

OPERATING PROCEDURE

IT CHANGE MANAGEMENT PROCEDURES MANUAL

PREPARED BY: AEMO

DOCUMENT NO: Enter Document ID

VERSION NO: 6.6

STATUS FINAL

Approvals

The undersigned have approved the release of Version 6.7 of AEMO's IT Change Management Procedures Manual.

Title	Signature	DATE
Executive General Manager, Operations		
Executive General Manager, IMT		
General Manager Systems Operations		

Table of Contents

1.1	About this Document	8
1.2	Who should use this Document?	8
1.3	What help is available to assist in using the Change Management Process?	8
2.	CHANGE MANAGEMENT	8
2.1	Objectives and Principles	8
2.2	Definition of Change	9
2.3	Scope	10
2.4	Change Management Criteria	11
2.5	Implementation of the Change Management Process	12
2.6	Market Impact	12
2.7	Change to the Change Management Process	13
3.	AUTHORISATION FOR CHANGE TO PROCEED	13
4.	AER RESPONSIBILITY	15
5.	PARTICIPANT INVOLVEMENT	16
5.1	Dispute Resolution	17
6.	ROLES AND RESPONSIBILITIES	17
6.1	Change Developer	17
6.2	Change Implementer	18
6.3	Change Installer	19
6.4	Change Manager	19
6.5	Database Team Leader	19
6.6	Delegated Authority	19
6.7	Executive	20
6.8	Senior Manager Electricity Market Service Delivery, Information Management and Technology	20
6.9	Help Desk	20
6.10	Manager of Networks	20
6.11	Nominated Client	20
6.12	System Owner	21
6.13	User Group	22
6.14	Change Management Working Group	22
7.	CHANGE MANAGEMENT PROCESS	23
8.	CONTROLLING AND PERFORMING CHANGES	26
8.1	Initiation sub-Processes	28
8.1.1	Initiating a Change	28

8.2	Assessment Sub-Processes	28
8.2.1	Change Evaluation and Assignment	28
8.2.2	Change Assessment	29
8.2.3	Change Registration	30
8.3	Approval sub-processes	30
8.3.1	Change Authorisation	30
8.4	Implementation sub-Processes	31
8.4.1	Change Build	31
8.4.2	Release Schedule	32
8.4.3	Change Notification	32
8.4.4	Promotion of Change to Production	33
8.4.5	Change Completion	35
8.5	Change Tracking	35
9.	RESPONSE WINDOWS	36
10.	RELEASE MANAGEMENT	37
11.	CHANGE MANAGEMENT CONTROL FORMS	39
11.1	Change Assessment Form	40
11.2	Change Implementation Form	40
12.	CHANGE MANAGEMENT RECORDS	40
12.1	Change Management Database	40
13.	ATTACHMENT 1 – USER GROUPS: TERMS OF REFERENCE	40
13.1	Purpose	40
13.2	Authority	40
13.3	Membership	41
13.4	Responsibilities	41
14.	ATTACHMENT 2 – CHANGE MANAGEMENT WORKING GROUP: TERMS OF REFERENCE	41
14.1	Role	41
14.2	Membership	41
14.3	Administration	42
14.4	Agenda for Committee Meetings	42
15.	ATTACHMENT 3 – CHANGE MANAGEMENT REVIEW COMMITTEE	42
15.1	Role	42
15.2	Membership	43
15.3	Administration	43
15.4	Voting Rights	43
16.	ATTACHMENT 4 – KEY CONTACTS	43
16.1	Other enquiries	44



Change History

Draft 0.1	15 July 1998	Robert Feil	Initial Draft Version – including Change Control Meetings and Reviews
Draft 0.2	21 Aug 1998	Robert Feil	First revision – updates to reflect changes to processes and current actions
Version 1	11 Sept 1998	Robert Feil	Initial formal release – reflects recommendations to Draft Versions
Version 2	8 Oct 1998	Robert Feil	Updated release – reflects current status (OfficeNet inclusion) and minor changes to operational procedures.
Version 3	20 Oct 1998	Robert Feil	Updated release – reflects changes to procedures for handling PIR initiated Changes and to correct errors in the spelling of Names
Version 4	20 Nov 1998	Stephen West	Draft updated release – reflects changes to procedures: <ul style="list-style-type: none"> • to have all changes assessed and authorised by the Executive before the change is progressed to Production • to specify procedures for implementing emergency changes • to provide access to the Change Management System for Participants
Version 4.1	23 Nov 1998		Draft updated release – reflects changes to procedures: <ul style="list-style-type: none"> • added section for Change Calendar
Version 4.2	27 Nov 1998	Stephen West	Draft Updated Release – reflects changes to Change Categories requested by Change Control Working Group
Version 4.3	30 Nov 1998	Stephen West	Approved by the Executive for release for NEMMCO and Participant comment

Final

Version 4.3.1	10 Dec 1998	Stephen West	Draft update on V 4.3, at Participant request to include control forms: <ul style="list-style-type: none"> • Project Issue Report • Change Request • Change Implementation
Version 4.4	15 Jan 1999	Stephen West	Draft update to accommodate NEMMCO and Participant feedback on Version 4.3. Major changes: <ul style="list-style-type: none"> • Remove the concept of “emergency change”, so that change is defined with reference to a Managed Product List, and all changes are managed in a similar manner. • Inclusion of NECA requirements • Inclusion of Participant involvement
Version 4.5	22 Jan 1999	Stephen West	Draft update to accommodate NEMMCO feedback on V4.4. Major changes: <ul style="list-style-type: none"> • Design of the Forms used, and changes to names of the Forms • “Dispute Resolution” heading changed to “Participant Involvement” • Title of “Change Management Committee” changed to “Change Implementation Committee” • Change to titles of Change Management Forms.
Version 5.0 Draft	3 Feb 1999	Stephen West	Approved by NEMMCO GMs for release for public comment
Version 5.1 Draft	22 Apr. 1999	John Beale	Incorporates outcomes of the NRF and NGF Submissions and subsequent discussions.
Version 5.1 Final	7 May 1999	John Beale	Incorporates final amendments requested by NGF and NRF 7 May 1999
Version 5.2	7 June 1999	John Beale	Version 5.1 Final draft accepted and republished as Version 5.2
Version 5.3	24 Aug 1999	John Beale	Introduce the terms Priority and Market Impact to replace Severity and modify

Final

			PIR, CAF and CIF templates accordingly and publish as Version 5.3
Version 5.4	May 2000	John Beale	Review of Change Management Procedures to refine and clarify some definitions and operational issues
Version 6.0	August 2001	John Beale	Changes to these procedures in line with agreement reached at the Change Management Review meeting held 10 August 2001
Version 6.0a	December 2001	John Beale	Revert Nominated Client section to previous wording prior to version 6.0 and include the 15 Business day response time limit
Version 6.1	January 2002	John Beale	Remove specific Change Coordinator role and associated references with Change Manager
Version 6.2	December 2004	John Beale	Replace all references to NRF with ERAA and Change Management Review meetings to be held at least once every 12 months instead of 6 months.
Version 6.3	December 2005	John Beale	Replace all references to NECA with AER and National Electricity Clause 3.17.1 with National Electricity Rules Clause 3.17.1.
Version 6.4	December 2006	John Beale	Changes to the Section 13 – Attachment 2 Change Management Working Group – Terms of Reference. Meetings held monthly instead of fortnightly and addition of Technology services and Office Systems to list of attendees.
Version 6.5	December 2007	John Beale	Replace all references to PIR with Helpdesk VMWARE SERVICE MANAGER and also confirm in section 4 that NEMMCO will contact each participant who has raised an objection to a Change Notice in an attempt to resolve the issues raised.

Final

Version 6.6	June 2009	Peta Elms	Update all references to NEMMCO with AEMO.
Version 6.7	January 2012	Peta Elms	Refresh document to clarify information

1.1 About this Document

This document describes the AEMO IT Change Management Process that applies to all changes to the IT environment for market systems, real time systems, and office systems.

1.2 Who should use this Document?

Anyone who needs to request or implement a change to any element of the Energy Market Systems, Energy Management Systems or any system or product included in AEMO's Managed Products List.

1.3 What help is available to assist in using the Change Management Process?

- AEMO's Change Manager is available to explain the process in detail.
- The document, Energy Market Systems IT Procedures Manual: Change Management, is available on AEMO's Web site.

2. Change Management

Change Management Standards are essential for the controlled and auditable implementation of changes to Energy Market Systems. This manual sets out the processes to be followed, and standards to be achieved, by AEMO in the management of change as it affects the various AEMO IT systems including the Energy Market Systems, Real Time Systems (EMS/SCADA), any system or product in the managed product list and associated computer hardware, software, voice and network systems for which it has responsibility.

These standards must not be deviated from when planning or implementing changes under the Change Management Process.

2.1 Objectives and Principles

- The objectives of the Change Management Process with respect to the Energy Market Systems environment are to:
 - enforce an evaluation of a proposed change in terms of its benefit, its cost, and risk to the systems, and the implications of the change to both AEMO and Participants;

Final

- ensure Participants are involved in changes to and development of product(s) identified in the Managed Product List as subject to the National Electricity Rules Clause 3.17.1 and / or has a Nominated Client other than AEMO;
- manage and track changes, to provide AEMO and Participants with an audit record of all changes, and to enable all parties to assess the impact and risk to market operations at any time via a clear snapshot of current and planned change activities;
- provide a defect-free introduction of changes;
- contribute to cost reduction by measuring the process and identifying sources of defects;
- ensure that all changes undertaken are tested against compliance with the requirements of the National Electricity Rules; and
- ensure that the process of change supports, and forms part of the Australian Energy Regulators, (AER) authorisation of software changes as set out in the National Electricity Rules Clause 3.17.1.

The principles of Change Management are:

- All changes to the AEMO IT Systems environment must be authorised by the Executive.
- The System Owner has overall ownership of the change and is accountable for the change from assessing the initial request, development of the change and implementation of the change to the Production and if appropriate the Pre-production environment.
- The Change Management Process is the method for managing and controlling changes in the Energy Market Systems environment, but is not responsible for the solution development or the actual implementation of the change.
- The Change Manager coordinates the movement of the change from initiation through assessment and approval to implementation.

2.2 Definition of Change

In terms of these IT Change Management Procedures a change is defined as the addition of any item to, the deletion of any item from, or the alteration of any item on AEMO's Managed Product List (MPL).

For the purposes of these procedures changes are defined in terms of three categories namely:

- A change which relates to the development of a new program or which alters the functional characteristics of an existing application used in the Energy Market. This type of change requires both notification and approval by Participants and, where appropriate Nominated Client approval before any development work or implementation is undertaken.
- A change which is to fix a fault with the operation of an existing application used in Energy Market Systems. This type of change is required to make the program conform to the most relevant, approved functional specification. In such cases, notification is required advising Participants and Nominated Clients that a change to the program is to be made. However, as the change is to ensure the application used in Energy Market Systems conforms to a previously agreed functional specification, Participant and / or Nominated Client approval for this type of change is not necessary.
- Changes which are of an operational/housekeeping status, typically implemented during normal day-to-day market operations, and this type of change is managed differently to other changes. Operational/housekeeping changes will be implemented under a documented procedure and the procedure will form part of the Managed Product List. The change will usually be restricted to modifying standing data, and routine systems administration and housekeeping operations. This type of change could be scheduled on a regular or an irregular basis, and its scheduling specified in the documentation.

2.3 Scope

AEMO maintains a Managed Product List (MPL) of hardware, system and application software, procedures, and environmental facilities that are integral to the operation of the Energy Market Systems, the Real Time Systems, and applications used in Energy Market Systems. The Managed Product List is maintained as a separate document by the Change Manager as part of these procedures

The Managed Product List defines the scope of the Change Management Process for changes initiated by AEMO staff, Market Participants, and AEMO's contracted service providers. Any changes to an item contained in the MPL must be undertaken using the processes outlined within this manual.

Specific exclusions from the Change Management Process are:

- Any change control processes that AEMO's IT development methodology uses to manage versions of system modules during development. When those changes have been integrated and tested as a release, the release comes under the Change Management Process for its promotion both to the Pre-production environment and the Production environment.
- Any change control processes that service provider's use internal to their own organisation. AEMO's Change Management Process must be followed only when the service providers propose to implement a change to that part of the AEMO system under their control.

2.4 Change Management Criteria

The following are criteria by which the Change Management Process can be evaluated:

- All items on the Managed Product List are subject to change control and tracking
- All changes to the Managed Product List are authorised as specified in the Change Management Process.
- The Change Manager shall be responsible for the management and Production of the Managed Product List.
- There will be one source of information (the AEMO Change Management Database and associated documentation and forms concerning the status of every change including history).
- There will be a single change request process used that includes, as a minimum, a description of and reasons for the change, success criteria, prerequisite changes, appropriate management authorisation, requested implementation date and backout procedures to restore previous conditions.
- There will be a coordinated set of Release Plans (release schedules) for all changes which are not related to faults.
- There will be a formal technical evaluation and audit against standards for proposed changes to assess the test and backout procedures and the impact on performance and availability.
- Management approval will be required from all appropriate functional areas before implementation of a change.

- Management reports will be prepared that include the number of successful and unsuccessful changes per month, by category, by source and by trends. The report will also provide an analysis of the unsuccessful changes, together with a statement of the effects of the failures. The reports will be public documents available to Participants.
- The AEMO Change Manager will contribute to the integrity of items on the Managed Product List by ensuring all changes have the appropriate sign-offs, as specified on the Change Implementation Form, and preventing the promotion to Production status of changes that do not meet this condition.
- There will be a periodic (six monthly) audit to ensure that the Managed Product List item is as defined in the inventory.
- Participants will be periodically (initially annually) surveyed for their assessment of the working of the Change Management Process.
- By the Market Auditor's periodic review of the application of AEMO's IT Change Management processes.

2.5 Implementation of the Change Management Process

There has been a phased approach to the implementation of change management processes and procedures, which covers all changes to AEMO's Managed Product List. The Change Manager will be responsible to ensure the Change Management Process is reviewed at least once per year as part of AEMO's continuous quality improvement, and that the review will seek comment from Participants.

Another aspect of the implementation of the Change Management Process concerns the Australian Energy Regulators (AER) responsibilities under the National Electricity Rules Clause 3.17.1. The AER has at this stage agreed to continue the process developed by NECA that will not require specific authorisation for individual changes if AEMO operates a change process that has been agreed to by the AER and Participants. (See AER Responsibility in section 4 below for further details). AEMO's Managed Product List identifies relevant software subject to the National Electricity Rules Clause 3.17.1 and / or which have a Nominated Client other than AEMO.

2.6 Market Impact

The term Market Impact is used to specifically indicate the impact the change request has on the National Electricity Market and is specific to the Electricity Market Systems and associated electricity products, services and facilities as listed in the Managed Product List. Five categories of Market Impact are defined and these are:

1. Market Impact – (Unscheduled Outage)

Final

Fault only: A fault has stopped or will stop a component of the market systems and no work-around is available that can be quickly and securely implemented. A fix is required within 24 hours.

2. Market Impact – (Workaround Exists)

Fault or Change: A fault has stopped or will stop a component of the electricity market systems, or has significant business implications to the electricity market, or AEMO has implemented a change that has affected one or more participants, and a work-around is available that can be quickly and securely implemented. The fix is required within 14 days.

3. Market Impact – (Scheduled Outage / Scheduled Release)

Fault or Change: The request is to fix a system, network or service fault, or to add new functionality. The request will be implemented in the next planned release.

4. Market Impact – (Not Critical)

Change or Observation only: The issue is not critical and has no significant effect on the use or operation of the system. A fix may be taken up in a future release.

5. Market Impact – None

Change or Observation, which has no impact on the electricity market.

2.7 Change to the Change Management Process

The Change Management Process and in particular these procedures may be reviewed from time to time to ensure they continue to meet AEMO and Participant requirements. Changes to these procedures must be approved by the IT Change Management Review Committee. The Committee will meet as required but at least once every twelve months to consider changes to these procedures or any other matters relating to the Energy Market IT Change Management Process.

Participants and AEMO may request changes to these procedures by forwarding such a request to the AEMO Change Manager who will upon receipt of a request organise for the meeting to be convened and for the distribution of any papers and associated documentation. The Change Management Review Committees role and membership is described in Attachment 3 of these procedures.

3. Authorisation for Change to Proceed

Authorisation from the AEMO Executive is mandatory for all change categories. This includes all changes requests including those with an Electricity Market Impact classification 1 (Outage). Participants will be consulted throughout the change process where appropriate but will not have authorisation power. In the event of a dispute on whether a change

affecting the Energy Market should be authorised to proceed or not, the process outlined in Clause 8.2 of the National Electricity Rules will be followed.

The Executive can delegate authority to appropriately qualified people (referred to in this document as the Delegated Authority) to authorise a change. The delegation will be documented and will form part of the Managed Product List, and will state as a minimum:

- specification of the areas covered by the delegation;
- the extent of the delegation and any restrictions on the authority;
- the period for which the delegation applies;
- that the Delegated Authority has had the appropriate education and training to carry out the delegated task;
- any reporting actions required of the Delegated Authority; and
- any review period for the delegation.

Documented administrative procedures that have been approved as such by the Executive can be implemented without individual approvals from the Executive as long as each change is implemented according to the authorised procedure. However, changes to the administrative procedures require reauthorisation by the Executive.

The Executive authorisation will be based on a business evaluation. The Executive requires considerable information on the proposed change to evaluate and authorise a change request, including:

- a full description;
- a list of significant benefits expected;
- the impact of not proceeding with the change;
- how Participants might be affected;
- the impact on performance (covering business issues such as Dispatch times through to the technical such as network response);
- broad estimates for cost and the project work effort for implementing the change except where the change is a routine maintenance activity;
- business and technical risk;
- consequential impact of change;
- test requirements for AEMO and for Participants;

- forecast cut-over plan;
- estimated implementation date;
- where appropriate, specification of criteria that must be met during the development of the change and its implementation to Production. If these criteria are not met, the change must be brought to the Executive for review.

This information will be provided by the relevant technical and business areas of AEMO, and will be recorded on a Change Assessment Form (CAF). The Executive authorisation is formally recorded as either a signature on this form or an electronic transmission to which the specific CAF document is attached and referencing the specific CAF No.

4. AER Responsibility

Section 3.17 of the National Electricity Rules specifies the Australian Energy Regulators (AER) role with respect to AEMO software associated with Energy Market Systems. Specifically, the National Electricity Rules prohibits AEMO from altering, reconfiguring, reprogramming, or otherwise modifying or enhancing any computer software required under chapter 3 of the National Electricity Rules for the operation of the market, unless such changes have been duly authorised by the AER.

The AER does not propose to give specific authorisation to each change under the National Electricity Rules Clause 3.17.1 but rely on a general authorisation of any changes that require the AER's approval or otherwise would alter calculation methodologies or affect the content, format or timing of data made available to the Market subject to the following conditions:

- the proposed change must have been subject to the change management procedures set out in the currently approved version of the AEMO IT Change Management Procedures Manual between the AEMO and the Market Participants. In particular, all market participants must have been consulted about the proposed change. Changes which involve migration via Pre-production are to be advised to the Market Participants and shall remain in Pre-production for at least one month before it is promoted to Production; In cases where Market or National Electricity Rules requirements conflict with Participant requirements then the Market or National Electricity Rule requirements are to prevail on the understanding that Participants will be consulted and advised of the situation.
- if, within two weeks of notification to all market participants that a proposed change will be released to Pre-production and where this timing does not conflict with the Market Impact timing or National Electricity Rule requirements and

Final

6 or more participants give notice to the AER that they object to the proposed change then the proposed change must be withdrawn.

- Where a proposed change is withdrawn by AEMO in the circumstances set out above, either participants' objections must be resolved and the change must be re-submitted through the agreed change management procedure or AEMO must put forward a specific application for authorisation of the proposed change by the AER. The AER will then consult all market participants, including the participants that initially object to the proposed change, before deciding whether or not to authorise it.

This Procedure is intended to facilitate timely implementation of essential and agreed software changes whilst ensuring an effective right of appeal to the AER by aggrieved Market Participants.

5. Participant Involvement

AEMO is committed to Participants being involved in changes to, and in the future development of the Energy Market IT systems, to different degrees depending on the changes proposed. Participants have specifically requested involvement with changes to products which are covered by the National Electricity Rules Clause 3.17.1 and / or for which they are a Nominated Client. These products are listed and identified in the Managed Product Listing. In addition, User Groups have been established to review products of mutual interest and propose changes to AEMO for consideration.

The process will flow as follows:

- The User Groups (initially established for CSV files and Parser, InfoServer, Settlements and Ancillary services, and PIMMS and the replacement bidding system) and other groupings of Participants will raise issues and propose changes, and determine priorities for each release. Submissions from outside the User Groups might be referred to the relevant User Group or the submitters might be asked to demonstrate support from a wider proportion of Participants.
- AEMO will analyse the change request and if the request is approved, it will be placed in a nominated release. Release Plans will be developed and project managed by AEMO and will be published.

- Where a change is contemplated the Nominated Client(s) for the product affected, as registered in the Managed Products List, will be advised and consulted.
- The National Generators Forum, the National Retailers Forum, and Participants generally will have opportunity to comment or raise issues before major changes are developed, and will be able to test releases in a Pre-production environment before the change is promoted to Production status.
- AEMO will issue change notices and where appropriate give Participant(s) a 15 business day period from the date of issue of the Change Notice to respond. In the event that a response is not received within the 15 Business day period the change will be deemed as being approved by the Participant(s). Any objection to a change must be supported by a reason and AEMO will contact each participant who has raised an objection in an attempt to resolve the issues raised. If AEMO does not receive at least six objections to the Change Notice then the change will be deemed as approved by the Market.

5.1 Dispute Resolution

In this context, it is possible that differences of opinion will arise between AEMO and the national forums, and between Participants. Where disputes about changes to the systems exist between AEMO and a representative number of Participants, the process outlined in Clause 8.2 of the National Electricity Rules will be followed.

6. Roles and Responsibilities

The following are the key roles in the Change Management Process. It is important to note that several roles may be performed by one individual (for example, the System Owner may also be the Senior Manager Electricity Market Development or Senior Manager Electricity Market Operations), and alternatively several people could fulfil one role (for example, the task of assessing a change might be performed by several people). Roles therefore should not be confused with people. These roles and responsibilities are specifically elements of the Change Management Process and are not necessarily aligned to the AEMO organisation structure.

6.1 Change Developer

The Change Developer is the person assigned to initiate the change assessment process and manage the development of the change. The Change Developer must be an AEMO employee. In the case of a contracted supplier completing the implementation, the AEMO employee overseeing the change will be nominated the Change Developer.

- Responsibilities include:
 - Identification of the service or technical need for the change.
 - Definition of the success criteria for the change.
 - Accountability for the correctly categorising the change.
 - Proposing the change solution in technical terms as appropriate.
 - Seeks the approval to proceed via the Change Assessment Form process.

6.2 Change Implementer

The Change Implementer is the person assigned to manage the promotion of the change to the Pre-production and / or Production environments. The Change Implementer's responsibilities include:

- Contributing effort and skill.
- Obtaining approval to proceed via the Change Implementation Form.
- Overseeing the change.
- Assisting in planning the technical execution of the change.
- Ensuring that those implementing the change have appropriate skills and training and adhere to AEMO's standards and procedures.
- Verifying that building and testing of the change has been completed.
- Verifying technical function of the change after activation.
- Supervising the backing out of the change, if necessary, as specified in the plan documented on the Change Implementation Form.
- Should be present during the implementation of the change and for a period of at least 4 hours after the change has been implemented.
- Advising the Change developer of the operational status of the change.
- Recording and filing of all documentation, test results and reports associated with the change in a format suitable for, and accessible to, inspection and audit requirements.

6.3 Change Installer

The Change Installer is the person who is knowledgeable about the operating system, application and / or database standards and actually performs the installation of executable images, data base tables or data constants into the Pre-production/ Production system.

6.4 Change Manager

The Change Manager's responsibilities include:

- Managing Production and maintenance of the Managed Product List.
- Coordinating the movement of change requests through the various stages of the Change Management Process.
- Controlling and maintaining the change management database, the Managed Product List and associated documentation and forms.
- Monitoring the Release Plans and resolution of conflicts in co-operation with the Project Services Group.
- Managing the interface to the AEMO and Participants' business processes.
- Maintaining the emergency contact lists for Participants' sites.
- Managing the change approval process.
- Convene the Change Management Working Group meetings as required.
- Advising AEMO, the AER and Participants of the operational status of the change.
- Verifying closure of change.

6.5 Database Team Leader

The Database Team Leader is responsible for managing the Energy Market Systems' database environments used in supporting the National Electricity Market and is required to approve all changes relating to the MMS database and IT network environments.

6.6 Delegated Authority

AEMO Leadership Team (i.e., the Chief Executive Officer or Executive General Manager) may, from time to time, delegate their authority to another member of staff. The Change Management Procedure provides for the use of this Delegated Authority.

All delegations of authority must be in writing to the Delegated Officer, must state the period for which the delegation applies. An electronic copy of this authority must be forwarded to the Change Manager or Delegated Officer to ensure appropriate delegations are recorded for future audit reference.

6.7 Executive

The AEMO Leadership team within AEMO, comprising the Chief Executive, Executive General Managers and Senior Managers. The Executive role includes:

- Assessment of the benefit of the change in relation to the cost.
- Assessment of the business risk and impact of the change.
- Ensuring that the technical feasibility, risk and effect of the change have been adequately assessed.
- Where appropriate, specifying criteria that if not met throughout the implementation of the change will trigger a review of the change progress.
- Approval for the change to be developed prior to implementation, or rejection of the change request.

Where appropriate ensure the proposed change complies with the National Electricity Rules.

6.8 Senior Manager Electricity Market Service Delivery, Information Management and Technology

The Senior Manager Electricity Market Service Delivery, Information Management and Technology is responsible for maintaining the security, integrity and reliability of all systems associated with the operation of the National Electricity Market and is required to approve all changes.

6.9 Help Desk

The Help Desk may be the initial contact point for change requests, both from internal and external parties. Regardless of whether the change request is logged internally or via the Help Desk as a VMWARE SERVICE MANAGER call they are to be forwarded to the appropriate System Owner for evaluation.

6.10 Manager of Networks

The Manager of Networks is responsible for managing the IT Network environment supporting the Energy Market Systems and is required to approve all changes relating to the IT Network environment.

6.11 Nominated Client

AEMO and Participants have a common goal of best practice in the development of the Energy Market IT systems. The Nominated Client is a way to facilitate the consultation and approval steps that occur throughout the development life cycle, but it stands or falls on a cooperative approach between AEMO and Participants.

Different parties will have an interest in specific items on the Managed Product List. All parties that have an interest in a particular product are generically referred to as the Nominated Client for that product, and the interest is recorded in the Managed Product List. The Nominated Client could be, for example, the AEMO Market Operator, or a User Group. In many cases, the Nominated Client will be obvious, but a User Group, for example, will choose its own Nominated Client that might be one or more individuals representing the Group, or the whole Group.

The role of the Nominated Client is two-fold:

- For changes to the product of interest, the Nominated Client will need to approve the change at various stages of the change development, i.e. functional specification, release planning and acceptance testing. In the context of this Change Management Process, the Nominated Client will have to provide a sign-off on the Change Implementation, indicating that the product can be promoted to Production status within 15 business days of Notification of the Change. In the event that a response is not received within the 15 business day period the change will be deemed as being approved by the Nominated Client.

For Changes to other products, the Nominated Client will be consulted where appropriate for possible impacts on the product of interest.

6.12 System Owner

In the context of Change Management, the System Owner is the AEMO person in charge of the technical and business IT assessment of the requested change to the system.

Responsibilities include:

- Evaluating the initial request for a change and assigning the request to the Change Developer for assessment and Change Implementer for implementation.
- Proposing a date by which the change will be implemented.
- Coordinating the business assessment which is to include AEMO, User Groups and Participants as appropriate
- Reviewing and sign off on the Change Assessment Form and / or Change Implementation Form and forwarding of the form to the next authority for approval.
- Managing the development cycle to produce the solution required to implement the change.
- Packaging the changes for promotion to the Production environment.

- Managing the business assessment with the Change Developer where appropriate.
- Identifying the affected parties.
- User groups will be informed and involved in the assessment of the change request
- Managing the notification, as required.
- Ensure performance acceptance testing of the change has been completed and verifying its correct operation after implementation.
- Completing the post change details.

6.13 User Group

The User Groups exist to foster cooperative development with AEMO on the direction of development of the AEMO market systems. Terms of Reference for the operation of the User Groups are provided in Attachment 1.

In summary, the Group can only propose what features should be included in a system release – it has no power to direct AEMO to undertake a particular system modification or system development. The User Group will advise AEMO on:

- priority of all requests for changes to the AEMO market systems;
- what changes might be implemented in the system release cycles;
- issues with the published release cycle;
- release management procedure; and

advise AEMO on the Technical and / or Business risks if any, relating to the proposed change.

6.14 Change Management Working Group

The Change Management Working Group has a focus on the promotion to Production status of items on AEMO's Managed Product List, and its Terms of Reference are provided in Attachment 2. In summary, the Working Group provides a forum to review at the operational level change management activities on a regular basis. The Change Manager will carry issues arising from the Committee to AEMO senior management.

7. Change Management Process

The major steps within the Change Management Process are:

- **Change Initiation:** involved with initiating and logging the change request.
- **Change Assessment:** involved with assessing the business and technical issues from both an AEMO and Participant point of view.
- **Change Authorisation:** involved with authorisation for the change to be progressed or the rejection of the change. Authorised changes are allocated to a particular release as part of this step.
- **Change Implementation:** involved with the planning, scheduling and implementing of changes to AEMO's Managed Product List.
- **Post Assessment/Implementation Review:** involved with documenting whether the change was successfully completed as specified or not.
- **Change Closure:** involved with checking all fields and closing the change request.

Change requests may be initiated by Participants, AEMO Service Providers and AEMO and processed according to the following:

- **Participants** register a change request through the AEMO Help Desk which results in a VMWARE SERVICE MANAGER call being raised. All Helpdesk calls are to be reviewed regularly by the appropriate System Owner. If the Helpdesk call is deemed to be worthy for development the System Owner is to assign a Change Developer to the Helpdesk call and raise a Change Assessment Form seeking approval from the Executive before any further work is undertaken on the Helpdesk call. If the Helpdesk call is rejected the person requesting the change is to be notified and if appropriate may refer the issue to the AER for dispute resolution
- **AEMO Service Providers** (e.g. Telstra) are responsible for their own development methodologies and change management processes. However, any change recommended by the Service Providers to AEMO systems must be supported by documentation from the Service Providers recommending the change and be formally recorded as supported and approved for implementation in the minutes of the respective AEMO operations meeting.

- **AEMO initiated change** requests may be either formally registered through the Help Desk as a VMWARE SERVICE MANAGER call or by directly raising a Change Assessment Form which is to include all the details normally recorded by the Helpdesk call or local change request register.

Unless otherwise stated in these procedures Change Assessment and Change Implementation Forms are required to be fully approved for all changes prior to any development or implementation work taking place.

Furthermore, except when timing constraints conflict with Market Impact or National Electricity Rule requirements and where the priority is NOT classified as either urgent or high at least 7 calendar days' notice should be allowed for the processing of a Change Assessment Form or Change Implementation Form. The AEMO Change Management - Process is illustrated in Diagram 1. The sub-processes that take place in each of the major steps are described in a later section of the document.

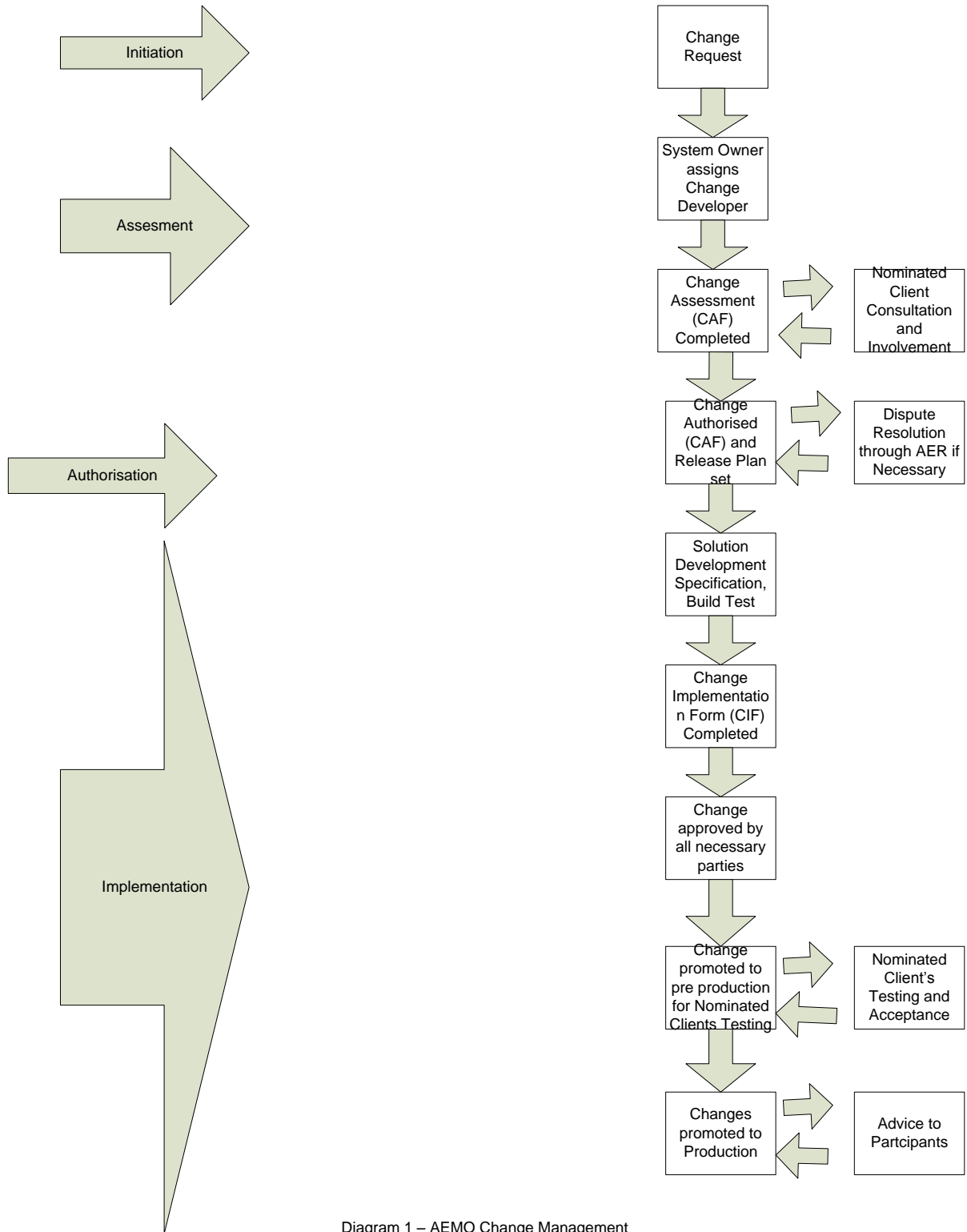


Diagram 1 – AEMO Change Management Process

The Change Management Process must be followed in all cases, and should not be deviated from when planning or implementing changes. However, the use of the Pre-production system is specific to Energy Market Systems changes and the change management process in such cases is further clarified in diagram 1. However, it is to be recognised that while many MMS changes will be migrated from test to preproduction and then to Production there will be instances when the migration path using the Pre-production system is not appropriate. In cases where such changes do not involve a product covered by the National Electricity Rules Clause 3.17.1 or does not have a Nominated Client other than AEMO, AEMO reserves the right to implement the change direct from test to Production when it considers such changes are appropriate and do not add any additional foreseeable risk to the market systems.

If the change involves a product for which a Nominated Client other than AEMO is specified in the Managed Product List, or the product is subject to the National Electricity Rules Clause 3.17.1 appropriate notices and agreement from Participants will be requested before such changes are implemented. In such cases if the change is to be implemented direct from test to Production agreement from the Participants will be specifically requested.

Serious system difficulties, that have stopped or will stop the operation of the Market, need to be repaired quickly to restore the market to normal operation. AEMO Executive may delegate authorisation to the relevant System Owner for emergency situations. In such cases the administrative issues (for example, creating the Change Assessment Form and/or the Change Implementation Form) might be deferred when a change is being implemented to manage an emergency situation. These forms must be completed at the earliest convenience.

Actions to effect a change in an emergency situation, as described above, should include an assessment of the impact of any change, a backout strategy and notification to affected parties. The change process is not completed until all relevant processes under the Change Management Procedure have been completed, albeit retrospectively.

8. Controlling and Performing Changes

Diagram 2 illustrates the process flow for the change request through each of the four major steps of Change Management, initiation, assessment, authorisation, and implementation. Each step comprises a number of sub-processes, and more detail is provided in following sections.

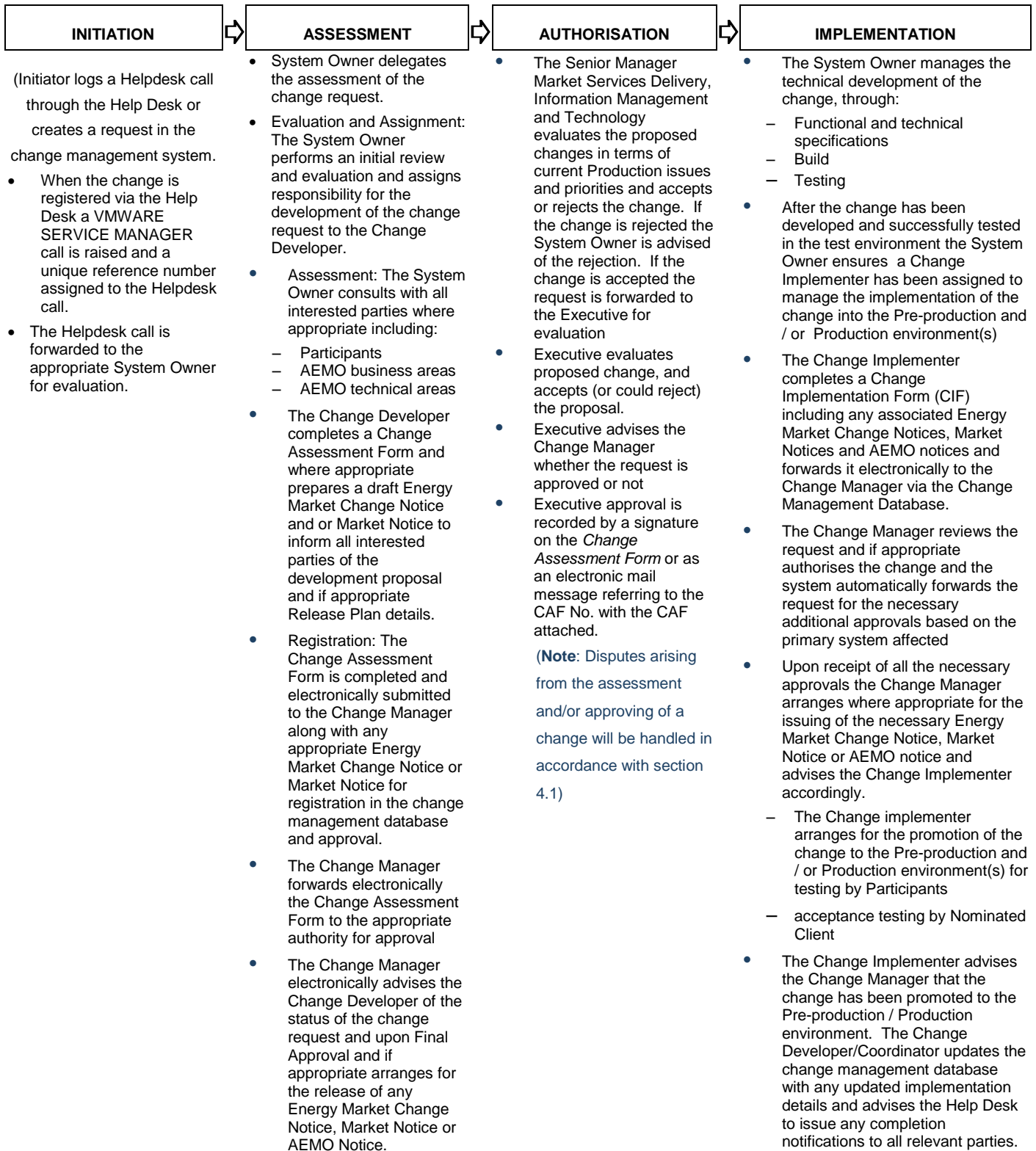


Diagram 2 – Process Flow for a Change Request

8.1 Initiation sub-Processes

8.1.1 Initiating a Change

The Change Management Process is triggered by the identification of a need to improve the current environment. Anyone may initiate a change, including individual Participants or the User Groups representing Participants.

Once a requirement for change is identified, a Change Request must be registered as a Helpdesk call through the Help Desk. The following are the responsibility of the Help Desk:

- Registering Help desk VMWARE SERVICE MANAGER call reference number;
- Forwarding the Helpdesk call to the appropriate System Owner or delegated officer.

The outputs of the change initiation sub-process will include:

- Either a completed Help desk registered call request, a locally registered change request or an appropriately completed Change Assessment Form.

8.2 Assessment Sub-Processes

8.2.1 Change Evaluation and Assignment

The System Owner performs an initial evaluation of the request to confirm the relevance of the request, and assigns responsibility for the technical development of the change to the Change Developer.

The following are the responsibility of the System Owner:

- determining whether this change is within the scope of the system;
- ensure a Change Developer has been assigned with responsibility for the technical development of the change request.

The outputs of the change evaluation and assignment sub-process will include

- A notification to the appropriate people that the request has been created and assigned.

8.2.2 Change Assessment

In the Change Assessment sub-process, the change is evaluated from an end user and business impact viewpoint as well as determining the technical feasibility, risk and effect of a change within the overall Production environment. Several Helpdesk calls or change requests might be included in the one assessment.

The following are the responsibility of the System Owner:

- Assigning a person to be responsible for the technical development of the change
- Managing the business assessment in collaboration with all interested parties, including:
 - Change Developer
 - Participants
 - AEMO business areas
 - AEMO technical areas
 - managing the technical assessment;
 - reviewing the assessment;
 - proposing the Release Plan under which the change will be promoted to the Production environment;

the completed Change Assessment Form is electronically submitted via the Change Management Database system and then electronically forwarded for all necessary approvals. The following are the responsibilities of the Change Developer under management of the System Owner:

- performing the technical assessment;
- ensuring that changes to be implemented are tested against compliance with the requirements of the rules;
- under the management of the System Owner, developing a proposed solution and estimate cost to implement;
- completing the appropriate sections of the change record, the Change Assessment Form.

The outputs of the change assessment process will include:

- An appropriately completed change record, the Change Assessment Form;

- A notification to the Help Desk and all other interested parties that the assessment has been completed.

8.2.3 Change Registration

Change Registration occurs in parallel with assessment. It is the formal recording of the change in the Change Management database that is used for tracking all changes made to the Production environment. It might be that several related individual requests or Helpdesk calls being combined in the one change, and submitted as a Change Assessment Form.

The outputs of the change registration sub-process will include:

- A change record entered in the Change Management database.
- The change (documented on the Change Assessment Form) forwarded to the appropriate personnel for all necessary approvals.

8.3 Approval sub-processes

8.3.1 Change Authorisation

The purpose of the Change approval sub-process is to evaluate the change in terms of cost, benefit and risk to the operation of the market, and to authorise the change to be developed.

Approval by the Executive is always required for the change to progress, and there will also be situations where approval from the Nominated Client is required.

The following are the responsibility of the Executive, and where necessary, the Nominated Client:

- ensuring a competent evaluation of the change has been completed;
- where necessary, specifying criteria or conditions under which progress of the change (through development to implementation) might be reviewed or halted;
- recording the approval by a signature or electronic approval on the Change Assessment Form.

The following are the responsibility of the Change Manager:

- Ensuring approval for the change to be either developed and / or implemented has been obtained from the Senior Manager Electricity Market Operations, Information Management and Technology and Executive;
- coordinating authorisation by the Nominated Client where necessary;

Final

- monitoring the approval sub-process;
- managing any issues with the change;
- managing rejected changes;
- notifying affected parties of the outcome (including rejection of changes) of the authorisation process.

The outputs of the Change Approval sub-process will include:

- A signed change record (may be electronically), the Change Assessment Form, from the Executive (and where appropriate, the Nominated Client) that the change can be progressed, or that the change is rejected.
- An updated record in the Change Management database reflecting the status of the change.
- Notification to all parties of the proposed change and schedule.

8.4 Implementation sub-Processes

8.4.1 Change Build

The purpose of the Change Build sub-process is to design, develop and test the change under which promotion of the change to the Pre-production and / or Production environment(s) will be managed. The objective is to perform and monitor all relevant actions to ensure implementation of the proposed change is free of defect.

The following are the responsibility of the System Owner:

- Ensuring a Change Implementer has been assigned with the necessary skills to manage the implementation of the change into the Pre-production and / or Production environments.

The following are the responsibilities of the Change Implementer:

- verifying that all tests have been completed successfully;
- Completing a Change Implementation Form for the change to be approved for implementation into the Production environment.

The outputs of the change build process will include:

- A completed and submitted Change Implementation Form.

- A tested and documented backout plan.
- Completed change checklists.
- Updated procedural, technical and configuration documentation.

8.4.2 Release Schedule

The Release Schedule specifically relates to MMS changes, which provide additional functionality and these normally, refer to changes which have a Market Impact classification of 3, 4 or 5. The purpose of the Release Schedule sub-process is to verify that all change details are completed and to commit the scheduled date and time of the change within the overall coordinated Release Plans. The objective is to ensure that the change meets all of the change management criteria and that there are no schedule conflicts.

The following are the responsibility of the System Owner:

- reviewing the change record details; and
- delegate scheduling the change to the appropriate person – to meet the expectations of the requestor and minimise impact on participants and end users.

The outputs of the change schedule sub-process will include

- A scheduled change ready for approval
- A scheduled change ready for implementation
- Registered and approved Change Assessment and Change Implementation Forms
- An updated consolidated change schedule
- A notification to the Help Desk that the release planning has been completed.

The intention is to issue two releases per annum on a half yearly basis by consolidating a number of changes into a single release level rather than issuing individual patches to products as and when problems of a medium to low priority are identified.

For all changes where there is a Market Impact classification other than 5, these will be communicated to Participants via Energy Market System Change Notices, Help Desk Bulletins and or User Group meetings and while the aim to go to two releases per year this is to the extent allowed for by the external forces on development.

8.4.3 Change Notification

One of the more critical elements of the Change Management Process is keeping all affected parties advised of the status of the change. The Change Manager will be responsible for these notifications. In particular, at change implementation, the Change Manager will, as appropriate arrange for:

Final

- Automatic e-mail advice to be sent to the Change Developer / Change Implementer and System Owner;
- Notifications to be sent where appropriate to Nominated Clients and Participants through an Energy Market Change Notice, Help Desk Bulletin and / or Market Notices;
- e-mail advice to be sent to the Energy Market or SCADA group – as appropriate for the change;
- e-mail to be sent to the Control Room Supervisors;
- A fully approved copy of the Change Assessment and Change Implementation Forms completed and saved in the change management database.

8.4.4 Promotion of Change to Production

The purpose of the Change Promotion sub-process is to manage and monitor the promotion of changes into the Pre-production and / or Production environment(s). The use of the Pre-production environment is specific to Energy Management System and while many Energy Management System changes will be migrated from test to Pre-production and then to the Production environment there will be cases when the migration path will involve the change being moved directly from the test to Production environment. In such cases where the change involves a product which has a Nominated Client other than AEMO or the product is subject to the National Electricity Rules Clause 3.17.1 appropriate notices and consultation with Participants will be facilitated before such changes are developed or implemented.

The objective is to monitor the implementation status to ensure that the implementation is being executed in accordance with the plan and the schedule.

The following are the responsibility of the Change Implementer:

- initiating the change plan;
- managing the execution of the change plan by:
 - supervising the installation of the change
 - ensuring the distribution of the change
 - activating the change
 - verifying that the change has been successful by testing the revised system
 - monitoring of the system and providing support for the agreed period

- confirming with system users that the new or revised system is operating as planned;
- monitoring the change execution
- backing out the change if necessary
- negotiating any changes to schedule
- including any change notifications which will be issued to the Help Desk for issuing on the appropriate day; notifying the Change Manager of any issues;
- arranging for Final Acceptance with the system users of the change;
- passing necessary and agreed documentation to affected system users;
- advising the Change Manager of any changed procedures and operational issues;
- advising the Change Manager and System Owner of the outcome of the change;
- Advising the Help Desk when the implementation has been completed and advising successful/unsuccessful message should be issued as soon as possible; and
- Complete the post assessment (CAF) and implementation (CIF) details.

The following are the responsibilities of the Change Manager:

- Ensuring all the details are appropriate; and
- Issue tasks to the Help Desk to issue change notifications on the appropriate day to the appropriate audience.
- close the CIF.

The outputs of the change implementation sub-process will include:

- Notification to problem management of any unexpected errors.
- Activated and verified or backed out changes.
- Cancelled changes.
- Notifications to relevant parties.

- Restored environments.
- A notification of the outcomes to the Help Desk.

8.4.5 Change Completion

The purpose of the Change Completion sub-process is to evaluate the completion status of the change and close the change record. The objective is to verify that the change was implemented in accordance with the specified change plan and that the desired output of the change was achieved.

The following are the responsibility of the Change Implementer:

- verifying the change details;
- performing the post implementation review ensuring all specified success criteria have been met;
- approving closure of any problem records if change was initiated to correct a problem;
- informing the Help Desk of the status; and
- documenting change closure.

The outputs of the change completion sub-process will include

- Post assessment/implementation review;
- Change Management database record updated.
- Change Manager closes the CAF/CIF.

8.5 Change Tracking

The purpose of Change Tracking is to ensure that the change proposal is moved through the relevant parts of the Change Management Process. Change Tracking operates through the complete life of the change, from initiation of the change proposal through to closure after promotion of the change to the Production system.

The following are parts of the Change Tracking process and are the responsibility of the Change Manager:

- maintaining all change authorisations
- confirming the required change details have been recorded at each step
- ensuring the change is moved on from sub-process to sub-process
- reviewing the proposed solution for its impacts on all AEMO managed products and Participants' systems

- keeping all affected parties notified of the status of the change request

The outputs of the Change Tracking sub-process will include:

- Completed change control records

9. Response Windows

AEMO classifies changes at Market Impact 1 (Outage) through to 5 (no Impact), and responds differently to changes at the different levels. Guidelines for classifying changes, and AEMO's expected response are provided in the table following.

Market Impact	Fault or Change Request	Description	Time to Respond	Time to Repair	Status	Change Management Action	Closure Requirement
1 (Outage)	fault only	<ul style="list-style-type: none"> • A fault in an IT system or procedure, or AEMO-implemented change to the Managed Product List, has stopped or will stop either the operation of the market or one or more Participants' activities in the market; AND • No work-around is available that can be quickly and securely implemented. 	Within one hour	Within 24 hours or until fixed	Emergency release	Change Management Process: 1. Follow the complete Change Management Process 2. Creating change management database entry (possibly deferred until after implementation)	Sign-off by System Owner
2 Workaround (Exists)	1. fault 2. change request	<ul style="list-style-type: none"> • a fault has stopped or will stop a component of the market systems, or has significant business implications to the market or AEMO has implemented a change that has affected one or more Participants; AND • a work-around is available that can be quickly and securely implemented 	Within one hour	1. within 48 hours 2. within 14 days	Urgent release	Follow the complete Change Management Process, recognising the smaller time frame and the need to push the resolution of the problem through.	<ul style="list-style-type: none"> • Sign-off by AEMO; AND • sign-off by Requestor
3 (Scheduled)	1. fault 2. change request	a request: <ul style="list-style-type: none"> • to fix a system, network or service fault • to add new functionality 	One month	Four months, next release	Normal release	Follow the complete Change Management Process	<ul style="list-style-type: none"> • sign-off by AEMO; AND • sign-off by Requestor
4	Change	The issue is not critical	One month	Possibly in a future	Normal	Follow the complete Change	<ul style="list-style-type: none"> • sign-off by

Final

(Non Critical)	request			release	release	Management Process	AEMO; AND • sign-off by Requestor
5 (No Impact)	Change request	The issue has no impact on the market	One month	Possibly in a future release	Normal release	Follow the complete Change Management Process	• sign-off by AEMO; AND • sign-off by Requestor

10. Release Management

Release Management relates specifically to Energy Market System applications software and to those changes which have a Market Impact classification of 3, 4 or 5. Release Management commences early in the change process and continues through to the successful completion of implementation of the change into the Production environment.

It is the key to successful implementation of change and is concerned with planning the orderly movement of changes from identification, through approval and ultimately into the Production environment. It must accommodate both AEMO and Participant needs and this will be achieved through sharing of information in the consultative process, forward planning, sensible and efficient grouping of changes and budgeting for the changes.

Integral to Release Management are Release Plans which are developed for each release and this will define the time frames, steps in the process and the content of the release for each of the various AEMO IT Production systems involved in the release. Changes approved by the Executive (via the CAF) will be allocated to a particular Release Plan. The Release Plan forms the basis for forward planning of the IT releases for the benefit of both AEMO staff and Participants. IT system usually comprises several identifiable modules. A typical system release would be expected to contain changes to one or more of those modules with other modules remaining unchanged. The Release Plan will schedule and track the progress of changes for each release at the system module level.

The intention is to issue two releases per annum on a six monthly basis by consolidating a number of changes into a single release level rather than issuing individual patches to products as and when problems of a medium to low priority are identified.

As an example a typical Electricity MMS Release plan showing the relationship between the initiating change requests (Help Desk VMWARE SERVICE MANAGER calls) through the Help Desk and the eventual system release to Production is illustrated in Diagram 3.

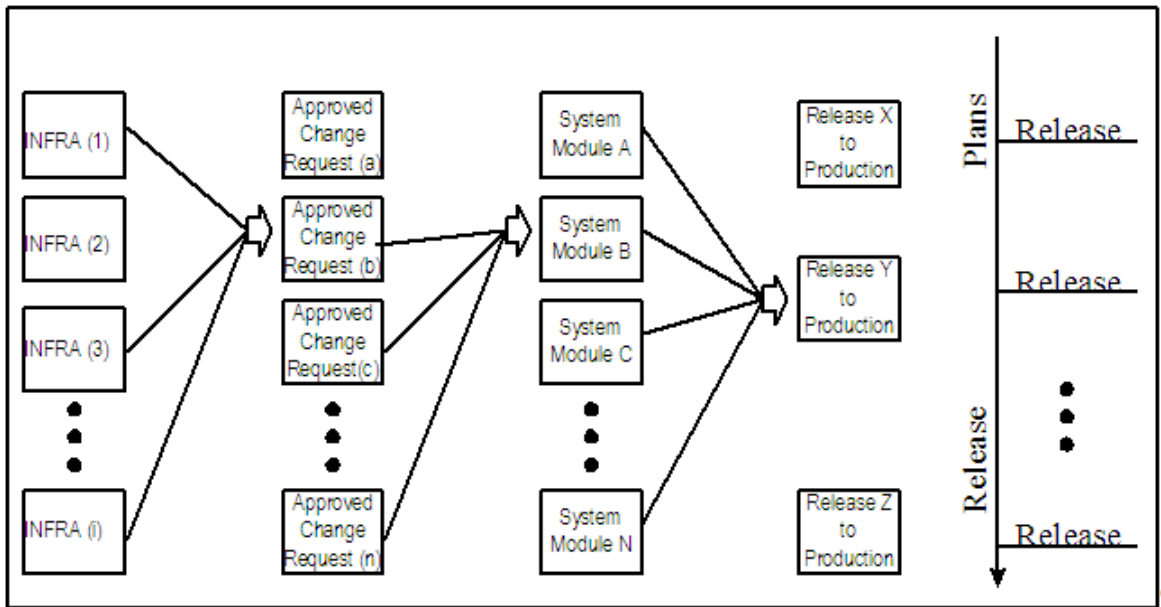


Diagram 3 Process Flow for a Change from a Help Desk VMWARE SERVICE MANAGER call to a Release

AEMO will schedule a relatively small number of releases each financial year, expected to be about two. The Release Plan cycle of typically four months would then allow time for:

- consultation and communication of changes with Participants;
- Participants to ramp up technical support to implement changes to their systems if necessary;
- sufficient testing time in the Pre-production environment.

Releases will be designated with the date of the release, with a release number of the form yyyy.mm.dd, where:

- yyyy is the year
- mm is month
- dd is the day

For example, 19990303 represents the release for 3 March 1999. The management of releases is illustrated in Diagram 4.

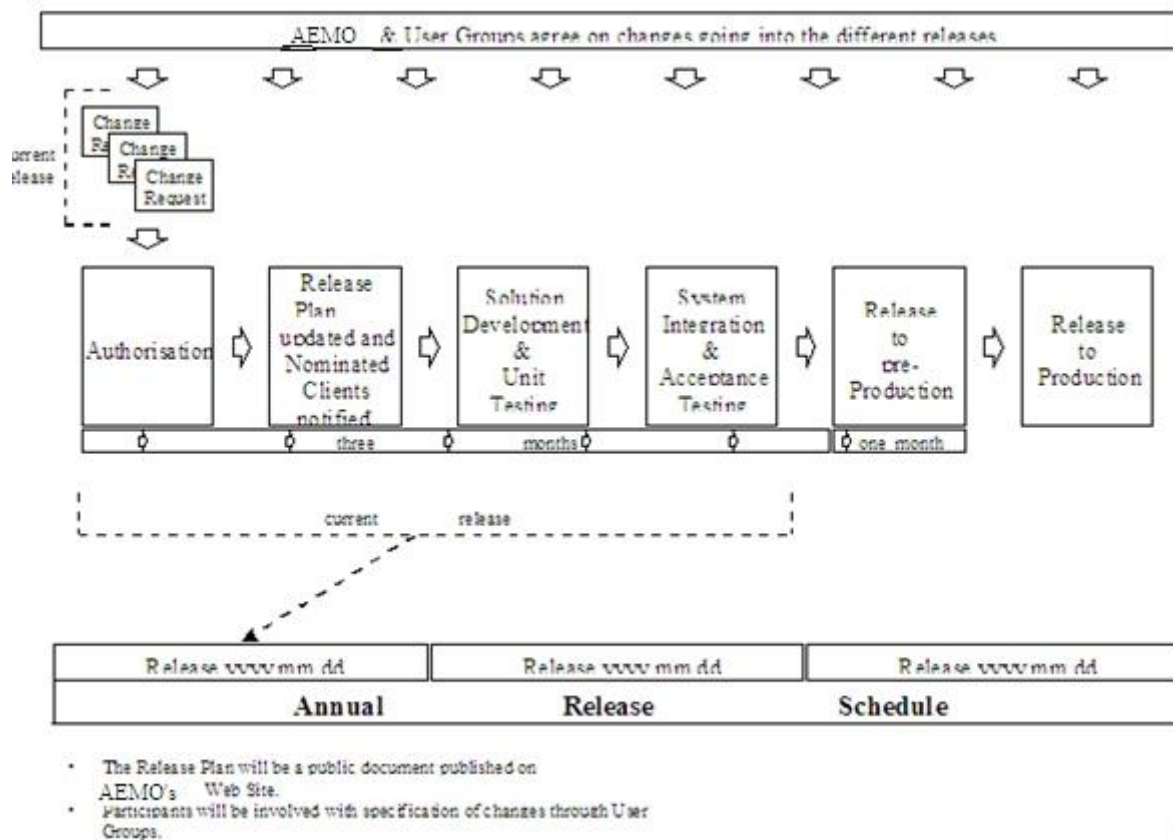


Diagram 4 Release Management Cycle

AEMO and User Groups (representing Market Participants) will continually review the outstanding changes and agree on changes that will be proposed for approval into the forthcoming releases. These changes will then progress through AEMO's Change Management Process and ultimately be developed into modules that are ready for the Production environment. Following testing, the changes will be released to Pre-production for one month.

The Pre-production environment is provided for Participants to test new releases before AEMO promotes the release from Pre-production to Production. The Change Manager will be responsible for notifying Participants when the release is promoted to Pre-production. It is the Participant's responsibility to use this period for testing in-house systems with the Pre-production release, and to notify AEMO of potential negative impacts on the Participant's system.

Two weeks before the release is promoted to Production is the last date on which Participants can raise objections to the release. This date will be included in the Change Notification issued to participants as part of the release.

11. Change Management Control Forms

Change Management Forms are the responsibility of the Change Manager and are part of the VMWARE SERVICE MANAGER system or the Change Management Database system.

Final

11.1 Change Assessment Form

The Change Assessment Form is part of the Change Management Database System and is submitted electronically via that system for all the necessary approvals with an audit trail of the approvals recorded for each request.

11.2 Change Implementation Form

The Change Implementation Form is part of the Change Management Database System and is submitted electronically via that system for all the necessary approvals with an audit trail of the approvals recorded for each request.

12. Change Management Records

Change Management Records are the responsibility of the Change Manager or delegated officer. These records are maintained for AEMO's internal use to track both all changes and the status of any particular change.

12.1 Change Management Database

The change management database provides details about submitted Change Assessment, Change Implementation Forms, the associated authorisations and status of each request.

13. Attachment 1 – User Groups: Terms of Reference

The User Groups exist to foster cooperative development with AEMO on the direction of development of the Energy Market systems. The Terms of Reference provide broad guidelines for the operation of the Groups, and will assist the Group in maintaining focus on its purpose and provide a benchmark for assessment. However, the Charter is not intended to be a prescriptive document, and it is expected that each Group will establish its own format of operation.

13.1 Purpose

The User Groups represent all Participants, working in cooperation with AEMO on the direction of development of the Energy Market systems.

13.2 Authority

The User Groups can only propose what features should be included in a system release. The Groups have no power to direct AEMO to undertake a particular system modification or system development. Where disputes arise, the dispute resolution process defined in AEMO's Change Management Process will be followed.

13.3 Membership

Each User Group will comprise no more than eight members representing Participants, plus a representative from AEMO. The Private Generators Group and the ERAA will nominate members for the User Groups. Members of a Group will be users of the particular system component.

13.4 Responsibilities

The User Groups represent all Participants, not just the interests of the companies where members of the Groups are employed. The User Groups will advise AEMO on:

- priority of all requests for changes to the AEMO market systems;
- what changes might be implemented in the system release cycles;
- issues with the published release cycle;
- release management procedure;
- Provide advice to AEMO regarding technical and / or business risks relating to proposed changes.

AEMO will convene and provide administrative support for the User Group meetings

14. Attachment 2 – Change Management Working Group: Terms of Reference

14.1 Role

- The Change Management Working Group's focus is on the promotion to Production status of items on AEMO's Managed Product List.
- The Change Manager controls the promotion of items to Production, and the Change Management Working Group provides a forum to review at the operational level change management activities on a regular basis with meetings held monthly.
- The Change Manager will carry issues arising from the Committee to AEMO senior management.

14.2 Membership

Membership of the Committee is open to all parties likely to be affected by changes to the Managed Product List. Core membership comprises representatives from:

- AEMO's energy management operations, both business and IT
- AEMO's market management operations, both business and IT
- AEMO's Technical Services , both business and IT
- AEMO's Business IT Systems, both technical and IT

14.3 Administration

The Change Manager:

- convenes the Committee meeting
- sets the agenda
- manages the minutes of the meetings.

14.4 Agenda for Committee Meetings

1. Issues arising from the previous meeting
2. Review of changes since the last meeting
3. Change reports:
 - 3.1 EMS report
 - 3.2 Electricity MMS report
 - 3.3 Electricity MSATS report
 - 3.4 Networks report
 - 3.5 Business IT systems report
4. Any other issues

15. Attachment 3 – Change Management Review Committee

The Change Management Process and in particular these procedures may be reviewed from time to time to ensure they continue to meet Participant and AEMO requirements

15.1 Role

The Change Management Review Committee's role is to review the change management procedures to ensure they are relevant to the developing needs of Participants and AEMO and meet the requirements of all parties in an effective and efficient manner. The Change Management Review Committee is expected to meet on an as needs basis and at least once every 12 months to consider change management issues which may have arisen since the last meeting and changes to the procedures or any other matters relating to the AEMO IT Change Management Process. Participants and AEMO may request a meeting of the Change Management Review Committee by forwarding a request to the AEMO Change

Manager who upon receipt of such a request organise for a meeting to be convened and for the distribution of any papers and associated documentation.

15.2 Membership

Membership of the Change Management Review Committee is open to all parties involved with changes and must include at least one representative from the National Generators Forum (NGF), The Energy Retailers Association of Australia (ERAA), AER, AEMO and the AEMO Change Manager. More than one representative must be approved by all member organisations.

15.3 Administration

The Change Manager:

- Convenes the committee meeting upon request or at least on a twelve monthly basis
- Sets the agenda and distributes associated papers and documentation
- Records and distributes minutes to members of the Change Management Review Committee

15.4 Voting Rights

All voting on changes to the Change Management Procedures requires 100% consensus and member organisations have only one vote.

16. Attachment 4 – Key Contacts

Role	name	organisation	phone	e-mail
Change Manager	Peta Elms	AEMO	02 8884 5364	Peta.Elms@aemo.com.au
Database Team Leader	Robbie Cook	AEMO	02 8884 5356	Robbie.Cook@aemo.com.au
NT Team Leader	Jason Guest	AEMO	07 3347 3910	Jason.Guest@aemo.com.au
Manager Service Delivery	Phil Ghusn	AEMO	07 3347 3908	Phil.Ghusn@aemo.com.au
Senior Manager Information Technology Market Service Delivery	Tissa Perera	AEMO	02 8884 5363	Tissa.Perera@aemo.com.au
Senior Manager Realtime Operations	Andrew Dunn	AEMO	03 9648 8727	Andrew.Dunn@aemo.com.au

Final

Role	name	organisation	phone	e-mail
Senior Manager Electricity Market Development	Mike Muir	AEMO	02 8884 5010	Mike.Muir@aemo.com.au
System Owner MSATS	Mike Muir	AEMO	02 8884 5010	Mike.Muir@aemo.com.au
System Owner of Business IT	Maria Zavros	AEMO	07 3347 3026	Maria.Zavros@aemo.com.au
System Owner of Networks	Bruce McClenahan	AEMO	07 3347 3108	Bruce.McClenahan@aemo.com.au
System Owner of Security	Tim Daly	AEMO	02 8884 5052	Tim.Daly@aemo.com.au
System Application Owner of Gas Solutions	Wayne Lee	AEMO	03 9609 8335	Wayne.Lee@aemo.com.au
Help Desk	Mark Salmon	AEMO	1300 300 295 (Option 2)	Mark.Salmon@aemo.com.au HelpDesk@aemo.com.au

16.1 Other enquiries

For all other types of enquiries please call the AEMO Help Desk on 1300 300 295 (option 2).