

WA RETAIL FORUM

Continuation of MSATS Procedures – CATS Principles,
Obligations and Transactions
Overview of WIGS Procedures
MSATS Reports

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AGENDA



1. Workshop Objectives
2. Assumptions for Future WA Arrangements
3. Overview of WIGS Procedures
4. Continuation of MSATS CATS Transaction Overview, including WIGS Transactions
5. Next Steps
6. Questions

To provide participants with an overview of the National Electricity Market (NEM) Procedures, specifically:

- CATS Procedures - Market Settlements & Transfers Solutions (MSATS)
- Procedure for the Management of Wholesale, Interconnector, Generator and Sample (WIGS) NEMs

The overview includes:

- Market transactions
- Comparison between current WA and NEM processes
- MSATS Reports
- Potential policy matters to consider with drafting Retail Market Procedures suitable for WA

* Also refer to March WA Retail Forum Presentation for overview of MSATS Procedures Principles and Obligations

FUTURE WA ARRANGEMENT ASSUMPTIONS



In WA:

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

The MSATS Procedures are made under clause 7.16.2 (effective 1 December 2017) of the NER and are published as separate documents along functional lines:

- **CATS Procedures** – These apply to End User transactions
- **WIGS Procedures** – These 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

All Registered Participants, Metering Providers and Metering Data Providers must comply with the MSATS Procedures

Assumption: 7.16.2 of the NER will be applicable to WA

The WIGS Procedure covers the registration of metering installations and management of standing data for NMIs that are classified as wholesale, interconnector, generator or sample

This covers:

- Defining the attributes of a connection point for the purpose of consumer transfer
- Providing the registration of a NMI and associated metering installation components against that connection point
- Define the roles and obligations of CATS participants

- Enable Jurisdictions to convey to CATS participants the rules under which a retail transfer will be approved
- Facilitate market settlements
- Facilitate and support an efficient industry process for:
 - The transfer of NMIs between retailers
 - The provision and maintenance of CATS standing data
 - The provision and maintenance of CATS codes and rules
 - The discovery of approved NMI standing data

MSATS & WIGS PROCEDURE ANALYSIS – KEY ASSUMPTIONS



The analysis in these slides is based on the following key assumptions for WA:

- Adopting the MSATS/WIGS procedures amended for the NEM (Metering Competition) coming into effect 1 December 2017
- Utilising the Transactions where relevant (e.g. excluding Embedded Networks)
- Transactions utilised for NMI Classification Codes Interconnectors & Sample are not anticipated to be relevant to WA
- MSATS changes taking place at 00:00hrs Western Standard Time (WST)

MSATS & WIGS PROCEDURE ANALYSIS – KEY ASSUMPTIONS



- No longer utilising the WA Transfer Code and Metering Codes for the SWIS
- Participant Role NSP2 is anticipated to be irrelevant for WA
- Applying the following NMI classification codes as parameters for defining Change Reason Codes, application timeframes and Objection Rules:
 - SMALL – consumes ≤ 160 MWh annually
 - LARGE – consumes > 160 MWh annually
- NEM Objection Codes will be available for utilisation

MSATS & WIGS PROCEDURE ANALYSIS – KEY ASSUMPTIONS



- 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
- WP (as the LNSP) being responsible for providing and maintaining the “contestable flag”

MSATS/WIGS CHANGE REASON CODES

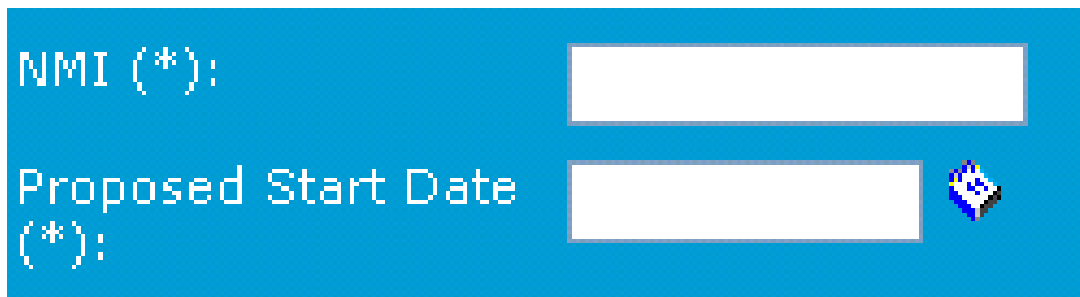


Group of events	Initiator	Change Reason Code Assignment
1000-1100	New FRMP	Change FRMP and related roles (Discussed in March Forum)
1500	MDP	Special – supply actual change date (Discussed in March Forum)
2000-2499	LNSP	Create NMI and relationships
2500-2999	LNSP	Create NMI and relationships, metering 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


Items highlighted in BLUE are included in this presentation

- The Change Reason Codes govern the population of data in a Change Request (CR)
- Change Reason Code – defined parameters:
 - Participants permitted to initiate a CR
 - 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

- Two types of information in a change request:
 - Data that's required for all change requests
 - Data about the change request itself
 - The data that is going to be changed
 - This varies depending on the business process the change request represents
- In MSATS Browser, an * indicates mandatory data



NMI (*):

Proposed Start Date (*): 

REQUIRED INFORMATION FOR ALL CHANGE REQUESTS



Change Request - New		Participant ID:	NEMMCO
		Participant Name:	NEMMCO
Change Request (*):	2001 - Create NMI Details - Retrospective		
Change Request Status:	Participant Transaction ID (*):	TEST-TRAINING	
NMI (*):	Checksum (*):	3	
Proposed Start Date (*):	Original Transaction Date:	01-Feb-2006	
Actual Change Date:	Actual End Date:		
Read Type Code:	Transaction Type Code:		
Related Request ID:			
<input type="button" value="Clear"/>			<input type="button" value="Next"/>

- NMI and checksum
- Change reason code - Identifies the type of data to be changed (business transaction)
- Proposed start (change) date OR Actual change date
- Participant transaction id (your identifier for the CR)

PARTICIPANT RELATIONSHIPS



- Defines relationships between the NMI and Market Participants and Service Providers:
 - Roles for a NMI and the Participant IDs
 - The period of time when the relationship existed
- A participant can act in more than one role

Participant Relationships - Results						Participant ID:	NEMMCO	
						Participant Name:	NEMMCO	
Relationships: 1233211233 NMI Status Code: A								
Role	Participant Name	Participant ID	Start Date	End Date	Activity Status	Updated On	Created On	Action
FRMP	AGL Hydro Partnership	ACTEWNGY	20-Aug-2004	31-Dec-9999	A	31-Dec-9999	4-Sep-2004	• NMI Master
LNSP	Country Energy - LNSP	ADVANCEP	20-Aug-2004	31-Dec-9999	A	31-Dec-9999	4-Sep-2004	• NMI Master
LR	AGL South Australia - Retail	AGLE	20-Aug-2004	31-Dec-9999	A	31-Dec-9999	4-Sep-2004	• NMI Master
RP	Country Energy (DNSP)	AUSTINLP	20-Aug-2004	31-Dec-9999	A	31-Dec-9999	4-Sep-2004	• NMI Master
MDP	Country Energy - MDP	CNRGYMDP	20-Aug-2004	31-Dec-9999	A	31-Dec-9999	4-Sep-2004	• NMI Master
MPB	Country Energy - MPB	CNRGYMPB	20-Aug-2004	31-Dec-9999	A	31-Dec-9999	4-Sep-2004	• NMI Master
MPC	Energyx - MDP/MPC	ENERGEXM	20-Aug-2004	31-Dec-9999	A	31-Dec-9999	4-Sep-2004	• NMI Master
ROLR	Origin Energy Electricity Ltd	POWERCOR	20-Aug-2004	31-Dec-9999	A	31-Dec-9999	4-Sep-2004	• NMI Master

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

OBJECTION CODES

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 & WIGS	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

EXAMPLE – RAISING AN OBJECTION VIA THE BROWSER



- ▶ Participants
- ▼ Transactions
 - Change Requests
 - Objections
 - Notification
 - Request for data
 - Bulk Update TLF

Objections - Search		Participant ID:	NEMMCO
		Participant Name:	NEMMCO
Search By:			New
Change Request ID:	<input type="text"/>		
Or:			
Objection Raised By:	<input type="text"/>		
Objection Code			
Include Withdr.			
NMI Range Fro			
Date From (*)			
<input type="button" value="Search"/> <input type="button" value="Clear"/>			

Objections - New		Participant ID:	NEMMCO
		Participant Name:	NEMMCO
Participant Transaction ID (*):	<input type="text"/>		
Change Request ID (*):	<input type="text"/>		
Objection Code (*):	<input type="text"/>		
Role ID (*):	<input type="text"/>		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

SELECTING OBJECTION CODE

Objections - New		Participant ID:	NEMMCO
		Participant Name:	NEMMCO
Participant Transaction ID (*):	<input type="text" value="objection-test"/>		
Change Request ID (*):	<input type="text" value="8337687"/>		
Objection Code (*):	<input type="text" value=""/>		
Role ID (*):	<input type="text" value=""/>		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

NOTWARE - No business-to-business notification received.
CRCODE - CR code being used does not apply to NMI concerned
DEBT - The consumer at this NMI has a longstanding debt
NOTRANS - No previous retail transfer found.
DECLINED - Identified party declines to perform service
NOPAPER - Paperwork not received or incomplete
NOTAPRD - Not approved to operate in the LNSP area
NOTCONT - Still a franchised customer - not contestable
NOTPRUD - No Prudential Approval
NOTRESP - Not Responsible for NMI in the identified role
RETRO - Retrospective Transfer Issue
BADDATA - Incorrect standing data for this NMI
BADMETER - Non-compliant metering
BADPARTY - Nominated MDP or MP is incorrect
DATEBAD - Retro Change Date does not align to a read
BLOCK - NEMMCO Objection
CONTRACT - NMI under existing contract.

Objections - New		Participant ID:	NEMMCO
		Participant Name:	NEMMCO
Participant Transaction ID (*):	<input type="text" value="objection-test"/>		
Change Request ID (*):	<input type="text" value="8337687"/>		
Objection Code (*):	<input type="text" value="NOTRESP - Not Responsible for NMI in the identified role"/>		
Role ID (*):	<input type="text" value="RP - Responsible Person"/>		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

EXAMPLE OF VIEWING AN OBJECTION VIA THE BROWSER



Objections - Search

Participant ID: NEMMCO
Participant Name: NEMMCO

Search By: New

Change Request ID:

Or:

Objection Raised By:

Objection Code:

Include Withdrawn:

NMI Range From: To:

Date From (*) (dd-mmm-yyyy): To (*) (dd-mmm-yyyy):

Objections - List

Participant ID: NEMMCO
Participant Name: NEMMCO

Objections:								
Participant ID	Objection ID	Change Request ID	Objection Code	Objection Description	Withdrawal	Updated On	Updated By	Action
NEMMCO	19912	8337687	NOTRESP	Not Responsible for NMI in the identified role	OBJ	11-Aug-2006	SUEDYSO	<ul style="list-style-type: none">WithdrawView CRShow All

OVERVIEW OF CURRENT WA VS NEM ARRANGEMENTS



Obligation – CTR/CR Requirements	WA	NEM
Publish and amend CTR/CR requirements	WP build Pack	AEMO (MSATS /WIGS Procedures)
Transferrable	Contestable customers only (>50MWh annually) - CTR	All customers – MSATS/WIGS
CTR/CR Codes	Only use: 1000 – Change Retailer & 1025 – Transferred in Error	All
CTR/CR Submission	Not applicable	aseXML Transaction via MSATS
CTR/CR limit	Not applicable	None
Objected, Rejected or Requested change status codes	Not applicable	Used
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



WA does not appear to include the following standing data information in current build pack specifications:

- Asset management plan details
- Calibration tables
- Test and Calibration program details
- Network Tariff Code additional information
- Demand 1, Demand 2 or Next Test Date

CREATE NMI
CHANGE REASON CODES 2XXX SERIES



- The creation of a NMI in WA appears to be interlinked to the New Connection Process and is exchanged between participants as part of the Network Operator's current Service Order handling and response processes
- NEM Model uses Service Order Processes, however, also requires the LNSP to Raise a Create NMI CATS Transaction to create the NMI in AEMO's MSATS system. Once created, the NMI is discoverable in MSATS via the NMI Discovery Process

MSATS/WIGS CREATE NMI CODES



Reason Code	Description	NMI Classification Codes	Initiating Participant	To be used in WA?
2000	Create NMI	SMALL, LARGE, WHOLESAL, GENERATR	New LNSP	Yes by WP as the LNSP
2001	Create NMI Retrospective	SMALL, LARGE, WHOLESAL, GENERATR	New LNSP	Yes by WP as the LNSP
2020	Create NMI – Child NMI *Embedded Networks	SMALL, LARGE, WHOLESAL, GENERATR	New ENM	Not relevant as Embedded Networks are not in current scope for WA
2021	Create NMI – Child NMI *Embedded Networks	SMALL, LARGE, WHOLESAL	New ENM	Not relevant as Embedded Networks are not in current scope for WA
2500	Create NMI, Meter, Data-stream	SMALL, LARGE, WHOLESAL, GENERATR	New LNSP	Yes by WP as the LNSP
2501	Create NMI, Meter, Data-stream	SMALL, LARGE, WHOLESAL, GENERATR	New LNSP	Yes by WP as the LNSP
2520	Create NMI, Meter, Data-stream – Child NMI	SMALL, LARGE	New ENM	Not relevant as Embedded Networks are not in current scope for WA
2521	Create NMI, Meter, Data-stream – Child NMI	SMALL, LARGE	New ENM	Not relevant as Embedded Networks are not in current scope for WA

- A create NMI Transaction is used by LNSP's and Embedded Network Managers to establish the initial set of information in MSATS at a connection point
- LNSP's and Embedded Network Managers must allocate a NMI and NMI Checksum for each connection point in accordance with the NMI Procedures and clause 7.13.2 of the NER
- Per MSATS/WIGS Procedures – Must Initiate a Create NMI CR for each connection point supplied within its area within two business days of the mandatory data required by the Change Request becoming available

- Mandatory information includes that consent from a retailer to be nominated as the FRMP in MSATS has been obtained for each connection point prior to initiating the Change Request
- Consider and action as necessary within two business days any requests from incorrectly assigned Participants to correct a Create NMI Change Request in MSATS
- All new NMIs should be Numeric unless permitted in accordance with the National Metering Identifier Procedure

Assumption: Rules applied to the NEM will be applied to WA

OBLIGATIONS

- NMI Ranges are published on AEMO's website which already includes NMI Ranges for WA. Refer to:

https://www.aemo.com.au/-/media/Files/Electricity/NEM/Retail_and_Metering/Metering-Procedures/NMI-Allocation-List.pdf

- WP NMI Allocation Rules were based on NEMMCO/AEMO National Metering Identifier (NMI) Procedure document.

State	Network Service Provider	Participant ID	NMI Block			NMI Block	
			From	To	Excluding	From	To
WA	Western Power		WAAA000000	WAAAZZZZZZ	WAAAW....	8001000000	8020999999
	Horizon Power					8021000000	8021999999

Initiating role: A new LNSP

Change Reason Code	Comment
2000 – Create NMI Details	Used where the New LNSP establishes the initial set of information in MSATS about a connection point to apply from a Prospective Day.
2001 – Create NMI Details – Retrospective	Used where the New LNSP establishes the initial set of information in MSATS about a connection point to apply from a Retrospective Day.

Conditions Precedent	CATS	WIGS
NMI does not exist in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE Or GENERATOR

CHANGE REQUEST OBLIGATIONS

The new LNSP must:

- Obtain the NMI Checksum
- Confirm that the NMI is a valid for the connection point
- Populate a Change Request with:

Change Reason Code	Participant Transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	TNI Code
DLF Code	NMI Classification Code	Jurisdiction Code
FRMP (as nominated)	LR	RoLR
RP	MDP	MPB
MPC	NMI Status Code	Locality
State	Postcode	

- Nominate itself as the new LNSP

CHANGE REQUEST OBLIGATIONS



- Populate the Change Request with values for the following address fields (as appropriate):

EITHER:

DPID	Flat Number	Flat Type
Floor Number	Floor Type	House Number
House Number Suffix	Location Descriptor	Lot Number
Street Name	Street Suffix	Street Type

OR:

Unstructured Address 1	Unstructured Address 2	Unstructured Address 3
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The current LNSP may populate the CR with:

Parent Name	Building name	Feeder Class
Customer Threshold Code		

MPB Requirements

On receipt of the Change Request Status notification for the Completed status, the New MPB must provide the Metering Installation Type Code to MSATS when known, using Change Reason Code 3000 or 3001

Assumption: Change Request requirements applied to the NEM will be applied to WA

TIMING REQUIREMENTS

CR Code 2000 – Create NMI Details

Objection Logging Period (business days)		Objection Clearing Period (business days)		Retrospective Period (business days)	Prospective Period (business days)
SMALL NMI	LARGE, WHOLESAL GENERATR NMI	SMALL NMI	LARGE, WHOLESAL GENERATR NMI		
1	1	10	20	0	65

CR Code 2001 – Create NMI Details - Retrospective

Objection Logging Period (business days)	Objection Clearing Period (business days)		Retrospective Period (business days)	Prospective Period (business days)
SMALL, LARGE, WHOLESAL, GENERATR NMI	SMALL, LARGE NMI	WHOLESAL, GENERATR NMI	SMALL, LARGE, WHOLESAL, GENERATR NMI	SMALL, LARGE, WHOLESAL, GENERATR NMI
1	10	20	130	0

Assumption: Timing requirements applied to the NEM will be applied to WA

OBJECTION RULES



CR Code 2000 – Create NMI Details

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP		
			N	C	N	C	N	C	N	C	N	C	N	C			
BADPARTY	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-
NOTRESP	SMALL	ALL	Yes	-	Yes	-	Yes	-	Yes	-	-	-	-	Yes	-	-	-
	LARGE													-			
	WHOLESAL													-			
	GENERATR													-			

CR Code 2001 – Create NMI Details – Retrospective

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP		
			N	C	N	C	N	C	N	C	N	C	N	C			
BADPARTY	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-
NOTRESP	SMALL	ALL	Yes	-	Yes	-	Yes	-	Yes	-	-	-	-	Yes	-	-	-
	LARGE													-			
	WHOLESAL													-			
	GENERATR													-			
RETRO	ALL	ALL	Yes	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-

N = New Role, C = Current Role

Assumption: NEM Objection Rules will be applied to WA

CR 2500 & 2501 – CREATE A NMI, METER, DATA-STREAM



Initiating role: A new LNSP

Change Reason Code	Comment
2500 – Create NMI Details, Meter, Data-Stream	Used where the New LNSP is able to provide the Datastream and metering installation details at the same time it establishes the initial set of information in MSATS for a connection point to apply from a Prospective Day.
2001 – Create NMI Details, Meter, Data-Stream - Retrospectively	Used where the New LNSP is able to provide the Datastream and metering installation details at the same time it establishes the initial set of information in MSATS for a connection point to apply from a Retrospective Day.

Conditions Precedent	CATS	WIGS
NMI does not exist in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE Or GENERATOR

CHANGE REQUEST OBLIGATIONS

The LNSP must:

- Obtain the NMI Checksum
- Confirm that the NMI is a valid NMI for the connection point
- Populate a Change Request with:

Change Reason Code	Participant Transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	TNI Code
DLF Code	NMI Classification Code	Jurisdiction Code
FRMP (as nominated)	LR	RoLR
RP	MDP	MPB
MPC	NMI Status Code	Locality
State	Postcode	Meter Serial ID (at least one)
Metering Installation Type (for each meter)	Meter Register Status Code (for each meter)	Register ID (at least one for each meter)
Register Identifier Status Code (for each register)	Network Tariff Code	Actual/Cumulative Indicator (for each register)
Controlled Load Indicator (for each register)	Dial Format (for each register)	Multiplier Value (for each register)
Time of Day Code (for each register)	Unit of Measure Code (for each register)	NMI Suffix (at least one)
Datastream Type (for each suffix)	Profile Name (for each suffix)	ADL (for each suffix)
Datastream Status Code (for each suffix)	MDM Contributory Suffix (for each register)	

CHANGE REQUEST OBLIGATIONS



- Nominate itself as the new LNSP
- Provide the Average Daily Load if this value was not provided by the new FRMP
- Populate the Change Request with values for the following address fields (as appropriate):

EITHER:

DPID	Flat Number	Flat Type
Floor Number	Floor Type	House Number
House Number suffix	Location Descriptor	Lot Number
Street Name	Street Suffix	Street Type

OR:

Unstructured Address 1	Unstructured Address 2	Unstructured Address 3
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CHANGE REQUEST OBLIGATIONS



The new LNSP for SMALL/LARGE NMI Classification Codes may:

- Populate the Change Request with:

Parent Name	Building name	Feeder Class
Customer Threshold Code		

- Populate the Change Request with the following for each meter:

Additional Site information	Next Scheduled Read Date	Meter location
Meter hazard	Meter route	Meter use
Meter point	Meter manufacturer	Meter model
Transformer location	Transformer type	Transformer ratio
Meter constant	Last test date	Next test date
Test result accuracy	Test result notes	Test performed by
Measurement type	Meter program	Meter Read Type
Remote phone number	Communication equipment type	Communication protocol
Data conversion arrangements	Data validation arrangements	Estimation instructions
Asset management plan details	Calibration tables (details of any calibration factors programmed into the meter)	Password details (the read and time set passwords only, separated by a space; the write password is not to be recorded in MSATS)
Test and calibration program details	User access rights details (i.e. details of any End User access to the metering installation such as pulse outputs)	

The new LNSP may populate the Change Request with the following for each register:

Network Tariff Code additional information	Demand value 1, if the Network Tariff charge includes a demand component	Demand value 2, if the Network Tariff charge includes a second demand component
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Assumption: Change Request Requirements applied to the NEM will be applied to WA

TIMING REQUIREMENTS

CR Code 2500 – Create NMI, Data-stream & Meter Details

Objection Logging Period (business days)		Objection Clearing Period (business days)		Retrospective Period (business days)	Prospective Period (business days)
SMALL NMI	LARGE, WHOLESAL, GENERATR NMI	SMALL NMI	LARGE, WHOLESAL GENERATR NMI		
1	1	10	20	0	65

CR Code 2501 – Create NMI, Data-stream & Meter Details – Retrospective

Objection Logging Period (business days)		Objection Clearing Period (business days)		Retrospective Period (business days)	Prospective Period (business days)
SMALL NMI	LARGE, WHOLESAL, GENERATR NMI	SMALL NMI	LARGE, WHOLESAL GENERATR NMI		
1	1	10	20	130	0

Assumption: Timing requirements applied to the NEM will be applied to WA

CR Code 2500 – Create NMI, Data-stream & Meter Details

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
BADMETER	ALL	ALL	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-
BADPARTY*	SMALL	ALL	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-
	LARGE												-			
NOTRESP	ALL	ALL	Yes	-	Yes	-	Yes	-	Yes	-	-	-	Yes	-	-	-

* Note, not relevant for WHOLESAL or GENERATR

CR Code 2501 – Create NMI, Data-stream & Meter Details – Retrospective

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
BADMETER	ALL	ALL	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-
BADPARTY	ALL	ALL	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-
NOTRESP	ALL	ALL	Yes	-	Yes	-	Yes	-	Yes	-	-	-	Yes	-	-	-
RETRO	ALL	ALL	Yes	-	Yes	-	-	-	-	-	-	-	-	-	-	-

Assumption: Objection Rules applied to the NEM will be applied to WA

NOTIFICATION RULES



CR Code 2500 & 2501

Participant Role – Receives Notification of Change

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	-
COMPLETED	Yes	-	Yes	-	Yes	-	Yes	-	Yes	-	-	-	Yes	-
OBJECTED	Yes	-	Yes	-	Yes	-	Yes	-	Yes	-	-	-	Yes	-
PENDING	Yes	-	Yes	-	Yes	-	Yes	-	Yes	-	-	-	Yes	-
REJECTED	Yes	-	Yes	-	Yes	-	Yes	-	Yes	-	-	-	Yes	-
REQUESTED	Yes	-	Yes	-	Yes	-	Yes	-	Yes	-	-	-	Yes	-

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA

EXAMPLE - CREATION OF A NMI VIA THE BROWSER



- Transactions
 - Change Requests
 - Objectives
 - Notification
 - Request for data

Change Request - Search

Search By:

Change Request ID:

Or:

New

Change Request - New

Participant ID:	NEMMCO
Participant Name:	NEMMCO

Change Request (*):

Change Request Status:

NMI:

Proposed Start Date:

Actual Change Date:

Read Type Code:

Related Request ID:

Participant Transaction ID:

Checksum:

Original Transaction Date:

Actual End Date:

Transaction Type Code:

SELECTING THE CHANGE REASON CODE



Change Request - New		Participant ID:	NEMMCO
		Participant Name:	NEMMCO

Change Request (*):

Change Request Status:

NMI:

Proposed Start Date:

Actual Change Date:

Read Type Code:

Related Request ID:

- 1000 - Change Retailer
- 1010 - Change Retailer - Retro Align to Meter Read
- 1020 - Change Retailer-Retro-Long Term/Error (not SMALL)
- 1021 - Error Correction - Missed CR1500
- 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)
- 1030 - Change Retailer - Move-In
- 1040 - Change Retailer - Move-In - Retrospective
- 1080 - Change Retailer - Child NMI
- 1081 - Change Retailer - Child NMI - Retro Align Meter Rd
- 1082 - Change Retailer Child - Retro: Long Term / Error
- 1083 - Change Retailer Child NMI - Move-In
- 1084 - Change Retailer Child NMI - Move-In - Retro
- 1500 - Provide Actual Change Date (New MDP)
- 2000 - Create NMI Details
- 2001 - Create NMI Details - Retrospective**
- 2003 - Create NMI Details - Retrospective (Tier 1 Only)
- 2020 - Create NMI Details - Embedded Network Child
- 2021 - Create NMI Details - Emb Network Child - Retro
- 2100 - Create External Profile Shape
- 2101 - Create External Profile Shape - Retro
- 2500 - Create NMI, Datastream + Meter Details
- 2501 - Create NMI, Datastream + Meter Details - Retro

EXAMPLE OF CREATION OF A NMI CR 2001 VIA THE BROWSER



Change Request - New		Participant ID:	NEMMCO
		Participant Name:	NEMMCO
Change Request (*):	<input type="text" value="2001 - Create NMI Details - Retrospective"/>		
Change Request Status:		Participant Transaction ID (*):	<input type="text"/>
NMI (*):	<input type="text"/>	Checksum (*):	<input type="text"/>
Proposed Start Date (*):	<input type="text"/>	Original Transaction Date:	
Actual Change Date:		Actual End Date:	
Read Type Code:		Transaction Type Code:	
Related Request ID:			
<input type="button" value="Clear"/>		<input type="button" value="Next"/>	

* Indicates mandatory field

ENTER * REQUIRED DETAILS



Change Request - New		Participant ID:	NEMMCO
		Participant Name:	NEMMCO
Change Request (*):	<input type="text" value="2001 - Create NMI Details - Retrospective"/>		
Change Request Status:	Participant Transaction ID (*):	<input type="text" value="test-training"/>	
NMI (*):	Checksum (*):	<input type="text" value="3"/>	
Proposed Start Date (*):	Original Transaction Date:	<input type="text" value="01-Jul-2006"/>	
Actual Change Date:	Actual End Date:		
Read Type Code:	Transaction Type Code:		
Related Request ID:			
<input type="button" value="Clear"/>	<input type="button" value="Next"/>		

CHANGE REQUESTS MAIN SCREEN



Change Requests - Main		Participant ID:	NEMMCO
		Participant Name:	NEMMCO
Go To: Participant Role Relationships NMI Standing Data NMI Data Stream NMI Meter Register NMI Register Identifier			
General Information:			Edit
Change Request ID:		Change Reason Code:	2001
Change Request Status:		Participant Transaction ID	test-training
NMI:	9011111111	Checksum:	3
Proposed Start Date:	01-Jul-2006	Original Transaction Date:	
Actual Change Date:		Actual End Date:	
Related Request ID:			
Read Type Code:		Trans Type Code:	
Participant Role Relationships - List:			New
Role ID	Participant ID		Action
NMI Standing Data - List:			New
Jurisdiction Code	NMI Classification Code	Status Code	Action
<input type="button" value="View Summary"/>	<input type="button" value="Submit"/>	<input type="button" value="Cancel"/>	

SELECTING ROLE AND PARTICIPANT ID



Change Request - New - Participant Role Relationships		Participant ID:	NEMMCO
		Participant Name:	NEMMCO
Role ID (*):	FRMP - Financially Responsible Market Participant ▼		
Participant ID (*):	▼		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

Change Request - New - Participant Role Relationships		Participant ID:	NEMMCO
		Participant Name:	NEMMCO
Role ID (*):	FRMP - Financially Responsible Market Participant ▼		
Participant ID (*):	CNRGY - Country Energy - Retailer ▼		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

ROLES ALL ENTERED AND READY TO ENTER REQUIRED NMI STANDING DATA



Change Requests - Main

Participant ID: NEMMCO
Participant Name: NEMMCO

Go To: [Participant Role Relationships](#) [NMI Standing Data](#) [NMI Data Stream](#) [NMI Meter Register](#) [NMI Register Identifier](#)

General Information:

[Edit](#)

Change Request ID: Change Reason Code: 2001
 Change Request Status: Participant Transaction ID: test-training
 NMI: 9011111111 Checksum: 3
 Proposed Start Date: 01-Jul-2006 Original Transaction Date:
 Actual Change Date: Actual End Date:
 Related Request ID:
 Read Type Code: Trans Type Code:

Participant Role Relationships - List:		New
Role ID	Participant ID	Action
FRMP	CNRGY	• Edit
LNSP	CNRGYP	• Edit
LR	CNRGY	• Edit
MDP	CNRGYMDP	• Edit
MPB	CNRGYMPB	• Edit
MPC	CNRGYMDP	• Edit
ROLR	CNRGY	• Edit
RP	CNRGYP	• Edit

NMI Standing Data - List:			New
Jurisdiction Code	NMI Classification Code	Status Code	Action

ENTER * REQUIRED FIELDS

Change Request - New - NMI Standing Data		Participant ID:	NEMMCO
		Participant Name:	NEMMCO
Jurisdiction Code (*):	<input type="text"/>	Aggregate Flag:	<input type="text"/>
DLF Code (*):	<input type="text"/>	TNI Code (*):	<input type="text"/>
NMI Classification Code (*):	<input type="text"/>	NMI Status Code (*):	<input type="text"/>
Embedded Network Parent:	<input type="text"/>	Embedded Network Child:	<input type="text"/>
Address			
Building/Property Name:	<input type="text"/>	Location Descriptor:	<input type="text"/>
Lot Number:	<input type="text"/>		
Flat/Unit	Type: <input type="text"/> Number: <input type="text"/>		
Floor/Level	Type: <input type="text"/> Number: <input type="text"/>		
Street	House Number: <input type="text"/> Name: <input type="text"/>	Type:	<input type="text"/>
	House Number Suffix: <input type="text"/> Name Suffix: <input type="text"/>		
Suburb/Locality (*):	<input type="text"/>	State (*):	<input type="text"/>
Postcode (*):	<input type="text"/>		
DPID:	<input type="text"/>		
Unstructured Address 1:	<input type="text"/>		
Unstructured Address 2:	<input type="text"/>		
Unstructured Address 3:	<input type="text"/>		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			



ENTER * REQUIRED FIELDS



Change Request - New - NMI Standing Data

Participant ID:	NEMMCO
Participant Name:	NEMMCO

Jurisdiction Code (*): NSW - New South Wales

DLF Code (*): BL24 - CE - Low Voltage Urban Domestic - Central

NMI Classification Code (*): SMALL - Small

Aggregate Flag: Y - Yes

TNI Code (*): NCH1 - COFFS HARBOUR (66)

NMI Status Code (*): D - Not Energised

Embedded Network Parent:

Embedded Network Child:

Address

Building/Property Name:

Lot Number:

Location Descriptor:

Flat/Unit Type: Number:

Floor/Level Type: Number:

Street House Number: 1 Name: VIEW Type: ST - STREET

House Number Suffix: Name Suffix:

Suburb/Locality (*): COFFS HARBOUR State (*): NSW - NEW SOUTH WALES Postcode (*): 2450

DPID:

Unstructured Address 1:

Unstructured Address 2:

Unstructured Address 3:

Save **Clear**

SCREEN AFTER REQUIRED DATA ENTERED



Change Requests - Main

Participant ID: NEMMCO

Participant Name: NEMMCO

Go To: Participant Role Relationships NMI Standing Data NMI Data Stream NMI Meter Register NMI Register Identifier

General Information:

[Edit](#)

Change Request ID: Change Reason Code: 2001
Change Request Status: Participant Transaction ID: test-training
NMI: 9011111111 Checksum: 3
Proposed Start Date: 01-Jul-2006 Original Transaction Date:
Actual Change Date: Actual End Date:
Related Request ID:
Read Type Code: Trans Type Code:

Participant Role Relationships - List:		New
Role ID	Participant ID	Action
FRMP	CNRGY	• Edit
LNSP	CNRGYP	• Edit
LR	CNRGY	• Edit
MDP	CNRGYMDP	• Edit
MPB	CNRGYMPB	• Edit
MPC	CNRGYMDP	• Edit
ROLR	CNRGY	• Edit
RP	CNRGYP	• Edit

NMI Standing Data - List:			
Jurisdiction Code	NMI Classification Code	Status Code	Action
NSW	SMALL	D	• Edit

[View Summary](#)

MAINTAIN METERING CHANGE REASON CODES 3XXX SERIES

- Maintenance of metering details in WA appears to be interlinked to related Service Order Processes and Meter reading data exchanged between participants as part of the Network Operator's current Service Order handling and response processes and meter data files. Is there other processes? (e.g. allocation of network tariffs)
- NEM Model uses Service Order Processes however also requires the LNSP to Raise a Maintain Metering CATS Transaction to maintain metering data in AEMO's MSATS system

MSATS/WIGS MAINTAIN METERING CODES



Reason Code	Description	NMI Classification Codes	Initiating Participant	To be used in WA
3000	Create metering installation details	SMALL, LARGE, WHOLESAL, GENERATR.	Current MPB	Yes by WP as the MPB
3001	Create metering installation details – Retrospective	SMALL, LARGE, WHOLESAL, GENERATR	Current MPB	Yes by WP as the MPB
3004	Exchange of Metering Information	SMALL, LARGE, WHOLESAL, GENERATR	Current MPB	Yes by WP as the MPB
3005	Exchange of Metering Information – Retrospective	SMALL, LARGE, WHOLESAL, GENERATR	Current MPB	Yes by WP as the MPB
3050	Change metering installation details	SMALL, LARGE, WHOLESAL, GENERATR	Current MPB	Yes by WP as the MPB
3051	Change metering installation details – Retrospective	SMALL, LARGE, WHOLESAL, GENERATR	Current MPB	Yes by WP as the MPB
3080	Advanced change metering installation details	SMALL, LARGE	Current MC	Yes by WP as the MC
3081	Advanced change metering installation details – Retrospective	SMALL, LARGE	Current MC	Yes by WP as the MC

MSATS/WIGS MAINTAIN METERING CODES



Reason Code	Description	NMI Classification Codes	Initiating Participant	To be used by WA?
3090	Advanced Meter Exchange	SMALL, LARGE	Current MC	Yes by WP as the MC
3091	Advanced Meter Exchange – Retrospective	SMALL, LARGE	Current MC	Yes by WP as the MC
3100	Change Network Tariff Code	SMALL, LARGE, WHOLESAL, GENERATR	Current LNSP	Yes by WP as the LNSP
3101	Change Network Tariff Code – Retrospective	SMALL, LARGE, WHOLESAL, GENERATR	Current LNSP	Yes by WP as the LNSP

Maintain Metering Change Request is used by the responsible Participant to ensure that metering installations are provided, installed and maintained in accordance with the NEM Metrology Procedure (clause 7.3.2 of the NER)

This includes:

- Ensuring the accuracy and testing of each metering installation complies with the NER requirements and the NEM Metrology Procedure (see clause 7.3.2(e)(2) of the NER).
- Providing and maintaining the security control of a metering installation (clause 7.3.2(e)(3) of the NER).

- Where required, ensuring each of its metering installations has a communications link installed and maintained to the telecommunications network (clause 7.3.2(e)(4) of the NER)
- Providing access to each of its metering installations from a telecommunications network (clause 7.3.2(e)(5) of the NER).
- A Metering Provider meets the requirements listed in schedule 7.4 and has been accredited by and registered by AEMO as a Metering Provider.
- Clause 7.3.2(a) of the NER requires Metering Providers to install and maintain metering installations.

- Clause 7.3.2(a) of the NER requires Metering Providers to install and maintain metering installations

Assumptions:

- Rules applied in the NEM will be applied to WA
- The LNSP (WP) will be responsible for maintaining the network tariff/s in MSATS for each metering installation, even where there may be another arrangement in which the Retailer may allocate the network tariff

CR 3000 & 3001 – NEM CREATE METERING INSTALLATION DETAILS



Initiating roles: A Current MPB

Change Reason Code	Comment
3000 – Create Metering Installation Details	Used where the Current MPB makes a Prospective Change to the initial set of information in MSATS about the metering installation details, and there is no associated meter removal for the NMI for the same effective date.
3001 – Create Metering Installation Details – Retrospective	Used where the Current MPB makes a Prospective Change to the initial set of information in MSATS about the metering installation details, and there is no associated meter removal for the NMI for the same effective date

Conditions Precedent	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
The metering installation details do not exist in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE, GENERATOR

CHANGE REQUEST OBLIGATIONS

The current MPB must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Submit a Change Request with:

Change Reason Code	Participant Transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	Meter Serial ID (at least one)
Metering Installation Type (for each meter)	Meter Register Status Code (for each meter)	Register ID (at least one for each meter)
Register Identifier Status Code (for each register ID)	Actual/Cumulative Indicator (for each Register ID)	Controlled Load Indicator (for each Register ID)
Dial Format (for each Register ID)	Multiplier Value (for each Register ID)	Time of Day Code (for each Register ID)
Unit of Measure Code (for each Register ID)	Network Tariff Code (for each Register ID)	MDM contributory suffix (for each register)

Where changes to Network Tariff information are required the current MPB must:

- Check that the Network Tariff Code is correct and, if it is not, update it to have the correct value
- Change the Network Tariff Code to ensure that the current information provided in MSATS is the latest information available from the current LNSP

CHANGE REQUEST OBLIGATIONS



The current MPB may submit the Change Request with:

Additional Site Information	Meter Hazard	Next Scheduled Read Date
Meter Location	Meter Point	Meter Route
Meter Use	Transformer Location	Meter Manufacturer
Meter Model	Meter Constant	Transformer Type
Transformer Ratio	Test Result Accuracy	Last Test Date
Next Test Date	Measurement Type	Test Result Notes
Test Performed By	Remote Phone Number	Meter Program
Meter Read Type	Data Conversion Arrangements	Communication Equipment Type
Communication Protocol	Asset Management Plan Details	Data Validation Arrangements
Estimation Instructions	Test And Calibration Program Details	Calibration Tables (details of any calibration factors programmed into the meter)
Password details (the read and time set passwords only, separated by a space; the write password is not to be recorded in MSATS)	User Access Rights Details (i.e. details of any end-use customer access to the metering installation such as pulse outputs)	

CHANGE REQUEST OBLIGATIONS



The current MPB may submit the Change Request with the following for each register:

Network Tariff Code Additional Information	Demand Value 1, if the network tariff charge includes a demand component	Demand Value 2, if the network tariff charge includes a second demand component
---	--	---

For retrospective changes, the current MPB may populate the Change Request with:

Actual Change Date

Assumption: Change Request Requirements applied to the NEM will be applied to WA

CR Code 3000 – Create Meter Details

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	0	65

CR Code 3001 – Create Meter Details – Retrospective

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	140	0

Objection rules: Objections are not permitted

Assumption: Timing Requirements applied to the NEM will be applied to WA

NOTIFICATION RULES



CR Code 3000 & 3001

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role

Assumption: Notification Requirements applied to the NEM will be applied to WA

Initiating role: A current MPB

Change Reason Code	Comment
3004 – Exchange of Metering information	Used where the Current MPB is required to provide a Prospective Change to the information in MSATS about the metering installation details. The change will include the removal of at least one existing meter and the installation of at least one new meter. A minimum set of metering installation details for the NMI shall exist upon completion of the Change Request.
3005 – Exchange of Metering information – Retrospective	Used where the Current MPB is required to provide a Retrospective Change to the information in MSATS about the metering installation details. The change will include the removal of at least one existing meter and the installation of at least one new meter. A minimum set of metering installation details for the NMI shall exist upon completion of the Change Request.

CR 3004 & 3005 – EXCHANGE OF METERING INFORMATION



Conditions Precedent	CATS	WIGS
NMI exists in MSATS	Yes	Yes
Metering installation details exist in MSATS	Yes	Yes
At least one meter is removed and one meter is created in each Change Request	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR
Meter Serial ID for the installed meter shall be different to the existing Meter Serial ID for the same NMI	Yes	Yes

CHANGE REQUEST OBLIGATIONS

The current MPB must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Must submit a Change Request with:

Change Reason Code	Participant transaction ID	Its Participant ID
Proposed Change Date	NMI	NMI Checksum
Meter Serial ID (for each meter)		

- For each meter associated to the NMI, where the Meter Register Status Code is to be C (current) populate the Change Request with (where this information does not currently exist in MSATS):

Meter Register status Code	Metering Installation Type
----------------------------	----------------------------

Assumption: Change Request Requirements applied to the NEM will be applied to WA

CHANGE REQUEST OBLIGATIONS



For all Register IDs associated with the NMI, where the Register Identifier Status Code is to be C populate the Change Request with the following information (where this information does not currently exist in MSATS):

Register ID	Unit of measure code (for each Register ID)	Multiplier value (for each Register ID)
Time of day code (for each Register ID)	Dial format (for each Register ID)	Register Identifier Status Code (for each Register ID)
Controlled Load indicator (for each Register ID)	Actual/cumulative indicator (for each Register ID)	Network Tariff Code (for each Register ID)
MDM Contributory Suffix (for each register)		

Where changes to Network Tariff information are required:

- Check that the Network Tariff Code is correct and, if it is not, update it to have the correct value
- Change the Network Tariff Code to ensure that the current information provided in MSATS is the latest information available from the current LNSP

NEM CHANGE REQUEST OBLIGATIONS



The current MPB may populate the Change Request with the following for each meter:

Additional site information	Next Scheduled Read Date	Meter location
Meter hazard	Meter route	Meter use
Meter point	Meter manufacturer	Meter model
Transformer location	Transformer type	Transformer ratio
Meter constant	Last test date	Next test date
Test result accuracy	Test result notes	Test performed by
Measurement type	Meter program	Meter Read Type
Remote phone number	Communication equipment type	Communication protocol
Data conversion arrangements	Data validation arrangements	Estimation instructions
Asset management plan details	Calibration tables (details of any calibration factors programmed into the meter)	Password details (the read and time set passwords only, separated by a space; the write password is not to be recorded in MSATS)
Test and calibration program details	User access rights details (i.e. details of any End User access to the metering installation such as pulse outputs)	Network Tariff Code additional information

For Retrospective Changes, the current MPB may populate the Change Request with:

Actual Change Date

TIMEFRAME & OBJECTION RULES



CR Code 3004 – Exchange of Metering Information

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	0	65

CR Code 3005 – Exchange of Metering Information – Retrospective

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	140	0

Objection Rules: Objections are not permitted

Assumption: Objection Rules applied to the NEM will be applied to WA

NOTIFICATION RULES



CR Code 3004 & 3005

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role

Assumptions: Notification Rules applied to the NEM will be applied to WA

CR 3050 & 3051 – CHANGE METERING INSTALLATION DETAILS



Initiating role: Current MPB

Change Reason Code	Comment
3050 – Change Metering Installation Details	Used where the Current MPB is required to make a Prospective Change to the metering installation details in MSATS. Each Meter Serial ID must exist in MSATS and a minimum set of metering installation details for the NMI shall exist upon Completion of the Change Request.
3051 – Change Metering Installation Details – Retrospective	Used where the Current MPB is required to make a Retrospective Change to the metering installation details in MSATS. Each Meter Serial ID must exist in MSATS and a minimum set of metering installation details for the NMI shall exist upon Completion of the Change Request.

Conditions Precedent	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
The metering installation details exists in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

CHANGE REQUEST OBLIGATIONS

The current MPB must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Submit a Change Request with:

Change Reason Code	Participant transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	Meter Serial ID (at least one)

For each meter associated to the NMI, where the Meter Register Status Code is to be 'C' (current) populate the Change Request with the following information (where this information does not currently exist in MSATS):

Meter Register Status Code	Metering Installation Type Code
----------------------------	---------------------------------

Assumption: Change Request Requirements applied to the NEM will be applied to WA

CHANGE REQUEST OBLIGATIONS

For each meter associated with the NMI, where the Register Status Code is to be 'C' (current) populate the Change Request with the following information:

Register ID	Register Identifier Status Code	Actual/cumulative indicator
Controlled Load indicator	Dial format	Multiplier value
Time of day code	Unit of measure code	

Where changes to Network Tariff information are required:

- Check that the Network Tariff Code is correct and, if it is not, update it to have the correct value
- Change the Network Tariff Code to ensure that the current information provided in MSATS is the latest information available from the current LNSP

CHANGE REQUEST OBLIGATIONS



The current MPB may populate the Change Request with:

MDM contributory suffix (for a register)	Meter hazard	Additional site information
Meter location	Meter point	Meter route
Meter use	Transformer location	Meter manufacturer
Meter model	Meter constant	Transformer type
Transformer ratio	Test result accuracy	Last test date
Next test date	Measurement type	Test result notes
Test performed by	Remote phone number	Meter program
Meter Read Type	Data conversion arrangements	Communication equipment type
Communication protocol	Asset management plan details	Data validation arrangements
Estimation instructions	Test and calibration program details	Calibration tables (details of any calibration factors programmed into the meter)
Password details (the read and time set passwords only, separated by a space; the write password is not to be recorded in MSATS)	User access rights details (i.e. details of any End User access to the metering installation such as pulse outputs)	Network Tariff Code
Network Tariff Code additional information		

For retrospective changes populate the Change Request with:

Actual Change Date

TIMEFRAME & OBJECTION RULES



CR Code 3050 – Change Meter Details

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	0	65

CR Code 3051 – Change Meter Details – Retrospective

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	140	0

Objection rules: Objections are not permitted

Assumption: Timing requirements applied to the NEM will be applied to WA

Participant Role – Receives Notification of Change

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	-	-	-	-
COMPLETED	-	Yes	-	Yes	-	Yes	-	Yes	-	Yes	-	-	-	Yes
OBJECTED	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PENDING	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REJECTED	-	-	-	-	-	-	-	-	-	Yes	-	-	-	-
REQUESTED	-	-	-	-	-	-	-	-	-	-	-	-	-	-

N = New Role, C = Current Role

Assumptions: Notification Rules applied to the NEM will be applied to WA

CR 3080 & 3081 – ADVANCED CHANGE METERING INSTALLATION DETAILS



Initiating role:

- A current Metering Co-ordinator
- Where a change of Role is included in the Change Request, the initiator must agree with all affected Participants of the Roles that are changing prior to creating the Change Request

Change Reason Code	Comment
3080 – Advanced Change Metering Installation Details	Used where the Current MC is required to provide Prospective Change(s) to the metering installation details in MSATS, including potential changes to Data-stream information, and to the Roles of MDP, MPB and MPC. The Change Request must include one or more changes to metering installation details for a Meter Serial ID and each Meter Serial ID must exist in MSATS. A minimum set of metering installation details for the NMI shall exist upon Completion.
3081 – Advanced Change Metering Installation Details – Retrospective	Used where the Current MC is required to provide Retrospective Change(s) to the metering installation details in MSATS, including potential changes to Data-stream information, and to the Roles of MDP, MPB and MPC. The Change Request must include one or more changes to metering installation details for a Meter Serial ID and each Meter Serial ID must exist in MSATS. A minimum set of metering installation details for the NMI shall exist upon Completion.

CR 3080 & 3081 – ADVANCED CHANGE METERING INSTALLATION DETAILS



Conditions Precedent	CATS	WIGS
NMI exist in MSATS	Yes	Not applicable
NMI Classification Code	SMALL or LARGE	Not applicable
Metering installation details exist in MSATs	Yes	Not applicable

CHANGE REQUEST OBLIGATIONS

The current Metering Co-ordinator must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Submit the Change Request with:

Change Reason Code	Participant transaction ID	Its Participant ID
Proposed Change Date	NMI	NMI Checksum
The Meter Serial ID (for each meter);		

- For each meter associated to the NMI, where the Meter Register Status Code is to be 'C' (current) populate the Change Request with (where this information does not currently exist in MSATS):

Meter Register Status Code	The Metering Installation Type
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CHANGE REQUEST OBLIGATIONS

The current Metering Co-ordinator must:

- For all Register IDs associated with the NMI, where the Register Identifier Status Code is to be 'C' (current) populate the Change Request with:

Register ID	Register Identifier Status Code (for each Register ID)	Unit of measure code (for each Register ID)
Multiplier value (for each Register ID)	Time of day code (for each Register ID)	Dial format (for each Register ID)
Network Tariff Code (for each Register ID)	Controlled Load indicator (for each Register ID)	Actual/cumulative indicator (for each Register ID)
MDM Contributory Suffix (for each register)		

- For all data-streams associated with the NMI, where the Data-stream Status Code is to be 'A' (active), populate the Change Request with):

NMI suffix	Data-stream type (for each suffix)	Profile Name (for each suffix)
ADL (for each suffix)	Data-stream Status Code (for each suffix)	

CHANGE REQUEST OBLIGATIONS



The current Metering Co-ordinator may populate the Change Request with the following for each meter:

MDP	MPB	MPC
Additional Site information	Next Scheduled Read Date	Meter location
Meter hazard	Meter route	Meter use
Meter point	Meter manufacturer	Meter model
Transformer location	Transformer type	Transformer ratio
Meter constant	Last test date	Next test date
Test result accuracy	Test result notes	Test performed by
Measurement type	Meter program	Meter Read Type
Remote phone number	Communication equipment type	Communication protocol
Data conversion arrangements	Data validation arrangements	Estimation instructions
Asset management plan details	Calibration tables (details of any calibration factors programmed into the meter)	Password details (the read and time set passwords only, separated by a space; the write password is not to be recorded in MSATS)
Test and calibration program details	User access rights details (i.e. details of any End User access to the metering installation such as pulse outputs)	

CHANGE REQUEST OBLIGATIONS



The current Metering Co-ordinator may populate the Change Request with:

Network Tariff Code additional information	Demand value 1, if the Network Tariff charge includes a demand component	Demand value 2, if the Network Tariff charge includes a second demand component
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For Retrospective Changes, populate the Change Request with:

Actual End Date

Where changes to Network Tariff information is required:

- Check that the Network Tariff Code is correct and, if it is not, update it to have the correct value
- Change the Network Tariff Code to ensure that the current information provided in MSATS is the latest information available from the current LNSP
- On receipt of a Data Request for Change Request Code 3080, the MDP must initiate a Change Request to provide the Actual Change Date

Assumption: Change Request Requirements applied to the NEM will be applied to WA

CR Code 3080 – Advanced Change Metering Installation Details

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	0	65

CR Code 3081 – Advanced Change Metering Installation Details Retrospective

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	130	0

Assumption: Timing Requirements applied to the NEM will be applied to WA

CR Code 3080 – Advanced Change Metering Installation Details

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		ROLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
DECLINED	ALL	ALL	-	-	-	-	Yes	-	Yes	-	-	-	-	-	-	-

CR Code 3081 – Advanced Change Metering Installation Details – Retrospective

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		ROLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
DECLINED	ALL	ALL	-	-	-	-	Yes	-	Yes	-	-	-	-	-	-	-
BADDATA	ALL	NSW VIC SA	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-	-

N = New Role, C = Current Role

Assumption: Objection Rules applied to the NEM will be applied to WA

NOTIFICATION RULES

Participant Role – Receives Notification of Change

Status Change	FRMP		LR		LNSP		MDP		MPB		RoLR		RP (MC)	
	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
OBJECTED	-	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	-	Yes
PENDING	-	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	-	Yes
REJECTED	-	-	-	-	-	Yes	-	-	-	-	-	-	-	Yes
REQUESTED	-	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	-	Yes

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA

CR 3090 & 3091 ADVANCED EXCHANGE OF METERING



Initiating role: Current Metering Co-ordinator

Change Reason Code	Comment
3090 – Advanced Exchange of Metering	Used where the Current MC is required to provide a Prospective Change to the information in MSATS relating to the metering installation details, including potential changes to Data-stream information, Network Tariff Code and to the Roles of MDP, MPB and MPC. The change shall include the removal of at least one existing meter and the installation of at least one new meter. A minimum set of metering installation details for the NMI shall exist upon Completion.
3091 – Advanced Exchange of Metering – Retrospective	Used where the Current MC is required to provide a Retrospective Change to the information in MSATS relating to the metering installation details, including potential changes to Data-stream information, Network Tariff Code and to the Roles of MDP, MPB and MPC. The change shall include the removal of at least one existing meter and the installation of at least one new meter. A minimum set of metering installation details for the NMI shall exist upon Completion.

CR 3090 & 3091 ADVANCED EXCHANGE OF METERING



Conditions Precedent	CATS	WIGS
The NMI exists in MSATS	Yes	Not applicable
The metering installation details do not exist in MSATS	Yes	Not applicable
NMI Classification Code	SMALL or LARGE	Not applicable
At least one meter is removed and one meter is created in each CR.	Yes	Not applicable
Meter Serial ID for the installed meter shall be different to the existing Meter Serial ID for the same NMI.	Yes	Not applicable

Initiating roles:

- A current Metering Co-ordinator
- Where a change of Role is included in the Change Request the initiator must agree with all affected Participants of the Roles that are changing prior to creating the Change Request

The current Metering Co-ordinator must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Submit the Change Request with:

Change Reason Code	Participant transaction ID	Its Participant ID
Proposed Change Date	NMI	NMI Checksum
Meter Serial ID (for each meter)		

CHANGE REQUEST OBLIGATIONS

The current Metering Co-ordinator must:

- For each meter associated to the NMI, where the Meter Register Status Code is to be 'C' (current) populate the Change Request with the following information:

Metering Installation Type	Meter Register Status Code
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- For all Register IDs associated with the NMI, where the Register Identifier Status Code is to be 'C' (current) populate the Change Request with the following information:

Register ID	Register Identifier Status Code (for each Register ID)	Unit of measure code (for each Register ID)
Multiplier value (for each Register ID)	Time of day code (for each register ID)	Dial format (for each register ID)
Network Tariff Code (for each Register ID)	Controlled Load indicator (for each Register ID)	Actual/cumulative indicator (for each Register ID)
MDM Contributory Suffix (for each register)		

CHANGE REQUEST OBLIGATIONS

- For all Data-streams associated to the NMI, where the Data-stream Status Code is to be 'A' (active) populate the Change Request with the following information (where this information does not currently exist in MSATS):

NMI suffix	Datastream type (for each suffix)	Profile Name (for each suffix)
Daily average load (for each suffix)	Data-stream Status Code (for each suffix)	

CHANGE REQUEST OBLIGATIONS



The current Metering Co-ordinator may populate the Change Request with:

MDP	MPB	MPC
Additional Site information	Next Scheduled Read Date	Meter location
Meter hazard	Meter route	Meter use
Meter point	Meter manufacturer	Meter model
Transformer location	Transformer type	Transformer ratio
Meter constant	Last test date	Next test date
Test result accuracy	Test result notes	Test performed by
Measurement type	Meter program	Meter Read Type
Remote phone number	Communication equipment type	Communication protocol
Data conversion arrangements	Data validation arrangements	Estimation instructions
Asset management plan details	Calibration tables (details of any calibration factors programmed into the meter)	Password details (the read and time set passwords only, separated by a space; the write password is not to be recorded in MSATS)
Test and calibration program details	User access rights details (i.e. details of any End User access to the metering installation such as pulse outputs)	

CHANGE REQUEST OBLIGATIONS

The current Metering Co-ordinator may:

- Populate the Change Request with:

Network Tariff Code additional information	Demand value 1, if the Network Tariff charge includes a demand component	Demand value 2, if the Network Tariff charge includes a second demand component
--	--	---

- For Retrospective Changes, populate the Change Request with:

Actual End Date

- Where changes to Network Tariff information is required:
 - Check that the Network Tariff Code is correct and, if it is not, update it to have the correct value
 - Change the Network Tariff Code to ensure that the current information provided in MSATS is the latest information available from the Current LNSP

Assumption: Rules applied to the NEM will be applied to WA.

TIMING REQUIREMENTS

MDP requirements: On receipt of a Data Request for CR Code 3090, the MDP must initiate a Change Request to provide the Actual Change Date

CR Code 3090 – Advanced Exchange of Metering

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	0	65

CR Code 3091 – Advanced Exchange of Metering –

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	130	0

Assumption: Timing requirements applied to the NEM will be applied to WA

OBJECTION RULES

CR Code 3090 – Advanced Exchange of Metering

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
DECLINED	ALL	ALL	-	-	-	-	Yes	-	Yes	-	-	-	-	-	-	-

CR Code 3091 – Advanced Exchange of Metering – Retrospective

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
DECLINED	ALL	ALL	-	-	-	-	Yes	-	Yes	-	-	-	-	-	-	
BADDATA	ALL	NSW VIC SA	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-	

N = New Role, C = Current Role.

Assumption: Objection Rules applied to the NEM will be applied to WA

NOTIFICATION RULES



Participant Role – Receives Notification of Change

Status Change	FRMP		LR		LNSP		MDP		MPB		RoLR		RP (MC)	
	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
OBJECTED	-	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	-	Yes
PENDING	-	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	-	Yes
REJECTED	-	-	-	-	-	Yes	-	-	-	-	-	-	-	Yes
REQUESTED	-	Yes	-	-	-	Yes	Yes	Yes	Yes	Yes	-	-	-	Yes

N = New Role, C = Current Role.

Assumption: Notification Rules applied to the NEM will be applied to WA

CR 3100 & 3101 - CHANGE NETWORK TARIFF CODE



Initiating roles: The current LNSP

Change Reason Code	Comment
3100 – Change Network Tariff	Used where the Current LNSP (or the ENM in the case of a Child NMI) is required to make a Prospective Change to Network Tariff Code.
3101 – Change Network Tariff – Retrospective	Used where the Current LNSP (or the ENM in the case of a Child NMI) is required to make a Retrospective Change to the Network Tariff Code.

Conditions Precedent	CATS	WIGS
NMI exists in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR
Meter Register data is loaded into MSATS	Yes	Yes

CHANGE REQUEST OBLIGATIONS

- Check that the Network Tariff Code created by the MPB when the meter was created in MSATS is correct and, if it is not, update it to have the correct value
- Change the Network Tariff Code in MSATS to ensure that the current information provided in MSATS is the latest information available from the Current LNSP
- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Submit a Change Request with the following:

Change Reason Code	Participant transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	Meter Serial ID
Register ID	Network Tariff Code (for each register)	

CHANGE REQUEST OBLIGATIONS & TIMING RULES



The current LNSP may:

- Populate a Change Request with:

Network Tariff Code additional information

- For Retrospective Changes, populate the Change Request with:

Actual Change Date

CR Code 3100 – Change Network Tariff

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	0	65

CR Code 3101 – Change Network Tariff – Retrospective

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	140	0

Assumption: Change Request & Timing requirements applied to the NEM will be applied to WA

OBJECTION AND NOTIFICATION RULES



Objection rules: Objection Rules are not permitted

CR Code 3100 & 3101

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA

MAINTAIN DATASTREAM CHANGE REASON CODES 4XXX SERIES

- WA appears to utilise B2B Service Order Provide/Verify Meter Data Processes for the maintenance of data-stream details
- The FRMP can trigger either a:
 - Provide Meter Data Request with investigation code ‘Missing Datastream’ when they reasonably believe the data is incomplete based on the configuration information provided in the MDF file.
- Or
 - Verify Meter Data Request with investigation code ‘Invalid MDFF Data’ where the Participant reasonably believes a datastream is provided in the MDF Data does not match the NMIConfiguration (e.g. mismatch between MSATS and MDF)
- The NEM Model also utilises Service Order Processes however in addition requires the MDP to Raise a Maintain Metering CATS Transaction to maintain data-stream’s in AEMO’s MSATS system

MSATS/WIGS MAINTAIN DATA-STREAM CHANGE REASON CODES



Reason Code	Description	NMI Classification Code	Initiating Participant	To be used by WA?
4000, 4001	Create Data-stream Details	SMALL, LARGE, WHOLESAL, GENERATR	Current MDP	Yes by WP as the MDP
4004, 4005	Exchange of Data-stream Information	SMALL, LARGE, WHOLESAL, GENERATR	Current MDP	Yes by WP as the MDP
4050, 4051	Change Data-stream Details	SMALL, LARGE, WHOLESAL, GENERATR	Current MDP	Yes by WP as the MDP

Metering Data Provider (MDP):

- A person who meets the requirements listed in schedule 7.3 and has been accredited and registered by AEMO under clause S7.3.1(c)

Clause 7.4.3 of the NER outlines a Metering Providers (MP) major obligations including to:

- Install and maintain metering installations (clause 7.4.3(a) of the NER)
- Ensure the metering installation is installed and maintained in accordance with the NEM Metrology Procedure (schedule S7.4 of the NER)

The MDP is responsible for ensuring that metering installations are provided, installed and maintained in accordance with the NEM metrology procedure (clause 7.2.5 of the NER), including:

- Ensuring the components, accuracy and testing of each metering installation complies
- Providing and maintaining the security control of a metering installation
- Where required, ensure that for each of its metering installations a communications link is installed and maintained to the telecommunications network and provide access to each of its metering installations from a telecommunications network

MDP Data-stream maintenance tasks include:

- Setting up new Data-stream configuration at the time of the creation of the NMI
- Active and inactive Data-stream status maintenance based on status of meter installation
- Date parameter alignment to accommodate meter churn processes
- For active non-interval NMI Data-streams the MDP must submit an aseXML message containing the metering data csv payload for the specific NMI Data-stream and settlements date

Assumption: Rules applied to the NEM will be applied to WA

CR 4000 & 4001 – CREATE NMI DATASTREAM



- **Initiating role:** A current MDP

Change Reason Code	Comment
4000 – Create NMI Data-stream Details	Used where the Current MDP makes a Prospective Change to the initial set of information in MSATS about the NMI Data-stream details, and there is no associated Data-stream status change to inactive for the NMI for the same effective date.
4001 – Create NMI Data-stream Details - Retrospective	Used where the Current MDP makes a Retrospective Change to the initial set of information in MSATS about the NMI Data-stream details, and there is no associated Data-stream status change to inactive for the NMI for the same effective date.

Conditions Precedents	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
The NMI Data-stream details do not exist in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

Assumption: Change Request requirements applied to the NEM will be applied to WA

CHANGE REQUEST OBLIGATIONS



The current MDP must:

- Obtain the NMI Checksum
- Confirm that the NMI is still valid for the connection point
- Populate a Change Request with:

Change Reason Code	Participant transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	NMI suffix (at least one)
Data-stream type (for each suffix)	Profile Name (for each suffix)	Daily average load (for each suffix)
Data-stream Status Code (for each suffix)		

- Obtain the ADL from the LNSP if this value is not otherwise provided by the new FRMP
- For retrospective changes, the current MDP may populate a Change Request with:

Actual End Date

TIMING REQUIREMENTS & OBJECTION RULES



Objection Logging Period (business days)		Objection Clearing Period (business days)		Retrospective Period (business days)	Prospective Period (business days)
SMALL NMI	LARGE, WHOLESAL, GENERATR NMI	SMALL NMI	LARGE, WHOLESAL, GENERATR NMI		
0	0	0	0	140	65

Objection Rules: Objections are not permitted

Assumption: Timing requirements applied to the NEM will be applied to WA

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA

CR 4004 & 4005 – EXCHANGE OF DATASTREAM INFORMATION



Initiating role: Current MDP

Change Reason Code	Comment
4004 – Exchange of Data-stream Information	Used where the Current MDP is required to make a Prospective Change to the NMI Data-stream in MSATS. The change will include at least one Data-stream status change to inactive and the creation of at least one new Data-stream. A minimum set of NMI Data-stream details for the NMI shall exist upon Completion.
4005 – Exchange of Data-stream Information – Retrospective	Used where the Current MDP is required to make a Retrospective Change to the NMI Data-stream in MSATS. The change will include at least one Data-stream status change to inactive and the creation of at least one new Data-stream. A minimum set of NMI Data-stream details for the NMI shall exist upon Completion.

Conditions Precedents	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
The metering installation details exist in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

CHANGE REQUEST OBLIGATIONS



The current MDP may:

- Obtain the NMI Checksum from an approved source
- Confirm that the NMI is valid for the connection point
- Submit a Change Request with:

Change Reason Code	Participant transaction ID	Its Participant ID
Proposed Change Date	NMI	NMI Checksum

For all Data-streams associated to the NMI, where the Data-stream Status Code is to be 'A' (Active) populate the Change Request with the following information:

NMI suffix (at least one)	Data-stream type (for each suffix)	Profile Name (for each suffix)
ADL (for each suffix)	Data-stream Status Code (for each suffix)	

CHANGE REQUEST OBLIGATIONS



The current MDP may:

- Populate a Change Request with:

Meter Serial ID (for each meter)	Register ID (for each Register ID)	MDM contributory suffix (for each Register ID)
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- For Retrospective Changes populate a Change Request with:

Actual End Date

Assumption: Change Request requirements applied to the NEM will be applied to WA

TIMING REQUIREMENTS & OBJECTION RULES



CR 4004 – Exchange of Datastream Information

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	0	65

CR 4005 – Exchange of Datastream Information – Retrospective

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	140	0

Objection Rules: Objections are not permitted

Assumption: Timing requirements and objection rules applied to the NEM will be applied to WA

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role

Assumption: Notification Rules applied in the NEM will be applied to WA

CR 4050 & 4051 – CHANGE NMI DATASTREAM



Initiating role: Current MDP

Change Reason Code	Comment
4050 – Change NMI Data-stream	Used where the Current MDP is required to make a Prospective Change to the NMI Data-stream in MSATS. Each Data-stream must exist in MSATS and a minimum set of NMI Data-stream details for the NMI shall exist upon Completion.
4051 – Change NMI Data-stream – Retrospective	Used where the Current MDP is required to make a Retrospective Change to the NMI Data-stream in MSATS . Each Data-stream must exist in MSATS and a minimum set of NMI Data-stream details for the NMI shall exist upon Completion.

Conditions Precedent	CATS	WIGS
NMI exists in MSATS	Yes	Yes
Metering installation and Data-stream details exist in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

CHANGE REQUEST OBLIGATIONS

The current MDP must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Submit a Change Request with the following:

Change Reason Code	Participant transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	Customer Classification Code (for Small/Large NMI's)

- For all Register IDs associated with the *NMI* suffix, where the Data-stream Status Code is to be 'A' (Active) populate the Change Request with the following information:

Data-stream type	Profile Name	Daily average load
Data-stream Status Code		

CHANGE REQUEST OBLIGATIONS



The current MDP may:

- Populate the Change Request with:

MDM contributory suffix	Meter Serial ID	Register ID
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- For Retrospective Changes, may populate the Change Request with:

Actual End Date

Assumption: Change Request requirements applied to the NEM will be applied to WA

Objection rules: Objections are not permitted

CR Code 4050 – Change NMI Datastream Details

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	0	65

CR Code 4051 – Change NMI Datastream Details – Retrospective

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	140	0

Assumption: Timing requirements and objection rules applied to the NEM will be applied to WA

NOTIFICATIONS RULES

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role

Assumption: Notification Rules applied in the NEM will be applied to WA

MAINTAIN NMI
CHANGE REASON CODE 5XXX SERIES



- The maintenance of a NMI in WA appears to be interlinked to Service Orders and NMI Discovery -Standing Data Responses and is exchanged between participants as part of the Network Operator's current Service Order handling and response processes
- NEM Model uses Service Order Processes and NMI Discovery - Standing Data Responses however also requires the various Roles to Raise a Maintain NMI CATS Transaction to maintain the NMI in AEMO's MSATS system

MAINTAIN NMI CHANGE REASON CODES



Reason Code	Description	NMI Classification Codes	Initiating Participant	To be used by WA?
5001, 5021	Backdate NMI Start Date	SMALL, LARGE, WHOLESAL, GENERATR	5001 LNSP or AEMO 5021 AEMO OR ENM	5001 Yes by WP as the LNSP 5021 Not Relevant as Embedded Networks are not in current scope for WA
5050, 5051	Change NMI	SMALL, LARGE, WHOLESAL, GENERATR	Current LNSP	Yes by WP as the LNSP
5054, 5055	Change NMI (Customer Classification Code)	SMALL, LARGE	Current FRMP	Yes by current FRMP
5060, 5061	Change NMI – Child NMI	SMALL, LARGE, WHOLESAL, GENERATR	Current Embedded Network Manager	Not Relevant as Embedded Networks are not in current scope for WA
5070, 5071	Update Next Scheduled Read Date	SMALL, LARGE	Current MDP	Yes by WP as the MDP. Only applies to non-remotely read meters
5080, 5081	Change Parent Name	SMALL, LARGE, WHOLESAL, GENERATR	Current LNSP	Not Relevant as Embedded Networks are not in current scope for WA
5090, 5091	Make a NMI a Child NMI	SMALL, LARGE, WHOLESAL, GENERATR	New Embedded Network Manager	Not Relevant as Embedded Networks are not in current scope for WA

NER clause 7.3.1 sets out that the responsible person is the person responsible, in accordance with Chapter 7, for the Metrology Procedure and Procedures authorised under the NER, including:

- Provision, installation and maintenance of a metering installation
- and
- Collection of metering data from each metering installation for which it is responsible, the processing of that data and the delivery of the processed data to the metering database and to parties entitled to that data in accordance with Part F of Chapter 7

Assumptions: Rules applied in the NEM will be applied to WA

On 1 July 2012, the AER assumed responsibility for regulating retail energy markets in those states and territories that had adopted the National Energy Customer Framework (NECF). This introduced the NMI Customer Classification Code

The introduction of the NECF package placed new obligations on retailers (FRMPs) regarding the classification of consumers and provision of NMI standing data to assist with accurate quoting and contracting of consumers in the NEM.

The Customer Framework includes the National Energy Retail Law, National Energy Retail Rules and National Energy Retail Regulations.

The NECF includes the National Energy Retail Law, National Energy Retail Rules and National Energy Retail Regulations.

As of 1 July 2015, NECF commenced in Queensland, New South Wales, the Australian Capital Territory, Tasmania and South Australia.

Assumption: While NECF is not anticipated to apply in WA it is assumed WA will use Customer Classification Code (similar to VIC who has not adopted NECF)

Initiating roles: AEMO or the LNSP may initiate a Change Request to backdate a NMI's Start Date in MSATS

Change Reason Code	Comment
5001 – Backdate NMI Start Date	Used where AEMO, on request from an LNSP, or the LNSP, backdates the initial set of information in MSATS in regard to a connection point to apply from a Retrospective Day.

Conditions Precedents	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

CHANGE REQUEST OBLIGATIONS



The New LNSP (who must be the current LNSP for the period where the NMI exists in MSATS) must:

- Obtain the NMI Checksum
- Confirm that the NMI is still valid for the connection point
- Populate a Change Request with the following:

Participant Transaction ID	NMI and NMI Checksum	Participant ID
Proposed Change Date	Actual End Date (which should be the day prior to the day that the NMI Master Record starts)	TNI Code
DLF Code	NMI Classification Code	Jurisdiction Code
FRMP	LR	RoLR
RP	MDP	MPB
MPC	LNSP as itself	NMI Status Code
Locality	State	Postcode

CHANGE REQUEST OBLIGATIONS

The New LNSP (who must be the current LNSP for the period where the NMI exists in MSATS) must:

- Populate the Change Request with values for the following address fields (as appropriate):

EITHER

DPID	Flat number	Flat type
Floor number	Floor type	House number
House number suffix	Location descriptor	Lot number
Street name	Street suffix	Street type

OR

Unstructured Address 1	Unstructured Address 2	Unstructured Address 3
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The LNSP may:

- Populate the Change Request with the following information:

Parent Name	Building name	Feeder Class
Customer Threshold Code		

- AEMO must:
On request from an LNSP, populate a Change Request with the data provided by the LNSP in accordance with CR 5001
- MPB must:
On receipt of a Completed notification, backdate the metering installation details using Change Reason Code 3001 (Create metering installation details – Retrospective)

Assumption: Change Request requirements applied in the NEM will be applied to WA

CR Code 5001 – Backdate NMI Start Date

Objection Logging Period (business days)		Objection Clearing Period (business days)		Retrospective Period (business days)	Prospective Period (business days)
SMALL NMI	LARGE, WHOLESALE, GENERATOR NMI	SMALL NMI	LARGE, WHOLESALE GENERATOR NMI		
1	1	10	20	140	0

Assumption: Timing requirements applied in the NEM will be applied to WA

OBJECTION & NOTIFICATION RULES



CR Code 5001 - Objection Rules

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
NOTRESP	SMALL	ALL	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-
	LARGE, WHOLESAL, GENERATR		Yes	-	Yes	-	Yes	-	Yes	-	-	-	-	-	-	-
BADPARTY	ALL	ALL	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-

CR Code 5001 Notification Rules

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

N = New Role, C = Current Role

Assumption: Objection Rules applied in the NEM will be applied to WA

Initiating role: Current LNSP

Change Reason Code	Comment
5050 – Change NMI Details	Used where the Current LNSP is required to make a Prospective Change to the set of information in MSATS about a connection point.
5051 – Change NMI Details – Retrospective	Used where the Current LNSP is required to make a Retrospective Change to the information in MSATS about a connection point.

Conditions Precedents	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

CHANGE REQUEST OBLIGATIONS

The current LNSP must:

- Obtain the NMI Checksum from an approved source
- Confirm that the NMI is valid for the connection point
- Submit a Change Request with the following:

Change Reason Code	Participant Transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	

CHANGE REQUEST OBLIGATIONS

The current LNSP may populate a Change Request with:

TNI Code	DLF Code	NMI Classification Code
Jurisdiction Code	NMI Status Code	Parent Name
Locality	State	Postcode
Building name	DPID	Flat number
Flat type	Floor number	Floor type
House number	House number suffix	Location descriptor
Lot number	Street name	Street suffix
Street type	Unstructured Address 1	Unstructured Address 2
Unstructured Address 3	Feeder Class	Customer Threshold Code

For retrospective changes, the current LNSP may populate the Change Request with:

Actual Change Date

TIMING REQUIREMENTS



CR Code 5050 – Change a NMI Prospective

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	0	65

CR Code 5051 – Change a NMI Retrospective

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	140	0

Note: An Objection Logging Period of zero means Objections need to be logged by midnight of the business day that the Change Request is submitted

Assumption: Timing requirements applied in the NEM will be applied to WA

OBJECTION RULES



Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
BADMETER	ALL	ALL	-	-	-	-	-	Yes	-	-	-	-	-	-	-	-
NOTRESP	ALL	ALL	-	-	-	-	-	Yes	-	-	-	-	-	-	-	-

N = New Role, C = Current Role

Assumption: Objection Rules applied to the NEM will be applied to WA

NOTIFICATION RULES

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA

CR CODE 5054 & 5055 – CHANGE NMI DETAILS CUSTOMER CLASSIFICATION CODE



Initiating role: Current FRMP

Change Reason Code	Comment
5054 – Change NMI Details – Customer Classification Code	Used where the Current FRMP is required to make a Prospective Change to the Customer Classification Code.
5055 – Change NMI Details – Customer Classification Code – Retrospective	Used where the Current FRMP is required to make a Retrospective Change to the Customer Classification Code.

Conditions Precedents	CATS	WIGS
The NMI exists in MSATS	Yes	No
NMI Classification Code	SMALL or LARGE	Not Applicable

CHANGE REQUEST OBLIGATIONS



The current FRMP must:

- Obtain the NMI Checksum
- Confirm that the NMI is a valid for the connection point
- Submit a Change Request with the following:

Change Reason Code	Participant transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	Customer Classification Code

For Retrospective Changes, the Current FRMP may populate a Change Request with:

Actual End Date

Assumption: Obligations applied in the NEM will be applied to WA for the use of creating/maintain Customer Classifications codes (business/residential)

TIMING REQUIREMENTS & OBJECTION RULES



CR Code 5054 – Change NMI Customer Classification Code

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	0	65

CR Code 5055 – Change NMI Customer Classification Code Retrospectively

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	140	0

Objection rules: Objections are not permitted

Assumption: Timing requirements applied in the NEM will be applied to WA

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role.

Assumption: Notification Rules applied to the NEM will be applied to WA

CR CODE 5070 & 5071 UPDATE NEXT SCHEDULED READ DATE



Initiating role: A current MDP

Change Reason Code	Comment
5070 – Update Next Scheduled Read Date	Used where the Current MDP is required to provide MSATS with the Next Scheduled Read Date prospectively.
5071 – Update Next Scheduled Read Date – Retrospective	Used where the Current MDP is required to provide MSATS with the Next Scheduled Read Date retrospectively. Note if this transaction is submitted by batch, the database MSATS will be updated straight away.

Conditions Precedent	CATS	WIGS
NMI exists in MSATS	Yes	No
NMI Classification Code	SMALL or if LARGE only applies to non-remotely read meters	No

TIMING REQUIREMENTS AND OBJECTION RULES



CR Code 5070 – Update Next Scheduled Read Date

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	0	3

CR Code 5071 – Update Next Scheduled Read Date – Retrospective

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
0	0	1	0

Objection rules: Objections are not permitted

Assumption: Change Request requirements applied to the NEM will be applied to WA

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA

CHANGE ROLES
CHANGE REASON CODE 6XXX SERIES



- Maintenance of change roles in WA appears to be interlinked to related Service Order Processes and Transfers
- NEM Model uses Service Order Processes and Transfers however also considers where a change of Role can occur without either on in conjunction, it requires the relevant role to Raise a Change Role CATS Transaction to maintain Role information in AEMO's MSATS

MSATS/WIGS CHANGE ROLE CODES



Reason Code	Description	NMI Classification Codes	Initiating Participant	To be used in WA?
6100	Change LNSP	SMALL, LARGE, WHOLESAL, GENERATR	New LNSP	Unlikely as WP is the only LNSP
6110	Change LNSP – Retrospective	SMALL, LARGE, WHOLESAL, GENERATR	New LNSP	Unlikely as WP is the only LNSP
6200	Change MDP	SMALL, LARGE, WHOLESAL, GENERATR	Current FRMP or Current MC	Unlikely unless Meter Competition is adopted as WP is the only MDP
6210	Change MDP – Retrospective	SMALL, LARGE, WHOLESAL, GENERATR	Current FRMP or Current MC	Unlikely unless Meter Competition is adopted as WP is the only MDP
6300	Change MC	SMALL, LARGE, WHOLESAL, GENERATR	New MC	Not Initially unless Meter Competition is adopted
6301	Change MC – Retrospective	SMALL, LARGE, WHOLESAL, GENERATR	New MC	Not Initially unless Meter Competition is adopted
6400	Change LR	SMALL, LARGE, WHOLESAL, GENERATR	New LR	Unlikely unless another LR is introduced
6401	Change LR – Retrospective	SMALL, LARGE, WHOLESAL, GENERATR	New LR	Unlikely unless another LR is introduced

MSATS/WIGS CHANGE ROLE CODES



Reason Code	Description	NMI Classification Codes	Initiating Participant	To be used in WA?
6421	Change LR – Retrospective – Child NMI	SMALL, LARGE, WHOLESAL, GENERATR	New LR	Not relevant for WA as Embedded Networks are not anticipated to be utilised/in scope for WA
6500	Change RoLR	SMALL, LARGE, WHOLESAL, GENERATR	New RoLR	Unlikely unless another RoLR is introduced
6501	Change RoLR – Retrospective	SMALL, LARGE, WHOLESAL, GENERATR	New RoLR	Unlikely unless another RoLR is introduced
6700	Change MP	SMALL, LARGE, WHOLESAL, GENERATR	Current MC	Unlikely unless Meter Competition is adopted as WP is the MP
6701	Change MP – Retrospective	SMALL, LARGE, WHOLESAL, GENERATR	Current MC	Unlikely unless Meter Competition is adopted as WP is the MP
6800	Change Multiple Roles	SMALL, LARGE,	Current FRMP or Current MC	Unlikely unless Meter Competition is adopted as WP will take on the roles of MC, MDP, MBP and MPC
6801	Change Multiple Roles - Retrospective	SMALL, LARGE,	Current FRMP or Current MC	Unlikely unless Meter Competition is adopted as WP will take on the roles of MC, MDP, MBP and MPC

CR CODE 6100 & 6100 – CHANGE LNSP



Initiating roles: New LNSP or new Embedded Network Manager (ENM)

Change Reason Code	Comment
6100 – Change LNSP	Used where the New LNSP (or the New ENM) is required (either by a regulatory change or due to an error in the NMI Master Record) to apply a Prospective Change to the name of the Current LNSP (or the Current ENM) in MSATS.
6110 – Change LNSP – Retrospective	Used where the New LNSP (or the New ENM) is required (either by a regulatory change or due to an error in the NMI Master Record) to apply a Retrospective Change to the name of the Current LNSP (or the Current ENM) in MSATS.

Conditions Precedent	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

Assumptions:

- WP will be the only LNSP so therefore Change Reason Codes 6100 and 6100 are not anticipated to be initially used in WA
- Embedded Network Managers are not anticipated to be utilised/in scope for WA

CHANGE REQUEST OBLIGATIONS



The New LNSP (or ENM) must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Submit a Change Request with the following with:

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

- Nominate itself as the new LNSP (or ENM)

CHANGE REQUEST OBLIGATIONS



The New LNSP (or ENM) may populate a Change Request with:

TNI Code	DLF Code	NMI Classification Code
Jurisdiction Code		

For retrospective changes, the new LNSP (or ENM) may populate a Change Request with:

Actual Change Date	
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TIMING OBLIGATIONS



CR Code 6100 – Change LNSP			
Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	0	65
CR Code 6110 – Change LNSP – Retrospective			
Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	130	0

Assumption: Timing requirements applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

CR Code 6100 – Change LNSP

Objection Code	NMI Classes	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP(MC)		LNSP		
			N	C	N	C	N	C	N	C	N	C	N	C	N	C	
BADDATA	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
NOTRESP	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes

CR Code 6110 – Change LNSP - Retrospective

Objection Code	NMI Classes	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP(MC)		LNSP		
			N	C	N	C	N	C	N	C	N	C	N	C	N	C	
BADDATA	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
NOTRESP	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
RETRO	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes

Assumption: Objection Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

CR CODE 6200 & 6210 – CHANGE MDP



Initiating roles: Current FRMP or current Metering Co-ordinator

Change Reason Code	Comment
6200 – Change MDP	Used where the Current FRMP or Current MC is required to apply a Prospective Change to the name of the Current MDP.
6210 – Change MDP – Retrospective	Used where the Current FRMP or Current MC is required to apply a Retrospective Change to the name of the Current MDP.

Conditions Precedent	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

Assumption: WP will continue to act in the MDP role therefore Change Reason Codes 6100 and 6100 are not anticipated to be initially used in WA until Metering Competition is introduced

CHANGE REQUEST OBLIGATIONS



The Current FRMP or current Metering Co-ordinator must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Submit a Change Request with the following:

Change Reason Code	Participant transaction ID	NMI and NMI Checksum
Participant ID	Proposed Change Date	MDP

- For retrospective changes, may populate a Change Request with:

Actual End Date

- On receipt of a Change Request 6200, the MDP must initiate a change request to provide the Actual Change Date

TIMING REQUIREMENTS

CR Code 6200 – Change MDP			
Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	0	65
CR Code 6210 – Change MDP – Retrospective			
Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	130	0

Assumption: Notification Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

OBJECTION RULES

CR Code 6200 – Change MDP

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C		
BADMETER	ALL	ALL	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-
DECLINED	ALL	ALL	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-
NOTRESP	ALL	ALL	-	-	-	-	-	Yes	-	-	-	-	-	-	-	-

CR Code 6210 – Change MDP Retrospectively

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C		
BADMETER	ALL	ALL	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-
DECLINED	ALL	ALL	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-
NOTRESP	ALL	ALL	-	-	-	-	-	Yes	-	-	-	-	-	-	-	-
BADDATA	SMALL	NSW VIC SA	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-	-
BADDATA	LARGE	ALL	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-	-
BADDATA	WHOLSAL GENERTR	ALL	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-	-

N = New Role, C = Current Role

Assumption: Objection Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

NOTIFICATION RULES

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

CR CODE 6300 & 6301 – CHANGE MC



Initiating roles: New Metering Co-ordinator

Change Reason Code	Comment
6300 – Change MC	Used where the New MC is required to apply a Prospective Change to the Current MC.
6301 – Change MC – Retrospective	Used where the New MC is required to apply a Retrospective Change to the Current MC.

Conditions Precedent	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

Assumption: WP will take on the role of MC therefore CR Codes 6300 and 6301 are not anticipated to be initially used in WA until Metering Competition is introduced

CHANGE REQUEST REQUIREMENTS

The new MC must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Submit a Change Request with the following:

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

- Nominate itself as the new Metering Co-ordinator
- For retrospective changes, the new Metering Co-ordinator may populate a Change Request with:

Actual End Date

- After receiving a CR 6300, the MDP must initiate a change request to provide the Actual Change Date

TIMING REQUIREMENTS



CR Code 6300 – Change MC			
Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	0	65
CR Code 6301 – Change MC – Retrospective			
Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	130	0

Assumption: Timing requirements applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

OBJECTION RULES

CR Code 6300 – Change MC

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C		
BADPARTY	SMALL LARGE	ALL	-	Yes	-	-	-	-	-	-	-	-	-	Yes	-	-
NOTRESP	WHOLESALE GENERATOR	ALL	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-
BADPARTY	WHOLESALE GENERATOR	ALL	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-

CR Code 6301 – Change MC Retrospective

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C		
BADPARTY	SMALL LARGE GENERATOR WHOLESALE	ALL	-	Yes	-	-	-	-	-	-	-	-	-	Yes	-	-
RETRO	SMALL LARGE	ALL	-	Yes	-	-	-	-	-	-	-	-	-	Yes	-	-
RETRO	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-
NOTRESP	GENERATOR WHOLESALE	ALL	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-

N = New Role, C = Current Role

Assumption: Objection Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

NOTIFICATION RULES

CR Code 6300 – Change MC

Status Change	NMI CLASS	FRMP		LR		LNSP		MDP		MPB		RoLR		RP (MC)	
		N	C	N	C	N	C	N	C	N	C	N	C	N	C
CANCELLED	ALL	-	Yes	-	-	-	-	-	-	-	-	-	-	Yes	Yes
COMPLETED	ALL	-	Yes	-	Yes	-	Yes	-	Yes	-	Yes	-	-	Yes	Yes
OBJECTED	ALL	-	Yes	-	-	-	-	-	-	-	-	-	-	Yes	Yes
PENDING	GENERATR WHOLESAL	-	Yes	-	-	-	-	-	-	-	-	-	-	Yes	Yes
REJECTED	ALL	-	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes
REQUESTED	ALL	-	Yes	-	-	-	-	-	-	-	-	-	-	Yes	Yes

CR Code 6301 – Change MC Retrospective

Status Change	NMI CLASS	FRMP		LR		LNSP		MDP		MPB		RoLR		RP (MC)	
		N	C	N	C	N	C	N	C	N	C	N	C	N	C
CANCELLED	ALL	-	Yes	-	-	-	-	-	-	-	-	-	-	Yes	Yes
COMPLETED	ALL	-	Yes	-	Yes	-	Yes	-	Yes	-	Yes	-	-	Yes	Yes
OBJECTED	ALL	-	Yes	-	-	-	-	-	-	-	-	-	-	Yes	Yes
PENDING	ALL	-	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes
REJECTED	ALL	-	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes
REQUESTED	SMALL LARGE	-	Yes	-	-	-	-	-	-	-	-	-	-	Yes	Yes

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

CR CODE 6400 & 6401 – CHANGE LR (LOCAL RETAILER)



Initiating role: New LR

Change Reason Code	Comment
6400 – Change LR	Used where the New LR is required (either by a regulatory change or due to an error in the NMI Master Record) to apply a Prospective Change to the name of the Current LR.
6401 – Change LR – Retrospective	Used where the New LR is required (either by a regulatory change or due to an error in the NMI Master Record) to apply a Retrospective Change to the name of the Current LR.

Conditions Precedent	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

Assumption: Unless another LR is introduced Change Reason codes 6400 and 6401 are unlikely to be used for WA

CHANGE REQUEST REQUIREMENTS



The new LR must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Submit a Change Request with:

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

- Nominate itself as the new LR
- For retrospective changes, the New LR may populate a Change Request with:

Actual End Date

CR Code 6400 – Change LR

Objection Logging Period (business days)		Objection Clearing Period (business days)		Retrospective Period (business days)	Prospective Period (business days)
SMALL NMI	LARGE, WHOLESAL, GENERATR NMI	SMALL NMI	LARGE, WHOLESAL, GENERATR NMI		
1	1	10	20	0	65

CR Code 6401 – Change LR Retrospective

Objection Logging Period (business days)		Objection Clearing Period (business days)		Retrospective Period (business days)	Prospective Period (business days)
SMALL NMI	LARGE, WHOLESAL, GENERATR NMI	SMALL NMI	LARGE, WHOLESAL, GENERATR NMI		
1	1	10	20	130	0

Assumption: Timing Requirements applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

CR Code 6400 – Change LR

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
NOTRESP	ALL	ALL	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-

CR Code 6401- Change LR Retrospective

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
NOTRESP	ALL	ALL	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-
RETRO	ALL	ALL	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-

N = New Role, C = Current Role

Assumption: Objection Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

NOTIFICATION RULES

Participant Role – Receives Notification of Change

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

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

Initiating role: New RoLR

Change Reason Code	Comment
6500 – Change RoLR	Used where the New RoLR is required (either by a regulatory change or due to an error in the NMI Master Record) to apply a Prospective Change to the name of the Current RoLR.
6501 – Change RoLR – Retrospective	Used where the New RoLR is required (either by a regulatory change or due to an error in the NMI Master Record) to apply a Retrospective Change to the name of the Current RoLR.

Conditions Precedent	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

Assumption: Unless another RoLR is introduced Change Reason codes 6500 and 6501 are unlikely to be utilised for WA

CHANGE REQUEST REQUIREMENTS



The New RoLR must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point
- Submit a Change Request with the following:

Change Reason Code	Participant Transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	

- Nominate itself as the New RoLR
- For retrospective changes, the New LR may populate a Change Request with:

Actual End Date

CR Code 6500 – Change RoLR

Objection Logging Period (business days)		Objection Clearing Period (business days)		Retrospective Period (business days)	Prospective Period (business days)
SMALL NMI	LARGE, WHOLESAL, GENERATR NMI	SMALL NMI	LARGE, WHOLESAL, GENERATR NMI		
0	0	0	0	0	65

CR Code 6501 – Change RoLR Retrospective

Objection Logging Period (business days)		Objection Clearing Period (business days)		Retrospective Period (business days)	Prospective Period (business days)
SMALL NMI	LARGE, WHOLESAL, GENERATR NMI	SMALL NMI	LARGE, WHOLESAL, GENERATR NMI		
0	0	0	0	130	0

Assumption: Timing Requirements applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

CR Code 6500 – Change RoLR

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
NOTRESP	SMALL LARGE	ALL	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-

CR Code 6501- Change RoLR Retrospective

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
NOTRESP	SMALL LARGE	ALL	-	-	-	Yes	-	-	-	-	-	-	-	Yes	-	-
RETRO	SMALL LARGE	ALL	-	-	-	Yes	-	-	-	-	-	-	-	Yes	-	-

N = New Role, C = Current Role

*Objections not permitted for NMI Classification Codes: WHOLESAL or GENERATR

Assumption: Objection Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

NOTIFICATION RULES

CR Code 6500 and 6501

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

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA if this Change Request code becomes relevant to WA

6700 & 6701 – CHANGE MPB OR MPC OR BOTH



Initiating role: Current MC

Change Reason Code	Comment
6700 – Change MPB or MPC or both	Used where the Current MC is required to provide a Prospective Change to the Current MPB or MPC or both.
6701 – Change MPB or MPC or both – Retrospective	Used where the Current MC is required to provide a Retrospective Change the Current MPB or MPC or both.

Conditions Precedent	CATS	WIGS
The NMI exists in MSATS	Yes	Yes
NMI Classification Code	SMALL or LARGE	WHOLESALE or GENERATOR

Assumption: WP will take on the roles of MPB, MPC and MC therefore Change Request Codes 6300 and 6301 are not anticipated to initially be used in WA until Metering Competition is introduced

CHANGE REQUEST OBLIGATIONS



The current MC must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point prior to the initiation of a Change Request
- Submit a Change Request with the following:

Change Reason Code	Participant Transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	

- Submit a Change Request with at least one of:

MPB	MPC
-----	-----

CHANGE REQUEST OBLIGATIONS



- Nominate itself as the new LR
- For retrospective changes, the current MC may populate a Change Request with:

Actual End Date

- On receipt of a data request for CR 6700, the MDP must initiate a Change Request to provide the Actual Change Date.

TIMING REQUIREMENTS



CR Code 6700 – Change MPB or MPC or both

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	0	65

CR Code 6701 - Change MPB OR MPC or both - Retrospective

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	130	0

Assumption: Timing requirements applied to the NEM will be applied to WA if this Change Request code becomes relevant to WA

OBJECTION RULES



CR Code 6700 and 6701

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		RoLR		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
DECLINED	ALL	ALL	-	-	-	-	-	-	Yes	-	-	-	-	-	-	-
NOTAPRD	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes

N = New Role, C = Current Role

Assumption: Objection Rules applied to the NEM will be applied to WA if this Change Request code becomes relevant to WA.

NOTIFICATION RULES



CR Code 6700 and 6701

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

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA if this Change Request code becomes relevant to WA

6800 & 6801 - CHANGE MULTIPLE ROLES



Initiating role: Current FRMP or Metering Co-ordinator

Change Reason Code	Comment
6800 – Change Multiple Roles	Used where the Current FRMP or Current MC is required to provide concurrent Prospective Changes to one or more Roles.
6801 – Change Multiple Roles – Retrospective	Used where the Current FRMP or Current MC is required to provide concurrent Retrospective Changes to one or more Roles.

Conditions Precedent	CATS	WIGS
The NMI exists in MSATS	Yes	No
NMI Classification Code	SMALL or LARGE	No
The date of the change of MC, MDP, MBP or MPC will be the Actual Change Date	Yes	No

Assumption: WP will take on the roles of MC, MDP, MBP and MPC therefore Change Request Codes 6800 and 6801 are not anticipated to be initially used in WA until Metering Competition is introduced

CHANGE REQUEST REQUIREMENTS



The current FRMP or Metering Co-ordinator must:

- Obtain the NMI Checksum
- Confirm that the NMI is valid for the connection point prior to the initiation of a Change Request
- Submit a Change Request with the following:

Change Reason Code	Participant Transaction ID	NMI and NMI Checksum
Its Participant ID	Proposed Change Date	

- Submit a Change Request with at least one of:

MDP	MPB	MPC
RP (only Current FRMP)		

- For retrospective changes, the current FRMP or MC may populate a Change Request with:

Actual End Date

The MDP must:

- On receipt of a Data Request for Change Reason Code 6800 initiate a Change Request to provide the Actual Change Date
- For Prospective Changes that do not require a Meter Reading, provide the Actual Change Date within 2 days of the Proposed Change Date being reached
- For changes that require a Meter Reading, provide the Actual Change Date within 2 days of the meter read

TIMING REQUIREMENTS



CR Code 6800 – Change Multiple Roles

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	0	65

CR Code 6801 – Change Multiple Roles – Retrospectively

Objection Logging Period (business days)	Objection Clearing Period (business days)	Retrospective Period (business days)	Prospective Period (business days)
1	20	130	0

Assumption: Timing requirements applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

CR Code 6800 – Change Multiple Roles

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		MPC		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
BADMETER	ALL	ALL	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-
BADPARTY	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-
DATEBAD	ALL	ALL	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-	-
DECLINED	ALL	ALL	-	-	-	-	Yes	-	Yes	-	Yes	-	Yes	-	-	-
NOTAPRD	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
NOTRESP	ALL	ALL	-	-	-	-	-	Yes	-	Yes	-	Yes	-	-	-	-
NOACC	ALL	ALL	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-

N = New Role, C = Current Role

Assumption: Objection Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

CR Code 6800 – Change Multiple Roles – Retrospectively

Objection Code	NMI Class	Jur'n	FRMP		LR		MDP		MPB		MPC		RP (MC)		LNSP	
			N	C	N	C	N	C	N	C	N	C	N	C	N	C
BADMETER	ALL	ALL	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-
BADPARTY	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-
DATEBAD	ALL	ALL	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-	-
DECLINED	ALL	ALL	-	-	-	-	Yes	-	Yes	-	Yes	-	Yes	-	-	-
NOTAPRD	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
NOTRESP	ALL	ALL	-	-	-	-	-	Yes	-	Yes	-	Yes	-	-	-	-
RETRO	ALL	ALL	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-
BADDATA	ALL	ALL	-	-	-	-	-	Yes	-	-	-	-	-	-	-	-
NOACC	ALL	ALL	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-

N = New Role, C = Current Role

Assumption: Objection Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

NOTIFICATION RULES

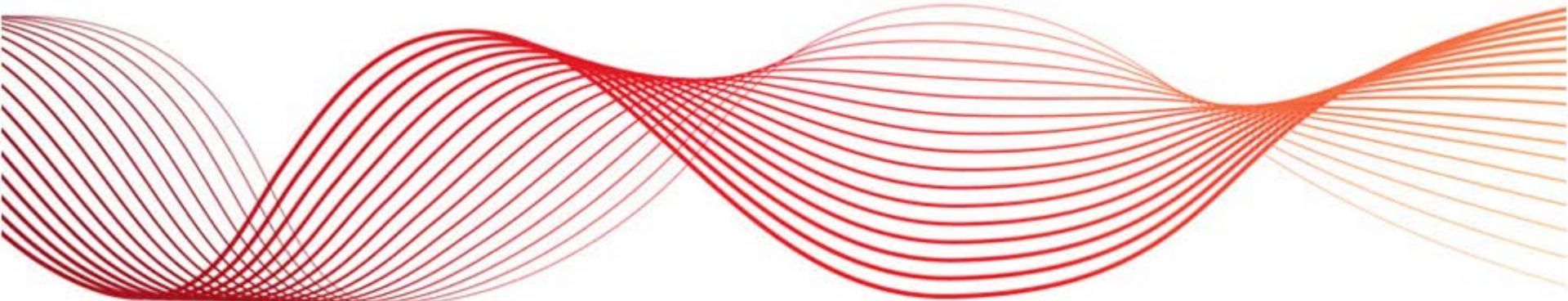
CR Code 6800 & 6801

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

N = New Role, C = Current Role

Assumption: Notification Rules applied to the NEM will be applied to WA if this Change Reason code becomes relevant to WA

NEXT STEPS



- AEMO expects to undertake a further review of the MSATS & WIGS Procedures once the WA policy direction is certain, including: identifying procedure changes required to incorporate WA, formal consultation processes, IT business requirements and market readiness activities
- MSATS training course (existing NEM) is to be reviewed and the timeframes for WA participant attendance is being considered by AEMO
- Next forum will provide an overview of the NEM B2B Procedures and related transactions

QUESTIONS



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

MSATS REPORTS

MAY 2017



AGENDA

1. Objectives
2. Master Data
3. MSATS Reports
4. Related Documents
5. Data Model
6. The History Model for CATS Master Tables & Related information
7. NMI Master Enquiry
8. CATS C4 – NMI Master Report
9. CATS C1 – Data Replication Resynchronisation Report
10. Snapshot Report
11. Other Reports for Reference

To provide participants with an overview MSATS CATS Reports which can be run by participants

- CATS C4 – NMI Master Report
 - CATS C1 – Data Replication Resynchronisation Report
 - Snapshot Report
-
- Other reports included in this presentation are for information purposes
 - Data records returned in reports will vary by Role (e.g. FRMP) and what a participant is entitled to access in accordance with the Standing Data Access Rules

Notifications of completed change requests are the main method for maintaining master data in MSATS and Participants systems

Master data can also be obtained from MSATS via the

- NMI Master screen
- Participant Relationships screen
- C4 report (NMI Master)
- C1 report (Data Replication Resynchronisation Report)

Generally used:

- To check for discrepancies between your system and MSATS
- If you have to resynchronise because of missed notifications

MSATS CATS REPORTS



Report Description	Access Level	Row Limit
C1 – Data Replication Resynchronisation Report	P	30000
C2 – NMI Audit Report	N	1000
C3 – NMI Change Request Report	P	10000
C4 – NMI Master Report	P	500
C6 – NMI Discovery Audit Report	N	200
C7 – New Participant Data Access Report	P	200
C8 – Security Report	N	100000
C9 – Count Report	P	5000
C12 – ROLR NMI Count Report	N	10000

Access Level: P = Participant, N = NEMMCO Only

MSATS MDM REPORTS



Report Description	Access Level	Row Limit
RM 7 – MDP Data Delivery Report	N	100
RM8 – Date BMP PPS Generated Report	P	100
RM9 – Actual vs Estimate Report	P	50
RM10 – Load Aggregation Error Report	N	200
RM11 – MDM Missing Data (null) Report	P	20000
RM12 – Wholesale Maximum Value Report	N	100
RM13 – NMI Data-streams History Report	P	100
RM14 – Data Version Comparison Report	P	200
RM15 – Multiple Versions Report	P	50
RM16 – L1 Settlement Reconciliation Report	P	2000
RM17 – L3 Settlement Reconciliation Report	P	100

Access Level: P = Participant, N = NEMMCO Only

MSATS MDM REPORTS



Report Description	Access Level	Row Limit
RM18 – Electricity Interval Data Report	P	200
RM19 – Aggregated Actual vs Estimate Report	N	50
RM20 – Profile Shape Data Report	P	4000
RM21 – L2 Settlement Reconciliation (with FRMP) Report	N	30000
RM21 – L2 Settlement Reconciliation	P	3000
RM22 – Data Estimation Report	P	20000
RM23 – Settlement – Aggregated Data	P	200
RM24 – Settlement – Non Aggregated Data	P	200
RM25 – Settlement – Profile Shape Data	N	1000
RM26 – MDP Substitution and Estimation	N	10000
RM26 – MDP Substitution and Estimation Report	P	10000

Access Level: P = Participant, N = NEMMCO Only

The Modelling of the CATS data is complex because:

- Data can be updated retrospectively: AND
- It must be possible to tell what it looked like as at any time in the past

This complex data model is called the CATS History model because it allows you to track the history of changes to the master data

CATS uses a history model for the five NMI master data tables that relies on a combination of:

- Two different types of dates
- the settlement date range (trading dates)
- the date the database record was created and/or updated
- An update process that doesn't change the business data in any existing database record

An update to an existing record:

- Marks the existing record as obsolete (inactive), as at a certain date, and, for most updates:
 - Replaces the obsolete record with two new active records:
 - One has the old configuration (up to the day before the actual change date on the Change Request)
 - The other has the new configuration (starting from the actual change date)

EXAMPLE FROM NMI DATA STREAMS LIST VIA MSATS BROWSER



NMI Data Streams - List							Participant ID:	NEMMCO		
							Participant Name:	NEMMCO		
Data Streams for: ABC0000630										
Suffix	Type	Average Daily Load	Profile Name	Start Date	End Date	Status Code	Activity Status	Updated On	Created On	
N1	I	100	NOPROF	12-Jun-2004	6-May-2006	A	A	31-Dec-9999	7-Jun-2006	
N1	I	180	NOPROF	7-May-2006	31-Dec-9999	A	A	31-Dec-9999	7-Jun-2006	
N1	I	100	NOPROF	12-Jun-2004	31-Dec-9999	A	I	7-Jun-2006	21-Jun-2004	

- Three database records for the one datastream suffix (N1)
- Bottom row is the original record, created on 21-Jun-04, with a Start Date of 12-Jun-04 and an End Date to the end of time (31-Dec-99). Its ADL is 100.
- Record was made inactive (Activity Status = I) on 7-Jun-2006
- Replaced by two records, both of which are active (Activity Status = A):
 - For trading dates 12-Jun-04 to 6-May-06 the ADL = 100
 - For trading dates 7-May-04 to 31-Dec-9999 the ADL = 180
- Can assume from this, a change request 4051 to update the ADL to 180, with an actual change date of 7-May-06, completed on 7-Jun-06

FIVE KEY DATA ITEMS



Suffix	Type	Average Daily Load	Profile Name	Start Date	End Date	Status Code	Activity Status	Updated On	Created On
N1	I	100	NOPROF	12-Jun-2004	6-May-2006	A	A	31-Dec-9999	7-Jun-2006

Start Date- Starting Trading Date

Synonyms: StartDate, FromDate

End Date - ending trading date

Synonyms: EndDate, ToDate

Created On date – date/time when the record was created (the change request was completed)

Synonyms: MaintCreateDt, CreationDate

Updated On date – date when the data became obsolete (because of an update)

Synonyms: MaintUpdtDt, MaintenanceDate

Activity Status

Synonyms: MaintActFlg, RowStatus

CREATING A NEW “PHYSICAL ENTITY”



When a brand new entity (e.g.. new NMI or datastream is created), the key fields are populated like this:

Start Date	The actual change date on the change request that caused this record to be created
End Date	31-Dec-9999 (which means open ended - into the future). Also called the High Date
Created On date	The date and time when the record was created
Updated On date	31-Dec-9999
Activity Status	A

Data Streams for: ABC0001850

Suffix	Type	Average Daily Load	Profile Name	Start Date	End Date	Status Code	Activity Status	Updated On	Created On
N1	I	100	NOPROF	12-Jun-2004	31-Dec-9999	A	A	31-Dec-9999	21-Jun-2004

UPDATING AN EXISTING “ENTITY’S” DETAILS



What **active** records will become inactive?

Depends on the Start Date and End Date implied by the Change Request:

- Start date is Change Request’s Actual Change Date
- End date is 31-Dec-9999 unless specified
- (Remember: change requests usually don’t have an end date – most changes are open-ended i.e. into the future)

Any **active** master records with start and/or end dates overlapping period between the Change Request’s Actual Change Date and Actual End Date have to go!

SPLITTING VERSUS REPLACING

- Original record split – Change Request dates didn't exactly overlap:

Data Streams for: ABC0000630									
Suffix	Type	Average Daily Load	Profile Name	Start Date	End Date	Status Code	Activity Status	Updated On	Created On
N1	I	100	NOPROF	12-Jun-2004	6-May-2006	A	A	31-Dec-9999	7-Jun-2006
N1	I	180	NOPROF	7-May-2006	31-Dec-9999	A	A	31-Dec-9999	7-Jun-2006
N1	I	100	NOPROF	12-Jun-2004	31-Dec-9999	A	I	7-Jun-2006	21-Jun-2004

- Original record replaced – Change Request dates exactly overlap

Data Streams for: RIP0000024									
Suffix	Type	Average Daily Load	Profile Name	Start Date	End Date	Status Code	Activity Status	Updated On	Created On
11	C	1100	NSLP	26-Feb-2004	31-Dec-9999	A	A	31-Dec-9999	25-Feb-2004
11	C	1000	NSLP	26-Feb-2004	31-Dec-9999	A	I	25-Feb-2004	25-Feb-2004

EXPANDING THE DEFINITIONS OF THE FIVE FIELDS



Start Date	The date from when the business data in this record applies – either the Actual Change Date or copied from the start date on an existing record being made inactive
End Date	31/12/9999 means into the future (often called High Date). Otherwise, it is the date up to when the business data in this record applies.
Created On date	The date and time when the record was created.
Updated On date	31/12/9999 if the record is active OR The date the record was made inactive
Activity Status	A if the record is active I if the record is inactive

RELATIONSHIP BETWEEN END DATE OF 31-DEC-9999 AND ACTIVITY STATUS



- If End Date = 31-Dec-9999 and Activity Status = A the record is the current active record (represents the business data for today and into the future)
- If End Date = 31-Dec-9999 and Activity Status = I then the record has been replaced

Data Streams for: ABC0000630									
Suffix	Type	Average Daily Load	Profile Name	Start Date	End Date	Status Code	Activity Status	Updated On	Created On
N1	I	100	NOPROF	12-Jun-2004	6-May-2006	A	A	31-Dec-9999	7-Jun-2006
N1	I	180	NOPROF	7-May-2006	31-Dec-9999	A	A	31-Dec-9999	7-Jun-2006
N1	I	100	NOPROF	12-Jun-2004	31-Dec-9999	A	I	7-Jun-2006	21-Jun-2004

RELATIONSHIP BETWEEN ACTIVITY STATUS AND DATABASE UPDATE DATE



- If Activity Status = A
then
Updated On is 31-Dec-9999
- If Activity Status = I then
Updated On is the date the record became obsolete

Data Streams for: ABC0000630									
Suffix	Type	Average Daily Load	Profile Name	Start Date	End Date	Status Code	Activity Status	Updated On	Created On
N1	I	100	NOPROF	12-Jun-2004	6-May-2006	A	A	31-Dec-9999	7-Jun-2006
N1	I	180	NOPROF	7-May-2006	31-Dec-9999	A	A	31-Dec-9999	7-Jun-2006
N1	I	100	NOPROF	12-Jun-2004	31-Dec-9999	A	I	7-Jun-2006	21-Jun-2004

- There are three types of records:
 - **Current active records**
 - The current configuration of each entity
 - Is defined by MaintActFlg = A and End Date = 31/12/9999
 - **Active historic records**
 - The active configuration for trading periods in the past
 - Is defined by MaintActFlg = A and End Date <> 31/12/9999
 - **Inactive historic records**
 - Records that have been superseded by updates but that used to be active
 - Is defined by MaintActFlg = I and MaintUpdtDt <> 31/12/9999

NMI Master Enquiry Screen



SELECTING THE NMI MASTER SCREEN



Welcome SDYSON
You have 0 Message(s)

- Home
- Set Participant
- Participants
- Transactions
- NMI Information
 - NMI Discovery
 - NMI Master
 - Participant Relationship
- Profile Preparation
- Data Load Import
- Metering Data
- Settlement Data
- Reports
- B2B Browser
- Administration
- User Profile
- Logout

NMI Master - Search

Participant ID:	ENGYAUST
Participant Name:	Energy Australia - Retailer

Current Participant Role (*):

NMI Range From: To:
(To return all records for a single NMI leave the To: field empty)

Participant:

Exists In Role: LNSP

Participant:

Exists In Role:

Participant:

Exists In Role:

Date Range From (*) (dd-mmm-yyyy): To (*) (dd-mmm-yyyy):

- **Single NMI mode**
 - Selects all data for one NMI you are entitled to in the role you nominate
 - Does not require you to know and enter the LNSP
- **“Normal” mode**
 - Requires a date range (maximum of 7 days)
 - Can select a range of NMIs
 - Requires you enter an LNSP
- In both modes, returns active and inactive records

HOW TO USE NMI MASTER IN SINGLE NMI MODE



To select single NMI mode you must:

- Choose a role in which you have a relationship
- Enter a NMI in the NMI Range From field
- DON'T enter a NMI in the NMI Range To field
- Clear the Date Range From and Date Range To fields

EXAMPLE – SINGLE NMI AS FRMP

NMI Master - Search		Participant ID:	ACTEWNGY
		Participant Name:	AGL Hydro Partnership
Current Participant Role (*):	FRMP - Financially Responsible Market Participant		
NMI Range From:	1233211233	To:	
(To return all records for a single NMI leave the To: field empty)			
Participant:			
Exists In Role:	LNSP		
Participant:			
Exists In Role:			
Participant:			
Exists In Role:			
Date Range From (*) (dd-mmm-yyyy):		To (*) (dd-mmm-yyyy):	
<input type="button" value="Search"/> <input type="button" value="Clear"/>			

From and To dates are cleared

- All records from CATS_NMI_Data you're entitled to see

NMI Master - List				Participant ID:	ACTEWNGY		
				Participant Name:	AGL Hydro Partnership		
NMI Standing Data							
NMI ▼	Checksum	LNSP	Start Date	End Date	Updated On	Created On	Action
1233211233	2		20-Aug-2004	31-Dec-9999	31-Dec-9999	4-Sep-2004	<ul style="list-style-type: none">• View• View Data Streams• View Relationships• View Meter Registers• Show All

- From there you can select to view the data

Action
<ul style="list-style-type: none">• View• View Data Streams• View Relationships• View Meter Registers• Show All

Option	Shows
View	All of selected NMI Data record
View Data Streams	Datastream records
View Relationships	Relationship records
View Meter Register	Meter and register-level records
Show all	CATS NMI Data records not selected by original query

EXAMPLE OUTPUT – THE COMPLETE NMI DATA RECORD (VIEW)



NMI Master - View		Participant ID:	ACTEWNGY
		Participant Name:	AGL Hydro Partnership
General Information:			
NMI:	1233211233	Jurisdiction:	VIC
Classification Code:	SMALL	Aggregate Flag:	Y
Embedded Network ID (Parent):		TNI Code:	SARW
Embedded Network ID (Child):		DLF Code:	CLDS
Start Date:	20-Aug-2004	End Date:	31-Dec-9999
Status Code:	A	Updated On:	31-Dec-9999 00:00:00
Activity Status:	A	Created On:	4-Sep-2004 00:30:10
Address Information:			
Building/Property Name:		Location Descriptor:	
Lot Number:			
Flat/Unit	Type:	Number:	
Floor/Level	Type:	Number:	
Street	House Number: 1	Name: ONE	Type: ST
	House Number Suffix:	Name Suffix:	
Suburb/Locality:	FOOTSCRAY	State: VIC	Postcode: 3999
DPID:			
Unstructured Address 1:			
Unstructured Address 2:			
Unstructured Address 3:			

Click Browser's Back button to select other options



EXAMPLE OUTPUT – WITH MULTIPLE RECORDS RETURNED



NMI Master - List						Participant ID:	NEMMCO
						Participant Name:	NEMMCO
NMI Standing Data							
NMI ▼	Checksum	LNSP	Start Date	End Date	Updated On	Created On	Action
MAGIC00000	1		1-Jun-2004	31-Aug-2004	31-Dec-9999	28-Sep-2004	<ul style="list-style-type: none"> View View Data Streams View Relationships View Meter Registers Show All
MAGIC00000	1		1-Sep-2004	31-Dec-9999	31-Dec-9999	28-Sep-2004	<ul style="list-style-type: none"> View View Data Streams View Relationships View Meter Registers Show All
MAGIC00000	1		1-Jun-2004	31-Dec-9999	28-Sep-2004	27-Sep-2004	<ul style="list-style-type: none"> View View Data Streams View Relationships View Meter Registers Show All

- A set of rules that determine, by role, what individual data items you are entitled to see
- For most tables, this is expressed by the column name, e.g.. you may or may not be able to see REMOTE_PHONENUMBER on CATS_METER_REGISTER, depending on your role
- For CATS_NMI_PARTICIPANT_RELATIONS, the rules specify what roles each role can see.
 - In the case of this table the rules determine whether or not you will see the whole role, not just the specific data item
 - E.g. if you are the LR, you may not be able to see the FRMP so you will not get a row containing the FRMP that you might otherwise be entitled to

NMI Master - C4 Report



The **C4 NMI Master Report** is a snapshot of information for a NMI or NMIs for a nominated trading period, as at a nominated date.

It is designed to allow a participant to manually request NMI Standing Data for a single or group of NMI's

- Provides a service to allow a Participant to obtain NMI standing data information
- Report can be run for single or multiple range NMI's
- Response includes both active and inactive records
- Multiple reports can be requested at any given time through the online or batch interfaces
- Can be run online or via Batch
- Delivery time for report output is minimal (minutes)
- Useful for reconciling the NMI configuration used for a settlement case

MSATS maintains the following verification parameters for the C4 Master report:

- Any Participant can run a C4 report however only those with active NMI ownership between the dates requested will have information returned
- The period of time entered/requested (the time between its Start Date and End Date) must overlap at least part of the period covered by the report Start Date and End Date parameters
- The data must have existed during the report 'As At Date'

C4 – MASTER REPORT OUTPUT

- Returns records for the selected NMIs:
 - For a nominated trading date or date range
 - As at a nominated date
- Different from NMI Master enquiry, which does not have an “as at” facility – i.e. gives you all records for trading date or date range, not just records as they existed as a date
- Especially useful for reconciling the NMI configuration used for a settlement case
- Report has row limits – currently 500 rows which means you may have to run the report several times to get everything matching the parameters

C4 – MASTER REPORT OUTPUT

The report uses the 5 MSATS master tables:

- CATS_NMI_DATA
- CATS_NMI_PARTICIPANT_RELATIONS
- CATS_NMI_DATA_STREAM
- CATS_METER_REGISTER
- CATS_REGISTER_IDENTIFIER

C4 Report has two types

- Summary Report
- Detailed Report

Output is provide in XML format and is limited to 500 rows per report (sequential numbering system designed to allow participants to run additional reports based on next sequential number to obtain further NMI data)

The summary report provides the following data output:

- CATS_NMI_DATA
 - NMI, TNI, DLF, Embedded Network Parent, Embedded Network Child, Aggregate Flag, NMI Status, NMI Classification Code, Jurisdiction Code, Start Date, End Date, Creation Date, Maintenance Date, Row Status
- CATS_NMI_PARTICIPANT_RELATIONS
 - NMI, Participant ID, Role ID
- CATS_NMI_DATA_STREAM
 - NMI, Suffix, Profile Name, AverageDailyLoad, DataStream Type, Status
- CATS_METER_REGISTER
 - NMI, Serial Number, Next Scheduled Read Date
- CATS_REGISTER_IDENTIFIER
 - NMI, Serial Number, Register ID

The detailed report provides the following data output based on Participant privileges:

- CATS_NMI_DATA
 - NMI, Address, DPID, Aggregate, Status, Feeder Class, Customer Classification Code, Customer Threshold Code, Jurisdiction Code, NMI Classification Code, TNI, DLF, Parent Embedded Network Identifier, Child Embedded Network Identifier
- CATS_NMI_PARTICIPANT_RELATIONS
 - NMI, Participant ID, Role ID
- CATS_NMI_DATA_STREAM
 - NMI, Suffix, Profile Name, Average Daily Load, DataStream Type, Status

- CATS_METER_REGISTER
 - NMI, Serial Number, Next Scheduled Read Date, Location, Hazard, Installation Type Code, Route, Use, Point, Manufacturer, Model, Transformer Location, Transformer Type, Transformer Ratio, Constant, Last Test Date, Next Test Date, Test Result Accuracy, Test Result Notes, Test Performed By, Measurement Type, Read Type Code, Remote Phone Number, Communications Equipment Type, Communications Protocol, Data Conversation, Data Validations, Status, Program, Additional Site Information, Estimation Instructions, Asset Management Plan, Calibration Tables, Test Calibration Program
- CATS_REGISTER_IDENTIFIER
 - NMI, Multiplier, Dial Format, Suffix, Controlled Load, Consumption Type, Demand 1, Demand 2, Status, Serial Number, Register ID, Network Tariff Code, Network Additional Information, Unit Of Measure, Time Of Day.

C4 – MASTER REPORT

ADDITIONAL INFORMATION



INITIATING CHECKS:

- A check against the CATS_NMI_PARTICIPANT_RELATIONS table will verify who the current Participant for the requested NMI was during that time period.
- The test to obtain the subset of data applies the following four principles:
 - The record's STARTDATE is \leq the report's End Date.
 - The record's ENDDATE is \geq the report's Start Date.
 - The record's MAINTCREATEDT is \leq the report's As At Date.
 - The record's MAINTUPDTDT is \geq the report's As At Date.

These four tests identify in part which records should be returned.

ADDITIONAL CHECKS:

- The following additional checks follow on from the initiating checks:
 - The requested NMI(s) is in the requestors nominated Jurisdiction with a nominated NMI Classification
 - Determine whether a requesting nominated PARTICIPANTID exists in MSATS.

Overriding all this is a report row limit, which is currently set at 500 (a single NMI result may provide multiple rows of data).

- Only the first 500 CATS_NMI_Data records that are selected will be included.

Data provided in 5 separate data blocks in the following order:

- `<ReplicationBlock tableName="ElectricityNMIMaster">`
- `<ReplicationBlock tableName="ElectricityNMIRoles">`
- `<ReplicationBlock tableName="ElectricityNMIDataStreams">`
- `</ReplicationBlock><ReplicationBlocktableName="ElectricityNMIMeters">`
- `<ReplicationBlock
tableName="ElectricityNMIRegisterConfiguration">`

C4 - EXAMPLE 1 - SINGLE NMI SEARCH



Below is an example of the MSATS Master report input required when querying a single NMI (* Mandatory fields)

Reports

- CATS
- Queue Monitoring
- Schedule Maintenance

CATS reports

- C1 - Data Replication Resynchronisation
- C4 - NMI Master Report - Master
- C7 - New Participant Data Access Report

Report - Master

Participant ID:	INTLENGY
Participant Name:	Integral Energy - Retailer

Select NMIs starting with:

NMI:

Start Date (*) (dd-mmm-yyyy): End Date (*) (dd-mmm-yyyy):

As At Date (*) (dd-mmm-yyyy):

Participant IS:
NOT:

Participant (*):

Role IS:
NOT:

Role ID (*):

NMI Classification Code:

Jurisdiction Code:

Report Type (*): Summary Detailed

Report Last Sequence Number (*):

Please select a "NMI" OR a "Jurisdiction Code" and "NMI Classification Code" combination.

C4 - EXAMPLE 2 – DATE PARAMETER SEARCH

- Below is the input parameters required to run a report for multiple NMI results based on date variables.
- This example shows the FRMP requesting a report to display won customers in CITIP area

Report - Master		Participant ID:	INTLENGY
		Participant Name:	Integral Energy - Retailer
Select NMIs starting with:	<input type="text"/>	<input type="button" value="Apply"/>	
NMI:	<input type="text"/>		
Start Date (*) (dd-mmm-yyyy):	27-Apr-2006	End Date (*) (dd-mmm-yyyy):	3-May-2006
As At Date (*) (dd-mmm-yyyy):	3-May-2006		
Participant IS:			
NOT:	<input type="checkbox"/>		
Participant (*):	CITIP - CitiPower Retailer		
Role IS:			
NOT:	<input type="checkbox"/>		
Role ID (*):	LR - Local Retailer		
NMI Classification Code:	SMALL - Small		
Jurisdiction Code:	VIC - Victoria		
Report Type (*):	<input checked="" type="radio"/> Summary <input type="radio"/> Detailed		
Report Last Sequence Number (*):	0		
Please select a "NMI" OR a "Jurisdiction Code" and "NMI Classification Code" combination.			
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

C4 - EXAMPLE 3 - REPORT OUTPUT – HEADER AND PARAMETERS



```
- <Header>
  <From description="NEMMCO">NEMMCO</From>
  <To description="NEMMCO">NEMMCO</To>
  <MessageID>NEMMCO-MSG-23062802</MessageID>
  <MessageDate>2006-04-19T11:20:55+10:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>High</Priority>
  <SecurityContext>NEMMCOBATCH</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
- <Transaction transactionID="CATS-23062802" transactionDate="2006-04-19T11:20:55+10:00"
  initiatingTransactionID="223789">
  - <ReportResponse version="r10">
    - <ReportParameters xsi:type="ase:CATSMasterReportParameters">
      <ReportName>Master</ReportName>
      <FromDate>2006-04-13</FromDate>
      <ToDate>2006-04-19</ToDate>
      <AsAtDate>2006-04-19</AsAtDate>
      <LastSequenceNumber>0</LastSequenceNumber>
      <NMI>SW30000000</NMI>
      <ExcludeParticipant>No</ExcludeParticipant>
      <Participant>ALL</Participant>
      <ExcludeRole>No</ExcludeRole>
      <Role>ALL</Role>
      <ReportType>Summary</ReportType>
    </ReportParameters>
    - <ReportResults xsi:type="ase:ReplicationReportFormat">
```

REPORT RESULTS - NMIMASTER AND NMIROLES

```
- <ReportResults xsi:type="ase:ReplicationReportFormat">
- <ReplicationBlock tableName="ElectricityNMIMaster">
  - <Row xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:type="ase:ElectricityNMIMasterRow">
    <SequenceNumber>11046886</SequenceNumber>
    <CreationDate>2003-11-26T07:46:56+10:00</CreationDate>
    <MaintenanceDate>9999-12-31T00:00:00+10:00</MaintenanceDate>
    <RowStatus>A</RowStatus>
    <FromDate>2003-11-26T00:00:00+10:00</FromDate>
    <ToDate>9999-12-31T00:00:00+10:00</ToDate>
    <NMI>SW30000000</NMI>
    <JurisdictionCode>NSW</JurisdictionCode>
    <NMIClassificationCode>SMALL</NMIClassificationCode>
    <TransmissionNodeIdentifier>NSW1</TransmissionNodeIdentifier>
    <DistributionLossFactorCode>JHBL</DistributionLossFactorCode>
    <Aggregate>Yes</Aggregate>
    <Status>A</Status>
  </Row>
</ReplicationBlock>
- <ReplicationBlock tableName="ElectricityNMIRoles">
  - <Row xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:type="ase:ElectricityNMIRoleRow">
    <SequenceNumber>56201108</SequenceNumber>
    <CreationDate>2003-11-07T07:48:13+10:00</CreationDate>
    <MaintenanceDate>9999-12-31T00:00:00+10:00</MaintenanceDate>
    <RowStatus>A</RowStatus>
    <FromDate>2003-11-06T00:00:00+10:00</FromDate>
    <ToDate>9999-12-31T00:00:00+10:00</ToDate>
    <NMI>SW30000000</NMI>
    <Party>SOLARIS</Party>
    <Role>FRMP</Role>
  </Row>
  - <Row xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:type="ase:ElectricityNMIRoleRow">
    <SequenceNumber>56201110</SequenceNumber>
```

Data Replication Resynchronization - C1 Report



The MSATS C1 Report allows:

- A participant the ability to resynchronise their data should data be lost for a period of time. (e.g. notifications missed during an unplanned outage period)
- Provide additional information around a Change Request error response received.
- Useful if your own systems miss change request notifications for a known, relatively short, time period
- Returns all records updated (i.e. made inactive) or created between a date/time range

Note: This report should not be used to resynchronise all data due to size of the database and row limits would make the task impractical.

The following tables are available in MSATS to select and obtain data:

- CATS_NMI_DATA
- CATS_NMI_PARTICIPANT_RELATIONS
- CATS_NMI_DATA_STREAM
- CATS_METER_REGISTER
- CATS_REGISTER_IDENTIFIER

The report also allows you to obtain data from other groups of tables:

- Configuration tables (codes and rules)
- Change request tables
- Objection tables
- Notifications
- Data Requests
- Error Tables

Based on the date and time parameters applied running a C1 report for a nominated period will return the following:

- All new and old inactive records created during that period
- The C1 report output is limited to 10000 rows per request (minimum 100)
- Sequential numbering is included in the report output and as such a preceding reports can be run based on inputting the next sequential number.
- The report will be sent to the Participants MSATS Web Browser Outbox where it can then be viewed and downloaded.
- The report is run via a MSATS batch processing job.

- Participant logs into MSATS web browser with their specific Participant ID login details
 - The requesting participant must have the correct privileges to obtain the information. Any participant can run the C1 report however only a participant with correct rights based on the NEM Participant rules and obligations will have data returned.
- The report requires both date parameters and table option selected prior to running to the report (only one table can be selected per report).
 - The 5 MSATS master tables, and all MSATS Codes and Rules tables available.
 - There are date parameter rules that should be followed to provide the most relevant output to suit the requestors needs.

The report parameters are:

- **Date and time parameters**
 - Start Date
 - End Date
 - Start Time
 - End Time
- **Table name** (selected from a list)
- **Maximum rows**
 - Can limit the number of rows to between 200-30000

C1 REPORT SCREEN

- ▼ Reports
 - CATS
 - MIM
 - Queue Monitoring
 - Schedule Maintenance

CATS reports	Participant ID:	INTLENGY
	Participant Name:	Integral Energy - Retailer
<ul style="list-style-type: none">• C1 - Data Replication Resynchronisation Report - Data Replication Resynchronisation Report (C1)• C4 - NMI Master Report - Master• C7 - New Participant Data Access Report - NewParticipantAccess		

REPORT REQUEST SCREEN



Report - Data Replication Resynchronisation Report (C1)		Participant ID:	INTLENGY
		Participant Name:	Integral Energy - Retailer
Start Date (*) (dd-mmm-yyyy):	<input type="text" value="27-Apr-2006"/>	End Date (*) (dd-mmm-yyyy):	<input type="text" value="3-May-2006"/>
Time From (hh:mm:ss):	<input type="text" value="00:00:00"/>	Time To (hh:mm:ss):	<input type="text" value="23:59:59"/>
Tables (*):	<input type="text" value=""/>		
Report Last Sequence Number (*):	<input type="text" value="0"/>		
Maximum Rows:	<input type="text" value="200"/>	ROWLIMITS: Minimum: 100 Maximum: 10000	
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

LIST OF TABLES



Report - Data Replication Resynchronisation Report (C1)

Participant ID:	NEMMCO
Participant Name:	NEMMCO

Start Date (*) (dd-mmm-yyyy): End Date (*) (dd-mmm-yyyy):

Time From (hh:mm:ss): Time To (hh:mm:ss):

Tables (*):

Report Last Sequence Number (*):

Maximum Rows:

- CATS_CHANGE_REASON_CODES
- CATS_CR_INITIATION_RULES
- CATS_CR_STATUS_CODES
- CATS_DATA_SOURCE_CODES
- CATS_DEREG_CODES
- CATS_DISCOVERY_ACCESS_RULES
- CATS_DISCOVERY_SEARCH_RULES
- CATS_DLF_CODES
- CATS_EMB_NET_ID_CODES
- CATS_ERROR_CODES
- CATS_INBOUND_CHANGE_REQUEST
- CATS_INBOUND_METER_REGISTER
- CATS_INBOUND_NMI_DATA
- CATS_INBOUND_OBJECTIONS
- CATS_INBOUND_REGISTER_ID
- CATS_INBOUND_ROLES
- CATS_INBOUND_STREAMS
- CATS_JURISDICTIONAL_RULES
- CATS_JURISDICTION_CODES
- CATS_METER_INSTALL_TYPE_CODES
- CATS_METER_REGISTER
- CATS_NETWORKTARIFF_CODES
- CATS_NMI_CLASS_CODES
- CATS_NMI_DATA
- CATS_NMI_DATA_STREAM
- CATS_NMI_PARTICIPANT_RELATIONS
- CATS_NMI_STATUS_CODES
- CATS_NOTIFICATION_RULES
- CATS_OBJECTION_CODES

EXAMPLE

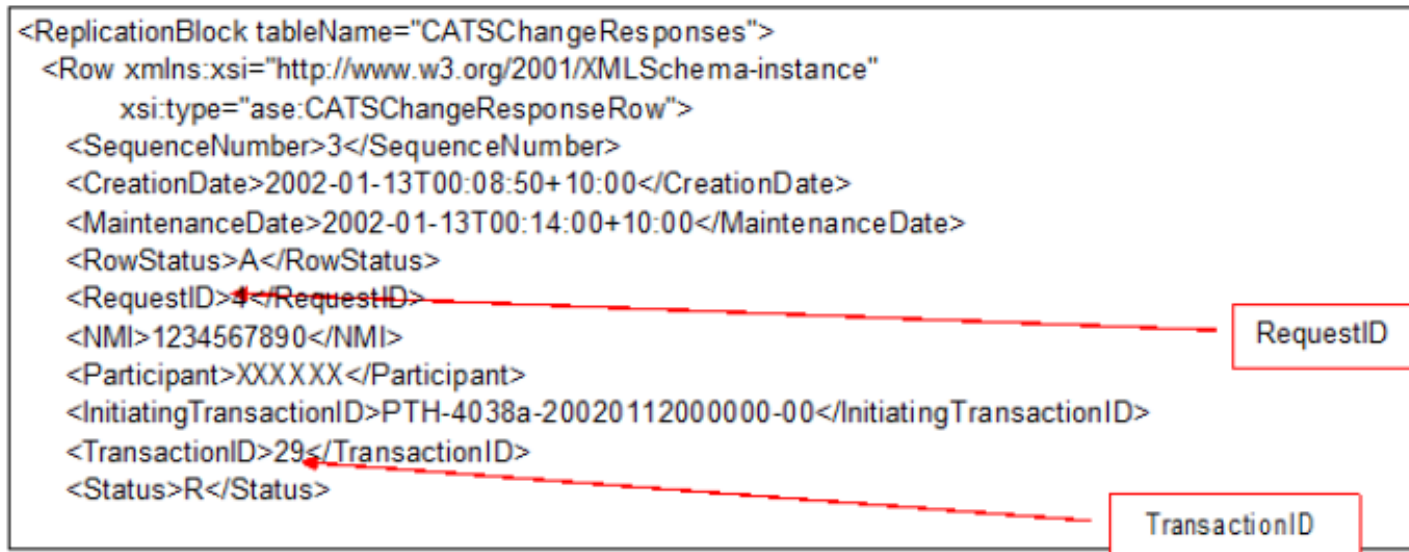
Run the C1 Report against the CATS_OUTBOUND_CHANGE_REQUESTS table



***Restrict the search to the date the transactions were rejected, to limit the output and minimise transactions required to search through.*

The output for each transaction selected will look similar to this:

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



The TransactionID will be used to find the error

EXAMPLE CONTINUED

Next step is to run the C1 report for CATS_OUTBOUND_ERRORS

Start Date (*) (dd-mmm-yyyy):	<input type="text" value="22-Jan-2002"/>	End Date (*) (dd-mmm-yyyy):	<input type="text" value="22-Jan-2002"/>
Time From (hh:mm:ss):	<input type="text" value="00:00:00"/>	Time To (hh:mm:ss):	<input type="text" value="23:59:59"/>
Tables (*):	<input type="text" value="CATS_OUTBOUND_ERRORS"/>		
Report Last Sequence Number (*):	<input type="text" value="0"/>		

Output provided:

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

TransactionID

The Code and Explanation tags will provide information to help understand the error received

C1 REPORT - OUTPUT



- The report will be sent to the Participants MSATS Web Browser Outbox where it can then be viewed and downloaded.
- The report is run via a MSATS batch processing job.

The MSATS Browser can confirm that a change request submitted by Batch has a status of Rejected, however the C1 report provides information around WHY the CR was rejected.

Using the RequestID of a CR a participant can obtain the detailed reason for the rejection.

This is done by running two C1 reports and combining the results:

- CATS_OUTBOUND_CHANGE_REQUESTS
- CATS_OUTBOUND_ERRORS

- Output is all rows from one table created or updated between the nominated dates
- Because it only returns data for one table, it cannot, like C4, give all the data from all of the master tables for a NMI
- Output is an XML document
- Can be run for configuration tables, change request tables, etc, not just master data

REPORT OUTPUT – HEADER AND PARAMETERS



```
<?xml version="1.0" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r10" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
  instance" xsi:schemaLocation="urn:aseXML:r10
  http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">
- <Header>
  <From description="National Electricity Market Management Company">NEMMCO</From>
  <To description="National Electricity Market Management Company">NEMMCO</To>
  <MessageID>NEMMCO-MSG-xx001</MessageID>
  <MessageDate>2006-01-10T13:20:10.000+10:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>Medium</Priority>
  <SecurityContext>SDYSON</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
  - <Transaction transactionID="NEMMCO-MSG-xx001" transactionDate="2006-01-
    10T13:20:09.900+10:00">
    - <ReplicationRequest version="r10">
      - <ReplicationParameters>
        <TableName>CATS_CHANGE_REASON_CODES</TableName>
        <CreationFromDate>1998-01-01T00:00:00.000+10:00</CreationFromDate>
        <CreationToDate>9999-12-31T00:00:00.000+10:00</CreationToDate>
        <LastSequenceNumber>0</LastSequenceNumber>
      </ReplicationParameters>
    </ReplicationRequest>
  </Transaction>
</Transactions>
</ase:aseXML>
```

REPORT OUTPUT – TABLE ROWS FOR CATS CHANGE REASON CODES



```
<?xml version="1.0" ?>
- <ase:aseXML xmlns:ase="urn:aseXML:r10" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:aseXML:r10 http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">
- <Header>
  <From description="NEMMCO">NEMMCO</From>
  <To description="NEMMCO">NEMMCO</To>
  <MessageID>NEMMCO-MSG-23066432</MessageID>
  <MessageDate>2006-07-15T20:46:34+10:00</MessageDate>
  <TransactionGroup>CATS</TransactionGroup>
  <Priority>Medium</Priority>
  <SecurityContext>NEMMCOBATCH</SecurityContext>
  <Market>NEM</Market>
</Header>
- <Transactions>
- <Transaction transactionID="CATS-23066432" transactionDate="2006-07-15T20:46:34+10:00"
  initiatingTransactionID="NEMMCO-MSG-xx001">
- <ReplicationNotification version="r10">
  - <ReplicationParameters>
    <TableName>CATS_CHANGE_REASON_CODES</TableName>
    <CreationFromDate>1998-01-01T00:00:00+10:00</CreationFromDate>
    <CreationToDate>9999-12-31T00:00:00+10:00</CreationToDate>
    <LastSequenceNumber>0</LastSequenceNumber>
    <MaximumRows>200</MaximumRows>
  </ReplicationParameters>
  - <ReplicationBlock tableName="CATSChangeReasonCodes">
    - <Row xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:type="ase:CATSChangeReasonCodeRow">
      <SequenceNumber>1</SequenceNumber>
      <CreationDate>1998-06-04T00:00:00+10:00</CreationDate>
      <MaintenanceDate>9999-12-31T00:00:00+10:00</MaintenanceDate>
      <RowStatus>A</RowStatus>
      <FromDate>1998-06-05T00:00:00+10:00</FromDate>
      <ToDate>9999-12-31T00:00:00+10:00</ToDate>
      <Code>1000</Code>
      <Description>Change Retailer</Description>
    </Row>
    - <Row xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:type="ase:CATSChangeReasonCodeRow">
      <SequenceNumber>2</SequenceNumber>
      <CreationDate>1998-06-04T00:00:00+10:00</CreationDate>
      <MaintenanceDate>9999-12-31T00:00:00+10:00</MaintenanceDate>
      <RowStatus>A</RowStatus>
      <FromDate>1998-06-05T00:00:00+10:00</FromDate>
      <ToDate>9999-12-31T00:00:00+10:00</ToDate>
```

ADDITIONAL C1 REPORT INFORMATION



EXAMPLES OF CHANGE REQUEST ERRORS - C1 REPORT



The C1 report is a useful tool for determining common error rejection codes received after submitting an invalid Change Request

ERROR NUMBER	ERROR DESCRIPTION	POSSIBLE EXPLANATION	C1 REPORT TABLE TO QUERY
1101	Data fields provided that are not valid for this Change Request Type.	Supplied data that is invalid for the change reason code used	CATS_TRANS_FIELD_VALIDATION
1109	Invalid NMI Class Code	The NMI Classification code is not listed or the code start date is after the proposed CR date	CATS_NMI_CLASS_CODES
1111	Invalid TNI Code (or similar – e.g.. DLF code)	The TNI code on the change request is invalid. It is either not on the CATS_TNI_CODES table, or the start date for the TNI code is after the proposed date on the change request.	CATS_TNI_CODES

EXAMPLES OF CHANGE REQUEST ERRORS - C1 REPORT



ERROR NUMBER	ERROR DESCRIPTION	POSSIBLE EXPLANATION	C1 REPORT TABLE TO QUERY
1120	Invalid Participant Id	<p>Check whether you have nominated a participant in a role which they are not entitled to perform, either because:</p> <ul style="list-style-type: none">(1) They are not valid for that role(2) They were not valid for that role for the period covered by this change request(3) You have entered a name which is not a valid participant id(4) You have entered a name which is not all uppercase	CATS_PARTICIPANT_ROLES

EXAMPLES OF CHANGE REQUEST ERRORS - C1 REPORT



ERROR NUMBER	ERROR DESCRIPTION	POSSIBLE EXPLANATION	C1 REPORT TABLE TO QUERY
1151	Not all required fields have been entered. Please ensure all fields have been completed.	When you create a change request you must supply all fields that are required for the change reason code (CRCODE) you have selected. You must supply all fields on a change request where the data source code is RI.	CATS_TRANS_FIELD_VALIDATION
1168	No Jurisdictional Rules Found for Change Request Type, NMI Classification	The change request you are trying to create is not valid for the NMI's jurisdiction and NMI classification. Note that if on the change request you are changing the jurisdiction and/or NMI classification you need to check that there are jurisdictional rules for the jurisdiction and/or NMI classification you are selecting, not the old one.	CATS_JURISDICTIONAL_RULES

C1 - DATE AND TIME PARAMETERS

To run the report the following needs to be included:

Date	Description
Start Date / Time From	The starting date and time for all records must have been created or updated on or after the input date/time
End Date / Time To	The record must have been created or updated on or before this date / time
Table	The name of the table you are replicating

- For a record to be returned the MAINTCREATEDT (which is the date that the record was written to the database) must be between the Report Start Date + Time From and Report End Date + Time To
OR
- The MAINTUPDTRDT (set initially to default of 31-Dec-9999) must be between the Report Start Date + Time From and Report End Date + Time To
- A record becomes obsolete when a new change request is attached to the NMI and at that time the MAINTUPDTRDT is updated from 31-Dec-9999 to the date and time when it was updated as obsolete.

C1 – TABLES USED AND SECURITY APPLIED



Additional report security is applied to the following tables available for a C1 report to ensure that the requester is entitled to the data.

TABLE NAME	SECURITY APPLIED
CATS_INBOUND_CHANGE_REQUEST	<p>Requestor entitled to the records if one or more of the following are met:</p> <ul style="list-style-type: none">• You initiated the Change Request (CR)• You are a nominated role on the CR• You had a relationship with the NMI for the trading dates nominated on the change request, as at the date the CR record was created
CATS_INBOUND_METER_REGISTER	<p>Requestor entitled to the records if one or more of the following are met:</p> <ul style="list-style-type: none">• You initiated the Change Request (CR)• You are a nominated role on the CR• You had a relationship with the NMI for the trading dates nominated on the CR which was active between the create date (MaintCreatedt) of the first record for this CR and the create date (MaintCreatedt) of the most recent record on the CATS_INBOUND_CHANGE_REQUEST table for this change request <p>AND</p> <ul style="list-style-type: none">• The standing data access rules permit you (based on the roles you have that are active during the lifecycle of the change request) to view it. Depending on the roles you are acting in, you may only have access to some of the data from a record.

C1 – TABLES USED AND SECURITY APPLIED



TABLE NAME	SECURITY APPLIED
CATS_INBOUND_NMI_DATA	Same as CATS_INBOUND_METER_REGISTER
CATS_INBOUND_STREAMS	Same as CATS_INBOUND_METER_REGISTER
CATS_INBOUND_ROLES	Basic security is the same as CATS_INBOUND_METER_REGISTER. However, when the standing data access rules are applied to this table, if you requestor does not have access to data about a role then the whole record is excluded, not just individual fields.
CATS_INBOUND_OBJECTIONS	Entitlement to a record on this table if you are the initiator of the objection.
CATS_INBOUND_REGISTER_IDENTIFIER	Same as CATS_INBOUND_METER_REGISTER
CATS_METER_REGISTER	Requestor is entitled to a record from this table if they have a relationship with the NMI that overlaps the trading dates (Start Date and End Date) on the record that was active at the time the record was active. You are only entitled to see data from these records relevant to the role you were acting in at the time the record was active
CATS_NMI_DATA	Same as CATS_METER_REGISTER.

C1 REPORT TABLES AND SECURITY APPLIED



TABLE NAME	SECURITY APPLIED
CATS_NMI_DATA_STREAM	Same as CATS_METER_REGISTER.
CATS_REGISTER_IDENTIFIER	Same as CATS_METER_REGISTER.
CATS_NMI_PARTICIPANT_RELATIONS	The basic security is the same as CATS_METER_REGISTER. However, when the standing data access rules are applied to this table, if you don't have access to data about a role then the whole record is excluded, not just individual fields.
CATS_OUTBOUND_CHANGE_REQUESTS	Requestor is entitled to a record from this table if they are the initiator of the change request that this record relates to.
CATS_OUTBOUND_ERRORS	Requestor is entitled to a record from this table if you were the initiator of the change request or objection that this record relates to.
CATS_OUTBOUND_NOTIFICATIONS	Requestor is entitled to a record from this table if they are the recipient of the notification.
CATS_OUTBOUND_OBJECTIONS	Requestor is entitled to a record from this table if they are the initiator of the objection that this record relates to.
CATS_OUTBOUND_REQUESTS	Requestor is entitled to a record from this table where they are the recipient of the data request.

C1 – ADDITIONAL TABLES USED WHERE NO ADDITIONAL SECURITY APPLIES



The following MSATS tables have no additional security

TABLE NAME	TABLE NAME	TABLE NAME
CATS_CHANGE_REASON_CODES	CATS_JURISDICTION_CODES	CATS_PARTICIPANTS
CATS_CR_INITIATION_RULES	CATS_JURISDICTIONAL_RULES	CATS_READ_TYPE_CODES
CATS_CR_STATUS_CODES	CATS_METER_INSTALL_TYPE_CODES	CATS_RETROSPECTIVITY_CODES
CATS_DATA_SOURCE_CODES	CATS_NMI_CLASS_CODES	CATS_ROLES
CATS_DEREG_CODES	CATS_NMI_STATUS_CODES	CATS_TNI_CODES
CATS_DISCOVERY_ACCESS_RULES	CATS_NOTIFICATION_RULES	CATS_TRANS_FIELD_VALIDATION
CATS_DISCOVERY_SEARCH_RULES	CATS_OBJECTION_CODES	CATS_TRANS_TYPE_CODES
CATS_DLF_CODES	CATS_OBJECTION_RULES	MSATS_NATIONAL_CALENDAR
CATS_EMB_NET_ID_CODES	CATS_PARTICIPANTS	CATS_NETWORKTARIFF_CODES
CATS_ERROR_CODES	CATS_READ_TYPE_CODES	

SNAPSHOT REPORT



CATS SNAPSHOT REPORT

Purpose of Report:

The CATS Snapshot Report is designed as a last resort for a Participant who requires bulk data from MSATS where output row limits are not applied

Reason for Request:

- Participant has lost synchronisation with MSATS (e.g. major system failure)
- Bulk data correction required

Report provides a snapshot of all records a participant is entitled to in accordance with Standing Data Access Rules

How To Request Report:

- Participant can request from AEMO Information and Support Hub and fill in an application form
- AEMO manually processes request
- AEMO as part of WA Market Readiness activities will look at running snapshot reports

Output provided:

Data provided is from the MSATS Master Tables:

- CATS_NMI_DATA
- CATS_NMI_PARTICIPANT_RELATIONS
- CATS_NMI_DATA_STREAM
- CATS_METER_REGISTER
- CATS_REGISTER_IDENTIFIER

Small files are zipped and emailed

Large files are provided in CD

ADDITIONAL PARTICIPANT REPORTS FOR INFORMATION PURPOSES



C3 - NMI CHANGE REQUEST REPORT



The **C3 – NMI Change Request Report** provides details of ALL change requests and notifications for NMIs selected by the requestor.

- This report is useful for:
 - Resolving discrepancies between MSATS and participant systems with respect to change requests.
 - Managing outstanding change requests that have not completed.

C3 – SCREEN VIEW

To run the C3 NMI Change Request report add the Start Date and End dates for the period you require information and chose SAVE option

Note: Only 7 days allowed between the start and end date



The screenshot shows a web form with a blue background. It contains two date input fields: 'Start Date (*) (dd-mmm-yyyy):' with the value '16-Mar-2017' and 'End Date (*) (dd-mmm-yyyy):' with the value '22-Mar-2017'. Below these is a checkbox labeled 'Change Requests Submitted by Participant:' which is checked. At the bottom left are two buttons: 'Save' and 'Clear'.

Message will appear on screen with Request ID

Report has been submitted. Request ID is 22836163

Report will be sent to the Participant MSATS Inbox

- ▶ Profile Preparation
- ▶ Data Load Import
 - Participant Inbox
 - Participant Outbox
- ▶ Metering Data
- ▶ Settlement Data

CATS C7 – NEW PARTICIPANT DATA ACCESS REPORT

The purpose of the **New Participant Data Access Report** is to detail certain NMI Standing Data for a nominated new party in a proposed change request

Report output will be limited by number of rows allowed in order to prevent unacceptably large reports being generated

Both AEMO users and Participants can access this report:

- Participant access is limited to Participants who are nominated on the change request as a new party
- They do not necessarily have to already have a relationship with the NMI

Some or all of the following information will be included in the report:

- Jurisdiction code
- TNI Code
- DLF Code
- Address
- NMI Status code
- Current roles

For each metering installation, the:

- Meter Serial Number
- Meter Installation Type
- Next Scheduled Read Date

RUNNING C7 REPORT



- ▼ Reports
 - CATS
 - Queue Monitoring
 - Schedule Maintenance

CATS reports

Participant ID:	CNRGY
Participant Name:	Country Energy - Retailer

- C1 - Data Replication Resynchronisation Report - Data Replication Resynchronisation Report (C1)
- C4 - NMI Master Report - Master
- C7 - New Participant Data Access Report - NewParticipantAccess

RUNNING A C7 REPORT

Report - NewParticipantAccess

Report - NewParticipantAccess

Request ID (*):

C7 – SCREEN VIEW

The request ID must be a relevant Change Request ID



Report - NewParticipantAccess

Request ID (*):

Save Clear

Message will appear on screen with Request ID

Report has been submitted. Request ID is 22836163

Report will be sent to the Participant MSATS Inbox

- ▶ Profile Preparation
- ▼ Data Load Import
 - Participant Inbox
 - Participant Outbox
- ▶ Metering Data
- ▶ Settlement Data

C7 REPORT RESULTS

```
- <ReportResults xsi:type="ase:CATSNewParticipantAccessReportFormat">
- <NMISstandingData xsi:type="ase:ElectricityStandingData" version="r10">
  <NMI>XXXXXXXXXX</NMI>
  - <MasterData>
    <JurisdictionCode>VIC</JurisdictionCode>
    <TransmissionNodeIdentifier>VKT2</TransmissionNodeIdentifier>
    <DistributionLossFactorCode>CLES</DistributionLossFactorCode>
  - <Address>
    - <StructuredAddress>
      - <House>
        <HouseNumber>31</HouseNumber>
      </House>
      - <Street>
        <StreetName>APPLE</StreetName>
        <StreetType>ST</StreetType>
      </Street>
    </StructuredAddress>
    <SuburbOrPlaceOrLocality>MOONEE PONDS</SuburbOrPlaceOrLocality>
    <StateOrTerritory>VIC</StateOrTerritory>
    <PostCode>3039</PostCode>
  </Address>
  <Status>D</Status>
</MasterData>
- <RoleAssignments>
  - <RoleAssignment>
    <Party>AGILITYM</Party>
    <Role>MPC</Role>
  </RoleAssignment>
  - <RoleAssignment>
    <Party>AGILITYM</Party>
    <Role>MDP</Role>
  </RoleAssignment>
  - <RoleAssignment>
    <Party>SOLARIS</Party>
    <Role>ROLR</Role>
  </RoleAssignment>
  - <RoleAssignment>
    <Party>SOLARIS</Party>
    <Role>FRMP</Role>
  </RoleAssignment>
  - <RoleAssignment>
    <Party>SOLARIS</Party>
    <Role>LR</Role>
  </RoleAssignment>
  - <RoleAssignment>
    <Party>SOLARISP</Party>
    <Role>LNSD</Role>
```

- Notifications sent to all roles who received REQ notification
- Use completion notification to synchronise own systems
 - All parties nominated as new parties on the CR receive a NMI Master report (C4) in the completion notification
 - Provides all standing data the role is entitled to

C9 – NMI COUNT REPORT



C9 - PURPOSE



This report is a CSV – type report for a given ‘as at date and time’ and business date.

Participants can run this report a maximum of once per day per Participant ID and the report is delivered to the Participant outbox

Has two types of report:

- High level Report (Level 1)
- Detailed Report (Level 2)

Initial validation on requestor Participant role will depend on what report type will be delivered

C9 - PARAMETERS

The report parameters are:

- Business Date (dd-mmm-yyyy)
- As At Date (dd-mmm-yyyy)
- As At Time (hh:mm:ss)



Note: Screen has default Business Date and As At Date fields have the current market date and As At Time has the current market time (AEST).

If any of parameters is NULL when submitted, then the report submission date and time is used.

The screen "Save" and "Clear" buttons for the report:

- "Save" - when selected, runs the validation process first and if no errors exist, submits the report request
- "Clear" - when selected by a user, resets all fields back to the values shown when the screen was opened in the current session

C9 - HIGHER LEVEL OUTPUT



The 'Higher level' report provides a count of NMIs grouped by:

Requestor Participant Id	Role of Requestor	Jurisdiction
NMI Status	NMI Class	

C9 - DETAILED OUTPUT



The 'Detailed' report provides a count of NMIs grouped by:

Requestor Participant ID	Role of requestor	Jurisdiction	NMI Status
NMI Class	LNSP Participant ID	LR Participant ID	FRMP Participant ID
MDP Participant ID	MPB Participant ID	RP Participant ID	

Data visibility rules apply to the Participant Roles.

The report only includes NMIs with a NMI Status of 'A', 'D', and 'G'.

Data Visibility:

Where a participant is not privileged to know the Participant ID for other roles (as per the Standing Data Access Rules) the field will be replaced with a dash –

Rules:

- As At Date range cannot be in the future
- Business Date range – cannot be later than the ‘As At Date’
- Participant can only run report a maximum of once a day per Participant ID

Error Codes:

- 1910 – As At Date and As At Time must be less than the current date and time
- 1911 – Business Date must be less than or equal to the As At Date
- 1912 – [Participant ID] has already requested this report today.
Unable to process report

MSATS MDM REPORTS



RM8 - DATE BMP PPS GENERATED REPORT



RM8 – PURPOSE AND SCREEN VIEW



This report:

- Lists all profiles created and applied within a specified period
- Available to AEMO and Participants authorised to access report
- The roles that have access to this report are RP, FRMP, LR, LNSP, MPB, MPC, and MDP.
- The data available from the report will be available for 13 months until metering data is archived

Report - DatePPSBMPGenerated		Participant ID:	NEMMCO
		Participant Name:	Australian Energy Mar
Start Date (*) (dd-mmm-yyyy):	<input type="text" value="21-Mar-2017"/>	End Date (*) (dd-mmm-yyyy):	<input type="text" value="27-Mar-2017"/>
As At Date (*) (dd-mmm-yyyy):	<input type="text" value="27-Mar-2017"/>	As At Time (*) (hh:mm:ss):	<input type="text" value="00:00:00"/>
Report Last Sequence Number (*):	<input type="text" value="0"/>		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

RM8 – INPUT FIELDS

FIELD	DESCRIPTION	FORMAT
Start Date	Defines the start date for the period.	Date format dd-mmm-yyyy
End Date	Defines the end date for the period. The End Date must be within 7 days of the Start Date specified.	Date format dd-mmm-yyyy
As At Date	The As At Date field determines the date and time at which the data retrieval is being conducted (i.e. what the data looked like on that date, excluding any retrospective changes made to the data after that date).	Date format dd-mmm-yyyy
As At Time	Returns the data that was current at this time.	Time format hh:mm:ss
Report Last Sequence Number	Specifies the last record in the output table prior to the records that should be returned.	Up to 11 numbers

The report will produce the following data that fits the report criteria, sorted in the following order:

- Profile Name
- Profile Area
- Case Id
- Scenario
- Date/Time Case was run
- Report Sequence Number

RM 9 – ACTUAL VS ESTIMATE



The purpose of the **Actual versus Estimate Report** is:

- To allow AEMO and Participants to compare the number of Estimated and Actual meter reads in the system
- Output is for either consumption or interval meters and can be further restricted to only those meter reads supplied by a particular MDP
- provides a high level comparison of meter reads
- available to AEMO users and Participants authorised to access this report.
- The data from this report will be available for 13 months until metering data is archived
- Current roles that have access to this report are RP (MC), FRMP, LR, LNSP, MPB, MPC, and MDP.

RM 9 – SCREEN VIEW



Report - ActualvsEstimate		Participant ID:	NEMMCO
		Participant Name:	Australian Energy M
Start Date (*) (dd-mmm-yyyy):	<input type="text" value="17-Mar-2017"/>	End Date (*) (dd-mmm-yyyy):	<input type="text" value="23-Mar-2017"/>
Data Type (*):	<input checked="" type="radio"/> Interval <input type="radio"/> Consumption		
MDP:	<input type="text" value=""/>		
As At Date (*) (dd-mmm-yyyy):	<input type="text" value="23-Mar-2017"/>	As At Time (*) (hh:mm:ss):	<input type="text" value="00:00:00"/>
Report Last Sequence Number (*):	<input type="text" value="0"/>		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

RM 9 –INPUT FIELDS

FIELD	DESCRIPTION	FORMAT
Start Date	<p>Defines the start date for the period.</p> <p>The period is limited to 7 days for interval data and 90 days for consumption data.</p> <p>This field defaults to a date seven days ago.</p>	Date format dd-mmm-yyyy
End Date	<p>Defines the end date for the period.</p> <p>This field defaults to today's date.</p>	Date format dd-mmm-yyyy
Data Type	This limits report to a specific data type, which can be either Interval metering data or consumption metering data.	Option button
MDP	This limits the data to particular MDP. If this field is left blank, then all MDPs are returned.	Drop-down list
As At Date	The As At Date field determines the date and time at which the data retrieval is being conducted (i.e. what the data looked like on that date, excluding any retrospective changes made to the data after that date).	Date format dd-mmm-yyyy
As At Time	Returns the data that was current at this time.	Time format hh:mm:ss
Report Last Sequence Number	<p>Specifies the last record in the output table prior to the records that should be returned. If 0 is entered, the report will use data from the start of the output table and return only as many rows as are specified by the report's row limit. You will need to run the report further times, entering the last sequence number from each report output to obtain further data.</p> <p>To ensure you receive all data you must continue to submit the report until no data is returned.</p>	Up to 11 numbers

RM 9 –OUTPUT

The report will produce the following data that fits the report criteria, sorted in the following order:

MDP	Settlement Date	Count of Number of Intervals Not Red (i.e. flag status <> 'A')
Total Number of Intervals (i.e. number of datastream intervals)	Percentage of Intervals Not Read	Report Sequence Number

The report is limited to return a maximum of 10,000 records

MDM REPORT
RM 11 – MISSING DATA REPORT



This report produces a list of dates for NMI Data Streams where the NMI suffixes exist in CATS but no meter reads exist in MDM at a certain point in time.

- It is normally run for a period of one settlement week and can be limited according to NMI and MDP and produced before each settlement run.
- It will only list missing data for interval and consumption meters. It is assumed that a row containing Interval Data with missing data will be rejected, thus the data for the entire day will be missing at any time.
- The report also has the facility to be run for all NMIs or just for second tier NMIs (i.e. those where the FRMP and LR are different), for which metering data is required in order to complete wholesale settlement.
- This report is available to AEMO and participant users authorised to access it. (FRMP, LR and MDP)
- The data produced by the report will be available for 13 months until metering data is archived.

RM 11 – SCREEN VIEW AND INPUT FIELDS



Report - MissingData

Participant ID: NEMMCO
Participant Name: Australian Energy Mar

Start Date (*) (dd-mmm-yyyy): 17-Mar-2017 x End Date (*) (dd-mmm-yyyy): 23-Mar-2017

Select NMIs starting with: Apply

NMI:

MDP (*):

As At Date (dd-mmm-yyyy): 23-Mar-2017 As At Time (hh:mm:ss): 00:00:00

Report Last Sequence Number (*): 0

Data Type (*): Interval Consumption

NMI Selection: SecondTierNMIs AllNMIs

Save Clear

FIELD	DESCRIPTION	FORMAT
Start Date	The start of the settlement period.	Date format dd-mmm-yyyy
End Date	The end of the settlement period. The period must be less than 7 days for interval meters.	Date format dd-mmm-yyyy
Select NMIs starting with	The purpose of this field is to reduce the number of NMIs displayed in the drop-down list to enable faster location of the NMI required. Only NMIs starting with the characters entered will be displayed.	Up to 10 numbers
NMI	If applied, the report will only report data that is related to the selected NMI.	10 characters
MDP	The MDP from which the data was received.	Drop-down list

RM 11 - INPUT FIELDS CONT

FIELD	DESCRIPTION	FORMAT
As At Date	The As At Date field determines the date at which the data retrieval is being conducted (i.e. what the Settlement Data looked like on that date, excluding any retrospective changes made to the data after that date).	Date format dd-mmm-yyyy
As At Time	The As At Time field determines the time at which the data retrieval is being conducted (i.e. what the Settlement Data looked like at that point in time, excluding any retrospective changes made to the data after that time).	Time format hh:mm:ss
Last Sequence Number	Specifies the last record in the output table prior to the records that should be returned. If 0 is entered, the report will use data from the start of the output table and return only as many rows as are specified by the report's row limit. You will need to run the report further times, entering the last sequence number from each report output to obtain further data. To ensure you receive all data you must continue to submit the report until no data is returned.	Up to 11 numbers
Data Type	Whether the data to be returned is for Interval or Consumption meters	Option button
NMI Selection	Whether only second tier NMIs should be included (i.e. ones where during the nominated start and end dates the FRMP was not the same as the LR) or all NMIs.	Option button

The report will produce the following data for each meter that fits the report criteria, sorted in the following order:

- MDP (Metering Data Provider)
- Settlement Date
- NMI
- NMI Suffix
- Sequence Number

The report is limited to return a maximum of 20,000 records

RM 13 – NMI DATASTREAM HISTORY REPORT



The NMI Datastream History report allows the retrieval of the history of a NMI data stream's metering data for a specified period.

This report:

- Returns all versions of metering data that exist in the system for that NMI for the days within the report period.
- Can only be run for a single NMI at a time.
- Is available to AEMO users and Participants authorised to access the report.
- The roles that have access to this report are RP, FRMP, LR, LNSP, MPB, MPC, and MDP.
- Data from this report will be available for 13 months until metering data is archived.

RM13 – SCREEN VIEW



Report - NMIDataStreamHistory		Participant ID:	NEMMCO
		Participant Name:	Australian Energy
Start Date (*) (dd-mmm-yyyy):	<input type="text" value="21-Mar-2017"/>	End Date (*) (dd-mmm-yyyy):	<input type="text" value="27-Mar-2017"/>
Select NMIs starting with:	<input type="text"/> <input type="button" value="Apply"/>		
NMI (*):	<input type="text"/>		
Data Type (*):	<input checked="" type="radio"/> Interval <input type="radio"/> Consumption		
As At Date (*) (dd-mmm-yyyy):	<input type="text" value="27-Mar-2017"/>	As At Time (*) (hh:mm:ss):	<input type="text" value="00:00:00"/>
Report Last Sequence Number (*):	<input type="text" value="0"/>		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

RM13 – INPUT FIELDS

Field	Description	Format
Start Date	Limits output to Meter Reads that occurred on or after this date. This field defaults to the date seven days ago.	Date format dd-mmm-yyyy
End Date	Limits output to Meter Reads that occurred on or prior to this date. This date must be within 7 days of the Start Date specified. This field defaults to today's date.	Date format dd-mmm-yyyy
Select NMIs starting with	The purpose of this field is to reduce the number of NMIs displayed in the drop-down list to enable faster location of the NMI required.	Up to 10 numbers
NMI	National Metering Identifier	10 characters
Data Type	This limits report to a specific data type = Interval or Consumption	Option button
As At Date	The As At Date field determines the date and time at which the data retrieval is being conducted	Date format dd-mmm-yyyy
As At Time	Returns the data that was current at this time.	Time format hh:mm:ss
Report Last Sequence Number	Specifies the last record in the output table prior to the records that should be returned. To ensure you receive all data you must continue to submit the report until no data is returned.	Up to 11 numbers

RM13 – INTERVAL DATA OUTPUT FIELDS



For a NMI that is active throughout the report period, the following details will be displayed for each version of data:

Settlement Date	NMI	Suffix
Load time	MDP Version Datetime	MDP
Value(s)	Read Type (status) Flag(s)	Sequence No
Active or History Indicator (A_H), which indicates whether this record is Active or a History record. If it is a History record, it means that this read has subsequently been replaced by another read		

RM13 – CONSUMPTION DATA OUTPUT FIELDS



For a NMI that is active throughout the report period, the following details will be displayed for each version of data:

Start date/End Date	NMI	Suffix
Load time	MDP Version Datetime	MDP
Value(s)	Read Type (status) Flag(s)	Sequence No
Active or History Indicator (A_H), which indicates whether this record is Active or a History record. If it is a History record, it means that this read has subsequently been replaced by another read		

RM14 - DATA VERSION COMPARISON REPORT



RM14 - PURPOSE

This report:

- Allows the comparison of meter reads loaded on 2 separate dates for a single NMI.
- Will return all data loaded for suffixes of a particular NMI on each of the 2 load dates (supplied as inputs).
- Where “only report on differences” was supplied as an input parameter, only reads that differ between the two versions will be returned. Otherwise all meter reads loaded on the 2 load dates for suffixes of the input NMI will be returned.
- Will verify the accuracy of an estimate read.
- Can only be run for a single NMI at a time.
- Available to AEMO users and Participants who are authorised to access this report (RP, FRMP, LR, LNSP, MPB, MPC, and MDP)
- The data from this report will be available for 13 months until metering data is archived.

R14 – SCREEN VIEW



Report - DataVersionComparison		Participant ID:	NEMMCO
		Participant Name:	Australian Energy Mark
Start Date (*) (dd-mmm-yyyy):	<input type="text" value="21-Mar-2017"/>	End Date (*) (dd-mmm-yyyy):	<input type="text" value="27-Mar-2017"/>
Select NMIs starting with:	<input type="text"/> <input type="button" value="Apply"/>		
NMI (*):	<input type="text"/>		
Date Load 1 (*) (dd-mmm-yyyy):	<input type="text" value="28-Mar-2017"/>	Time Load 1 (*) (hh:mm:ss):	<input type="text" value="00:00:00"/>
Date Load 2 (*) (dd-mmm-yyyy):	<input type="text" value="28-Mar-2017"/>	Time Load 2 (*) (hh:mm:ss):	<input type="text" value="00:00:00"/>
Data Type (*):	<input type="radio"/> Interval <input type="radio"/> Consumption		
Report where difference is not equal to zero	<input type="radio"/> Yes <input type="radio"/> No		
As At Date (*) (dd-mmm-yyyy):	<input type="text" value="27-Mar-2017"/>	As At Time (*) (hh:mm:ss):	<input type="text" value="00:00:00"/>
Report Last Sequence Number (*):	<input type="text" value="0"/>		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

RM14 – INPUT FIELDS



FIELD	DESCRIPTION	FORMAT
Start Date	Start date for the comparison period. Limits output to Meter Reads that occurred on or after this date.	Date format dd-mmm-yyyy
End Date	<p>End of Comparison period. Limits output to Meter Reads that were prior to or equal to this date.</p> <p>The end date must be within 7 days of the start date for interval data, and within 90 days of the start date for consumption data.</p>	Date format dd-mmm-yyyy
Select NMIs starting with	The purpose of this field is to reduce the number of NMIs displayed in the drop-down list to enable faster location of the NMI required	Up to 10 numbers
NMI	National Metering Identifier	10 characters
Date Load 1	<p>Limits the meter read records returned to be only those that were loaded on this date.</p> <p>Date Load 1 values must be prior to or equal to the current date.</p>	Date format dd-mmm-yyyy
Time Load 1	<p>Limits the meter read records returned to be only those that were loaded at this point in time.</p> <p>Time Load 1 values must be less then the current time if the Date Load 1 is the current date.</p>	Time format hh:mm:ss

RM14 – INPUT FIELDS



FIELD	DESCRIPTION	FORMAT
Date Load 2	Limits the meter read records returned to be only those that were loaded on this date. Date Load 2 values must be prior to or equal to the current date.	Date format dd-mmm-yyyy
Time Load 2	Limits the meter read records returned to be only those that were loaded at this point in time. Time Load 2 values must be less then the current time if the Date Load 2 is the current date.	Time format hh:mm:ss
Data Type	This limits the data to a particular data type, i.e. interval or consumption	Option button
Report where difference is not equal to zero	Limits output to only those suffix day combinations where a difference exists between the meter reads loaded on Date Load 1 and Date Load 2	Yes / No option
As At Date	The As At Date field determines the date at which the data retrieval is being conducted i.e. what the Settlement Data looked like on that date, excluding any retrospective changes made to the data after that date. This date must be prior to or equal to the current date.	Date format dd-mmm-yyyy
As At Time	Returns data that was current at this point in time.	Time format hh:mm:ss
Report Last Sequence Number	Specifies the last record in the output table prior to the records that should be returned. You will need to run the report further times, entering the last sequence number from each report output to obtain further data. To ensure you receive all data you must continue to submit the report until no data is returned.	Up to 11 numbers

The outputs listed here are for one NMI data stream on a particular settlement date.

There are two alternative sets of data returned depending on if the “Report Only Differences” checkbox is selected.

Report Only Differences Selected:

- A difference exists when any of the read type flags are different or any of the data values are different between two selected reads.
- If only one record is returned by the report, no data will be displayed by the report - i.e. if there is only one version of the data.
- If two records exist but there are no differences between the two versions, no data will be displayed by the report.

RM14 – INTERVAL OUTPUT WHEN REPORT ONLY DIFFERENCES IS SELECTED



If two versions exist and there are differences between the two versions, the following information will be returned:

NMI	Suffix	Settlement
MDP	MDP Version Datetime for Load Time 1	Load Time 1
Values 1..48 for load time 1	Read Type (Status) Flags for load time 1	MDP Version Datetime for Load Time 2
Load Time 2	Values 1..48 for load time 2	Read Type (Status) Flags for load time 2
Differences between values for load time 1 and load time 2	Differences between read type flags for load time 1 and load time 2 Any difference in the read type flags will be indicated by a '1' and a lack of difference will be indicated by a '0'	

RM14- INTERVAL OUTPUT WHEN REPORT ONLY DIFFERENCES NOT SELECTED



If there is only one record that matches the report criteria, then the following information will be returned:

NMI	Suffix	Settlement Date	MDP
MDP Version Datetime	Load Time	Values 1..48	Read Type Flags

RM14- INTERVAL OUTPUT WHEN REPORT ONLY DIFFERENCES NOT SELECTED CONT



If there are two or more records found that match the report criteria, then the following information will be returned:

NMI	Suffix	Settlement Date
MDP	MDP Version Datetime for Load Time 1	Load Time 1
Values 1..48 for load time 1	Read Type (status) flags for Load Time 1	Load Time 2
Values 1..48 for load time 2	Read Type (status) flags for Load Time 2	Differences between values for load time 1 and load time 2
Differences between read type flags for load time 1 and load time 2 Any difference in the read type flags will be indicated by a '1' and a lack of difference will be indicated by a '0'.		

Non Interval Data

The outputs listed below are for one NMI data stream with the same interval start date.

Report Only Differences is Selected

A difference exists when the read type flag or the values are different between the two meter reads.

If only one record matches the report criteria, no data will be displayed by the report – i.e. there is only one version of the data.

If two records exist but there are no differences between the two versions, no data will be displayed by the report.

RM14- NON INTERVAL OUTPUT WHEN REPORT ONLY DIFFERENCES IS SELECTED



If there are differences between the two versions, the following information will be returned:

NMI	Suffix	Settlement Date	MDP
MDP Version Date for Load Time 1	Load Time 1	Value for Load Time 1	Read Type (Status) Flag for load time 1
MDP Version Date for Load Time 2	Load Time 2	Value for Load Time 2	Read Type (Status) Flag for Load Time 2
Difference between value for load time 2 and load time 2	Difference between read type flag for load time 1 and load time 2. A difference in read type flag will be indicated by a '1' and a lack of difference will be indicated by a '0'		

RM14- NON INTERVAL OUTPUT WHEN REPORT ONLY DIFFERENCES NOT SELECTED



If there is only one record that matches the report criteria, then the following information will be returned:

NMI	Suffix	Settlement Date	MDP
MDP Version Date time	Load Time	Value	Read Type Flag

RM14- NON INTERVAL OUTPUT WHEN REPORT ONLY DIFFERENCES NOT SELECTED



If there are two records found that match the report criteria, then the following information will be returned:

NMI and Suffix	Settlement date	MDP	MDP Version Date For Load Time 1
Load Time 1	Value for Load Time 1	Read Type (Status) Flag for load time 1	MDP Version Date for Load Time 2
Load Time 2	Value for Load Time 2	Read Type (Status) Flag for load time 2	Difference between value for load time 1 and load time 2
Difference between read type flag for load time 1 and load time 2. A difference in the read type flag will be indicated by a '1' and a lack of difference will be indicated by a '0'.			

RM 15 – MULTIPLE VERSIONS REPORT



RM 15 – PURPOSE

This Report provides:

- the user with information on the number of versions of metering data that have been supplied to the system by a Meter Data Provider (MDP), within a Settlement date range.
- If the number of versions is supplied as input, the output will contain all NMI and Suffixes with that number of versions or greater.
- If a number of versions is not supplied, the output will return a count of all NMI and Suffixes with the number of versions supplied.
- The number of versions increases each time a retrospective change is made to the metering data.
- Available to AEMO users and participants authorised to access this report. The report will only return information to Participants for NMIs to which they are related.
- The roles that have access to this report are RP, FRMP, LR, LNSP, MPB, MPC, and MDP.

RM 15 – SCREEN VIEW



Report - MultipleVersions		Participant ID:	NEMMCO
		Participant Name:	Australian Energy M
Start Date (*) (dd-mmm-yyyy):	<input type="text" value="17-Mar-2017"/>	End Date (*) (dd-mmm-yyyy):	<input type="text" value="23-Mar-2017"/>
MDP (*):	<input type="text" value=""/>		
Select NMIs starting with:	<input type="text" value=""/> <input type="button" value="Apply"/>		
NMI:	<input type="text" value=""/>		
Data Type (*):	<input checked="" type="radio"/> Interval <input type="radio"/> Consumption		
Number of versions:	<input type="text" value=""/>		
As At Date (*) (dd-mmm-yyyy):	<input type="text" value="23-Mar-2017"/>	As At Time (*) (hh:mm:ss):	<input type="text" value="00:00:00"/>
Report Last Sequence Number (*):	<input type="text" value="0"/>		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

RM 15 –INPUT FIELDS

FIELD	DESCRIPTION	FORMAT
Start Date	Start Date of the Settlement Period to be reported.	Date format dd-mmm-yyy
End Date	End Date of the Settlement Period to be reported.	Date format dd-mmm-yyy
MDP	MDP (Metering Data Provider) for the Data Case.	Drop-down list
Select NMIs Starting With	The purpose of this field is to reduce the number of NMIs displayed in the drop-down list to enable faster location of the NMI required. Only NMIs starting with the characters entered will be displayed.	Up to 10 numbers
NMI	When supplied, will limit output to only those suffixes that belong to that NMI.	10 characters
Data Type	Whether the data to be returned is for Interval or Consumption meters	Option button
Number of Versions	Number of Versions of data that must exist during the settlement period specified above. Note: The amount of information supplied will be limited if a value is not entered into this field.	Up to 11 numbers
As At Date	The As At Date field determines the date at which the data retrieval is being conducted (i.e. what the Settlement Data looked like on that date, excluding any retrospective changes made to the data after that date).	Date format dd-mmm-yyyy
As At Time	The As At Time field determines the time at which the data retrieval is being conducted (i.e. what the Settlement Data looked like at that point in time, excluding any retrospective changes made to the data after that time).	Time format hh:mm:ss
Last Sequence Number	Specifies the last record in the output table prior to the records that should be returned. If 0 is entered, the report will use data from the start of the output table and return only as many rows as are specified by the report's row limit. You will need to run the report further times, entering the last sequence number from each report output to obtain further data. To ensure you receive all data you must continue to submit the report until no data is returned. There is a limit to the number of values provided in each report to a maximum of 50 rows.	Up to 11 numbers

There are three alternatives for data produced by this report. The data that is produced depends on whether the user specified the no of versions in the input stage.

1. Number of Versions is supplied for Interval data:

- NMI + NMI Suffix
- Settlement Date
- Count of # Versions
- Sequence number

2. When number of Versions is for Non-Interval data:

- Start Date
- End Date
- NMI + NMI Suffix
- Count of # Versions
- Sequence number

3. Number of Versions is Not Supplied

- Settlement Date
- Count of # Versions
- Count of # NMI dataStreams with that Number of Versions.
- Sequence number

RM18 - ELECTRICITY INTERVAL DATA REPORT



The purpose of the **Electricity Interval Data report** is to allow users to retrieve all meter data for a particular combination of TNI, FRMP, LR, and MDP.

The output of the report:

- Will return the meter reads of all suffixes for NMI's matching the combination.
- Output is at a high level.
- Available to Participants authorised to access this report (RP, FRMP, LR, LNSP, MPB, MPC, and MDP)
- Data from this report will be available for 13 months until metering data is archived.

RM18 – REPORT SCREEN VIEW



Report - ElectricityIntervalData		Participant ID:	NEMMCO
		Participant Name:	Australian Energy M
Start Date (*) (dd-mmm-yyyy):	<input type="text" value="21-Mar-2017"/>	End Date (*) (dd-mmm-yyyy):	<input type="text" value="27-Mar-2017"/>
TNI (*):	<input type="text"/>		
FRMP (*):	<input type="text"/>		
LR (*):	<input type="text"/>		
MDP (*):	<input type="text"/>		
MDP version (dd-mmm-yyyy):	<input type="text" value="3-Apr-2017"/>	MDP Version Time (hh:mm:ss):	<input type="text" value="00:00:00"/>
Select NMIs starting with:	<input type="text"/>	<input type="button" value="Apply"/>	
NMI:	<input type="text"/>		
As At Date (*) (dd-mmm-yyyy):	<input type="text" value="27-Mar-2017"/>	As At Time (*) (hh:mm:ss):	<input type="text" value="00:00:00"/>
Report Last Sequence Number (*):	<input type="text" value="0"/>		
<input type="button" value="Save"/> <input type="button" value="Clear"/>			

RM18 – INPUT FIELDS

FIELD	DESCRIPTION	FORMAT
Start Date	Defines the start date for the settlement period.	Date format dd-mmm-yyyy
End Date	Defines the end date for the settlement period. The End Date must be within 7 days of the Start Date specified.	Date format dd-mmm-yyyy
TNI	Limits output to NMIs that belong to this TNI	Drop-down list
FRMP	Limits output to NMIs that have the FRMP specified.	Drop-down list
LR	Limits output to NMIs that have this LR	Drop-down list
MDP	Limits output to NMIs that have this MDP	Drop-down list
MDP Version	Limits output to reads that have this MDP Version Date	Date format dd-mmm-yyyy
Select NMIs Starting With	The purpose of this field is to reduce the number of NMIs displayed in the drop-down list to enable faster location of the NMI required. Only NMIs starting with the characters entered will be displayed.	Up to 10 numbers
NMI	When supplied, will limit output to only those suffixes that belong to that NMI.	10 characters
As At Date	The As At Date field determines the date and time at which the data retrieval is being conducted (i.e. what the data looked like on that date, excluding any retrospective changes made to the data after that date).	Date format dd-mmm-yyyy
As At Time	Returns the data that was current at this time.	Time format hh:mm:ss
Report Last Sequence Number	Specifies the last record in the output table prior to the records that should be returned. To ensure you receive all data you must continue to submit the report until no data is returned.	Up to 11 numbers

RM18 – OUTPUT FIELDS

The report will provide the following information for each meter read that corresponds to the report criteria:

MDP	MDP Version Date Time	NMI	Suffix
Settlement Date	Load Date/Time	Value01	Value xx (one value for each number between 01 and 48)
Value48	Read Type (Status) flag	Report Sequence Number	