AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Draft MSATS 46.99 Release Schedule and Technical Specification – August 2021

0.20 October 2020

Staging: TBC Monday 1 February 2021

Pre-production: Early July 2021

Production: Thursday 29 September 2021

Release series: MSATSCS291021

Important Notice

PURPOSE & AUDIENCE

This document describes the technical changes required to participant's systems for the Customer Switching (Release). The Australian Energy Market Operator (AEMO) provides this information as a service targeting business analysts and IT staff in participant organisations. It provides guidance about the changes to their market systems under the National Electricity Rules (Rules), as at the date of publication.

HOW TO USE THIS DOCUMENT

- If you have questions about the business aspects of these changes, please see Consultations on AEMO's website.
- The references listed throughout this document are primary resources and take precedence over this document.
- Unless otherwise stated, you can find resources mentioned in this guide on AEMO's website.
- Text in this format is a link to related information.
- **Text in this format**, indicates a reference to a document on AEMO's website.
- **Text in this format** is an action to perform in the MSATS Web Portal.
- This document is written in plain language for easy reading. Where there is a discrepancy between the Rules and information or a term in this document, the Rules take precedence.
- Rules and Glossary Terms are capitalised and have the meanings listed against them in the **National Electricity Rules (NER)** and **Guide to MSATS and B2B Terms**.

PRIVACY AND LEGAL NOTICES

The material in this publication may be used in accordance with the privacy and legal notices on AEMO's website.

TRADEMARK NOTICES

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

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

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

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

DISTRIBUTION

Available to the public.

DOCUMENT IDENTIFICATION

Prepared by: AEMO Technology

Last update: Friday, 30 October 2020 2:30 PM

VERSION HISTORY

0.20 Initial publication

DOCUMENTS MADE OBSOLETE

The release of this document changes only the version of Draft MSATS 46.99 Release Schedule and Technical Specification – August 2021.

CONTACT US

Electricity Retail Consultative Forum (ERCF): ercf@aemo.com.au

Support Hub: To contact AEMO's Support Hub use Contact Us on AEMO's website or Phone: 1300 AEMO 00 (1300 236 600) and follow the prompts.

Contents

1. Introduction

This Draft MSATS 46.99 Release Schedule and Technical Specification – August 2021 (Release) describes the changes to MSATS for the Customer Switching project.

AEMO worked with the AEMC and COAG to recommend, prepare, and design improvements to the customer switching process. The new process streamlines existing processes and improves retail market competition.

1.1 Status

Version	Status
0.20	For review and discussion only

This technical specification presents the Customer Switching design at the time of publication. It may change as participants provide feedback and test. Please send feedback to supporthub@aemo.com.au.

1.2 Version numbers

Incremental version numbers such as 0.01, 1.01, 2.01 and so on mean a draft version or a small change to the technical specification.

Major version numbers such as 1.00, 2.00 means there are substantial changes to the technical specification. Participants must carefully review these changes, detailed below.

1.3 Changes in this version

No changes as this is the initial draft release.

AEMO releases new versions of this document as the technical requirements are streamlined.

1.4 Principles

- A simple, easy, and prompt customer switching process for End-use Customers.
- Streamlined and transparent procedures.
- Certainty for participants.

- Obligations for parties are clear, enforceable, and reportable.
- Regard for the implementation and ongoing costs.
- The design and associated rule changes consider:
  - Customer protection issues, including billing and contract information.
  - Energy billing, settlement, and enforcement arrangements, including reporting of breaches to the AER.

1.5 New process

- Allows customers to transfer Retailers within two days.
- Has regard for the proper time frames for notification and Meter read options. For example, the Previous Read Date and Quality Flag received in MSATS by the MDP, substitute reads, and smart Meter reads.

1.6 Solution

To fast track the Customer Switching process, there are a number of options available and the new Retailer may require the Previous Read Date and Quality Flag, so they are supplied:

1. As part of the Type 2 NMI Discovery search.
2. In a NMI Standing Data Response.
3. Only if the requesting ParticipantID is a valid Initiating particpant.

Participants can also switch on an estimated read if they want to transfer on a Prospective date and that Prospective date does not align with a read date.

The Previous Read Date and Quality Flag are available from a Type 2 NMI Discovery Search using any of the following interfaces:

Protocol	Reference
Hokey Pokey FTP	**Using the File Interface** in Introduction to MSATS
B2M Sync and Async APIs	Guide to NEM Retail B2M APIs

Protocol	Reference
MSATS Web Portal	**NMI Discovery** in Guide to MSATS Web Portal

1.6.1 Change requests

Change Requests have the following changes:

- Error correction Change Requests are reduced.
- Change Request Reversals are added.
- For some CRs, the MDP provides the substituted Metering Data to the previous FRMP for billing and forward estimated data to the new FRMP.

1.7 Audience

AEMO provides this information as a service targeting business analysts and IT staff in participant organisations.

1.8 Rules, consultations, and procedures

The following resources are related to Customer Switching, they are primary resources and take precedence over this document.

Details	Type	Status
7.16.2 National Electricity Rules	Rules	Current
aseXML r39 Schema	Consultation	Final
MDFF Specification NEM12 NEM13	Procedure	Final
Metrology Procedures	Procedure	Current
MSATS Procedures – CATS Procedure Principles and Obligations v4.9	Procedure	Final but not effective
MSATS Procedures: Procedure for the Management of WIGS NMIs v4.9	Procedure	Final but not effective
National Energy Retail Rules	Rules	Current

Details	Type	Status
NEM Customer Switching Consultation	Consultation	Final
Retail Electricity Market Glossary and Framework	Procedure	Final but not effective

1.9 Customer switching changes

Change	Reference
Procedure change and rules changes	- Rules, consultations, and procedures on page 8
Streamline Customer Transfers to enable an overnight switch	- Retired Codes on page 13 - Code Configuration Changes on page 15 - Retail Transfer CR Specific Validation on page 22 - Appendix A on page 62
Reduce complexity of Change Retailer Transactions and options	- Retired Codes on page 13 - Code Configuration Changes on page 15 - Appendix A on page 62
Enable efficient reversal or cancelling of a previous Change Request. Each unique reversal process has a specific CR Code in MSATS	- Retired Codes on page 13 - Code Configuration Changes on page 15 - Change Request Reversals on page 18 - Appendix A on page 62
Improve transfer accuracy/reduce need for retrospective error corrections	- Code Configuration Changeson page 15 - Change Request Reversals on page 18 - Retail Transfer CR Specific Validation on page 22 - Appendix A on page 62
Allow transfers without actual reads	- Retail Transfer CR Specific Validation on page 22 - Processing of Request for Data Transfers on page 27 - Appendix A on page 62
Transfer on Actual Readings where customer requirement is retrospective	- Code Configuration Changes on page 15 - Retail Transfer CR Specific Validation on page 22 - Previous Read Date and Quality Flags on page 29 - Previous Read Date Validation on page 36

Change	Reference
Provide listing of previous read dates to Retailers	- Previous Read Date and Quality Flags on page 29 - MSATS Web Portal on page 37 - Appendix A on page 62
B2M aseXML schema r39 changes	- B2M aseXML Schema r39 on page 40

1.10 Schedule

Scheduled for implementation in:

- Staging: TBC Monday 1 February 2021
- Pre-production: Early July 2021
- Production: Thursday 29 September 2021
- Production effective date: Friday 1 October 2021

1.11 Approval to change

No approval is required from participant change controllers. AEMO sought approval in the NEM Customer Switching and aseXML r39 Schema consultations.

1.12 Proposed timeline

Milestone	Date	Description
Approval required	No approval required	AEMO sought approval in the NEM Customer Switching and aseXML r39 Schema consultations
B2M schema change r39	March 2021	Released as part of the 5MS MSATS 46.98 release For details, see MSATS 46.98 Technical Specification – 5MS – Meter Data The schema is available from the deployment of MSATS 46.98 but the Customer Switching fields (Previous Read Date and Quality Flag) are not utilised or populated until Thursday 29 September 2021

Milestone	Date	Description
Revised Technical Specification	TBC	Further details of the changes to assist IT staff with their own technical implementation Will include 5MS MSATS 46.99 changes
Staging	TBC Monday 1 February 2021	AEMO implements Customer Switching changes in Staging in October 2020, but they are not effective until this date. Participants may see some new Customer Switching fields e.g. Previous Read Date and Quality Flag in NMI Discovery, but they are not populated until the effective date. Based on the progress of internal project testing, AEMO may bring the staging date forward to enable a longer participant evaluation window. For staging details, see https://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Systems-Workstream/Staging-Environment
Pre-production refresh	Complete 6 October 2020 – 12 October 2020	Refresh of the pre-production system with data refreshed from the production system data of 1 Oct 2020
Pre-production implementation	Early July 2021	AEMO implements components of the Release to pre-production for participant testing AEMO has full access to the system during this period Participant access is not restricted; however, the data content or system availability is not guaranteed
Pre-production available	Early July 2021	Testing period begins for participants
User group meeting: pre-production review	Tentative Wednesday, 21 July 2021	Market systems user group meeting or joint 5MS industry forum to review the implementation of this pre-production release
Production implementation	Wednesday, 29 September 2021 Thursday 29 September 2021	AEMO implements the release to production

Milestone	Date	Description
Production systems available	Thursday 29 September 2021	Production systems available to participants Customer Switching MSATS Procedures 4.9 become effective
User group meeting: post-implementation review	Tentative Friday, 15 October 2021	Market systems user group meeting or joint 5MS industry forum to review the implementation of the production release

2. Retired Codes

The following codes retire at the completion of this Release and are no longer available for use in Change Requests (CRs). Removal of these codes means participants can no longer raise these types of change requests.

To assist with the management of in-flight transactions, AEMO publishes the C1 report with effective dates appropriate to publication go-live, and effective date +90 days.

2.1 Retired change reason codes

Event	CR	Description	Initiating participant
Change Retailer	1021	Error Correction – Missed CR 1500 (SMALL NMI only)	New FRMP
	1022	Incorrect transfer date	
	1024	Transfer missed (SMALL NMI only)	
	1026	Cooled Off	
	1027	End User Moves Out on or before CR completion date	
	1028	Non-account holder signs contract	
	1080	Change Retailer – Child NMI	
	1081	Change Retailer – Child NMI – Retrospective Align Meter Reading	
	1082	Change Retailer Child – Retrospective Long Term/Error	
	1083	Change Retailer Child NMI – Move In	
	1084	Change Retailer Child NMI – Move In – Retrospective	

2.2 Retired read type codes

Code	Name of code	Description of code
CR	Consumer Read	Available if approved by jurisdictional policy. Advice from the new FRMP to the MC or MDP that the end user has agreed to transfer on a Meter reading it provides. The MDP/MPC is not required to undertake a special Meter reading. Applies to type 6 Metering Installations.
ER	Estimated Read	Available if approved by jurisdictional policy. Advice from the new FRMP to MDP that the end user has agreed to transfer on an estimated reading. No Meter reading is required for this transfer. The MDP is to provide an estimated reading in accordance with the **Metrology Procedures** and any other jurisdiction requirements. Applies to type 4A, 5 and type 6 Metering Installations.
NS	Next Scheduled Read Date	Advice from the new FRMP to the MDP the Proposed Change Date for the end user transfer is the NSRD, which is a date in the future. No other Meter reading is required. An acceptable date is a window that is up to 3 Business Days before or 2 Business Days after the published NSRD. If the date proposed by the New FRMP is not within this same window (i.e. up to 3 Business Days before or 2 Business Days after), the MDP must advise the FRMP there is a problem with the date proposed within 2 days of receipt of the data request. If the Meter is read outside this window, the MDP is not obliged to provide an Actual Change Date CR 1500. Applies to types 4A, 5 and type 6 Metering Installations.

2.3 Retired objection code

Code	Description
DEBT	Used by the current FRMP for change retailer requests in Victoria only, where there is an aged debt reaching Jurisdictional limits.

3. Code Configuration Changes

There are configuration changes for the following existing Change Retailer Change Reason Codes.

Participants can find codes and rules in the MSATS Web Portal > Administration > Codes Maintenance and Rules Maintenance.

Change Reason Code	Description
1000 – Change Retailer	The date of transfer is on a: - Prospective Day – a date nominated by the new FRMP for a meter reading, a substituted reading, or a Special Read, as defined by the Read Type Code. - Retrospective Day – a date nominated by the new FRMP. The Metering Data Type must be Remotely Read.
1010 – Change Retailer (SMALL only)	The date of transfer is the date of a Previous Meter Reading (a Retrospective Day). The Metering Data Type must be Manually Read.
1020 – Change Retailer – Retrospective – Long Term/Error (Not SMALL)	The date of transfer could be a date agreed between the Current FRMP and New FRMP (a Retrospective Day) where the actual transfer date was in error. In Victoria only, the date of transfer could be a date agreed by the Current FRMP and the New FRMP (a Retrospective Day)
1030 – Change Retailer – Move-In	The date of transfer (move-in) is on a Prospective Day.
1040 – Change Retailer – Move-In – Retrospective	The date of transfer (move-in) is on a Retrospective Day.

4. Error Codes

The following new error codes are introduced as part of Customer Switching and updated in the MSATS Web Portal > Codes Maintenance > Error Codes table.

Code	Message	Description	Relates to
1008	The related CR does not exist with COM status	No records exist Reject transaction	Change request reversals (see page 18)
1009	The reversal CR code is invalid for the related CR	No records exist Reject transaction	Change request reversals (see page 18)
1010	The related CR is not the last completed change	Other CRs were completed after the related CR Reject transaction	Change request reversals (see page 18)
1011	The participant is not entitled to raise a CR	The the initiating participant ID did not hold a role for the NMI Reject transaction	Change request reversals (see page 18)
1012	The related CR has not been raised within the valid timeframe for reversal	The completion date of the related CR is older than the creation date of the reversing CR Reject transaction	Change request reversals (see page 18)
1013	The reversal CR contains inbound changes	Inbound records exist for this CR Reject transaction	Change request reversals (see page 18)
1014	The related CR created new records	Changes were made after the related CR Reject transaction	Change request reversals (see page 18)
1015	The reversal date does not match the actual change date of the related CR	The reversing and related CRs do not have the same actual change date Reject transaction	Change request reversals (see page 18)

Code	Message	Description	Relates to
1016	The proposed change date does not align to a previous read date	Reject transaction	Previous read date validation (see page 29)
1017	Metering review required	Mixed Metering Types	Previous Read Date & Quality Flag (see page 29)
1018	There are no current meters installed for this NMI	No Active Meter	Previous Read Date & Quality Flag (see page 29)
1019	No metering data available	No Metering Data	Previous Read Date & Quality Flag (see page 29)
1020	The metering data available contains null values	Metering Data Ccntains null (A,S,F and/or NULL)	Previous Read Date & Quality Flag (see page 29)
1021	Not applicable	NMI does not meet the criteria for Previous Read Date & Quality Flag	Previous Read Date & Quality Flag (see page 29)
1022	Unable to retrieve data at this time	MDM unavailable	Previous Read Date & Quality Flag (see page 29)

5. Change Request Reversals

Customer Switching provides the ability to reverse or undo a previous Change Request (CR), where each unique reversal process has a specific CR Code in MSATS. These new CRS behave exactly like other CRs.

The two new reversal codes are:

CR_Code	Description	Initiation time frame	FRMP
1060	Reverse Retailer – Cooling Off	Within 10 Business Days	Raised by the existing current FRMP (e.g. the FRMP raising the CR10XX that completed within the initiation time frame.
1061	Reverse Retailer – Debt Objection	Within 1 Business Day	Raised by the previous FRMP (e.g. the FRMP who was current on the NMI prior to the completion of the CR10XX)

5.1 Reverse CR codes

This table describes the reversible code for use with each reversible CR.

Reversable completed CR code	Reversable by CR code
1000	1060
1000	1061
1010	1060
1010	1061
1030	1060
1040	1060

5.2 Reversal

The Retailer provides the Related Change Request ID for MSATS to:

1. Determine if the Reversal CR meets the Reversal criteria.
2. Validate the related CR:
    a. Was completed within defined time frames (initiation window and Retrospective period).
    b. Is the most recently completed CR.
    c. Is initiated by the appropriate Role and Participant ID.
3. Ensure no other concurrent Transfer exists.
4. Complete the Reversal for the same date as the Related Change Request.

5.2.1 CR1060

Raised by the Winning FRMP.

The Initiating reversal participant:

1. FRMP on the current MSATS record.
2. FRMP of the CR being reversed.
3. Initiator of the CR being reversed.

5.2.2 CR1061

Raised by the losing FRMP (in Victoria only).

The Initiating reversal participant:

1. Is the most recent previous FRMP.
2. Is the outgoing Participant ID and Role on the CR being reversed.

5.3 Preconditions

- A previous change of FRMP role has processed to COM (complete) status.

5.4 Generic reversal process

A Market Participant raises a reversal CR:

1. MSATS validates the initiating Participant ID and Role is either for:

    a. A **CR1060**: the same FRMP Participant ID and Role that initiated the related CR ID.

    b. A **CR1061:** the most recent previous FRMP

2. For a reversal CR MSATS validates:

    a. The related CR ID:

        1. Is eligible for reversal.
        2. Has COM status.
        3. Has an Actual Change Date within the retrospective time frames specified.
        4. Is the most recently completed CR for the NMI being reversed such as: Role, Meter, etc.

b. The reversal meets the defined initiation time frames.

c. For a CR1061, the Jurisdiction is VIC (Victoria).

3. Where the reversal CR is a 1060 or 1061, determine there is no other related transfer impacted. For details, see the **Concurrent Transfer Process** in the **MSATS Procedures**.

4. MSATS updates the CATS CR record with all values of the related CR ID, including the Proposed Change Date and Actual Change Date.

5.5 Reversal history model

5.5.1 CR1060 Cooling off reversal

CR1060 – COOLING OFF REVERSAL					
Create Date/Time	Start Date *16/12/2003*	End Date *1/04/2020*	Start Date *2/04/2020*	End Date *31/12/9999*	Description
3/04/2020 17:23	RETAIL1		RETAIL1		RETAIL2 submits CR 1060
2/04/2020 17:14			RETAIL2		RETAIL2 wins Customer from RETAIL1
17/12/2013 17:25	RETAIL1				Original

5.5.2 CR1061 Debt (Vic only)

CR1061 – DEBT (Vic Only)					
Create Date/Time	Start Date *16/12/2003*	End Date *1/04/2020*	Start Date *2/04/2020*	End Date *31/12/9999*	Description
9/04/2020 17:23	RETAIL1		RETAIL1		RETAIL1 submits CR 1061
6/04/2020 17:14			RETAIL2		RETAIL2 wins Customer from RETAIL1
17/12/2013 17:25	RETAIL1				Original

6. Retail Transfer CR Specific Validation

For the processing of Customer Switching CRs within the 1000 to1099 range (except 1023), this project changes several Change Request (CR) specific validation rules related to Retail Transfers.

6.1 Preconditions

CRs not passing validation are processed through to a state of Rejected (REJ) with existing error codes provided.

6.2 Modified retail transfer process

When MSATS receives a CR with a Read Type Code:

1. Identify if the combinations are valid for:

    a. **Prospective** proposed change date

    b. **Retrospective** proposed change date
    For details, see Read type code combinations on page 24.

2. Check if the meter type is valid for the Read Type Code.
    For details, see Meter install type on page 25.

6.2.1 Post-conditions

At the completion of this Release:

1. MSATS does not apply this validation to Inflight CRs at the time of implementation.

2. Valid Change Requests are processed to a state of Requested (REQ) and an appropriate Request for Data (RDAT) sent (if required).

3. Change Requests not passing validation are processed through to a state of Rejected (REJ) with existing error codes provided.

The following tables define the permitted combinations of codes a NMI must have before a retrospective or prospective CR can proceed.

6.2.2 Read type code combinations

For Meter details, see Legend on page 25.

CR Code		1000		1010	1030	1040, 102X	1023	All
Read Type Code	**Proposed change date**	**Prospective**	**Retrospective**	**Retrospective only**	**Prospective only**	**Retrospective only**	**Retrospective only**	
PR	Previous read date	X	X	Type A	X	Type A	X	X
SP	Special read	Type A	X	X	Type A/Type B	X	X	X
RR	Read required	Type A/Type B	Type B	X	X	X	X	X
EI	Existing interval meter	Type B	Type B	X	Type B	Type B	X	X
GR	Greenfield NMI	X	X	X	X	X	Type C	X
UM	Unmetered connection point	X	X	X	X	X	X	Type D

Legend

Type A	Basic, MRIM (not RWD), MRAM	manually read
Type B	Comms 1-4, 4C & 4D, MRIM (with RWD), VICAMI, Sample	remotely read
Type C	Not metered	Connection/Greenfield
Type D	Unmetered Supply	Type 7

6.2.3 Meter install type codes

Metering Group	Meter Install Type Code	Description
Type A	BASIC	Accumulation Meter – Type 6
	MRIM **without** a Meter Read Type of RWD	Manually Read Interval Meter – Type 5
	MRAM	Small customer metering installation – Type 4A
Type B	COMMS1	Interval Meter with communications – Type 1
	COMMS2	Interval Meter with communications – Type 2
	COMMS3	Interval Meter with communications – Type 3

Metering Group	Meter Install Type Code	Description
	COMMS4	Interval Meter with communications – Type 4 This code is used for large customer with type 4 metering installations and for small customer type 4 metering installation installed before 1 December 2017
	COMMS4C	CT connected metering installation that meets the minimum services specifications
	COMMS4D	Whole current metering installation that meets the minimum services specifications
	MRIM **with** a Meter Read Type of RWD	Manually Read Interval Meter – Type 5
	VICAMI	A relevant metering installation as defined in clause 9.9C of the NER.
	SAMPLE	Sample Meter
	PROF	For Profile Setup
Type C	No Meters Exist	n/a
Type D	UMCP	Unmetered Supply – Type 7

7. Processing of Request for Data Transfers

Currently, for all customer transfers (10XX CRs), a Request for Data (RDAT) is sent to the MDP to prompt them to provide the CR1500 for the Actual Change Date. For Customer Switching, the process is modified to only issue the RDAT based on specific scenarios.

7.1 Preconditions

MSATS receives the CR within the Change Reason Code range 1000-1999 .

7.2 No RDAT issued process

1. MSATS identifies if the following scenarios exist:

   a. The CR is a CR1030 or CR1040.

   b. Has a Read Type Code of SP (Special Read).

MDPs only provide a CR1500 when MSATS issues an RDAT.

If yes, see RDAT issued scenarios below.

2. For all other scenarios, MSATS **does not** issue an RDAT to the MDP for a CR1500.

3. MSATS continues to process the CR without the RDAT or CR1500 requiring completion.

4. The Proposed Change Date in the CR becomes the Actual Change Date for the transfer.

7.3 RDAT issued scenarios

7.3.1 CR1030 or CR1040

Where the transaction is a CR1030 or CR1040 an RDAT is issued and a CR1500 is required from the MDP.

7.3.2 ReadTypeCode of SP

Where the transaction has a Read Type Code of Special Read (SP) an RDAT is issued and a CR1500 is required from the MDP.

8. Previous Read Date and Quality Flags

Appendix A provides several Customer Switching scenarios, including complex components.

8.1 Previous read date

Customer Switching results in the need to provide Retailers (FRMPs) with a list of valid Previous Read Dates (PRDs) and the associated Quality Flag for a NMI in the NMI Discovery Search 2 - NMI Standing Data Response in an additional section called MSATS Metering Data (see NMI discovery stage 2 – obtain standing data results on page 37.

Be aware, in a small number of cases, a submitted Change Request may get rejected because the MDP submitted new or updated Metering Data between the completion of a NMI Detail search and the CR submission.

MSATS provides Previous Read Dates for data reviewed in a 12-month retrospective period.

8.2 Preconditions

The NMI must exist in MSATS.

8.3 PRD and quality flag process

1. When MSATS receives a valid NMI Discovery Search 2 it determines:

   a. The NMI Classification is: **L - Large** or **S - Small**.

   b. The NMI Status is: **A – Active** or **D – Not Energised**.

   c. The NMI has at least one Meter with a Meter Register Status of: **C – Current** or **D – Remotely De-Energised**.

   d. The Metering at the NMI has a Metering Installation Type Code of:

      1. **BASIC - Accumulation Meter**
      2. **MRIM - Manually Read Interval Meter** (not having a Meter Read Type of RWD)
      3. **MRAM – Small Customer Metering Installation – Type 4A**

e. An active Data Stream (at least one) within a 12-month retrospective period.

2. If a NMI does not meet any of the criteria in step one above, MSATS provides an error message (see page 16).

3. If multiple Metering Installation Types exist for a NMI, MSATS provides the following message: **Metering Review Required.**

4. MSATS obtains Read Dates and Quality Flags for a 12-month period from the current date.

5. MSATS uses the Quality Flags described on page 34.

6. MSATS determines each unique PRD and associated singular Quality Flag.

8.3.1 Previous read date hierarchy

MSATS determines a Previous Read Date based on the following hierarchy:

1. Datastreams

2. MDPVersionDate and Time

3. Quality Flag (when both of the above are successful)

8.3.2 Mixed metering types

MSATS provides an error message if it determines, for a single NMI, there are multiple Meter Installation Type Codes for Meters with a Meter Register Status of:

1. C – Current

2. D – Remotely De-Energised

8.3.3 No metering data

MSATS provides an error message: **No Metering Data available**, if it determines, for a single NMI, there is no valid metering data available. For no Metering Data scenarios, see page 62.

8.3.4 MDM database unavailable

MSATS provides an error message: **Unable to retrieve data at this time**, if it is unable to obtain Metering Data from the MDM database.

8.4 Consumption data process

If the Metering Data is Consumption, the following process determines the PRD:

1. Find all Metering Data for the NMI within the previous 12 months.
2. For each active Data Stream, determine each of the current **ToDates**, if a valid Quality Flag exists.
   The **ToDates** refer to the *ToDate* in the MDFF file received from the MDP for the NMI. For details, see **MDM File Format and Load Process**.
3. If there are multiple Data Streams, MSATS ensures the ToDate is the same date for all Data Streams for the NMI.
4. The PRD is the valid ToDate + 1 determined by MSATS.
5. If MSATS successfully determines a PRD, it looks for corresponding Quality Flags.
6. Because MSATS can receive reads for multiple meters and/or Datastreams, to determine a single Quality Flag for each PRD, MSATS applies the logic on page 30.
7. MSATS returns all valid PRDs and the determined Quality Flag limited to a maximum of 12 Previous Read Dates within the previous 12-month period.

```
NMI,Suffix,FromDate,ToDate,Status,Value,MDPVersionDate,SubstitutionType,LoadD
ate,ActHistFlag
4001000259,11,2019-01-01,2019-03-02,A,111.11,2019-09-30 18:48:26.345,,2019-
09-26 16:22:39.715,Active
4001000259,22,2019-01-01,2019-02-07,S,113.11,2019-09-30 18:48:26.345,12,2019-
09-26 16:22:39.715,Active
```

8.5 Interval data process

Where the Metering Data is Interval, the following process determines the PRD:

1. For each unique MDP Version Date, MSATS determines the latest **Interval Date** of the reads for all valid Data Streams for the NMI that contains only valid Quality Flags.
   The Interval Date refers to the *IntervalDate* in the MDFF file received from the MDP for the NMI. For details, see **MDM File Format and Load Process**.

2. MSATS ensures the Interval Date determined in step 1 is the same date for all active valid Data Streams for that Interval Date.

3. The PRD is the date after the last valid Interval Date + 1 in the MDP Version Date.

4. If MSATS determines a PRD, it looks for a corresponding valid Quality Flag.

5. Because MSATS can receive reads for multiple meters and/or Datastreams, to determine a single Quality Flag for each PRD, MSATS applies the logic on page 30.

6. For the determined PDR, the following applies:

   a. Any day of data containing a single Z or E Quality Flag is not considered for the PRD process.

   b. Any day of data containing a single N returns an error for that PRD.

   c. Where a reading period is:

      - 1 day where two or more hours of a lower level flag exists, the Quality Flag **does not** reflect that level for the PRD.

      - 2–7 days where four or more hours of lower level flag exists, the Quality Flag **reflects** that level for the PRD.

      - 7 or more days where 48 hours or more of a lower level flag exists, the Quality Flag **reflects** that level for the PRD.

7. MSATS returns all valid PRDs and the determined Quality Flag limited to a maximum of 12 Previous Read Dates within the previous 12-month period.

```
NMI,Suffix,SettlementDate,Status,IntervalTime,Value,MDPVersionDate,Substituti
onType,LoadDate,ActHistFlag
4001000259,E1,2019-01-01,A,00:05:00,111.11,2019-09-30 18:48:26.345,12,2019-
09-26 16:22:39.715,Active
4001000259,E1,2019-01-01,A,00:10:00,113.11,2019-09-30 18:48:26.345,12,2019-
09-26 16:22:39.715,Active
4001000259,E1,2019-03-04,A,00:05:00,234.45,2019-08-26 16:23:39.715,12,2019-
09-30 18:48:26.345,Active
4001000259,B1,2019-01-01,A,00:05:00,113.11,2019-09-26 16:22:39.715,12,2019-
09-30 18:48:26.345,Active
```

8.6 Quality flags

8.6.1 Consumption data quality flags

To determine a single Quality Flag for a PRD, MSATS applies the following logic.

QF combination	PRD and Quality Flag
A	A – Actual
A & F	F – Final Substitute
A & S	S – Substitute
F & S	S – Substitute
A, F, & S	S – Substitute
E	Not considered for the PRD

8.6.2 Interval data quality flags

Quality Flag (QF) hierarchy

Hierarchy	QF combination	Previous Read Date Quality Flag
1	A	Actual Reading
2	F	Final Substitute
3	A & S	Substitute
5	Z or E or anything else	Not considered for this purpose

Based on the QF hierarchy, the following also applies for each PRD:

Reading Period	Description
N	Error returned for that read date
1 Day	When 2 or more hours of a lower-level flag exists, the QF reflects that level for the PRD
2 – 7 Days	When 4 or more hours of lower-level flag exists, the QF reflects that level for the PRD
7+ Days	When 48 hours or more of a lower-level flag exists, the QF reflects that level for the PRD

8.6.3 No active meter

MSATS provides an error message: **There are no current meters installed for this NMI**, if it determines, for a single NMI, there are no Meters and Meter Register Statuses of:

1. C – Current
2. D – Remotely De-Energised

MSATS shall provide appropriate error messages. (ER2)

9. Previous Read Date Validation

Customer Switching proposes to transfer without the need for the MDP to confirm a Meter reading exists via a CR1500. There are new values providing Retailers with the Previous Read Date (PRD) if they want to align to a meter reading.

9.1 Preconditions

MSATS receives the CR.

9.2 New PRD validation process

1. MSATS identifies if the Change Request (CR) has a Read Type Code of PR (Previous Read) and is not a CR1040.
   If it is a CR1040, no PRD validation is required and the transfer progresses to Requested (REQ) based on transfer and CR processing validations.

2. If the Read Type Code is PR, MSATS ensures the Proposed Change Date in the CR matches the PRD
   If the PRD does **not** match the Proposed Change Date, MSATS rejects the CR with a **1016** error: Proposed Change Date does not align to a Previous Read Date. This validation represents the PRD at the time the CR was raised. An MDP may have provided new Metering Data since the NMID was performed.

3. Where the PRD matches the Proposed Change Date in the CR, the transfer progresses to Requested (REQ) based on existing transfer and CR processing validations without requiring a CR1500.

4. The Proposed Change Date in the CR becomes the Actual Change Date for the transfer.

10. MSATS Web Portal

10.1 NMI discovery stage 2 – obtain standing data results

On the Obtain Metering Data – Results interface there is a new link to **MSATS Metering Data**.

To view MSATS Metering Data:

1. Click **NMI Information** > **NMI Discovery** > **Search Type 2 (Obtain Standing Data)**.
2. Enter the **NMI** and **Checksum** and click **Search**.
3. In Obtain Standing Data – Results, click **MSATS Metering Data** (see Figure 1 on page 38)
4. The interface displays with the following details (see Figure 2 on page 38):
    a. NMI
    b. Previous Read Dates
    c. Associated Quality Flags

    If previous reads are not available a message displays (see Figure 3 on page 38).

You can also obtain this information using the getNMIDetail API.

Figure 1 Obtain standing data results

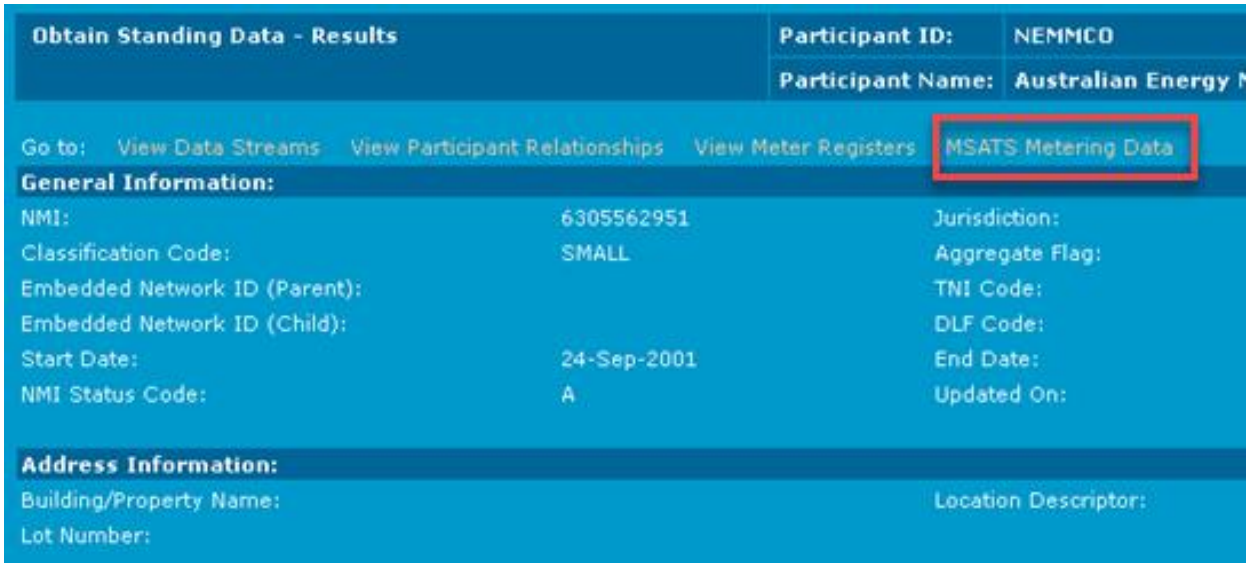


Figure 2 MSATS metering data

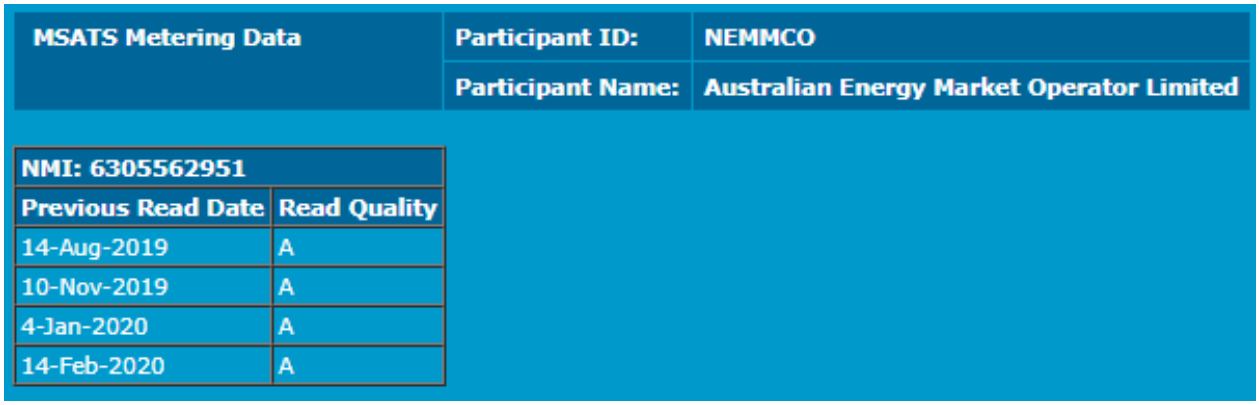


Figure 3 Previous reads unavailable

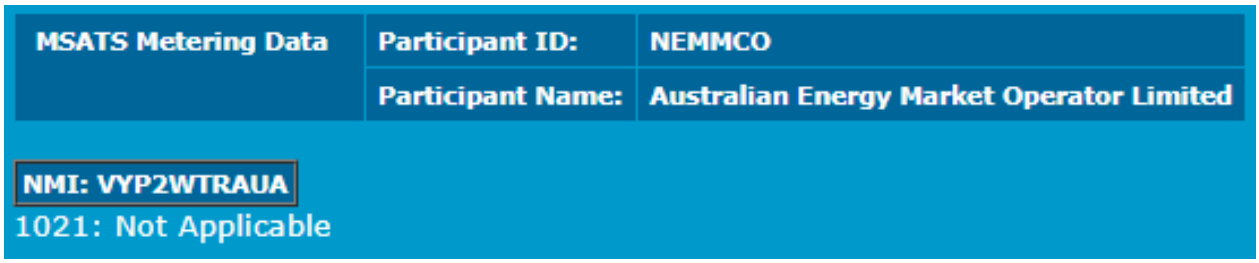


Figure 4 No metering data available

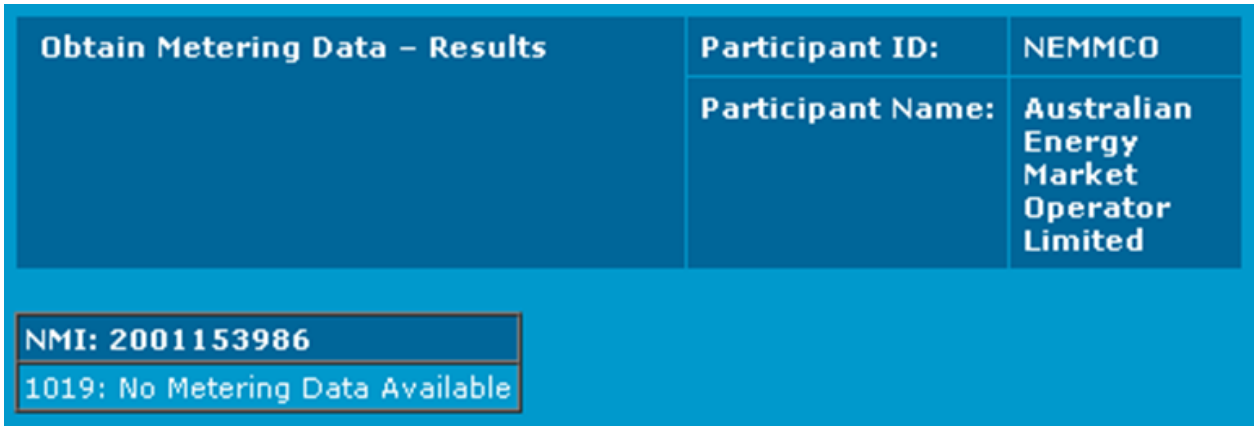
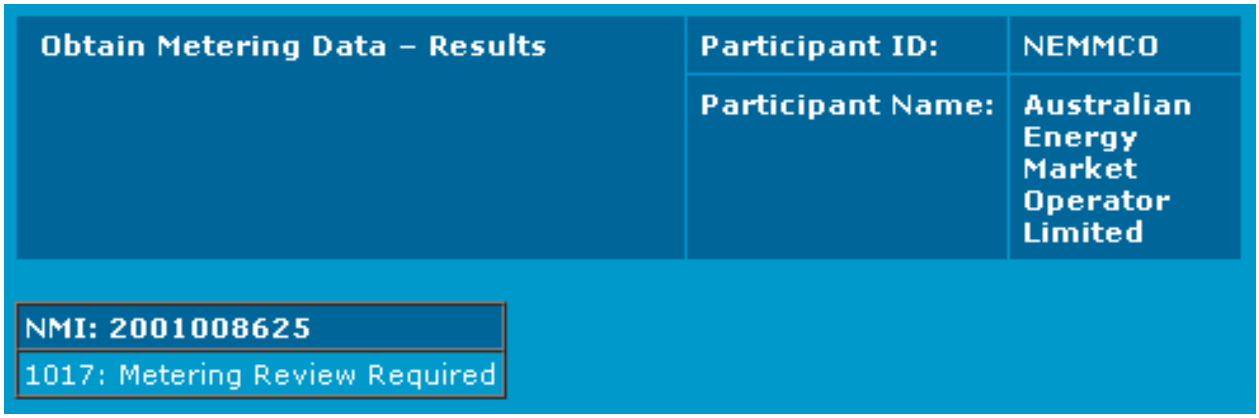


Figure 5 Metering review required



10.1.1 MSATS Metering Data user rights access

Your company's Participant Administrator (PA) provides you access to the MSATS Metering Data interface using the **NMI Discovery** entity in the Administration menu.

For help assigning user access rights, see Guide to User Rights Management.

11. B2M aseXML Schema r39

The 5-Minute Settlement (5MS) Retail stream releases the B2M aseXML schema r39 in MSATS 46.98. This chapter explains the changes in the schema for the Customer Switching project only. For 5MS details, see MSATS 46.98 Technical Specification -5MS -Meter Data.

Changes for the aseXML B2M schema for Customer Switching are for Retailers to align customer transfer dates to prior read dates (PRD). To obtain the PRD, participants complete a NMI Discovery 2 request.

To obtain **schemas, guidelines, whitepapers** etc, see aseXML Standards on AEMO's website.

11.1 Customer switching B2M schema change summary

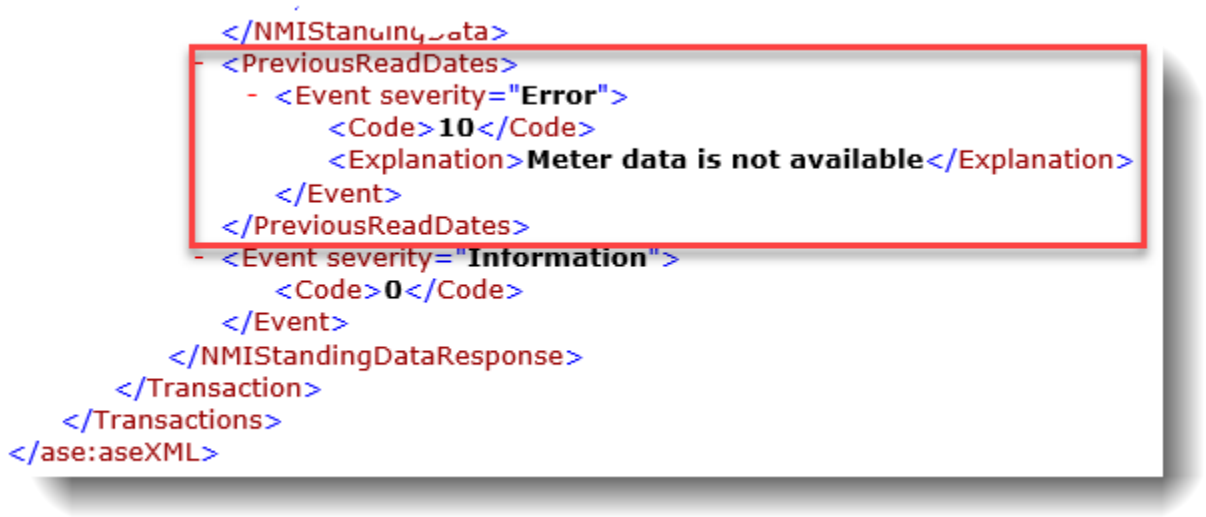
Schema files	Complex types	Element	Version change	Transactions
aseXML_r39.xsd	×	×	NMIDataAccess_r39.xsd Common_r39.xsd Events_r39.xsd	×
Common_r39.xsd	PreviousReadDate	ReadDate ReadQuality	×	NMIStandingDataResponse
	PreviousReadDates	PreviousReadDate Event	×	NMIStandingDataResponse
Events_r39.xsd	×	×	ReleaseIdentifier r39	×
NMIDataAccess_r39.xsd	×	PreviousReadDates	NMIStandingDataResponse r39	NMIStandingDataResponse

11.2 NMI standing data response

Addition of Previous Read Dates to the NMI Standing Data Response.

Figure 6 PreviousReadDates

Figure 7 Meter data not available



11.2.1 NMIDataAccess_r39.xsd

Add element PreviousReadDates to NMIStandingDataResponse.

```
<xsd:complexType name="NMIStandingDataResponse">
  <xsd:annotation>
        <xsd:documentation>
Application - NMI Data Access
TransactionExchange - NMI Standing Data
TransactionGroup – NMID
Priority – High
Purpose - Provide the results of a request for the current standing data for
a particular NMI
Detail - Usage of the NMIStandingData type allows the transaction to carry
variable content according to fuel and jurisdictional requirements. At least
one Event element must be present in the response to indicate the success or
otherwise of the search.
        </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
        <xsd:element type="NMIStandingData" name="NMIStandingData"
minOccurs="0"/>
        <xsd:element type="PreviousReadDate" name=" PreviousReadDate "
minOccurs="0"/>
        <xsd:element type="Event" name="Event" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute type="r39" name="version" default="r39" use="optional"/>
</xsd:complexType>
```

11.3 New PreviousReadDate block

A new PreviousReadDate block exists to provide:

1. Multiple read dates with the associated quality flag
2. A message when readings are unavailable.

Participants can use the NMI Discovery 2 to view this information.

11.3.1 Common_r39.xsd

Define new complex types:

```
<xsd:complexType name="PreviousReadDate">
	<xsd:annotation>
		<xsd:documentation>
		Purpose - Date and quality of a previous NMI
reading</xsd:documentation>
	</xsd:annotation>
	<xsd:sequence>
		<xsd:element name="ReadDate" type="xsd:date"/>
		<xsd:element name="ReadQuality">
			<xsd:simpleType>
				<xsd:restriction base="xsd:string">
					<xsd:maxLength value="1"/>
				</xsd:restriction>
			</xsd:simpleType >
		</xsd:element>
	</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="PreviousReadDates">
	<xsd:annotation>
		<xsd:documentation>
		Purpose - List dates of previous NMI readings</xsd:documentation>
	</xsd:annotation>
	<xsd:choice>
		<xsd:element name="PreviousReadDate" type="PreviousReadDate"
maxOccurs="unbounded"/>
		<xsd:element name="Event" type="Event" maxOccurs="1"/>
	</xsd:choice>
</xsd:complexType>
```

11.4 Send and receive PreviousReadDate block

Send and receive PreviousReadDate block	Latest r39	Current r39	Superseded r35	Discontinued r31
From participants FTP to AEMO	✓	✓	×	×
To participants FTP from AEMO	✓	✓	×	×
From MSATS web portal to AEMO	✓	✓	×	×
Request and response from APIs: - NMI Discovery - NMI Detail	✓	✓	×	×

11.5 B2M schema r39 transition

For assistance transitioning your aseXML schema version, see Guide To Transition Of aseXML.

Schema version	Description	Customer switching status
LATEST	Send and receive current and next projected future version When a new version is deployed, AEMO transitions you for continuous compliance	Providing your systems are updated, you can send and receive the new PreviousReadDate block **LNSPs & FRMPs must transition to obtain new fields**
CURRENT	Send and receive r35 You remain on r35, which becomes the Superseded version so you can transition when ready	**You must update to r39 to receive the new PreviousReadDate block**
SUPERSEDED	Receive files in r35 AEMO transitions you from r31 to r35	**You must update to r39 to receive the new PreviousReadDate block**
DISCONTINUED	AEMO no longer supports versions r31 or lower and passes them through without transform	**You must transition to r39**

11.6 B2M schema transforms

Transforms available:

- r39 -> r35

11.7 Upgrading to B2M schema r39

You change your B2M aseXML schema, in **MSATS** > **Participants** > **Participant Schema**.

If you cannot see the menu item, contact your company's Participant Administrator (PA) for access. If you do not know who your company's PA is, contact AEMO's Support Hub.

LNSPs & FRMPs must transition to obtain new fields.

Participant Users (with access rights) can change their participant ID B2M schema version.

1. Ensure your aseXML system is ready to receive files conforming to r39.
2. In the MSATS main menu, click **Participants** and then **Participant Schema**.
   The schema version, any applied transforms, and the Outbox Status display.
3. Click **Please Stop**.
   The acknowledgement process is not stopped when output file production is stopped. Acknowledgements conform to the schema version as selected at the time of creation of the acknowledgement. To avoid a mixture of current and

superseded versions of acknowledgement files, stop sending files and delete the already acknowledged zip files in your inbox.

4. The stopped message appears, click **Return to Participant aseXML Schema interface**.

5. The **Please Stop** button changes to **Please Resume**. Click **Refresh** to display the Outbox Status until it is Empty (for example, zero .ZIP files in the outbox, excluding acknowledgement files and B2B files).

6. The aseXML version drop-down becomes active:

   a. Pre-release implementation: select **Latest**.

   b. Post-release implementation: select **Current**.

   c. If upgrading to r35: select **Superseded**.

For more help, see Guide to MSATS Web Portal.

7. Click **Please Resume**.

8. The resumed message appears, click **Return to Participant aseXML Schema**. Your aseXML version is changed and files are produced in your chosen schema version.

12. Participant Impact

12.1 In-flight change requests

12.1.1 Post go-live

MSATS rejects any new CRs received for retired Change Reason Codes.

12.1.2 Objections

Objections for Customer Switching are obsolete 21 days after implementation.

Participants can:

- Continue to raise Objections until the Objection Logging Period closes.
- Remove Objections until the Objection Clearing Period closes.

12.1.3 Change request processing

To effect transfer completion, where an RDAT is issued and a CR1500 is required, MSATS still requires the CR1500.

The usual processing of PEND and COM status continues.

12.1.4 Go-live configuration updates

Configuration change updates are as follows:

- Removal of the ability to initiate retired CR Codes.
- 65 Business Days / 90 Calendar Days post go-live configuration updates to remove notifications for retired CR Codes.

12.2 B2M aseXML schema change to r39

To receive the new PreviousReadDate block, AEMO recommends participants upgrade to r39 by deployment of this Release. Previous read dates

You can use NMI discovery 2 to get Previous Read Dates (PRD). For help, see NMI discovery stage 2 – obtain standing data results on page 37.

12.3 At the completion of this release

1. If this release affects you, change your systems for compatibility.
2. Be familiar with new error codes.
3. Be familiar with what happens to in-flight Change Requests.
4. Retired codes used in Change Requests are rejected.
5. You cannot raise Objections on retired objection codes.
6. You can only send Notifications to parties according to the Notification Rules.
7. You cannot select the MDP, MPB, and MPC roles in the CR 1000 to 1099 range.
8. The role of RP is an optional field in the CR 1000 to 1099 range, excluding 1060 and 1061.

13. Implementation

To maintain systems in-line with AEMO's market systems, participants need to:

- Review and assess the impact on their market systems with respect to the changes implemented as part of this Release.
- Schedule staff and resources to upgrade their market systems for the production implementation of this Release.

13.1 Key consideration

For Customer Switching the key is upgrading to the B2M aseXML schema r39 to receive the new fields.

13.2 Upgrade options

13.2.1 Option 1

- Update local processes and technical interfaces to suit the changes.

13.2.2 Option 2

- If changes are irrelevant to participant business processes and technical interfaces, ignore this release.

13.3 Risks

- No critical impacts to participants identified.

13.4 What happens if I do not upgrade?

You cannot receive the new PreviousReadDate block in B2M schema r39.

14. FAQs

14.1 Change Request reversals

14.1.1 How long is the cooling-off period?

The Cooling-off Period is specified in instruments outside of AEMO's jurisdiction. The period for raising a CR1060 is specified in the **MSATS Procedures**.

14.1.2 If I am the losing FRMP, do I need the reversal dates to object?

Objections are not applicable on CR10XX Change requests but you can raise the new reversal change request.

You need the originating Change Request ID to populate into the Reversal CR and MSATS populates the dates.

14.1.3 Are there new rejection reasons for Reversal CRs?

No.

14.1.4 When raising a Reversal CR will MSATS include CR6000 series CR's in its suite of CRs it will look for as a completed CR before processing the reversal?

Yes, MSATS will look for any change requests that have been completed and if the transfer CR is not the latest completed CR then the reversal will be rejected.

14.1.5 Will there be a CAN coming after REJ of CR1060 to the retailer who has raised it?

Reversal Change Requests follow the Change Requests lifecycle. REJ is a final status.

14.1.6 Does the MSATS History Model change?

No.

14.1.7 For a reversal CR, what happens for DB MC to MC back to DB MC?

If an MC was changed in the transfer CR, then when the reversal CR is completed the NMI will go back to the status it was before the transfer CR was completed. For example, the original MC (before the transfer) is the current MC. They reverse back to the previous roles before the Transfer CR was completed.

14.1.8 If multiple reversals need processing, does the CR reversal take longer?

There is only one Change Request Reversal, not a queue of reversals. The active CR reversal is the most recently submitted.

14.1.9 Do CR reversals show in MSATS?

Yes, you can search these CRs with the Transaction Code. But they don't show in Participant Relationships.

14.1.10 If an MC raises a CR68XX to change the roles and it is still in pending will the reversal CR still process?

Yes, the reversal still processes, but if the CR68XX is complete the reversal is rejected.

If you are no longer the MC, you are required to cancel the CR68XX and any related service orders.

14.1.11 How long does a debt CR reversal take?

All reversals complete in the overnight batch process. The window for raising is 1 day. For more details, see **MSATS Procedures**.

14.1.12 if a CR Reversal is submitted for a CR that is not the latest, is it rejected?

Yes.

14.1.13 If a Reversal CR is complete, what does that mean for any pending CR68xxs?

You must cancel them.

14.1.14 What happens if an MP starts an installation when a CR6800 is pending?

As soon as the CR68XX is in pending status an MP can commence the Meter install. If the job is complete, all parties must discuss to rectify.

14.1.15 Can you do customer transfers with meter changes

No. The NER states that only **the** MC can install Meters. This means the MC must be the MC before a meter installation can take place.

14.1.16 If a customer requests can we provide them who the retailer was that reversed them?

Same process as loss and acquisitions. A Com notification with details.

14.2 Previous Read Date and Quality Flag

14.2.1 How can I see the previous read date and quality flag?

They are available from a Type 2 NMI Discovery Search using any of the following interfaces:

1. FTP File Interface
2. B2M Sync and Async APIs
3. MSATS Web Portal

14.2.2 With regards to Previous Read Date what value is shown?

The read date plus one day. For details, see the scenarios in Appendix A.

14.2.3 What channels does this cover? E, B, K and Q? (Datastreams)

Only covers Datastreams used for the Settlements process.

14.2.4 How many previous readings show?

The last 12 months reading, for example 4 reads over 12 months = 4 readings.

14.2.5 How many previous reads return for an interval meter?

12 previous reads.

14.2.6 Is the previous read in a C4 report response or only in NMI discovery?

No, only in NMI Discovery.

14.2.7 Can a meter removal be part of a previous read?

No, MSATS only returns reads for current active Meters.

14.2.8 Will I see removed meter reads?

No.

14.2.9 Will I see previous reads for the last 12 months?

Only for current manually read Meters.

14.2.10 Is this the same for de-energised meters?

Yes, if the Meters are current a read is returned.

14.2.11 Is this to help identify read dates on legacy metering?

This process is to provide Previous Read Dates for Manually Read Meters. This includes Basic and MRIM Meters not having a Read Type Code of RWD.

14.2.12 For a meter exchange from BASIC to COMMS, if the BASIC meter was removed within the last 65 business days, can the retailer win the site based on the basic schedule read date which could be within 65 business days?

No, MSATS only returns reads for the current active Meters.

14.2.13 For previous read dates what value is shown?

The ToDate in the MDMF plus one day and the **CurrentRegisterReadDateTime** in the MDFF for Basic Meters. For details, see the scenarios in Appendix A.

The IntervalDate in the MDFF based on groupings of MDPVersionDateTime using the last IntervalDate where we have a valid Quality Flag plus one day for Manually Read Interval Meters.

14.2.14 Will this change when AEMO accepts MDFF?

After 5MS implementation, AEMO can use the MDMF and MDFF for Basic Meters and MDFF for Interval meters.

14.2.15 How do quality flags work if the customer transferred 6 months ago on an estimate?

If a transfer happens using a substituted read provided by the MDP then the substituted read is in MSATS and returned as part of the PRD in NMI Discovery.

14.2.16 For a 3-month MRIM previous read, where the flags are A and E, the flag returned is A?

The IntervalDate in the MDFF based on groupings of MDPVersionDateTime using the last IntervalDate where there is a valid Quality Flag plus one day for Manually Read Interval Meters. E is not considered a valid Quality Flag.

14.2.17 Can a customer transfer on an S Read?

Substitute reads apply to Prospective Change Requests only.

14.2.18 If the replacement reads went back 1 year, then there is one for the entire 12 months?

If AEMO receive one block of data covering a full year of reads, the PRD process returns the read date as per the logic covered in previous questions. MSATS only returns the latest read dates for the MDPVersionDateTime grouping.

14.2.19 Do requests coming in either side of replacements provide different results?

If you perform a NMI Discovery on one day and a meter exchange completed after your NMI Discovery and the transfer CR was raised after the meter exchange was completed the transfer CR gets rejected as the PRD provided in the NMI Discovery is no longer valid.

14.2.20 What happens if the metering data revision happens after MSATS validates the CR?

The CR completes because it happens overnight and the MDP is required to provide Metering Data to the new FRMP from the effective date. If required, the MDP must provide a substitute reading for the effective date.

14.2.21 Is the validation done when the CR is raised, not when the CR is complete?

Yes.

14.2.22 If previous Datastreams are I, there is no previous read

Yes, Datastreams must be active.

14.2.23 Can a prospective transfer happen on an S read if the MDP cannot provide an A read?

Yes, you can raise Prospective transfers and the transfer completes using the proposed date in the CR. If the MDP does not have a read on the effective date they must provide a substitute read. The Transfer completes and the substituted read is provided after the MDP receives the Completion Notification.

14.2.24 If another retailer tries to win the same site from a retrospective date, it can happen only on an A quality flag?

Yes, all Retrospective changes must have a PRD with a QF of A.

14.2.25 Is the MDP obliged to take an actual read even though an S quality was provided earlier?

If the date the previous Retailer won the site was transferred on an actual read, the read is returned in NMI Discovery and is used for the transfer.

If it is a substitute read the Retailer won on, they cannot use it to retrospectively win the customer using the CR1010, even if it falls within the time frames.

You can use the error correction CRs on a date agreed by both parties.

14.2.26 For days indicated as S, do we assume that any interval in that day is S then the whole day is considered S?

MSATS assesses the Quality Flags over the duration of the MDFF received. The calculation is based on the reading period. For example, if MSATS receives 1 day of data there must be 2 or more hours of substitutes before a substitute returns. If an error returns for the previous read date, then the transfer on the previous read fails. For more details, see Previous Read Date Scenarios on page 62.

Yes, MSATS rejects the Change Request if it does not meet the PRD criteria.

14.2.27 For any reason, can retailers object to any of these CRs, 1000, 1010, 1030, 1040?

No.

14.2.28 Can a CR1060 be raised for an insitu CR raised prior to the go-live date?

No, because 1 day has passed after raising, as per the **CATS Procedures**.

14.2.29 Can a retrospective correction be raised for a CR102X with quality flag A?

This scenario is agreed between Retailers.

14.2.30 Can we lift the objection we placed due to DEBT after go-live?

Yes, the Objection window remains open post go-live.

14.2.31 Can receiving retailers reject a 1060 or 1061?

No, there any no objections on these reversals.

15. Terms

15.1 Rules terms

You can find the following terms defined in the National Electricity Rules (NER).

Term
AEMO
AER
Business Day
End-use Customers

Term
Market Participant
Meter
Metering Data
Metering Installation

Term
NEM
NMI
Retailer

15.2 Glossary

You can find a full list of MSATS glossary terms in:

1. **Retail Electricity Market Glossary and Framework**
2. **Guide to MSATS and B2B Terms**

Abbreviation/Term	Explanation
COAG	Council of Australian Governments
Release	Draft MSATS 46.99 Release Schedule and Technical Specification – August 2021
Schema	B2M aseXML schema r39
TBC	To be confirmed

16. References

aseXML standards: The standard developed by Australian energy industries to facilitate the exchange of information between energy industry participants using XML.

Guide to MSATS and B2B Terms: Assists participants to understand the terms used in the MSATS guides.

Guide to MSATS Web Portal: Assists participants to use the MSATS web portal functions.

Guide to NEM Retail B2M APIs: Explains how to build B2M retail metering APIs.

Guide To Transition Of aseXML: Provides information and guidance for participants transitioning to another B2M or B2B asexml schema.

Guide to User Rights Management: Assists participant administrators (PAs) to use the user rights management functions in the MSATS Web Portal.

Introduction to MSATS: Provides an introduction to the Market Settlement And Transfer Solution (MSATS), including using the file interface (Batch Handlers).

Reducing customers' switching times: https://www.aemc.gov.au/rule-changes/reducing-customers-switching-times

Reducing retail customers' switching times in the NEM: https://aemo.com.au/initiatives/submissions/reducing-retail-customers-switching-times-in-the-nem

Retail Electricity Market Glossary and Framework: assist participants to understand the overall retail electricity framework. Contains terms used in the Retail Electricity Market Procedures and a list of NEM procedures, guidelines, and documents.

MDM File Format and Load Process: Specifies the Meter Data Management (MDM) Format used by MDPs for the provision of Metering Data to AEMO.

MSATS 46.98 Technical Specification -5MS -Meter Data: The 5-Minute Settlement - Meter Data is part of 5MS and includes changes related to participants' IT systems.

17. Appendix A – Previous Read Date Scenarios

17.1 Consumption

17.1.1 Simple single read

Format	DS	From	To	MDP Version	QF
MDMF	01	2020-01-01	2020-01-29	2020-02-01	A
MDFF	01	2020-01-02 06:45:20	2020-01-30 09:26:20	2020-02-01	A
			RESULTS:	**30/01/2020**	**A**

17.1.2 Simple multiple reads

Format	DS	From	To	MDP Version	QF
MDMF	01	2019-12-01	2019-12-30	2020-01-01	S
MDFF	01	2019-12-02 09:26:20	2019-12-31 09:26:20	2020-01-02	S
MDMF	01	2019-12-30	2020-01-29	2020-01-03	A
MDFF	01	2019-12-31 09:26:20	2020-01-30 09:26:20	2020-01-04	A
			RESULTS:	**30/01/2020**	**A**
				31/12/2019	**S**

17.1.3 Simple replacement read - 2 reads plus replacement substitution

						Replacement read				
Format	**DS**	**From**	**To**	**MDP Version**	**QF**	**DS**	**From**	**To**	**MDP Version**	**QF**
MDMF	01	2019-12-01	2019-12-30	2020-01-01	S	01	2019-12-01	2019-12-30	2020-01-04	A
MDFF	01	2019-12-02 06:45:20	2019-12-31 09:26:20	2020-01-01	S	01	2019-12-02 06:45:20	2019-12-31 09:26:20	2020-01-04	A
MDMF	01	2019-12-30	2020-01-29	2020-02-01	A	01				
MDFF	01	2019-12-31 09:26:20	2020-01-30 09:26:20	2020-02-01	A	01				
								RESULTS:	**2020-01-30**	**A**
									2019-12-31	**A**

17.1.4 Complex replacement read - 3 Reads plus 1 replacement of 2 substitutions

						Replacement reads					
Format	**DS**	**From**	**To**	**MDP Version**	**QF**	**Format**	**DS**	**From**	**To**	**MDP Version**	**QF**
MDMF	01	2019-12-01	2019-12-30	2020-01-01	A	MDMF					
MDFF	01	2019-12-02 06:45:20	2019-12-31 09:26:20	2020-01-01	A	MDFF	01	2019-12-02 06:45:20	2019-12-31 09:26:20	2020-01-04	A
MDMF	01	2019-12-30	2020-01-29	2020-02-01	S	MDMF	01	2019-12-30	2020-02-28	2020-01-04	A
MDFF	01	2019-12-31 09:26:20	2020-01-30 09:26:20	2020-02-01	S						
MDMF	01	2020-01-29	2020-02-28	2020-03-01	S	MDFF	01	2019-12-31 09:26:20	2020-02-29 21:01:23	2020-01-04	A
MDFF	01	2020-01-30 09:26:20	2020-02-29 21:01:23	2020-03-01	S						
									RESULTS:	**2020-02-29**	**A**

						Replacement reads					
										2019-12-31	**A**

17.1.5 Complex replacement read - 3 Reads plus 1 replacement of 3 reads

						Replacement reads					
Format	**DS**	**From**	**To**	**MDP Version**	**QF**	**Format**	**DS**	**From**	**To**	**MDP Version**	**QF**
MDMF	01	2019-12-01	2019-12-30	2020-01-01	A	MDMF	01	2019-12-01	2020-02-28	2020-04-01	A
MDFF	01	2019-12-02 06:45:20	2019-12-31 09:26:20	2020-01-01	A						
MDMF	01	2019-12-30	2020-01-29	2020-02-01	S						
MDFF	01	2019-12-31 09:26:20	2020-01-30 09:26:20	2020-02-01	S	MDFF	01	2019-12-02 06:45:20	2020-02-29 21:01:23	2020-04-01	A
MDMF	01	2020-01-29	2020-02-28	2020-03-01	S						

						Replacement reads					
MDFF	01	2020-01-30 09:26:20	2020-02-29 21:01:23	2020-03-01	S						
									RESULTS:	**2020-02-29**	**A**

17.1.6 Complex replacement read - 3 Reads plus 1 replacement of 3 reads - extended period

						Replacement reads					
Format	**DS**	**From**	**To**	**MDP Version**	**QF**	**Format**	**DS**	**From**	**To**	**MDP Version**	**QF**
MDMF	01	2019-12-01	2019-12-30	2020-01-01	A	MDMF	01	2019-11-01	2020-03-10	2020-04-01	A
MDFF	01	2019-12-02 06:45:20	2019-12-31 09:26:20	2020-01-01	A						
MDMF	01	2019-12-30	2020-01-29	2020-02-01	S						
MDFF	01	2019-12-31 09:26:20	2020-01-30 09:26:20	2020-02-01	S	MDFF	01	2019-11-02 06:45:20	2020-03-11 21:01:23	2020-04-01	A

						Replacement reads					
MDMF	01	2020-01-29	2020-02-28	2020-03-01	S						
MDFF	01	2020-01-30 09:26:20	2020-02-29 21:01:23	2020-03-01	S						
									RESULTS:	**2020-03-11**	**A**

17.1.7 **Multiple meters and reads – QF hierarchy**

Format	DS	From	To	MDP Version	QF	DS	From	To	MDP Version	QF	Results:	
MDMF	01	2019-12-01	2019-12-30	2020-01-01	F	02	2019-12-01	2019-12-30	2020-01-01	F	**2019-12-31**	**F**
MDMF	01	2019-12-30	2020-01-29	2020-02-01	A	02	2019-12-30	2020-01-29	2020-02-01	A	**2020-01-30**	**A**
MDMF	01	2020-01-29	2020-02-28	2020-03-01	S	02	2020-01-29	2020-02-28	2020-03-01	S	**2020-02-29**	**S**
MDMF	01	2020-02-28	2020-03-29	2020-04-01	F	02	2020-02-28	2020-03-29	2020-04-01	S	**2020-03-30**	**S**
MDMF	01	2020-03-29	2020-04-29	2020-05-01	F	02	2020-03-29	2020-04-29	2020-05-01	A	**2020-04-30**	**F**

Format	DS	From	To	MDP Version	QF	DS	From	To	MDP Version	QF	Results:	
MDMF	01	2020-04-29	2020-05-28	2020-06-01	A	02	2020-04-29	2020-05-28	2020-06-01	S	**2020-05-29**	**S**
MDMF	01	2020-05-28	2020-06-28	2020-07-01	A	02	2020-05-28	2020-06-28	2020-07-01	F	**2020-06-29**	**F**

17.2 Interval

17.2.1 Simple single read - row 2

DS	To	MDPVersionTS	QF	QF Sample
01	2020-01-01	2020-01-11	A	
01	2020-01-02	2020-01-11	A	
01	2020-01-03	2020-01-11	A	
01	2020-01-04	2020-01-11	A	
01	2020-01-05	2020-01-11	A	
01	2020-01-06	2020-01-11	A	
01	2020-01-07	2020-01-11	A	
01	2020-01-08	2020-01-11	A	
01	2020-01-09	2020-01-11	A	
01	2020-01-10	2020-01-11	V	AAAAEEEEE
	RESULTS:	**2020-01-10**	**A**	

17.2.2 **Simple single read - row 242**

DS	To	MDPVersionTS	QF	QF Sample
01	2020-01-01	2020-01-10	S	
01	2020-01-02	2020-01-10	S	
01	2020-01-03	2020-01-10	S	
01	2020-01-04	2020-01-10	S	
01	2020-01-05	2020-01-10	S	
01	2020-01-06	2020-01-10	S	
01	2020-01-07	2020-01-10	S	
01	2020-01-08	2020-01-10	S	
01	2020-01-09	2020-01-10	S	
01	2020-01-10	2020-01-10	V	SSSSSSEEEEE
01	2020-01-11	2020-01-10	E	
01	2020-01-12	2020-01-10	E	
	RESULTS	**2020-01-10**	**S**	

17.2.3 Simple - QF variation – row 28

DS	To	MDPVersionTS	QF	QF Sample
01	2020-01-01	2020-01-11	A	
01	2020-01-02	2020-01-11	A	
01	2020-01-03	2020-01-11	S	
01	2020-01-04	2020-01-11	S	
01	2020-01-05	2020-01-11	F	
01	2020-01-06	2020-01-11	F	
01	2020-01-07	2020-01-11	A	
01	2020-01-08	2020-01-11	A	
01	2020-01-09	2020-01-11	A	
01	2020-01-10	2020-01-11	V	AAAAEEEEE
01	2020-01-11	2020-01-11	E	
01	2020-01-12	2020-01-11	E	
	RESULTS	**2020-01-10**	**S**	

17.2.4 Simple - QF variation – row 270

DS	To	MDPVersionTS	QF	QF Sample
01	2020-01-01	2020-01-11	F	
01	2020-01-02	2020-01-11	F	
01	2020-01-03	2020-01-11	S	
01	2020-01-04	2020-01-11	S	
01	2020-01-05	2020-01-11	F	
01	2020-01-06	2020-01-11	F	
01	2020-01-07	2020-01-11	F	
01	2020-01-08	2020-01-11	F	
01	2020-01-09	2020-01-11	F	
01	2020-01-10	2020-01-11	V	FFFFFEEEEE
01	2020-01-11	2020-01-11	E	
01	2020-01-12	2020-01-11	E	
	RESULTS	**2020-01-10**	**S**	

17.2.5 Simple multiple reads – QF variation - row 298

DS	To	MDPVersionTS	QF	QF Sample
01	2020-01-01	2020-01-10	A	
01	2020-01-02	2020-01-10	A	
01	2020-01-03	2020-01-10	A	
01	2020-01-04	2020-01-10	V	AAAASSSSS
01	2020-01-05	2020-01-10	V	AAAASSSSS
01	2020-01-06	2020-01-10	V	AAAASSSSS
01	2020-01-07	2020-01-10	A	
01	2020-01-08	2020-01-10	A	
01	2020-01-09	2020-01-10	A	
01	2020-01-10	2020-01-10	V	AAAAEEEEE
01	2020-01-11	2020-01-10	E	
01	2020-01-12	2020-01-10	E	
	RESULTS	2020-01-10	A	

17.2.6 Simple multiple reads – 2 reads – row 54

DS	To	MDPVersionTS	QF	QF Sample
01	2020-01-01	2020-01-11	A	
01	2020-01-02	2020-01-11	A	
01	2020-01-03	2020-01-11	S	
01	2020-01-04	2020-01-11	A	
01	2020-01-05	2020-01-11	F	
01	2020-01-06	2020-01-11	F	
01	2020-01-07	2020-01-11	A	
01	2020-01-08	2020-01-11	A	
01	2020-01-09	2020-01-12	A	
01	2020-01-10	2020-01-12	V	AAAAEEEEE
01	2020-01-11	2020-01-12	E	
01	2020-01-12	2020-01-12	E	
	RESULTS	**2020-01-10**	**A**	
		2020-01-09	**F**	

17.2.7 Replacement single read – row 214

					Replacement reads			
DS	**To**	**MDPVersionTS**	**QF**	**QF Sample**	**To**	**MDPVersionTS**	**QF**	**QF Sample**
01	2020-01-01	2020-01-10	A		2020-01-01	2020-01-15	A	
01	2020-01-02	2020-01-10	A		2020-01-02	2020-01-15	A	
01	2020-01-03	2020-01-11	S		2020-01-03	2020-01-15	F	
01	2020-01-04	2020-01-11	S		2020-01-04	2020-01-15	F	
01	2020-01-05	2020-01-12	F		2020-01-05	2020-01-15	A	
01	2020-01-06	2020-01-12	F		2020-01-06	2020-01-15	A	
01	2020-01-07	2020-01-13	A		2020-01-07	2020-01-15	A	
01	2020-01-08	2020-01-13	A		2020-01-08	2020-01-15	A	
01	2020-01-09	2020-01-14	A		2020-01-09	2020-01-15	A	
01	2020-01-10	2020-01-14	V	AAAAEEEEE	2020-01-10	2020-01-15	V	AAAAEEEEE
01	2020-01-11	2020-01-10	E		2020-01-11	2020-01-15	E	
01	2020-01-12	2020-01-10	E		2020-01-12	2020-01-15	E	
					RESULTS	**2020-01-10**	**F**	

17.2.8 **Multiple meters – row 393**

DS	To	MDPVersionTS	QF	QF Sample	DS	To	MDPVersionTS	QF	QF Sample	RESULTS	
N1	2020-01-01	2020-01-10	A		N2	2020-01-01	2020-01-10	A		**2020-01-10**	**A**
N1	2020-01-02	2020-01-10	A		N2	2020-01-02	2020-01-10	A			
N1	2020-01-03	2020-01-10	A		N2	2020-01-03	2020-01-10	A			
N1	2020-01-04	2020-01-10	A		N2	2020-01-04	2020-01-10	A			
N1	2020-01-05	2020-01-10	A		N2	2020-01-05	2020-01-10	A			
N1	2020-01-06	2020-01-10	A		N2	2020-01-06	2020-01-10	A			
N1	2020-01-07	2020-01-10	A		N2	2020-01-07	2020-01-10	A			
N1	2020-01-08	2020-01-10	A		N2	2020-01-08	2020-01-10	A			
N1	2020-01-09	2020-01-10	A		N2	2020-01-09	2020-01-10	A			
N1	2020-01-10	2020-01-10	V	AAAAEEEEE	N2	2020-01-10	2020-01-10	V	AAAAEEEEE		
N1	2020-01-11	2020-01-10	E		N2	2020-01-11	2020-01-10	E			

DS	To	MDPVersionTS	QF	QF Sample	DS	To	MDPVersionTS	QF	QF Sample	RESULTS
N1	2020-01-12	2020-01-10	E		N2	2020-01-12	2020-01-10	E		

17.2.9 Multiple meter reads – row 464

DS	To	MDPVersionTS	QF	QF Sample	DS	To	MDPVersionTS	QF	QF Sample	RESULTS
N1	2020-01-01	2020-01-10	A		N2	2020-01-01	2020-01-10	E		**Error**
N1	2020-01-02	2020-01-10	A		N2	2020-01-02	2020-01-10	E		
N1	2020-01-03	2020-01-10	A		N2	2020-01-03	2020-01-10	E		
N1	2020-01-04	2020-01-10	A		N2	2020-01-04	2020-01-10	E		
N1	2020-01-05	2020-01-10	A		N2	2020-01-05	2020-01-10	A		
N1	2020-01-06	2020-01-10	A		N2	2020-01-06	2020-01-10	E		
N1	2020-01-07	2020-01-10	A		N2	2020-01-07	2020-01-10	E		
N1	2020-01-08	2020-01-10	A		N2	2020-01-08	2020-01-10	E		

DS	To	MDPVersionTS	QF	QF Sample	DS	To	MDPVersionTS	QF	QF Sample	RESULTS
N1	2020-01-09	2020-01-10	A		N2	2020-01-09	2020-01-10	E		
N1	2020-01-10	2020-01-10	V	AAAAEEEEE	N2	2020-01-10	2020-01-10	E		
N1	2020-01-11	2020-01-10	E		N2	2020-01-11	2020-01-10	E		
N1	2020-01-12	2020-01-10	E		N2	2020-01-12	2020-01-10	E		

18. Index

Q

R

S

T

U

W