POWER OF CHOICE IMPLEMENTATION PROGRAM

INDUSTRY TEST PLAN EN/MC (VERSION 1.0)

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AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

VERSION RELEASE HISTORY

Version	Date	Summary of Changes
0.1	06/02/2017	First draft issued for discussion with the Power of Choice – Industry Test Working Group (POC-ITWG)
0.2	05/04/2017	Second draft issued, incorporating POC-ITWG feedback received on version 0.1
0.3	21/04/2017	Third draft issued, incorporating POC-ITWG feedback received on version 0.2
1.0	10/05/2017	Industry Test Plan (EN/MC) finalised as Version 1.0, timelines updated.

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1. INTRODUCTION

This Industry Test Plan (EN/MC) outlines industry testing activities for the Embedded Networks (EN) and Metering Competition (MC) rule changes as part of Power of Choice (POC) Implementation Project. This document should be read in conjunction with the POC Industry Test Strategy. Any deviations from the POC Industry Test Strategy for this Industry Test Plan (EN/MC) are outlined within this document.

1.1 Background

The objective of AEMO's POC Implementation Program is to design and implement the required changes to electricity metering, retail market arrangements and infrastructure to give effect to rule changes arising from the POC Review.[1]

1.1.1 Scope of the Industry Testing Plan (EN/MC)

The following POC related rule changes are relevant to this Industry Test Plan:

- Expanding Competition in Metering and Related Services (MC) rule change[2]
- Embedded Networks (EN) rule change[3]

The following updated retail market procedures are relevant to this Industry Test Plan:[4]

- Market Settlement and Transfer Solution (MSATS) procedures:
  - Consumer Administration and Transfer Solution (CATS)
  - Wholesale, Interconnector, Generator and Sample (WIGS)
- National Metering Identifier (NMI) standing data schedule

Items inside scope

This Industry Test Plan prescribes all activities that will allow AEMO and NEM market participants to test their systems changes (as required under the MC and EN rule changes) in the following areas:

- Business to Market (B2M) and Market to Business (M2B) communication flows between AEMO's market system and NEM participants' market interfacing systems via MSATS.

Items outside scope

This Industry Test Plan does not prescribe activities required for any testing activities associated with:

- Business to Business (B2B) changes due to the MC and EN rule changes. These testing activities will be included in the POC Market Trial phase.
- Changes to NEM participants' supporting business systems that do not directly interact with AEMO's market systems (i.e. back-end systems).
- Any bilateral testing between participants. Participants can coordinate bilateral testing between themselves in parallel with the Industry Test, however reporting during Industry Test will not refer to bilateral testing.
- Unchanged communication flows between AEMO's market systems and NEM participants' market interfacing systems.

[1] See AEMC website, http://www.aemc.gov.au/Major-Pages/Power-of-choice.
[2] Rule made; AEMC final rule determination published 26 November 2015.
[3] Rule made; AEMC final rule determination published 17 December 2015.
[4] Package 1 procedure changes, see AEMO website, http://www.aemo.com.au/Stakeholder-Consultation/Consultations/Power-of-Choice---AEMO-Procedure-Changes-Package-1. Package 2 procedure changes, see AEMO website, http://www.aemo.com.au/Stakeholder-Consultation/Consultations/Power-of-Choice---AEMO-Procedure-Changes-Package-2

Each NEM participant is responsible for their own preparedness in respect of the above matters and should account for such items within their own organisational testing program.

1.2 About this paper

1.2.1 Structure of this paper

This paper is structured as follows:

- Chapter 2 details the key dates and milestones of the industry testing phase.
- Chapter 3 details the scope and objectives of the industry testing phase.
- Chapter 4 details the test preparation activities.
- Chapter 5 details the test execution approach.

1.2.2 Reference documents

The following POC-related documents are relevant to the Industry Test Plan.

#	Document Name
1	POC Market Readiness Strategy[5]
2	POC Industry Test Strategy[6]
3	POC Industry Registration & Accreditation Plan[7]
4	AEMO Procedures, as approved by AEMO under the following NER Consultations: - POC Procedure Changes (Package 1)[8] - POC Procedure Changes (Package 2)[9]
5	MSATS 46.88 Technical Specification[10]

[5] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream
[6] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream/Industry-Test-Work-Group
[7] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream
[8] See AEMO website, http://aemo.com.au/Stakeholder-Consultation/Consultations/Power-of-Choice---AEMO-Procedure-Changes-Package-1
[9] See AEMO website, http://aemo.com.au/Stakeholder-Consultation/Consultations/Power-of-Choice---AEMO-Procedure-Changes-Package-2
[10] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/IT-systems-and-change/IT-change

2. KEY DATES AND MILESTONES

2.1 Key milestones for the Industry Test Plan (EN/MC)

Table 1 – Key milestones

#	Milestone	Indicative date	NEM Participant
1	Industry Test Plan (MC/EN)– first draft	6 February 2017	AEMO
2	POC-ITWG meeting – review first draft of Industry Test Plan (EN/MC)	13 February 2017	All
3	Participant feedback due on first draft of Industry Test Plan (EN/MC)	20 February 2017	All
4	POC ITWG meeting – discuss feedback and next steps for Industry Test Plan (EN/MC)	7 March 2017	All
5	MSAT pre-production release of B2M schema r35 and associated EN/MC changes	22 March 2017	AEMO
6	POC ITWG meeting – discuss feedback and second draft of Industry Test Plan (EN/MC) and workbook	5 April 2017	All
7	AEMO outage for data refresh (production data from 30 March 2017 at 15:00 hrs AEST)	6 April - 10 April 2017	AEMO
8	Registration for Industry Test (EN/MC)	13 February 2017 – 20 April 2017	All
9	POC ITWG meeting – EN/MC test planning – review third draft of Industry Test Plan (EN/MC) and test workbook including test calendar	28 April 2017	All
10	AEMO issues HP SaaS QC credentials	2 May 2017	AEMO
11	Participant feedback on Industry Test Plan (EN/MC) and test workbook including test calendar	3 May 2017 – ***extended to 11 May 2017***	Test Participants
12	Participants confirm HP SaaS QC access	9 May 2017	Test Participants
13	Test Participant meeting – AEMO walk-through updates to test plan, workbook, HP SaaS QC set-up. Data requirements reviewed	9 May 2017	AEMO and Test Participants
14	AEMO circulates final Industry Test Plan (EN/MC)	12 May 2017	AEMO
15	AEMO completes draft HP SaaS QC set-up for industry review	15 May 2017	AEMO
16	Participants review and provide feedback on draft HP SaaS QC set-up	17 May 2017	Test Participants
17	AEMO outage for data refresh (production data from 10 May 2017 at 15:00 hrs (AEST)	12 May – 19 May	AEMO

#	Milestone	Indicative date	NEM Participant
18	Participants agree on data ranges	12 May 2017 – 19 May 2017	Test Participants
19	AEMO finalises HP SaaS QC set-up	19 May 2017	AEMO
20	Participants submit entry criteria sign-off	19 May 2017	Test Participants
21	AEMO confirms test readiness	22 May 2017	AEMO
22	MSAT pre-production refreshed – ENM tariff change applied	22 May 2017	AEMO
23	Daily meetings commence	22 May 2017	All
24	Cycle 1 (23 May 2017 - 2 June 2017) completes	2 June 2017	All
25	Cycle 2 (5 June 2017 – 16 June 2017) completes	16 June 2017	All
26	Cycle 3 (19 June 2017 - 30 June 2017) completes	30 June 2017	All
27	Test Completion Report – draft	7 July 2017	AEMO
28	Test Completion Report – final	14 July 2017	AEMO

3. SCOPE AND OBJECTIVES OF INDUSTRY TEST (EN/MC)

3.1 Industry Test (EN/MC) objectives

The overall objective of the Industry Testing (EN/MC) is to support industry's operational preparedness for the "go-live" date by:

- Providing market participants, who are ready to participate in early testing, the opportunity and tools to verify:
  - Technical compliance against the updated electricity retail market procedures from package 1 and package 2 procedure changes.
  - Technical compliance against the related aseXML schema changes.[11]
- Providing an opportunity to reduce the identified risk associated with the compressed industry test timeframe[12]:
  - Identifying and fixing defects in AEMO's and participating parties' systems.
  - Setting up and trialling structures and processes that can be expanded and used during the full Market Trial (phase 3).

Participation in the Industry Test (EN/MC) is voluntary, however AEMO encourages participants to register and participate in the Test in order for the overall objective to be achieved.

Participants that do not take part in the Industry Test (EN/MC) will have an opportunity to undertake the EN/MC test scenarios during the full Market Trial (phase 3), either as stand-alone transaction based scenarios or combined with other transactions (e.g. service orders) to form end-to-end business process scenarios.

Participants that do take part in the Industry Test (EN/MC) will have the choice to not repeat, or to repeat EN/MC test scenarios during the full Market Trial (phase 3) – e.g. against a different pairing participant, or as part of an end-to-end business process.

3.2 Industry Test (EN/MC) scope inclusions

Industry Test (EN/MC) scope inclusions:

- Industry capability based technical and functional testing as follows:
  - Industry technical verification and validation:
    - Determines the technical state of the solution e.g. schema validation, interoperability of infrastructure.
  - Industry functional verification and validation:
    - Determines the state of solution as matched against required business functionality and business processes. The solution may not mirror production from a complete "go-live" perspective e.g. performed on low volumes of data and accelerated timeframes.
- Within this context industry testing includes:
  - Change requests (CR) validations and configuration – changes to mandatory/optional fields, objection codes, initiating parties, notified parties, objecting parties, objection logging periods.

[11] Sample aseXML documents also available, see http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/IT-systems-and-change/aseXML_standards/aseMXL-Document-Samples

[12] See the POC Industry Risk and Issue log – risk R11, see http://www.aemo.com.au/-/media/Files/Electricity/NEM/Power-of-Choice/PM/PoC-Industry-Register.xlsx

  - Changes to meter register status codes, NMI status codes, read type codes.
  - Changes to reports (C1 and C7 reports).
  - Embedded Network (EN) and NMI ranges screen changes.
  - axeML schema changes (B2M r35).
- Test scope is aligned with the MSAT changes as detailed in the MSAT 46.88 Release Schedule (version 2.01) on 17 March 2017[13] updated:
  - Release on 22 May to include the ENM tariff allocation

3.3 Industry Test (EN/MC) scope exclusions

Industry Test (EN/MC) scope exclusions:

- B2B transactions.
- Testing of unchanged B2M transactions.
- Testing of non-critical business processes (unless otherwise agreed by the impacted participants).
- Testing of participants' back end systems. Reporting during the industry testing will not refer to any issues found in participant's back end systems.
- Full volume testing.

[13] See the latest MSAT Release schedule here: http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/IT-systems-and-change/IT-change

4. INDUSTRY TEST PREPARATION

The POC Industry Test Working (ITWG) will drive the test planning and preparation process, as per the ITWG Terms of Reference. All participants taking part in the Industry Test are expected to provide industry test resources to be part of the ITWG.

4.1 Test registration

Each participant is requested to register with AEMO prior to the commencement of the Industry Test (EN/MC). Registration requests should be sent via email to the POC inbox at POC@aemo.com.au. Registration requests should include the information in Appendix A.

4.2 Test tools

HP SaaS Quality Centre (QC) will be used to manage the POC Industry Testing execution, including test scenarios, test results and the tracking of test defects. HP SaaS QC will be configured by AEMO with all required information and will be accessible by all participants.

4.3 Test scenarios, scripts and data

The ITWG will be responsible for developing test scenarios, scripts and corresponding data sets.

In terms of scenarios, the scripting and data requirements developed in these workshops will:

- Agree on the test scenarios required for industry testing, including which scenarios participants intend to test (“intended scenarios”).
- Define the subsequent test scripts that will need to be executed.
- Agree on the scope of test execution and test scripts required by participant role (i.e. Retailers, Distributors, Metering Coordinator, Metering Providers, Metering Data Providers, Embedded Network Manager and AEMO).
- Agree on the approach and timing of test script execution.
- Agree on the data required, both baseline and dynamic, to support the execution of test scripts.

4.3.1 Test data

AEMO’s preproduction will be refreshed using production data from 10 May 2017 at 15:00 hrs (AEST). AEMO has identified Pre-requisite scenarios in the EN&MC workbook which generate the data required for the functional scenarios. Each functional scenario has a ‘Reference to Pre-requisites’ column which links the pre-requisite scenario

AEMO would have the required config data and the NMI ranges for the participants in the pre-prod environment.

1. With respect to the NMIs, LNSP can create the NMIs (different CR codes) and pass it on to the retailers to execute the functional scenarios.
2. If we don’t have an LNSP to create NMIs during Industry Testing, participants have to identify test data from the existing environment/database as these are existing CR codes and align with other participants and AEMO to ensure data is aligned across systems. The only point to be noted here is since it is existing data, participants will not have an option to select the new Status, Meter Status, Meter Install Codes and Register Status during CR creation.
3. If we don’t have an LNSP to create the NMIs and if participants are not able to identify the data form the existing database, there will be a risk of not being able to run the functional scenarios.

Multiple test data sets should be identified for each test script to allow for multiple executions of that test script in case of defects or problems in execution. Data identified will be mapped against every scenario in the data column in HP SaaS QC.

4.3.2 Participants

The term 'Participant' is used to indicate a unique role that a given business is to adopt for the purpose of testing. For example, where a participating business fulfils the role of LNSP and MDP, these roles are classed as different Participants for testing purposes.

If an organisation has more than one role (i.e. is more than one 'Participant', then it may need to separately carry out testing for each role (as each role has different transactions).

If an organisation has more than one participant ID but they are all for the same role, then as long as the participant is using the same set of systems for each ID, the participant would only need to perform testing once for those IDs.

Participants will detail which participant roles and ID they will be testing under as part of their Test Registration.

The Industry Test Workbook will include the test participant matrix, detailing who each participant will test with and when.

4.3.3 Industry Test Workbook

The Industry Test Workbook will document the test scenarios, data requirements, test participants and test calendar. This will be published on the AEMO website and will be developed in consultation with the ITWG. In addition, the test cases and steps will be uploaded to HP SaaS QC in preparation for test execution.

4.4 Test environment

Industry Testing will utilise the MSATS pre-production environment, managed by AEMO. Participants test environments will be as close to a replica of their go-live systems as possible. A diagram of the environment is documented in the Industry Test Strategy document under section 6.4.

In line with the AEMO published release schedule, the MSATS 46.88 release for EN/MC was deployed to the MSATS preproduction environment on 22 March 2017. The release deployed the B2M R35 schema and the EN/MC changes as documented in the published MSATS 46.88 Technical Specification. An additional patch fix release is planned for the 22 May 2017 and Industry Testing (EN/MC) will commence from 23 May 2017.

AEMO will be refreshing the pre-production environment from 12 May to 19 May 2017 and during this time pre-production environment will not be available. It will be available from 22 May 2017. Preproduction will be refreshed using production data from 10 May 2017 at 15:00 hrs (AEST).

5. INDUSTRY TEST EXECUTION APPROACH

5.1 Pre-requisites

New participants will have commenced registration[14] or accreditation[15] activities in order to have their MSATS pre-production ID and credentials issued.[16]

5.2 Entry criteria

Entry criteria for the Industry Test (EN/MC) are as follows. The entry criteria relate to individual participants, and AEMO will coordinate and communication readiness between all paired participants to commence testing.

Participants are requested to submit the checklist in Appendix B when ready to commence testing.

- Pre-production environment available.
  - Stable and reliable
  - Adequate internal testing completed to be ready to commence industry testing.
- Participant credentials issued (for new participants).
- Connectivity testing complete (for new participants).
- Test preparation is complete:
  - Industry Test Plan (EN/MC)
  - Industry Test Workbook.
  - HP Quality Centre configured with all test information
  - Test data preparation is complete.
- HP SaaS QC is accessible and useable.
- Appropriately skilled resource capability available to execute and support testing.

AEMO external test lead will confirm the following:

- Industry Test Plan (EN/MC) and Workbook is complete and delivered to the ITWG.
- HP SaaS QC is configured with all required test information, and is accessible and useable by testing participants.
- Testing participants have confirmed readiness (through the submission of completed entry criteria checklist).

5.3 Exit/Completion criteria

Exit criteria for the text execution phase include:

- Participants have run all intended test scenarios.
- All open defects have agreed resolutions – e.g. plan in place to fix and retest prior to, or during, the Phase 3 (Market Trial).
- Cycle 3 completion date has been reached.

[14] The Application for Registration as a Metering Coordinator and the Metering Coordinator Registration Guide can be found here : http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Participant-information/New-participants/Application-forms-and-supporting-documentation

[15] The Qualification Procedure for Metering Providers, Meter Data Providers and Embedded Network Managers, along with the Accreditation checklists can be found here: http://www.aemo.com.au/Stakeholder-Consultation/Consultations/Power-of-Choice---AEMO-Procedure-Changes-Package-2

[16] Refer to the POC Industry Accreditation & Registration Plan for an overview of these activities. See http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream

5.4 Test scenario and script execution

Test execution will be undertaken as follows:

- Tests scenarios and scripts will be stored in HP SaaS QC as per the defined test configuration.
- Execution of the testing will be undertaken according to execution calendar made available as part of the preparation activities. Informal testing may occur between participants, however reporting of the testing will be based on the defined execution calendar.
- Test execution information will be updated in HP SaaS QC as it occurs. This will include test case progress, status and data used.
- An audit trail of test execution is to be undertaken by participants. This includes capture of positive results to prove that a test met expected results as well as capture of negative results for defect resolution. Where applicable, this information will be maintained in HP SaaS QC.

In addition to updating the HP SaaS QC test case progress and status, participants will update the scenario status in HP SaaS QC as below, which will flow into the Status Traffic Light report which AEMO will circulate prior to the daily test meetings.

- Scenario Status:
  - Completed (green)
  - In progress (yellow)
  - Blocked (red)
  - Failed (red)
  - Not Started

5.5 Industry Test Cycles

The Industry Test is targeted to be executed over 3 identical test cycles, with each cycle consisting of the same set of scenarios:

- The objective of cycle 1 is to successfully complete all identified test scenarios to uncover issues/defects.
- The objective of cycle 2 and 3 is to re-run all test scenarios, to re-test the fixed identified issues/defects.

To align with the overall objective of the Industry Test (EN/MC) of giving participants an opportunity to test their systems and de-risk the overall POC program, a flexible approach will be taken with the cycles. Test participants will be able to:

- Commence test execution in cycle 2 or cycle 3.
- Choose to not re-run tests successfully completed in one cycle in a subsequent cycle.

5.6 Defect management

The overall defect management process is detailed in the Industry Testing Strategy document under section 8. Defects raised during industry testing will be captured in HP SaaS QC with the following information:

- Description of the defect and severity, who detected in and when.
- The particular test scenario and test script associated with it.
- Defect owner (entered after gaining agreement between testing counterparties as to who owns the defect.
- Target fix date (entered by defect owner).

Defect status and progress on defect fixes will be discussed in the scheduled stand-up meetings.

For the Industry Test (EN/MC), defects will be classified by severity only. See Appendix C for defect severity classification.

Defects will be fixed and re-tested during the cycle where possible. If the fix can't be delivered within the cycle it will be re-tested in the next cycle. See Appendix D for defect management status and lifecycle.

5.7 Test process

AEMO will initially schedule daily stand-up meetings for testing participants to discuss test execution progress and defect status. The frequency and length of meetings will be assessed during the test execution phase.

Participants will be expected to update HP SaaS QC with their daily test results by the end of that day, or by 8:00 am (AEST) on the following morning. AEMO will generate the test execution and traffic light status report between 8:00 am and 9:30 am (AEST) and circulate prior to the stand-up meetings.

These meetings will be:

- Scheduled daily 10.00 am (AEST))
- Use the teleconference facilities provided by AEMO and be chaired by the Industry Test Manager.
- Use a standard agenda:
  - Confirm attendance.
  - Review planned against actual progress for test execution. Discuss exceptions against planned execution.
  - Review defect status – outstanding defects.
  - Confirm planned tests for the following days.

5.8 Test reporting

The progress of the Industry Test can be monitored on a continuous basis by all market participants using HP SaaS QC. Any regular reports will produced to track the progress of test execution and defect resolution. The format of these reports will be determined by the ITWG as part of the preparation activities and templates will be include in the Industry Test Plans and confirm readiness to commence scheduled tests. This information, will be presented to the ITWG to track the progress of test execution and defect resolution at the ITWG stand-up meetings.

These reports will include test measurement during the industry test and will be based on but not limited to the following metrics agreed by the participants:

- Test execution summary by participant:
  - Number of test scenarios executed versus the number planned
  - Number of passed, failed, blocked or deferred test scenarios versus test scenarios executed
  - Planned count versus actual count (with any exceptions)
  - Planned % versus actual %
- Defect summary will be reported with a focus on status, severity, priority, ownership, participants impacted, version and date detected against and actions required:
  - Open defects and their progressive status
  - Overall by severity and status
  - By participant and severity and status

- Issues and risks

An overall Industry Test (EN/MC) Completion Report will be written at the completion of the testing period and will be presented to the ITWG and the POC Readiness Working (RWG).

This report will include:

- An introduction highlighting the purpose of the report, the background to the testing and its scope.
- Testing outcomes highlighting a results summary, defects summary, outstanding defects, summary of other outstanding issues and agreed workarounds.
- Recommendations and conclusion.

AEMO will prepare the completion reports using data from HP SaaS QC and inputs provided by participants. Inputs provided by participants would include details on their defect fixes.

5.9 Test Support

All requests for support during the Industry Test (EN/MC) phase should be emailed to the POC inbox (POC@aemo.com.au). Test support will be provided between 9:00 and 17:00 hrs (AEST) on business days. The subject line of the email should contain:

- **HP SaaS QC** for assistance with HP SaaS QC access or operation
- **Industry Test (EN/MC)** for other queries.

APPENDIX A. REGISTRATION

The following information is to be submitted to POC@aemo.com.au

ORGANISATION NAME:

TEST LEAD:

PARTICIPANT DETAILS:

#	Participant role (LNSP, MDP, MC, etc.)	Participant ID/s	Jurisdiction/s	Registration status (existing, in progress, planned)	Targeted commencement data
1	*Retailer X*	*RetX1, RetX2*	*NSW,QLD*	*Existing*	*3 April 2017*
2	*ENM X*	*TBA*	*NSW,QLD*	*In progress – pre-prod credentials due mid-May 2017*	*1 June 2017*
3					
4					

Notes:

1) Please add a role for each individual participant role you wish to test under (e.g. in example above Retailer X will test under either RetX1 or RetX2 – not both).
2) If accreditation or registration is planned or in progress please indicate when you expect to receive your pre-production credentials.
3) Add in rows as required.

APPENDIX B. ENTRY CRITERIA

The following information is to be submitted to POC@aemo.com.au

DATE:

ORGANISATION NAME:

TEST LEAD:

PARTICIPANT DETAILS: <please note which participant roles and IDs this entry criteria submission applies to>

ENTRY CRITERIA:

#	Entry Criteria	Achieved (Yes/No)	Comments
1	Pre-production environment available – stable and reliable, adequate internal testing completed to be ready for Industry testing, test version of actual system		
2	MSAT connectivity confirmed		
3	HP SaaS QC accessible		
4	Test planning in HP SaaS QC completed and understood – Test execution processes, schedule, scenarios/ scripts and test data		
5	Appropriately skilled resource capability available to execute and support testing		

APPENDIX C. DEFECT CLASSIFICATION

The descriptions of each classification of **severity** are:

Severity	Description
1- Showstopper	This is a defect that makes the system unusable resulting in an extremely critical (catastrophic) impact on business operations. The software under test does not perform correctly, there is no work around and displays one or more of the following characteristics: • System hangs or performance is degraded to the point of being unusable. • System crashes repeatedly. • Critical functionality is not available. • An error occurs that results in a catastrophic negative business impact. • An error occurs that results in a loss or corruption of data that affects completion of a business process.
2- Critical	This is a defect that causes major system functionality to be degraded or causes particular features or functions to be inoperative with critical impact to business. The software under test has incorrect behaviours and displays one or more of the following characteristics: • System performance is significantly degraded due to the error. • A total system failure occurs which is caused by an unusual or unlikely sequence of user actions. • Important functionality has incorrect behaviour that significantly disrupts user operation. • An error occurs that results in significant business impact for the participant. • An error occurs that results in a loss or corruption of data that does not affect completion of a business process. • Loss of essential administrative functions. • The specific error cannot be circumvented.

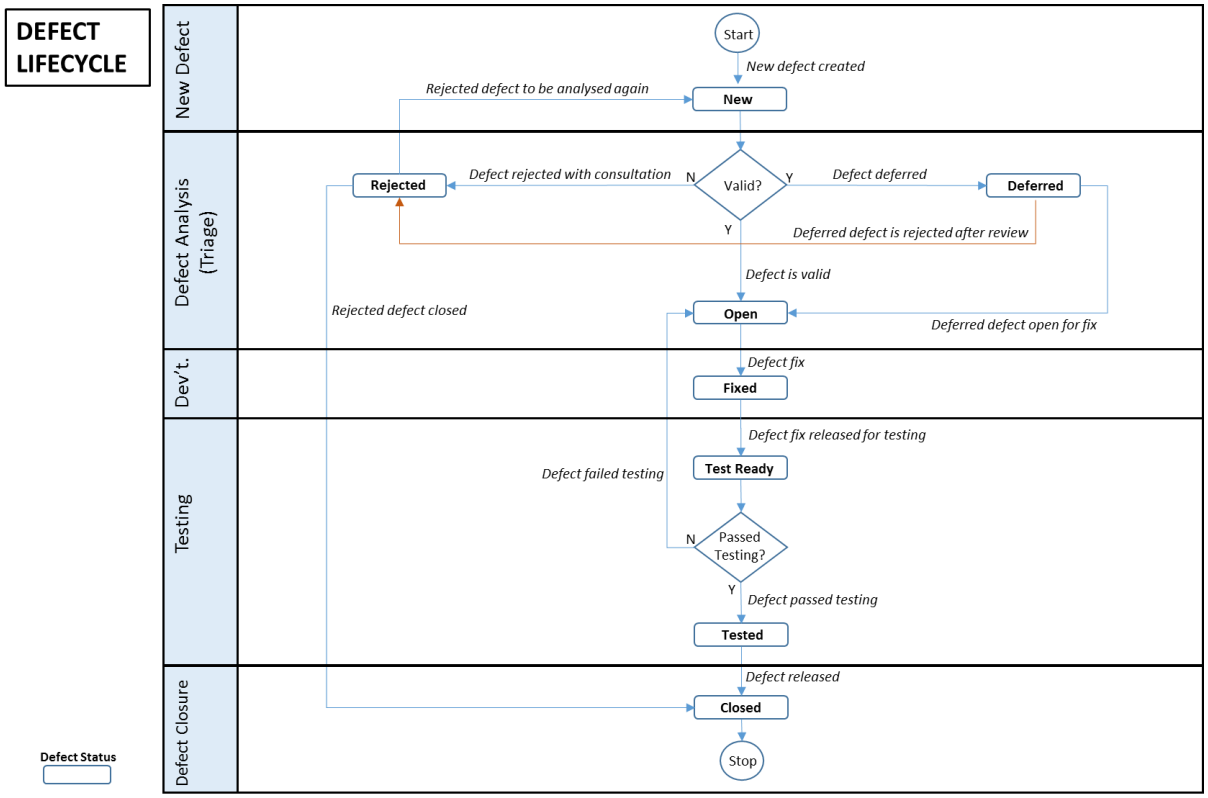
Severity	Description
3- Moderate	This is a defect that causes a problem but one that is not critical to overall business operation. The software under test has incorrect behaviour but with limited loss, or no loss of functionality or no impact on participants' operations and displays one or more of the following characteristics: • Minor degradation of business functions. • Loss of routine administration functions. • An error occurs that results in some negative business impact for the participant. • The specific error can be circumvented and the business process can continue with manual or additional systems intervention. • Usability problems in the developed software.
4- Cosmetic	This is a defect that does not affect the functionality of the system. These may be cosmetic errors (e.g. spelling mistake) or they may be errors in the system documentation.

APPENDIX D. DEFECT MANAGEMENT STATUS

Status	Description
New	Initial defect raised but will require a triage to determine if further analysis is required and whether it is a true defect as such to move to an open status.
Open	HP SaaS QC (QC) item that is considered valid to be set to 'Open' for further analysis. Open status means, development team is working on the QC item (analysis or fixing)
Rejected	QC item that is considered invalid is set to 'Rejected'. AEMO will set QC item to 'Rejected' with ITWG consultation during daily meetings. If a QC item status is accidentally set to 'Rejected' QC administrator will assist to rectify.
Fixed	Once QC item has been fixed and unit tested by developer the status is set to 'Fixed'. This indicated release manager can release the fix to testing environment.
Test Ready	Once Release manager released the fix to test environment successfully the status is set to 'Test Ready'
Tested	Tester (defect originator) will only test QC item with the status 'Test Ready' and set status to 'Tested' upon passing the QC item.
Closed	Test manager is responsible to set QC item status to 'Closed' once it has been released to production successfully.

The following diagram depicts the defect management process throughout the various stages of the defect lifecycle from its inception through to its closure.

Figure 5 Industry Testing Defect Management Cycle



Industry Test (EN/MC) Workbook

Version	Date Released
v0.1	10/02/2017
v0.2	05/04/2017
v0.3	21/04/2017
v0.4	28/04/2017

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Comment
Initial first draft for discussion at the 13 February ITWG
Second draft discussed at the 5 April 2017 ITWG (and circulated post the session)
Third draft for discussion at the 28 April ITWG (EN/MC planning session)
Added duration to test steps, test participation and draft calendar

Description
Changes to CATS and WIGS CRs due to the POC EN/MC procedure changes
NMI data required for FUNCTIONAL transaction test cases. NMI data creation is optional and Participants may use existing NMI's in there system. If Participant LNSP is available, this test cases can be executed.
FUNCTIONAL Transaction test cases which verifies the procedural changes.
Cycle 1 Calendar
Participant Test Partners - Testing partner priority - to be populated by participants
Participant Registration -participants registered into EN/MC test, and participant groups (NEM regions)
Cycle Dates for EN/MC testing
Quick Reference Guide
MSAT Transaction Type Codes
Change Reason Codes with Initiating Party
Assignment of Change Reason Codes to Events
Change Request Status Life Cycle
Retrospective and Prospective Change Reason Codes
MSAT Reports
Role Codes
Jurisdiction Codes
Objection Codes
NMI Classification Codes
Customer Classification Codes
Customer Threshold Codes
NMI Status Codes
Datastream Status Codes
Meter Register Status Codes
Register Identifier Status Codes
Metering Installation Type Codes
Read Type Codes

Valid Combinations of Read Type Codes, Metering Installation Type Codes and Change Reason Codes
Field Validation Codes
CATS Configuration Tables

Tab Name
CATS and WIGS
Prerequisites
FUNCTIONAL
Cycle 1 Calendar
Participant Test Partners
Participant Registration
Cycle Dates
Quick Reference Guide
MSAT Transaction Type Codes
Change Reason Codes - IP
Change Request Codes - Events
CR Life Cycle
Retro- and Prospective CRs
MSAT Reports
Role Codes
Jurisdiction Codes
Objection Codes
NMI Classification Codes
Customer Classification Codes
Customer Threshold Codes
NMI Status Codes
Datastream Status Codes
Meter Register Status Codes
Register Id Status Codes
MI Type Codes
Read Type Codes

Read Type Code Valid Combos
Field Validation Codes
CATS Configuration Tables

Changes to CATS and WIGS CRs due to the POC EN/MC procedure ch

Procedure	Section
CATS	Obligations by Role
CATS	Role codes and rules for a CR
CATS	Role codes and rules for a CR
CATS	Role codes and rules for a CR
CATS	Role codes and rules for a CR
CATS	Role codes and rules for a CR
CATS	Role codes and rules for a CR
CATS	CR1000 series
CATS	*CR1000 series*
CATS	CR1000 series
CATS	CR1000 series
CATS	*CR1000 series*
CATS	*CR1000 series*
CATS	CR1000 series
CATS	CR1000 series
CATS	*CR1000 series*
CATS	CR1000 series
CATS	CR1000 series
CATS	CR1000 series
CATS	CR1000 series
CATS	CR1000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	*CR2000 series*
CATS	*CR2000 series*
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR2000 series
CATS	CR3000 series
CATS	CR3000 series
CATS	CR3000 series
CATS	CR3000 series
CATS	CR3000 series
CATS	CR3000 series

CATS	CR3000 series
CATS	CR3000 series
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CATS	CR3000 series
CATS	CR3000 series
CATS	CR4000 series
CATS	CR4000 series
CATS	CR5000 series
CATS	CR5000 series
CATS	CR5000 series
CATS	CR5000 series
CATS	CR5000 series
CATS	CR5000 series
CATS	CR5000 series
CATS	CR5000 series
CATS	CR5000 series
CATS	*CR5000 series*
CATS	*CR5000 series*
CATS	*CR5000 series*
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
CATS	CR6000 series
WIGS	CR1000 series
WIGS	CR1000 series
WIGS	CR1000 series
WIGS	CR1000 series
WIGS	CR2000 series
WIGS	CR2000 series
WIGS	CR2000 series
WIGS	CR2000 series
WIGS	CR2000 series

WIGS	CR3000 series
WIGS	CR3000 series
WIGS	CR3000 series
WIGS	CR3000 series
CATS	CR5000 series
WIGS	CR5000 series
WIGS	CR5000 series
WIGS	CR5000 series
WIGS	CR5000 series
WIGS	CR5000 series
WIGS	CR6000 series
WIGS	CR6000 series
WIGS	CR6000 series
WIGS	Other
WIGS	Other

ıanges (WP1)

Item	CR description
Metering provider - Category B	N/A
Role codes	N/A
Status codes - NMI status codes	Various CRs
Status Codes - Meter Register Statu	CR3000 series
Read type codes	All
Read type codes	All
Read type codes	All
CR[1000, 1010*, 1020, 1030, 1040]	Change Retailer - small or large
CR[1000, 1020, 1030, 1040]	*Change Retailer - small or large*
CR[1000, 1010, 1020, 1030, 1040]	Change Retailer - small or large
CR[1000, 1020, 1030, 1040]	Change Retailer - small or large
CR[1021, 1022, 1023, 1024, 1025, 1	*Change Retailer - Error Corrections -*
CR[1021, 1022, 1023, 1024, 1025, 1	*Change Retailer - Error Corrections -*
CR[1021, 1022, 1023, 1024, 1025, 1	Change Retailer - Error Corrections -
CR[1080, 1081, 1082, 1083, 1084]	Change Retailer - Embedded Networ
CR[1080, 1081, 1082, 1083, 1084]	*Change Retailer - Embedded Networ*
CR[1080, 1081, 1082, 1083, 1084]	Change Retailer - Embedded Networ
CR[1080, 1083, 1084]	Change Retailer - Embedded Networ
CR[1082]	Change Retailer - Embedded Networ
CR[1050, 1051]	Change Retailer – Where FRMP is NC
CR[1050, 1051]	Change Retailer – (ENC) Where FRMF
CR[2000]	Create NMI
CR[2000, 2001]	Create NMI
CR[2003]	Create Tier 1 NMI
CR[2020,2021]	Create NMI – Child NMI
CR[2020,2021]	Create NMI – Child NMI
CR[2020,2021]	Create NMI – Child NMI
CR[2020,2021]	Create NMI Details –Child – Retrospe
CR[2020,2021]	Create NMI Details –Child – Retrospe
CR[2020,2021]	*Create NMI – Child NMI*
CR[2021]	*Create NMI Details –Child – Retrospe*
CR[2500,2501]	Create NMI, Meter, Datastream
CR[2500,2501]	Create NMI, Meter, Datastream
CR[2500,2501]	Create NMI, Meter, Datastream
CR[2520, 2521]	Create NMI, Meter, Datastream – Ch
CR[2520, 2521]	Create NMI, Meter, Datastream – Ch
CR[2520, 2521]	Create NMI, Meter, Datastream – Ch
CR[2520, 2521]	Create NMI, Meter, Datastream – Ch
CR[2520, 2521]	Create NMI, Meter, Datastream – Ch
CR[3000,3001]	Create Metering Installation Details
CR[3000,3001]	Create Metering Installation Details
CR[3003]	Create Tier 1 Metering Installation D
CR[3004,3005]	Exchange of Metering Information
CR[3004,3005]	Exchange of Metering Information
CR[3050, 3051]	Change metering installation details

CR[3050, 3051]	Change metering installation details
CR [3053]	Change Tier 1 Metering Installation D
CR[3080, 3081]	Advanced Change Metering Installati
CR[3080, 3081]	Advanced Change Metering Installati
CR[3080, 3081]	Advanced Change Metering Installati
CR[3080]	Advanced Change Metering Installati
CR[3090, 3091]	Advanced Exchange of Metering
CR[3090, 3091]	Advanced Exchange of Metering
CR[3090, 3091]	Advanced Exchange of Metering
CR[3090]	Advanced Exchange of Metering
CR[4003]	Create Tier 1 Datastream Details
CR[4053]	Change Tier 1 Datastream Details
CR[5001]	Backdate NMI Start Date
CR[5001]	Backdate NMI Start Date
CR[5021]	Backdate NMI Start Date – Child
CR[5021]	Backdate NMI Start Date – Child
CR[5021]	Backdate NMI Start Date – Child
CR[5053]	Change Tier 1 NMI Standing Data
CRs [5060, 5061]	Change NMI – Child NMI
CRs [5060, 5061]	Change NMI – Child NMI
CRs [5060, 5061]	Change NMI – Child NMI
CR[5080, 5081]	Change Parent Name
CR[5090, 5091]	*Make a NMI a Child NMI*
CR[5090, 5091]	*Make a NMI a Child NMI*
CR[5090, 5091]	*Make a NMI a Child NMI*
CR[6100, 6110]	Change LNSP
CR[6200, 6210]	Change MDP
CR[6200]	Change MDP
CR[6300, 6301]	Change MC
CR[6300]	Change MC
CR[6400, 6401]	Change LR
CR[6421]	Change LR Child NMI
CR[6500, 6501]	Change RoLR
CR[6500, 6501]	Change RoLR
CR[6700, 6701]	Change MPB, MPC, or Both
CR[6700]	Change MPB, MPC, or Both
CR[6800, 6801]	Change Multiple Roles – MC, MDP, M
CR[6800, 6801]	Change Multiple Roles – MC, MDP, M
CR[6800]	Change Multiple Roles – MC, MDP, M
CR[6800, 6801]	Change Multiple Roles – MC, MDP, M
CR[6800, 6801]	Change Multiple Roles – MC, MDP, M
CR[1000, 1020]	Change FRMP
CR[1000, 1020]	Change FRMP
CR[1050, 1051]	Change Retailer – Where FRMP is NC
CR[1080, 1082]	Change FRMP - Embedded Networks
CR[2000, 2001]	Create NMI
CR[2020, 2021]	Create NMI – Child NMI
CR[2100, 2101]	Create External Profile Shape
CR[2500, 2501]	Create NMI, Meter, Datastream
CR[2500, 2501]	Create NMI, Meter, Datastream

CR[3000, 3001]	Create Metering Details
CR[3000, 3001]	Create Metering Details
CR[3004, 3005]	Exchange of Metering Information
CR[3004, 3005]	Exchange of Metering Information
CR[5001]	Backdate NMI Start Date
CR[5021]	Backdate NMI Start Date – Child
CR[5060, 5061]	Change NMI – Child NMI
CR[5080, 5081]	Change Parent Name
CR[5090, 5091]	Make NMI a Child NMI
CR[5100, 5111]	Change External Profile Shape
CR[6200]	Change MDP
CR[6500, 6501]	Change ROLR
CR[6700]	Change MPB, MPC, or Both
ECLR	Change LR – Child NMI Auto
EPRF	Change Secondary FRMP – Parent NM

Description of change
MPB must update the Meter Register Status Code
Clarification
NMI status code "N" added
New meter register status code of D is added to indicated remove disconnection at the meter level
Removal of Read Type Codes
Read Type Codes now apply to type 4A
Read Type Codes now apply to type VICAMI, COMMS4C, COMMS4D
Initiation party - validation
Mandatory/Optional - MDP
Objection logging period
Objection code
Initiation party - validation
Mandatory/Optional - MDP
Objection logging period
Initiation party - validation
Mandatory/Optional - MDP
Objection logging period
Objection code
Objection code
Disabled
Disabled
Objection logging period
Objection party
Disabled
Objection logging period
Initiation party
Objection code
Objection code
Notifications
Objection code
Objection code
Objection logging period
Objection code
Mandatory/Optional
Objection logging period
Initiation party
Objection code
Objection code
Mandatory/Optional
Mandatory/Optional
Mandatory/Optional
Disabled
Mandatory/Optional
Mandatory/Optional
Mandatory/Optional

Mandatory/Optional
Disabled
Initiation party - validation
Notifications
Mandatory/Optional
Data request/CR1500
Initiation party - validation
Notifications
Mandatory/Optional
Data request/CR1500
Disabled
Disabled
Objection logging period
Objection code
Objection logging period
Objection code
Initiation party
Disabled
Initiation party
Notifications
Notifications
Initiation party
Initiation party
Notifications
Objection code
Objection logging period
Objection logging period
Data request/CR1500
Objection logging period
Data request/CR1500
Objection logging period
Objection logging period
Objection code
Objection logging period
Objection logging period
Data request/CR1500
Initiating party
Objection logging period
Objection code
Objection code
Notifications
Initiation party - validation
Objection code
Disabled
New WIGS CR
Objection party
New WIGS CR
Objections
Objection code
Mandatory/Optional

Mandatory/Optional
Mandatory/Optional
Mandatory/Optional
Mandatory/Optional
Objection code
New WIGS CR
New WIGS CR
New WIGS CR
New WIGS CR
Objections
Data request/CR1500
Objection code
Data request/CR1500
New WIGS CR
New WIGS CR

Back to References

Detailed description

The MPD will be the only party who can update the remove disconnection status at the meter level (using CR3
LNSP role id will be used for the ENM, RP role id will be used for the MC
Description of code is Non Market Child NMI
Description of codes is Remotely Disconnected
Read type codes "NI - New Interval meter" and "NB- Future Move In (Basic) are no longer applicable
Read type codes now apply to the type 4A (MRAM) meter: NS, RR, SP, ER,PR
Read type codes now apply to the type VICAMI, COMMS4C and COMMS4D metering installation type code: EI
FRMP can now change MDP if not RP (removal of FRMP=RP validation))
MDP is now optional
Objection logging period changed from 5 to 1 business day
Current RP can now object using objection code of "CONTRACT"
FRMP can now change MDP if not RP (removal of FRMP=RP validation))
MDP is now optional
Objection logging period changed from 5 to 1 business day
FRMP can now change MDP if not RP (removal of FRMP=RP validation))
MDP is now optional
Objection logging period changed from 5 to 1 business day
Current RP can now object using objection code of "CONTRACT"
Current RP can now object using objection code of "CONTRACT"
CR code no longer available
CR code no longer available
Objection logging period changed from 5 to 1 business day
RoLR can no longer object using objection code of "NOTRESP"
CR code no longer available
Objection logging period changed from 5 to 1 business day
Initiation role changes from LR to ENM (ENM in the role id of LNSP)
LNSP can no longer object using objection code of 'NOTRESP'
RoLR can no longer object using objection code of "NOTRESP"
RoLR to no longer receive any notifications
New LR can now object using objection code of 'NOTRESP'
New LR can now object using objection code of 'RETRO'
Objection logging period changed from 5 to 1 business day
RoLR can no longer object using objection code of "NOTRESP"
MDM Contributory Suffix is now mandatory
Objection logging period changed from 5 to 1 business day
Initiation role changes from LR to ENM (ENM in the role id of LNSP)
RoLR can no longer object using objection code of "NOTRESP"
RoLR to no longer receive any notifications
MDM Contributory Suffix is now mandatory
MDM Contributory Suffix is now mandatory
Network Tariff Code is now mandatory
CR code no longer available
MDM Contributory Suffix is now mandatory
Network Tariff Code is now mandatory
Network Tariff Code is now mandatory - if changes required

MDM Contributory Suffix is now mandatory
CR code no longer available
Initiation role changes from RP (LNSP) to MC (remove validation that RP=LNSP)
Current LNSP to receive all notifications
MDM Contributory Suffix is now mandatory
CR1500 now required
Initiation role changes from RP (LNSP) to MC (remove validation that RP=LNSP)
Current LNSP to receive all notifications
MDM Contributory Suffix is now mandatory
CR1500 now required
CR code no longer available
CR code no longer available
Objection logging period changed from 5 to 1 business day
RoLR can no longer object using objection code of "NOTRESP"
Objection logging period changed from 5 to 1 business day
RoLR can no longer object using objection code of "NOTRESP"
Initiation role changes from (AEMO or ENLR) to (AEMO or ENM)
CR code no longer available
Initiation role changes from LR to ENM (ENM in the role id of LNSP)
Current LNSP to receive notifications for Cancelled and Rejected Statuses
Current LR to no longer receive notifications for Cancelled and Rejected Statuses
Current FRMP can no longer initiate, only the current LNSP
Initiation role changes from AEMO or LNSP to ENM (ENM in the role id of LNSP)
Current LNSP to receive all notifications
Current LNSP can now object using objection code of "NOTAWARE"
Objection logging period changed from 5 to 1 business day
Objection logging period changed from 5 to 1 business day
CR1500 now required
Objection logging period changed from 5 to 1 business day
CR1500 now required
Objection logging period changed from 5 to 1 business day
Objection logging period changed from 5 to 1 business day
RoLR can no longer object using objection code of "NOTRESP"
Objection logging period changed from 5 to 1 business day
Objection logging period changed from 5 to 1 business day
CR1500 now required
Current MC can now initiate (as well as current FRMP)
Objection logging period changed from 5 to 1 business day
Objection code = "NOACC" added for new and current MPD, MPB and MPC
New RP can now object with Objection code = "DECLINED"
Add rejected notification for the new and current MC (RP)
FRMP can now change MDP if not RP (removal of FRMP=RP validation))
Current RP can now object using objection code of "CONTRACT"
CR code no longer available
Enabled for WIGS - all related Notification rules and objection rules should be as per the CATS transactions
RoLR can no longer object using objection code of "NOTRESP"
Enabled for WIGS - all related Notification rules and objection rules should be as per the CATS transactions
Remove all objections
RoLR can no longer object using objection code of "NOTRESP"
MDM Contributory Suffix is now mandatory

MDM Contributory Suffix is now mandatory
Network Tariff Code is now mandatory
MDM Contributory Suffix is now mandatory
Network Tariff Code is now mandatory
RoLR can no longer object using objection code of "NOTRESP"
Enabled for WIGS - all related Notification rules and objection rules should be as per the CATS transactions
Enabled for WIGS - all related Notification rules and objection rules should be as per the CATS transactions
Enabled for WIGS - all related Notification rules and objection rules should be as per the CATS transactions
Enabled for WIGS - all related Notification rules and objection rules should be as per the CATS transactions
Remove all objections
CR1500 now required
RoLR can no longer object using objection code of "NOTRESP"
CR1500 now required
Enabled for WIGS - all related Notification rules and objection rules should be as per the CATS transactions
Enabled for WIGS - all related Notification rules and objection rules should be as per the CATS transactions

NMI Class	Jurisdiction	Initiating Party	Impacted Party	SWG deliverable ar
3000 series)		Current MPB	Current MPB	
All	All			
All	All			
LARGE, SMALL	All	New FRMP	New FRMP	2
LARGE, SMALL	*All*	*New FRMP*	*New FRMP*	2
LARGE, SMALL	All	New FRMP	All	2
LARGE	All	New FRMP	Current MC (RP role	2
LARGE, SMALL	*All*	*New FRMP*	*New FRMP*	*2*
LARGE, SMALL	*All*	*New FRMP*	*New FRMP*	*2*
LARGE, SMALL	All	New FRMP	New FRMP	2
LARGE, SMALL	All	New FRMP	New FRMP	2
LARGE, SMALL	*All*	*New FRMP*	*New FRMP*	2
LARGE, SMALL	All	New FRMP	All	2
LARGE	All	New FRMP	Current MC (RP role	2
LARGE	ACT, NSW, VI	New FRMP	Current MC (RP role	2
LARGE	All	New FRMP	All	2
LARGE	All	New FRMP	All	2
LARGE	All	New LNSP	All	2
LARGE, SMALL	All	New LNSP	New RoLR	2
LARGE, SMALL	All	New LNSP	All	2
LARGE	All	New ENM	All	2
LARGE, SMALL	All	New ENM	New ENM	2
LARGE, SMALL	All	New ENM	New LNSP	2
LARGE, SMALL	All	New LNSP	New RoLR	2
LARGE, SMALL	All	New LNSP	New RoLR	2
LARGE, SMALL	All	*New ENM*	*New LR*	*2*
LARGE, SMALL	All	*New ENM*	*New LR*	*2*
LARGE	All	New LNSP	All	2
LARGE, SMALL	All	New LNSP	New RoLR	2
LARGE, SMALL	All	New LNSP	New LNSP	2
LARGE, SMALL	All	New ENM	All	2
LARGE, SMALL	All	New ENM	New ENM	2
LARGE, SMALL	All	New ENM	New RoLR	2
LARGE, SMALL	All	New ENM	New RoLR	2
LARGE, SMALL	All	New ENM	New ENM	2
LARGE, SMALL	All	Current MPB	Current MPB	2
LARGE, SMALL	All	Current MPB	Current MPB	2
LARGE, SMALL	All	Current MPB	All	2
LARGE, SMALL	All	Current MPB	Current MPB	2
LARGE, SMALL	All	Current MPB	Current MPB	2
LARGE, SMALL	All	Current MPB	Current MPB	2

LARGE, SMALL	All	Current MPB	Current MPB	2
LARGE, SMALL	All	Current MPB	All	2
LARGE, SMALL	All	Current MC	Current MC	2
LARGE, SMALL	All	Current MC	Current LNSP	2
LARGE, SMALL	All	Current MC	Current MC	2
LARGE, SMALL	All	Current MC	MDP	2
LARGE, SMALL	All	Current MC	Current MC	2
LARGE, SMALL	All	Current MC	Current LNSP	2
LARGE, SMALL	All	Current MC	Current MC	2
LARGE, SMALL	All	Current MC	MDP	2
LARGE, SMALL	All	Current MDP	All	2
LARGE, SMALL	All	Current MDP	All	2
LARGE	All	AEMO or LNSP	All	2
LARGE, SMALL	All	New ENM	New RoLR	2
LARGE	All	AEMO or ENM	All	2
LARGE, SMALL	All	AEMO or ENM	New RoLR	2
LARGE, SMALL	All	AEMO or ENM	ENM	2
LARGE, SMALL	All	Current LNSP		2
LARGE, SMALL	All	Current ENM	Current ENM	2
LARGE, SMALL	All	Current ENM	Current LNSP	2
LARGE, SMALL	All	Current ENM	Current LR	2
LARGE, SMALL	All	Current LNSP	Current FRMP	2
LARGE, SMALL	*All*	*New ENM*	*AEMO*	*2*
LARGE, SMALL	*All*	*New ENM*	*Current LNSP*	*2*
LARGE, SMALL	*All*	*New ENM*	*Current LNSP*	*2*
LARGE, SMALL	All	New LNSP	All	2
LARGE, SMALL	All	Current FRMP or	All	2
LARGE, SMALL	All	Current FRMP or	MDP	2
LARGE, SMALL	All	New MC	All	2
LARGE, SMALL	All	New MC	MDP	2
LARGE	All	New LR	All	2
LARGE	All	New LR	All	2
LARGE, SMALL	All	New RoLR	Current RoLR	2
LARGE	All	New RoLR	All	2
LARGE, SMALL	All	Current MC	All	2
LARGE, SMALL	All	Current MC	MDP	2
LARGE, SMALL	All	Current FRMP or	Current MC	2
LARGE, SMALL	All	Current FRMP or	All	2
LARGE, SMALL	All	Current FRMP or	Current and new M	2
LARGE, SMALL	All	Current FRMP or	New RP	2
LARGE, SMALL	All	Current FRMP or	New MC (RP role) a	2
WHOLESAL, INTERCC	All	New FRMP	New FRMP	2
WHOLESAL, INTERCC	All	New FRMP	Current MC (RP role	2
WHOLESAL, INTERCC	All	New FRMP	All	2
WHOLESAL, GENERA	All	New FRMP	All	2
WHOLESAL, INTERCC	All	New LNSP	New RoLR	2
WHOLESAL, GENERA	All	New ENM	New ENM	2
EPROFILE	All	AEMO	All	2
WHOLESAL, INTERCC	All	New LNSP	New RoLR	2
WHOLESAL, INTERCC	All	New LNSP	New LNSP	2

WHOLESAL, INTERCC	All	Current MPB	Current MPB	2
WHOLESAL, INTERCC	All	Current MPB	Current MPB	2
WHOLESAL, INTERCC	All	Current MPB	Current MPB	2
WHOLESAL, INTERCC	All	Current MPB	Current MPB	2
WHOLESAL, INTERCC	All	New ENM	New RoLR	2
WHOLESAL, INTERCC	All	AEMO or LNSP/E	All	2
WHOLESAL, GENERATR		Current ENM	Current ENM	2
WHOLESAL, GENERATR		Current LNSP	Current LNSP	2
WHOLESAL, GENERATR		New ENM	New ENM	2
EPROFILE	ALL	AEMO	All	2
WHOLESAL, INTERCC	All	Current FRMP or	MDP	2
WHOLESAL, INTERCC	All	New RoLR	Current RoLR	2
WHOLESAL, INTERCC	All	Current MC	MDP	2
WHOLESAL, INTERCON, GENERATF		AEMO/MSATS	AEMO	2
WHOLESAL, INTERCON, GENERATF		AEMO/MSATS	AEMO	2

Procedure

	MSATS should validate
MSAT Procedures - CATS v4.2	
MSAT Procedures - CATS v4.2	
MSAT Procedures - CATS v4.2	
MSAT Procedures - CATS v4.2	
MSAT Procedures - CATS v4.2	
MSAT Procedures - CATS v4.2	
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Objective	Test case/Scenario	Initiating Participant	Supporting Role	Steps
AEMO to create new Embedded Network Identifier Codes if required. Note: Existing EN identifier code will continue to use	INDT_PRE_AEMO_01	AEMO		1
AEMO to define new NMI range blocks for the new LNSP's if required. Note: Current LNSP will continue to use the existing NMI range blocks.	INDT_PRE_AEMO_02	AEMO		1
Verify ENM is able to initiate the CR 2520 and NMI data is populated in C7 report (CR-2520: Create NMI + Meter, DataStream – Child NMI)	INDT_PRE_01	LNSP	LNSP	1
			AEMO	2
			LNSP	3
			FRMP	4
Verify ENM is able to initiate CR 2021 and			LNSP	1
			AEMO	2

NMI data populates in C5 Report (2021 - Embedded Network Child NMI)	INDT_PRE_02	LNSP	LR	3
			FRMP	4
			AEMO	5
Verify newly added columns in C7 report **(Meter Manufacturer, Meter Model ,Network Tariff codes)**	INDT_PRE_03	LNSP	LNSP	1
			AEMO	2
			RP	3
			LR	4
			AEMO	5
			FRMP	6
Verify ENM can initiate CR-2521 for LARGE/SMALL/WHOLESALE NMI class	INDT_PRE_04	LNSP	LNSP	1
			AEMO	2
			MDP	3
			MDP	4

			AEMO	5
			FRMP	6
LNSP create NMI, CR-2001 (Test data to be used by the test scenarios in Functional tab)	INDT_PRE_05	LNSP		1
				2
LNSP create NMI, CR-2000 (Test data to be used by the test scenarios in Functional tab)	INDT_PRE_06	LNSP		1
				2
LNSP Create Embedded Network Child NMI, CR-2020 (Test data to be used by the test scenarios in Functional tab)	INDT_PRE_07	LNSP		1
				2
LNSP Create Embedded Network Child NMI, CR-2021 (Test data to be used by the test scenarios in Functional tab)	INDT_PRE_08	LNSP		1
				2

LNSP create NMI, CR-2501 (Test data to be used by the test scenarios in Functional tab)	INDT_PRE_09	LNSP		1
				2

Test Step description (NMI Transactions)	CR Code	NMI Class	Status	Meter Status	Meter Install Codes	Register Status
		Test Data				
Verify new Embedded Network Identifier Codes are generated in the MSATS system						
Verify new NMI range blocks are defined for the New LNSP's.						
LNSP initiate the CR-2520 for WIGS NMI. Verify new NMI status code "N" and new meter status "D" can be selected. Verify MDM Contributory Suffix and Network Tariff Code are mandatory fields.	2520	WIGS	N	D	COMMS4D	R
Verify CR moved to COM status.						
Verify LNSP receives notification for CR moved to COM status						
FRMP Trigger and validate the C7 report data						
Verify LNSP initiate 2021	2021	LARGE, SMALL	N			
Verify CR moved to COM status.						

Verify LR receives notification for CR's moved to COM status						
FRMP Trigger NMI Discovery to verify the NMI details						
Trigger C5 report and verify NMI data population						
Verify the LNSP is able to initiate CR-2500 for WIGS NMI.	2500	WIGS	A	D	MRAM	C
Verify CR moved to COM status.						
Verify RP receives notification for CR's moved to COM status						
LR Trigger NMI Discovery and verify the NMI details						
Trigger C5 data population.						
FRMP Trigger and validate C7 report data						
LNSP initiates the 2521 (MDM Contributory Suffix and Network Tariff Code is mandatory)	2521	LARGE, SMALL, Wholesale	N	C	COMMS4C	C
Verify CR moved to COM status.						
MDP receives notification for CR's moved to COM status						
MDP Trigger NMI Discovery and verify the NMI details						

Trigger C5 data population.						
FRMP Trigger and validate C7 report data						
Create NMI- 2001 - Create NMI details	2001	WIGS	A			
Verify CR moved to COM status.						
Create NMI- 2000 - Create NMI details	2000	SMALL/LARGE	N			
Verify CR moved to COM status.						
Create NMI- 2020 - Create Embedded Network Child NMI	2020	SMALL	X			
Verify CR moved to COM status.						
Create NMI- 2021 - Create Embedded Network Child NMI	2021	LARGE Jurisdiction - NSW/ACT	D			
Verify CR moved to COM status.						

Create NMI- 2501 - Create NMI details	2501	SMALL	A	D	VICAMI	C
Verify CR moved to COM status.						

Duration	Participant Groups - CYCLE 1				CitiPower/Powercor		SA Power
					CITIPP	POWCP	UMPLP
	Group 1 - SA	Group 2 - VIC	Group 3 - TAS	Group 4 - QLD	LNSP	LNSP	LNSP
Prior to the beginning of the Industry Test	AEMO	AEMO	AEMO	AEMO			
Prior to the beginning of the Industry Test	AEMO	AEMO	AEMO	AEMO			
Day 1 Initiate the CR 2520 with Proposed Start Date as Next Day.	UMPLP	CITIPP/POV	MISSING	MISSING	Y	Y	Y
System waits for the Objection logging period to be completed (1 business day for CR 2520)	AEMO	AEMO	AEMO	AEMO			
Day 3 CR 2520 is move to COM status.	UMPLP	CITIPP/POV	MISSING	MISSING			
Day 3 C7 Report can be triggered.	ERMPOWE	STANWELL	AURORA	AGLQLD2			
Day 1 Initiate the CR 2021 with Proposed Start	UMPLP	CITIPP/POV	MISSING	MISSING	Y	Y	Y
System waits for the Objection logging period to be completed (1 business day for CR 2021)	AEMO	AEMO	AEMO	AEMO			

Day 3 CR 2021 is move to COM status.	AGLE	SOLARIS	AURORA	MISSING			
Day 3 NMI Discovery can be triggered.	ERMPOWE	STANWELL	AURORA	AGLQLD2			
Day 3 C5 Report can be triggered.	AEMO	AEMO	AEMO	AEMO			
Day 1 Initiate the CR 2500 with Proposed Start Date as Next Day.	UMPLP	CITIPP/POV	MISSING	MISSING	Y	Y	Y
System waits for the Objection logging period to be completed (1 business day for CR 2500)	AEMO	AEMO	AEMO	AEMO			
Day 3 CR 2500 is move to COM status.	UMPLP	CITIPP/POV	MISSING	MISSING			
Day 3 NMI Discovery can be triggered.	AGLE	SOLARIS	AURORA	MISSING			
Day 3 C5 Report can be triggered.	AEMO	AEMO	AEMO	AEMO			
Day 3 C7 Report can be triggered.	ERMPOWE	STANWELL	AURORA	AGLQLD2			
Day 1 Initiate the CR 2521 with Proposed Start Date as previous Date.	UMPLP	CITIPP/POV	MISSING	MISSING	Y	Y	Y
System waits for the Objection logging period to be completed (1 business day for CR 2521)	AEMO	AEMO	AEMO	AEMO			
Day 3 CR 2521 is move to COM status.	POWMEMI	CPNETMDP	POWMEMI	POWMEMDP			
Day 3 NMI Discovery can be triggered.	POWMEMI	CPNETMDP	POWMEMI	POWMEMDP			

Day 3 C5 Report can be triggered.	AEMO	AEMO	AEMO	AEMO			
Day 3 C7 Report can be triggered.	ERMPOWE	STANWELL	AURORA	AGLQLD2			
Day 1 Initiate the CR 2001 with Proposed Start Date as previous Date.	UMPLP	CITIPP/POV	MISSING	MISSING	Y	Y	Y
Day 3 CR 2001 is move to COM status.							
Day 1 Initiate the CR 2000 with Proposed Start Date as next Day.	UMPLP	CITIPP/POV	MISSING	MISSING	Y	Y	Y
Day 3 CR 2000 is move to COM status.							
Day 1 Initiate the CR 2020 with Proposed Start Date as next Day.	UMPLP	CITIPP/POV	MISSING	MISSING	Y	Y	Y
Day 3 CR 2020 is move to COM status.							
Day 1 Initiate the CR 2021 with Proposed Start Date as previous Date.	UMPLP	CITIPP/POV	MISSING	MISSING	Y	Y	Y
Day 3 CR 2021 is move to COM status.							

Day 1 Initiate the CR 2501 with Proposed Start Date as previous Date.	UMPLP	CITIPP/POV	MISSING	MISSING	Y	Y	Y
Day 3 CR 2501 is move to COM status.							

Energy Queensland -	
ENERGEXP	ERGONETP
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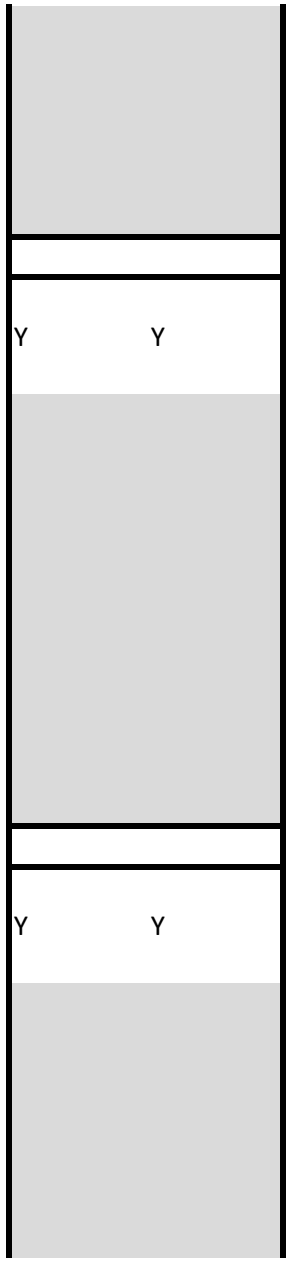
Y	Y
Y	Y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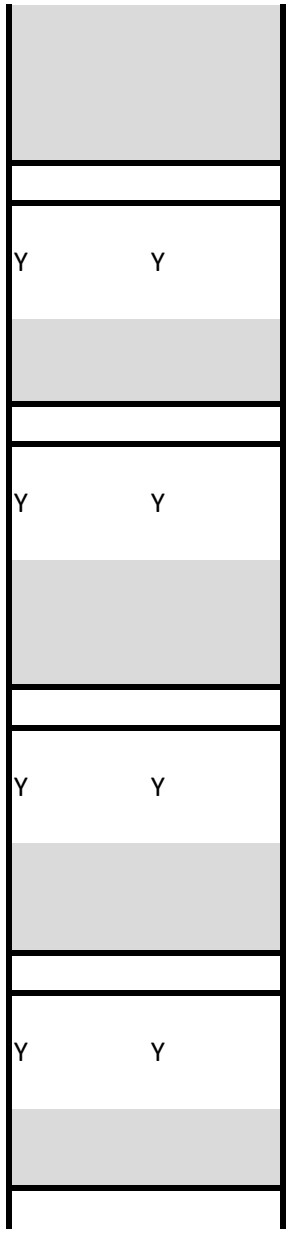
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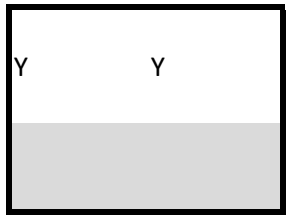
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Objective	Test case/Scenario	Initiating Participant	Supporting Role	Steps	Test Step description (CR Transactions)
Verify removal of validation FRMP=RP Applicable for following CRs ('1000','1010','1020','1030','1040','1080','1081','1082','1083','1084','6800','6801') **Read Type codes NI,NB are no longer valid.**	INDT-FUN-01	FRMP	FRMP_New	1	Verify FRMP Initiate CR 1030 on a existing NMI Verify Read Type codes (NI,NB) are removed from the selection.
			MDP_Current	2	MDP receives an outbound request to submit CR 1500. MDP submit CR 1500, Verify CR 1500 is moved to COM status.
			AEMO	3	Verify actual Change request (CR1030) Status moved to COM status.
			FRMP_New	4	verify new FRMP receives notification of CR-1030 completion.
verify current MC is able to initiate CR-3080 and CR-3090			RP_Current	1	Verify RP can initiate CR 3080 on a existing NMI
			MDP_Current	2	Verify MDP receives an outbound request to submit CR 1500.

CR is not completed unless CR-1500 is submitted.	INDT-FUN-02	RP	AEMO	3	Verify CR-1500 Status moved to COM status.
			RP_Current	4	Verify RP receives notification for Change Request 3080 moved to COM status .
			LNSP_Current	5	LNSP, verifies the notification for CR 3080 COM status.
Verify current MC is able to initiate CR-6800	INDT-FUN-03	RP	RP_Current	1	RP create change Request 6800 on a existing NMI
			MDP_Current	2	MDP receives an outbound request to submit CR 1500. MDP submit CR 1500, Verify CR 1500 is moved to COM status.
			FRMP_Current	3	Verify FRMP receives notification when change request is moved to COM status.
			AEMO	4	Verify CR-6800 moves to COM status
Verify current MDP or MPB or MPC is able to Object CR -6800 using objection code 'NOACC'	INDT-FUN-04	RP	RP_Current	1	RP create change Request 6800 on a existing NMI
			MDP	2	verify able to Object CR-6800 with Objection code 'NOACC'.
			MPB	3	verify able to Object CR-6800 with Objection code 'NOACC'.

NOACC'.			MPC	4	verify able to Object CR-6800 with Objection code 'NOACC'.
			FRMP_Current	5	Verify FRMP receives notification when change request is moved to OBJ status.
			AEMO	6	Verify CR-6800 moves to OBJ status
Verify New MC is able to object CR-6800 using objection code 'DECLINED'.	INDT-FUN-05	RP	RP_Current	1	RP create change Request 6800 on a existing NMI
			RP_New	2	verify New RP able to Object CR-6800 with Objection code 'DECLINED'.
			FRMP_Current	3	Verify FRMP receives notification when change request is moved to OBJ status.
			AEMO	4	Verify CR-6800 moves to OBJ status
verify current MC is able to Object **CR-1083** using objection code 'CONTRACT'	INDT-FUN-06	FRMP	FRMP_New	1	FRMP create CR-1083 for existing NMI
			RP_Current	2	Verify Current RP can Object CR 1083 with Objection code 'CONTRACT'.
			AEMO	3	Verify CR 1083 moves to OBJ status
verify current MC is able to Object **CR-1082** using objection code 'CONTRACT'	INDT-FUN-07	FRMP	FRMP_New	1	FRMP create CR for existing NMI
			RP_Current	2	Verify Current RP can Object CR 1082 with Objection code 'CONTRACT'.

1082 using objection code 'CONTRACT'.			AEMO	3	Verify CR 1082 moves to OBJ status
verify current MC is able to Object CR-1000, 1020 using objection code 'CONTRACT'.	INDT-FUN-08	FRMP	FRMP_New	1	FRMP create CR for existing NMI
			RP_Current	2	Verify Current RP can Object CR 1000 with Objection code 'CONTRACT'.
			AEMO	3	Verify CR 1000 moves to OBJ status
			RP_Current	4	Current RP receives CR Objection notification.
verify current ENM is able to Object CR-5090, 5091 using objection code 'NOTAWARE'.	INDT-FUN-09	LNSP	LNSP_New	1	New LNSP create CR-5090
			LNSP_Current	2	Verify current LNSP can Object CR 5090 with Objection code 'NOTAWARE'.
			AEMO	3	Verify CR 5090 moves to OBJ status
			AEMO	4	CR 5090 moves to CAN status
			LNSP_New	5	New LNSP receives CR cancellation notification.
verify ROLR cannot object on CR's (Applicable for CRs-2000, 2001, 2020, 2021, 2500, 2501, 2520, 2521, 6500, 6501) verify ROLR do not receive any	INDT-FUN-10	LNSP	LNSP_New	1	LNSP, Create CR 2021
			ROLR	2	verify ROLR does not receive any Notification on CR 2021.
			AEMO	3	To verify ROLR cannot Object the CR 2021 Objection is not raised.

notifications for CR-2020, 2021			ROLR	4	Verify CR 2021 is in REQ status
verify new LR can Object CR-2021 with objection code 'NOTRESP'	INDT-FUN-11	LNSP	LNSP_New	1	LNSP, Create CR 2021
			LR_New	2	To verify the new LR can Object the CR-2021 with Objection code 'NOTRESP'
			AEMO	3	Verify CR 2021 moves to OBJ status
verify new LR can Object CR-2021 with objection code 'RETRO'	INDT-FUN-12	LNSP	LNSP_New	1	LNSP, Create CR 2021
			LR_New	2	To verify the new LR can Object the CR-2021 with Objection code 'RETRO'
			AEMO	3	Verify CR 2021 moves to OBJ status
			AEMO	4	Verify CR 2021 moves to CAN status
			LNSP_New	5	LNSP receives CR cancellation notification
			LR_New	6	LR receives CR cancellation notification
verify current ENM is receiving the change request REJ status notification for CR-5060, 5061	INDT-FUN-13	LNSP	LNSP_Current	1	LNSP, Create CR 5061 and not provide the Actual End Date. *(CR can only be created on NMIs which were created by using 2021,2521)*
			AEMO	2	CR-5061 is rejected due to non availability of Actual Change Date.
			LNSP_Current	3	LNSP, receives the CR Rejection notification
			LR_Current	4	LR **doesn't** receive CR REJ notifications.

verify current ENM is receiving change request COM status notification for CR-5090, 5091	INDT-FUN-14	LNSP	LNSP_New	1	LNSP, Create CR 5090 *(CRs can be created on NMIs which were created by using 2021,2520)*
			AEMO	2	Verify CR-5090 moves COM Status.
			LR_Current	3	Verify LR receives the CR COM status notification
			LNSP_Current	4	LNSP receives the CR COM status notification
verify FRMP cannot initiate CR-5080, 5081	INDT-FUN-15	FRMP	FRMP_Current	1	FRMP Initiates CR 5080. Error encountered during CR initiation.
verify following CRs are disabled and cannot be initiated for SMALL and LARGE NMI Classification. CR 2003, 3003, 3053, 4003, 4053, 5053, 1050, 1051, 1090, 1091, 5090, 5091.	INDT-FUN-16	FRMP	FRMP	1	verify following listed CRs are disabled and no longer initiated by FRMP. 1050, 1051, 1090, 1091
		LNSP	LNSP	2	verify following listed CRs are disabled and no longer initiated by LNSP. 2003, 5053, 5090, 5091
		MDP	MDP	3	verify following listed CRs are disabled and no longer initiated by MDP. 4003, 4053
		MPB	MPB	4	verify following listed CRs are disabled and no longer initiated by MPB. 3003, 3053
verify following CRs are disabled and cannot be initiated for 'WHOLESAL', 'GENERATR' and 'SAMPLE' NMI Classification: CR 1050, 1051.	INDT-FUN-17	FRMP	FRMP	1	verify CRs are disabled for FRMP

verify Objection logging period is reduced from 5 to 1 business day for following CR's ,if NMI classification is SMALL or LARGE 1000, 1010, 1020, 1030, 1040, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1080, 1081, 1082, 1083, 1084, 6100, 6110, 6200, 6210, 6300, 6301, 6700, 6701, 6800 and 6801	INDT-FUN-18	ANY	ANY	1	verify Objection logging period for the listed CRs is 1 business day.
verify Objection logging period is reduced from 5 to 1 business day for following CR's ,if NMI classification is LARGE 2000, 2020, 2021, 2500, 2501,2520, 2521, 5001, 5021, 6400, 6401,6421, 6500 and 6501	INDT-FUN-19	ANY	ANY	1	verify Objection logging period for the listed CRs is 1 business day.
verify following CRs no longer be Objected for NMI class SMALL, LARGE, WHOLESAL, INTERCON, GENERATR,SAMPLE CR2100, 2101, 5110 and 5111	INDT-FUN-20	NEMM	NEMM_New	1	New NEMM initiate CR-2100 NMI Class: EPROFILE
			MDP_New	2	Verify new MDP can not Object on CR-2100
			NEMM_New	3	NEMM of the NMI validate the REQ status Notifications
			AEMO	4	Verify CR is moved to COM status.
			NEMM_New	5	Receives notification for CR's moved to COM status

verify MDP cannot Object CR-1040, 1084 using objection code **'NOACC'**.	INDT-FUN-21	FRMP	FRMP_New	1	FRMP, Create CR 1040
			MDP (Current/New)	2	MDP ,raises an Objection 'NOACC' on CR 1040 Objection is **not** raised, Error encountered during Objection initiation.
verify new FRMP is able to initiate CR-1000 for meter installation type code = VICAMI and Read type code = EI	INDT-FUN-22	FRMP	FRMP_New	1	FRMP, Create CR 1000
			MDP_Current	2	MDP receives an outbound request to submit CR 1500. MDP submit CR 1500.
			AEMO	3	Verify CR 1500 status change to COM
			AEMO	4	Verify CR 1000 moves to COM status
			FRMP_New	5	FRMP receives the CR-1000 COM status notification
verify new FRMP cannot initiate CR-1000 for meter installation type code = VICAMI and Read type code = NS	INDT-FUN-23	FRMP	FRMP_New	1	Verify if FRMP tries to initiate CR 1000 with Read Type Code - NS, an error is encountered.

verify CR-6800 cannot be initiated with incorrect MDP.	INDT-FUN-24	RP	RP_Current	1	To verify when current RP initiates CR-6800 with incorrect MDP, the CR fails to get initiated. ******Error is encountered while creating the Change Request***
verify new MC cannot initiate CR-6800	INDT-FUN-25	RP	RP_New	1	To verify when New RP initiates CR-6800, the CR fails to get initiated. ******Error is encountered while creating the Change Request***
verify CR-6800 can not be initiated with incorrect MDP.	INDT-FUN-26	FRMP	FRMP_Current	1	To verify when current FRMP initiates CR-6800 with incorrect MDP, the CR fails to get initiated. ******Error is encountered while creating the Change Request***
verify CR-6800 can be initiated by current FRMP.	INDT-FUN-27	FRMP	FRMP_Current	1	FRMP create change Request 6800 on a existing NMI
			AEMO	2	Verify CR status change to REQ status
			MDP_New	3	MDP receives an outbound request to submit CR 1500. MDP submit CR 1500.
			AEMO	4	Verify CR 1500 status change to COM
			FRMP_Current	5	FRMP, Verify CR 6800 is moved to COM status. Notification of CR-6800 Completion status

verify current MPB can initiate CR-3051 with Meter Register Status Code = D.	INDT-FUN-28	MPB	MPB_Current	1	MPB create change Request 3051 on a existing NMI
			AEMO	2	Verify CR 3051 status change to COM
			MPB_Current	3	Verify MPB receives CR-3051 Completion notification
verify current LNSP can initiate CR-5060 for NMI Status code = N	INDT-FUN-29	LNSP	LNSP_Current	1	LNSP, Create CR 5060 *(CR can only be created on NMIs which were created by using 2021,2521)*
			AEMO	2	Verify CR is moved to COM Status.
			LNSP_Current	3	LNSP receives CR moved to COM Status notification.
verify current LR cannot initiate CR-5060.	INDT-FUN-30	LR	LR_Current	1	LR, Initiates CR 5060, Error is encountered. CR is not initiated.

CR Code	Reference to prerequisites	CATS and WIGS	Duration		Participant Groups - CYCLE 1			
					Group 1 - SA	Group 2 - VIC	Group 3 - TAS	Group 4 -QLD
1030	INDT_PRE_06	CATS and WIGS	Day 1 Initiate the CR 1030 with Proposed Start Date as Next Day.		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2
1500		CATS and WIGS	Day 1 Submit CR 1500 with Actual Change Date as Next Day		POWMEMDP/ESTAMDP	CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP
1030			System waits for the Objection logging period to be completed (1 business day for CR 1030)		AEMO	AEMO	AEMO	AEMO
1030			Day 3 CR 1030 is move to COM status.		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2
3080		CATS and WIGS	Day 1 Initiate the CR 3080 with Proposed Start Date as Next Day		UMPLP	CITIPP/POWCP	MISSING	MISSING
1500			Day 1 Submit CR 1500 with Actual Change Date as Next Day		POWMEMDP/ESTAMDP	CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP

1500	INDT_PRE_06		System waits for the Objection logging period to be completed (1 business day for CR 3080)		AEMO	AEMO	AEMO	AEMO
3080					UMPLP	CITIPP/POWCP	MISSING	MISSING
			Day 3 CR 3080 is move to COM status.		UMPLP	CITIPP/POWCP	MISSING	MISSING
6800		CATS and WIGS	Day 1 Initiate the CR 6800 with Proposed Start Date as Next Day		UMPLP	CITIPP/POWCP	MISSING	MISSING
1500			Day 1 Submit CR 1500 with Actual Change Date as Next Day		POWMEMDP/ESTAMDP	CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP
	INDT_PRE_06		System waits for the Objection logging period to be completed (1 business day for CR 6800)		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2
			Day 3 CR 6800 is move to COM status.		AEMO	AEMO	AEMO	AEMO
6800		CATS and WIGS	Day 1 Initiate the CR 6800 with Proposed Start Date as Next Day		UMPLP	CITIPP/POWCP	MISSING	MISSING
			Day 1 Objection is placed on the CR 6800		POWMEMDP/ESTAMDP	CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP
			Day 1 Objection is placed on the CR 6800		POWMETMP/ETSAPMP	CITIPWMP/POWERCMP	POWMETMP	POWMETMP
	INDT_PRE_06							

			Day 1 Objection is placed on the CR 6800		POWMETMP/ ETSAPMP	CITIPWMP/ POWERCMP	POWMETM P	POWMETM P
			Day 1 CR 6800 is move to OBJ Status		ERMPOWER/A GLE/AES	STANWELL/ SOLARIS/PU LSE/COVAU	AURORA	AGLQLD2
					AEMO	AEMO	AEMO	AEMO
6800	INDT_PRE_06	CATS and WIGS	Day 1 Initiate the CR 6800 with Proposed Start Date as Next Day		UMPLP	CITIPP/POW CP	MISSING	MISSING
			Day 1 Objection is placed on the CR 6800		UMPLP	CITIPP/POW CP	MISSING	MISSING
			Day 1 CR 6800 is move to OBJ Status		ERMPOWER/A GLE/AES	STANWELL/ SOLARIS/PU LSE/COVAU	AURORA	AGLQLD2
					AEMO	AEMO	AEMO	AEMO
1083	INDT_PRE_07	CATS and WIGS	Day 1 Initiate the CR 1083 with Proposed Start Date as Next Day		ERMPOWER/A GLE/AES	STANWELL/ SOLARIS/PU LSE/COVAU	AURORA	AGLQLD2
			Day 1 Objection is placed on the CR 1083		UMPLP	CITIPP/POW CP	MISSING	MISSING
			Day 1 CR 1083 is move to OBJ Status		AEMO	AEMO	AEMO	AEMO
1082	INDT_PRE_08	CATS and WIGS	Day 1		ERMPOWER/A GLE/AES	STANWELL/ SOLARIS/PU	AURORA	AGLQLD2
			Day 1 Objection is placed on the CR 1082		UMPLP	CITIPP/POW CP	MISSING	MISSING

			Day 1 CR 1082 is move to OBJ Status		AEMO	AEMO	AEMO	AEMO
1000	INDT_PRE_05	CATS and WIGS	Day 1 Initiate the CR 1000 with Proposed Start Date as Next Day		ERMPOWER/AGLE/AES	STANWELL/ SOLARIS/PULSE/COVAU	AURORA	AGLQLD2
			Day 1 Objection is placed on the CR 1000		UMPLP	CITIPP/POWCP	MISSING	MISSING
			Day 1 CR 1000 is moved to OBJ Status		AEMO	AEMO	AEMO	AEMO
					UMPLP	CITIPP/POWCP	MISSING	MISSING
5090	INDT_PRE_05	CATS and WIGS	Day 1 Initiate the CR 5090 with Proposed Start Date as Next Day		UMPLP	CITIPP/POWCP	MISSING	MISSING
			Day 1 Objection is placed on the CR 5090		UMPLP	CITIPP/POWCP	MISSING	MISSING
					AEMO	AEMO	AEMO	AEMO
			Day 1 CR 5090 is withdrawn.		AEMO	AEMO	AEMO	AEMO
			Day 1 CR 5090 is move to CAN status.		UMPLP	CITIPP/POWCP	MISSING	MISSING
2021	NA	CATS and WIGS	Day 1 Initiate the CR 2021		UMPLP	CITIPP/POWCP	MISSING	MISSING
					AGLE	SOLARIS	AURORA	MISSING
					AEMO	AEMO	AEMO	AEMO

					AGLE	SOLARIS	AURORA	MISSING
2021	NA	CATS and WIGS	Day 1 Initiate the CR 2021 with Proposed		UMPLP	CITIPP/POW CP	MISSING	MISSING
			Day 1 Objection is placed on the CR 2021		AGLE	SOLARIS	AURORA	MISSING
			Day 1 CR 2021 is move to OBJ Status		AEMO	AEMO	AEMO	AEMO
2021	NA	CATS and WIGS	Day 1		UMPLP	CITIPP/POW CP	MISSING	MISSING
			Day 1 Objection is placed on the CR 2021		AGLE	SOLARIS	AURORA	MISSING
			Day 1 CR 2021 is move to OBJ Status		AEMO	AEMO	AEMO	AEMO
			Day 1 CR 2021 is withdrawn.		AEMO	AEMO	AEMO	AEMO
			Day 1 CR 2021 is move to CAN status.		UMPLP	CITIPP/POW CP	MISSING	MISSING
					AGLE	SOLARIS	AURORA	MISSING
5061	INDT_PRE_04	CATS and WIGS	Day 1 Initiate CR 5061 with Proposed Start Date as Previous Date		UMPLP	CITIPP/POW CP	MISSING	MISSING
					AEMO	AEMO	AEMO	AEMO
					UMPLP	CITIPP/POW CP	MISSING	MISSING
					AGLE	SOLARIS	AURORA	MISSING

5090	INDT_PRE_02	CATS and WIGS	Day 1 Initiate the CR 5090 with Proposed Start Date as Next Day		UMPLP	CITIPP/POWCP	MISSING	MISSING
			System waits for the Objection logging period to be completed (1		AEMO	AEMO	AEMO	AEMO
			Day 3 CR 5090 is move to COM status.		AGLE	SOLARIS	AURORA	MISSING
					UMPLP	CITIPP/POWCP	MISSING	MISSING
5080	INDT_PRE_05	CATS and WIGS	Day 1 Initiate the CR 5080		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2
	INDT_PRE_06	CATS and WIGS	Day 1 Initiate the CR 1090		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2
		CATS and WIGS	Day 1 Initiate the CR 5090		UMPLP	CITIPP/POWCP	MISSING	MISSING
		CATS and WIGS	Day 1 Initiate the CR 4003		POWMEMDP/ESTAMDP	CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP
		CATS and WIGS	Day 1 Initiate the CR 3003		POWMETMP/ETSAPMP	CITIPWMP/POWERCMP	POWMETMP	POWMETMP
1050	INDT_PRE_05	CATS and WIGS	Day 1 Initiate the CR 1050		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2

	INDT_PRE_06	CATS and WIGS	Day 1 Initiate the CR 1000 Day 3 Objection cannot be raised.		ANY	ANY	ANY	ANY
	NA	CATS and WIGS	Day 1 Initiate the CR 2000 Day 3 Objection cannot be raised		ANY	ANY	ANY	ANY
2100	NA	CATS and WIGS	Day 1 Initiate the CR 2100 with Proposed Start Date as Next Day		AEMO	AEMO	AEMO	AEMO
					POWMEMDP/ ESTAMDP	CPNETMDP/ POWERMDP	POWMEMDP	POWMEMDP
			System waits for the Objection logging period to be completed (1 business day for CR 2100)		AEMO	AEMO	AEMO	AEMO
			Day 3 CR 2100 is move to COM status.		AEMO	AEMO	AEMO	AEMO
					AEMO	AEMO	AEMO	AEMO

1040	INDT_PRE_06		Day 1 Initiate the CR 1040		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2
			Day 1 MDP Object CR 1040		POWMEMDP/ESTAMDP	CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP
1000	INDT_PRE_09	CATS and WIGS	Day 1 Initiate the CR 1000 with Proposed Start Date as Next day		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2
			Day 1 Submit CR 1500 with Actual Change Date as Next Day		POWMEMDP/ESTAMDP	CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP
			System waits for the Objection logging period to be completed (1 business day for CR 1030)		AEMO	AEMO	AEMO	AEMO
			Day 3 CR 1000 is move to COM status.		AEMO	AEMO	AEMO	AEMO
					ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2
1000	INDT_PRE_09	CATS and WIGS	Day 1 Initiate the CR 1000		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2

6800	INDT_PRE_06		Day 1 Initiate the CR 6800		UMPLP	CITIPP/POWCP	MISSING	MISSING
6800	INDT_PRE_06		Day 1 Initiate the CR 6800		UMPLP	CITIPP/POWCP	MISSING	MISSING
6800	INDT_PRE_06		Day 1 Initiate the CR 6800		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2
6800	INDT_PRE_06	CATS and WIGS	Day 1 Initiate the CR 6800 with Proposed Start Date as Next Day		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2
					AEMO	AEMO	AEMO	AEMO
			Day 1 Submit CR 1500 with Actual Change Date as Next Day		POWMEMDP/ESTAMDP	CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP
			System waits for the Objection logging period to be completed (1 business day for CR 6800)		AEMO	AEMO	AEMO	AEMO
			Day 3 CR 6800 is move to COM status.		ERMPOWER/AGLE/AES	STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2

3051	INDT_PRE_06	CATS and WIGS	Day 1 Initiate the CR 3050 with Proposed Start Date as Next Day		POWMETMP/ ETSAPMP	CITIPWMP/ POWERCMP	POWMETMP	POWMETMP
			Day 2 CR 3050 is move to COM status.		AEMO	AEMO	AEMO	AEMO
					POWMETMP/ ETSAPMP	CITIPWMP/ POWERCMP	POWMETMP	POWMETMP
5060	INDT_PRE_04	CATS and WIGS	Day 1 Initiate the CR 5060 with Proposed Start Date as Next Day		UMPLP	CITIPP/POWCP	MISSING	MISSING
			Day 2 CR 5060 is move to COM status.		AEMO	AEMO	AEMO	AEMO
					UMPLP	CITIPP/POWCP	MISSING	MISSING
5060	INDT_PRE_04	CATS and WIGS	Day 1 Initiate the CR 5060		AGLE	SOLARIS	AURORA	MISSING

AGL					Aurora Energy	CitiPower/Powercor							Cova U	ERM Power/ Powermetric			SA Power		
SOLARIS	PULSE	AGLQLD2	AGLE	AES	AURORA	CITIPP LNSP	CITIPP MC	CITIP WMP	CPNETMDP	POWCP LNSP	POWCP MC	POWERCMP	POWERMDP	COVAU	ERMPOWER	POWMEMDP	POWMETMP	UMPLP LNSP	UMPLP MC	ETSAPMP
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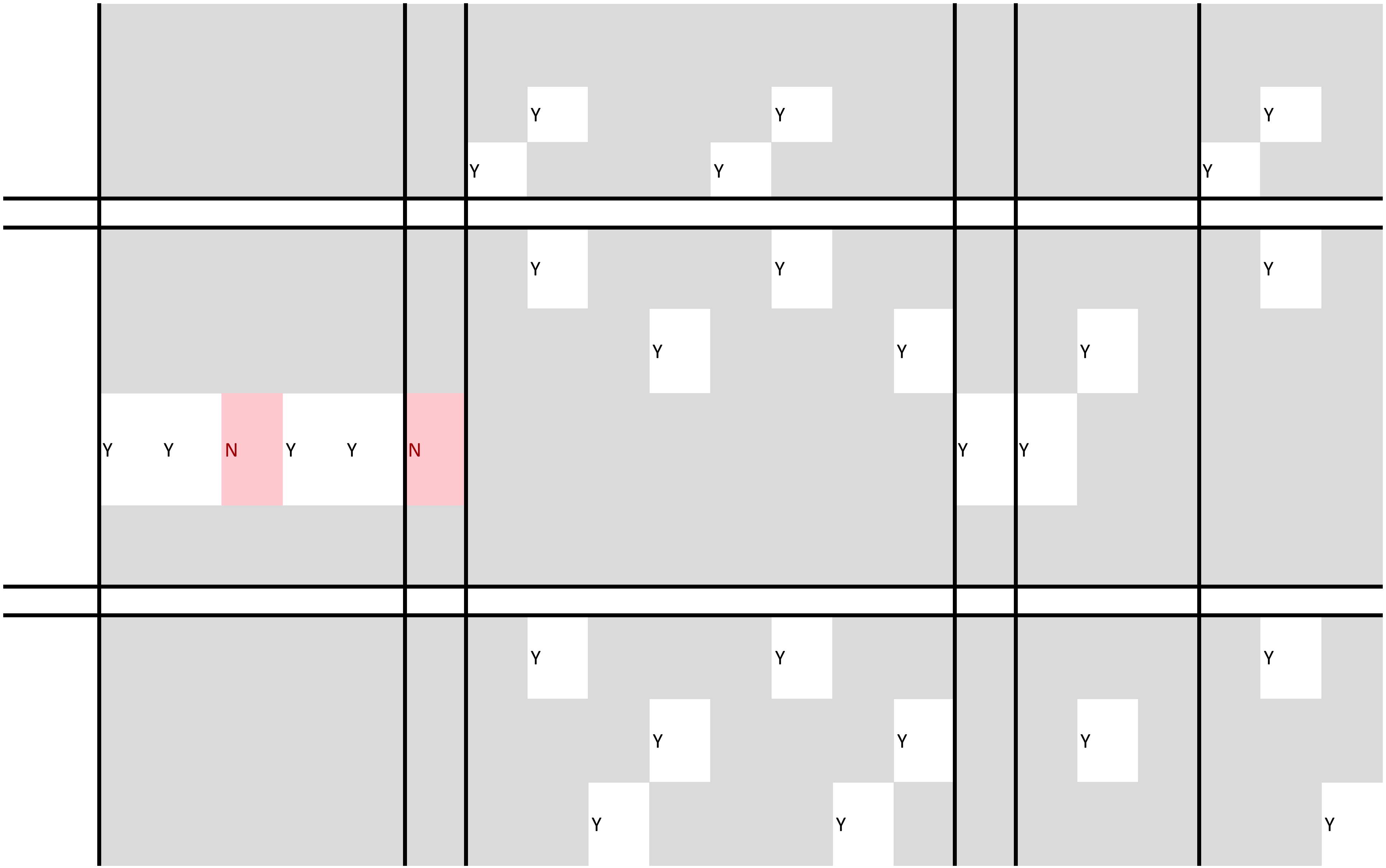
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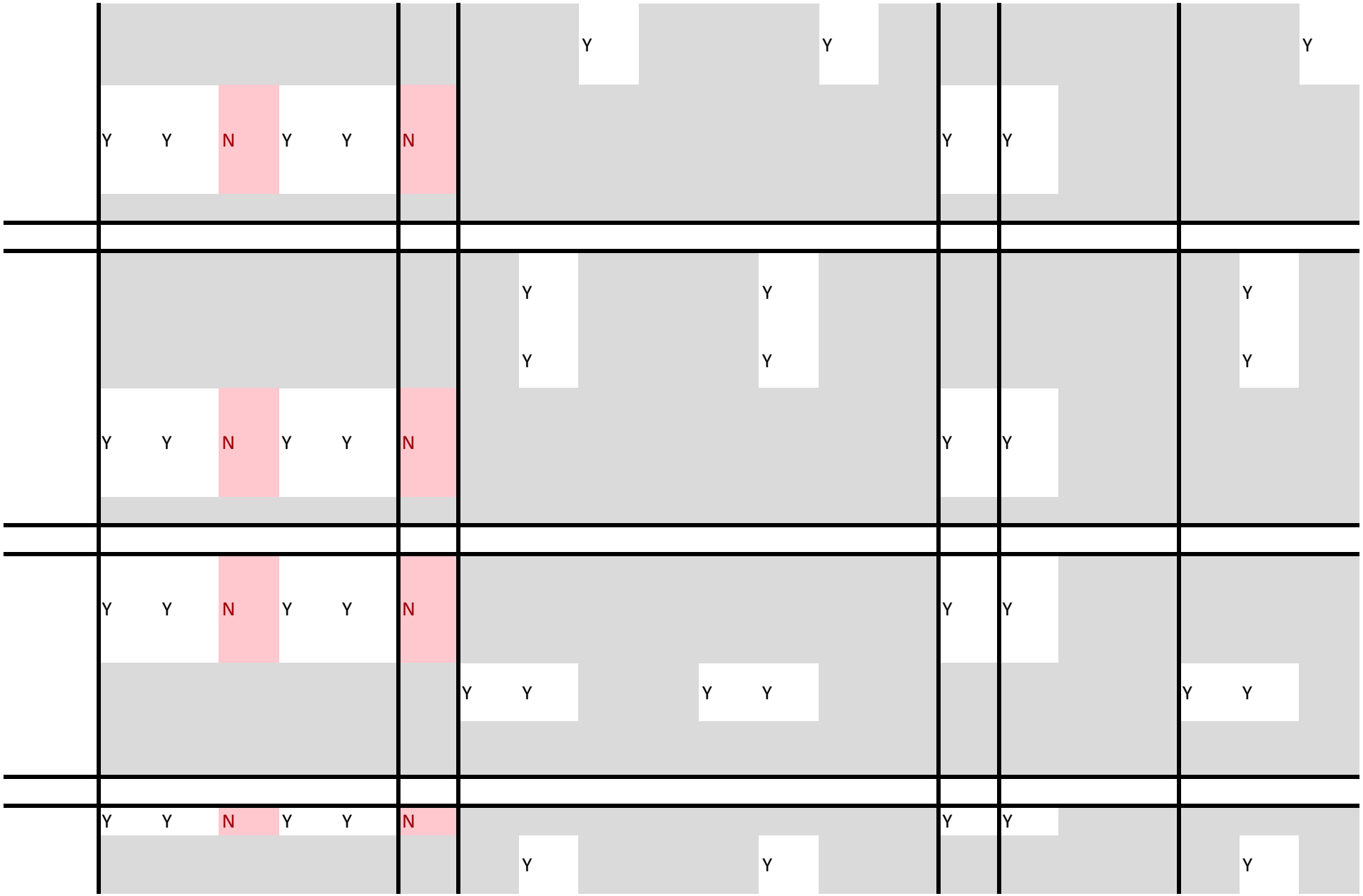
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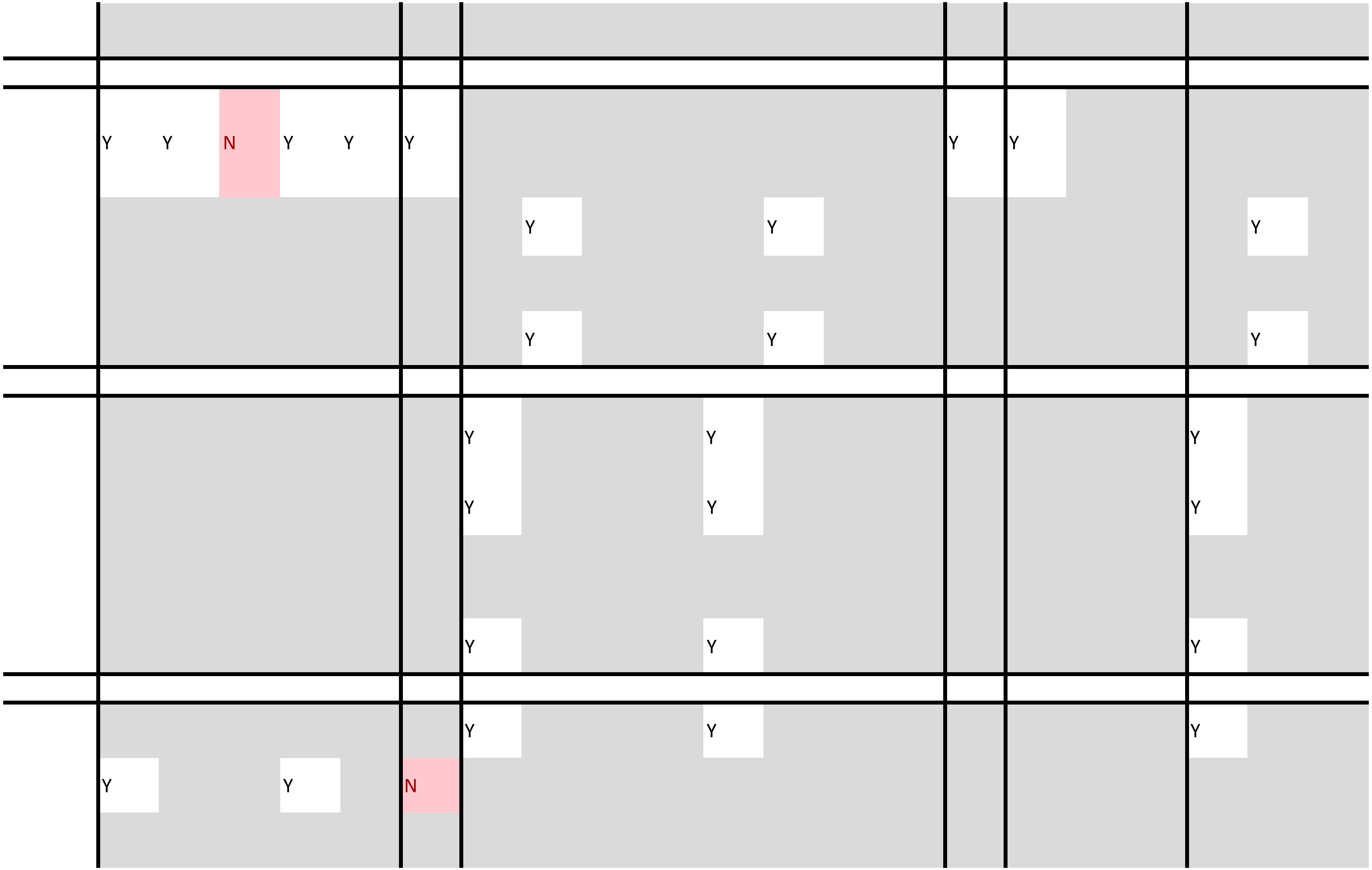
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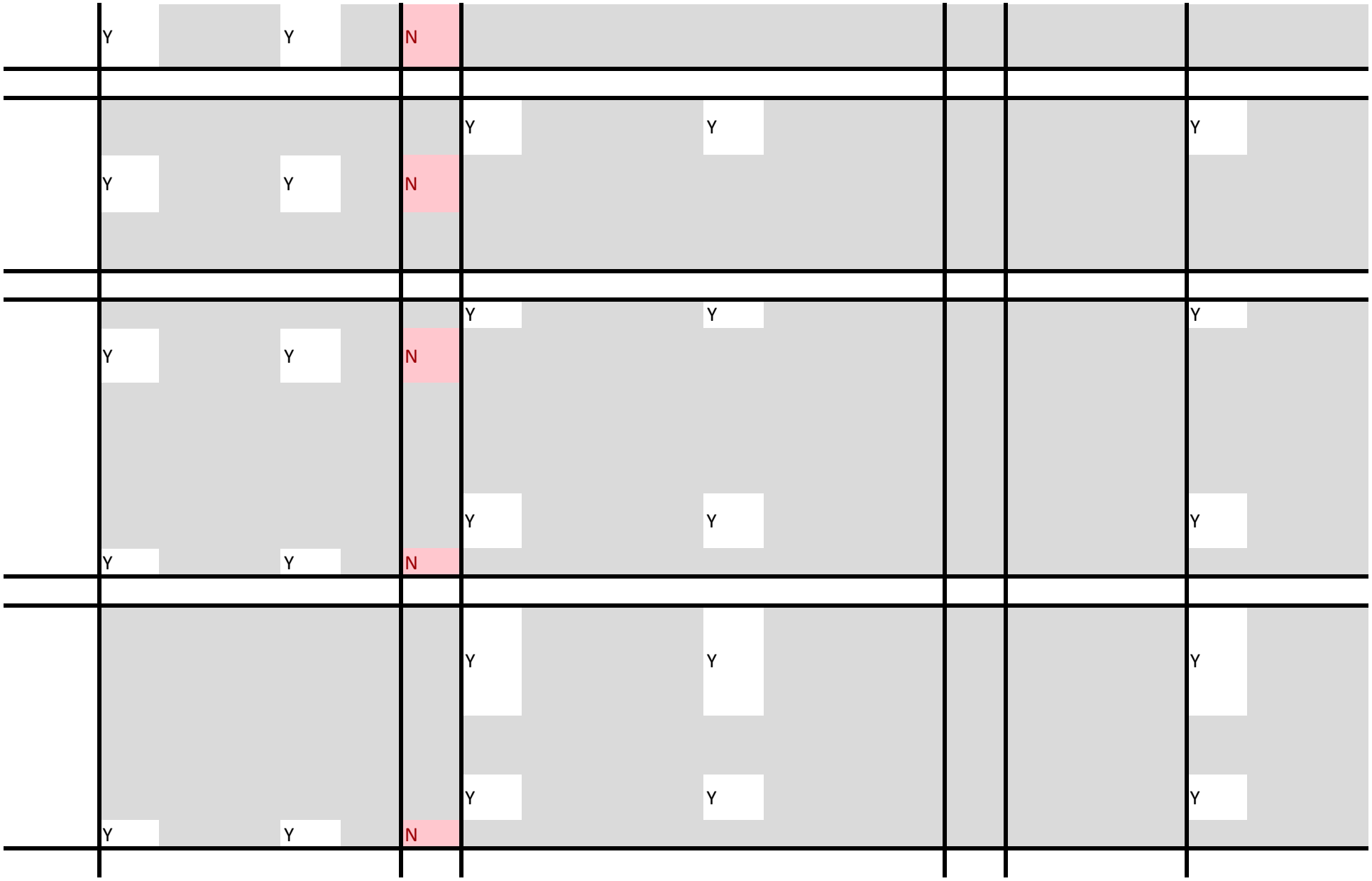
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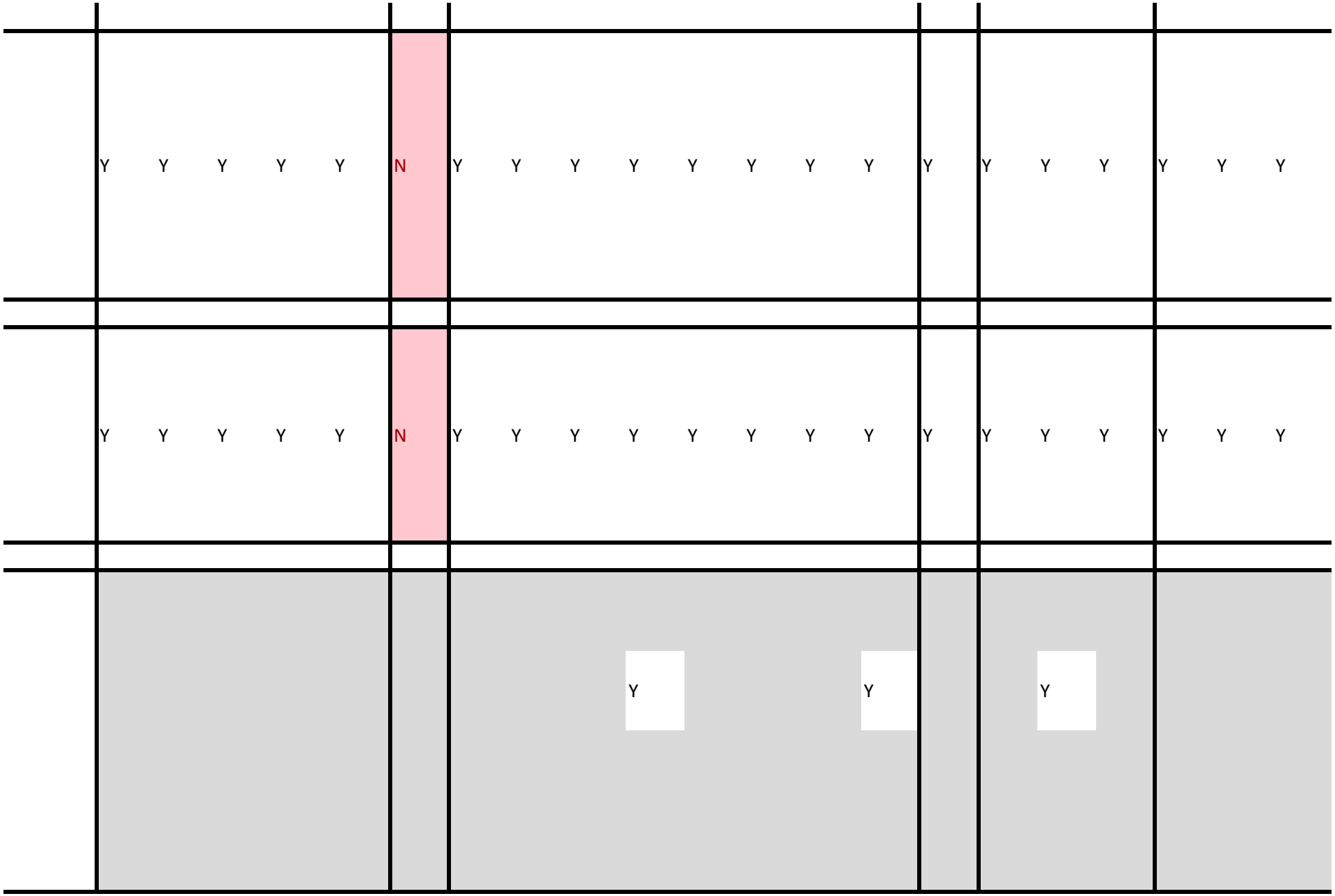
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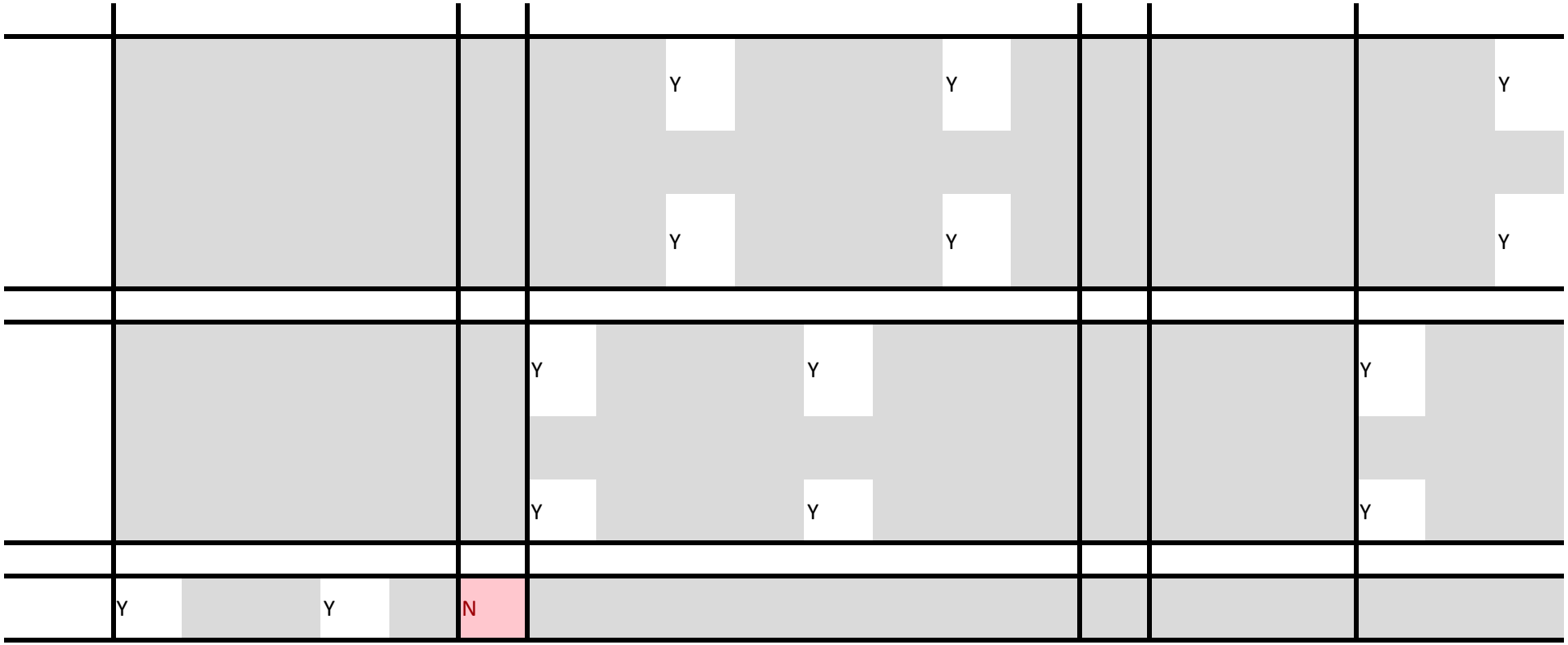
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	Stanwell Corporation Limited	Simply Energy - Cycle 2	Energy Queensland - Cycle 3 (TBC)					
ESTAMDP	STANWELL	ENGYAVIC	ENERGEXPLNSP	ENERGEXPMC/RP	EGXLTDMPMP	ENERGEXMMDP	ERGONETPLNSP	ERGONMPMP	WBAYMMDP
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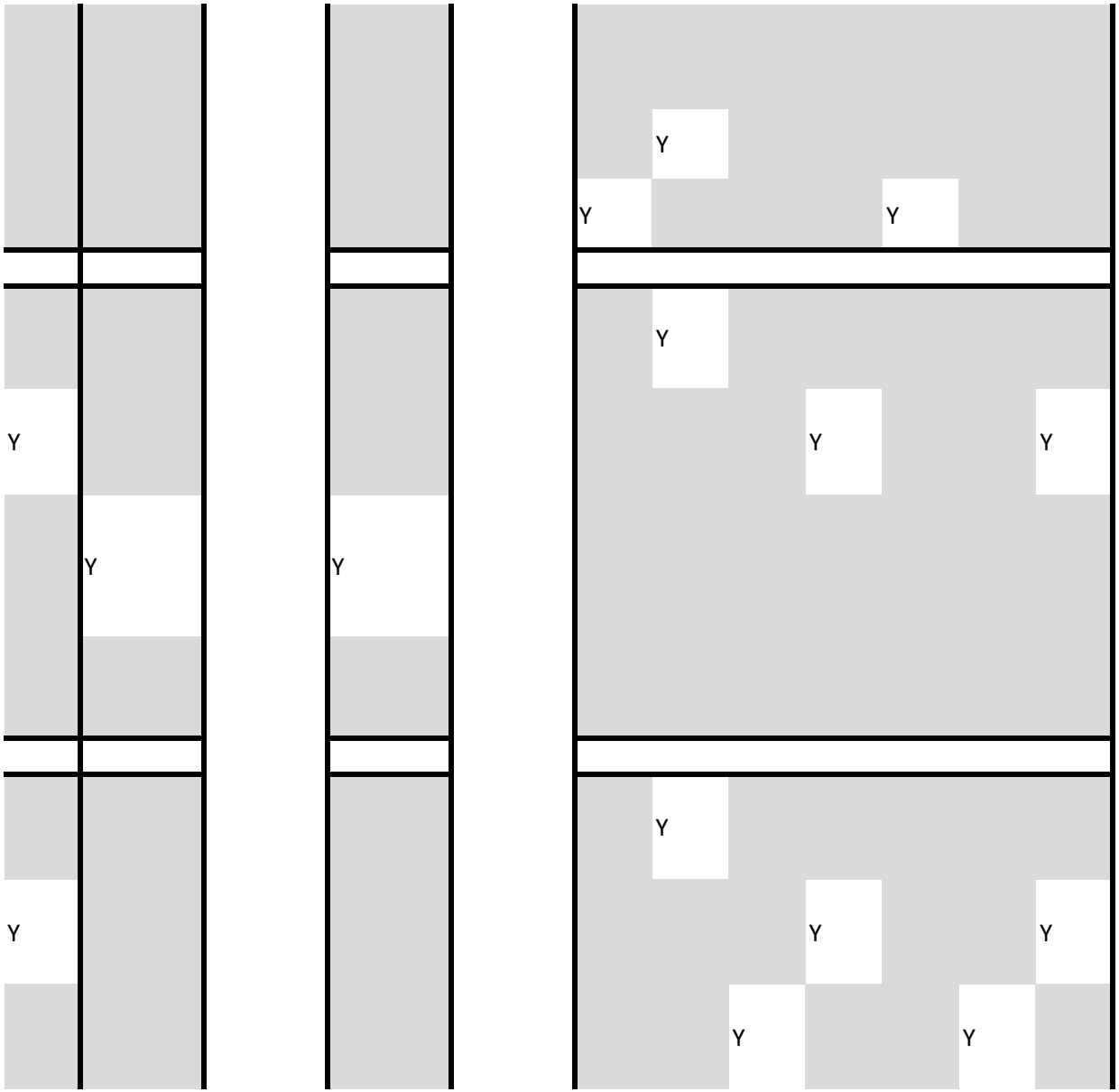
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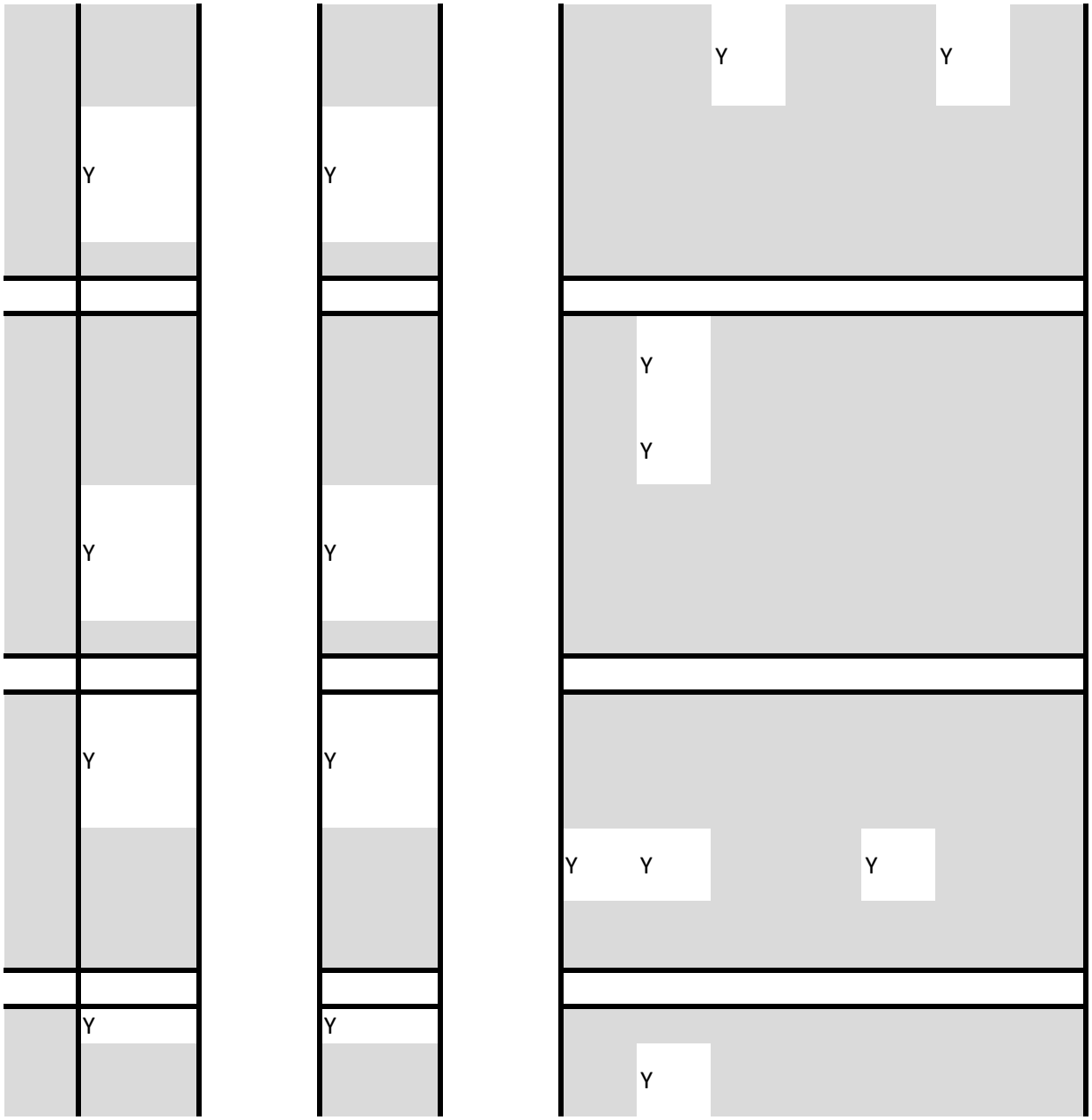
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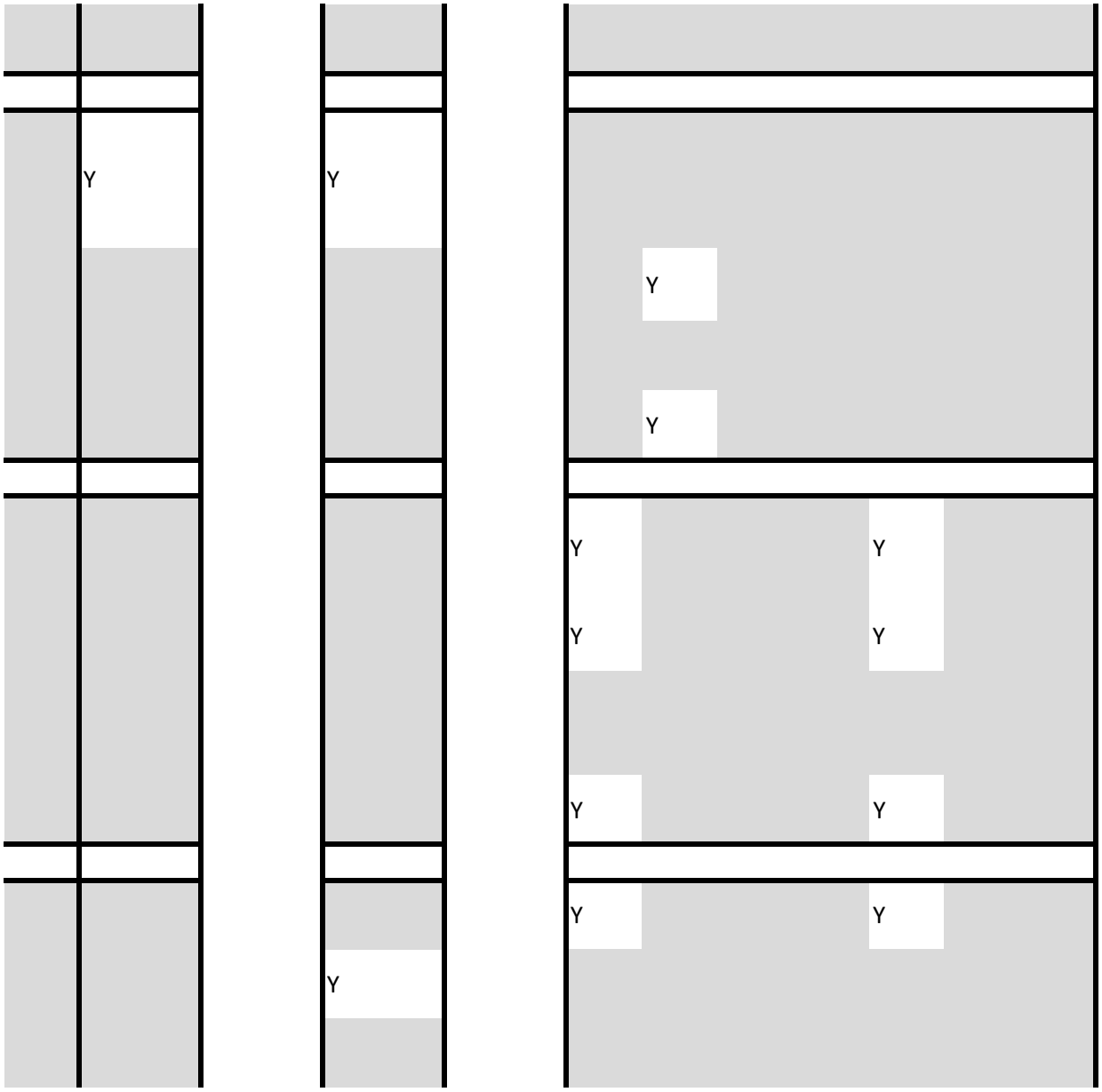
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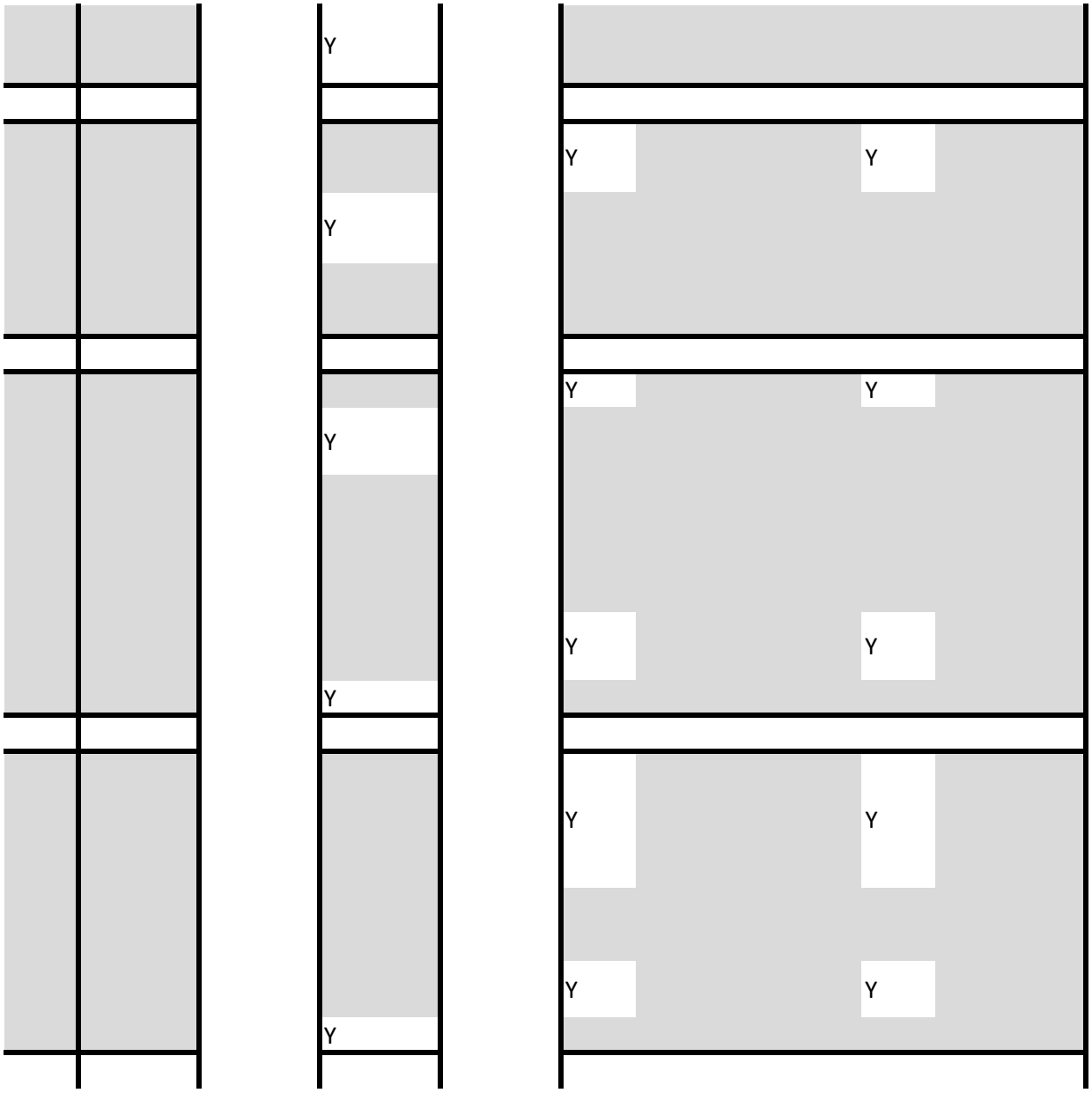
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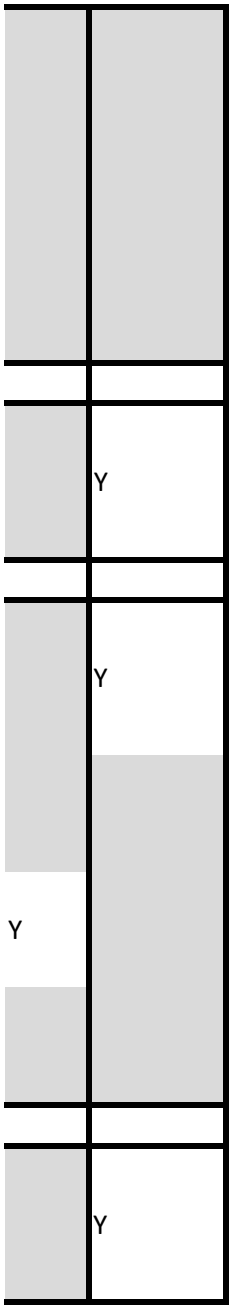
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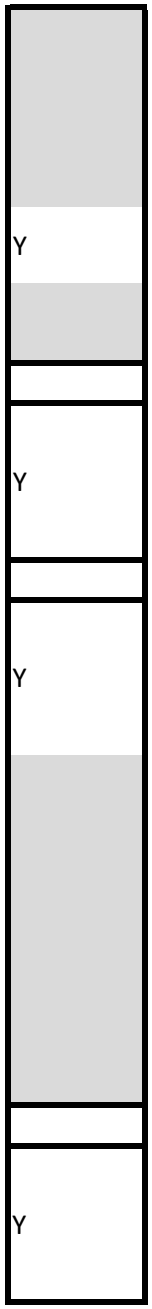
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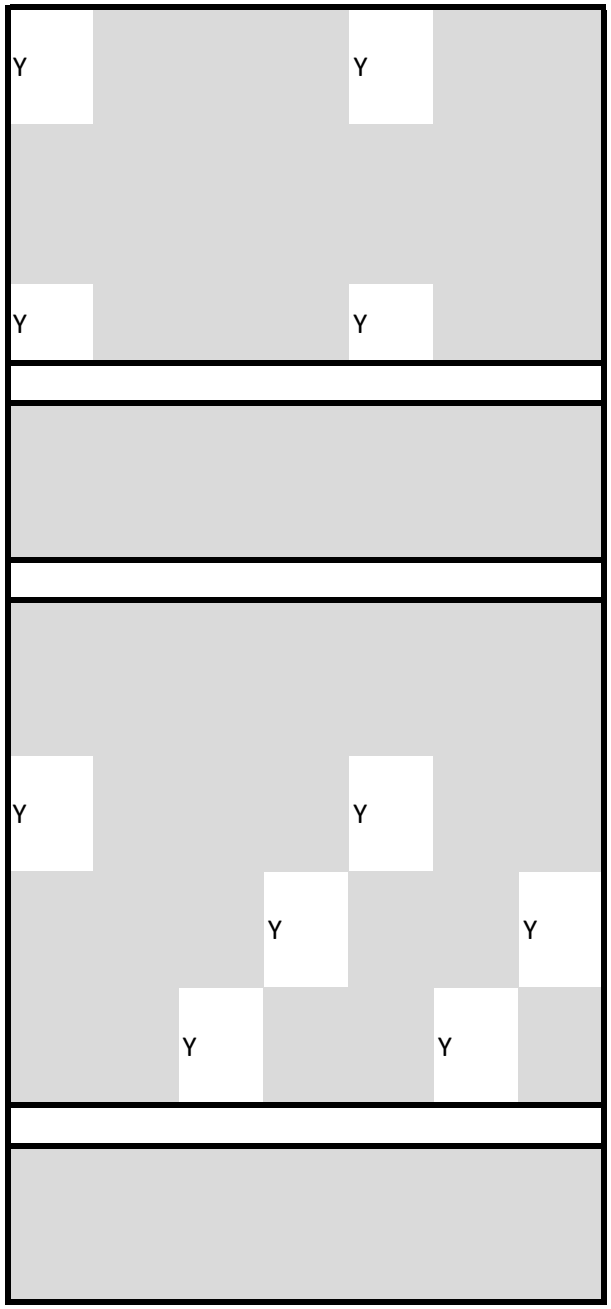
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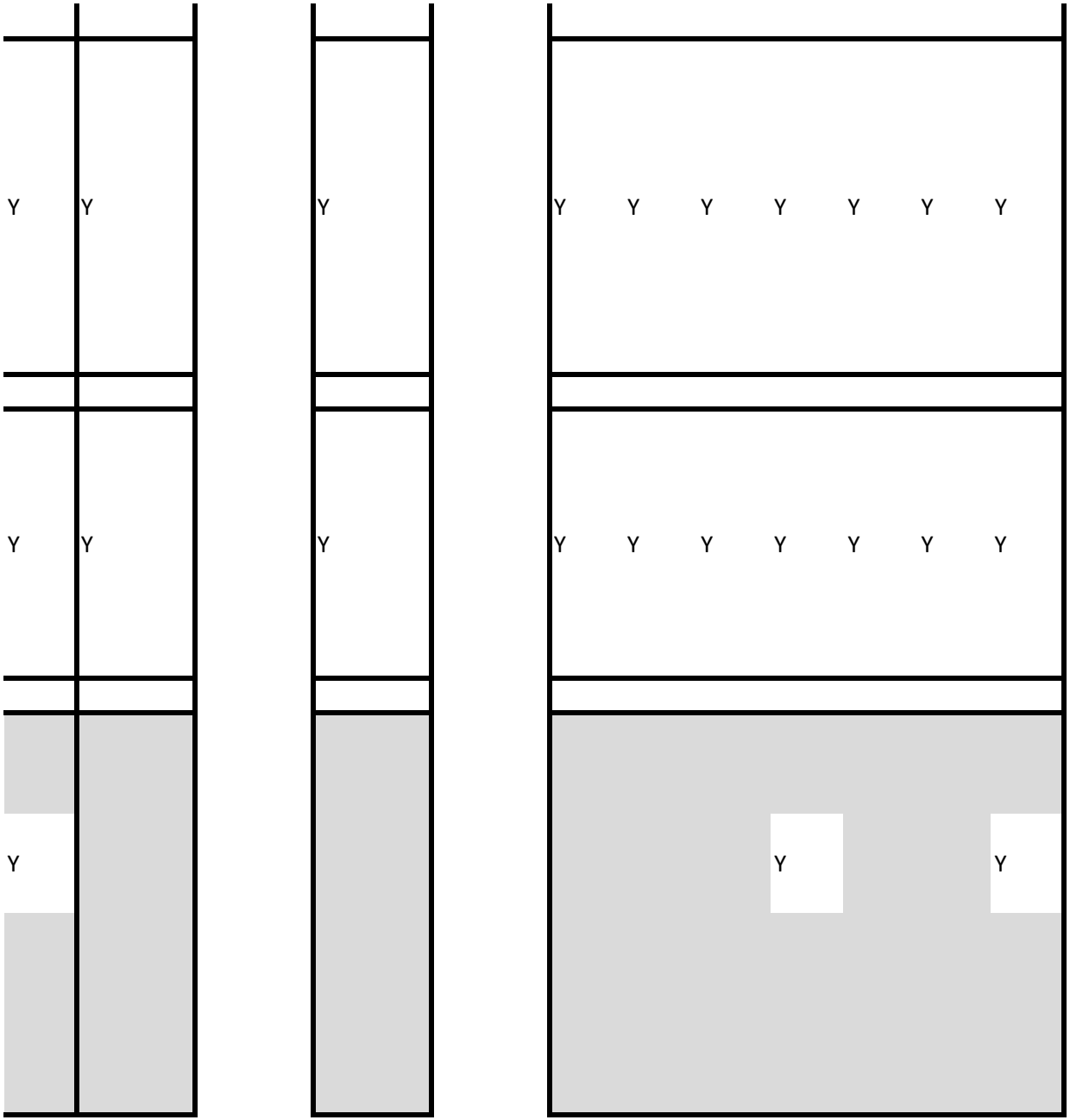
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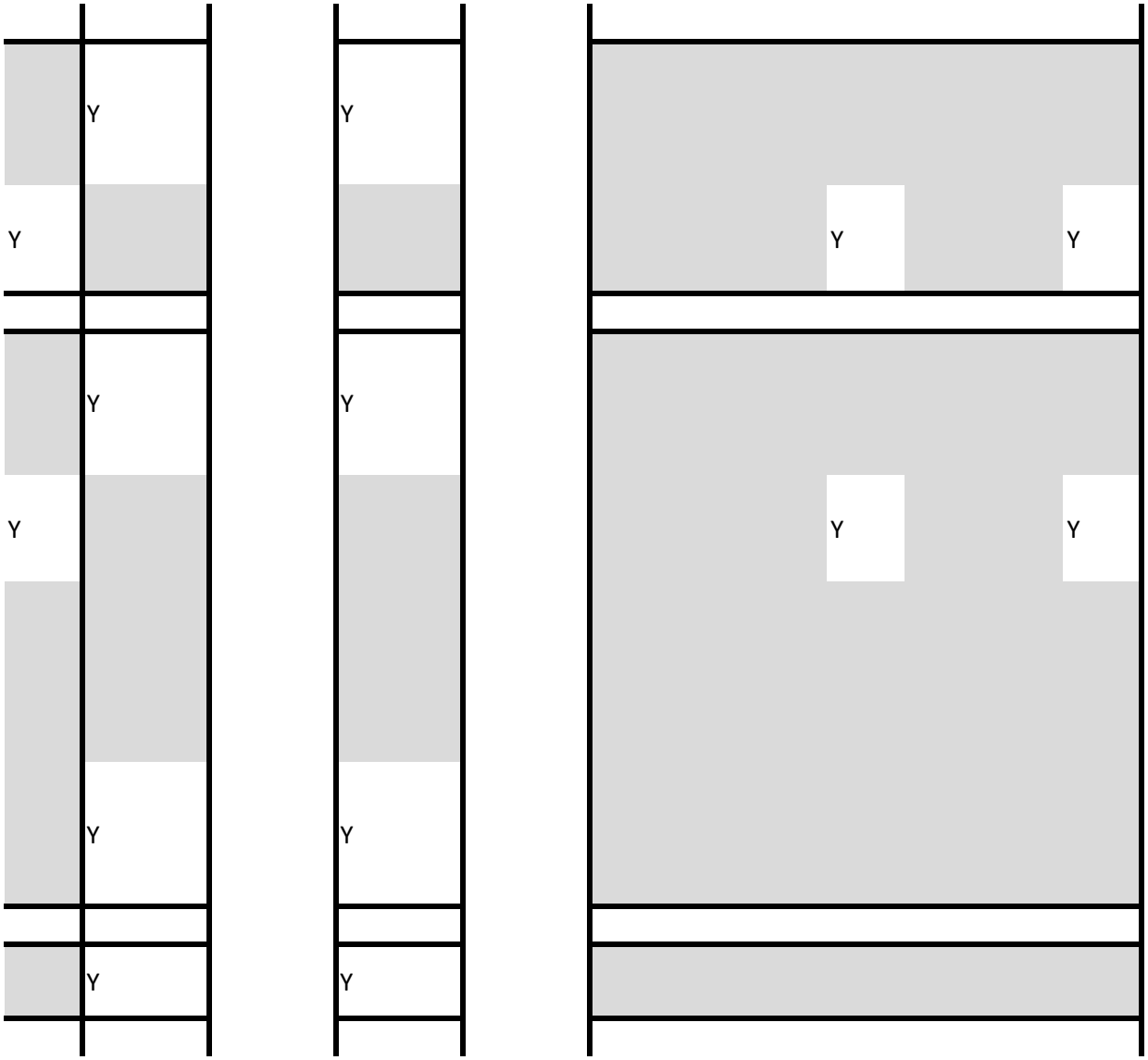
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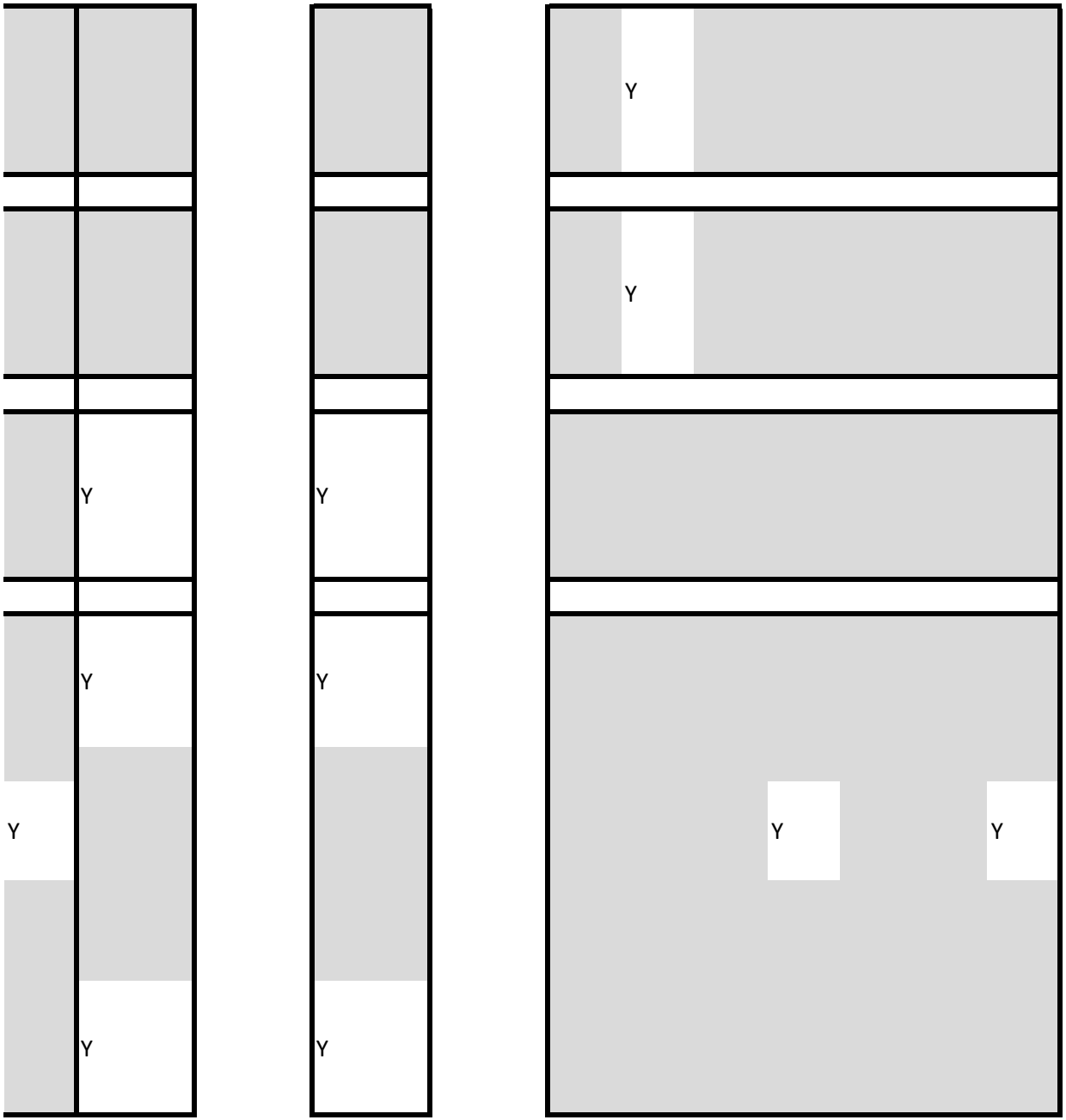
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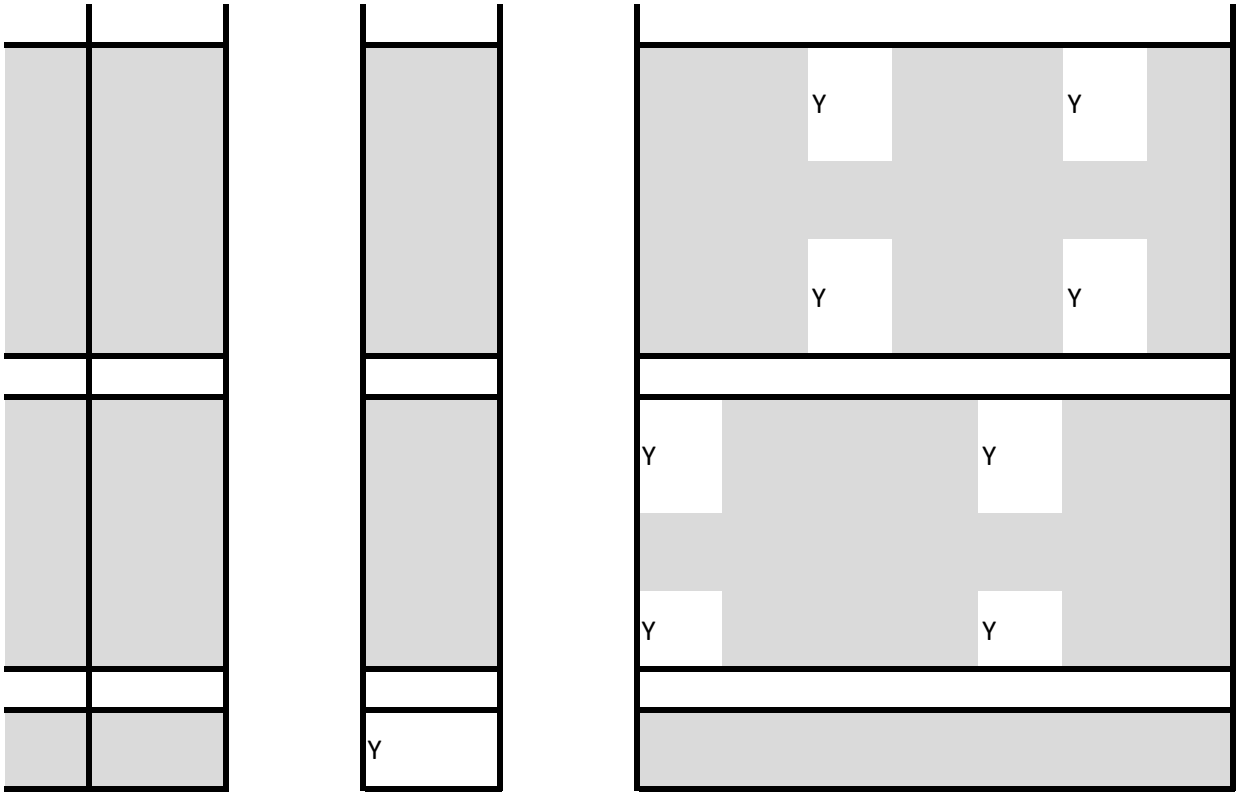
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Test case/Scenario	Objective
INDT_PRE_01	Verify ENM is able to initiate the CR 2520 and NMI data is populated in C7 report (CR-2520: Create NMI + Meter, DataStream – Child NMI)
INDT_PRE_02	Verify ENM is able to initiate CR 2021 and NMI data populates in C5 Report
INDT_PRE_03	Verify newly added columns in C7 report (Meter Manufacturer, Meter Model ,Network Tariff codes)
INDT_PRE_04	Verify ENM can initiate CR-2521 for LARGE/SMALL/WHOLESALE NMI class
INDT_PRE_05	LNSP create NMI, CR-2001 (Test data to be used by the test scenarios in Functional tab)
INDT_PRE_06	LNSP create NMI, CR-2000 (Test data to be used by the test scenarios in Functional tab)
INDT_PRE_07	LNSP Create Embedded Network Child NMI, CR-2020 (Test data to be used by the test scenarios in Functional tab)
INDT_PRE_08	LNSP Create Embedded Network Child NMI, CR-2021 (Test data to be used by the test scenarios in Functional tab)
INDT_PRE_09	LNSP create NMI, CR-2501 (Test data to be used by the test scenarios in Functional tab)
INDT-FUN-01	Verify removal of validation FRMP=RP Applicable for following CRs ('1000','1010','1020','1030','1040','1080','1081','1082','1083','1084','6800','6801')
INDT-FUN-02	verify current MC is able to initiate CR-3080 and CR-3090
INDT-FUN-03	CR is not completed unless CR-1500 is submitted. Verify current MC is able to initiate CR-6800
INDT-FUN-04	Verify current MDP or MPB or MPC is able to Object CR -6800 using objection code 'NOACC'.
INDT-FUN-05	Verify New MC is able to object CR-6800 using objection code 'DECLINED'.
INDT-FUN-06	verify current MC is able to Object CR-1083 using objection code 'CONTRACT'
INDT-FUN-07	verify current MC is able to Object CR-1082 using objection code 'CONTRACT'.
INDT-FUN-08	verify current MC is able to Object CR-1000, 1020 using objection code 'CONTRACT'.
INDT-FUN-09	verify current ENM is able to Object CR-5090, 5091 using objection code 'NOTAWARE'.

	verify ROLR cannot object on CR's (Applicable for CRs-2000, 2001, 2020, 2021, 2500, 2501, 2520, 2521, 6500, 6501)
INDT-FUN-10	verify ROLR do not receive any notifications for CR-2020, 2021
INDT-FUN-11	verify new LR can Object CR-2021 with objection code 'NOTRESP'
INDT-FUN-12	verify new LR can Object CR-2021 with objection code 'RETRO'
INDT-FUN-13	verify current ENM is receiving the change request REJ status notification for CR-5060, 5061
INDT-FUN-14	verify current ENM is receiving change request COM status notification for CR-5090, 5091
INDT-FUN-15	verify FRMP cannot initiate CR-5080, 5081
INDT-FUN-16	verify following CRs are disabled and cannot be initiated for SMALL and LARGE NMI Classification. CR 2003, 3003, 3053, 4003, 4053, 5053, 1050, 1051, 1090, 1091, 5090, 5091.
INDT-FUN-17	verify following CRs are disabled and cannot be initiated for 'WHOLESAL', 'GENERATR' and 'SAMPLE' NMI Classification: CR 1050, 1051.
INDT-FUN-18	verify Objection logging period is reduced from 5 to 1 business day for following CR's ,if NMI classification is SMALL or LARGE 1000, 1010, 1020, 1030, 1040, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1080, 1081, 1082, 1083, 1084, 6100, 6110, 6200, 6210, 6300, 6301, 6700, 6701, 6800 and 6801
INDT-FUN-19	verify Objection logging period is reduced from 5 to 1 business day for following CR's ,if NMI classification is LARGE 2000, 2020, 2021, 2500, 2501,2520, 2521, 5001, 5021, 6400, 6401,6421, 6500 and 6501
INDT-FUN-20	verify following CRs no longer be Objected for NMI class SMALL, LARGE, WHOLESAL, INTERCON, GENERATR,SAMPLE CR2100, 2101, 5110 and 5111
INDT-FUN-21	verify MDP cannot Object CR-1040, 1084 using objection code 'NOACC'.
INDT-FUN-22	verify new FRMP is able to initiate CR-1000 for meter installation type code = VICAMI and Read type code = EI
INDT-FUN-23	verify new FRMP cannot initiate CR-1000 for meter installation type code = VICAMI and Read type code = NS
INDT-FUN-24	verify CR-6800 cannot be initiated with incorrect MDP.
INDT-FUN-25	verify new MC cannot initiate CR-6800
INDT-FUN-26	verify CR-6800 can not be initiated with incorrect MDP.
INDT-FUN-27	verify CR-6800 can be initiated by current FRMP.
INDT-FUN-28	verify current MPB can initiate CR-3051 with Meter Register Status Code = D.
INDT-FUN-29	verify current LNSP can initiate CR-5060 for NMI Status code = N
INDT-FUN-30	verify current LR cannot initiate CR-5060.

Day 1
Day 2
Day 3

Day 4
Day 5
Day 6
Day 7
Day 8
Day 9

Initiating Participant	Reference to prerequisites	Elapsed days	Start Day	Mon 22-May Day	Tues 23-May 1	Weds 24-May 2	Thurs 25-May 3
LNSP	N/A	3	Day 2			X	X
LNSP	N/A	3	Day 2			X	X
LNSP	N/A	3	Day 2			X	X
LNSP	N/A	3	Day 2			X	X
LNSP	N/A	3	Day 2		X	X	X
LNSP	N/A	3	Day 1		X	X	X
LNSP	N/A	3	Day 1		X	X	X
LNSP	N/A	3	Day 1		X	X	X
LNSP	N/A	3	Day 1		X	X	X
FRMP	INDT_PRE_06	3	Day 4				
RP	INDT_PRE_06	3	Day 4				
RP	INDT_PRE_06	3	Day 4				
RP	INDT_PRE_06	1	Day 5				
RP	INDT_PRE_06	1	Day 5				
FRMP	INDT_PRE_07	1	Day 6				
FRMP	INDT_PRE_08	1	Day 6				
FRMP	INDT_PRE_05	1	Day 6				
LNSP	INDT_PRE_05	1	Day 6				

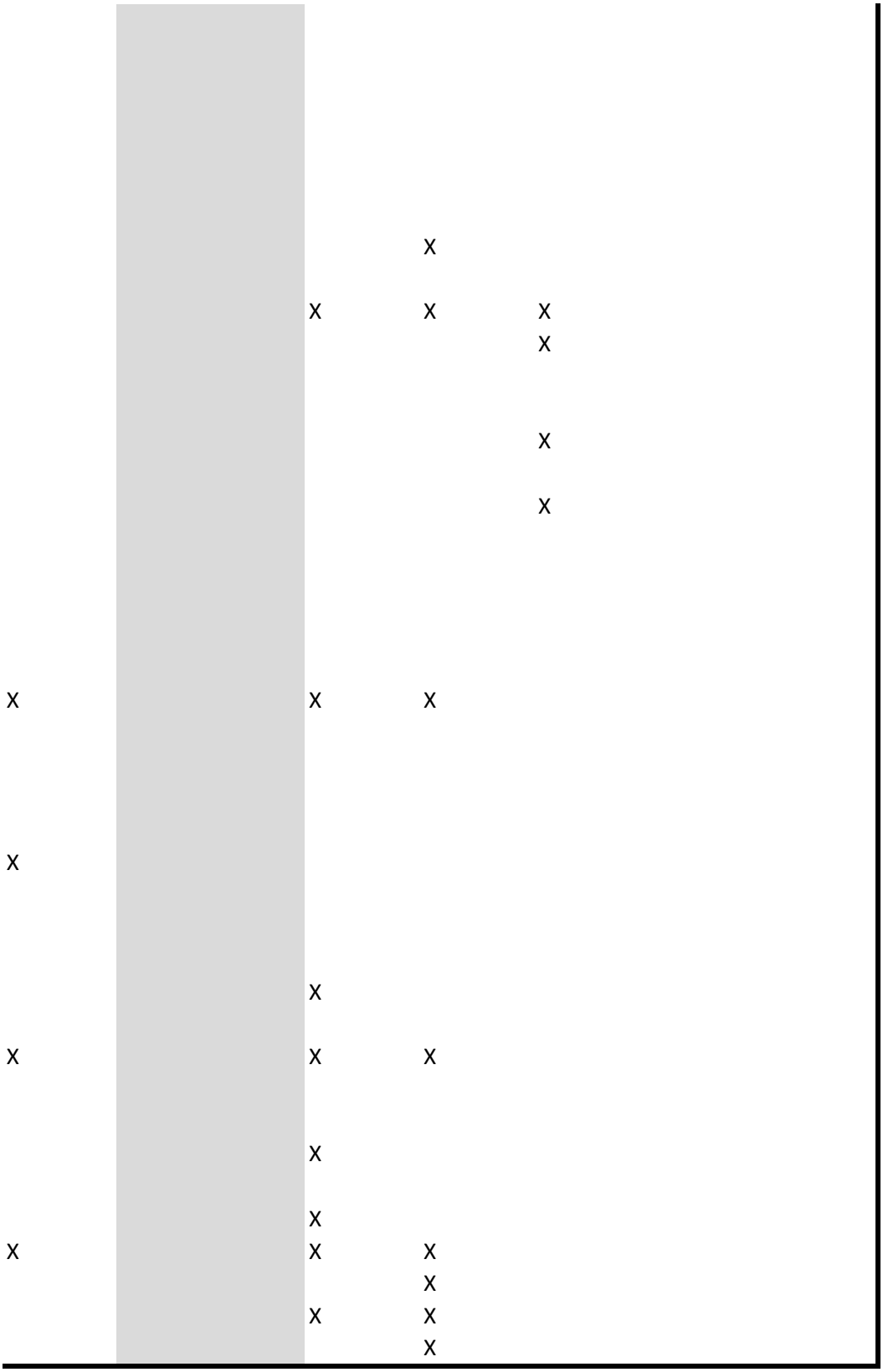
LNSP	NA	1	Day 3			X
LNSP	NA	1	Day 3			X
LNSP	NA	1	Day 3			X
LNSP	INDT_PRE_04	1	Day 6			
LNSP	INDT_PRE_02	3	Day 5			
FRMP	INDT_PRE_05	1	Day 7			
FRMP	INDT_PRE_06	1	Day 7			
FRMP	INDT_PRE_05	1	Day 7			
ANY	INDT_PRE_06	3	Day 4			
ANY	NA	3	Day 3		X	X
NEMM	NA	3	Day 1	X	X	X
FRMP	INDT_PRE_06	1	Day 5			
FRMP	INDT_PRE_09	3	Day 4			
FRMP	INDT_PRE_09	1	Day 7			
RP	INDT_PRE_06	1	Day 5			
RP	INDT_PRE_06	1	Day 5			
FRMP	INDT_PRE_06	1	Day 5			
FRMP	INDT_PRE_06	3	Day 4			
MPB	INDT_PRE_06	1	Day 6			
LNSP	INDT_PRE_04	2	Day 5			
LR	INDT_PRE_04	1	Day 6			

5
5
4

6
8
7
4
0
0

Fri 26-May	27-May	28-May	Mon 29-May	Tues 30-May	Weds 31-May	Thurs 01-Jun	Fri 02-Jun
4			5	6	7	8	9
X							
X							
X							
X							
X			X	X			
X			X	X			
X			X	X			
			X				
			X				
				X			
				X			
				X			
				X			

				X				
			X	X	X			
					X			
					X			
					X			
X			X	X				
X								
			X					
X			X	X				
			X					
			X					
X			X	X				
				X				
			X	X				
				X				



Testing partner priority - to be populated by participants

High	Aim to test all relevant test cases against this participant ID
Medium	Aim to test some cases against this participant ID
Low	Not a priority to test against this participant ID
NA	Not a valid testing partner

AGL

SA Power	**UMPLP**	LNSP
SA Power	**UMPLP**	MC/RP
SA Power	**ETSAPMP**	MP
SA Power	**ESTAMDP**	MDP
Powermetri	**POWMEMD**	MP
Powermetri	**POWMETM**	MDP

AGLE	**AES**	**AGLE**	**AES**
FRMP	FRMP	ROLR/LR	ROLR/LR

AURORA

Powermetri	**POWMEMDP**	MP
Powermetri	**POWMETMP**	MDP

AURORA
FRMP

CitiPower/Powercor

AGL	**SOLARIS**	FRMP
AGL	**PULSE**	FRMP
CovaU	**COVAU**	FRMP
Stanwell	**STANWELL**	FRMP
CitiPower/P	**CITIPP**	LNSP
CitiPower/P	**CITIPP**	MC/RP
CitiPower/P	**CITIPWMP**	MP
CitiPower/P	**CPNETMDP**	MDP
CitiPower/P	**POWCP**	LNSP
CitiPower/P	**POWCP**	MC/RP
CitiPower/P	**POWERCMP**	MP
CitiPower/P	**POWERMDP**	MDP

CITIPP	**CITIPP**	**CITIPWMP**	**CPNETMDP**	**POWCP**
LNSP	MC/RP	MP	MDP	LNSP

Powermetri	POWMEMDP	MP
Powermetri	POWMETMP	MDP

CovaU

COVAU

FRMP

CitiPower/P	CITIPP	LNSP
CitiPower/P	CITIPP	MC/RP
CitiPower/P	CITIPWMP	MP
CitiPower/P	CPNETMDP	MPD
CitiPower/P	POWCP	LNSP
CitiPower/P	POWCP	MC/RP
CitiPower/P	POWERCMP	MP
CitiPower/P	POWERMDP	MDP
Powermetri	POWMEMDP	MP
Powermetri	POWMETMP	MDP

ERMPOWER/Powermetric

ERMPOWER

FRMP

SA Power	UMPLP	LNSP
SA Power	UMPLP	MC
SA Power	ETSAPMP	MP
SA Power	ESTAMDP	MDP
Powermetri	POWMEMDP	MDP
Powermetri	POWMETMP	MP

AGL	AGLE
AGL	AES
AGL	SOLARIS
AGL	PULSE
CovaU	COVAU
Stanwell	STANWELL
CitiPower/P	CITIPP
CitiPower/P	CITIPP
CitiPower/P	CITIPWMP
CitiPower/P	CPNETMDP
CitiPower/P	POWCP
CitiPower/P	POWCP
CitiPower/P	POWERCMP
CitiPower/P	POWERMDP
SA Power	UMPLP
SA Power	UMPLP
SA Power	ETSAPMP
SA Power	ESTAMDP

SA Power

AGL	AGLE	FRMP
AGL	AES	FRMP
	ERMPOWER	
ERM Power		FRMP
	POWMEMDP	
Powermetri	P	MDP
	POWMETMP	
Powermetri	P	MP
SA Power	UMPLP	LNSP
SA Power	UMPLP	MC
SA Power	ETSAPMP	MP
SA Power	ESTAMDP	MDP

UMPLP	UMPLP	ETSAPMP	ESTAMDP
LNSP	MC	MP	MDP

STANWELL

CitiPower/P	CITIPP	LNSP
CitiPower/P	CITIPP	MC/RP
CitiPower/P	CITIPWMP	MP
	CPNETMDP	
CitiPower/P		MPD
CitiPower/P	POWCP	LNSP
CitiPower/P	POWCP	MC/RP
	POWERCMP	
CitiPower/P		MP
	POWERMD	
CitiPower/P	P	MDP
	POWMEMDP	
Powermetri	P	MP
	POWMETMP	
Powermetri	P	MDP

STANWELL
FRMP

CYCLE 2

SIMPLY ENERGY

CitiPower/P	CITIPP	LNSP
CitiPower/P	CITIPP	MC/RP
CitiPower/P	CITIPWMP	MP
	CPNETMDP	
CitiPower/P		MPD
CitiPower/P	POWCP	LNSP
CitiPower/P	POWCP	MC/RP
	POWERCMP	
CitiPower/P		MP
	POWERMD	
CitiPower/P	P	MDP
SA Power	UMPLP	LNSP

ENGYAVIC	ENGYAVIC
FRMP	LR/ROLR

SA Power	UMPLP	MC
SA Power	ETSAPMP	MP
SA Power	ESTAMDP	MDP
Powermetri	POWMEMDP	MP
Powermetri	POWMETMP	MDP

CYCLE3

ENERGY QLD

AGL	AGLQLD2	FRMP
AGL	AES	FRMP
Simply Ener	ENGYAVIC	FRMP
Stanwell	STANWELL	FRMP
ERM Power	ERMPOWER	FRMP
Energy QLD	ENERGEXP	LNSP
Energy QLD	ENERGEXP	MC/RP
Energy QLD	EGXLTDMP	MP
Energy QLD	ENERGEXM	MDP
Energy QLD	ERGONETP	LNSP
Energy QLD	ERGONMP	MP
Energy QLD	WBAYM	MDP
Powermetri	POWMEMDP	MP
Powermetri	POWMETMP	MDP

ENERGEXP	ENERGEXP	EGXLTDMP	ENERGEXM	ERGONETP
LNSP	MC/RP	MP	MDP	LNSP

Test scenario preferences (used on Functional t

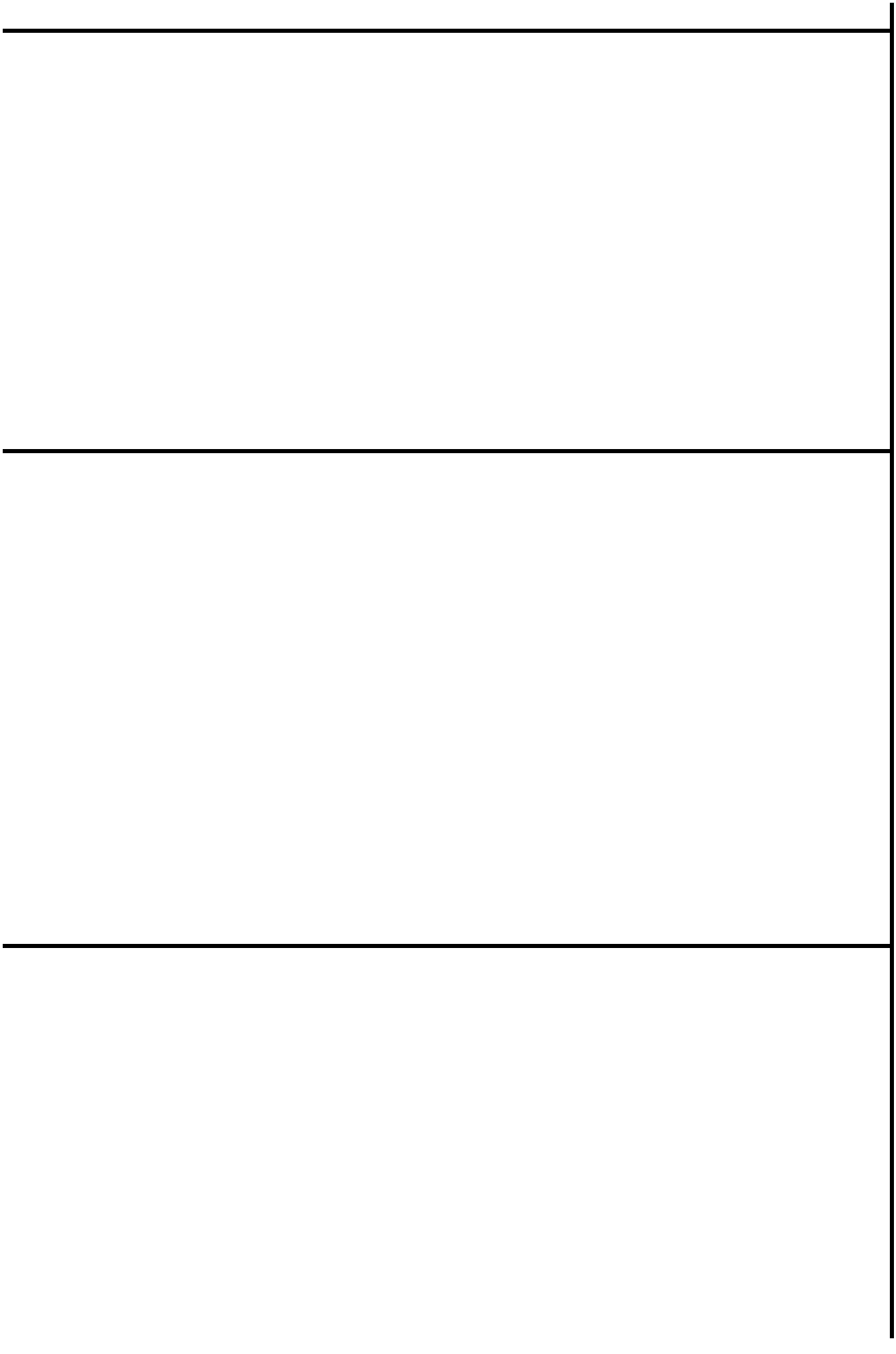
Yes - AND	Aim to undertake this test case with
Yes - OR	Aim to undertake this test case with
No - LP	This test case is a low priority
No - N/A	This test case is not relevant

			SOLARIS	PULSE	SOLARIS	PULSE
			FRMP	FRMP	ROLR/LR	ROLR/LR
CitiPower/P	CITIPP	LNSP				
CitiPower/P	CITIPP	MC/RP				
CitiPower/P	CITIPWMP	MP				
CitiPower/P	CPNETMDP	MDP				
CitiPower/P	POWCP	LNSP				
CitiPower/P	POWCP	MC/RP				
CitiPower/P	POWERCMP	MP				
CitiPower/P	POWERMD	MDP				
Powermetri	POWMEMD	MP				
Powermetri	POWMETM	MDP				

Powermetr
Powermetr

POWCP	POWERCMP	POWERMDP
MC/RP	MP	MDP

	POWMEMDP	POWMETMP
	MPD	MP
FRMP		
FRMP		
FRMP		
FRMP		
FRMP		
FRMP		
FRMP		
LNSP		
MC/RP		
MP		
MDP		
LNSP		
MC/RP		
MP		
MDP		
LNSP		
MC		
MP		
MDP		

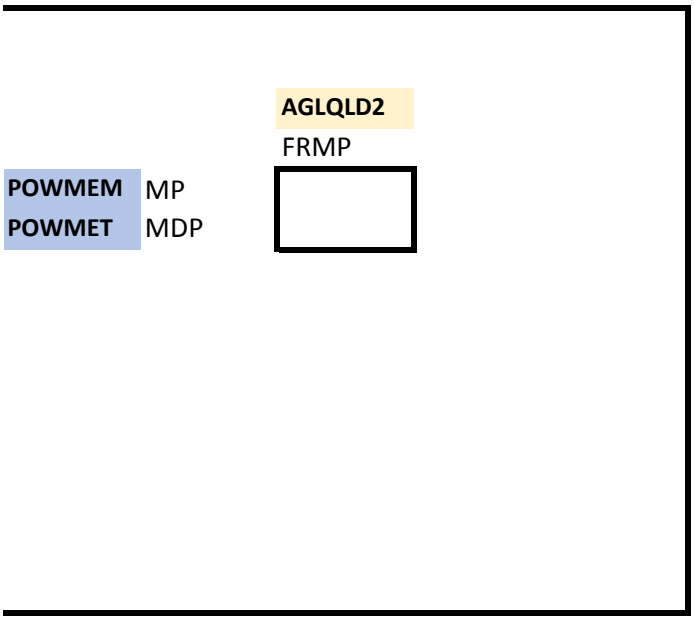


ERGONMP	WBAYM
MP	MDP

tab)

ı this participant ID

ı this or equivalent participant ID



Organisation	Test Lead	# Participant
ERM Power/ Powermetric	Sam Mukhtar	1
ERM Power/ Powermetric	Sam Mukhtar	2
ERM Power/ Powermetric	Sam Mukhtar	3
SA Power	Peter Draffin	1
SA Power	Peter Draffin	2
SA Power	Peter Draffin	3
SA Power	Peter Draffin	4
Stanwell Corporation Limited	Oliver Jessup	1
AGL	Sanhita Dutta	1
AGL	Sanhita Dutta	2
AGL	Sanhita Dutta	3
AGL	Sanhita Dutta	4
AGL	Sanhita Dutta	5
Aurora Energy	James Rowbottom	1
CovaU	Sarah Palmer	1
CitiPower/Powercor	Raymond Huisman	1
CitiPower/Powercor	Raymond Huisman	2
CitiPower/Powercor	Raymond Huisman	3
CitiPower/Powercor	Raymond Huisman	4
CitiPower/Powercor	Raymond Huisman	5
CitiPower/Powercor	Raymond Huisman	6
CitiPower/Powercor	Raymond Huisman	7
CitiPower/Powercor	Raymond Huisman	8
Simply Energy	Jun Liu	1

Energy Queensland	Kate Gordon	1
Energy Queensland	Kate Gordon	2
Energy Queensland	Kate Gordon	3
Energy Queensland	Kate Gordon	4
Energy Queensland	Kate Gordon	6
Energy Queensland	Kate Gordon	7
Energy Queensland	Kate Gordon	8

Look ups		
ERMPOWER	FRMP	ERMPOWER
POWMEMDP	MDP	POWMEMDP
POWMETMP	MP	POWMETMP
UMPLP	LNSP	UMPLP
UMPLP	MC	UMPLP
ETSAPMP	MPB	ETSAPMP
ESTAMDP	MDP	ESTAMDP
STANWELL	FRMP	STANWELL
SOLARIS	FRMP	SOLARIS
PULSE	FRMP	PULSE
AGLQLD2	FRMP	AGLQLD2
AGLE	FRMP	AGLE

AES	FRMP	AES
AURORA	FRMP	AURORA
COVAU	FRMP	COVAU
CITIPP	LNSP	CITIPP
CITIPP	MC	CITIPP
CITIPWMP	MPB	CITIPWMP
CPNETMDP	MDP	CPNETMDP
POWCP	LNSP	POWCP
POWCP	MC	POWCP
POWERCMP	MPB	POWERCMP
POWERMDP	MDP	POWERMDP
ENGYAVIC	FRMP	ENGYAVIC
AEMO	AEMO	AEMO

Participant role (LNSP, MDP, MC, etc.)	Role	Participant ID/s
Retailer	FRMP	ERMPOWER
MDP	MDP	POWMEMDP
MP	MP	POWMETMP
LNSP	LNSP	UMPLP
MC	MC	UMPLP
MPB	MPB	ETSAPMP
MDP	MDP	ESTAMDP
Retailer	FRMP	STANRET/STANWELL/STANSGA
Retailer AGL	FRMP	SOLARIS
Retailer AGL	FRMP	PULSE
Retailer AGL	FRMP	AGLQLD2
Retailer AGL	FRMP	AGLE
Retailer Power Direct	FRMP	AES
Retailer	FRMP	AURORA
Retailer	FRMP	COVAU
LNSP	LNSP	CITIPP
MC	MC	CITIPP
MPB	MPB	CITIPWMP
MDP	MDP	CPNETMDP
LNSP	LNSP	POWCP
MC	MC	POWCP
MPB	MPB	POWERCMP
MDP	MDP	POWERMDP
Retailer – Simply Energy (small market)	FRMP	ENGYAVIC
LNSP	LNSP	ERGONETP
LNSP	LNSP	ENERGEXP
MDP	MDP	WBAYM
MDP	MDP	ENERGEXM
MC	MC	ENERGEXP
MPB	MPB	EGXLTDMP
MPB	MPB	ERGONMP

ANY	ANY
AEMO	AEMO
NEMM	AEMO
NEMM_New	AEMO
FRMP	FRMP
FRMP_Current	FRMP
FRMP_New	FRMP
LR	LR
LR_Current	LR
LR_New	LR
ROLR	ROLR
LNSP	LNSP

LNSP_Current	LNSP
LNSP_New	LNSP
MDP	MDP
MDP (Current/New)	MDP
MDP_Current	MDP
MDP_New	MDP
MPB	MPB
MPB_Current	MPB
MPC	MPB
RP	LNSP
RP_Current	LNSP
RP_New	LNSP

Jurisdiction/s	Registration status (existing, in progress, planned)	Targeted commencement date
ACT, NSW, QLD, SA, TAS, VIC	Existing	May-17
ACT, NSW, QLD, SA, TAS, VIC	Existing	May-17
ACT, NSW, QLD, SA, TAS, VIC	Existing	May-17
SA	Existing	03-Apr-17
SA	Existing (as current RP)	03-Apr-17
SA	Existing	03-Apr-17
SA	Existing	03-Apr-17
QLD, NSW, VIC	Existing	24-Apr-17
VIC, NSW	Existing	18th April
VIC, NSW	Existing	18th April
QLD	Existing	18th April
SA	Existing	18th April
VIC, QLD, SA, NSW, ACT	Existing	18th April
TAS	Existing	23-May-17
NSW,VIC	Existing	23-May-17
VIC	Existing	01-May-17
VIC	Existing as current RP	01-May-17
VIC	Existing	01-May-17
VIC	Existing	01-May-17
VIC	Existing	01-May-17
VIC	Existing as current RP	01-May-17
VIC	Existing	01-May-17
VIC	Existing	01-May-17
VIC, SA, NSW, QLD, ACT	Existing	01-Jun-17

QLD	Existing	19th June 2017
QLD	Existing	19th June 2017
QLD	Existing	19th June 2017
QLD	Existing	19th June 2017
QLD	Existing	19th June 2017
QLD	Existing	19th June 2017
QLD	Existing	19th June 2017

Phase	Comment
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1	We will test using the STANWELL PID
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1	Intended scenarios: 8 □INDT-FUN-01
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1	
Phase 1 - cycle 2	

Phase 2	
Phase 2	
Phase 2	
Phase 2	
Phase 2	
Phase 2	
Phase 2	

Roles

AEMO

NEMM

NEMM_New

FRMP

FRMP_Current

FRMP_New

LR

LR_Current

LR_New

ROLR

LNSP

LNSP_Current
LNSP_New
(MC as RP)

MDP
MDP (Current/New)
MDP_Current
MDP_New

MPB
MPB_Current
MPC

https://www.aer.gov.au/re
The register of RoLRs w

Titlesort descending
ActewAGL Retail
AGL Sales Pty Limited
AGL South Australia Pty Lt
Aurora Energy Pty Ltd
EnergyAustralia Pty Ltd
Origin Energy Electricity Lt

ACT	NSW	QLD	SA	TAS	VIC
AEMO	AEMO	AEMO	AEMO	AEMO	AEMO

ERMPOWER	ERMPOWER	ERMPOWER	**ERMPOWER**	ERMPOWER	ERMPOWER
AES	STANWELL	STANWELL	**AGLE**	AES	**STANWELL**
	SOLARIS	AGLQLD2	**AES**	**AURORA**	**SOLARIS**
	PULSE	AES			**PULSE**
	AES				AES
	COVAU				**COVAU**
ENGYAVIC	*ENGYAVIC*	*ENGYAVIC*	***ENGYAVIC***	*ENGYAVIC*	*ENGYAVIC*

			AGLE	**AURORA**	**SOLARIS**

			AGLE	**AURORA**	**SOLARIS**

			UMPLP		**CITIPP**
					POWCP
		ERGONETP			
		ENERGEXP			

POWMEMDP	POWMEMDP	POWMEMDP	**POWMEMDP**	POWMEMDP	POWMEMDP
			ESTAMDP		**CPNETMDP**
					POWERMDP
		ENERGEXM			
		WBAYM			

POWMETMP	POWMETMP	POWMETMP	**POWMETMP**	POWMETMP	POWMETMP
			ETSAPMP		**CITIPWMP**
		EGXLTDMP			**POWERCMP**

ERGONMP

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as last updated on 14 March 2017.

Sector	Segment	Region	Status	Effective date
Electricity, Ga	Retail	Australian Cap	Current	01-Jul-12
Electricity, Ga	Retail	New South W	Current	01-Jul-13
Electricity	Retail	South Australi	Current	01-Feb-13
Electricity	Retail	Tasmania	Current	01-Jul-12
Electricity	Retail	New South W	Current	01-Jul-13
Electricity	Retail	Australian Cap	Current	01-Jul-13

		Group 1 - SA
	ANY	ANY
	AEMO	AEMO
	NEMM	AEMO
	NEMM_New	AEMO
	FRMP	ERMPOWER/AGLE/AES
	FRMP_Current	ERMPOWER/AGLE/AES
	FRMP_New	ERMPOWER/AGLE/AES
	LR	AGLE
	LR_Current	AGLE
	LR_New	AGLE
	ROLR	AGLE
Phase 1 - cycle 2	LNSP	UMPLP
	LNSP_Current	UMPLP
	LNSP_New	UMPLP
	MDP	POWMEMDP/ESTAMDP
	MDP (Current/New)	POWMEMDP/ESTAMDP
	MDP_Current	POWMEMDP/ESTAMDP
	MDP_New	POWMEMDP/ESTAMDP
	MPB	POWMETMP/ETSAPMP
	MPB_Current	POWMETMP/ETSAPMP
	MPC	POWMETMP/ETSAPMP
	RP	UMPLP
19th June 2017	RP_Current	UMPLP
19th June 2017	RP_New	UMPLP

19th June 2017
19th June 2017

19th June 2017

19th June 2017

	3	4	5
Group 2 - VIC	**Group 3 - TAS**	**Group 4 -QLD**	
ANY	ANY	ANY	
AEMO	AEMO	AEMO	
AEMO	AEMO	AEMO	
AEMO	AEMO	AEMO	
STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2	
STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2	
STANWELL/SOLARIS/PULSE/COVAU	AURORA	AGLQLD2	
SOLARIS	AURORA	**MISSING**	
SOLARIS	AURORA	**MISSING**	
SOLARIS	AURORA	**MISSING**	
SOLARIS	AURORA	**MISSING**	
CITIPP/POWCP	**MISSING**	**MISSING**	
CITIPP/POWCP	**MISSING**	**MISSING**	
CITIPP/POWCP	**MISSING**	**MISSING**	
CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP	
CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP	
CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP	
CPNETMDP/POWERMDP	POWMEMDP	POWMEMDP	
CITIPWMP/POWERCMP	POWMETMP	POWMETMP	
CITIPWMP/POWERCMP	POWMETMP	POWMETMP	
CITIPWMP/POWERCMP	POWMETMP	POWMETMP	
CITIPP/POWCP	**MISSING**	**MISSING**	
CITIPP/POWCP	**MISSING**	**MISSING**	
CITIPP/POWCP	**MISSING**	**MISSING**	

Cycle	Start	Finish
Cycle 1	23-May-17	02-Jun-17
Cycle 2	05-Jun-17	16-Jun-17
Cycle 3	19-Jun-17	30-Jun-17

MSAT Procedures - CATS v4.2

Change Retailer (FRMP)

Change Reason Code	Description
1000, 1010 (SMALL only), 1020 (LARGE only), 1030, 1040	Change Retailer
1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029 (All these codes are for SMALL only)	Change Retailer – Error Corrections (Small NMIs only)
1050,1051 (Both codes are for Large only)	Change Retailer – Where FRMP is NOT the RP
1080, 1081 (SMALL only), 1082, 1083, 1084	Change Retailer – Child NMI - Small or Large
1090, 1091 (Both codes are for Large only)	Change Retailer – Child NMI - Where FRMP IS NOT the RP

Provide Data

Change Reason Code	Description
1500	Provide Actual Change Date

Create NMI

Change Reason Code	Description
2000, 2001	Create NMI
2003	Create Tier 1 NMI
2020, 2021	Create NMI – Child NMI
2500, 2501	Create NMI, Meter, Datastream
2520, 2521	Create NMI, Meter, Datastream – Child NMI

Maintain Metering

Change Reason Code	Description
3000, 3001	Create Metering Installation Details
3003	Create Tier 1 Metering Installation Details
3004, 3005	Exchange of Metering Information
3050, 3051	Change Metering Installation Details
3053	Change Tier 1 Metering Installation Details
3080, 3081	Advanced Change Metering Installation Details
3090, 3091	Advanced Exchange of Metering
3100, 3101	Change Network Tariff Code

Maintain Datastream

Change Reason Code	Description
4000, 4001	Create Datastream Details
4003	Create Tier 1 Datastream Details
4004, 4005	Exchange of Datastream Information
4050, 4051	Change Datastream Details
4053	Change Tier 1 Datastream Details

Maintain NMI

Change Reason Code	Description
5070, 5071	Update Next Scheduled Read Date
5001, 5021	Backdate NMI Start Date
5050, 5051	Change NMI
5053	Change Tier 1 *NMI Standing Data*
5054, 5055	Change NMI (Customer Classification Code)
5060, 5061	Change NMI – Child NMI
5080, 5081	Change Parent Name
5090, 5091	Make a NMI a Child NMI

Change Roles (excluding FRMP)

Change Reason Code	Description
6100, 6110	Change LNSP

6200, 6210	Change MDP
6300, 6301	Change MC
6400, 6401	Change LR
6421	Change LR Child NMI
6500, 6501	Change RoLR
6700, 6701	Change MPB, MPC, or Both
6800, 6801	Change Multiple Roles – MC, MDP, MPC, MPB

Auto change roles

Change Reason Code	Description
ECLR	Change LR – Child NMI - Auto
EPFR	Change Secondary FRMP – Parent NMI

AEMO only

Change Reason Code	Description
5100, 5101	Standing data updates
ROLR	Invoke BCT for RoLR
BCxx	Invoke BCT Process

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Change FRMP

Section & Page No	Change Reason Code
Sec 7, Page 44	1000, 1020
Sec 8, Page 49	1050,1051 (Both codes are for Large only)
Disabled from 1 December 2017	1080, 1082
Sec 9, Page 53	
Disabled from 1 December 2017	

Provide Data

Section & Page No	Change Reason Code
Sec 10, Page 59	1500

Create NMI

Section & Page No	Change Reason Code
Sec 11, Page 61	2000, 2001
Disabled from 1 December 2017	2020, 2021
Sec12, Page 64	2500, 2501
Sec 13, Page 67	
Sec 14, Page 70	

Maintain Profile Shapes

Section & Page No	Change Reason Code
Sec 15, Page 74	2100, 2101
Disabled from 1 December 2017	5110, 5111
Sec 16, Page 77	
Sec 17, Page 80	
Disabled from 1 December 2017	
Sec 18, Page 83	
Sec 19, Page 86	
Sec 20, Page 90	

Maintain Metering

Section & Page No	Change Reason Code
Sec 21, Page 92	3000, 3001
Disabled from 1 December 2017	3004, 3005
Sec 22, Page 94	3050, 3051
Sec 23, Page 96	3100, 3101
Disabled from 1 December 2017	

Maintain Datastream

Section & Page No	Change Reason Code
Sec 24, Page 98	4000, 4001
Sec 25, Page 100	4004, 4005
Sec 26, Page 103	4050, 4051
Disabled from 1 December 2017	
Sec 27, Page 105	
Sec 28, Page 107	
Sec 29, Page 109	
Sec 30, Page 111	

Maintain NMI

Section & Page No	Change Reason Code
Sec 31, Page 113	5001, 5021
	5050, 5051
	5060, 5061
	5080, 5081
	5090, 5091

Change Roles (excluding FRMP)

Section & Page No	Change Reason Code
	6100, 6110

Sec 32, Page 115
Sec 33, Page 118
Sec 34, Page 120
Sec 35, Page 122
Sec 36, Page 124
Sec 37, Page 126
Sec 38, Page 128

Section & Page No
Sec 39, Page 131
Sec 40, Page 132

Section & Page No
Sec 41, Page 133
Sec 42, Page 136
Sec 42, Page 136

6200, 6210
6300, 6301
6400, 6401
6421
6500, 6501
6700, 6701

AEMO only

Change Reason Code
5100, 5101
BCxx
ECLR
EPFR

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Description	Section & Page No
Change FRMP	Sec 2, Page 13
Change Retailer – Where FRMP is NOT the RP	Disabled from 1 December 2017
Change FRMP – Child NMI	Sec 3, Page 17

Description	Section & Page No
Provide Actual Change Date	Sec 4, Page 21

Description	Section & Page No
Create NMI	Sec 5, Page 23
Create NMI – Child NMI	Sec 6, Page 26
Create NMI, Meter, Datastream	Sec 7, Page 29

Description	Section & Page No
Create External Profile Shape Change External Profile Shape	Sec 8, Page 32

Description	Section & Page No
Create Metering Details	Sec 9, Page 35
Exchange of Metering Information	Sec 10, Page 38
Change Metering Details	Sec 11, Page 41
Change Network Tariff Code	Sec 12, Page 44

Description	Section & Page No
Create Datastream Details	Sec 13, Page 46
Exchange of Datastream Information	Sec 14, Page 48
Change Datastream Details	Sec 15, Page 50

Description	Section & Page No
Backdate NMI Start Date	Sec 16, Page 52
Change NMI	Sec 17, Page 55
Change NMI – Child NMI	Sec 18, Page 57
Change Parent Name	Sec 19, Page 59
Make NMI a Child NMI	Sec 20, Page 61

Description	Section & Page No
Change LNSP	Sec 21, Page 63

Change MDP	Sec 22, Page 65
Change MC	Sec 23, Page 68
Change LR	Sec 24, Page 71
Change LR Child NMI Generator and Wholesale	Sec 25, Page 73
Change ROLR	Sec 26, Page 75
Change MPB, MPC, or Both	Sec 27, Page 77

Description	**Section & Page No**
Standing Data Updates	Sec 28, Page 79
Invoke Bulk Change Tool	Sec 29, Page 82
Change LR – Child NMI Auto	Sec 30, Page 85
Change Secondary FRMP – Parent NMI	Sec 31, Page 86

Table 3-A – MSATS Transaction Type Codes

Code	Name of Transaction Type	Initiated by
CR	Change Request	Participant
NOT	Change Request Status Notification	MSATS
RDAT	Request for Participant data	MSATS
OBJ	Objection	Participant
WCR	Change Request Withdrawal	Participant
WOBJ	Objection Withdrawal	Participant
NMID	NMI Discovery Request	Participant
NMIR	NMI Discovery Response	MSATS
CRR	Change Request Response	MSATS
OBJR	Objection Response	MSATS
ACK	Acknowledgment	MSATS
CODE	Codes Update	MSATS
RPTR	Report Request	Participant
RPTD	Report Data	MSATS

Description
Used to initiate a Change Request. Submitted by a Participant anytime they wish to create or update any standing data.
Notifies a Participant of a Change Request's change in status in accordance with the applicable Change Request Status Nofification Rules.
A request by MSATS to a Participant for provision of the necessary data in a Change Request in accordance with the applicable Field Validation Rules it that data is not already contained in the NMI Master Record.
A Participant can raise an Objection to a Change Request in accordance with the applicable Objection Rules. Other Participants will be informed in accordance with the applicable Change Request Status Nofification Rules.
The initiating Participant may Cancel a Change Request at any time prior to Completion. Other Participants will be informed in accordance with the applicable Change Request Status Nofification Rules.
The initiating Participant may withdraw an Objection. Other Participants will be informed in accordance with the applicable Change Request Status Nofification Rules.
A Participant wants to view CATS Standing Data. Further particulars of the search types can be found in section 43.
MSATS sends a Participant information in response to a NMI Discovery Search.
MSATS response to a Change Request with an approval or rejection as it reaches the Pending Validation status.
MSATS response to an Objection with an approval or rejection. Other Participants will be informed in accordance with the applicable Change Request Status Nofification Rules.
MSATS responds to ALL transactions with an acknowledgment of receipt.
MSATS notifies Participants of any changes to codes, rules or Participant data.
Participant requests a report.
The data generated by a report request.

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Table 4-A – Change Reason Codes

Code	Description	Initiating Participant
1000	Change Retailer	New FRMP
1010	Change Retailer – Retrospective – Align to Meter Reading	New FRMP
1020	Change Retailer–Retrospective –Long Term/Error (not SMALL)	New FRMP
1021	Error Correction – Missed CR 1500	New FRMP
1022	Incorrect transfer date	New FRMP
1023	New *NMI* – LNSP set up wrong *retailer* in MSATS	New FRMP
1024	Transfer missed	New FRMP
1025	Transferred in error	New FRMP
1026	Cooled Off	New FRMP
1027	End User Moves Out on or before CR completion date	New FRMP
1028	Non-account holder signs contract	New FRMP
1029	Other Error Corrections (SMALL only)	New FRMP
1030	Change Retailer – Move-In	New FRMP
1040	Change Retailer – Move-In – Retrospective	New FRMP
1080	Change Retailer – Child NMI	New FRMP
1081	Change Retailer – Child NMI – Retrospective Align Meter Reading	New FRMP
1082	Change Retailer Child – Retrospective Long Term/Error	New FRMP
1083	Change Retailer Child NMI – Move In	New FRMP
1084	Change Retailer Child NMI – Move In – Retrospective	New FRMP
1500	Provide Actual Change Date	New and Current MDP
2000	Create *NMI* Details	New LNSP
2001	Create *NMI* Details – Retrospective	New LNSP
2020	Create *NMI* Details –Child	New ENM
2021	Create NMI Details –Child – Retrospective	New ENM
2100	Create External Profile Shape	New AEMO
2101	Create External Profile Shape – Retrospective	New AEMO
2500	Create *NMI* , NMI Datastream & *metering installation* details	New LNSP
2501	Create *NMI* , NMI Datastream & *metering installation* details – Retrospective	New LNSP
2520	Create NMI, MDM Datastream & Metering Installation Details – Child NMI	New ENM
2521	Create NMI, MDM Datastream & Metering Installation Details – Child NMI – Retrospective	New ENM
3000	Create *metering installation* details	Current MPB
3001	Create *metering installation* details – Retrospective	Current MPB
3004	Exchange of Metering Information	Current MPB
3005	Exchange of Metering Information – Retrospective	Current MPB
3050	Change *metering installation* details	Current MPB
3051	Change *metering installation* details – Retrospective	Current MPB
3080	Advanced change *metering installation* details	Current MC
3081	Advanced change *metering installation* details – Retrospective	Current MC
3090	Advanced Meter Exchange	Current MC
3091	Advanced Meter Exchange – Retrospective	Current MC
3100	Change Network Tariff Code	Current LNSP
3101	Change Network Tariff Code – Retrospective	Current LNSP
4000	Create NMI Datastream Details	Current MDP
4001	Create NMI Datastream Details – Retrospective	Current MDP

	4004	Exchange of Datastream Information	Current MDP
	4005	Exchange of Datastream Information – Retrospective	Current MDP
	4050	Change NMI Datastream Details	Current MDP
	4051	Change NMI Datastream Details – Retrospective	Current MDP
	5001	Backdate *NMI* Start Date	AEMO or LNSP
	5021	Backdate *NMI* Start Date – Child	AEMO or ENM
	5050	Change *NMI* Details	Current LNSP
	5051	Change *NMI* Details – Retrospective	Current LNSP
	5054	Change *NMI* Details – Customer Classification Code	Current FRMP
	5055	Change *NMI* Details – Customer Classification Code – Retrospective	Current FRMP
	5060	Change *NMI* Details – Child	Current ENM
	5061	Change *NMI* Details – Child – Retrospective	Current ENM
	5070	Update Next Scheduled Read Date	Current MDP
	5071	Update Next Scheduled Read Date – Retrospective	Current MDP
	5080	Change Parent Name	Current LNSP
	5081	Change Parent Name – Retrospective	Current LNSP
	5090	Make a *NMI* a Child NMI	New ENM
	5091	Make a *NMI* a Child NMI – Retrospective	New ENM
	5100	5100 – Change *NMI* Details – Prospective (AEMO only)	AEMO
	5101	5100 – Change *NMI* Details – Retrospective (AEMO only)	AEMO
	5110	Change External Profile Shape	Current AEMO
	5111	Change External Profile Shape – Retrospective	Current AEMO
	6100	Change LNSP	New LNSP
	6110	Change LNSP – Retrospective	New LNSP
	6200	Change MDP	Current FRMP or Current MC
	6210	Change MDP – Retrospective	Current FRMP or Current MC
	6300	Change MC	New MC
	6301	Change MC – Retrospective	New MC
	6400	Change LR	New LR
	6401	Change LR – Retrospective	New LR
	6421	Change LR – Retrospective – Child NMI	New LR
	6500	Change RoLR	New RoLR
	6501	Change RoLR – Retrospective	New RoLR
	6700	Change MP	Current MC
	6701	Change MP – Retrospective	Current MC
	6800	Change Multiple Roles	Current FRMP or Current MC
	6801	Change Multiple Roles - Retrospective	Current FRMP or Current MC
BCxx		Invoke Bulk Change Process	AEMO
ECLR		Change of Local Retailer – Child (Auto)	AEMO/MSATS
EPFR		Change of Secondary FRMP – Parent (Auto)	AEMO/MSATS
ROLR		Invoke Retailer of Last Resort	AEMO

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Table 3-B – Assignment of Change Reason Codes to Events

Group of events	Description of event
Change Retailer	SMALL NMI
	LARGE NMI
	Embedded network SMALL & LARGE
Provide Data	Provide Actual Change Date SMALL & LARGE (for CR 1000, 1030, 1080, 1083, 1010, 1040, 1081, 1084, 3080, 3090, 6200, 6700, 6800)
Create NMI	Create a *NMI* SMALL & LARGE
	Create a Child NMI SMALL & LARGE
	Create *NMI* , *metering installation* details & NMI Datastream SMALL & LARGE
	Create NMI, *metering installation* details & MDM datastream – Child NMI SMALL & LARGE
Maintain Metering	Create *metering installation* details SMALL & LARGE
	Exchange of Metering Information SMALL & LARGE
	Change *metering installation* details SMALL & LARGE
	Advanced Change Metering Installation Details SMALL & LARGE
	Advanced Meter Exchange SMALL & LARGE
	Change Network Tariff Code SMALL & LARGE
Maintain Datastream	Create NMI Datastream SMALL & LARGE
	Exchange of Datastream Information SMALL & LARGE
	Change NMI Datastream SMALL & LARGE
Maintain NMI	Update NSRD SMALL & LARGE
	Change a *NMI* SMALL & LARGE
	Change *NMI* – Customer Classification Code
	Change Child NMI SMALL & LARGE
	Backdate *NMI* start date
	Backdate Child NMI Start Date
	Change Parent Name SMALL & LARGE

	Make a *NMI* a Child NMI
Change Role	Change LNSP SMALL & LARGE
	Change MDP SMALL & LARGE
	Change MC SMALL & LARGE
	Change Local Retailer SMALL & LARGE
	Change Local Retailer Child NMI SMALL & LARGE
	Change RoLR SMALL & LARGE
	Change Metering Provider SMALL & LARGE
	Change Multiple Roles SMALL & LARGE
System	Change of Child Local Retailer (Auto)
	Change of Secondary FRMP – Parent (Auto)
AEMO only	Invoke Retailer of Last Resort
	Invoke Bulk Change Process
	AEMO-Initiated standing data updates
Manage External Profiles	Create External Profile [(1)]
	Change External Profile [(1)]

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Change Reason Code Assignment
1000, 1010, 1030, 1040, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029
1000, 1020, 1030, 1040,
1080, 1081, 1082, 1083, 1084
1500
2000, 2001
2020, 2021
2500, 2501
2520, 2521
3000, 3001
3004, 3005
3050, 3051
3080, 3081
3090, 3091
3100, 3101
4000, 4001
4004, 4005
4050, 4051
5070, 5071
5050, 5051
5054, 5055
5060, 5061
5001
5021
5080, 5081

5090, 5091
6100, 6110
6200, 6210
6300, 6301
6400, 6401
6421
6500, 6501
6700, 6701
6800, 6801
ECLR
EPFR
RoLR
BCxx
5100, 5101
2100, 2101
5110, 5111

Table 3-C – Retrospective Change Reason Codes

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

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(a) For a Re

(b) Retrosp

Table 3-D – Prospective Change Reason Codes

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

(a) For a Pr

(b) The ma

(c) Prospec

ferences

etrospective Change, the Proposed Change Date must either be the date the Change Request is raised

ective Changes have 0 days for the Prospective Days in the Timeframe Rules for the Jurisdiction/Char

rospective Change, the Proposed Change Date must be the day following the date on which a Change

ximum number of days for a Prospective Change depends on the Timeframe Rules/Change Reason C

tive Changes have 0 days for the Retrospective Days in the Timeframe Rules/Change Reason Code/N

d or a date in the past and within the number of days allowed by the Timeframe Rules/Change Reaso
nge Reason Code/NMI Classification Code combination.

Request is submitted, or a date after that date.
ode/NMI Classification Code for the relevant Change Request. The maximum number of days is the va
IMI Classification Code combination.

n Code/NMI Classification Code on this Change Request. The maximum number of days is the value s

lue stored in Prospective Days. At present, the maximum allowable number of days for any Prospective

tored in Retrospective Days. At present, the maximum number of days in the past for any Role Chang

e Change is 65 *business days* .

ge Request is 130 business days, the maximum number of days in the past for changing NMI Standing

Data is 140 business days.

CR Life cycle

#	Stage	Pre-cursers
1	Initiated	N/A
2	Pending validation	1
3	Rejected	2,4,6
4	Requested	2,5
5	Objected	4,6
6	Pending	4
7	Completed	6
8	Cancelled	2,4,5,6

Possible next states
Initiated->Pending validation
Pending validation ->Requested, Pending validation ->Rejected, Pending validation->Cancelled
Rejected
Requested->Pending, Requested->Rejected, Requested->Objected, Requested->Cancelled
Objected->Requested, Objected->Cancelled
Pending->Completed, Pending->Rejected, Pending->Objected, Pending->Cancelled
Completed
Cancelled

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Table 5-A – MSATS Reports

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Report Name	Description
CATS C1	Data Replication Resynchronisation Report
CATS C3	NMI Change Request Report
CATS C4	NMI Master Report
CATS C7	New Participant Access Report
CATS C9	NMI Count Report
MDM RM8	DatePPSBMPGenerated
MDM RM9	Actual Versus Estimate Data Report
MDM RM11	Missing Data
MDM RM13	NMI Datastreams History Report
MDM RM14	MDP Data Version Comparison Report
MDM RM15	Count of Multiple Versions Report
MDM RM16	Level 1 Settlement Reconciliation Report
MDM RM17	Level 3 Settlement Reconciliation Report for Non-Aggregated Data
MDM RM18	Interval Data Report
MDM RM19	Aggregated Energy Actual-vs-Estimate Report
MDM RM20	PPS Report
MDM RM21	Level 2 Settlement Reconciliation Report
MDM RM22	Data Estimation Report
MDM RM26	MDP Substitution and Estimation Report

Table 4-B – Role Codes

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

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Table 4-C – Jurisdiction Codes

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

Table 4-D – Objection Codes

Code	Description
BADDATA	Used by a Participant to confirm that the standing data in the change request or the NMI Master Record is incorrect (e.g. Meter Serial ID). If the Participant role is incorrect; use NOTRESP.
BADMETER	Used by the MDP for change retailer requests, where the Read Type Code is not compatible with the method for collecting *metering data* at the *metering installation* .
BADPARTY	Used by the MC when the MDP, MPB, or MPC nominated on a change retailer request is incorrect as they are not the party appointed by the MC, or do not have the capability or capacity to operate in the Role proposed.
DATEBAD	Used by the MDP for *meter installation* types 4A, 5 and 6 to inform the FRMP that the proposed date in the Change Request does not align with the date the Metering Reading is scheduled to be taken. Used by the Current FRMP, or MDP for retrospective change of *retailer* requests where one or both of the Proposed Change Date, or Actual End Date is incorrect.
DEBT	Used by the Current FRMP for change *retailer* requests, were there is an aged debt reaching Jurisdictional limits.
DECLINED	Used by a Participant who does not wish to perform the Role for which it is nominated in the Change Request.
NOACC (1)	Used where no access can be obtained to the *metering installation* to perform the manual collection of *metering data* required to facilitate a transfer of FRMP, or Meter Churn.
NOTAPRD	Used by the LNSP where a Participant is not accredited or authorised to operate within the LNSP area, most typically applying to the Role of MP.
NOTPRUD	No prudential approval. AEMO has not approved the transaction for prudential reasons.
NOTRESP	Not responsible for *NMI* in the identified Role. For use by a nominated Participant to Object on the basis that they are not responsible in the Role in which they are nominated.
RETRO	Participant does not agree to a Retrospective Change.
BLOCK	AEMO Objection to the transaction either at the request of a Jurisdiction or for operational reasons.

CONTRACT	Must only be used where an existing contractual obligation takes precedence over the proposed change and: • a FRMP transfer is sought, in Queensland only, prior to the termination or end date of a term contract for the supply of electricity; or • A change of MC is proposed and the Current MC has been appointed in the Role of MC by a large End User.
NOTRANS	Used by the Current FRMP and only applies to retrospective change of *retailer* requests. A check of records shows no previous change of *retailer* request exists for the error correction change of *retailer*.
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 any of the ENM, FRMP, or the *Exempt Embedded Network Service Provider re* garding making one of their *NMIs* a Child NMI.
CRCODE	Can be used if the Change Reason Code being used does not apply to the *NMI* concerned.

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Table 4-E – NMI Classification Codes

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Code	Description [2]
EPROFILE	External *profile* shape
GENERATR	Generator
INTERCON	Interconnector
LARGE [1]	Victoria: >=160 MWh NSW: >=160 MWh ACT: >= 160 MWh QLD: >=100 MWh SA: >=160 MWh TAS: >=150MWh
SAMPLE	Sample Meter
SMALL[1]	Victoria: <160 MWh NSW: <160 MWh ACT: < 160 MWh QLD: < 100 MWh SA: <160 MWh TAS: <150 MWh
WHOLESAL	Wholesale Transmission Node Identifier

Table 4-F – Customer Classification Codes

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Code
BUSINESS
RESIDENTIAL

Table 4-G – Customer Threshold Codes

Customer Threshold Code	Description
LOW	Consumption is less than the ‘lower consumption threshold’ as defined in the National Energy Retail Regulations
MEDIUM	Consumption is equal to or greater than the ‘lower consumption threshold’, but less than the ‘upper consumption threshold’, as defined in the National Energy Retail Regulations
HIGH	Consumption is equal to or greater than the ‘upper consumption threshold’ as defined in the National Energy Retail Regulations

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Table 4-H – NMI Status Codes

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

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Table 4-I – Datastream Status Codes

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

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Table 4-J – Meter Register Status Codes

Code	Name of code	Description of code
C	Current	Applies when a *meter* at the *NMI* is current and not *remotely disconnected*.
R	Removed	Applies when a *meter* at the *NMI* is removed.
D	Remotely Disconnected	Applies when a *meter* at the *NMI* is *remotely disconnected*.

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Table 4-K – Register Identifier Status Codes

Code	Name	Description
C	Current	Applies when a Meter Register at the *NMI* is current, i.e. connected to a *connection point*.
R	Removed	Applies when a Meter Register at the *NMI* is removed, i.e. not connected to a *connection point*.

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Table 4-L – Metering Installation Type Codes

Code	Description	Manually Read Flag
BASIC	Basic Consumption Meter – Type 6	Y
COMMS1	Interval Meter with communications – Type 1	Y
COMMS2	Interval Meter with communications – Type 2	Y
COMMS3	Interval Meter with communications – Type 3	Y
COMMS4	Interval Meter with communications – Type 4 (Note: 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)	Y
COMMS4D	Whole current *metering installation* that meets the *minimum services specifications*	Y
COMMS4C	CT connected *metering installation* that meets the *minimum services specifications*	Y
MRAM	*small customer metering installation* – Type 4A	Y
VICAMI	a relevant *metering installation* as defined in clause 9.9C of the NER.	Y
MRIM	Manually Read Interval Meter – Type 5	Y
UMCP	Unmetered Supply – Type 7	N
PROF	For Profile Setup	N
SAMPLE	Sample Meter	Y

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Table 4-M – Read Type Codes

Code	Name of code
NS	Next Scheduled Read Date[(1)]
RR	Next Read Date
SP	Special Read
ER	Estimated Read
CR	Consumer Read
PR	Previous Read Date[(2)]
UM	Unmetered Connection Point
EI	Existing Remotely-Read Interval Meter

Description of code
Advice from New FRMP to MDP that the Proposed Change Date for the End User transfer is the Next Scheduled Read Date, which is, therefore, a date in the future. No other Meter Reading is required. An acceptable date is a window that is up to 3 *business days* before or 2 *business days* after the published Next Scheduled Read Date. 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 that 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* .
Advice from New FRMP to MDP that the Proposed Change Date for the End User transfer is to be the date the *meter* is next read, which is, therefore, a date in the future. This code should be used if it is intended that the transfer is to occur on the date that the *meter* is read next, whenever that date is (i.e. the Proposed Change Date has no relevance). Applies to types 4A, 5 and type 6 *metering installations* .
Advice from New FRMP to MDP that the Proposed Change Date for the End User transfer is a date that does not align with the scheduled reading cycle. The MDP/MPC is to arrange for the Special Meter Reading. Applies to type 4A, 5 and type 6 *metering installations* .
Available if approved by Jurisdictional policy. Advice from the New FRMP to MDP that the End User has agreed to transfer on an Estimated Reading. No Meter Reading is required for this transfer. MDP is to provide an Estimated Reading in accordance with the *metrology procedure* and any other Jurisdiction requirements. Applies to type 4A, 5 and type 6 *metering installations* .
Available if approved by Jurisdictional policy. Advice from New FRMP to MC or MDP that the End User has agreed to transfer on a Meter Reading it provides. MDP/MPC is not required to undertake a Special Meter Reading. Applies to type 6 *metering installations* .
Available if approved by Jurisdictional policy. Advice from the New FRMP to the MDP that the transfer is to occur on the previous Meter Reading. Applies to type 4A, 5 and type 6 *metering installations* .
Used when the *NMI* being transferred is an unmetered *connection point* .
Advice from the New FRMP to the MDP that there is an existing remotely-read Interval Meter at the *connection point* and that the existing *meters* will continue to be used after the transfer. Applies to type 1 to 4 *metering installations* only.

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Table 4-N – Valid Combinations of Read Type Codes, Metering Installation Type Codes and Change Reas

	CR Code		1000		1010, 102X, 1040		1030	
	Metering Installation Type Code		BASIC	MRIM / MRAM	BASIC	MRIM / MRAM	BASIC	MRIM / MRAM
Read Type Code	NS	Next Scheduled Read Date	Yes	Yes	No	No	No	No
	RR	Next Read Date	Yes	Yes	No	No	Yes	Yes
	SP	Special Read	Yes	Yes	No	No	Yes	Yes
	ER	Estimated Read	Yes	Yes	Yes	No	Yes	Yes
	CR	Consumer Read	Yes	No	No	No	No	No
	PR	Previous Read Date	No	No	Yes	Yes	No	No
	UM	Unmetered Connection Pt	No	No	No	No	No	No
	EI	Existing Interval Meter	No	No	No	No	No	No

Note: 1080 is the same as 1000, 1081 is the same as 1010, 1083 is the same as 1030, and 1084 is the same as 1040.

Note: 102X refers to 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028 and 1029.

Note: COMMSx refers to COMMS1, COMMS2, COMMS3, COMMS4, COMMS4C, COMMS4D.

on Codes

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All CR Codes	
COMMSx / VICAMI	**UMCP**
No	No
No	No
No	No
No	No
No	No
No	No
No	Yes
Yes	No

Table 4-O – Field Validation Data Source Codes

Code	Explanation
RI	Required to Initiate. This means it must be supplied by the initiator of the Change Request.
OI	Optional on Initiation. This means it is optionally supplied by the initiator of the Change Request.
RQ	Requested by CATS if the data is not already in CATS. For all RQ fields, the Participant that supplies the data must be identified. For all RQ fields, it is also necessary to identify whether this data is required prior to the transaction passing from Pending Validation to Requested.
RA	Requested by CATS regardless of whether it is already in CATS. For all RA fields, the Participant that supplies the data must be identified. For all RA fields, it is also necessary to identify whether this data is required prior to the transaction passing from Pending Validation to Requested. This code will be used for requesting the Actual Change Date on End User transfer Change Requests. (However, in this special case, the request will only be sent if the *metering installation* is flagged as manually read).
RD	This is only required for the Actual Change Date on the transaction that is returned as a consequence of a request to provide an Actual Change Date (currently 1500 is the only one).

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Table 4-P – CATS Configuration Tables Available for Download

Type	Description
Code	List of the available Change Reason Codes
Rule	Change Request Initiation Rules
Code	Change Request Status codes
Code	Data source code used for Field Validation Rules
Code	De-registration codes
Rule	Rule governing NMI Discovery Search
Rule	Rules defining if Site address is returned in NMI Discovery Search
Code	DLF Codes
Code	Parent Name codes
Code	Error codes used by MSATS
Code	List of Jurisdiction Codes
Rule	Jurisdiction rules governing Change Request Initiation
Code	Meter installation type codes
Code	NMI Classification Codes
Code	NMI Status Codes
Rule	Change Request Status Notification Rules that specify which notifications are generated by MSATS
Code	List of available Objection Codes
Rule	The rules governing the use of Objections
	List of Roles along with their assigned Participant IDs used by MSATS
Code	List of *Registered Participant* IDs
Code	List of allowable Read Type Codes
Code	List of available Roles
Code	*Transmission connection point* identifier codes
Rule	Transaction Field Validation Rules
Code	List of transaction types in MSATS
Code	Calender used by MSATS
Code	Network Tariff Codes

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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_JURISDICTION_CODES
CATS_JURISDICTIONAL_RULES
CATS_METER_INSTALL_TYPE_CODES
CATS_NMI_CLASS_CODES
CATS_NMI_STATUS_CODES
CATS_NOTIFICATION_RULES
CATS_OBJECTION_CODES
CATS_OBJECTION_RULES
CATS_PARTICIPANT_ROLES
CATS_PARTICIPANTS
CATS_READ_TYPE_CODES
CATS_ROLES
CATS_TNI_CODES
CATS_TRANS_FIELD_VALIDATION
CATS_TRANS_TYPE_CODES
MSATS_NATIONAL_CALENDAR
CATS_NETWORKTARIFF_CODES

Meeting Notes

Power of Choice – Industry Test Working Group

MEETING:	Power of Choice – Industry Test Work Group
DATE:	Wednesday, 5 April 2017
TIME:	10:30am – 2:30pm
LOCATION:	Melbourne, Sydney, Brisbane and teleconference
MEETING #:	3

ATTENDEES:

NAME	COMPANY
Tim Sheridan	AEMO (Chair)
Amale Yamak	AEMO
Matthew Stuchbury	AEMO
Samudra Arachchige	AEMO
Sumathi Chatna	AEMO
Noura Elhawary	AEMO
Jennifer Fikret	AEMO
Peter Almonte	ActewAGL Distribution
Tim Walker	ActewAGL Distribution
Alena Chia	Active Stream Pty Ltd
Daniel Paterson	Active Stream Pty Ltd
Jonathan Ganley	Agility
Andrew Peart	AGL Energy Limited
Sanhita Dutta	AGL Energy Limited
Sandra Jones	Alinta Energy Retail Sales
James Rowbottom	Aurora Energy
Paul Willacy	Aurora Energy
Jennifer Brown	Ausgrid
Peter Gilligan	Ausgrid
Anil Ramakrishnah	AusNet Services
Donna Kyle	AusNet Services
Shikha Gupta	Brave Energy Systems
Sarah Palmer	CovaU
Anna Russo	Endeavour Energy
Jackie Mayo	Energex Limited
Charles Coulson	Energy Australia
Steven Tadic	Energy Australia
Vishnu Vijayan	Energy Australia
Gurvir Singh	Energy Australian Energy Market Operator
Martin Andonovski	Ergon Energy
John Snow	Ergon Energy
Claire Tamplin	ERM Power Limited
Debbie Voltz	Essential Energy

Craig Taylor	Hansen Technologies
Ferouza Saran	Jemena Electricity Networks
Clinton Gadsden	Lumo Energy
Ray Lynch	Lumo Energy
Jaya Mukherjee	Lumo Energy
Josh Allen-Nelson	Metering Dynamics
Chantal Wright	Momentum Energy
Abhijit Gharde	Origin Energy
Ciro Barbieri	Origin Energy
Jason Groom	Origin Energy
Malcolm Hempel	Pacific Hydro
Gaz Dongol	People Energy
Raymond Huisman	Powercor
Brendan Jones	Powercor
Joseph Warda	Powermetric
Tammy Flannagan	SA Power Networks
Neville Lewis	Select Data and Measurement Solutions
Chris Reilly	Stanwell Corporation
Adrian Honey	Tas Networks
Brian Oliver	TasNetworks
Ben Davidson	United Energy Distribution
Tony Cartwright	United Energy Distribution
Paul Greenwood	Vector AMS

Meeting Notes **(red text highlights action items)**

1. Industry Test Strategy (version 0.2)

- Amale Yamak presented the second draft the second draft of the Industry Test Strategy.
- Questions and comments from the ITWG at the meeting included:
  - 2.3.5 Bilateral transactions – agreement needs to be made on file formats and if it would be beneficial to include them in the Test Strategy. Currently, this is not part of industry testing, however, participants can test with another counterpart participant outside of industry testing.
  - When will the SMP Tech Guide be released? The draft will be released on 17 April. The content being worked on by the SWG will include web services technical guide, however, API will be sourced and LVI.
  - R35 & R36 – transaction acknowledgement – What will this impact and clarity is sought on the operations of acknowledgement with participants. M. Stuchbury noted acknowledgements will not be changing within the schema.
  - Is Network billing in scope? This will need to be considered and was raised by AGL. The PCF have requested AEMO to list some items that are out of scope. The timeframe for answer/classification is unknown. AEMO to clarify if network billing is out of scope in the industry test strategy.

Assumptions

- Test registration form to be uploaded available separately on the ITWG webpage.
- AEMO noted that none of the test phases are mandatory. However, participants were strongly encouraged to participate in all phases of testing.
- Is there a contingency for testing to be conducted outside the allocated test execution timeframes? AEMO recommended participants include in the Readiness Report if they cannot participate in any testing cycles.
- How often will AEMO perform any data refreshes during these cycles? AEMO indicated it will endeavour to minimise the number of data refreshes, with one scheduled just prior to phase one and another prior to market trial around mid-August.
- Will data refreshes and alignments across industry be included in the strategy or plan? The last data refresh was 30 March and the next one can be discussed in working groups. AEMO to provide further details on the data refresh prior to the industry testing dates as they are required in the next few weeks to allow for planning and for participants to align internal to AEMO's refresh pre-production date.

Milestones

- Participants indicated that they want to see specific testing cycle dates and milestones in the industry test strategy. AEMO will update the Test Strategy will update the milestone dates and update the Test Plan, testing cycles dates.
- EN/MC test execution timeline need to be updated. Currently scheduled to commence from April to July. AEMO indicated it would update the EN/MC test execution timeline and milestones in the industry strategy to reflect the commencement of phase 1 in May.
- Some participants indicated they would like to see non-functional testing in scope exclusion. Should participants would be privy to AEMO's internal non-functional testing results? AEMO indicated that it won't be communicating its own internal non-function testing results and will ensure all internally testing internally is completed before the pre-prod environment goes live.
- AEMO to confirm when daily meetings will commence, including scope and approach for how these meeting will be run. Currently, it was agreed to have a morning and afternoon meetings just for the initial testing phase until the process is cemented.
- 6.4.3 Configuration Management – Industry Testing Manager will keep record of participant software build versions. The group agree this detail was not required and could be removed.
- Entry Exit criteria – end to end and UAT results will be reviewed internally. AEMO indicated it would add end-to-end and remove UAT.
- The forum was asked what if entry and or exit criteria is not met and will this stop testing? This will need to be on a case by case basis with guidance from the ITWG.
- Participant IDs will need to be assigned by AEMO before new participants can participate in testing. This includes e-hub accreditation before they go participants can commence SMP testing.
- Will there be communication when updates are made to the pre-production environment? AEMO informed the group there will always be notification and release notes. Defects will be discussed through the ITWG and planned steps to solve them. AEMO indicated it would include details on suspension and resumption of updates to the pre-prod environment.
- Risks and issues raised from testing and will be captured in the PCF Program Risks and Issues Register. Testing related risks and issues will be communicated by AEMO to ITWG participants.

2. EN/MC Test Plan (version 0.2)

- Sumathi Chatna presented the second draft of the EN/MC Industry Test Plan.
- Questions and comments from the ITWG at the meeting included:
  - AEMO to the align dates in the EN/MC test plan with the dates in the industry test strategy.
  - What's the timeline for new participants to register? Specifically new participants that need ID's to be established? AEMO indicated it would confirm these details in the plan.
  - To access MSATS is a user name and password required? AEMO noted these details would be provided during accreditation and pre-production assessment.
  - What impact will the B2B schema changes on R36 (arriving in June) have on EN/MC testing? AEMO indicated it does not anticipate any impact.
  - Industry Test Cycles – Do cycle 1, 2 and 3 have different functionality? No in terms of EN/MC requirements, code from AEMOs point of view would be there from day one.
  - Appendix A Registration Form. The group agree a separate registration form would be need to be raised for each phase of testing.
  - AEMO confirmed there be separate test plans for phase 2 (B2B industry test) and phase 3 (market trial)?
  - A final date for submitting registration for EN and MC was requested – extended through to 20th April. If the registration is not submitted, participants may not be eligible to participate in phase 1 testing. There may be a risk that participants may not have someone to test with. AEMO will be scheduling test cycles in advance. AEMO needs to be advised who will be registering in order to organise the testing calendar (schedule). It is important to keep communication lines open between AEMO and participants.
  - Entry criteria – copy of production data at a certain point in time will be communicated to all participants.

3. EN/MC Test Workbook (version 0.2)

- Sumathi Chatna and Samudra Arachchige presented the second draft of the EN/MC Test Workbook.
- Questions and comments from the ITWG at the meeting included:
  - What are the new roles in first tab of the work book for EN MC? Is an EN Manager a role? Yes it is. RP in MSATS will always be Metering Co-ordinator. LNSP is the EN Manager.
  - The group discussed the best way to review the workbook. It was suggested to have an end to end scenario, which will give the vanilla flavour, and from there have different scenarios. Following this, there is a need to break down roles and it can be difficult to do this in a group this size. Option 1 would be to do it as a smaller focus group, line by line then return to the ITWG group with changes or option 2 would be a larger existing ITWG and go through them as a larger group with consensus.
  - AEMO indicated it would re-send version 0.2 of the workbook.
  - Scenario Options tab - AEMO to add dependencies into version 0.3 of the workbook including any updates from the industry feedback.
  - Feedback - if there are high or low priority test case scenarios they need to send through the POC email mail box address. There is a fair bit of co-ordination required for test case/scenarios from the industry participant's to go through and assist in the creation of the test steps. AEMO will upload into HP QC and created a folder structure.

3. Next Meetings (details to be confirmed)

- POC-ITWG: 28 April 2017(via teleconference and webinar)
- POC-ITWG: 12 May 2017 (in person at AEMO's Melbourne offices)

4. Actions Summary

- Post meeting actions for the POC-RWG are summarised below.

Item	Topic	Action required	Responsible	By
1	Draft documentation	Resend latest drafts of the industry test strategy, EN/MC industry test plan and workbook to the ITWG for review	AEMO	4-Apr-17
2	Industry Test Strategy	Send feedback to AEMO via POC inbox	ITWG	12-Apr-17
3	Industry Test Strategy	Confirm if network billing is out of scope	AEMO	21-Apr-17
4	Industry Test Strategy	Upload test registration form on the ITWG webpage.	AEMO	21-Apr-17
5	Industry Test Strategy	Specify dates for pre-production data refreshes	AEMO	21-Apr-17
6	Industry Test Strategy	Confirm when daily ITWG meetings will commence and how meetings will be run	AEMO	21-Apr-17
7	EN/MC Test Plan	Ensure start and end dates for EN/MC test cycles align with the industry test strategy	AEMO	21-Apr-17
8	EN/MC Test Plan	Confirm date for participants to register for EN/MC testing	AEMO	21-Apr-17
9	EN/MC Test Plan	Send feedback to AEMO via POC inbox	ITWG	12-Apr-17
10	EN/MC Test Workbook	Send feedback to AEMO via POC inbox	ITWG	12-Apr-17

POWER OF CHOICE IMPLEMENTATION PROGRAM

INDUSTRY TEST STRATEGY (VERSION 1.0)

Published: **May 2017**

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

VERSION RELEASE HISTORY

Version	Date	Summary of Changes
0.1	06/02/2017	First draft issued for discussion with the Power of Choice – Industry Test Working Group (POC-ITWG)
0.2	24/03/2017	Second draft issued, incorporating POC-ITWG feedback received on Version 0.1
1.0	10/05/2017	Industry Test Strategy finalised as Version 1.0, incorporating POC-ITWG feedback received on Version 0.2

EXECUTIVE SUMMARY

The Australian Energy Market Operator (AEMO) and industry participants are currently implementing a major electricity retail market reform package, commonly referred to as the Power of Choice (POC) reforms.

The POC reforms originate from the Australian Energy Market Commission's (AEMC) POC Review. Following publication of the Review's final report in November 2012, several related energy market rule changes, reviews and expert advice have been completed or are under development. The rule changes, which "go-live" on 1 December 2017, have amended and/or imposed new regulatory obligations on certain National Electricity Market (NEM) stakeholders.

For AEMO and NEM participants, this has prompted a major implementation work program to amend and/or create NEM procedures, business systems and supporting processes in preparation for the "go-live" date for the revised market arrangements. AEMO is playing a key coordination role in this work, in collaboration with its industry working groups, to prepare industry and itself for the "go-live" date.

AEMO's POC Implementation Program covers procedural, technical and readiness work streams. The readiness work stream is responsible for developing AEMO's Market Readiness Strategy, where "market readiness" refers to the successful implementation of all necessary activities by AEMO and NEM participants required for a seamless transition to new rule and procedural arrangements.

As referenced in the Market Readiness Strategy, a key component of market readiness is the industry testing phase – the period where AEMO and NEM participants test their market interfacing business systems against the updated procedures.

The purpose of the Industry Test Strategy is to define the scope, approach, process, responsibilities and high-level schedule of the industry testing phase.

This paper sets out AEMO's final Industry Test Strategy incorporating feedback received from industry stakeholders.

This paper is structured as follows:

- Chapter 1 introduces the purpose, scope, and approach to the development, of the Industry Test Strategy.
- Chapter 2 details the key dates and milestones of the industry testing planning and execution phases.
- Chapter 3 details the scope and objective of industry testing.
- Chapter 4 details the high-level test management approach.
- Chapter 5 details the industry testing preparation activities and approach.
- Chapter 6 details the entry and exit criteria and test execution approach.
- Chapter 7 details the defect management approach.

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1. INTRODUCTION

This chapter provides background information on AEMO's POC Implementation Program, and sets out the purpose, scope and approach to the development of the Industry Test Strategy.

1.1 AEMO's POC Implementation Program

The objective of AEMO's POC Implementation Program is to design and implement required changes to electricity metering, retail market arrangements and infrastructure to give effect to rule changes arising from the POC Review.[1]

To facilitate implementation of the Program, AEMO has established three work streams:

- Procedure Development – to define the required changes to electricity retail market procedures.
- Technical Development – to design, develop, implement and test changes to AEMO's retail market systems.
- Market Readiness – to coordinate, assist and prepare NEM participants and AEMO for the start of the revised market arrangements, and to monitor and report on the preparation efforts.

This paper only considers matters that relate to **Industry Testing** under the Market Readiness work stream. Further information on the Program, including past industry meeting papers, is available on the POC section of AEMO's website.[2]

1.2 Definition of industry testing

Throughout this document, "industry testing" refers to the testing of NEM participant's market interfacing systems with AEMO's market systems, in order to test updates made to these systems to comply with the new procedural arrangements effective from 1 December 2017 (that is, the scheduled "go-live" date for the POC reforms). In this document "industry testing" is used as an umbrella term to describe testing between NEM participants and AEMO and includes periods of:

- Industry Test – self-testing of functionality (e.g. connectivity) and/or coordinated multi-party testing of functional based scenarios (e.g. testing a single change request (CR)).
- Market Trial – coordinated multi-party end-to-end testing of business process scenarios (e.g. a new connection involving both CRs and services orders)

1.3 Purpose and scope of the Industry Test Strategy

A key document under AEMO's Market Readiness Strategy is this Industry Test Strategy. This section sets out the purpose and scope of this Strategy.

1.3.1 Purpose of the Industry Test Strategy

The purpose of the Industry Test Strategy is to set out a plan for managing, coordinating, monitoring and reporting on AEMO's and NEM participants' industry testing activities and results.

Industry Test Strategy and associated Test Plans

This Industry Test Strategy is a high-level document that details the testing approach that applies to the entire POC industry testing phase. This Strategy will be supported to by individual Test Plans containing details specific to each of the three phase of industry testing:

- Phase 1: Industry Test (EN/MC) – B2M
- Phase 2: Industry Test (B2B)

[1] See AEMC website, http://www.aemc.gov.au/Major-Pages/Power-of-choice.
[2] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice.

- Phase 3: Market Trial – B2M and B2B

The Test Plans may also consist of a number of supporting materials, including detailed workbooks, calendars, checklists and templates.

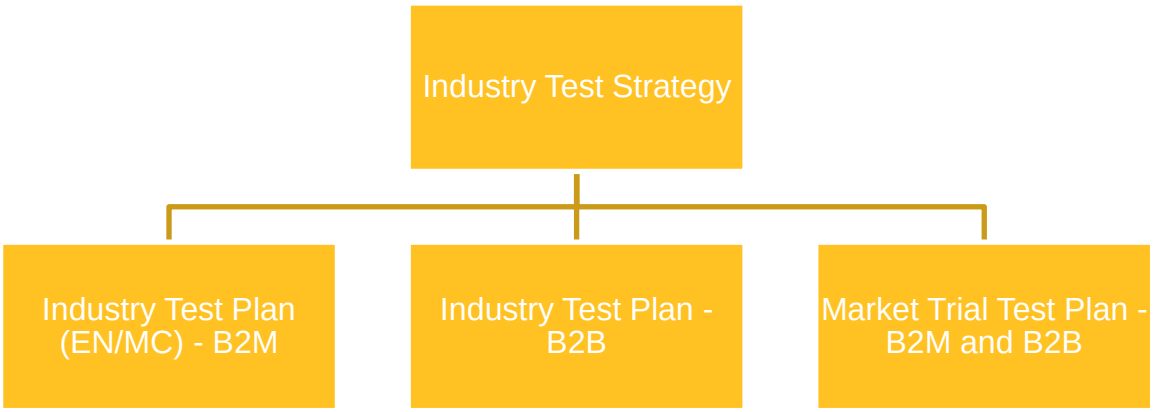


Figure 1– Industry Test Strategy and associated Test Plans

1.3.2 Scope of the Industry Test Strategy

The POC related rule changes are relevant to this Industry Test Strategy and are listed below:[3]

- Expanding Competition in Metering and Related Services (MC) rule change.[4]
- Meter Replacement Processes (MRP) rule change.[5,6]
- Embedded Networks (EN) rule change.[7]
- Electricity B2B Framework (B2B) rule change.[8]

1.4 Approach to development of the Industry Test Strategy

1.4.1 Utilise the POC Industry Test Working Group

AEMO will collaborate with NEM participants on the development of the Industry Testing Strategy and associated Test Plans via the POC Industry Testing Working Group (POC-ITWG).[9]

In order to develop the Industry Test Strategy and associated Test Plans in a timely manner, AEMO and NEM participants must take all reasonable steps to provide continuity of representation at POC-ITWG meetings, ideally with:

- A detailed understanding of the retail electricity market and POC program.
- Experience in developing test strategies and test plans, and managing and coordinating testing programs.
- Authorisation to consider matters, and provide views and commitments, on behalf of their organisation.

[3] See AEMC website, Power of Choice overview page, http://www.aemc.gov.au/Major-Pages/Power-of-choice.
[4] Rule made; AEMC final rule determination published 26 November 2015.
[5] Rule made; AEMC final rule determination published 10 March 2016.
[6] Note that there are no system changes associated with the MRP rule change.
[7] Rule made; AEMC final rule determination published 17 December 2015.
[8] Rule made; AEMC final rule determination published 30 June 2016.
[9] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream/Industry-Test-Work-Group

Each participant is expected to provide an industry test lead (and a delegate if required) to be part of the ITWG for the duration of industry testing preparation and execution activity. It is expected that these resources will be adequately skilled to meet the needs of the preparation and execution activities. AEMO will facilitate and chair the ITWG forums.

As per its term of reference, POC-ITWG working group members will be responsible for:

- Development of the Industry Test Strategy and Plans.
- Internal communication of the Industry Test Strategy and Plans within their represented organisation.
- Coordination of their internal testing teams to align with the activities in this Strategy and the associated Test Plans, including test planning, preparatory activities (preparing test scenarios and scripts, test calendars), actual test execution, defect management and progress reporting.

1.4.2 Updates to the Industry Test Strategy

The key milestones table (Section 2) lists the scheduled review points for the Industry Test Strategy.

1.5 About this paper

1.5.1 Structure of this paper

This paper is structured as follows:

- Chapter 2 details the key dates and milestone for the industry testing planning and execution phases.
- Chapter 3 details the objective and the high-level scope of each of the three phases of industry testing.
- Chapter 4 details the high-level test management approach, including roles and responsibilities, testing management tools, reporting, and risk and issues management.
- Chapter 5 details the high-level test planning phase.
- Chapter 6 details the entry and exit criteria and text execution approach.
- Chapter 7 details the defect management approach.

1.5.2 Reference documents

The following POC-related documents are relevant to the Industry Test Strategy and are available on the AEMO website under Power of Choice.

#	Document Name
1	POC Market Readiness Strategy[10]
2	AEMO Procedures, as approved by AEMO under the following NER Consultations: • POC Procedure Changes (Package 1)[11] • POC Procedure Changes (Package 2)[12]
3	B2B Procedures, as approved by the IEC under the following NER Consultation: • POC - B2B Procedure Changes[13]
4	MSATS 46.88 Technical Specification and MSATS 46.89 Technical Specification[14]

[10] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream.
[11] See AEMO website, http://aemo.com.au/Stakeholder-Consultation/Consultations/Power-of-Choice---AEMO-Procedure-Changes-Package-1
[12] See AEMO website, http://aemo.com.au/Stakeholder-Consultation/Consultations/Power-of-Choice---AEMO-Procedure-Changes-Package-2
[13] See AEMO website, http://aemo.com.au/Stakeholder-Consultation/Consultations/Power-of-choice---B2B-Procedures---Final-Report-and-Determination
[14] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/IT-systems-and-change/IT-change

#	Document Name
5	SMP Technical Guide Document[15]
6	POC Risk and Issue Management Plan[16]
7	POC Industry Registration & Accreditation Plan[17]

1.5.3 Audience

This Industry Test Strategy is intended for the following audiences:

- All NEM participants impacted by the POC reforms, such as, retailers, distributors, metering service providers and embedded network managers.
- Test Manager, Test Leads, Test Analysts (system integration, UAT, Industry and Market Trials) and Project Managers.
- Developers, Business and Functional SMEs.

Secondary audience includes the following groups:

- Development Managers
- IT Operations Team
- Change Controllers
- Operations Team

1.5.4 Acronyms

Acronym	Description
AEMO	Australian Energy Market Operator
B2B	Business to Business
B2M	Business to Market
CATS	Consumer Administration and Transfer Solution
ENM	Embedded Network Manager
ENSP	Embedded Network Service Provider
M2B	Market to Business
MC	Metering Competition
MRP	Meter Replacement Processes
MSATS	Market Settlements and Transfer Solution
PCF	Program Consultative Forum
SMP	Shared Market Protocol
RWG	Readiness Working Group
ITWG	Industry Testing Working Group
NF	Non – Functional

[15] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Systems-Work-Stream
[16] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Program-Management
[17] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream

2. KEY DATES AND MILESTONES

AEMO's Market Readiness Strategy details the key milestones for the POC Implementation Program and the Market Readiness workstream.

Key milestones for the development of the Industry Test Strategy are presented in Table 1 and the industry testing timeline is shown in Figure 2.

Table 1 – Key milestones

#	Milestone	Indicative date/s	Participant
1	AEMO circulates: - Industry Test Strategy – first draft - Phase 1: Industry Test Plan (EN/MC) – first draft	6 February 2017	AEMO
2	POC-ITWG meeting –review first drafts: - Industry Test Strategy - Phase 1: Industry Test Plan (EN/MC)	13 February 2017	All
3	Participant feedback due on first draft - Industry Test Strategy - Phase 1: Industry Test Plan (EN/MC)	20 February 2017	All
4	POC ITWG meeting – discuss feedback and next steps for: - Industry Test Strategy - Phase 1: Industry Test Plan (EN/MC) – planning and registration	7 March 2017	All
5	MSAT pre-production release of B2M schema r35 and associated EN/MC changes	22 March 2017	AEMO
6	POC-ITWG meeting – review second drafts: - Industry Test Strategy - Phase 1: Industry Test Plan (EN/MC)	5 April 2017	AEMO
7	AEMO outage for data refresh (production data from 30 March 2017 at 15:00 hrs AEST)	6 April - 10 April 2017	AEMO
8	AEMO circulates final drafts (with participant feedback incorporated): - Industry Test Strategy - Phase 1: Industry Test Plan (EN/MC)	12 May 2017	AEMO
9	POC-ITWG meeting: - Review first draft Phase 2: Industry Test Plan (B2B) - Commence planning for Phase 3: Market Trial	12 May 2017	All
10	Phase 1: Industry Testing (EN/MC) – execution	23 May 2017 – 30 June 2017	All

#	Milestone	Indicative date/s	Participant
11	Phase 2: Industry Test Plan (B2B) finalised	5 June 2017	AEMO
12	Phase 3: Market Trial Test Plan finalised	30 June 2017	AEMO
13	Phase 2: Staged release of schema R36 into the pre-production environment	From June 2017	AEMO
14	Phase 2: B2B Test execution commencement	June 2017 -– July 2017	All
15	Phase 3: Market Trial Test Workbook finalised	End of July	All
16	AEMO outage for data refresh (proposed date of production data from 3 August at 15:00 hrs AEST[18])	7 August - 14 August 2017	AEMO
17	**Phase 3: Market Trial Full pre-production release**	**21 August 2017**	**AEMO**
18	Phase 3: Market Trial execution	21 August 2017 – 3 November 2017	All
19	Final Market Trial Test Completion Report	Mid-November 2017	AEMO
20	"Go-live" date for POC reforms	1 December 2017	All

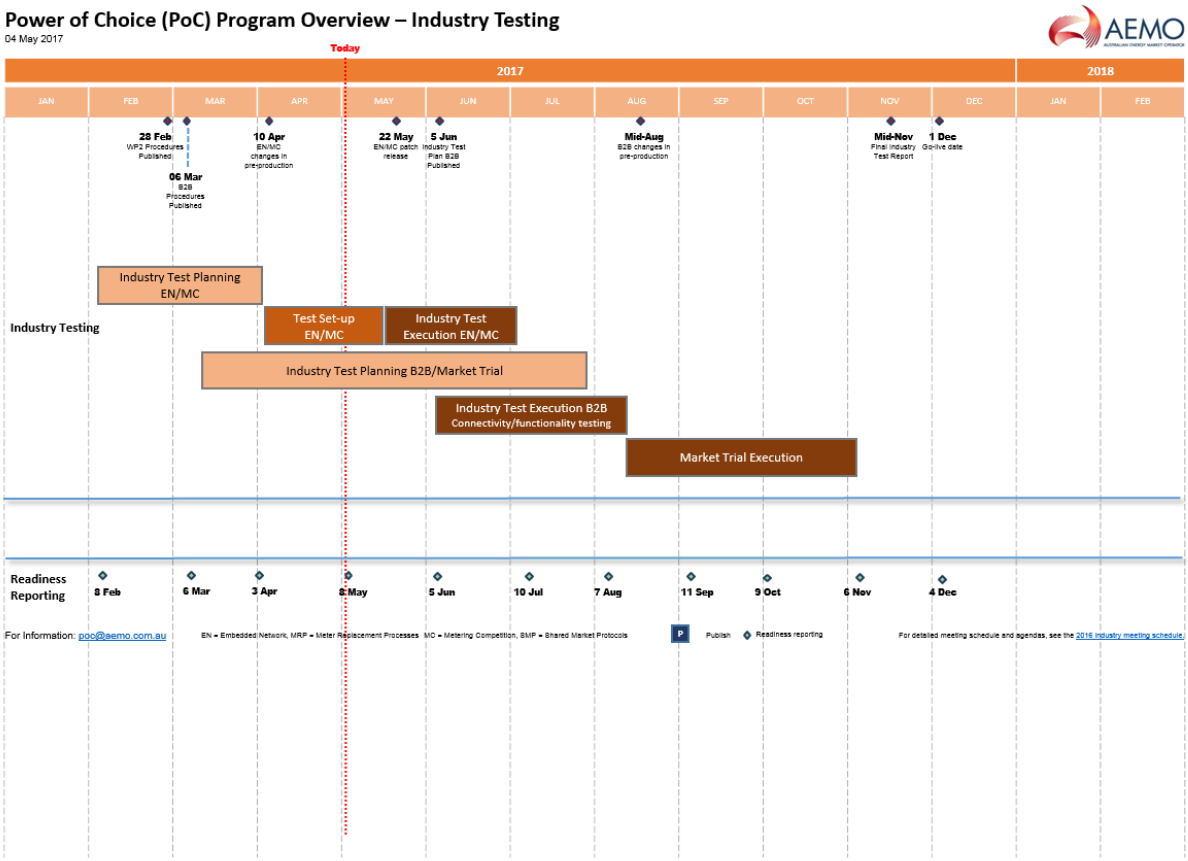


Figure 2– Industry Testing Timeline

[18] Date of production data will be confirmed in the Market Trial Test Plan

3. SCOPE AND OBJECTIVES OF INDUSTRY TESTING

3.1 Industry testing objectives

The overall objective of industry testing is to confirm industry's operational preparedness for the "go-live" date by providing market participants the opportunity and tools to test their updated systems and processes against the updated electricity retail market procedures.

3.2 Industry testing key principles

Industry testing of multiple-party interactions requires cooperation between participants to be successful. The following key principles should guide all parties involved in industry testing:

1. Adherence to the Industry Test Strategy and associated Tests Plans: all parties participating in industry testing must use their best endeavours to adhere to the Industry Test Strategy and Plans – including meeting key dates, fulfilling entry criteria checklist, adhering to defect management guidelines and reporting guidelines.
2. Appropriately skilled resource capability: all parties participating in industry testing must be appropriately resourced for the test planning and test execution effort.
3. Scope limited to critical business processes: any coordinated testing that requires interactions between multiple parties will be limited to critical business processes, unless otherwise agreed by the impacted parties.
4. Focus on the overall objective (reliability, safety and security of supply to end-use customers): all parties participating in industry testing should be committed to cooperating with each other and be prepared to be responsive and flexible when responding to events.

3.3 Industry testing scope

Industry testing will consist of system integration testing between NEM participants, to test their system changes as required under the MC, MRP, EN and B2B rule changes. The Test Plans for each of the three phases of industry testing will detail the scope inclusions and exclusions for that phase.

3.3.1 Scope inclusions

Industry testing scope inclusions:

- Industry capability based technical, functional and business operational testing as follows:
  - Industry technical verification and validation:
    - Determines the technical state of the solution e.g. schema validations, connectivity and provided interfaces.
  - Industry functional verification and validation:
    - Determines the state of solution as matched against required business functionality and business processes. The solution may not mirror production from a complete "go-live" perspective e.g. performed on low volumes of data and accelerated timeframes.
  - Industry operational capability verification and validation:
    - Determines the state of the solution from a "go-live: perspective and verifies technical, functional and operational compliance to obligations. Mirrors as close as possible the "go-live" state of the solution from the perspective of data, timing etc. Covers key business processes including but not limited to transfers and service orders.

3.3.2 Scope exclusions

Industry testing scope exclusions:

- Changes to NEM participants' supporting business systems that do not directly interact with AEMO's market systems (i.e. back-end systems).
- Any bilateral testing between participants. Participants can coordinate bilateral testing between themselves in parallel with industry testing, however reporting during industry testing will not refer to bilateral testing.
- Downstream business procedures for each industry participant.
- Industry transition and cutover process.
- Testing of agreed non-critical business processes (unless otherwise agreed by the impacted participants).
- Accreditation and Registration.

Each NEM participant is responsible for their own preparedness in respect of the above matters and should account for such items within their respective organisational testing programs.

3.4 Industry testing phases

The high-level objective and timeframes of each of the three industry testing phases are detailed below. Refer to the individual Test Plans for more details.

3.4.1 Phase 1: Industry Test (EN/MC) – B2M

Phase 1 of the industry testing will be focused on any Business to Market (B2M) system changes due to the EN and MC rule changes to the following:

- MSATS procedures:
  - Consumer Administration and Transfer Solution (CATS)
  - Wholesale, Interconnector, Generator and Sample (WIGS)
- National Metering Identifier (NMI) standing data schedule

This phase will be detailed in the Industry Test Plan (EN/MC). Participation in the Industry Test (EN/MC) is voluntary.

Objective

Providing market participants, who are ready to participate in early testing, the opportunity and tools to verify:

- Technical compliance against the updated electricity retail market procedures from package 1 and package 2 procedure changes.
- Technical compliance against the related aseXML schema (B2M R35) changes.[19]

Providing an opportunity to reduce the identified risk associated with the compressed industry test timeframe:[20]

- Identifying and fixing defects in AEMO's and participating parties' systems.
- Setting up and trialling structures and processes that can be expanded and used during the full Phase 3: Market Trial.

Participants who do not take part in the Phase 1: Industry Test (EN/MC) will have an opportunity to undertake the B2M test scenarios during Phase 3: Market Trial.

[19] Sample aseXML documents also available, see http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/IT-systems-and-change/aseXML_standards/aseMXL-Document-Samples

[20] See the POC Industry Risk and Issue log – risk R11, see http://www.aemo.com.au/-/media/Files/Electricity/NEM/Power-of-Choice/PM/PoC-Industry-Register.xlsx

Timeframe

Test execution for this phase will commence from 23 May 2017 and will complete on 30 June 2017. Participants who are ready prior to May can perform their own tests (e.g. transactional testing, aseXML schema validation) in the same pre-production environment (available from 10 April).

3.4.2 Phase 2: Industry Testing (B2B)

Phase 2 of the industry testing will be focused on B2B R36 schema validation and connectivity testing to the new web service API. This phase will be detailed in the Industry Test Plan (B2B). Participation in the Industry Test (B2B) is voluntary.

Objective

Providing market participants, who are ready to participate in early testing, the opportunity and tools to verify:

- Technical compliance against the related aseXML new B2B schema R36.
- Connectivity testing to MSATS Pre-Prod and e-hub and verifying APIs.

Providing an opportunity to reduce the identified risk associated with the compressed Market Trial timeframe by:

- Identifying and fixing defects in AEMO's and participating parties' systems.
- Confirming connectivity.

Timeframe

Test window for this phase will commence from early June 2017, and will complete at the end of July 2017.

3.4.3 Phase 3: Market Trial (B2B and B2M)

Phase 3 will include testing for all POC-related rule and procedure changes. This phase will be detailed in the Market Trial Test Plan.

Objective

Providing market participants the opportunity and tools to verify:

- Technical, functional and operational verification and validation against all B2B and B2M system changes under all POC-related rule and procedure changes, including system changes due to changes to the following procedures:
  - Customer and Site Details Notification Process
  - Meter Data Process
  - Service Order Process
  - One Way Notification Process
  - Consumer Administration and Transfer Solution (CATS)
  - Wholesale, Interconnector, Generator and Sample (WIGS)
  - National Metering Identifier (NMI) standing data schedule

Provide a demonstration of the industry's operational readiness for go-live operation by:

- Participants conducting end-to-end business processes against multiple participants

Timeframe

Phase 3: Market Trial will commence from mid-August when all system changes will be available in the pre-production environment (including the production data cut and refresh). This phase of testing is proposed to include three cycles, with indicative dates as follows:

- Cycle 1: 21 August to 8 September
- Cycle 2: 18 September to 6 October
- Cycle 3: 16 October to 3 November

3.5 Assumptions

1. AEMO will provide and maintain the single Pre-Production environment which will be used for all industry testing phases (including the Market Trial).
2. Package 1, Package 2 and B2B Procedures are documented and approved prior to the commencement of industry testing.
3. AEMO will back-up production data and upload into the pre-production environment prior to the initial phase of industry testing and again prior to the commencement of the Market Trial. AEMO will communicate the details and dates of this activity to all participants.
4. AEMO will upload the test case from the workbook in HP SaaS QC, and provide support of the HP SaaS QC during the industry testing.
5. AEMO will perform all internal functional and non-functional testing prior to release of any changes in pre-production for phase 1, and in parallel to the Market Trial.
6. Participants will register their interest with AEMO for the industry testing phases prior to their commencement, as detailed in the respective Test Plans.
7. Participants will perform internal testing prior to connecting to the AEMO pre-production environment.
8. Participants will have appropriately skilled resource capability for execution and support requirements during industry testing.
9. Participants will ensure that the appropriate pre-production environment is in place to support industry testing requirements.
10. Participants will ensure that defined test data is available within their test environments for industry testing and that this data is appropriately baselined and backed up.
11. All participants will use HP SaaS QC to document requirements and create and execute test cases, defect management and dashboard reporting.
12. Results from industry testing will be used by participants as one factor in their assessment of market readiness criteria.
13. Any testing activities required during transition will be detailed in the POC Industry Transition and Cutover Plan.

4. INDUSTRY TESTING MANAGEMENT

4.1 Roles and responsibilities

This section details the roles and responsibilities of the POC working groups involved in AEMO's POC Implementation Program throughout the industry testing planning and execution phases.[21]

4.1.1 POC-ITWG

AEMO and Participant Test leads on the POC-ITWG will be responsible for:

- Developing all test preparation materials, including test scenarios, test scripts and data sets, and populating HP SaaS QC with test steps, as required.
- Submitting test registration requests, entry and exit criteria checklists, software or connectivity requests to AEMO, when requested.
- Managing the testing process as prescribed in this Industry Testing Strategy and the supporting Test Plans, including:
  - Undertaking test execution as scheduled.
  - Updating HP SaaS QC with test progress and results.
  - Communicating with testing counterparties as required.
  - Attending scheduled stand-up and ad-hoc meetings.
  - Adhering to the defect management process including the retesting of fixed defects.

The POC-ITWG facilitator and chair (AEMO's test lead), in addition to the above responsibilities, will be responsible for ensuring the following activities:

- Coordinating the test preparation activities.
- Requesting and collecting test registration requests, entry criteria checklists, and software and connectivity requests, and coordinating the issuing of any required licences for the testing tool or connectivity credentials.
- Coordinating test counterparties (e.g. arranging pairings or grouping for test scenarios).
- Coordinating the test execution process as prescribed in this Industry Testing Strategy and the Industry Test Plans including:
  - Scheduling and chairing regular stand-up and ad-hoc meetings.
  - Communicating test readiness (i.e. giving individual participants, participant pairings or participants groups, the go-ahead to begin test activities).
- Communicating status reports and updates to the ITWG, RWG and other POC forums.
- Escalating participant issues to their RWG representative, i.e. Participant non-responsiveness in test execution (running behind test schedule, not updating HP SaaS QC or following the defect management process).
- Referring defects that cannot be resolved by the individual participant, or at the ITWG, level to the relevant Procedures working group or the POC-PCF for resolution.

4.1.2 POC Readiness Working Group (POC-RWG)

The POC-ITWG is a sub-group of the POC-RWG, and the POC-RWG will receive regular status reports on the testing progress.

[21] Refer to the POC Market Readiness Strategy for more information on AEMO's POC Implementation Program, see AEMO's website: http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream

4.1.3 POC Program Consultative Forum (POC-PCF)

The POC-PCF will receive regular status reports on the testing progress. The POC-ITWG will refer any participant issues or defects that cannot be resolved at the POC-PWG or B2B WG RWG level to the POC-PCF.

4.1.4 Procedures Working Groups (POC-PWG and B2B WG)

The ITWG will refer defects to the POC-PWG or B2B WG if industry testing uncovers:

- A showstopper defect in the procedures themselves (e.g. something that cannot technically work as prescribed).
- An area in the procedures which is open to interpretation, and guidance is required from the procedures working group as the correct interpretation. If possible, the ITWG will first agree on a proposed interpretation for the procedures working groups' endorsement.

It is the procedure working groups' responsibility to convene as soon as possible to address the issue and report back to the ITWG chair. If the POC-PWG or B2B WG cannot come to an agreement then the issue will be referred to the POC-PCF.

4.2 Test management tool

HP SaaS QC (QC) will be used to manage the industry testing, including test scenarios, test script development, test lab execution, test results, the tracking of test defects during all cycles and dashboard reporting.

HP SaaS QC will be configured by AEMO with all required information, and will be monitored and supported by AEMO. AEMO will provide one free dedicated licence to each organisation. If any organisation requires additional licences AEMO will purchase on the organisations' behalf at a cost charged back to the organisation.

This tool is available over the internet using the link:

- https://almgsuqcmt122.saas.hp.com/qcbin/start_a.jsp

4.3 Participant test registration

Each participant will need to register their intention to undertake industry testing with AEMO prior to the commencement of industry testing. Test registration is required so that multi-party test scenarios can be planned and scheduled from an end to end perspective.

AEMO will prompt for test registration requests and may request participants to complete templates or checklists as part of the registration activities. Registration requirements and templates will be included in the Test Plans.

All registration requests and queries for industry testing should be sent through using the POC inbox: POC@aemo.com.au.

4.3.1 Participant ID and roles

The term 'Participant' is used to indicate a unique role that a given business is to adopt for the purpose of testing. For example, where a participating business fulfils the role of LNSP and MDP, these roles are classed as different Participants for testing purposes.

- If an organisation has more than one role (i.e. is more than one 'Participant', then it may need to separately carry out testing for each role (as each role has different transactions).
- If an organisation has more than one participant ID but they are all for the same role, then as long as the participant is using the same set of systems for each ID, the participant would only need to perform testing once for those IDs.

- Participants will detail which participant roles and ID they will be testing under as part of their Test Registration.

Please note that participants must have an **existing participant ID** for each participant role they wish to test under in industry testing. Intending participants, including organisations undertaking new participant roles, need to follow the process to become registered or accredited in order to be issued a participant ID prior to taking part in industry testing. [22]

4.4 Communication and status reporting

The progress of industry testing will be monitored and reported on as follows:

- On a continuous basis: Test Participants and AEMO via HP SaaS QC.
- On a regular basis: Daily or more frequent, status reports generated by AEMO using HP SaaS QC (frequency and content defined in the Test Plans)
- Milestone reports: Test Completion reports, at the end of each testing phase, prepared by AEMO using HP SaaS QC and input by participants (content defined in the Test Plans).

In addition, testing progress will be reported on in the POC Industry Monthly Readiness Reports and at the POC-related forums.

4.5 Risk and Issues Register

AEMO has established a POC Risk and Issue management process and maintains a POC Risk and Issue Log, which can be found here:

http://www.aemo.com.au/-/media/Files/Electricity/NEM/Power-of-Choice/PM/PoC-Industry-Register.xlsx

All industry testing related risks and issues should be raised using the process detailed in the POC Risk and Issue Management Plan.[23] This Plan also details the process for tracking and addressing risks and issues.

[22] Refer to the POC Industry Accreditation & Registration Plan, see http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream

[23] See AEMO website, http://www.aemo.com.au/-/media/Files/Electricity/NEM/Power-of-Choice/B2B/PoC-Industry-Management-Plan---Risk-and-Issues.pdf

5. INDUSTRY TEST PREPARATION

Each participant will provide industry test resources to be part of the ITWG for the duration of industry testing preparation activity. It is expected that those resources will be adequately skilled to meet the needs of the preparation activity. The ITWG will meet as required to drive the planning and preparation process, as per the ITWG Terms of Reference.

5.1 Test Plans

As part of the preparation for industry testing, a series of workshops will be held by the ITWG to develop the Test Plans for the different phases of testing.

The Test Plans will include:

- Test phase objectives
- Detailed scope of testing
- Pre-requisite activities
- Entry and exit criteria
- Test cycle approach and dates
- Data management
- Defect management
- Test reporting requirements

5.1.1 Test Workbooks

The Test Plans for Phase 1: Industry Test (EN/MC) and Phase 3: Market Trial will include Test Workbooks. These workbooks will document the test scenarios, data requirements, registered test participants and test calendar. The test calendar will include the test participant matrix, detailing who each participant will test with and when.

The ITWG will develop the Test Workbooks, and associated scenarios, scripts and calendar, by:

- Defining the test scenarios required for industry testing, including identifying:
  - Scenario priority
  - Testing counterparties
- Defining and preparing the subsequent test scripts that will need to be executed.
- Defining the approach and timing of test script execution.

5.2 Test data

5.2.1 Data requirements

Data requirements will be developed during the test planning stage, and the approach to data management will be detailed in the respective Test Plans.

At a high-level:

- Data requirements will be will be identified for each test scenario as part of the test scenario development. These data requirements will be detailed in the Test Workbook
- Participants will be responsible for identifying data from their systems that fulfils those data requirements. It is suggested that participants select a range of NMIs for each test case.
- Participants will then align their scenario data with their testing counterparties.

Multiple test data sets should be identified for each test script to allow for multiple executions of that test script in case of defects or problems in execution. Data identified will be mapped against every scenario in the data column in HP SaaS QC.

Participants are responsible for ensuring that any required data is available within their test environments for industry test execution.

5.2.2 Data refresh

AEMO will undertake a data refresh prior to Phase 1 Industry Testing (EN/MC) and prior to Phase 3: Market Trial. The details of these will be included in the respective Test Plans. Participants are encouraged to align their pre-production data if possible, as this will make aligning data between participants easier.

5.3 Test environment

AEMO will prepare and maintain the single pre-production environment prior to the commencement of industry testing and throughout the test execution phases for the duration of industry testing. All participants with valid participants IDs will have access to the pre-production environment for industry testing. AEMO will back-up and refresh the data and support the pre-production environment.

All participant test environments will be maintained and managed by the respective participants.

Figure 3 shows the industry testing environment.

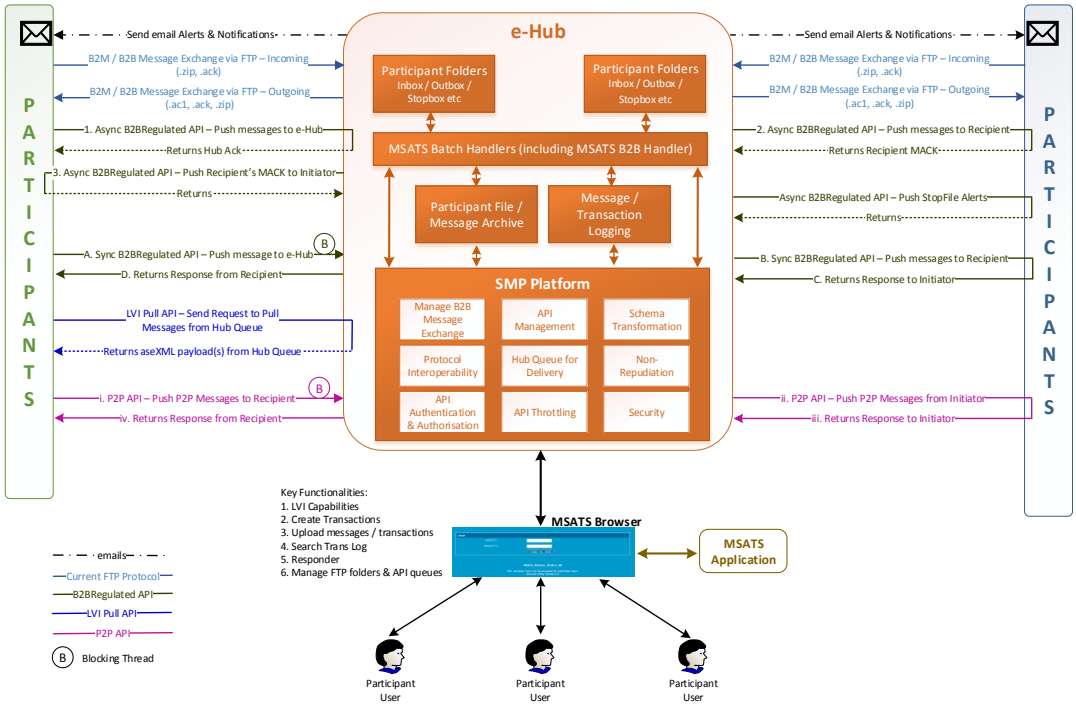


Figure 3 – Industry Testing Environment Diagram

5.3.1 Test support

Test support for the MSATS and e-hub pre-production environments will be provided between 9:00 and 17:00 hrs (AEST) on business days.

6. INDUSTRY TEST EXECUTION APPROACH

The ITWG will monitor and manage all industry testing execution activities. Participants are responsible for supplying their own teams for test execution for the duration of industry testing.

6.1 Industry Test Entry and Exit Criteria

The entry and exit criteria for each industry test phase will be defined in the relevant Test Plans. Depending on the test phase, the criteria are likely to be based on those listed below.

6.1.1 Entry criteria

AEMO and participants will be asked to submit entry criteria checklists prior to the commencement of industry testing. This may include, but is not limited to the following criteria:

- Pre-production environment available.
- Participants internal testing completed.
- Pre-production participant ID received for new participants (via registration and accreditation process).[24]
- Connectivity testing complete (aseXML validation).
- Test data preparation (in line with test scripts/cases, i.e. roles and NMI ranges) is complete.
- Appropriately skilled resource capability available to execute and support testing.

AEMO will confirm the following:

- Industry Test Plan is complete, agreed and delivered to the ITWG.
- HP SaaS QC is configured with all required test information, and is accessible and useable by all testing participants.
- Testing participants have confirmed readiness (through the submission of completed entry criteria checklist).

6.1.2 Exit criteria

Exit criteria for the text execution phase include:

- Successful completion of all high-priority test scenarios.
- No outstanding severity 1 defects.
- Work arounds negotiated for severity 2 defects
- Any open defects (severity 3 or 4) have agreed resolutions or work around in place.
- Final Test Summary Report completed.

6.2 Test scenario and script execution

Test execution will be undertaken as follows:

- Respective folders are created in HP SaaS QC Test Plan and Test Lab modules for all participants to facilitate testing.
- Tests scenarios and scripts that are in scope for participants will be set-up in their respective folders of HP SaaS QC Test Plan and Test Lab modules.
- Execution of the testing will be undertaken according to execution calendar made available as part of the preparation activities.

[24] Refer to the POC Industry Accreditation & Registration Plan, see http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream

- Informal testing may occur between participants, however reporting of the testing will be based on the defined execution calendar.
- Test execution information will be updated in HP SaaS QC as it occurs, i.e. in as close to real time as possible. This will include test progress, status and data used.
- An audit trail of test execution is to be undertaken by participants. This includes capture of positive results to prove that a test met expected results as well as capture of negative results for defect resolution. Where applicable, this information will be maintained in HP SaaS QC. Where this is not applicable, e.g. particularly large files, participants should store the required information accordingly so it can be referenced as positive proof of testing.

6.2.1 Test status

After running each test script, participants will update the test script status in HP SaaS QC as below:

- Test passed:
  - Test met expected result.
- Test failed:
  - Test did not meet expected result.
- Test blocked:
  - A test cannot be executed due to an outstanding defect preventing the test from been executed.
- Test Not Applicable (N/A):
  - A test that is identified as not a valid test case or not a valid business/end to end scenario to be run

6.2.2 Scenario status

After running each scenario, participants will update the scenario status in HP SaaS QC as below:

- Completed (green)
- In progress (yellow)
- Blocked (red)
- Failed (red)
- Not started

These scenario statuses will be used to generate the status traffic light reports which AEMO will generate and circulate prior to the daily test status meetings.

6.2.3 Test metrics

Test measurement during industry testing will be based on but not limited to the following metrics:

- Number of test scenarios executed versus the number planned
- Number of passed test scenarios versus test scenarios executed
- Number of failed test scenarios versus test scenarios executed
- Number of test scenarios blocked versus test scenarios planned
- Number of test scenarios deferred/not applicable versus number planned
- Outstanding defects including the impact and agreed date of resolution

These metrics will be reported as appropriate in the test status reports which AEMO will generate and circulate prior to daily test status meetings.

6.3 Daily process

The daily process to be adopted during each industry testing phase will be detailed in their respective Test Plans, including

- Frequency of daily test status meetings (number of meetings per day - which may be adjusted as testing execution progresses).
- Number and scheduled time/s of daily test status meetings.
- Meeting attendees (one meeting for all attendees or multiple meetings with targeted attendees).
- Meeting agenda templates.

To prepare for the scheduled meetings:

- Participants will be asked to update HP SaaS QC prior to the meeting
- AEMO will generate and circulate the test status report and status traffic light report prior to the meeting

The daily test status meeting agenda will include:

- Confirm attendance
- Test execution progress
    - Review planned against actual progress for test execution. Discuss exceptions against planned execution.
    - Confirmation of readiness to commence scheduled tests
- Review defect status – outstanding defects.

6.4 Test management activities

Table 2 shows the activities which will occur during industry testing and who is responsible for them.

Table 2 – Test management activities

Activities	Description	Timing	Responsibility
Prepare and execute tests	Individual testers are to prepare the testing, which includes the preparation of test scenarios, test scripts, test data and capture actual results for testing.	Daily	Participants
Update progress	Progressively update the status of each script tested in HP SaaS QC.	Daily	Participants
Raising defects	Raising defects from failed scripts or any other root cause in HP SaaS QC.	Real time immediate as soon as the script has failed.	Participants
Managing defects	Review defects logged in the HP SaaS QC.to identify major defects and determine the impact of those defects.	Daily	AEMO and Nominated Participants

Activities	Description	Timing	Responsibility
Retesting defects	Retesting defects once they are available to testers is a priority.	Defect retests are to be completed prior to commencing new scripts.	Participants
Test phase entry	Complete entry criteria checklist	Prior to the commencement of test phase execution	AEMO and Nominated Participants
Test phase exit	Complete exit criteria checks	At the completion of test phase execution	AEMO and Nominated Participants
Test status meetings	Test status meeting to be attended by all testers to discuss progress, issues and defects.	Daily (or as detailed in the Test Plan)	AEMO and Nominated Participants
Update Risks and Issues Log	Risks and Issues that arise and negatively affect testing progress will be recorded as identified.	As required	AEMO and Nominated Participants

7. DEFECT MANAGEMENT

7.1 Defect management approach

The defect management principles and guidelines for industry testing will be a collaborative effort, principally involving the testing teams, development teams and business analysis teams. There will, at times, be a need to consult other project team members for advice and assistance on the resolution of defects. Defect management will be managed entirely within the HP SaaS QC.

The ideal objective of defect management is to resolve all defects within the project lifecycle. This objective is tempered against other project objectives, such as achievement of schedule and system impact and priority of the defect (discussed below). The acceptable level of defects within each stage of testing is typically defined as part of the 'exit criteria' for that stage.

7.1.1 Raising defects

Defects raised during industry testing will be captured in HP SaaS QC, with the following information:

- Description of defect.
- The particular test scenario and/or test script associated with the defect.
- Who detected it and the date it was detected.
- Defect owner (entered after gaining agreement between testing counterparties as to who owns the defect).
- Target fix date (entered by defect owner).
- Defect severity and priority.
- Defect status.
- Defect root cause (entered by defect owner).

The term defect is to be viewed generically insofar as that information to be captured within HP SaaS QC may relate to information that would fall outside the normal IT definition of the word defect (against application software or infrastructure). For example:

- Information could be captured regarding lack of required support. This impacts test execution from a timing perspective; and
- Testing may indicate that a particular automated business process needs manual intervention to work correctly and given constrained timings an automated fix cannot be developed and tested in time for go-live. Information such as this can feed into the deployment\cutover planning for go-live.

As a general principle any information that occurs during industry testing and assists with risk mitigation for the "go live" solution may be captured.

Defect statuses and progress on defect fixes will be discussed in the daily test status meeting.

7.1.2 Defect triage

Defect triage occurs during the daily test status meeting. Test scenarios or scripts that are blocked with critical or high priority defects will be discussed in the meeting. The defect owner and the target fix time will be agreed for critical and high priority defects blocking test execution.

If required, a separate meeting will be arranged by AEMO and relevant participants to identify the root cause and resolve critical and high priority defects to ensure test execution can progress smoothly.

Participants and AEMO should review defects frequently on daily basis and update the target fix date/time in HP SaaS QC for everyone's reference.

7.1.3 Defect escalation

All open defects will be discussed in the daily test status meeting. If a critical/high priority defect can't be resolved within the agreed SLA, it can be escalated in the daily test status meeting, and if required AEMO will arrange a separate defect triage meeting with the relevant participants to see that the defect is resolved quickly in order to progress in test execution.

7.1.4 Defect prioritisation

Defects will be classified according to severity and priority by the participant test leads in consultation with other impacted participants. Severity will indicate the degree to which the defect affects both the application and more specifically testing. The descriptions of each classification of **severity** are shown in Table 3

Each defect will also be assigned a priority based upon expected impact to the POC Implementation Project. Defect priority will indicate the degree to which the defect affects the progress of testing, and the overall project. Priority is determined using a combination of probability, system impact and the business impact. The descriptions of each classification of **priority** are shown in Table 4.

Table 3 – Defect severity classifications

Severity	Description
1- Showstopper	This is a defect that makes the system unusable resulting in an extremely critical (catastrophic) impact on business operations. The software under test does not perform correctly, there is no work around and displays one or more of the following characteristics: • System hangs or performance is degraded to the point of being unusable. • System crashes repeatedly. • Critical functionality is not available. • An error occurs that results in a catastrophic negative business impact. • An error occurs that results in a loss or corruption of data that affects completion of a business process.
2- Critical	This is a defect that causes major system functionality to be degraded or causes particular features or functions to be inoperative with critical impact to business. The software under test has incorrect behaviours and displays one or more of the following characteristics: • System performance is significantly degraded due to the error. • A total system failure occurs which is caused by an unusual or unlikely sequence of user actions. • Important functionality has incorrect behaviour that significantly disrupts user operation. • An error occurs that results in significant business impact for the participant. • An error occurs that results in a loss or corruption of data that does not affect completion of a business process. • Loss of essential administrative functions. • The specific error cannot be circumvented.

3- Moderate	This is a defect that causes a problem but one that is not critical to overall business operation. The software under test has incorrect behaviour but with limited loss, or no loss of functionality or no impact on participants' operations and displays one or more of the following characteristics: • Minor degradation of business functions. • Loss of routine administration functions. • An error occurs that results in some negative business impact for the participant. • The specific error can be circumvented and the business process can continue with manual or additional systems intervention. • Usability problems in the developed software.
4- Cosmetic	This is a defect that does not affect the functionality of the system. These may be cosmetic errors (e.g. spelling mistake) or they may be errors in the system documentation.

Table 4 – Defect priority classification

Priority	Description
1- High	Defect is considered critical to business operations and/or testing. Core business and project impact. (Severity 1 & 2) Fix/resolution turnaround time best endeavour effort in first 4 hours or provide update on impact
2- Medium	Defect is considered moderate impact to the business operations and/or testing. However, core business processes are still able to be completed (possibly via workarounds, etc.) and testing is still able to continue (Severity 3)
3- Low	Defect is considered low impact to the business operations and/or testing. Core business processes are unaffected and testing is still able to continue (Severity 4)

7.1.5 Defect management status

Table 5 shows the valid defect management statuses to be selected in HP SaaS QC.

Table 5 – Defect management status

Status	Description
New	Initial defect raised but will require a triage to determine if further analysis is required and whether it is a true defect as such to move to an open status.
Open	HP SaaS QC (QC) item that is considered valid to be set to 'Open' for further analysis. Open status means, development team is working on the QC item (analysis or fixing)
Deferred	The defect that potentially has a dependency and will be deferred into future and fixed into the next or future cycle.
Rejected	QC item that is considered invalid is set to 'Rejected'.

Status	Description
	AEMO will set QC item to 'Rejected' with ITWG consultation during daily meetings. If a QC item status is accidentally set to 'Rejected' QC administrator will assist to rectify.
Fixed	Once QC item has been fixed and unit tested by developer the status is set to 'Fixed'. This indicated release manager can release the fix to testing environment.
Test Ready	Once Release manager released the fix to test environment successfully the status is set to 'Test Ready'
Tested	Tester(defect originator) will only test QC item with the status 'Test Ready' and set status to 'Tested' upon passing the QC item.
Closed	Test manager is responsible to set QC item status to 'Closed' once it has been released to production successfully.

7.1.6 Defect process flow

Figure 4 shows the defect management process throughout the various defect management statuses of the defect lifecycle from its inception through to its closure.

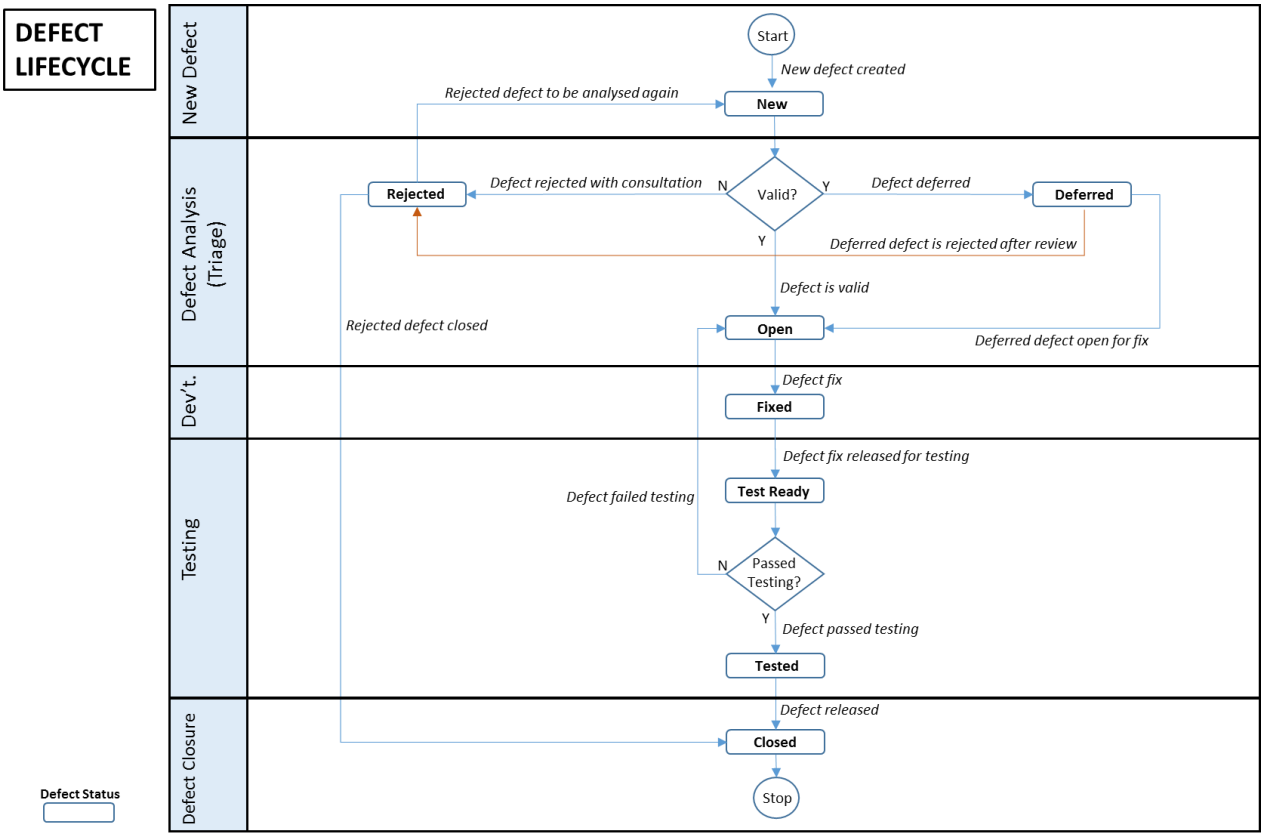


Figure 4– Defect management cycle

7.1.7 Defect cause

Defect root cause will be updated in HP SaaS QC once the defect cause is identified. This will help with the defect metrics to identify the impacted area of the issues/defects identified in the testing. Table 1 shows the available defect causes and their descriptions.

Table 6 – Defect cause

Root Cause	Description
Development/Design	The design of the process does not meet the requirements specified. Defect may include examples, algorithm (incorrect calculation), error handling, creation/release of object or memory, decision logic error, loop control, procedure call, failing to validate data values before being used.
Configuration	The intended outcome of the configuration is not meet.
Data	There are system data issues for the process that may prevent test completion.
Requirements	Unclear or incorrect requirement, Functional and Business specification documentation.
Environment	Defect is not in the object being tested but in the test set up, for example the wrong configuration or version control of platform, operating system, browser, hardware or networking, system is down or the environment is down.
Performance	Stress, Volume and Load, performance or timing related defect, for example when a system is unable to handle designed / planned volume, required number of concurrent users or network traffic volume.
Test Case/Script	Invalid test case/script where it is determined that the test case is in contradiction with the requirements it aims to test. This should subsequently result in the test case being updated and re-executed.

7.2 Suspension criteria and resumption requirements

AEMO, in consultation with the ITWG, will determine if a complete or partial suspension of testing is required during industry testing, and will determine when testing will continue.

7.2.1 Suspension criteria

Complete or partial suspension of testing may be required if:

- High density of defects are open impacted the number of test cases that can be executed.
- High severity (i.e. showstopper) or combination of defects open.
- Significant change to specifications (delaying release of software to the pre-production).
- Quality of software (rated by number of test cases failing).

If these circumstances arise, the following actions will be taken:

- AEMO will make a recommendation to suspend the test activities in consultation with ITWG.
- AEMO will advise the industry participants of the potential delays due to the test suspension, and the impact of defect / defects concerned.
- AEMO and the ITWG will support and coordinate the development and test efforts to resolve the defects raised.

7.2.2 Resumption criteria

Test resumption criteria can commence after the issues that caused the suspension of testing have been resolved:

- AEMO will inform the industry participants of the successful deployment of the defect fix(s) and its successful verification.
- AEMO will inform the industry participants that the test environment is in a suitable condition to resume the suspended testing.
- AEMO in consultation with the participant who raised the defect, will inform the participants of the impact(s) of the defect fix on the previously executed test cases and suggest if any re-execution has to be done.

Table 1: Summary of Participant Feedback to POC Industry Test Strategy v0.2 from the ITWG 5th April Forum

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
1	AGL	Scope of Industry Testing – are there some off market transactions that should be included in testing – e.g., network billing?	It won't be part of formal industry testing, however, you can test this bilaterally if you choose to
2	AGL	Can you please clarify the difference between industry testing and market trials	Noted and updated in the Industry Test Strategy Document accordingly
3	Energy Australia	There needs to be a section in the Industry Test Strategy document for suspension and resumption i.e. when the pre-prod environment is down during testing	Noted: I have include a section around Suspension and Resumption under the defect management section 7
4	AGL	For B2B testing from June, please clarify the specific date for bi-lateral testing to commence	B2B is scheduled to commence in mid June timelines (updated into the Industry Test Strategy document). However, bi-lateral testing is outside the scope of this phase.
5	AGL	Dependencies – there is a dependency on having the R36 schema built / tested and installed in the AEMO environment prior to bi-lateral B2B testing	Schema R36 is a dependency for B2B and will be deployed into the pre-production environment in June. Timelines will be detailed in the Industry Test Plan (B2B).
6	AGL	Suggest you adjust in the industry test planning timeline for EN/MC to go to end April	Noted: Timelines updated
7	AGL	What is the approach / strategy for partnering of testing?	This will be discussed at the next ITWG forum, participants will be asked to assist in the development of the test pairing of test cases and partnering with the participants who will be engaged in the Market Trial.
8	AGL	Prioritisation of testing – can some criteria be defined here? E.g., based on volume and potential customer impact	Noted – Based on industry participant consensus it is deemed that both potential customer impact and volumes set the criteria for the prioritisation of industry testing. This will be included in the Phase 3 Market Trial Test Plan
9	AGL	Note that your production snapshot date is now in the past – this should have been communicated earlier!	The AEMO support hub communications unfortunately did not reach everyone. So there will be another refresh and this will be communicated (via email) in advance to both the ITWG and RWG working group once confirmation is received from AEMO technology Lead.
10	AGL	Entry criteria – full UAT will not be completed as an entry criteria for industry testing	Agree and as discussed in the ITWG forum 5th April, there is a caveat to have at least the End to End testing completed internally as a flexible entry criteria and I have removed UAT from the equation.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
11	AGL	What is involved in B2B pre-testing / self-certification – when does this occur?	A draft version of the B2B accreditation guide articulates what is required for B2B self-certification.
12	AGL	What happens if exit criteria is not met given we have a fixed go-live date of 1-December?	This will be up for discussion between ITWG and the PoC Readiness group. Just to clarify and as an example, if there is a severity two defect and there is a work around going into production then that will be discussed in the escalation forum process the first been Readiness forum if unresolved POC Program Consultative Forum.
13	AGL	Section 9.2 mentions B2B testing as functionality becomes available. Is there a planned approach for this? (i.e., what functions when?)	See draft Phase 2 Industry Test Plan
14	AGL	9.3 Phase 3 doesn't seem to match to the industry testing timeline picture in section 3	Diagram and timeline have been updated
15	AGL	What happens in the period between test phases? Will data be reset? (we are not expecting a refresh)	There will be a data refresh prior to the commencement of Market Trial testing and not during the test execution
16	AGL	How will volume or stress testing be catered for?	AEMO will carry out Stress and Volume testing internally
17	AGL	Confirmation of the system refresh date prior to industry testing commence on mid – August so that participants can plan their own system refresh accordingly.	AEMO will confirm and communicate to all participants any data refresh from production into pre-production prior to mid-August.
18	AGL	Confirmation on HP QC SaaS readiness	AEMO has purchased the QC SaaS licences and they will be available prior to the commencement of phase 1 test execution
19	AGL	Confirmation on dates when Bi-Lateral testing can be commenced	This can be done at your own time outside of Industry testing as it is not in scope. AGL might like to partner up with another of your currently pairing participants.
20	People energy	Does existing participants need to do registration	Testing registration – registrating intention to participate in industry testing – requirements will be detailed in the Test Plans. Participants will require a valid participant ID to access AEMO's pre-productions system so they may need to under go Registration and/or Accreditation processes.
21	People energy	For testing do we need to nominate MC and ENM	This will depend on the test scenario.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
22	Jemena/UE/AusNet	Point No. 6: Will the test data be defined by AEMO. Is there an agreed strategy to ensure all Participants are aligned to the MSATS Pre-Production data? When will the data strategy be released?	AEMO communications will go out to all participants prior to any data refresh so as to align to the MSATS pre-production data and with production environment data. This will be documented in the Industry Test Strategy under environments and will allow ample time for participants to also perform their own internal data refresh.
23	Jemena/UE/AusNet	Point No. 8 Participants may not all be creating the Test Case in HP QC SaaS tool. Each participant may be executing the Test cases from their own Testing tool and a copy of the test cases can be provided to AEMO for uploading to AEMO's instance of HP QC. AEMO will need to provide a test case pro-forma that can be used by all participants	All organisations will receive one free HP QC SaaS licence, the folder structure will be created for each individual participant and this will allow each participant to internally manage their own daily execution activities. Also, the test workbook will be used as the agreed basis for test case and test step development and will be uploaded into QC by AEMO.
24	Jemena/UE/AusNet	Assumption 8 to be updated to show that AEMO will upload the tests into HP QC SaaS via their standard template (see line 7)	Noted: AEMO will upload the test case from the workbook in HP QC SaaS. Agreed
25	Jemena/UE/AusNet	If a data alignment across participant application is required, AEMO must co-ordinate a process by which the data validation in participant's applications. It may be better to define a excel pro-forma to provide the test data	Data requirements will be defined as part of the scenario definition. Participants initiating test scenarios will be asked to identify the data required and update it in HP SaaS QC. Participants who can not align their data refreshes with AEMO's will need to align their data with their testing partners.
26	Jemena/UE/AusNet	The date AEMO provided for each participant to take a refresh is 30 March, 2017. There will be variances in the ability of each participant to meet this date due to insufficient lead time provided to take the cut (i.e.: date provided was when this document came out).	AEMO will communicate to all participants the data cut refresh from production at least a couple of weeks prior to provide time for participants to cut their internal production data at the same time and same date for alignmen if possible. This is prior to phase one of Industry Testing.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
27	Jemena/UE/AusNet	It will not be feasible for ensuring the test environment build to be carried out based on a specified date. Some DBs have already refreshed their Pre-Production environment based on an Internal Data Refresh schedule. A more pragmatic solution must be used to align data between applications of participants.	The data refresh of the pre-production environment will be based on the communications with participants it is therefore, envisaged that there will be two production data cuts one in May and another prior to Market Trial.
28	Jemena/UE/AusNet	The Schema version R35 and R36 have been used in the document. Please clarify the correct version with the relevant Procedure.	The R35 is the updated B2M schema however, R36 is the new B2B schema.
29	Jemena/UE/AusNet	Are there multiple pre-production environments? Please confirm as per this reference in the document.	There is only ONE pre-prod environment and this has been communicated under the environment section 6 in the Industry Test Strategy.
30	Jemena/UE/AusNet	Point 17 - Test Summary Report. Is this a walkthrough of the TSR template to be used for market testing?	The test summary report will be developed as part of the test planning process. AEMO will share a draft format with the ITWG for their feedback.
31	Jemena/UE/AusNet	Non Functional testing was removed from the scope. Will the AEMO technical team provide confidence to the market participants that the environment will perform at a reasonable level based on the expected increase in messages that will be sent through service order processing?	AEMO will be performing their internal security, performance stress and volume testing. This statement has been re-instated in the Industry Test Strategy.
32	Jemena/UE/AusNet	Test Script development will be done by the participants in their own version of QC. An extract from this will be provided to AEMO for maintaining them centrally on provision of a standard template (see line 7)	The section under 5.1.1 Test Management repository tool, all participants will have a dedicated licence to HP QC the agreed scenarios and test cases/steps will be uploaded by AEMO. All participants will be able to execute using the set of tests assigned within the folder structure based on the ITWG agreed test calendar.
33	Jemena/UE/AusNet	Point No: 4 Is this a test report from the AEMO HPQC? It will be necessary to run central reporting only as >50 daily reports will be unmanageable.	AEMO will generate the test daily report and circulate to testing particpants.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
34	Jemena/UE/AusNet	Why is a Test Cycle completion report required? At the end of a phase, we will produce a TSR with the result from all the cycles covered in the phase.	Most cycles are either 2 or 3 weeks (period blocks) and a good best practice to assess at the end of each cycle as to the progress of testing.
35	Jemena/UE/AusNet	Last sentence on Page 28: It may not be practical to ensure the same cut of production data in participant applications. Also, conflict in the document: States prod cut for AEMO already taken, but on the 30th March - no participants advised to cut on the same date - see above.	AEMO recommend that participants align their data refreshes to make data alignment easier however it may not always be possible.
36	Jemena/UE/AusNet	There is mention in here that the data cut of the participants will be same as AEMO's pre-prod environment. This needs to be reword to say 'where possible' the environments will be in alignment.	Agree – has been reworded
37	Jemena/UE/AusNet	Status meetings to be attended by all testers. The format and manner in which this will be conducted needs to be clearly thought out as in excess of 100 people will not be workable.	Agree – this will be a topic for further discussion during test planning and we may need to adjust as testing progresses.
38	Jemena/UE/AusNet	Row No: 5 New Script preparation must not be linked to closure of defects and retests. Nor execution - testing is not necessarily suspended when a defect is found.	Agree and I have reworded accordingly, this is based on root cause analysis when a test script or step fails during test execution.
39	Jemena/UE/AusNet	Row 2 (in this page): Status meeting attendance must be only for affected participants.	Agree defect triage must be managed with the affected participants involved as this will be communicated to all participants anyway through the daily test reports.
40	Jemena/UE/AusNet	First sentence (Note) What date does this refer to?	I have reworded the first sentence completely and removed the word note.
41	Jemena/UE/AusNet	Please include that all releases must be applied after hours - we cannot lose daytime testing time especially if a post deploy problem occurs.	Will target out of hour releases where outages are required – however it will be dependent on a case by cases. Urgent fixes (blocking test execution) may occur duing business hours
42	Jemena/UE/AusNet	Clarify if R35 is in reference CATS procedure.	R35 is a reference to the B2M schema
43	Jemena/UE/AusNet	Section 1.2 This should be modified to show CATS R35 & B2B R36	There is no section 1.2

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
44	Jemena/UE/AusNet	Too lower level of details related to technical documentation. Please remove and specify in the test plan	Agree
45	Jemena/UE/AusNet	The heading of "INDUSTRY TEST EXECUTION APPROACH" is not appropriate for this section. The section describes Test Management activities	Noted,
46	Jemena/UE/AusNet	Please remove Participants internal testing completed, including both End to End and UAT test results reviewed.	In the entry criteria I have removed the UAT as it is quite possible that this testing phase will be carried out in parallel to End to End test execution by many participants.
47	Jemena/UE/AusNet	Entry criteria Point 1: The data cut alignment between participant applications has not been agreed. This criterion should refer to a strategy to manage the data synchronisation between applications.	Where possible AEMO will have support for managing data synchronisation between applications for Market Trial testing
48	Jemena/UE/AusNet	11th bullet point: Please provide a copy of the Entry Criteria Checklist	This will be included as part of the Test Plans
49	Jemena/UE/AusNet	4th bullet point: Where is the "Acceptance Criteria" defined?	Removed as it was a repeat of the above exit criteria.
50	Jemena/UE/AusNet	5th and 6th bullet point: What is the format for Final report?	The format for the Test Summary Report will be shared in a draft form with the ITWG for review and feedback.
51	Jemena/UE/AusNet	Please remove GO LIVE recommendation signed-off. NOTE that Industry testing provides input into the Industry Go/No Go decision. It is recommended to separate Exit criteria based on testing partnerships. Also in general all test execution reporting must be done based on testing partnerships,	Agree - GO LIVE recommendation has been removed. Agree test pairing is critical to market trial testing.
52	Jemena/UE/AusNet	Who will link the tests to the requirements in HP QC SaaS? What requirements documentation to link to, will be provided in HPQC? How will this be agreed and signed off?	Requirements will not be linked in HP SaaS QC.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
53	Jemena/UE/AusNet	5th bullet point: Real time update into AEMO HP QC is not practical.	All participants will have access to the QC for Power of Choice and agree that real time may be difficult I am therefore, rewording to as soon as you can. We will ask participants to update prior to status meetings.
54	Jemena/UE/AusNet	6th bullet point: What is "functional area". Has a list of allowed functional areas been defined for testing categorisation?	I have removed and reworded. If functional areas are required this can be included in the Market Trial Test Plan.
55	Jemena/UE/AusNet	Is the defect triage different to the stand-up mentioned in section 6.3?	The defect triage will occur in the daily status meetings (or stand up meeting)
56	Jemena/UE/AusNet	Statuses of "Rejected" and "Deferred" should be removed. If there is a dispute on the validity of the defect, it must be discussed and closed. Neither Rejected nor deferred are valid statuses. Use defect sub statuses to close defects that are duplicates, user error, data, environment, etc.	If there is a defect raised it can be rejected during the triage based on incorrect data alignment or any other root cause analysis. The deferred means it still is a defect however, not part of the current test cycle or waiting on a set of test cases to be executed prior to the defect been fixed.
57	Jemena/UE/AusNet	The defect management process need to provide more clarity on Who raises the defects? Who assigns the defects the participant that needs to fix the defect? What is the process to mark the defects as "Test Ready" if multiple parties are involved in the defect resolution? Will there need to be more than one defect raise if the issue is with two (or three) participants? What happens if there is a dispute on a defect? What are the SLAs on defect resolution?	Defect management section updated
60	Jemena/UE/AusNet	It is better to maintain just one classification (either Severity or Priority) to manage the defects in AEMO HPQC. The individual participants may have different severity/priority for the defects. This could lead to confusion. Participants may decide to use their internal business severity and prioritisation to manage defects based their organisational requirements.	Industry Standards and Best Practice has both business priority and system severity.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
61	Jemena/UE/AusNet	Appendix A Defect Classification We would recommend using only defect severities. It will be over complicated to use severities and priorities for Industry testing. How will the Severity be determined? What if different participants believe Severity is different?	In line with Test best practice and standards defect severity is relating to system impact whereas, priority is relating to the business impact. Therefore, both priority and severity classification statuses will stay in line with consensus and industry best practices.
62	ActewAGL Distribution	Section 2.2 clarification on the pre-prod environment availability for 3 April. Is this the same MSATS environment that will be available for industry testing in August?	Please refer to the MSATS release schedule for details on the r35 B2M schema release for April (link below). There will be a pre-production MSAT release for the r36 B2B schema around August - details are expected to be released in late March. https://www.aemo.com.au/-/media/Files/Electricity/NEM/IT-Systems-and-Change/2016/MSATS-4688-Release-Schedule--December-2017.zip
63	Aurora Energy	#1: Objective(s) of testing. There was concern raised when it was suggested there may not be a separate Test Plan for the B2B Connectivity / functionality testing (hope I have that right) and it lead me to thinking about the overall objective of testing vs the objectives of the test phases which I'm suggesting should be tied together in the overarching POC Test Strategy.	There will be a separate Test Plan for B2B and Market Trial.
64	Aurora Energy	The AEMO PoC Industry Test Strategy section 4.1 details 'Industry testing objectives' and the Industry Test Plans (6.1) confirms test phase objectives will be documented in the Industry Test Plans.	The Test Strategy details the overarching broader objections and the test plans it more focused on the test execution objectives.
65	Endeavour Energy	May a participant utilise the Pre-Production Environment for individual business testing during the formal test cycles?	Yes you can, however, we will need to ensure that NMI ranges identified for formal testing cycles are not compromised.
66	Endeavour Energy	Will the Pre-Production Environment be available to participants for testing between test cycles, e.g. between the 3 cycles of Industry Testing?	The period between cycles is primarily for deploying and re-testing software updates so the pre-production environment may not always be available.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
67	Endeavour Energy	Are participants only allowed to test as per the POC ITWG test plan or may they test B2B and B2M functionality independently or with other B2B participants?	Participants may test independently or with other B2B participants
68	Endeavour Energy	In regard to Data Baselines, larger companies may have many back-end systems that must be snapshotted from production and restored to the test environment at the times specified by the test plan in order to complete back-end end to end testing during the cycles. Is it the plan to always refresh to the same baseline, i.e. everyone snapshots as of 1/7/2017 00:00:00hrs and each refresh restores this baseline, or alternatively, will each refresh be against a new baseline date? Can this area of the strategy be expanded upon?	There will be two data refreshes and this will use two different snapshots – the details will be documented in the Test Plans and circulated via email to the ITWG, RWG and through the business as usual processes through AEMO's support hub,
69	Endeavour Energy	There is no milestone for Phase 2 execution	Updated
70	Endeavour Energy	Advise when the dates will be firmed up where they are indicated as 'mid Aug', 'mid - November' etc,	The commencement of Market Trial is scheduled for mid-August 21st is the official locked in date. As for the end date for Market Trial testing it will most likely be the first week of November. These will be firmed up in the Test Plans
71	Endeavour Energy	It's not clear when the testing for Pack 3 will be conducted. Suggest adding relevant milestones for Pack 3	The milestones for phase 3 are documented section 3.3 Milestones for the Industry Test Strategy.
72	Endeavour Energy	Is the test calendar referred to in this section different to the milestone date listed in Table 1?	Yes there will be a separate Test Calendar as part of the Test Planning activities in the Workbook managed by the AEMO internal testing team.
73	Endeavour Energy	Where is the B2B LVI in this diagram?	B2B is the phase 2 from June through to beginning of August (subject to data refresh in the pre-production environment prior to Market Trial testing. This is displayed in the diagram.
74	Endeavour Energy	Do we need to obtain new participant ID's for Pre-Production - see dot point 3.	If you are taking on a new role yes you will need to obtain a new participant ID. All existing participants will already have participant ID in the pre-production environment.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
75	Endeavour Energy	What does dot point 4 mean? Please clarify this statement.	This has been reworded for clarity.
76	Endeavour Energy	Include meter churn in the section titled Industry operational capability verification and validation	The scope section has been re-written. The detailed scope will be in the Market Trial Test Plan.
77	Energy Australia	Section 2.3.5 Added Performance, Volume and Security Testing to out of scope.	AEMO will conduct non-functional testing which will include performance, stress and volume and security testing.
78	Energy Australia	Key Milestone section Can we have actual dates in this section rather than term such as “Mid-April” and “End of June” Can you include key dates for Environment Refresh and any Environment Planned Outages Include the Industry Test Summary Report as a milestone with a date Figure 2. Overview diagram. Phase 3 is shown with 2 parts? Shouldn't this just be called "Phase 3: Market Trials Execution"	AEMO must align to the development activity dates and they are fluid so closer to the time we can confirm actual dates. This will be communicated during the ITWG forum meeting and via email to the POC ITWG. AEMO can confirm the key date and outage period for the first phase. However, for market trial we will know closer to the date as to when an outage will occur. Agree and have included the Test Summary Report as a milestone. The overview diagram has been updated and is all part of Market Trial Execution even through is shown in two parts as many participants will be testing for the first time the EN/MC and B2B in Market Trial and might want to testing in the first cycle connectivity, schema validations, transactional data testing.
79	Energy Australia	Test Entry and Exit Criteria Section needs to also reference Phase 3 Industry Market Trials Removed the following line in the Entry Criteria “, including both End to End and UAT test results reviewed.”	Agree I have updated the section 7.1.1 Entry Criteria and 7.1.2 Exit Criteria to to remove the UAT from the entry criteria as most likely many participants will be running this in parallel.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
80	Energy Australia	Under section 7.2.1 Test Status - Not Started" in the Test Status section	• Not Started – Test will commence but may have a predecessor
81	Energy Australia	Daily Process section Times need to be updated according to suggestion made in the meeting. Morning review 10 -10.30 ? Afternoon review 3.30 – 4? AEST	The times of meetings will be different in the different phases and hence will be detailed in the test plans.
82	Energy Australia	Defect Triage section Need to mention what time will defect triage occur. Is in it the morning or afternoon meeting? Or is it a third meeting?	The times of meetings will be different in the different phases and hence will be detailed in the test plans
83	Energy Australia	Inclusion Scope Removed "Transition and cutover process testing supporting the preproduction readiness activities and tasks"	Agree and has been removed from the scope inclusions section
84	Energy Australia	Test Phase Overview section Mention if test cycles will be used in Phase 1 and Phase 2. Phase 2 wording to mention "…targeted testing of B2B functionality"	I have reworded this sub section accordingly.
85	Energy Australia	Definition of industry testing" section. Seeing that you have this section, you should also mention the definition of 'Industry Market Trial testing'. Else try and combined the two.	Agree I have reworded and elaborated on the Industry Market Trial Phase 3.
86	Energy Australia	Risks & Issues section moved up after Dependencies section. Also can we have a table with the current testing risks and issues from the Program Register?	We have included a link to the program register
87	Energy Australia	Scope and Objectives sections were repeated with different information in both. Sections combined and moved up the document.	There is a defined broad scope and objective for the Industry and Market Trial Test Strategy and then a lower level for the testing phases.

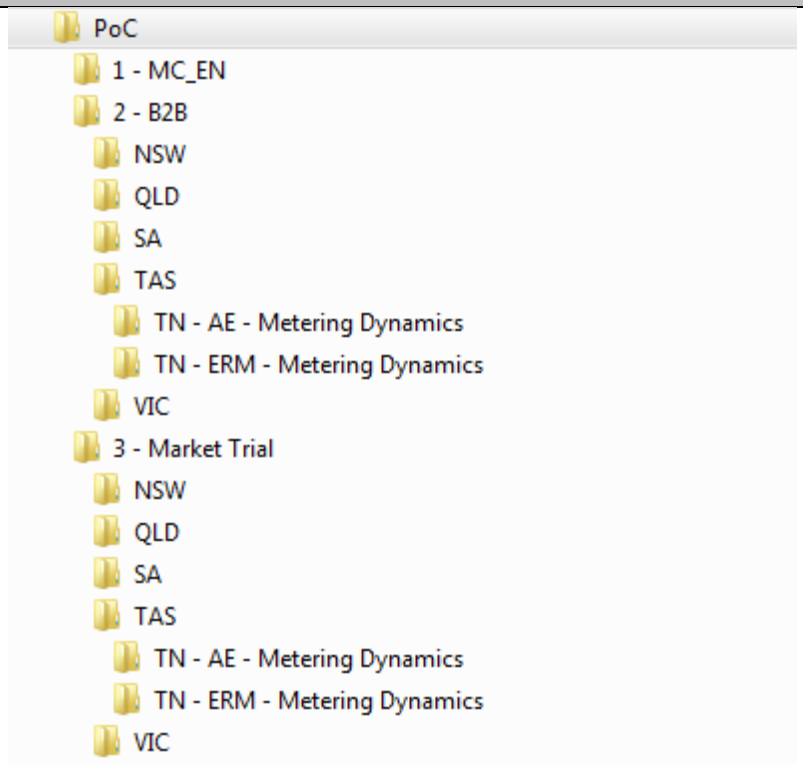
ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
88	Energy Australia	Minor changes to heading titles (i.e. Sections 2.3.1, 2.3.2, 2.3.3). The word Industry Strategy and Industry Testing was over used in titles.	Noted.
89	Energy Australia	Where there is only one section under a Heading 2 then a Heading 3 is not required (egg. Section 2.8.1)	Noted.

Table 2: Summary of Participant Feedback to POC Industry Test Plan (EN/MC) v0.3

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
1.	Active Stream	Is all market/industry testing to be conducted with counterparts from other organisations, or is there a test harness (responder?) that can be used? If so what processes will the responder support?	There is no MSATS B2M responder, so B2M industry testing will involve counter parties. For parts of the B2B testing, participants will be able to use the B2B responder.
2.	AGL	Do we have any objectives in terms of test coverage? I.e., we would like to test every transaction at least once. Ideally we would also like to test "High priority" transactions with all parties. High priority may be defined as transactions covering 80% of our transaction volume.	This is an industry objective so you comment as AGL wanting to test High priority transactions with all related participants which you cleared stated as transactions covering 80% of our transaction volume can suffice for the overall objective if there are no objections.
3.	AGL	If it is possible to provide End to end business process as test scenario rather than transaction oriented test scenarios.	EN/MC scenarios are functional, Market Trial will include business process end to end scenarios.
4.	ActewAGL Distribution	We ensure that there is a field for participant / testing counterparties so this can be used as a search criteria or sorting field through industry testing.	This will be included in the workbook and HP SaaS will have this functionality.
5.	Jemena/UE/AusNet	Customer Details Notification needs to be removed since expansion of life support information has been removed from the latest B2B.	Whilst there is minimal changes to CDN per say, we have added email address field and therefore, we still have to test this function.
6.	Agility	In section 5.5 of the test plan - Can we have some guidance on when the industry cycles are scheduled to take place? (I.e. cycle 1,2 & 3) each of 3 weeks duration.	Updated

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
		This is not made clear in the Test plan and Strategy – are these 3 cycles all expected to be executed between now and the end of June?	
7.	Agility	Section 3.2 And related to this – is development on the changes for all the following functionality expected to be ready for industry testing in May and June? - Change requests (CR) validations and configuration – changes to mandatory/optional fields, objection codes, initiating parties, notified parties, objecting parties. - Changes to meter register status codes, NMI status codes, read type codes. - Changes to reports (C1 and C7 reports). Embedded Network (EN) and NMI ranges screen changes - axeML schema changes	AEMO can confirm that the following changes are implemented in the EN/MC modules and workbook contains the test scenarios.
8.	Aurora Energy	The Industry Test Plans to confirm test phase objectives.	This will be documented at a phase level in the test plan document
9.	Aurora Energy	In the context of the EN/MC Test Plan (and associated execution) + the B2B Test Plan (and associated execution) = A Objective of 'A' above is to de-risk 'B'. Objective of A therefore is to: - De-risk B by: o Having appropriate coverage of functionality o Proving a number of participants have connectivity o Finding defects that would slow down or halt B Objective A can be completed by a subset of NEM participants. Objective of B is prove the majority of NEM participants are ready / market compliant / can interact with AEMO eHub (B2M) and each other (B2B)	This will be clarified in the Test plan for each phase of testing as full functionality for B2B will be ready for market trial. Phase one is EN.MC B2M and phase 2 is more on schema validation and connectivity testing.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
		Objective B can only be successfully achieved if the majority of NEM participants participate in the testing. Maybe stating the obvious but it may help to better clarify what we are trying to achieve out of each level of testing?	
10.	Aurora Energy	#2 – leading on from #1 is there somewhere where we can look or be informed of registration against the 3 test phases above?	AEMO has a consolidated registration excel spreadsheet list that details all participants' registration for each phase. This is currently work in progress as registration are been emailed through.
11.	Aurora Energy	#3 – setup of folder structure in HP SaaS QC. The approach may be worked through in more detail in subsequent test planning meetings within POC ITWG. However I'd like to suggest that rather than organising the workbook structure (bearing in mind I haven't used HP QC since 2011) just by NEM participant, that it is grouped by jurisdiction and by groups that will conduct E2E together (that have registered – i.e. not every combination). Something like this as an example:	AEMO will provide the ITWG working group a first cut of the QC folder structure and as a group we can discuss any alternation that would make sense and workable for industry testing. This is a good starting point to the QC SaaS folder structure.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
			
12.		- It would be advantageous to provide a mapping between the CATS&WIGS tab and the scenario options by including a Reference on the CATS & WIGS page and the associated reference on the Scenario options page. - Some of the scenarios include OBJ and COM steps do not include the FRMP directly. Although the FRMP is not included in the affected parties, notifications will be sent to the FRMP as per the notification rules.	Agree: Mapping included in the workbook Noted. All tests are algned with the browser. If participants wish to repeat the scenarios for the xml base they can do so, This point (browser/xml) is noted for development of the Market Trial workbook.

ITEM	RESPONDENT	PARTICIPANT COMMENT	AEMO RESPONSE
		- Some of the tests are aligned to the MSATS browser. Perhaps an indication which are browser based and which are xml based.	

POWER OF CHOICE IMPLEMENTATION PROGRAM

B2B INDUSTRY TEST PLAN (DRAFT VERSION 0.1)

Published: **May 2017**

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

VERSION RELEASE HISTORY

Version	Date	Summary of Changes
0.1	10/05/2017	First draft issued for discussion with the Power of Choice – Industry Test Working Group (POC-ITWG)

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1. INTRODUCTION

This B2B Industry Test Plan outlines industry testing activities as part of Phase 2 for Power of Choice (POC) Implementation Project. This document should be read in conjunction with the POC Industry Test Strategy. Any deviations from the POC Industry Test Strategy for this B2B Industry Test Plan are outlined within this document.

1.1 Background

The objective of AEMO's POC Implementation Program is to design and implement the required changes to electricity metering, retail market arrangements and infrastructure to give effect to rule changes arising from the POC Review.[1]

1.1.1 Scope of the B2B Industry Testing Plan

This test plan talks about the functions that will be available in the Pre-Prod environment which are good to test/verify functions before Phase 3 Market Trial which has the full functionality to test POC B2B & B2M related rule changes:

- AEMO will not coordinate any test execution during this phase. Participants are encouraged to use this phase to verify the connectivity and schema validations before moving to full Market Trial.
- There will not be any workbook that is associated with this phase. Unscripted test execution can happen during this phase.

Items inside scope

This Industry Test Plan prescribes all activities that will allow AEMO and NEM market participants to test their systems changes (as required under the B2B rule changes) in the following areas:

- Connectivity Testing for MSATS Pre-Prod and e-Hub. Note: system registration for the web methods API portal will need to be completed to enable this to be available for a participant to test.
- API connectivity and response testing
- New R36 schema for Business to Business.
- B2M communications - all changes deployed for phase 1 testing will be available for verification by participants if they would like to use the time to perform shake out testing. (This will not be coordinated by AEMO)

Items outside scope

This Industry Test Plan does not prescribe activities required for any testing activities associated with:

- Business to Business (B2B) end to end testing. This testing activity will be verified in the POC Market Trial Phase (Phase 3).
- Changes to NEM participants' supporting business systems that do not directly interact with AEMO's market systems (i.e. back-end systems).
- Any bilateral testing between participants. Note: Participants can coordinate bilateral testing between themselves during this period, however reporting during Industry Test will not refer to bilateral testing or the outcomes specifically.

[1] See AEMC website, http://www.aemc.gov.au/Major-Pages/Power-of-choice.

- Unchanged communication flows between AEMO's market systems and NEM participants' market interfacing systems.

Each NEM participant is responsible for their own preparedness in respect of the above matters and should account for such items within their own organisational testing program.

1.2 About this paper

1.2.1 Structure of this paper

This paper is structured as follows:

- Chapter 2 details the key dates and milestones of the industry testing phase.
- Chapter 3 details the scope and objectives of the industry testing phase.
- Chapter 4 details the test preparation activities.
- Chapter 5 details the test execution approach.

1.2.2 Reference documents

The following POC-related documents are relevant to the Industry Test Plan.

#	Document Name
1	POC Market Readiness Strategy[2]
2	POC Industry Test Strategy[3]
3	MSATS 46.88 Technical Specification[4]
4	MSATS 46.89 Technical Specification[5]

[2] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream
[3] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream/Industry-Test-Work-Group
[4] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/IT-systems-and-change/IT-change
[5] See AEMO website, http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/IT-systems-and-change/IT-change

2. KEY DATES AND MILESTONES

2.1 Key milestones for the Industry Test Plan B2B

Table 1 – Key milestones

#	Milestone	Indicative date	NEM Participant
1	Industry Test Plan B2B first draft circulated	10 May 2017	AEMO
2	POC-ITWG meeting – review first draft of Industry Test Plan B2B	12 May 2017	All
3	Participant feedback due on second draft of Industry Test Plan B2B	19 May 2017	All
4	POC ITWG meeting via teleconference – discuss feedback and final draft of Industry Test Plan B2B	29 May 2017 (tentative)	All
5	Registration of interest for participation for Industry Test B2B	29 May 2017	All

3. SCOPE AND OBJECTIVES OF INDUSTRY TEST B2B

3.1 B2B Industry Testing objectives

The overall objective of this phase of B2B Industry Testing is to support industry's operational preparedness for the "go-live" date by:

- Providing market participants, who are ready to participate in early testing, the opportunity and tools to verify:
  - Technical compliance against the related aseXML new schema R36, connectivity testing to MSATS Pre-Prod and e-hub and verifying APIs
  - Providing an opportunity for participants who did not participate in Phase one of testing to exercise changes delivered in phase one of industry testing. Changes detailed in the MSAT 46.88 Release Schedule (version 2.01) on 17 March 2017[6]
  - Providing an opportunity to reduce the identified risk associated with the compressed Market Trial timeframe[7]:
  - Identifying and fixing defects in AEMO's and participating parties' systems.
  - Setting up and trialling structures and processes that can be expanded and used during the full Market Trial (phase 3).

Participation in this phase of B2B Industry Testing is voluntary, however AEMO encourages participants to register and participate in the testing in order for the overall objective to be achieved. Participants that do not take part in this phase will have an opportunity to undertake the B2B test scenarios during the full Market Trial (phase 3).

3.2 Industry Test B2B scope inclusions

No additional requirements have been defined for this phase of testing beyond those detailed in section 1.1.1.

3.3 Industry Test B2B scope exclusions

Industry Test B2B scope exclusions as defined in section 1.1.1 of this document. No additional exclusions have been defined for his phase of testing.

[6] See the latest MSAT Release schedule here: http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/IT-systems-and-change/IT-change

[7] See the POC Industry Risk and Issue log – risk R11, see http://www.aemo.com.au/-/media/Files/Electricity/NEM/Power-of-Choice/PM/PoC-Industry-Register.xlsx

4. INDUSTRY TEST PREPARATION

The ITWG will drive the test planning and preparation process, as per the ITWG Terms of Reference. All participants taking part in this Industry Testing phase are expected to provide industry test resources to be part of the ITWG.

4.1 Test registration

Participant are required to register to ensure they have access to HP SaaS Quality Centre (QC) that will be used by AEMO to track defects that may be identified during this phase. Registration is also required to ensure any new participant IDs required for testing have been set up prior to testing commencing. Registration requests should be sent via email to the POC inbox at POC@aemo.com.au. Registration requests should include the information in Appendix A.

4.2 Test tools

HP SaaS Quality Centre (QC) will be used for defect management only during phase 2 of Industry testing.

4.3 Test scenarios, scripts and data

Test execution is not planned in HP SaaS QC for phase 2. Any testing conducted will be targeted unscripted testing.

4.3.1 Test data

Participants have to identify any test data that is required for Phase 2 unscripted testing. AEMO will not refresh the pre-prod database for Phase 2. The pre-prod database will be refreshed before Phase 1 test execution and will have the production data with cut-off date as of 10th May

4.3.2 Participants

This is an informal test phase, execution between participants will only occur where arrangements have been made between individual participants. Participants will be able to perform limited B2B testing in isolation via the use of the Respodner1 test participant.

4.4 Test environment

Industry Testing for phase 2 will utilise the MSATS pre-production environment, managed by AEMO. It is recommended that participants test environments be as close to a replica of their go-live systems as possible. A diagram of the AEMO environment is documented in the Industry Test Strategy document under section 5.3.

5. INDUSTRY TEST EXECUTION APPROACH

5.1 Pre-requisites

New participants will have commenced registration[8] or accreditation[9] activities in order to have their MSATS pre-production ID and credentials issued.[10]

5.2 Entry criteria

Entry criteria for the Industry Test (B2B) are as follows. The entry criteria relates to individual participants

Participants are requested to submit the checklist in Appendix B when ready to commence testing.

- Pre-production environment available.
  - Stable and reliable
  - Adequate internal testing completed to be ready to commence industry testing.
- Participant credentials issued (for new participants).
- Connectivity testing complete (for new participants).
- AEMO's HP SaaS QC is accessible and useable.

AEMO will confirm the following:

- HP SaaS QC is configured, accessible and useable by testing participants.

5.3 Exit/Completion criteria

Exit criteria for the text execution phase include:

- All open defects have agreed resolutions – e.g. plan in place to fix and retest prior to, or during, the Phase 3 (Market Trial).

5.4 Approach

This test phase is informal and will not validate each participant's outcomes or readiness for entry into phase 3. Execution during this phase will be managed by each participant to ensure they are able to participate in the third phase of testing. AEMO will be available to assist participants during this phase and resolve and defects identified during this period.

5.5 Defect management

The overall defect management process is detailed in the Industry Testing Strategy document under section 7. Defects raised during industry testing will be captured in HP SaaS QC with the following information:

- Description of the defect and severity, who detected in and when.
- Defect owner (entered after gaining agreement between testing counterparties as to who owns the defect.

[8] The Application for Registration as a Metering Coordinator and the Metering Coordinator Registration Guide can be found here : http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Participant-information/New-participants/Application-forms-and-supporting-documentation

[9] The Qualification Procedure for Metering Providers, Meter Data Providers and Embedded Network Managers, along with the Accreditation checklists can be found here: http://www.aemo.com.au/Stakeholder-Consultation/Consultations/Power-of-Choice---AEMO-Procedure-Changes-Package-2

[10] Refer to the POC Industry Accreditation & Registration Plan for an overview of these activities. See http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Power-of-Choice/Readiness-Work-Stream

- Target fix date (entered by defect owner).

Defect status and progress on defect fixes will be discussed in the scheduled stand-up meetings.

For this Industry Testing, defects will be classified by severity only. See Appendix C for defect severity classification.

Defects will be fixed and re-tested during this test phase where possible. If the fix can't be delivered within this phase it will be re-tested in phase three. See Appendix D for defect management status and lifecycle.

5.6 Test reporting

HP SaaS QC will not be used to track execution of any tests in this phase. The only reporting available during this phase for presentation to the ITWG will relate to defects and the progress of defect resolution.

As detailed in the industry test strategy the defect summary report will be available for all participants and will focus on status, severity, priority, ownership, participants impacted, version and date detected against and actions required:

- Open defects and their progressive status
- Overall by severity and status
- By participant and severity and status

5.7 Test Support

All requests for support during the Industry Test B2B phase should be emailed to the POC inbox (POC@aemo.com.au). Test support will be provided between 9:00 and 17:00 hrs (AEST) on business days. The subject line of the email should contain:

- **HP SaaS QC** for assistance with HP SaaS QC access or operation
- **Industry Test B2B** for other queries.

APPENDIX A. TESTING REGISTRATION

The following information is to be submitted to POC@aemo.com.au

ORGANISATION NAME:

TEST LEAD:

PARTICIPANT DETAILS:

#	Participant role (LNSP, MDP, MC, etc.)	Participant ID/s	Jurisdiction/s	Registration status (existing, in progress, planned)	Targeted commencement dta	Planned B2B interface (FTP, API push/push, API push/pull or MSATS Browser)
1	*Retailer X*	*RetX1, RetX2*	*NSW,QLD*	*Exisitng*	*3 April 2017*	
2	*ENM X*	*TBA*	*NSW,QLD*	*In Progress*	*1 June 2017*	
3						
4						

Notes:

1) Please add a role for each individual participant role you wish to test under (e.g. in example above Retailer X will test under either RetX1 or RetX2 – not both).
2) If you intend to perform e-hub connectivity testing please be specific with regards to the type of connectivity testing.
3) Add in rows as required.

POWER OF CHOICE - IMPLEMENTATION PROGRAM

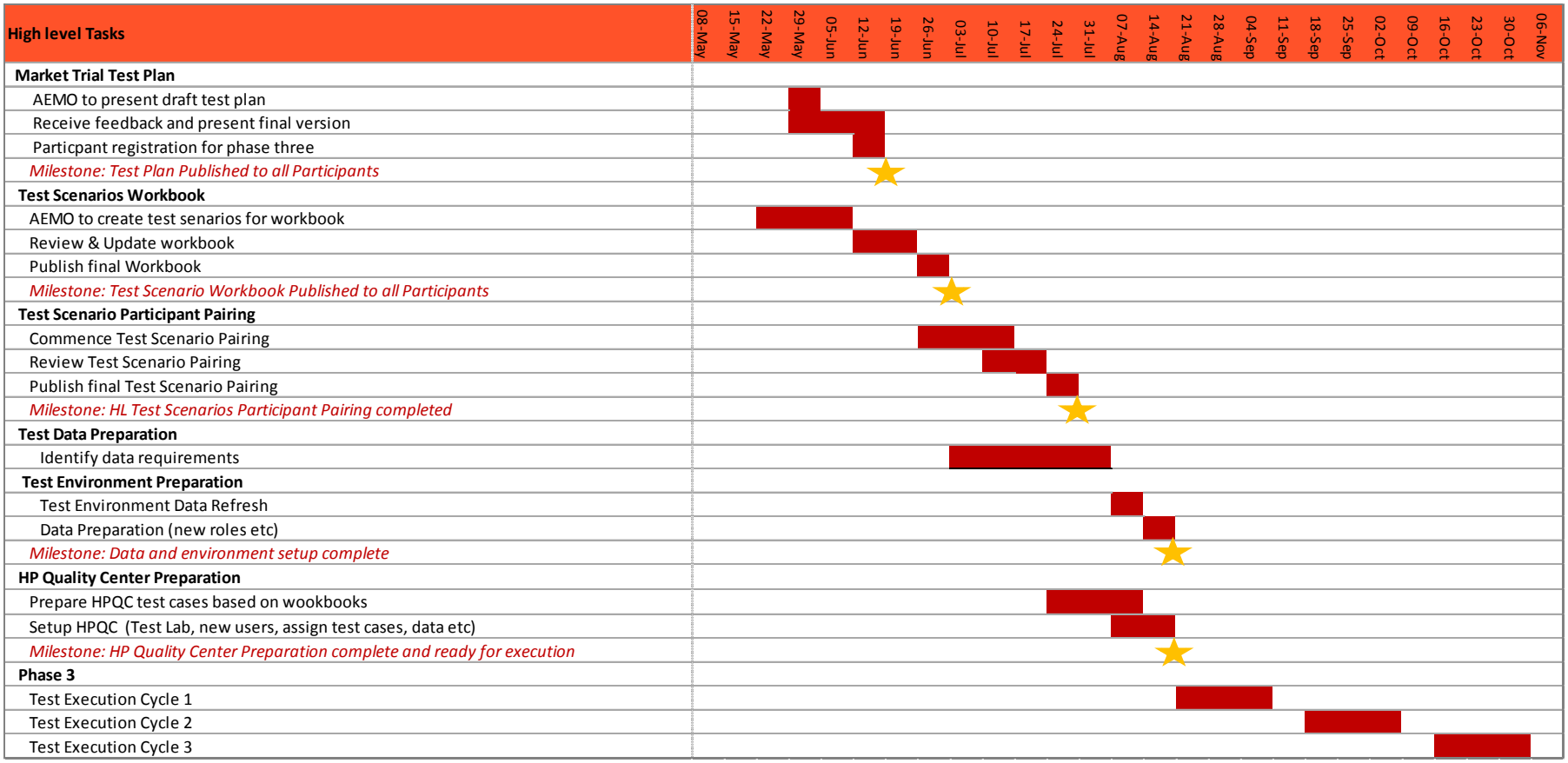
INDUSTRY TESTING PHASE 3 – MARKET TRIAL

12 May 2017

PRESENTED BY AEMO

TIMELINE - PHASE THREE MARKET TRIAL TESTING

- Overview of tasks to be completed for Phase Three – Market Trial Testing



TIMELINE - PHASE THREE MARKET TRIAL TESTING

- Market Trial Test Plan
  - AEMO to present draft test plan 29/05/2017
  - Receive feedback and present final plan from 29/05/2017 until 16/06/2017
- Test Scenario Workbook
  - AEMO to create test scenarios for workbook from 22/05/2017 until 09/06/2017
  - Review and update workbook from 12/06/2017 to 23/06/2017
  - Publish final workbook 26/06/2017
- Test Scenario Participant Pairing
  - Commence Test Scenario Pairing from 26/06/2017 until 07/07/2017
  - Review Test Scenario Pairing from 10/07/2017 until 21/07/2017
  - Publish Test Scenario Pairing 28/07/2017
- Test Data Preparation
  - Identification of data requirements to commence from 03/07/2017 until 04/08/2017

TIMELINE - PHASE THREE MARKET TRIAL TESTING

- Test Environment Refresh
  - Test Environment Data refresh planned from 07/08/2017 until 14/08/2017
  - Data Preparation (new roles etc.) from 14/08/2017 to 18/08/2017
- HP Quality Centre Preparation
  - Prepare HPQC test cases based on workbooks commencing 24/07/2017
  - Complete setup of HPQC (Test Lab, new users, assign test cases, data etc.) from 07/08/2017 to 18/08/2017
- Phase 3 Test Execution
  - Each test cycle will be 3 weeks in duration with a week between each cycle to provide participants to address issues, fix defects and prepare for the next cycle
    - Cycle 1 Execution from 21/08/2017 until 08/09/2017
    - Cycle2 Execution from 18/09/2017 until 06/10/2017
    - Cycle3 Execution from 16/10/2017 until 03/11/2017

AGENDA – POWER OF CHOICE - INDUSTRY TEST WORKING GROUP MEETING #5

DATE:	Friday 12 May 2017
TIME:	1.00 pm – 3.30 pm AEST
LOCATION:	AEMO Melbourne offices
CONTACT:	poc@aemo.com.au
TELECONFERENCE:	TOLL FREE: +61 1800 055 132 TOLL: +61 2 8228 1583 CONFERENCE ID: 347 925 82
WEBINAR (SCREEN SHARING)	Click here for GoToWebinar
INVITEES	POC-ITWG members

ITEM	TOPIC	PAPERS	RESPONSIBLE	TIME
1.	Welcome and introduction	***Item_01: RWG/ITWG meeting notes (5 Apr)***	AEMO	13:00 – 13.10
2.	Update on Industry Test for EN/MC planning		AEMO	13:10 – 13:25
3.	Industry Test Strategy – final	***Item_02: Final Industry Test Strategy version v1.0*** ***Item_03 Industry Feedback to v0.2***	AEMO	13:25 – 14:00
4.	Industry Test Plan - Phase 2 (B2B)	***Item 04 DRAFT POC B2B Industry Test Plan (Phase 2) v0.1***	AEMO	14:00 – 14:30
Tea/Coffee break				14:30 – 14:45
5.	Industry Test Phase 3 (Market trial) – approach and timeline for planning		AEMO	14: 45 – 15:15
6.	Agree actions and next steps		AEMO	15:15 – 15:30