

	Policy	Technology Division
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Title: **Engineering policy**

Unique Identifier:

240-4332798

Alternative Reference Number:

NA

Area of Applicability:

E

Documentation Type:

PL

Revision:

0

Total Pages:

7

Next Review Date:

October 2014

Disclosure Classification:

**CONTROLLED
DISCLOSURE**

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Date: 13/10/2011	Date: 13/10/2011	Date: 14/12/2011

CONTENTS

	Page
1. INTRODUCTION	3
2. POLICY CONTENT	3
2.1 POLICY STATEMENT	3
2.2 POLICY PRINCIPLES OR RULES	3
3. SUPPORTING CLAUSES	4
3.1 SCOPE	4
3.2 NORMATIVE/INFORMATIVE REFERENCES	4
3.3 DEFINITIONS	5
3.4 ABBREVIATIONS	5
3.5 ROLES AND RESPONSIBILITIES	6
3.6 PROCESS FOR MONITORING	6
4. AUTHORIZATION	6
5. REVISIONS	6
6. DEVELOPMENT TEAM	6
7. ACKNOWLEDGEMENTS	7

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1. INTRODUCTION

Eskom has restructured into an organisational model comprising of operating units, service functions and strategic functions. It is important that allocations of accountability for key functions are well defined to ensure the effective management of Eskom's assets, as these assets are capital intensive and are expected to provide an appropriate return over their lifetime. One of these key functions is Engineering Work. Failure to clarify Technical Authority for Engineering Work will result in the technical integrity of Eskom's assets leading to compromised asset health, shortening of asset life and major unplanned asset failures.

2. POLICY CONTENT

2.1 POLICY STATEMENT

Eskom shall ensure that the engineering of its power production plant and power delivery networks is managed in such a manner that the requirements of customers, internal stakeholders, regulatory and legal authorities are fully met. This will be accomplished through clearly defining Technical Authority for Engineering Work during the direction of research, technology standardisation activity, Design Base creation and management throughout the lifecycle of the asset.

The definition of Engineering Work shall be provided by a Technical Governance Committee.

2.2 POLICY PRINCIPLES OR RULES

2.2.1 Objective

The engineering of Eskom assets both during the Design Base creation phase and subsequent operations and maintenance, shall be managed in such a way to enable the sustainable achievement of its business objectives in a manner that is safe and conforms to legal, environmental and regulatory requirements.

2.2.2 Key Principles

The following key principles will apply:

- 2.2.2.1 Technical Authority for performing all Engineering Work in Eskom in order to create and manage a Design Base will reside with the Technology Engineering function.
- 2.2.2.2 An individual performing Engineering Design Work in Eskom will require delegation to perform the Engineering Work
- 2.2.2.3 The ultimate Technical Authority for Engineering Design Work resides with the relevant Centre of Excellence (COE) in Technology Engineering. Only the relevant COE shall have the Technical Authority for the delegation of the performance of Engineering Work.
- 2.2.2.4 Governance processes and systems for conducting Engineering Work shall be defined through a Technical Governance framework and will apply to all and any Engineering Work undertaken across Eskom.

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2.2.2.6 All maintenance and operations of Eskom assets shall be undertaken in compliance with the Design Base requirements in order to ensure the technical integrity of the assets during their lifecycle.

3. SUPPORTING CLAUSES

3.1 SCOPE

This policy document defines the requirements for managing the practice of engineering undertaken in, and for assets under the direct control of Eskom Holdings SOC Ltd. It covers Engineering Work activities during, research, standardisation, Design Base creation and management throughout the lifetime of the asset.

3.1.1 Purpose

This document prescribes the Eskom policy with regard to management of Engineering Work to achieve the following:

- 3.1.1.1 Clear identification of the Technical Authority for Engineering Work
- 3.1.1.2 Consistency and standardisation in approach across Eskom for Engineering Work
- 3.1.1.3 Clarity of the division of Technical Authority during Asset operations and maintenance
- 3.1.1.4 Ensuring that personnel performing Engineering Work are adequately certified by the relevant authority (e.g. ECSA, PLATO)
- 3.1.1.5 Well-managed and controlled utilisation of the critical mass of knowledge and skills
- 3.1.1.6 Long-term integrity of assets by ensuring singular custodianship of the Design Base

It would not be possible to ensure the integrity of Eskom's assets without clearly outlining the above requirements. The risk exists that the assets may be maintained, operated and altered in a way that is not consistent with the Design Base

3.1.2 Applicability

This policy shall apply throughout Eskom Holdings SOC Limited and organizations that it manages.

3.2 NORMATIVE/INFORMATIVE REFERENCES

Parties using this policy shall apply the most recent edition of the documents listed in the following paragraphs.

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3.2.1 Normative

- [1] Eskom's Divisional Mandates and Structures v2.1 (25 May 2011)
- [2] Act 46 :2000 : Engineering Profession Act 2000
- [3] 474-190: Design Base Standard

3.2.2 Informative

- [4] 32-9 Definition of Eskom Documents

3.3 DEFINITIONS

3.3.1 Assets

The set of Eskom's engineering structures, machines and systems that are used in the generation, transmission and delivery of electricity.

3.3.2 Design Base

The Design Base of an asset is the combination of those key design variables that define the functions, capabilities, capacities, physical sizes and dimensions, limits and set points (Operating Technical Specifications) and maintenance elements (Maintenance Base), that are required for the asset to meet its required performance, reliability and availability within the limits of external constraints.

In practice, it can be stated that should a change be made to any of the key design elements or external constraints, it will result in a change in the asset's performance, availability and/or reliability

3.3.3 Engineering Design Work

The design element of Engineering Work performed for the sole purpose of creating the design output requirements and the Design Base for an asset.

3.3.4 Engineering Work

The application of specific scientific disciplines in the process of developing, designing, maintaining and operating assets with full cognisance of their design and design limitations in order to improve the lives of people.

3.4 ABBREVIATIONS

Abbreviation	Description
ECSA	Engineering Council of South Africa
EXCO	Eskom Executive Committee
PLATO	Acronym refers to the South African Council for Professional and Technical Surveyors
MANCO	Management Committee

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3.5 ROLES AND RESPONSIBILITIES

The Divisional Executive Technology is tasked with providing assurance to Exco that this policy has been implemented and is being adhered to.

All Divisional Executives are tasked with ensuring that this policy is adhered to in their divisions.

3.6 PROCESS FOR MONITORING

The Divisional Executive Technology shall ensure that an adequate governance framework exists to manage all Engineering Work across Eskom. This shall include management of Engineering Work during the provision of research direction, development of technical standards, creation and management of the Design Base

The governance framework shall define items such as the appropriate Technical Authority for Engineering Work, properly mandated Engineering Work approval structures and the boundary of Engineering's authority during operating and maintenance.

The Divisional Executive Technology shall ensure that regular management reviews and internal audits are conducted over Engineering Work, including areas of the business that have been deemed to require ISO 9001 certification or accreditation.

4. AUTHORIZATION

This document has been seen and accepted by EXCO.

5. REVISIONS

Date	Rev.	Remarks
August 2011	0	New document

6. DEVELOPMENT TEAM

The following people were involved in the development of this document:

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7. ACKNOWLEDGEMENTS

None.

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