

Appendix 1.6: Asset management system framework

**Regulatory proposal for the ACT electricity distribution network 2019-24
January 2018**

Disclaimer: On 1 January 2018, the part of ActewAGL that looks after the electricity network changed its name to Evoenergy. This change has been brought about from a decision by the Australian Energy Regulator. Unless otherwise stated, ActewAGL Distribution branded documents provided with this regulatory proposal are Evoenergy documents.

ActewAGL

Asset Management System Framework

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ASSOCIATED DOCUMENTS

ISO 55001: 2014	Asset management - Management systems - Requirements
eIM: 2015	Energy Industry Model v2
A2000-65	Utilities Act 2000

ACRONYMS

ActewAGL	ActewAGL Distribution
eIM	Energy Industries Model

DEFINITIONS

asset	item, thing or entity that has potential or actual value to an organization
asset management	coordinated activity of an organization to realize value from assets
asset management system	management system for asset management whose function is to establish the asset management policy and asset management objectives
asset specific plan	documented information that specifies the activities, resources and timescales required for an individual asset type, to achieve the organization's asset management objectives
asset management plan	documented information that specifies the activities, resources and timescales required for a grouping of assets, to achieve the organization's asset management objectives
corrective action	An action taken to correct a non-conformance or incident
Non-conformance / nonconformity	A product or service that does not conform to product, service or process requirements
process	set of interrelated or interacting activities which transforms inputs into outputs
risk	effect of uncertainty on objectives
stakeholder	person or organization that can affect, be affected by, or perceive themselves to be affected by a decision or activity

Section 1 - Introduction

We have an ongoing commitment to implement and develop an asset management system to a globally recognised standard, ISO 55001. We recognize the benefits of having the best asset management system possible, which include:

- an explicit focus on maintenance, renewal and enhancement activities intended to deliver sustainable outputs valued by customers and funding providers at the lowest whole of life cost (as opposed to prioritising work predominantly according to asset condition)
- integration across boundaries between organisational functions and asset disciplines, and where relevant, between infrastructure managers and contracting organisations and
- an emphasis on evidence-based decision making, optimising maintenance and renewal interventions based on knowledge of how assets degrade and the risk of failure.

Further reasons for committing to and ISO 55001 compliant systems are:

- We are required by the Utilities ACT 2000 (ACT) to have an up-to-date asset management system consistent with current standards
- compliance with ISO 55001:2014 demonstrates that the organisation is applying the principles required by the standard and can therefore be considered to be operating in a 'least cost environment' consistent with its level of service obligations.

In 2015, a business model for the capability requirements of an energy delivery business, the Energy Industry Model (eIM) was developed as part of the Energy Industry Business Function Model (EIBFM) project. The project was an industry initiative and sponsored by AEMO on behalf of the Energy Market IT Steering Committee (EMITSC).

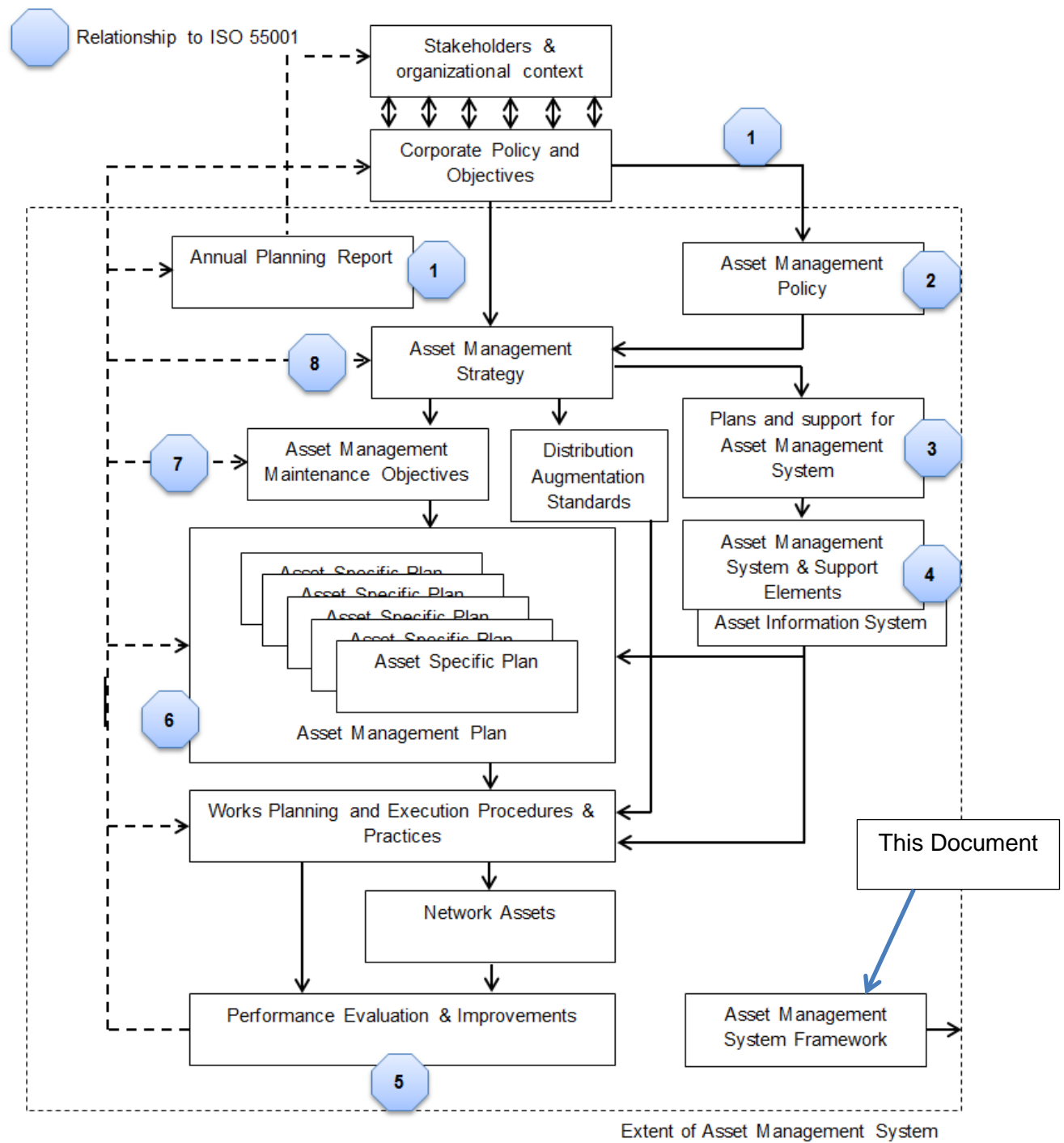
EMITSC was established to support the Energy Industry by developing and maintaining a framework for long-term systems investment. Its membership consists of AEMO, ENA, NGF, and ERAA nominated representatives. Its mission is to "Support the energy industry by developing and maintaining a framework for targeted long-term systems investment".

This document has also sought to align our asset management system with the eIM as well as ISO 55001. Table 1 maps the alignment of ISO 55001 with the eIM and our asset management system.

In striving to develop an ever more mature asset management system, many documents and processes in have been put in place, and there is a need to coordinate and provide alignment for these documents and processes, as well as identify and meet gaps. This document provides the framework for these requirements.

Figure 1 below is a diagrammatic representation of our asset management system within the organisational context. The boundary of the system is represented by the dotted line, and stakeholder inputs are in black and grey. Colour coding within the diagram represents the various phases of the plan, do, check, act cycle. Note that activities within the asset base itself are all subject to the plan, do, check, act cycle, indicating continuous improvement within operational activities.

Figure 1 – Diagrammatic representation of our asset management system



1.1 Scope

The scope of this document is to provide a reference to our asset management system. This document references all sections of ISO 55001, and alignment with the applicable part of the asset management system. Links are available back to the source documents within the asset management system.

This document should be used by persons

- requiring an overview of the structure of our asset management system,
- seeking specific documents or functions within our asset management system,
- auditing the asset management system.

Figure 2 provides an overview of the documents and their alignment within the asset management system.

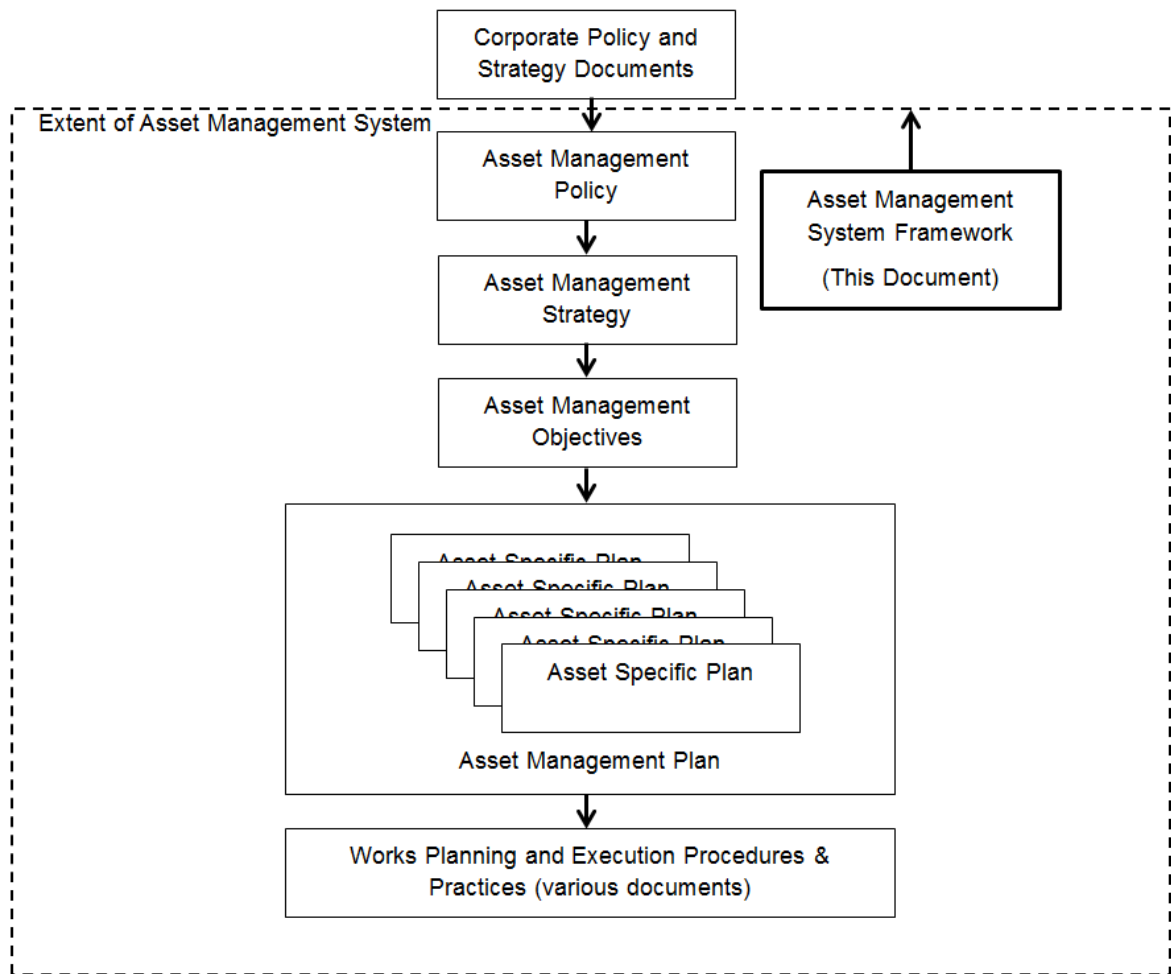


Figure 2 – Alignment of documents within our asset management system

1.2 Purpose

The purpose of this document is to:

- provide a framework to contain and structure components of asset management system
- provide alignment between components of the asset management system
- act as guide to help users and auditors navigate the asset management system
- provide a link between the asset management system and the standard (ISO 55001) and

Section 2: Description of Asset Management System

2.1 Overview

Our asset management system provides the framework for effective and economic management of its transmission and distribution assets, in a manner that considers the whole of life of the assets, and the whole of the system. The system, as described in this framework document contains asset management policies, strategies, objectives, plans, support structures, processes and activities for the whole of life of our engineering assets.

A diagrammatic representation of the contents of our asset management system is shown in figure 1.

2.2 Asset Management Policy

The asset management policy is a reflection of our corporate objectives with respect to its engineering assets, and as such, demonstrates our commitments as follows:

1. All assets shall be managed in full compliance with any relevant statutory and mandatory legal and safety requirements;
2. The management of asset related risk and Asset Management related risk shall be undertaken in accordance with our Risk Management and Legal Compliance Policies.
3. Assets, systems and networks shall be managed in a sustainable manner including due consideration of long-term financial, societal and environmental impacts;
4. The Asset Management approach shall be appropriate to the scale and relative importance of the assets and asset systems to achieving the overall organisational objectives; and
5. ActewAGL shall proactively seek continual improvement of its Asset Management capabilities and activities to assure value for money for customers and stakeholders.

2.3 Asset Management Strategy and Objectives

The asset management strategy is a document that sets out the strategic approach in managing our assets, to define and achieve the broad requirements as set out in the policy. The document also aligns with the asset management objectives which outline the long term requirements in managing our various asset classes.

2.4 Asset Specific Plans

Asset specific plans are generated within an application that is connected to data sources within the organisation. These plans deal with activities to be carried out on existing engineering assets

Asset specific plans have the capability to:

- Describe in detail the assets within the asset class of the plan
- Provide metadata on asset data,
- Describe the criticality and failure modes of the assets,
- Explain the whole of life maintenance and replacement strategies of the assets,
- Provide a detail plan of all the activities to be applied to the assets, as determined by strategies as described above.

2.5 Annual Planning Report

The purpose of the Annual Planning Report is to inform Customers, Generators, Investors, and Government about the electricity transmission and distribution network's current capability, anticipated investments to maintain that capability, drivers of future development needs and options to meet them.

2.6 Augmentation Planning

Augmentation planning is carried out in accordance with our distribution augmentation standards, which are in turn aligned with the asset management strategy. Each augmentation proposal is subjected to a rigorous process of forecasting, analysis of asset capability against forecast loads, options analysis (including not network solutions) and a business case. An annual summary of augmentations plans for the next 5 years is made publicly available in our annual planning report.

2.7 Delivery

Asset specific plans, and augmentation plans, when approved, are collated onto a program of works, which is sent to the Works Delivery section for scheduling and resource allocation. This process ensures that the works are delivered as efficiently as possible, co-ordinating the various disciplines required to effect works, whilst minimising outages and ensuring full deployment of staff.

Section 3: Manual

3.1 The company in Context [ISO 55001 Section 4]

Understanding Us) and our context [ISO 55001 Section 4.1]

We have analysed and documented the internal and external issues that affect its ability to achieve the intended outcomes of its asset management system.

Link:

[Asset Management Strategy](#)

[Annual Planning Report](#)

Understanding the needs and expectations of stakeholders [ISO 55001 Section 4.2]

We have documented the following details regarding its stakeholders:

- Who the stakeholders are
- Their requirements
- The need for recording and reporting, including financial information
- The criteria for asset management decision making
- The internal / external reporting requirements on the management of the assets.

Link:

[Asset Management Strategy](#)

[External Stakeholder Management](#)

[Annual Planning Report](#)

[ActewAGL WHSEQ Management Manual](#)

Determining the scope of the asset management system [ISO 55001 Section 4.3]

We have documented the scope of the asset management system, including the boundaries and applicability of the asset management system, and the set of assets to which ISO 55001 applies.

Link:

[Asset Management Strategy](#)

Asset management system maintenance [ISO 55001 Section 4.4]

We maintain and continually improve our asset management system, including the processes needed and their interactions, in accordance with the requirements of ISO 55001

Link:

[Asset Management System](#)

We have developed an Asset Management Strategy which includes documentation of the role of the asset management system in supporting achievement of the asset management objectives

Link:

[Asset Management Strategy](#)

3.2 Leadership [ISO 55001 Section 5]

Leadership and commitment [ISO 55001 Section 5.1]

Our senior management are committed to demonstrating leadership in asset management by:

- Ensuring alignment between our strategic plans and asset management objectives
- Ensuring alignment of the asset management system's approach to managing risks and opportunities to our approach to managing strategic and/or corporate risk
- Ensuring that the policies and objectives are established for the asset management system are compatible with our strategic direction
- Ensuring that the asset management system is integrated into our business processes
- Ensuring the availability of resources required for the asset management system
- Communicating the importance of effective asset management, and of conforming to the asset management system requirements
- Ensuring that the asset management system achieves its intended outcomes
- Directing and supporting staff to maximise the effectiveness of the asset management system
- Promoting continual improvement
- Being responsible for the asset management system.

Link:

[Management Review and Corporate Governance for Asset Management and Network Services Divisions](#)

[Asset Management Committee Charter](#)

Policy [ISO 55001 Section 5.2]

An asset management policy has been established that:

- Promotes continual improvement
- Is responsible for the asset management system.
- Is appropriate to our purpose
- Provides a framework for setting asset management objectives
- Includes a commitment to satisfy applicable requirements
- Includes a commitment to continual improvement of the asset management system.

The asset management policy is:

- Available as documented information
- Communicated within the organisation
- Available to stakeholders, as appropriate
- Consistent with the organisational strategic plans
- Consistent with other organisational policies
- Implemented, reviewed and updated periodically
- Appropriate to the nature and scale of the organisation's assets and operations

Link:

[Asset Management Policy](#)

Organisational roles, responsibilities and authorities [ISO 55001 Section 5.3]

We have assigned responsibility and authority for:

- Updating the Asset Management Strategy and Objectives
- Ensuring that the asset management system supports delivery of the Asset Management Strategy and Objectives
- Ensuring that the asset management system conforms to the requirements of ISO55001
- Ensuring the suitability, adequacy and effectiveness of the asset management system
- Approval of asset management plans
- Reporting the performance of the asset management system to our executive.

We ensure responsibility and authority for relevant roles are assigned and communicated within the organisation.

Link:

[Asset Management Strategy](#)

[Asset Management Objectives](#)

[Asset Management Communications Plan](#)

3.3 Planning [ISO 55001 Section 6]

Actions to address risks and opportunities [ISO 55001 Section 6.1]

We undertake the following activities with respect to risks and opportunities:

- Plans actions to address identified risks and opportunities
- Integrates and implements the actions into its asset management system processes
- Evaluates the effectiveness of these actions.

We have established, implemented and maintains processes for the ongoing determination, analysis and evaluation of asset-related risks, and continue to:

- Assess the risk that assets fail to deliver our objectives, including risks due to changes in the political, environmental, safety, social, technical, legislative, contractual, legal, regulatory and economic circumstances
- Consider risks that change with time
- Ensure that adequate resources are available to apply appropriate risk controls
- Ensure that its asset management system, asset management, and asset related risks are integrated into our risk management approach.
- Integrate action plans into review processes and cycles.

Link:

[Asset Management Strategy](#)

[Asset Management Objectives](#)

[The Risk Management Process](#)

[Asset Specific Plans](#)

[Distribution Network Augmentation Standard](#)

Asset management objectives and planning to achieve them [ISO 55001 Section 6.2]

We have established asset management objectives at relevant functions and levels, considering the expectations of stakeholders as well as financial, technical or organisational requirements, that:

- Are consistent with our business objectives and asset management policy
- Are measurable (where practicable) and monitored
- Take into account applicable requirements
- Are communicated to relevant stakeholders
- Are updated as appropriate
- Are based on asset management decision making criteria
- Are documented.

We have a documented strategic approach for prioritisation of asset management decision making, and determines:

- The strategic approach and methods to be employed in managing its assets over their lifecycle
- Assigned responsibilities

- The actions to be carried out and the resources required
- Financial and risk implications
- Timetables
- How results are evaluated
- A review period.

Link:

[Asset Management Objectives](#)

3.4 Support for the Asset Management System [ISO 55001 Section 7]

Resources [ISO 55001 Section 7.1]

We have determined the requirements and provided the resources needed for maintenance and continual improvement of the asset management system. The resources include a comprehensive suite of Asset Information Systems which are described in the following linked document:

Link:

[Asset Management Information Systems Description](#)

Competence [ISO 55001 Section 7.2]

We continue to undertake the following activities to ensure competence in the delivery of asset management services:

- Determine the necessary competence of staff where that affects asset management performance
- Ensure staff are competent
- Take action to acquire the necessary competence, and evaluate the effectiveness of the actions taken
- Retain documentation as evidence of competence
- Periodically review current and future competency needs and requirements.

Link:

[Apprentice Training Management Procedure](#)

[Competencies, Training and Awareness Policy](#)

[Training Needs Analysis](#)

[Safety, Environment, and Quality Training](#)

[Training Administration Procedure](#)

[Training Evaluation Procedure](#)

Awareness [ISO 55001 Section 7.3]

We provide assurance that staff that have the potential to impact on the achievement of asset management objectives are aware of:

- The asset management policy
- Their contribution to the effectiveness of the asset management system, including the benefits of improved asset management performance
- The implications of not conforming to the asset management system requirements.

Link:

[Asset Management Communications Plan](#)

Communication [ISO 55001 Section 7.1]

We have determined the need for internal and external communication relevant to the assets, asset management and asset management systems, and ensures that this need is satisfied.

Link:

[Asset Management Communications Plan](#)

Information System Support [ISO 55001 Section 7.5]

We have determined its information requirements to support its assets, asset management and asset management system. We have given consideration to:

- The significance of the identified risks
- Management responsibilities for asset management processes
- Financial, technical, risk, statutory, and executive authority processes and arrangements
- The social environment within which we operate
- The exchange of information between stakeholders
- The making of informed decisions.
- The (quality) attribute requirements of identified information needs
- Information collection methods, including frequency of collection, analysis and evaluation in order to ensure valid results.

We have specified, implemented and continues to maintain systems for managing its information, including attributes of all asset data (functional, physical, financial and derived).

Documented Information [ISO 55001 Section 7.6]

Our asset management system includes documented information as required by ISO55001, for legal and regulatory requirements and as being necessary for the effectiveness of the asset management system.

When creating and updating documented information we have ensured appropriate identification and description, format, review and approval for suitability and adequacy.

This documentation is controlled to ensure that it is:

- Available and suitable for use, where and when it is needed
- Adequately protected from loss of confidentiality, improper use, or loss of integrity
- Version controlled
- Retained and disposed as appropriate.

Link:

[Management System Documentation Procedure](#)

3.5 Operation [ISO 55001 Section 8]

Operational planning and control [ISO 55001 Section 8.1]

Our plans, implements and controls the processes needed to meet requirements by:

- Establishing criteria for the processes
- Implementing process control in accordance with the criteria
- Keeping documented information to the extent necessary to have confidence that the processes have been carried out as planned.

Our controls planned changes and reviews the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary. We ensure that outsourced processes are controlled.

Link:

[Asset Management Configuration Management](#)

[Asset Management Information Systems Description](#)

Management of change [ISO 55001 Section 8.2]

We assess any revisions or new arrangements for impact on its assets, asset management activities, asset management system or on the achievement of its objectives. Any risks involved are managed within its risk management approach.

Link:

[Asset Management Configuration Management](#)

[Process Change Model](#)

[ICT Change Management Procedure](#)

[Change Management Documents](#)

Outsourcing of asset management activities [ISO 55001 Section 8.3]

We determine and document:

1. Any processes and activities that are to be outsourced, including the scope and boundaries of the outsourced processes and activities and their interfaces with our own processes and activities. These processes are documented in the Procurement and Contract Management Policy. This Policy outlines the principles of acquiring goods and/or services. It is supported by the Procurement Management Manual (PMM), which guides users through the required procurement processes. Compliance with this Policy and the PMM will ensure that both ActewAGL and our valued Suppliers:
 - protect the health and safety of our employees, contractors and customers;
 - reduce operating costs and improve operating efficiencies;
 - improve the quality of goods and services ActewAGL provides to its customers;
 - promote productive relationships with Suppliers;
 - satisfy stakeholders requirements for good governance and economical operations;
 - shorten procurement cycle times; and
 - adhere to the appropriate probity, risk, regulatory and legislative requirements.

Local processes adopted by Business Units must be consistent with this Policy and the PMM. The Policy has the key strategic objectives of operating efficiently and effectively. Procurement management is a critical organisational capability. The PMM has been specifically designed to help ActewAGL achieve this objective, it is comprised of:

- Phase 1 - Business Requirements;
- Phase 2 - Sourcing and Selection;
- Phase 3 - Contract Management; and
- Phase 4 - Purchasing.

[Procurement and Contract Management Policy](#)

[Procurement Management Manual](#)

The Contract Management and Purchasing sections of the manual in particular make references to the need for contractors and supplies to comply with our engineering standards. An example of an engineering standard is linked below:

[Chamber Type Substation Design And Construction Standard](#)

2. The processes and scope for the sharing of knowledge and information between the organisation and the contracted service providers are provided in the Contactor Management Manual.

The Manual clearly identifies the HSE requirements for both the contractor and us. All parties must understand their obligations with respect to legal, contractual and technical aspects of the work to be undertaken. This must be supported by appropriate policies, procedures, work practices and behaviours.

The engagement of a contractor establishes an important relationship with an objective to achieve specific performance outcomes relating to:

- Controlling HS&E risks to contractor employees, our employees and the general public
- Maintaining and exceeding required standards in the provision of the specified works and services
- Cost effectiveness in the provision of the required works and services

3. Our authorities and responsibilities for managing outsourced processes and activities which are detailed in our Delegation of Authority document.

[Delegations of Authority](#)

3.6 Performance Evaluation [ISO 55001 Section 9]

Monitoring, measurement, analysis and evaluation [ISO 55001 Section 9.1]

We continue to determine:

- What needs to be monitored and inspected.
- Methods for monitoring, measurement, analysis and evaluation, as applicable, to ensure valid results
- When monitoring and measuring shall be performed
- When results from monitoring and measurement shall be analysed and evaluated.

We evaluate the asset management performance and the effectiveness of the asset management system, and retains documented evidence of the results of monitoring, measurement, analysis and evaluation.

Link:

[Planned Condition Monitoring Asset Inspections](#)

Internal audit [ISO 55001 Section 9.2]

We conduct internal audits at planned intervals to provide information to assist in the determination on whether the asset management system:

- Conforms to its requirements
- Conforms to the requirements of ISO55001
- Is effectively implemented and maintained.

We continue to:

- Implement and maintain an audit program
- Define audit criteria and scope for each audit
- Select auditors and conduct audits to ensure objectivity and the impartiality of the audit process
- Ensure that the results of the audits are reported to relevant management
- Retain documented evidence of the results of the audit and of implementation of the audit program.

Link:

[Management Systems Audit](#)

[Design Audit Procedure Guideline](#)

[Management Systems Audit Report](#)

[RTO Internal Audit Procedure](#)

Management review [ISO 55001 Section 9.3]

Senior management review the asset management system at planned intervals to ensure its continuing suitability, adequacy and effectiveness, including consideration of:

- Actions from previous management reviews
- Changes in external and internal issues as relevant to the asset management system
- Asset management performance, including trends in:
 - nonconformities and corrective actions
 - monitoring and measurement results
 - audit results
- Asset management activities;
- Opportunities for continual improvement;
- Changes in risk profile.

The outputs of the management review include decisions related to continual improvement opportunities and any need for changes to the asset management system.

Link:

[Asset Management Committee Charter](#)

[Management Review and Corporate Governance](#)

3.7 Improvement [ISO 55001 Section 10]

Nonconformity and corrective action [ISO 55001 Section 10.1]

When a nonconformity is identified, We will:

- Take action to control and correct the nonconformity and deals with the consequences
- Evaluate the need for action to eliminate the causes of the nonconformity by determining its causes and determining if similar nonconformities exist, or could potentially occur
- Implement any action needed;
- Review the effectiveness of any corrective action taken
- Make changes to the asset management system if necessary.

Documentation is retained of the nature of the nonconformity, any associated risks, actions taken and the results of any corrective action.

Link:

[Asset Specific Plans](#)

Preventive and predictive action [ISO 55001 Section 10.2]

We have processes to identify potential nonconformities and evaluate the need for preventive and predictive action to prevent their occurrence.

Link:

[Asset Management Strategy](#)

[Asset Specific Plans](#)

Continual improvement [ISO 55001 Section 10.3]

We continually improve the suitability, adequacy and effectiveness of the asset management system.

Link:

[Asset Management Strategy](#)

[Asset Specific Plans](#)

Appendix

Table 1 - alignment of ISO 55001 with the eIM and our asset management system		
ISO 55001	eIM	
4.1 Understanding the organisation and it's context	LP01_Market Development LP02_Market Forecasting LP03_Market Performance Review LP04_Industry Modelling LP05_Industry-wide Policy and Regulatory Management SP01_Industry-wide Current State Review SP02_Industry-wide Target State Forecast SP03_Industry-wide Solution Planning and Implementation	1
4.2 Understanding the needs and expectations of the stakeholders	PM01_Product Portfolio Management PM02_Product Development PM03_Sales and Market Planning CM01_Customer Sales Management CM02_Customer Service Operations CM03_Connection Point Management ES01_Investor Relationship Development ES02_Government and Industry Relationship Management ES03_Legal and Ethical Issue Management ES04_Public Relation Program Management ES05_Board of Directors Relationship Management RC_Regulation Compliance Management	
5.1 Leadership and commitment	VS01_Corporate Vision Formulation VS02_Corporate Strategy Formulation VS03_Strategic Initiative Management	
5.3 Organisational roles, responsibilities and authority	KM01_Organisation Performance Benchmarking KM02_Organisation Performance Management Framework Development KM03_Organisation Knowledge Management KM04_Organisation Change Management KM05_Portfolios, Programs and Projects Management KM06_Quality Management	
5.2 Policy	AL01_Asset Strategy and Policy Formulation	2

4.4 Asset management system	AO01_Asset Operation Strategy Formulation and Planning AO02_System/Plant Operation AO03_Asset Operation Performance Management NA01_Non-Productive Asset Design and Construction/Acquisition NA02_Non-Productive Asset Disposal Management NA03_Non-Productive Asset Maintenance NA04_Non-Productive Asset Obtainment, Installation and Planning	3
6.1 Actions to address risks and opportunities for the asset management system	EH010_Manage Enterprise Risk EH01_EHS Impact Assessment EH02_EHS Program Management EH03_Security Strategy Development EH04_Threat Response Strategy Development EH06_Remediation Effort Management EH07_Security Program Management EH08_EHS Program Monitoring EH09_Employee Training and Education EH011_Manage Business Resiliency	
7.1 Resources	FI01_General Accounting and Reporting FI02_Accounting Planning and Management FI03_Revenue Accounting FI04_Fixed Asset Project Accounting FI05_Internal Control Management FI06_International Fund/ Consolidation Management FI07_Tax Management FI08_Treasury Operation Management FI09_Account Payable and Expense Reimbursement Management FI10_Payroll Management	4
7.2 Competence	HR01_Employee Development and Counselling HR02_Human Resource Strategy Management and Planning HR03_Employee Information Management HR04_Employee Redeployment and Retirement HR05_Employee Recruitment HR06_Employee Reward and Retention	

7.3 Awareness	HR03_Employee Information Management KM03_Organisation Knowledge Management		
7.4 Communication	IT07_Enterprise Information Management		
7.5 Information Requirements	IT01_IT Service Delivery and Support IT02_IT Solution Deployment IT03_IT Solution Development and Maintenance IT04_IT Customer Relationship Development and Management IT05_Business Information Technology Management IT06_IT Risk Management IT07_Enterprise Information Management		
7.6 Documented Information	IT01_IT Service Delivery and Support IT02_IT Solution Deployment IT03_IT Solution Development and Maintenance IT05_Business Information Technology Management IT07_Enterprise Information Management		

8.2 Management of change	EH010_Manage Enterprise Risk EH01_EHS Impact Assessment EH02_EHS Program Management EH06_Remediation Effort Management 11.6.8 EH08_EHS Program Monitoring 11.6.9 EH09_Employee Training and Education 11.6.10 EH011_Manage Business Resiliency		
9.1 Monitoring, measurement, analysis and evaluation	AL04_Asset Performance Management AO03_Asset Operation Performance Management		
9.2 Internal audit	KM01_Organisation Performance Benchmarking KM06_Quality Management		
9.3 Management review	KM01_Organisation Performance Benchmarking KM02_Organisation Performance Management Framework Development KM03_Organisation Knowledge Management KM04_Organisation Change Management KM05_Portfolios, Programs and Projects Management KM06_Quality Management		
10. Improvement	KM01_Organisation Performance Benchmarking KM02_Organisation Performance Management Framework Development KM03_Organisation Knowledge Management KM04_Organisation Change Management KM05_Portfolios, Programs and Projects Management KM06_Quality Management		

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8.1 Operational planning and control	AL03_Asset Delivery AL05_Asset Retirement AO01_Asset Operation Strategy Formulation and Planning AO02_System/Plant Operation WM01_Works Program Development WM02_Works Program Management WM03_Work Scheduling and Dispatching WM04_Field Work Delivery	6
8.3 Outsourcing (control)	PC03_Supplier and Service Provider Selection PC02_Supplier and Service Provider Contract Management PC04_Supplier and Service Provider Appraisal and Development9	
8.2 Management of change	KM04_Organisation Change Management	
6.2.2 Planning to achieve asset management objectives	AL02_Asset Planning AL03_Asset Delivery AL04_Asset Performance Management AL05_Asset Retirement	7
8.3 Outsourcing (scope)	PC01_Sourcing Strategy Formulation	
4.3 Determining the scope of the asset management system	KM05_Portfolios, Programs and Projects Management LP01_Market Development LP02_Market Forecasting LP03_Market Performance Review	8
6.2.1 Asset management objectives	AL01_Asset Strategy and Policy Formulation AO01_Asset Operation Strategy Formulation and Planning	