procedures.

OVERVIEW OF CURRENT WA VS NEM ARRANGEMENTS (CONT.)

WP Objections	NEM Objections
If the retailer doesn't have an access contract	NOTAPRD – objection code could be used for WA. In the NEM, the LNSP uses this code for a participant that isn't accredited/authorised
If the information on the contestable customer is inconsistent with its records	BADDATA – objection code could be used for WA
The meter type is inconsistent with that required by the Metering Code	Covered by MC roles and responsibilities, see NER clause 7.3.2(e). No objection code in MSATS.
The transfer date does not comply	Will reject in MSATS if Proposed Change Date does not meet timeframe rules for CR code with applicable rejection error code (i.e., 1153, 1160)

MSATS CHANGE RETAILER CODES

Reason Code	Description	Initiating Participant
1000	Change retailer	New retailer
1010	Change Retailer – Retrospective – Align to Meter Reading	New retailer
1020	Change Retailer–Retrospective – Long Term/Error (not SMALL)	New retailer
1021	Error Correction – Missed CR 1500	New retailer
1022	Incorrect transfer date	New retailer
1023	New NMI – LNSP set up wrong retailer in MSATS	New retailer
1024	Transfer missed	New retailer
1025	Transferred in error	New retailer
1026	Cooled off	New retailer
1027	End User Moves Out on or before CR completion date	New retailer

Note: WA Technical Specification Packs show only 1000 and 1025 are used. Assumption: WA will apply the NEM CR Codes.

MSATS CHANGE RETAILER CODES (CONT.)

Reason Code	Description	Initiating Participant
1028	Non-account holder signs contract	New retailer
1029	Other Error Corrections (SMALL only)	New retailer
1030	Change Retailer – Move-In	New retailer
1040	Change Retailer – Move-In - retrospective	New retailer
1080	Change Retailer – Child NMI	New retailer
1081	Change Retailer – Child NMI – retrospective align mater reading	New retailer
1082	Change Retailer Child – Retrospective Long Term/Error	New retailer
1083	Change Retailer Child NMI – Move In	New retailer
1084	Change Retailer Child NMI – Move In - retrospective	New retailer
1500	Provide Actual Change Date	MDP - new and current

Assumption: Embedded Networks are out of scope for WA, if they do come into scope then the applicable CR codes can be applied.

CATS TRANSACTIONS STRUCTURE

All transactions follow the same structure which includes:

- Application
- Conditions Precedent
- Initiating Roles
- Requirements By Role
- Timeframe Rules – NEM business days
- Objection Rules – NEM business days
- Change Request Status Notification Rules

CHANGE RETAILER – SMALL OR LARGE NMI

Equivalent of WA CTR 1000 change retailer

Change Reason Code	Description
1000	Prospective transfer date
1010 (small NMIs only)	Retrospective transfer date – last meter reading date
1020 (large NMIs only)	Retrospective transfer date – agreed between the current FRMP and new FRMP - Error
1030	Prospective transfer date – move in
1040	Retrospective transfer date – move in

Equivalent to CTR 1025 for large customers > 160 MWh

CHANGE RETAILER - CONDITIONS PRECEDENT

- **Conditions precedent** for change retailer codes include:
  - NMI already exists in MSATS
  - NMI Classification Code - SMALL or LARGE
  - Date of the transfer - Actual Change Date
  - Actual Change Date - established based on the Read Type Code submitted to MSATS.

CHANGE RETAILER – SMALL OR LARGE NMI: FRMP REQUIREMENTS

The New FRMP must:

- Obtain the Current FRMP's agreement to retrospectively transfer an End User on a previous Meter Reading (only 1010).
- Obtain the NMI Checksum.
- Confirm that the NMI is valid for the connection point.
- Submit a CR after obtaining Explicit Informed Consent that must contain:

Change Reason Code	Participant transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	New RP
Read Type Code		

CHANGE RETAILER – SMALL OR LARGE NMI: FRMP REQUIREMENTS (CONT.)

The New FRMP must:

- Nominate itself as the FRMP
- For SMALL NMI classification code and if a MDP advises a meter reading cannot be obtained:
  - Withdraw the transfer request
  - Advise the MDP to read the meter on the Next Scheduled Read Date or propose a Special Read Date.
- For SMALL NMI classification code and if a MDP advises a Next Scheduled Read Date or Special Read Date is invalid:
  - Advise a valid date
  - Withdraw the transfer request.

CHANGE RETAILER – SMALL OR LARGE NMI: FRMP REQUIREMENTS (CONT.)

- The New FRMP:
  - May include the MPB or MPC in the CR or the MC can complete.
  - If the MDP is changing, may provide the MDP (except 1010)
  - For only 1020 - may populate CR with the Actual End Date.
  - For only 1010 – must respond within 2 business days to a request to retrospectively transfer on a previous meter reading

- For SMALL NMI classification code and if an MDP advises a meter reading cannot be obtained:
  - Withdraw the transfer request
  - Advise the MDP to read the meter on the Next Scheduled Read Date or propose a Special Read Date.

CHANGE RETAILER – SMALL OR LARGE NMI: FRMP REQUIREMENTS (CONT.)

- For SMALL NMI classification code and if a MDP advises a Next Scheduled Read Date or Special Read Date is invalid:
  - Advise a valid date
  - Withdraw the transfer request.

- A retailer may withdraw a change retailer transaction before the transfer is completed.

CHANGE RETAILER – SMALL OR LARGE NMI: MDP RESPONSIBILITIES

- The MDP must:
  - Once the transfer is completed, set up the NMI suffix(s) to be active on the Actual Change Date if this data is not already provided or has changed.
  - For 1000, 1010, 1030 or 1040 - initiate a CR to provide the Actual Change Date. For LARGE - the Actual Change Date must be the date nominated by the New FRMP. If inappropriate, MDP must advise the New FRMP of the reason and agree on the Actual Change Date.
  - For Prospective Changes not requiring a Meter Reading - provide the Actual Change Date within 2 days of the Actual Change Date.

CHANGE RETAILER – SMALL OR LARGE NMI: MDP RESPONSIBILITIES (CONT.)

- The MDP must:
  - For changes that require a Meter Reading, provide the Actual Change Date within 2 *days* of the Meter Reading.
  - For retrospective changes, ensure the Actual Change Date submitted is no earlier than any time limit specified by the Jurisdiction for the CR Code.
  - For SMALL NMI classification code:
    - When the Next Scheduled Read Date or Special Read Date is required - forward the Meter Reading to new FRMP and current FRMP, LR and LNSP.
    - Object to a CR if the New FRMP requests if the:
      - Next Scheduled Read Date is not within 2 business days
      - The date nominated for the retrospective change does not correspond to an Actual Meter Read Date.

CHANGE RETAILER – SMALL OR LARGE NMI: MDP RESPONSIBILITIES (CONT.)

- The MDP must:
  - Advise of a failure to take a Meter Reading within 2 days
  - For CRs that require an Estimated Reading, submit this as the Meter Reading related to the change date (except for a retrospective change – 1020, 1040)
  - Notify new FRMP where the Read Type Code is not aligned to the Meter Reading method
  - For retrospective changes, provide the Actual Change Date within 2 days of the data request.
  - Carry out an Actual Meter Reading if the New FRMP requests and within timeframes specified in the Metrology Procedure.

CHANGE RETAILER – SMALL OR LARGE NMI: MDP/MC RESPONSIBILITIES (CONT.)

- The MDP must for LARGE NMI Classification:
  - validate the Metering Installation Type Code is identified as a type 1 – 4 metering installation. If not, advise the New FRMP.
  - for Retrospective Changes that do not require a Meter Reading, provide the Actual Change Date within 2 days of receipt of the Data Request.

- MC must ensure MDP, MPC and MPB roles are correct

CHANGE RETAILER – SMALL OR LARGE NMI: CR 1000 AND 1020 TIMEFRAME RULES

CR 1000 and 1020 (and others) objection timeframes (business days) in table below.

CR Code 1000 – Change Retailer CR Code 1030 – Change Retailer – Move-In			
Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	0	65
CR Code 1010 – Change Retailer – Retrospective Align to Meter Read CR Code 1040 – Change Retailer – Move-In – Retrospective			
Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	10	0
CR Code 1020 – Change Retailer-Retrospective – Long Term/Error (not SMALL)			
Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	130	0

Assumption: WA will apply the NEM CR Codes.

CHANGE RETAILER: CR 1000 OBJECTION RULES

CR 1000 objection rules in table. Refer to objection codes in section 4.7 of the CATS Procedure.

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
BADMETER	ALL	ALL	-	-	-	-	Yes	Yes	Yes	Yes	-	-	Yes	-	-	Yes
BADPARTY	ALL	ALL	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-
DECLINED	ALL	ALL	-	-	-	-	Yes	-	-	-	-	-	Yes	-	-	-
NOTAPRD	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
DATEBAD	ALL	ALL	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-	-
NOACC	SMALL	ALL	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-	-
DEBT	ALL	QLD	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-
	SMALL	VIC														
CONTRACT	LARGE	QLD	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-
	LARGE	ALL	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-

Assumption: WA will apply the NEM CR Codes.

Note: Subject to WA policy for managing transfers of non-contestable sites, AEMO may use the BLOCK objection code to prevent transfer of non-contestable sites.

CHANGE RETAILER: CR 1000 OBJECTION RULES

CR 1020 objection rules in table. Refer to objection rules in section 7.8 of the CATS Procedure.

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
BADMETER	LARGE	ALL	-	-	-	-	Yes	Yes	-	-	-	-	Yes	-	-	Yes
BADPARTY	LARGE	ALL	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-
DECLINED	LARGE	ALL	-	-	-	-	Yes	-	-	-	-	-	Yes	-	-	-
NOTAPRD	LARGE	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
DATEBAD	LARGE	ALL	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-	-
RETRO	LARGE	ALL	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-
DEBT	LARGE	QLD	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-
CONTRACT	LARGE	QLD	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-
	LARGE	ALL	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-

Assumptions:

- WA will apply the NEM CR Codes.
- WA will not apply DEBT code as the current WA Transfer Code does not allow transfer of debt.

CHANGE RETAILER – ERROR CORRECTIONS

- Applies only for small NMIs:

Change Reason Code	Description
1021	Error Correction – Missed CR 1500
1022	Incorrect transfer date
1023	New NMI – LNSP set up wrong Retailer in MSATS
1024	Transfer missed
1025	Transferred in error
1026	Cooled Off
1027	Customer Moves Out on or before CR completion date
1028	Non-account holder signs contract
1029	Other Error Corrections (NMI Class SMALL only)

Equivalent to CTR 1025 for small customers ≤160 MWh

CONDITIONS PRECEDENT

- **Common conditions precedent** for change retailer codes:
  - NMI already exists in MSATS
  - The NMI Classification Code is SMALL – for metering installations types 4, 4A, 5, 6, or 7.
  - Date of the transfer - Actual Change Date
  - Actual Change Date - established based on the Read Type Code submitted to MSATS

CHANGE RETAILER – ERROR CORRECTIONS
SMALL NMI: FRMP REQUIREMENTS

The New FRMP must:

- Obtain the NMI Checksum.
- Confirm that the NMI is valid for the connection point.
- Submit a CR after obtaining Explicit Informed Consent that must contain:

Change Reason Code	Participant transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	
Read Type Code		

CHANGE RETAILER – ERROR CORRECTIONS
SMALL NMI: FRMP REQUIREMENTS (CONT.)

- The New FRMP:
  - Must nominate itself as the new FRMP
  - May populate the CR with RP, MPB, MPC or MDP or the MC to complete
  - May populate the CR with – Actual End Date
  - For retrospective changes, the proposed date must meet the timeframe rules
  - May withdraw the transfer request before the transfer is completed.

CHANGE RETAILER – ERROR CORRECTIONS SMALL NMI: MDP/MC REQUIREMENTS AND CR 1025 OBJECTION TIMEFRAMES

- MDP must set up the NMI suffix when the transfer is completed.
- MC must ensure the MDP, MPC and MPB roles are correct. If not, it needs to raise a CR to update.
- CR 1025 notification timeframes (business days) in table below.

Objection Logging Period (business days)	Objection Logging Period (business days)	Objection Logging Period (business days)	Objection Logging Period (business days)
1	20	130	0

- Also relevant for CR 1021,1022, 1023, 1024, 1026, 1027, 1028, 1029.

Assumption: WA will apply the NEM CR Codes.

CHANGE RETAILER – ERROR CORRECTIONS
SMALL NMI: CR 1025 OBJECTION RULES

- CR 1025 objection rules in table. Refer to objection codes for other CR Codes in section 8.8 of the CATS Procedure.

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
BADPARTY	ALL	ALL	-	Yes	-	-	Yes	-	-	-	-	-	-	-	-	-
DECLINED	ALL	ALL	-	-	-	-	Yes	-	-	-	-	-	Yes	-	-	-
NOTAPRD	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
CRCODE	ALL	ALL	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-
NOAWARE	SMALL	ALL	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-
NOTRANS	SMALL	ALL		Yes												
DEBT	SMALL	VIC	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-
	SMALL	QLD														
CONTRACT	LARGE	ALL	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-

Assumptions:

- WA will apply the NEM CR Codes.
- WA will not apply DEBT code as WA Transfer Code currently does not allow transfer of debt.

CHANGE RETAILER – ERROR CORRECTIONS SMALL NMI: CR 1025 STATUS NOTIFICATION RULES

- CR 1025 objection rules in table. Also relevant for 1021, 1022, 1023,1024, 1026, 1027, 1028, and 1029.

Status Change	FRMP		LR		LNSP		MDP		MPB		RoLR		RP	
	N	C	N	C	N	C	N	C	N	C	N	C	N	C
CANCELLED	Yes	Yes	-	-	-	Yes	Yes	Yes	-	-	-	-	Yes	Yes
COMPLETED	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	Yes	Yes
OBJECTED	Yes	Yes	-	-	-	Yes	Yes	Yes	-	-	-	-	Yes	Yes
PENDING	Yes	Yes	-	-	-	Yes	Yes	Yes	-	-	-	-	Yes	Yes
REJECTED	Yes	Yes	-	-	-	Yes	Yes	Yes	-	-	-	-	Yes	Yes
REQUESTED	Yes	Yes	-	-	-	Yes	Yes	Yes	-	-	-	-	Yes	Yes

Assumption: WA will apply the NEM CR Codes.

CHANGE RETAILER – EMBEDDED NETWORKS – SMALL OR LARGE

- There are also change retailer codes for embedded networks.

Change Reason Code	Comment
1080 – Change Retailer – Child NMI	The date of transfer is a Prospective Change.
1081 – Change Retailer – Child NMI – Retrospective Align Meter Read	The date of transfer would be the date of the last Meter Reading (a Retrospective Change).
1082 – Change Retailer Child – Retrospective: Long Term/Error	The date of transfer could be a date agreed by the current and New FRMP (a Retrospective Change) where the actual transfer date was in error. In addition, and for Victoria only, the date of transfer could be a date agreed by the Current FRMP and New FRMP (a Retrospective Change) to which both parties agree that the transfer should have been effected.
1083 – Change Retailer Child NMI – Move-In	The date of transfer (move-in) would be on a Prospective Day.
1084 – Change Retailer Child NMI – Move-In – Retrospective	The date of transfer (move-in) would be a Retrospective Day.

- Assumption: Unless the policy scope changes, WA will not use the Embedded Network Reason Codes.
- For further information on Embedded Network Change Retailer Codes see section 9 of the CATS Procedure.

PROVIDE DATA – PROVIDE ACTUAL CHANGE DATE – SMALL OR LARGE

Change Reason Code	Comment
1500 – Provide Actual Change Date (MDP)	The MDP is required to provide MSATS with the Actual Change Date following the Initiation of a Change Request by a FRMP or MC requiring an Actual Change Date.

- **Conditions precedent** include:
  - NMI already exists in MSATS
  - The FRMP or MC initiated a CR requiring an Actual Change Date
  - NMI Classification Code - SMALL or LARGE
  - MDP received a data request for the provision of the Actual Change Date.

- **Initiation** – the MDP may submit an Actual Change Date.

PROVIDE DATA – PROVIDE ACTUAL CHANGE DATE – SMALL OR LARGE (CONT.)

- **MDP requirements**:
  - Obtain the NMI Checksum
  - Confirm NMI is valid for the connection point prior to the initiation of the CR
  - Provide the Actual Change Date to MSATS within 2 days of the meter reading or within the timeframe prescribed by the jurisdiction. For retrospective it must be provided within 2 days of notification
  - Submit a CR with:

Change Reason Code	Participant transaction ID	NMI and NMI Checksum
Its Participant ID	Actual Change Date	Related Change Request ID
MDP		

PROVIDE DATA – PROVIDE ACTUAL CHANGE DATE – SMALL OR LARGE (CONT.)

Timeframe Rules

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	20	0

Objections - not permitted.

Notifications – Current and new MDP receives notification of change.

Assumption: WA will use CR 1500.

QUESTIONS

For further questions and feedback: WAMRPRetail@aemo.com.au

NEXT STEPS

NEXT STEPS

- AEMO expects to undertake a further review of the MSATS Procedures once Policy direction is certain, including: Identifying Procedure changes required to incorporate WA, Formal Consultation, IT business requirements and Market Readiness Activities.

- MSATS system training course (existing NEM) is to be reviewed and timeframes being considered.

- Next Forum will outline remaining CATS Transactions, MSATS Reports and Provide an overview of the WIGS Procedures.

QUESTIONS

For further questions and feedback: WAMRPRetail@aemo.com.au