



# POWER OF CHOICE IMPLEMENTATION PROGRAM

INDUSTRY TEST PLAN EN/MC (VERSION 0.1)

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## 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)



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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.<sup>1</sup>

### 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<sup>2</sup>
- Embedded Networks (EN) rule change<sup>3</sup>

The following updated retail market procedures are relevant to this Industry Test Plan:<sup>4</sup>

- 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).
- Bilateral communications outside AEMO's market systems.
- 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.

<sup>1</sup> See AEMC website, <http://www.aemc.gov.au/Major-Pages/Power-of-choice>.

<sup>2</sup> Rule made; AEMC final rule determination published 26 November 2015.

<sup>3</sup> Rule made; AEMC final rule determination published 17 December 2015.

<sup>4</sup> 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>



## 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	Market Readiness Strategy
2	Industry Test Strategy
3	Registration and Accreditation Plan



## 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	Registration for Industry Test (EN/MC)	13 February 2017 – 3 March 2017	All
5	POC ITWG meeting – discuss feedback and second draft of Industry Test Plan (EN/MC)	7 March 2017	All
6	POC ITWG meetings/teleconferences – detailed planning Industry Test Plan (EN/MC)	March 2017	All
7	POC-ITWG meeting – review final Industry Test Plan (EN/MC)	24 March 2017	All
<b>8</b>	<b>Phase 1: Pre-production available – EN/MC</b>	3 April 2017	All
9	Industry Test (EN/MC) - execution	3 April – July 2017	All



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

### 3.1 Industry Test (EN/MC) objectives

The objective of the Industry Testing (EN/MC) is to support industry's operational preparedness for the "go-live" date by providing market participants the 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.<sup>5</sup>

### 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.
  - 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
  - aseXML schema changes

### 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.

<sup>5</sup> Sample aseXML documents also available, see [http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/IT-systems-and-change/aseXML\\_standards/aseXML-Document-Samples](http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/IT-systems-and-change/aseXML_standards/aseXML-Document-Samples)





## 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 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](mailto: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 the scenario priority.
- 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

Participants are responsible for identifying the test data required for executing their test cases. All pertinent test data will be vetted with the other related participant(s) that will be engaged with those specific tests run in the cycle and agreed upon.

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.

#### 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 participant matrix and test schedule.

### **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.



## 5. INDUSTRY TEST EXECUTION APPROACH

### 5.1 Pre-requisites

New participants will have commenced registration or accreditation activities as required.

### 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.
- Internal testing complete.
- 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.

### 5.3 Exit criteria

Exit criteria for the text execution phase include:

- Successful completion of all high-priority test scenarios.
- No outstanding severity 1 or 2 defects.
- Any open defects (severity 3 or 4) have agreed resolutions.

### 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, i.e. real time. 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.

In addition to the HP SAAS QC updates, participants will complete a Status Traffic light report on a twice-weekly basis. This report will detail:



- All test scenarios for that participant
- Paired participant (if applicable)
- Status:
  - Completed (green)
  - In progress (yellow)
  - Blocked (red)
  - Failed (red)
  - Not Started

## 5.5 Defect management

The defect management process is as detailed in the Industry Testing Strategy.

## 5.6 Test process

AEMO will initially schedule twice weekly 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 asked to submit Status Traffic light reports prior to the stand-up meetings.

These meetings will be:

- Scheduled twice weekly (e.g. on Tuesday and Thursdays 10:00 am to 10:30 pm (AEDT))
- 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. All participants to confirm details prior to meeting.

## 5.7 Test reporting

The progress of the Industry Test can be monitored on a continuous basis by all market participants using HP SAAS QC.

Regular reports 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 execution summary by participant:
  - Planned count versus actual count
  - Planned % versus actual %
- Defect summary:
  - 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-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 all test reports using data from HP SAAS QC and inputs provided by participants.



## APPENDIX A. REGISTRATION

The following information is to be submitted to [POC@aemo.com.au](mailto: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	<i>Retailer X</i>	<i>RetX1, RetX2</i>	<i>NSW,QLD</i>	<i>Existing</i>	<i>3 April 2017</i>
2	<i>ENM X</i>	<i>TBA</i>	<i>NSW,QLD</i>	<i>In progress – pre-prod credentials due mid-May 2017</i>	<i>1 June 2017</i>
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](mailto:POC@aemo.com.au)

**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 – test version of actual system		
2	Completed internal testing (e.g. System Testing and System Integration Testing)		
3	Connectivity confirmed		
4	HP SAAS QC accessible and usable		
5	Test planning completed and understood – test processes and schedule, scenarios and scripts		
6	Test systems are pre-populated with test data		
7	HP SAAS QC configured with all test information		
8	Appropriately skilled resource capability available to execute and support testing		