



Standard

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1. INTRODUCTION

Eskom's Land and Biodiversity Policy (32-736) states that we shall ensure, in the planning, construction, operation, and decommissioning of Eskom's activities, that measures are in place to limit the impact of its infrastructure, land use, and use of other resources on biodiversity and shall comply with all applicable legislation.

Eskom's position on managing biodiversity impacts on the ecosystem is based on the following sequence:

- Avoiding the impact.
- If the impact cannot be completely avoided, then to minimise and reduce the impact.
- When an impact does occur, this must be mitigated and rehabilitated.
- As a last resort, the option of an offset must be considered in consultation with the Environmental Liaison Committee (ELC).

Eskom's impact on biodiversity and ecosystem services shall be measured through the use of the following two high-level indicators:

- A. Wildlife interactions
- B. Habitat management

This measurement will be achieved in the context of the project life-cycle process and includes the sourcing of all resources needed for Eskom's business activities:

- Planning (feasibility studies and design) of existing and new infrastructure
- Building of infrastructure
- Operation of infrastructure
- Decommissioning of infrastructure (which includes Eskom old-order-right defunct mines as well as cost plus mines for which Eskom carries financial liability for rehabilitation and closure)

This standard uses the framework of the ISO 14001:2004 Environmental Management System with the identification of relevant biodiversity-related aspects and impacts. These aspects, impacts, control mechanisms, position statements, as well as the respective wildlife and habitat management indicators, are described in this standard. It also describes possible areas of opportunity for proactive biodiversity management.

2. SUPPORTING CLAUSES

2.1 SCOPE

2.1.1 Purpose

The purpose of the standard is to set general rules, position statements, and control mechanisms for all impacts associated with biodiversity management for Eskom to support the Government's objectives and commitments to the Convention on Biological Diversity (CBD).

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Importantly, in addition to the objective of biodiversity and ecosystem services management, this standard recognises that Eskom must ensure the safe mechanical and electrical operation of infrastructure and must fulfil its legal, business, social, and environmental obligations.

2.1.2 Applicability

This standard shall apply throughout Eskom Holdings SOC Limited and its divisions, subsidiaries, and entities in which Eskom has a controlling interest, including identified contractors, suppliers, and service providers of Eskom where significant biodiversity impacts and risks may occur.

Where Eskom has influence in entities and/or operations, including instances where Eskom may have contractors, this standard will be applied in those areas directly under the control of Eskom, and due process will be followed to influence the entity or operation to comply with the requirements of this standard.

2.2 NORMATIVE/INFORMATIVE REFERENCES

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

2.2.1 Normative

The following is applicable or appropriate legislation, including, but not limited to:

- [1] Animal Protection Act, 1962 (Act No. 71 of 1962)
- [2] Agricultural Pests Act, 1983 (Act No. 36 of 1983)
- [3] Conservation of Agricultural Resources Act, 1989 (Act No. 43 of 1989)
- [4] Eskom Safety, Health, Environment, and Quality (SHEQ) Policy (32-727)
- [5] Fertilisers, Farm Feeds, Agricultural Remedies, and Stock Remedies Act, 1947 (Act No. 36 of 1947)
- [6] Eskom Land and Biodiversity Policy (32-736)
- [7] National Environmental Management Act, 1998 (Act No. 107 of 1998)
- [8] National Environmental Management: Biodiversity Act (NEMBA), 2004 (Act No. 10 of 2004)
- [9] National Environmental Management: Protected Areas Act (NEMPA), 2003 (Act No. 57 of 2003)
- [10] National Environmental Management: Waste Act (NEMWA), 2008 (Act No. 59 of 2008)
- [11] National Forests Act, 1998 (Act No. 84 of 1998) (List of Protected Tree Species)
- [12] National Parks Act, 1976 (Act No. 57 of 1976)
- [13] National Veld and Forest Fire Act, 1998 (Act No. 101 of 1998)
- [14] Marine Living Resources Act, 1998 (Act No. 18 of 1998)
- [15] Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

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2.2.2 Informative

- [16] Business and Biodiversity Offset Programme (BBOP) – Biodiversity Offset Design Handbook
- [17] Commercial Timber Growers' Guideline
- [18] Electrical Machinery Regulations GNR 1593 of 12 August 1988
- [19] ISO 14001:2004 Environmental Management System
- [20] ISO 9001 Quality Management System
- [21] National Biodiversity Framework (NBF), January 2008
- [22] National Protected Area Expansion Strategy (NPAES)
- [23] National Spatial Biodiversity Assessment (NSBA)
- [24] Provincial Guideline on Biodiversity Offsets, Western Cape, Revised Draft – March 2007
- [25] South Africa's National Biodiversity Strategy and Action Plan (2005)
- [26] Eskom/EWT Wildlife Interaction Manual (2005)

2.3 DEFINITIONS

2.3.1 Alien species:

- (a) A species that is not an indigenous species; or
- (b) an indigenous species trans-located or intended to be trans-located to a place outside its natural distribution range in nature, but not an indigenous species that has extended its natural distribution range by natural means of migration or dispersal without human intervention (National Environmental Management: Biodiversity Act (Act No. 10 of 2004)).

2.3.2 **Commercial timber growers** mean timber growers, both individually or as represented by the Forest Owners Association, South African Wattle Growers Union, or the South African Timber Growers Association and their staff (Commercial Timber Growers' Guideline).

2.3.3 **Critically endangered:** ecosystems that have undergone severe degradation of their ecological structure, function, or composition as a result of human intervention and that are subject to an extremely high risk of irreversible transformation (National Environmental Management: Biodiversity Act (Act No. 10 of 2004)).

2.3.4 **Ecosystem:** a dynamic system of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit (National Environmental Management Act, 1998 (Act No. 107 of 1998)).

2.3.5 **Eskom land:** any land and/or servitude and/or any real right registered in the Deeds Office in Eskom's name or favour.

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- 2.3.6 **Habitat:** a place where a species or ecological community naturally occurs (National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)).
- 2.3.7 **Invasive species:** any species whose establishment and spread outside of its natural distribution range:
- (a) threaten the ecosystem, habitats, or other species; and
 - (b) may result in economic or environmental harm or harm to human health (National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)).
- 2.3.8 **National park:**
- (a) An area that was a park in terms of the National Parks Act, 1976 (Act No. 57 of 1976), immediately before the repeal of that Act by section 90(1) of the National Environmental Management: Protected Areas Act 57 of 2003 and includes a park established in terms of an agreement between a local community and the Minister that has been ratified by Parliament; or
 - (b) an area declared or regarded as having been declared in terms of section 20 of the National Environmental Management: Protected Areas Act 57 of 2003 as a national park and includes an area declared in terms of section 20 as part of an area referred to in paragraph (a) or (b) as per the National Environmental Management: Protected Areas Act 57 of 2003.
- 2.3.9 **Plantation:** any trees planted and managed by commercial timber growers for commercial purposes (see Commercial Timber Growers' Guideline).
- 2.3.10 **Servitude:** a servitude is a real right (that is, registered in the Deeds Office against the title deed of an erf), the content of which is to allow limited access to an erf for a specific purpose. It does not entail ownership and must be exercised in a reasonable way, within the boundaries of the specific purpose. In this standard, the reference is specifically to servitudes that allow Eskom only to build, operate, and maintain infrastructure for the generation and conveyance of electricity and ancillary purposes.
- 2.3.11 **Special nature reserve:**
- (a) An area that was a special nature reserve in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), immediately before the repeal of section 18 of that Act by section 90 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003); or
 - (b) an area declared, or regarded as having been declared, in terms of section 18 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) as a special nature reserve and includes an area declared in terms of section 18 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) as part of an area referred to in paragraph (a) or (b) above.
- 2.3.12 **Species:** a kind of animal, plant, or other organism that does not normally interbreed with individuals of another kind and includes any subspecies, cultivar, variety, geographic

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race, strain, hybrid, or geographically separate population (National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)).

- 2.3.13 **Weed:** any kind of plant that has, under section 2 (3), been declared a weed and includes the seed of such plant and any vegetative part of such plant that reproduces itself asexually (Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)).

2.4 ABBREVIATIONS

Abbreviation	Description
A&F	Assurance and Forensic
BSC	Board Sustainability Committee
DEA	Department of Environmental Affairs
DESD	Distribution environmental screening document
EIA	Environmental impact assessment
ELC	Environmental Liaison Committee
EMP	Environmental management plan
Exco	Executive Management Committee
IBA	Important bird areas
NEMA	National Environmental Management Act
SANBI	South African National Biodiversity Institute
SANParks	South African National Parks
ToR	Terms of reference

2.5 ROLES AND RESPONSIBILITIES

2.5.1 **The Chief Executive** has the responsibility for ensuring that this standard is implemented.

2.5.2 **Divisional Executives** shall be responsible and accountable for the development, implementation, and performance of the appropriate biodiversity management systems in their respective divisions.

2.5.3 The **Chief Officer of Strategy and Risk Management** shall establish mechanisms to ensure an Eskom-coordinated and -aligned approach to biodiversity management and shall ensure that issues relating to biodiversity performance are monitored and recorded. All areas of the organisation shall report on biodiversity issues, and the Chief Officer of Strategy and Risk Management shall complement the assurance function provided by A&F to the Exco and the BSC.

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Land and biodiversity standard

Table 1					
Activities	Aspects	Impacts	Control mechanisms	Position statement	Wildlife (A) and habitat (B) indicators
1.Planning – feasibility studies and design (new infrastructure) <ul style="list-style-type: none"> • Generating plant and supporting infrastructure • Transmission power lines for the national grid • Distribution strengthening and supply to customers 	Pre-feasibility studies (screening). Feasibility/ business case (EIA), resulting in the selection of sites, routes, design, and technology.	<ol style="list-style-type: none"> 1. Incorrect site/ route selection, resulting in land use impacting biodiversity. 2. Technology, process and configuration, and infrastructure design options, resulting in resource use and infrastructure impacting biodiversity. 	<ol style="list-style-type: none"> 1. Governance processes related to project decision-making must ensure compliance with Eskom's Land and Biodiversity Standard positions. 2. Environmental screening during pre-feasibility stage. (To be a formalised mechanism as part of the planning process, that is, Tx and Dx master planning utilising strategic environmental assessments and Dx project screening using DESD.) 3. Execution of basic assessments or scoping/EIA based on the National Environmental Management (NEMA) – EIA Regulations. 4. Compliance with Eskom's Land and Biodiversity Standard shall be written into ToR of EIA consultants. 5. Maps of IBAs and bird-sensitive environments shall be established and maintained. 6. A register of designs 	<ol style="list-style-type: none"> 1. Eskom will evaluate the potential of existing servitudes and Eskom-owned land for their potential reuse for new infrastructure. 2. All planning-related activities shall be subjected to environmental assessments, which must take biodiversity-related impacts and bioregional and spatial planning into consideration. 3. Not to increase the biodiversity impact inside special nature reserves and national parks without an appropriate environmental assessment. 4. Not to build new infrastructure in "important bird areas" (IBAs) and/or bird-sensitive environments as identified through the Eskom-EWT strategic partnership, without prior engagement with the appropriate environmental NGO stakeholders (for example, BLSA, EWT, WWF, etc.). 5. Not to build new infrastructure in "critically endangered" biodiversity areas, as defined in the bioregional plans (as gazetted), without prior engagement with the relevant stakeholders (for 	<ol style="list-style-type: none"> 1. Number of legally required biodiversity offsets set as conditions of environmental authorisations.
					Annually
					Annually
					Annually

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Land and biodiversity standard**Table 1**

Activities	Aspects	Impacts	Control mechanisms	Position statement	Wildlife (A) and habitat (B) indicators	Frequency of reporting
			for "wildlife-friendly" power line structures shall be established and maintained.	<p>example, SANBI, Botsoc, DEA, SANParks, etc.).</p> <p>6. All designs of new power lines and supporting infrastructure for power generation must be evaluated for the risk they could pose to wildlife, and no design that has a high risk, or a record of it causing mortalities to wildlife, shall be used.</p> <p>7. Eskom will continue to support research in areas related to biodiversity.</p>		
<p>2. Construction and refurbishment (new and existing infrastructure)</p> <ul style="list-style-type: none"> Generating plant and supporting infrastructure Transmission power lines for the national grid Distribution strengthening and supply to customers 	Construction that could result in the establishment of infrastructure design and technology located on sites and routes that could impact biodiversity.	<p>1. Site/route establishment, resulting in land use impacting existing biodiversity.</p> <p>2. Technology, process and configuration, and infrastructure establishment, resulting in resource use and infrastructure impacting biodiversity and ecosystem services.</p> <p>3. The above will result in:</p> <ul style="list-style-type: none"> water and land 	<p>1. Governance processes related to project decision-making must ensure that Eskom's Land and Biodiversity Standard positions are adhered to.</p> <p>2. EMP to be developed and implemented.</p>	<p>1. All construction-related activities must be governed by an Eskom-approved EMP, which must contain measures to control biodiversity-related impacts.</p> <p>2. Compliance with the EMP shall be monitored and reported.</p>	<p>1. Number of legal contraventions related to biodiversity.</p>	Monthly

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Table 1

Activities	Aspects	Impacts	Control mechanisms	Position statement	Wildlife (A) and habitat (B) indicators	Frequency of reporting
		<ul style="list-style-type: none"> contamination; soil erosion; land degradation; species and habitat displacement; and uncontrolled fires. 				
3. Operating (existing infrastructure) <ul style="list-style-type: none"> Generating plant and supporting infrastructure Transmission power lines for the national grid Distribution strengthening and supply to customers 	Operational practices that could result in land use and resource usage/abstraction.	1. Operational activities on site/route infrastructure, resulting in land use impacting biodiversity. 2. Technology, process and configuration, and infrastructure operation, resulting in resource use and infrastructure impacting biodiversity. 3. The above items (1&2) will lead to: <ul style="list-style-type: none"> contamination of surface water, land, and groundwater; soil erosion; 	1. Governance processes related to project decision-making must ensure that Eskom's Land and Biodiversity Standard positions are adhered to. 2. Implementation of an Eskom-approved EMP. 3. Application of approved technical bulletins and instructions. 4. Weeds and alien and invader plants shall be controlled in terms of the conservation provisions of the Agricultural Resources Act No. 43 of 1989, Fertiliser Farm Feeds, Agricultural Remedies, and Stock Act No. 36 of 1947, and the Agricultural Pests Act No 36 of 1983.	1. All infrastructure must be monitored for potential biodiversity impacts during maintenance. 2. All infrastructure that has the potential to impact wildlife (electrocution and collisions) must be identified, reported, and assessed, and appropriate mitigation measures must be taken. 3. All Eskom-owned and/or -controlled land shall be managed through an EMP that includes biodiversity-related impacts. 4. In support of the South African biodiversity strategy, operations must consider the various opportunities for maintaining the biodiversity potential of Eskom-owned land.	1. Number of bird-unsafe structures identified.	Annually
					2. Number of bird-unsafe structures replaced.	Annually
					3. Number of hectares of Eskom-owned land declared as protected	Annually

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Table 1

Activities	Aspects	Impacts	Control mechanisms	Position statement	Wildlife (A) and habitat (B) indicators	Frequency of reporting
<ul style="list-style-type: none"> Mine closure for Eskom old-order-rights and cost plus mines 	Closure and rehabilitation methodologies.	End state of land use in accordance with closure strategy.	3. Compliance with Eskom's Land and Biodiversity Policy and Standard shall be written into ToR of EIA consultants. 4. Rehabilitation and remediation of contaminated land and waste dumps shall be done according to the NEMA: Waste Management Act No. 59 of 2008. 5. Compliance as per the Mineral and Petroleum Resources Development Act, section 60 (Closure Requirements).	3. The environmental risk assessment component of the closure process will provide preferred options in relation to mitigating biodiversity impacts.		

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4. AUTHORISATION

Approved by Exco Operations on 8 July 2010.

5. REVISIONS

Date	Rev.	Compiler	Remarks
June 2011	0	I. Jameson & I. Pillay	New document

6. DEVELOPMENT TEAM

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7. ACKNOWLEDGEMENTS

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