

	<p align="center"><b>Manual</b></p>	<p align="center"><b>Power Delivery Projects</b></p>
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## 1. Introduction

The Power Delivery Projects (PDP) business plan requires that assurance is provided to the Transmission Grids Management as well as to the shareholders that all the activities executed within PDP meets the technical specifications; documentation requirements as well as any statutory and legal requirements.

This manual serves to outline the specific policies, procedures, operational controls and work instructions pertaining to the implementation of the management system including legislative and regulatory requirements applicable to the implementation of the Environmental Management Systems (EMS). PDP will ensure that management system forms an integral part of all our functional responsibilities and that continual improvement continues to be what PDP strives towards.

## 2. Supporting Clauses

### 2.1 Scope

The manual provides guidance for the establishment, implementation, maintenance and incorporation of the PDP environmental management systems into all functional areas of PDP. The elements of the manual applies to all activities, which include but are not limited to line and civil construction conducted within the PDP environment. The manual's elements apply to all infrastructure for the construction of transmission lines, substations and associated activities.

#### 2.1.1 Purpose

The manual summarises and gives an indication on how and what to consider in the implementation of the EMS within PDP as per ISO14001:2015 Standard requirements.

#### 2.1.2 Applicability

This manual shall apply to PDP operations.

#### 2.1.3 Effective date

The implementation of this document is effective as of three months from the date of signature.

## 2.2 Normative/Informative References

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

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### 2.2.1 Normative

- [1] ISO 9001 Quality Management Systems
- [2] ISO 14001: Environmental Management Systems Specification with guidance for use
- [3] 240-53464409: Corrective and Preventive Action Procedure
- [4] 32-6: Documents and Records Management Procedure
- [5] 240-53464409: Corrective and Preventive Action Procedure
- [6] 240-44175038: Control of Non-conforming Products and Services Procedure
- [7] 240-91213801: Environmental Aspects, Impacts, Objectives and Programme Procedure
- [8] 240-53413860: Business Management System Audit Standard
- [9] 240-53458685: Management System Review Standard
- [10] PDPMAN-WN-51: SHEQ Roles and Responsibilities Procedure
- [11] PDPMAN-WN-14: Identification and Assessment of Environmental Aspects and Impacts

### 2.2.2 Informative

- [12] 2-727 Eskom SHEQ Policy
- [12] PDPMAN- SG-68: PDP SHEQ Statement of Commitment
- [13] National Environmental Management Act (Act 107 of 1998) and related Specific Environmental Management Acts

## 2.3 Definitions

Definitions shall also be defined as contained in normative and informative referenced documents (latest revisions) to be used. For the purpose of this management system standard, the following definitions but not limited to shall apply

- 2.3.1 Environment:** surroundings in which organisations (3.1.4) operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation (ISO 14001:2015).
- 2.3.2 Environmental aspect:** element of an organisation's (3.1.4) activities or products or services that can interact with the environment (3.5) (ISO 14001:2015)
- 2.3.3 Environmental impact:** any change to the environment (3.2.1), whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects (ISO 14001:2015)
- 2.3.4 Environmental Management System:** part of the management system (3.1.1) used to manage environmental aspects (3.2.2), fulfil compliance obligations (3.2.9), and address risks and opportunities (3.2.11)

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- 2.3.5 Environmental Policy:** intention and direction of an organisation (3.1.4) related to environmental performance (3.4.11) as formally expressed by its top management
- 2.3.6 Management Representative:** A member of PDP Management who has been appointed to carry out the duties in accordance with the ISO 14001:2015 Standard.
- 2.3.7 System:** A set of inter-related or interacting elements.
- 2.3.7 Top management:** person or group of people who directs and controls an organisation at the highest level
- 2.3.8 Grid:** A system of electrical distribution serving a large area especially by means of high-tension lines and substations.
- 2.3.9 Transmission line:** Line-system of conductors that transfers electrical current from one location to another.
- 2.3.10 Substation:** An installation at which electricity is received from one or more power stations for conversion from alternating to direct current, reducing the voltage, or switching before distribution by a low-tension network.

Abbreviation	Explanation
CS	Corporate Sustainability
DEFF	Department of Environment, Forestry and Fisheries
EMS	Environmental Management System
FM	Form
GC	Group Capital
GM	General Manager
HR	Human Resources
ISO	International Organisation and Standardisation
MN	Manual
PDP	Power Delivery Projects
SHEQ	Safety, Health, Environment and Quality
SOC	State Owned Company
WN	Work Instruction
Tx	Transmission Group

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## 2.4 Roles and Responsibilities

Roles and responsibilities are defined within the Corporate HR policies and procedures including PDPMAN-WN-51 developed for PDP.

## 2.5 Process for Monitoring

Effective implementation monitoring process will be done through a number of interventions that are indicated in the table below.

**Table 2: Monitoring Controls**

MONITORING CONTROLS	PURPOSE	RESPONSIBLE PARTY	FREQUENCY
Management review meetings	Measure adequacy and effectiveness of the system with the focus as stipulated in Clause 9.3 of the ISO: 14001 standard.	General Manager	Annually
PDP Environmental Management Committee Meetings	ISO:14001 Management system implementation and conformance status	PDP Environmental Team	Quarterly and as and when required
Departmental SHEQ meetings	ISO:14001 Management system implementation and performance status	Middle Manager SHEQ	Quarterly and as and when required
Environmental audits and inspections	Evaluate compliance to ISO 14001 Management system requirements, Legal and other requirements to which PDP subscribes.	SHEQ Manager	ISO 14001 audit and inspections as per PDP roles and responsibilities
Project Review Meetings (Grids)	Project Compliance and Status Reviews, awareness trainings,	Grids' Management	Every second month
Projects Progress Meetings (Sites)	Projects status and compliance and conformance status	Project Managers	Monthly

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## 2.6 Related/Supporting Documents

Additional standards, procedures and guidelines related to EMS shall be used in support of the aims and objectives of this Manual.

## 3. Document Content

### 3.1 Power Delivery Projects

Power Delivery Projects is a department that falls under the Transmission Group, Its core business activities are as indicated under section 2.1 of this manual.

PDP is divided into four portfolios/Grids:

1. Northern Grid;
2. Cape Grid;
3. Central and Eastern Grid;
4. 765kV Projects Grid; and
5. PDP Head Office including SHEQ Management

This manual is intended to provide an overview of the PDP EMS, identifying existing procedures, standards and documents and serves as a record of implementation of the ISO 14001 standard within PDP. This includes Contractors in the line, civil, stringing, and cabling and electrical project execution works on PDP's behalf.

### Exclusions

- Property Management for Megawatt Park (Buildings and Grounds), as these functions are areas managed by Eskom Real Estate (ERE). This is inclusive of activities relating to waste management within Megawatt Park.
- Human Resources, Procurement and Finance departments (supporting departments).
- All associated existing infrastructures such as existing power lines and substations operations and maintenance.

The Plan-Do-Check-Act Approach to EMS development, implementation and maintenance was adopted in order to fulfil the requirements of ISO 14001: 2015. Below figure indicate the key changes from ISO14001: 2004 to 2015 revision and why.

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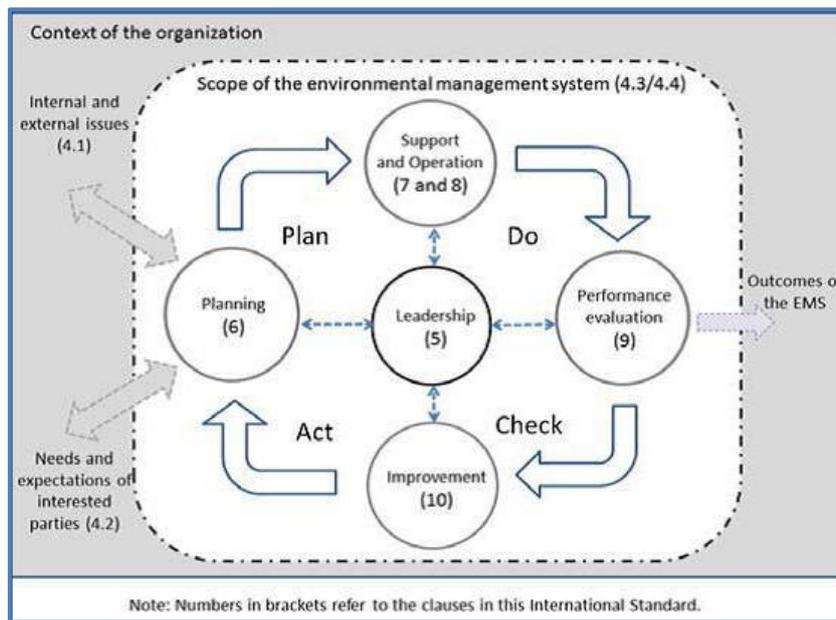


Figure 1: Key Changes to ISO14001 to current revision.<sup>1</sup>

### 3.2 Context of the Organisation

#### 3.2.1 Understanding the Organisation and its Context (Clause 4.1)

PDP is a department within Transmission Group of Eskom Holdings SOC Ltd. This department was established to deal with the project management services for the construction of Eskom transmission power lines and substations in South Africa. All designs and planning for the projects are done by the separate departments within the organisations. PDP employs internal (i.e. Eskom Rotek Industries) and external independent contractors for construction activities.

The end products from PDP operations are handed over to the Tx operations and maintenance (O&M).

PDP has identified internal and external issues that are relevant to the Environmental Management system in their Operational Plan – PDPMAN-FM-37. To determine these issues SWOT analysis tools were used and the tables below comprise of internal and external issues.

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**Table 3: Strengths, Weaknesses, Opportunities, and Threats (SWOT)**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Top Management support to EMS.<sup>IN</sup></li> <li>• Well established and maintained EMS.<sup>IN</sup></li> <li>• Tender evaluations – Environment inclusions in procurement process.<sup>IN</sup></li> <li>• Support from Sustainability Division and Tx. Group Executive Office.<sup>IN</sup></li> <li>• Established KPIs and OT&amp;Ps.<sup>IN</sup></li> <li>• Environmental inputs consideration in decision making.<sup>IN</sup></li> <li>• Improved Environmental performance over the years.<sup>IN</sup></li> <li>• PDP has a national footprint and has a clearly defined procedure and processes.<sup>IN</sup></li> <li>• Compliance with legislation that governs the activities.<sup>IN</sup></li> <li>• Synergy with other management system standards (ISO45001 and ISO9001).<sup>IN</sup></li> <li>• Well qualified and competent environmental team.<sup>IN</sup></li> <li>• PDP exclusively uses external independent accredited auditing firms for EMS certificate maintenance.<sup>EX</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Frequent changes in the organisational structures (i.e. top management).<sup>IN</sup></li> <li>• Internal procurement processes that are long and cumbersome.<sup>IN</sup></li> <li>• Shortage of environmental specialists &amp; auditing skills.<sup>IN</sup></li> <li>• Lack of standardization in the EMS implementation approach within the Grids.<sup>IN</sup></li> <li>• Lack of adequate SHEQ integration into project design.<sup>EX</sup></li> <li>• Insufficient lead times for projects due to legislated timelines (expropriation/approvals of applications-WUL).<sup>EX</sup></li> <li>• Incident management not uniform across the Grids (i.e. late reporting).<sup>IN</sup></li> <li>• Sporadic use of other organisational divisions' documentation (i.e. Tx or other Eskom Business Unit vs PDP documents).<sup>IN &amp; EX</sup></li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Continual improvement due to the ISO 14001: 2015 standard.<sup>IN</sup></li> <li>• Training &amp; awareness.<sup>IN</sup></li> <li>• Cost reduction.<sup>IN</sup></li> <li>• Knowledge management–sharing best practices.<sup>IN</sup></li> <li>• Improve collaboration with Government and other statutory departments; any other interested parties.<sup>IN</sup></li> <li>• Develop and use of inter-departmental specialists or expertise.<sup>IN</sup></li> <li>• Building relationship with affected communities and opportunity to share waste generated at sites.<sup>IN</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Constraints for training and awareness contracts.<sup>EX</sup></li> <li>• ISO 14001 certificate suspension or withdrawal.<sup>IN</sup></li> <li>• Poor performing environmental service providers (i.e. Environmental Control Officers).<sup>EX</sup></li> <li>• Poor performing construction contractors.<sup>EX</sup></li> <li>• Lack of implementation of maintenance plans.<sup>IN</sup></li> <li>• Travelling long distances between office and project sites.<sup>IN</sup></li> <li>• The limitation of having site (project) based Eskom environmental officers deemed as high risks.<sup>IN</sup></li> </ul>

**NOTE:**

<sup>IN</sup> – Internal issue    <sup>EX</sup> – External issue

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**Table 4: Internal and External Issues (positive or negative) determined by PDP**

Internal Issues	Positive or Negative	External Issues	Positive or Negative
<ul style="list-style-type: none"> <li>Organisational culture</li> </ul>	Positive	<ul style="list-style-type: none"> <li>Natural resources and biodiversity management</li> </ul>	Negative
<ul style="list-style-type: none"> <li>PDP Strategic Direction</li> </ul>	Positive	<ul style="list-style-type: none"> <li>Political instability in the country</li> </ul>	Negative
<ul style="list-style-type: none"> <li>Team's knowledge and competencies</li> </ul>	Positive	<ul style="list-style-type: none"> <li>Community unrests or protests</li> </ul>	Negative
<ul style="list-style-type: none"> <li>Established environmental management processes and systems</li> </ul>	Positive	<ul style="list-style-type: none"> <li>Climatic conditions (harsh weather, i.e. too hot or too cold weather, strong winds and thunder storms)</li> </ul>	Negative
<ul style="list-style-type: none"> <li>Top management support and resourcing</li> </ul>	Positive	<ul style="list-style-type: none"> <li>Financial stability of the organisation</li> </ul>	Positive / Negative
<ul style="list-style-type: none"> <li>Use of different levels of documentation within the organisation</li> </ul>	Negative	<ul style="list-style-type: none"> <li>Technological changes (i.e. engineering designs)</li> </ul>	Negative / Positive
<ul style="list-style-type: none"> <li>Transitioning to Tx Group</li> </ul>	Positive	<ul style="list-style-type: none"> <li>Contractors / service providers performance including environmental consultants</li> </ul>	Negative / Positive
		<ul style="list-style-type: none"> <li>Changes in legislation</li> </ul>	Negative / Positive

### 3.2.2 Understanding the needs and expectations of interested parties (Clause 4.2)

As state owned company, Eskom PDP builds for public's expectations and Public Enterprise department (DPE) as the major shareholder; and fulfilling funder's requirements and the general public that needs the supply of electricity.

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The operations are conducted in consideration of a number of requirements that are fore put by interested parties; among others for instance the Department of Public Enterprise, The World Bank, Department of Environmental Forestry and Fisheries, Department of Human Settlements, Water and Sanitations; and any other affected government departments.

The needs and expectations of the interested parties have been identified and are reflected in the table below.

**Table 5: Needs and Expectations for the determined interested parties**

Interested Parties	Needs and Expectations	Compliance Obligations
<ul style="list-style-type: none"> <li>Transmission Group</li> </ul>	<ul style="list-style-type: none"> <li>To implement an EMS and comply with the statutory and regulatory requirements.</li> <li>Require adequate infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Compulsory / organisational</li> </ul>
<ul style="list-style-type: none"> <li>Sustainability Division</li> </ul>	<ul style="list-style-type: none"> <li>To implement an EMS and comply with the statutory and regulatory requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Compulsory / organisational</li> </ul>
<ul style="list-style-type: none"> <li>Finance Institutions / Funders</li> </ul>	<ul style="list-style-type: none"> <li>Require full compliance to legislative requirements to health and wellbeing, social and environment.</li> <li>Bond conditions may contain specific environmental requirements to be complied with.</li> </ul>	<ul style="list-style-type: none"> <li>Contractual relationship</li> </ul>
<ul style="list-style-type: none"> <li>Finance Department</li> </ul>	<ul style="list-style-type: none"> <li>Manage environmental aspects in order to meet the environmental budget.</li> <li>Compliance to Public Finance Management Act</li> </ul>	<ul style="list-style-type: none"> <li>Legal requirements</li> </ul>
<ul style="list-style-type: none"> <li>Law Enforcement Agencies of all levels of government (i.e. Environment, Forestry and Fisheries; Human Settlements, Water and Sanitation and Public Enterprises)</li> </ul>	<ul style="list-style-type: none"> <li>Expect demonstration of compliance to applicable laws,</li> <li>Fulfil legal requirements; Ensure compliance to byelaws</li> </ul>	<ul style="list-style-type: none"> <li>Legal requirements</li> </ul>

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Interested Parties	Needs and Expectations	Compliance Obligations
<ul style="list-style-type: none"> <li>Provincial and Local Government</li> </ul>	<ul style="list-style-type: none"> <li>Compliance to relevant legislation</li> <li>Localisation and Skills development</li> </ul>	<ul style="list-style-type: none"> <li>Voluntary and legal requirements</li> </ul>
<ul style="list-style-type: none"> <li>Eskom employees</li> </ul>	<ul style="list-style-type: none"> <li>Conducive work environment, employee wellness, simplified environmental processes, employee safety.</li> </ul>	<ul style="list-style-type: none"> <li>Legal requirements and voluntary</li> </ul>
<ul style="list-style-type: none"> <li>Suppliers/Contractors/consultants</li> </ul>	<ul style="list-style-type: none"> <li>On time payments for services rendered.</li> <li>Environmental requirements</li> </ul>	<ul style="list-style-type: none"> <li>Contractual relationship</li> </ul>
<ul style="list-style-type: none"> <li>Land Owners</li> </ul>	<ul style="list-style-type: none"> <li>Liaise on land acquisitions</li> <li>Specific requirements that must be met during negotiations and during construction phase</li> </ul>	<ul style="list-style-type: none"> <li>Agreements</li> </ul>
<ul style="list-style-type: none"> <li>Communities</li> </ul>	<ul style="list-style-type: none"> <li>Expect environmentally responsible behaviour in areas where PDP is involved;</li> <li>Form part of the construction processes for new projects (especially through skills development and localisation)</li> <li>Contributions towards CSIs</li> </ul>	<ul style="list-style-type: none"> <li>Regulatory requirements and voluntary initiatives</li> </ul>
<ul style="list-style-type: none"> <li>Certification Bodies</li> </ul>	<ul style="list-style-type: none"> <li>Conform with the requirements of the EMS</li> </ul>	<ul style="list-style-type: none"> <li>Voluntary and partners agreements</li> </ul>

Monitoring and review of information pertaining to interested parties are conducted as per PDP management systems processes and procedures. The needs and expectations that are compliance obligations are managed in accordance with this manual and compliance obligations processes.

### 3.2.3 Determining the scope of the environmental management system (Clause 4.3)

The PDP department is managed and/or controlled from a central point which is in Johannesburg and they oversee all operations in the country. PDP was established to deal with the project management services for the construction of Eskom transmission power lines and substations in

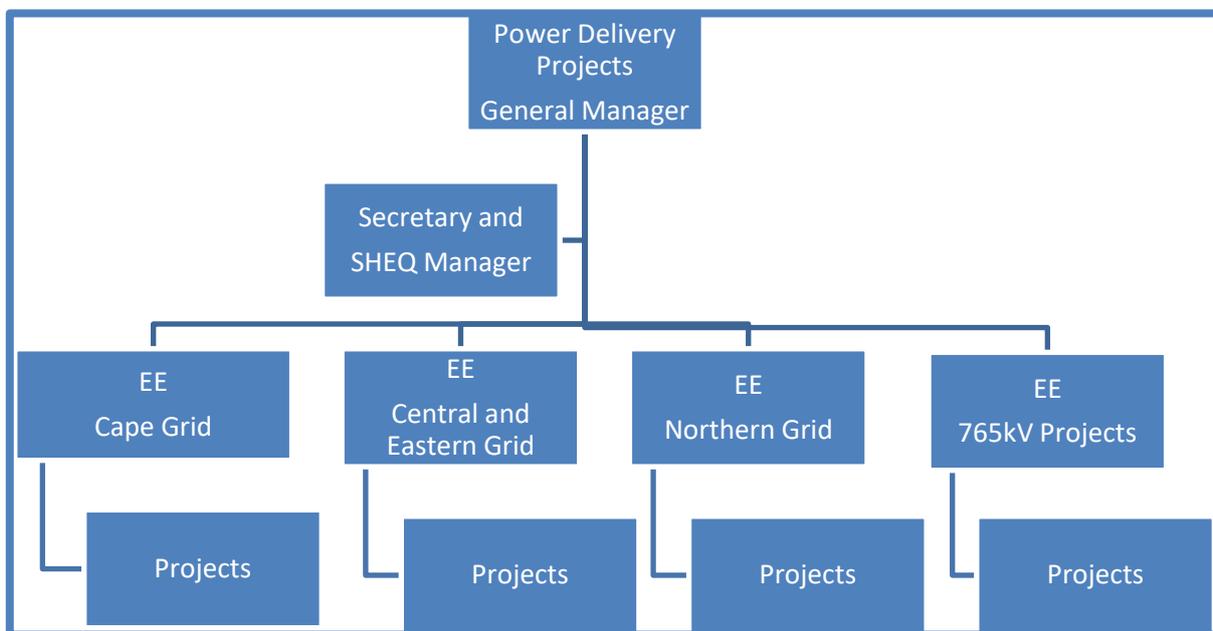
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South Africa. The areas to be affected by the environmental management system are as described under section 3.1 of this document. The department strives to comply with all compliance obligations including legal requirements relating to its operations and; all local government by-laws of each and every municipality where PDP are operating under their jurisdiction.

PDP works with the contractors that are constructing the power lines, civil works, stringing, and Cabling and Electrical. The Contractors are expected to have an EMS documentation that is in line with ISO14001 and PDP organisational requirements. PDP projects are normally spread out across the country. The Contractors documents are made site specific (specific actions to deal with risks and opportunities identified for a particular project) to the projects that they are working on.



**Figure 2: PDP Structure**

**3.2.4 Environmental management system (clause 4.4)**

PDP has established and have been implementing and maintaining and continually improving the environmental management system since its first certification in the year 2011. Since then, a number of processes, procedures have been developed in order to continually improve the management system.

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### 3.3 Leadership

#### 3.3.1 Leadership and Commitment (Clause 5.1)

The top management within PDP has developed the SHEQ Statement of Commitment (PDPMAN-SG-68) to conform to the requirements of the standard and Eskom SHEQ Policy (32-727). The aim of such intervention demonstrate leadership and commitment with respect to the environmental management system and to indicate how it can be implemented to conform to the Corporate Plan, Group Business Plan as well as PDP Business and Operation Plans. The top management is also making sure that resources are made available to integrate all EMS requirements into the organisation's business processes in order to achieve its intended outcomes.

The formulation of this document is also a way that demonstrates the leadership and commitment that the Top Management renders to the department and confirms that they are;

- Communicating the importance of effective environmental management and of conformance to the environmental management system requirements;
- Directing and supporting persons to contribute to the effectiveness of the environmental management systems;
- Promoting continual improvement; and
- Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

#### 3.3.2 Environmental policy (Clause 5.2)

PDP is responsible for the construction of transmission substations and power lines and their associated activities. PDP is using the Eskom SHEQ Policy (Ref: 32-727) as the organization took the decision to have one SHEQ Policy throughout the entire organisation. To affirm its commitment as a department, within the bigger organisation PDP then formulated the SHEQ Statement of Commitment (SoC) (PDPMAN-SG-68).

PDP Management is committed to communicating the policy together with the SoC to all employees and contractors working for and/or on its behalf. Through active promotion PDP will ensure that all employees are involved and committed to the management of SHEQ and to ensure that they understand their rights and obligations/responsibilities in terms thereof.

To demonstrate top management's firm commitment to achieve the above, the following are their prime roles;

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- Ensuring that our activities comply with all applicable legislative requirements and other requirements;
- Ensuring that there is continuous SHEQ training and awareness for all PDP employees;
- Ensuring that suppliers meet Eskom's SHEQ requirements;
- Promoting open communication and participation on SHEQ issues with all PDP stakeholders
- Setting SHEQ objectives and measuring performance to achieve continual improvement
- Ensuring that the policy and statement of commitment are well documented communicated and made available to interested parties.

The Management representative's responsibility includes stoppage of activities that deviate from the policy requirements.

The SHEQ Policy serves as the starting point for setting the EMS objectives and targets and plans to achieve them. Top Management, with inputs from Line Managers and Employees and through the SHEQ Policy Management process, sets and approves the EMS objectives. They also look at key performance indicators and performance targets to continually improve EMS performance in line with the accepted SHEQ Policy.

PDPMAN-SG-68 (SoC) and Reference: 32-727 (SHEQ Policy), can be accessed from the Eskom Documentation Centre and/or Hyperwave.

### **3.3.3 Organisational roles, responsibilities and authorities (Clause 5.3)**

Roles, responsibilities and authorities are assigned and described within the Corporate HR policies and procedures; and specifically to other levels or operations, they are described under PDPMAN-WN-51 procedure.

### **3.4 Planning (Actions to address risks and opportunities) (Clause 6.1)**

The following are the main planned and currently being implemented actions that are available for PDP to make sure that all risks and opportunities are addressed so as to achieve the intended outcomes (continuous maintenance of the ISO14001 certification and environmental significant incidents / legal contraventions);

- Provision of resources and support by top management;
- Provisions of environmental resources allocations per project;

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- Assuring that all projects have authorisations, permits or licenses as per legal and organisational requirements;
- Conducting and /or exposing employees to various environmental topics through training and awareness on current and relevant subjects;
- Conducting regular inspections and audits at all PDP operations;
- Management of incidents, complaints and non-conformances;
- Regular reporting on EMS performance; and
- Establish, implementing and reviewing of documentation (including procedures and processes).

#### **3.4.1 Environmental Aspects (clause 6.1.2)**

An Environmental aspect refers to an element of PDP's activities, products and services that it can control and those it can influence which have or can have a beneficial or adverse Environmental impact. These include aspects, which PDP can influence with respect to contractors. The aspects should take into account planned, new or modified activities, products and services.

The identification of Environmental aspects shall be an ongoing process to determine the past, current and potential impact of activities on the environment. An Environmental aspect and impact register has been developed for PDP and reviewed as per the impact and aspects identification and assessment work instruction (PDPMAN-WN-14).

Significant aspects, as identified and put in the register are assessed in terms of the methodology described in the Eskom Integrated Risk Management Standard (32-391). PDP shall only communicate its significant aspects where required by law (lawful request) and upon request.

#### **3.4.2 Compliance obligations (Clause 6.1.3)**

Compliance obligations include legal requirements that an organisation has to comply with and other requirements that PDP has or chooses to comply with. It includes establishing the impact of these requirements on the operations and the environmental risks to PDP.

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The identification and updating of all compliance obligations relevant to PDP's activities, products and services shall be recorded in the Legal Register, which is managed by a service provider on behalf of Eskom Corporate Sustainability.

The legal register covers national, provincial legislation, as well as applicable municipal bylaws where these are available. The register is consulted to determine legislative requirements of all activities on site. Legal and other requirements are also identified in the Environmental Management Programmes that have been developed for various projects in PDP and approved by DEFF. Legal requirements are communicated to key staff during inductions, and are included in contractual documentation.

A list of permits obtained the different projects has also been developed, and is updated as required. Every project shall keep all agreements with community groups, or non-governmental organisations, site specific registers of legal requirements, contractual agreements, and agreements with public authorities or customers on and around the site. All projects specific documentation shall be kept at the project site while the rest of the documents shall be kept at the office.

The legal register is web based and hosted online to ensure that it is continually kept updated and relevant. The Legal Register is updated by CS, and updates and/or changing legal requirements are communicated to the whole organisation including PDP by CS and then communicated further to the projects via PDP Grids. Any other compliance obligations including procedures and processes shall be kept within an approved document management system.

Contractors; and sub-contractors are required to compile site specific legal registers that should also include the provincial legislation and local bylaws where available.

### **3.4.3 Planning action (Clause 6.1.4)**

PDP has a number of plans and processes that are put in place in order to address significant environmental aspects, compliance obligations (as indicated above) and risks and opportunities identified. All plans are documented in a procedural or work instruction form where operations are also evaluated in order to assess the effectiveness of the measures being implemented at the projects.

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### **3.5 Environmental Objectives and planning to achieve them (Clause 6.2)**

#### **3.5.1 Environmental objectives (Clause 6.2.1)**

The objectives and targets are consistent with the SHEQ policy including the commitment to the reduction of risks/impacts, prevention of ill health and the prevention of pollution.

PDP Management shall establish annual/ financial year environmental objectives, documented and communicated throughout PDP. These objectives shall follow the consideration of technological options, financial, operational and business requirements of PDP. These evaluations are conducted through the development of the Business Plan. The objectives and targets are monitored on a monthly basis.

These objectives developed shall be based on legal and Eskom requirements as well as the head office and sites environmental aspects and impacts. Specific measures have been determined and short and long term targets for significant impacts, and strategies to meet these targets also determined.

Objectives are long-term goals and targets are short-term goals. Targets generally vary throughout the various PDP Operations activities, products or services (i.e. projects). Objectives and Targets shall be reviewed at least annually at the Management Review meetings and/or through periodic discussions with the PDP Management and PDP Environmental Management Committee.

##### **3.5.1.1 Planning Actions to achieve environmental objectives (Clause 6.2.2)**

PDP has established, implementing and maintaining programmes in order to achieve its set objectives. Programmes are developed at the relevant functions and levels of the organisation as well as the means and time frames by which the objectives shall be achieved and be documented. PDP works with projects that have already passed the planning stage (environmental impact assessment process conducted by the Land Development department).

Several programmes have been formulated by PDP for achieving objectives and targets. These programmes assign responsibility throughout PDP for achieving objectives and targets, and specify the means and time frame by which they will be achieved.

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**Project specific Environmental objectives, targets and programme(s)**

- i) For new infrastructural developments and existing infrastructure requiring upgrades and refurbishments, project specific Environmental Management Programmes (EMPRs) have been and/or are developed to indicate measures to prevent and mitigate impacts related to their development. Targets, responsibilities and action plans are described to prevent and mitigate significant environmental impacts specific to that development.
- ii) Project activities are accompanied with the development and implementation of the method statements (MS) or safe work procedures (SWP) which outline the specific activity control measures (i.e. for waste management, vegetation clearing etc.) for a particular activity. Those MSs or SWPs shall be approved or accepted by the Eskom before implemented.

**3.6 Support (Clause)****3.6.1 Resources (Clause 7.1)**

PDP's top management has with time, determined and made provisions on the resources needed for the establishment, implementation, maintenance and continual improvement of the environmental management system. In cases where internal resources needed support, top management is able to support with either internal or external team members.

**3.6.2 Competence (Clause 7.2)**

PDP has determined the necessary competent persons needed to undertake the work under its control that affects its environmental performance and its ability to fulfil its compliance obligations. There is a team of qualified environmental professionals that deals with EMS.

The training requirements of employees whose work may have a significant impact on the environment are identified by a training matrix. Should there be a need for new trainings due to changes in legislation, business requirements or any other changes that need training interventions, the responsible personnel are requested to include such in their development plans and action accordingly. The Human Resources Shared Services is responsible to retain all appropriate documented information as evidence of competence; which in this case, is the copies of certificates. All proof are submitted through local human resource personnel.

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### 3.6.3 Awareness (Clause 7.3)

All persons doing work under PDP's control are made aware of the SHEQ policy, the significant environmental aspects and impacts. Their contribution to the effectiveness of the environmental management system including the benefits of enhanced environmental performance and implications of not conforming the systems requirements as well as the compliance obligations form part of the awareness.

The awareness is conducted through inductions, environmental special day commemorations or celebration, email updates, information booklets or newsletters and through the Eskom website.

Project site specific induction programmes are run by the responsible contractor or Eskom Site SHE Practitioners. Specific training interventions are implemented by Eskom where necessary.

PDP shall ensure that people executing specific tasks are competent on the basis of appropriate education, training, skills and experience. Appropriate records of such training shall be kept and maintained.

In relation to statutory training requirements, training certificates are to be obtained as proof of competency.

In relation to in house training requirements, the Acknowledgement for Completion of Course or the Learner Participation Confirmation Letter will serve as proof of attendance and completion of the course. These notifications are sent via e-mail to the respective learner and manager after completion of the training intervention. For awareness initiatives attendance registers or the Zenzele training record is adequate proof of attendance/training.

### 3.6.4 Communication (Clause 7.4)

#### 3.6.4.1 General (Clause 7.4.1)

PDP has established, implementing and is maintaining a process for communication, participation and consultation. The procedure is there to make sure that SHEQ information is communicated to employees and other interested and affected parties. It covers internal and external communications also relevant to the environmental management systems. PDP reserves the right to communicate significant issues unless it is part of compliance obligations.

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### 3.6.4.2 Internal Communication (Clause 7.4.2)

Request for project related information shall be directed to the appropriate Project Manager. The Grid's Project Manager researches and provides a response to internal requests for project information. The mechanisms that are used for various types of communication include but are not limited to:

- i. Meetings (i.e. Management Review, Management, SHEQ Managers', Staff, etc.);
- ii. Inductions;
- iii. Letters;
- iv. Emails;
- v. Telephones;
- vi. Notice boards;
- vii. Intranet; and
- viii. Newsletter (**PDP – mostly from the GM's Desk**).

### 3.6.4.3 External Communication

The Eskom Communication Department will be utilised as a resource for external communication to external IAPs.

PDP shall communicate with external interested and affected parties as and when required by authorisations or is within its compliance obligations. The medium of communication is dependent on the matter being addressed.

#### 3.6.4.3.1 The process for handling inquiries and/or complaints

- All written or verbal inquiries received related to PDP shall be responded to verbally or in written form depending on the nature and scale of the inquiry.
- If the enquiry is in a written format, the receiver shall confer with a functional specialist e.g. SHEQ Manager for quality, health, safety or environmental enquiries prior to response.

#### 3.6.4.3.2 The process for handling media communication shall consist of:

- Eskom External communication procedure shall be adhered to for all external communication with the media.

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**3.6.4.3.3 The process for handling Corporate Social Responsibility with affected communities:**

- The Stakeholder personnel shall liaise with the community representatives and provide feedback to the Project Manager.

**3.6.4.3.4 The process for handling incidents and accidents:**

- The reporting of incidents and/or accidents shall be handled as detailed in the procedure for Environmental Incident Management.

**3.6.4.3.5 The process for handling product information and contracts**

- All contracts related information shall be handled in accordance with the contract between Eskom and the Supplier.

**3.6.4.3.6 Environmental Control Officer (ECO) Communication Process**

- The ECO shall conduct their activities as stipulated in the DEA/DEFF Approved Environmental Management Programme and per the conditions in the project Environmental Authorisation.
- Furthermore, the ECO shall communicate the environmental authorisation requirements, access agreements, special conditions, claims and/or complaints to the project manager and contractors.
- The ECO shall communicate and consult relevant landowners regarding access agreements, special conditions, and claims (damage) complaints with landowner.
- The ECO shall conduct audits as required by the applicable EA and CEMPr conditions.
- The ECO shall report audit findings, legal contraventions and non-conformance as required by the by the EAs and the CEMPr.

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### **3.6.5 Documented Information (Clause 7.5)**

#### **3.6.5.1 General (Clause 7.5.1)**

PDP has developed this manual to describe its processes and the information required by the ISO14001: 2015 EMS standard. The rest of the information relating to the management system is documented in the form of but not limited to standards, guidelines, plans, procedures and, work instructions.

#### **3.6.5.2 Creating and updating (Clause 7.5.2)**

Eskom has developed templates and naming conventions as a unique way of identifying documents that are used when developing, reviewing and the approval of documented information for suitability and adequacy.

PDP has developed and is maintaining a number of documentations as per requirements by ISO 14001:2015 and other related management systems.

The EMS documentation includes:

- A documented Eskom SHEQ Policy, PDP SHEQ Statement of Commitment and environmental objectives;
- This Environmental Manual (PDPMAN-MN-03);
- Documented information and processes required by ISO 14001:2015 standard;
- Documents identified for effective planning, operation and control of our processes;
- Records required by the ISO 14001:2015 Standard; and,
- Environmental system requirements imposed by our customers and / or the applicable regulatory authorities.

#### **3.6.5.3 Control of documented information (Clause 7.5.3)**

PDP has developed and is maintaining the integrated (used for SHEQ) work instruction to control all its documentation. Control of Documented Information (PDPMAN-WN-01) is the work instruction developed in this regard and aligned to Documents and Records Management Procedure (32-6).

This procedure makes provisions on the availability and suitability of use of the documentation where and when it is needed. Relevant and updated revisions shall be always being made available or accessible at the point of use.

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All documentation distributed especially to the projects shall be done with the use of a transmittal note. All documentation is available on Hyperwave and is controlled by the Document Controller. Environmental representatives responsible for management systems are afforded the right to store retrieve and manage documents that are stored on Hyperwave or any other Eskom Documentation Management system. All documents of external origins especially for operations (i.e. construction relevant information) are also identified and managed by PDP the same way as internal documentation.

### **3.6.6 Operation (Clause 8)**

This includes all operational planning and control processes that affect PDP's operations.

#### **3.6.6.1 Operational Planning and Control (Clause 8.1)**

In order to address risks and opportunities, PDP has established, implementing, control and maintaining the processes needed to meet environmental management system requirements. PDP has developed several operational control procedures aimed at managing the significant environmental aspects/risks associated with its operations. All these are carried out under specified conditions in order to meet the organisation's policies and objectives and strategies as well as legal and other applicable requirements.

These are mostly associated with project execution activities because office based activities' impacts are negligible in comparison. Contractors are expected to produce project specific operational planning and control processes in the form of method statements, procedures and/or work instruction.

The planning processes (EIAs and development of CEMPRs) for construction activities are conducted by the Land Development (department within Eskom Real Estate). These also include the permits and licenses application processes. The environmental requirements (EAs, EMPs, Permits and Licenses) are also made available during procurement processes where they are part of the tender enquiry documentations so as to outline the requirements to the bidders. PDP communicates its relevant environmental requirements to external providers (on request or if it is a compliance obligations), including contractors.

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PDP commits to the cradle-to-grave concept when it comes to the handling of waste generated from its operations. Records of the quantities and/or volumes of the waste are sought, maintained and kept.

### **3.6.7 Emergency preparedness and response (EPR) (Clause 8.2)**

It is the process of establishing, documenting and maintaining a procedure for identifying and responding to any potential emergency situations and potential accidents that can have an impact on the environment. In response to potential emergency situations identified as per Clause 6.1.1 PDP has adopted the EPR procedure as documented for MWP. This is due to the fact that PDP has no control over the management of the Megawatt Park Building where they domicile. This procedure seeks to prevent or mitigate the consequences of any such occurrence and consider the continuity of the business operations.

Project specific emergency plans and/or method statements shall be established to cover scenarios relating to the specific locations where projects are located. All emergency plans shall be site specific to cater for each emergency scenario and the plan shall be clearly communicated and understood at the projects. The necessary awareness trainings are also given to individuals such that they can understand their responsibilities for the management of any emergency that might arise.

### **3.6.8 Performance evaluation (Clause 9)**

#### **3.6.8.1 Monitoring, measurement, analysis and evaluation (Clause 9.1)**

##### **3.6.8.1.1 General (Clause 9.1.1)**

PDP has adopted and is using Monitoring, measurements, analysis and evaluation work instruction (PDPMAN-WN-94) to monitor, measure, and analyse on a regular basis, the key characteristics of its operations that can have a significant environmental impact. The process includes the recording of information to track performance of relevant operational controls and to evaluate conformance with the organisation's objectives and the ability of the processes to achieve planned results. The document outlines what needs to be monitored and measured, when to monitor and measure including the results reporting thereof. All the communications including the results of monitoring or measurements is handled through the communication procedure.

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Characteristics of operations and activities, which can have a significant impact on environment are monitored and measured regularly. Records of monitoring and measurement information as required for tracking performance, to prove that operating controls were effective and to demonstrate conformance with objectives and targets are provided for the purposes of reporting to organisation's top management on environmental performance.

PDP is mandated to ensure that any equipment used for monitoring and measurement will be capable of the accuracy required and calibrated on a regular basis. The control and assurance of this is done by the quality team and occupational hygiene team.

#### **3.6.8.1.2 Evaluation of compliance (Clause 9.1.2)**

This involves the establishment, implementation and maintenance of the process (es) needed to evaluate fulfilment of PDP compliance obligations.

The documents used as a point of reference within PDP is as the one indicated above under section 3.6.8.1.2. This evaluation shall be done with other requirements that PDP subscribes to namely:

- Evaluation of compliance with legal and other requirements (such as ISO14001 standard) will be conducted by means of reviews, inspections and audits;
- BU and local authority requirements where specified and communications with authorities will be maintained as part of the environmental records;
- Specific legal requirements may also be incorporated into Eskom, Group Capital and/or PDP processes (i.e. procedures, standards, instructions or bulletins);
- Compliance with other requirements such as Eskom policies, procedures, standards and guidelines may also be evaluated by means of reviews and audits;
- The audit reports shall be maintained as records of the evaluation to compliance obligations;
- Monitoring and review of legal permit/licenses conditions related to environmental assessment projects are conducted on a regular basis by Environmental staff and recorded. In certain cases, evaluation of compliance to permit / EMP conditions is a requirement set by the environmental authority as part of the authorisation of the project;

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- Compliance to EAs conditions are evaluated by means of on-site inspections and audits of projects (where applicable). The audits can be conducted by PDP environmental staff or externally appointed Environmental Officers and/ or Independent Environmental Control Officers (ECO);
- Incidents investigations and reporting is another tool (albeit a reactive one) that can be used to evaluate compliance to legal requirements;
- The legal updates and interpretations of requirements received from CS allows for reviewing and evaluating the legal requirements and the potential or actual impact on the business;
- Legal compliance obligations review/audits shall be done once in **5 (five)** years with the use of external contractors/service providers.

### **3.6.9 Internal Audit (Clause 9.2)**

#### **3.6.9.1 General (Clause 9.2.1)**

#### **3.6.9.2 Internal audit programme (Clause 9.2.2)**

It is the process of establishing, implementing and maintaining an audit programme for conducting periodic environmental management system audits or at planned intervals to determine whether or not the management system:

- Conforms to planned arrangements including the requirements of the management system standards to which the organisation subscribes as well as legal and organisational requirements, and
- Has been properly implemented and maintained, and is being adhered to.

PDP has adopted the corporate standard, Business Management System Audit Standard (Ref No. 240-53413860). PDP also developed a departmental specific work instruction (PDPMAN-WN-03) related to this.

The audit programme, including any schedule, shall be based on the significance of environmental management system aspects, the organisation's risks, the organisation's performance and the results of previous audits.

The audit arrangements cover the scope, frequency, methodologies and competencies, as well as the responsibilities and requirements for conducting audits and reporting results. The selection

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process of auditors and the execution of audits are conducted to ensure objectivity and the impartiality of the audit process.

The process shall specify external verification audits as set intervals to verify the effectiveness, efficiency and objectivity of the internal audits and auditors.

EMS audit methodologies and protocols should be common, as far as is appropriate, between Grids and Head Office, to facilitate inter-grid and Head Office benchmarking. (As a general principle, persons conducting an audit should be independent of the system being audited. For instance, a person from one Grid shall not necessarily audit their own operations. Thus a Peer Review system was then established. The schedule is developed on a yearly basis.

### **3.6.10 Management review (Clause 9.3)**

It is the process where the PDP Top Management, at regular intervals; review the EMS, to ensure its continuing suitability, adequacy and effectiveness in the light of system audit results, changing circumstances, changes in stakeholders' expectations, advances in technology and the commitment to continual improvement. PDP has adopted the Management System Review Standard (240-53458685). PDP has one management review meeting per year, while Grids/projects are expected to conduct their performance management meeting at planned intervals. These meetings help to prepare and feed to the management review that PDP hold on an annual basis.

The management review process shall ensure that the necessary information is collected/collated and documented to allow management to carry out this evaluation. Where required the necessary changes shall be made to policy, objectives and other elements of the management system.

PDP has set and reviews the environmental management objectives and targets, legal compliance and other requirements in order to ensure continuous improvement within environmental management on projects.

PDP shall review the performance of the EMS at specified intervals, in accordance with procedural requirements.

The following are the considerations for the PDP management reviews:

- The status actions from the previous management Reviews;

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- Changes in external and internal issues that is relevant to the environmental management systems;
- Corrective and preventative actions;
- Continual improvement of management systems;
- Monitoring, measuring and benchmarking;
- Emergency preparedness and response; and
- Aspect and Impact identification, risk assessment and risk control

The review shall cover the following topics:

- Extent to which objectives, targets and programmes have been met;
- Continued relevance of the SHEQ Policy;
- Results of internal audits and evaluations of compliance with applicable legal requirements and other requirements to which PDP subscribes;
- Customer feedback and communications from external interested parties, including complaints;
- Environmental performance;
- Status of preventive and corrective actions;
- Follow-up actions from previous management reviews;
- Changes that could affect the environmental management; and
- Recommendations for improvement.

The output of the management review shall be the Management Review Report, which is produced annually and contains the following:

- Summary of management review meetings;
- Company Environmental objectives and targets – progress and recommendations;
- Audit feedback – results and recommendation;
- Customer feedback – results and recommendations;
- Recommendations for improving the effectiveness of EM; and
- Possible changes to the SHEQ Policy

PDP Top Management shall establish an Environmental Management Committee, chaired by the appointed Management Representative, e.g. PDP SHEQ Manager. The primary role of the committee is to monitor performance of the Environmental Management Programme at PDP through

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regular meetings. The Environmental Management Committee shall meet at least quarterly or as and when required.

### **3.6.11 Improvement (Clause 10)**

#### **3.6.11.1 . General (Clause 10.1)**

PDP has determined processes of identifying opportunities for improvement and implementing necessary actions to achieve the intended outcomes of its environmental management system.

#### **3.6.11.2 . Nonconformity and corrective action (Clause 10.2)**

This involves implementation of the proactive and reactive measures against which the environmental performance is monitored, measured, analysed, documented and shared with the organisation on a regular basis. This process shall provide for qualitative and quantitative monitoring and shall include environmental inspections, audits and incident/accident reporting, recording and investigation analysis that shall be used for the identification of preventive and corrective actions, their implementation, monitoring and closing out.

PDP Environmental Management team has adopted processes developed by the Eskom as an organisation and is maintaining processes in response to clause nonconformity and corrective actions:

- Control of nonconforming products and services procedure
- Corrective and Preventative Action procedure

All nonconformities to environmental policies, procedures or standards shall be reported immediately to the supervisor and dealt with as detailed in the procedures and processes.

As for PDP environmental management, all preventive and corrective actions shall be a product of the **5-WHY Root Cause Analysis Process**.

Any corrective or preventive actions taken to eliminate the causes of actual or potential nonconformities shall be appropriate to the magnitude of the problems and commensurate with the environmental impact encountered.

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The organization shall retain documented information as evidence of the nature of nonconformities and a subsequent actions taken (i.e. use of Action Plans) and the result of any corrective actions. PDP shall also implement and record any changes in the documented processes resulting from corrective and preventive actions.

### 3.6.12 Continual Improvement

PDP shall continually improve the suitability, adequacy and effectiveness of the EMS in order to enhance its environmental performance. The rate, extent and timescale of actions that support continual improvements shall be determined within PDP

## 4. Acceptance

This document has been seen and accepted by the senior managers as indicated in the Table below.

Table 6: List of Senior Manager accepted the manual

Name	Designation
Naresh Hari	General Manager – Power Delivery Projects
Geoffrey Small	Middle Manager SHEQS – Power Delivery Projects
Mosebo Dikgale	Executive Manager – 765 kV Projects
Bob Naraghi	Executive Manager Projects – Central Grid
Lenny Chetty	Executive Manager Projects – Cape Grid (Acting)
Clint Fisher	Executive Manager Projects – Northern Grid
Bongani Mabena	SHEQ Manager – Cape Grid
Elliot Baduza	SHEQ Manager – Central Grid (Acting)
Puleng Tsatsi	SHEQ Manager – 765 kV Projects

## 5. Revisions

Date	Rev.	Compiler	Remarks
July 2010	0	Wiesaal Salaam	New document
May 2011	1	Wiesaal Salaam	Revised to include findings raised during gap assessment audit.

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<b>Date</b>	<b>Rev.</b>	<b>Compiler</b>	<b>Remarks</b>
July 2011	2	Wiesaal Salaam	Revised to include findings raised during system audit.
October 2011	3	Wiesaal Salaam	Sections 3.1 and 3.2 amended and Annexure A included addressing certification audit findings.
February 2012	4	Tshinanṅe Mutshatshi	Revised to include findings raised during system audit.
October 2012	5	Tshinanṅe Mutshatshi	Revised to include findings raised during system audit.
September 2016	6	Tshinanṅe Mutshatshi	Revised to include findings raised during system audits (Systems Documentation) and to include the ISO14001: 2015 requirements.
March 2018	7	Tshinanṅe Mutshatshi	Revised to address gaps identified through Internal Gap Assessment and Internal Audit.
April 2020	8	Tshinanṅe Mutshatshi	Revised to address gaps identified through Internal Gap Internal Audit.

## 6. Development Team

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

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## **7. Acknowledgements**

The PDP Environmental Management Committee team thanks everyone for their input in the development and maintenance of this document and its implementation.

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