

	Works Information for Engineering Innovation and Implementation Services	Generation New Business Engineering Innovation and Localisation
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1. Introduction

Eskom Generation has embarked on a strategy whereby it seeks to strengthen its technical expertise and further build capacity by augmenting skills and developing new talent. Eskom intends to make use of an innovation services contract for part of its engineering works. This document presents the high-level scope of the innovation services that an appointed engineering professional services Consultant shall do for Eskom.

The intention of this scope is to establish a panel of professional service providers who shall be pre-qualified to perform the engineering and technical work desired by Eskom Generation as the need arises. As such, this scope cannot be exhaustive but will give an indication of the envisioned skills required. Detailed requirements will be communicated to the panel on a case-by-case basis, as each task arises.

2. Supporting clauses

2.1 Purpose

The purpose of the document is to provide a high-level description of the scope of the professional services that shall be performed by the Consultant.

2.2 Applicability

This document shall apply throughout Eskom Generation Division.

2.3 Normative/Informative references

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs. Even though these documents are not cross referenced in the document, the reader should read them in conjunction with this document. These documents remain copyright of Eskom, and copies may be requested from Eskom is necessary. Non-Disclosure Agreements may be required, depending on the classification levels of the documents.

2.3.1 Normative

- [1] ISO 9001 Quality Management Systems.
- [2] 240-105658000 Supplier Quality Management Specification
- [3] 240-86973501 Engineering drawing Standard.
- [4] 240-136426152 Generation Engineering Drawing Symbol Standard.
- [5] 240-95401790 Reference Project Lifecycle Model Standard.
- [6] 240-53114002 Generation Engineering Change Management Procedure.
- [7] 240-124341168 Project/Plant Specific Technical Documents - Handover Work Instruction.
- [8] ISO 14001 Environmental Management Systems.
- [9] 32-245 Eskom Waste Management Standard.
- [10] 240-108987034 Eskom Environmental Standard.

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- [11] 32-6 Eskom Documents and Records Management Procedure.
- [12] 240-53113685 Design Review Procedure.
- [13] 240-53665024 Engineering Quality Manual.
- [14] 32-1034 Eskom Procurement and Supply Chain Management Procedure.
- [15] Public Finance Management Act.
- [16] 32-727 Safety, Health, Environment and Quality (SHEQ) Policy/Procedure.
- [17] 240-42366126: Process Control Manual for Project Management (Conceptual).
- [18] 240-99011570: Process Control Manual for Set up Project Controls (Conceptual).
- [19] 240-42385239: Process Control Manual for Contracts Management (Conceptual).
- [20] 240-45461812: Process Control Manual for Construction Management (Conceptual).
- [21] 240-45461809: Process Control Manual for Commissioning (Conceptual).

2.3.2 Informative

- [22] Occupational Health and Safety Act 85 of 1993.
- [23] Environmental Management Act 107 of 1998.
- [24] National Environmental Management: Waste Act (NEMWA) 59 of 2008.

2.4 Definitions

Definition	Explanation
Consultant	The Consultant is the party (an individual, firm, or company) appointed by the Employer to perform the services outlined in the contract.
Employer	The Employer (Eskom) is the contracting entity that engages the Contractor to perform the works, and in NEC3, it is treated as a single legal entity.
Employer's Agent	The "Employer's Agent" is a named individual or organization appointed by the Employer to act on their behalf to manage the contract
National key point	Refers to a strategic location or area, like power stations, airports, or government buildings, declared vital for national security, economy, or public interest under the National Key Point Act of 1980.
Project Manager	The representative of the Employer (Client) responsible for the administration and management of the contract, acting as the key decision-maker.
Implementor	Responsible for directing the execution of plans, coordinating resources, and turning designs into physical structures.

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2.5 Abbreviations

Abbreviation	Explanation
C&I	Control and Instrumentation
ECSA	Engineering Council of South Africa
EA	Environmental Authorisation
EMP	Environmental Management Plan
EMS	Environmental Management System
FEED	Front End Engineering Design
HMI	Human Machine Interface
ID	Identify Document
IT	Information Technology
I/O	Input/Output
LIMS	Laboratory Information Management System
MS	Microsoft
NBEIL	New Business Engineering Innovation and Localisation
NEMWA	National Environmental Management: Waste Act
OEM	Original Equipment Manufacturer
OT	Operational Technology
PLCM	Project Lifecycle Model
PPE	Personal Protective Equipment
SHEQ	Safety, Health, Environment, and Quality

3. The Works

3.1 Executive Overview

The scope of work involves the following critical works:

(The list is not exhaustive)

1. Front end engineering design (FEED) studies, i.e. feasibility study, options analysis, pre-project planning, scope development etc.
2. Co-develop projects from the design phase through implementation in collaboration with Eskom Engineering and Maintenance, ensuring effective skills transfer and knowledge sharing
3. Engineering development, i.e. concept development, design development, final detail design, etc.
4. Plants support, i.e. failure investigations, root cause analysis, engineering modifications etc.
5. Plant support on C&I control system installed in our Power Plants, field instrumentation engineering support on spares, HMI diagnostic support on complex issues and spares, operational technology (OT) e.g. diagnostic and repair support on automation processors modules support, diagnostic and repair support failures on all obsolete Control Systems and modules, information technology (IT), simulator support services and maintenance, cybersecurity assessments support, data centres and failure investigations on C&I systems complex issues as they arise .
6. Local & Remote C&I Engineering Support Services, Technician to support Control systems to Trouble shooting to be available anytime to address issues
7. Control Systems and Field Instrumentation Spares Support

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8. Projects involvement, i.e. engineering resources mobilisation on projects, etc. Integration of design and project management
9. System operability and maintainability
10. Project management and engineering integration.
11. Provide training on Nuclear, C&I and any other related power plant discipline to upskill and support site Employees.
12. Reverse engineering on:
 - a) Mechanical components.
 - b) Electrical Components.
 - c) Control and instrumentation systems.
 - d) Chemical services and other related services.
 - e) Environmental compliances.
 - f) Boiler plant and its auxiliaries.
 - g) Turbine plant and its auxiliaries.
 - h) Generator plant and its auxiliaries.
 - i) Outside plant.
 - j) Common plant.
13. Plant outage management and optimisation.
14. Technical competency: personnel shall have technical competencies ranging from competent junior levels up to expert consultants in the relevant engineering and technical fields.

3.2 Description of the works

The Consultant shall perform the following professional services:

1. Offer a complete suite of engineering services, utilizing their full complement of engineering and technical resources covering all engineering disciplines.
2. Utilize professional engineers that are ECSA registered or registered with the relevant international or any recognised professional body for engineer accreditation if foreign skills are required, to take responsibility for all designs produced.
3. Utilize, as far as possible, South African citizens as the local resources, unless requisite skills are not available locally.
4. Provide both on-site (based at Eskom's facilities and requirements) and off-site (based at the parent company office of the Consultant) professional services.
5. Conduct reverse engineering on mechanical, electrical, C&I systems as per requirement by the Client.
6. Produce designs on projects.
7. Conduct pipe engineering studies.
8. Implement reverse engineering deliverables by producing physical components for installation and use in the plant.

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9. Implement designs by producing the intended physical state of completed works.
10. Undertake engineering integration, encompassing the coordination and alignment of all engineering activities and deliverables to ensure consistency, compatibility, and compliance with project objectives.
11. Provide technical advice and assistance on chemical services, emissions abatement, efficiency improvement and other related plant areas.
12. Provide technical resources for mobilisation on Eskom projects.
13. Provide technical support on the existing Eskom plants and operations.
14. The consultant shall make provision for remote technical assistance and onsite technical assistance as and when the need arises.
15. Maintain machining/manufacturing workshops, or have established relationships with such workshops, to produce reverse engineered components as per Consultant's approved designs, as per task requirements.
16. Continuously train the Client's employees on Nuclear, C&I and any other related discipline by transferring knowledge and skills through mentoring, coaching, and supervising.
17. The supplier must ensure that all products fully comply with South Africa's localisation and industrialisation requirements.
18. In performing these works, the Consultant shall at all times adhere to Eskom regulations and governance processes, and laws national legislation.
19. Ensure full compliance with applicable SHEQ requirements

3.3 Deliverables / Milestones

Most of the outputs are expected to be professional services and is expected to be intellectual in nature, and as such, the Consultant is expected to keep in place a well-executed document management system. As part of the deliverables, the Consultant shall do the following:

1. The Contractor shall provide the following deliverables to Eskom Site Manager and Produce deliverables as per the detailed Scope of Work for the Task Orders issued by the Employer.
 - a. Technical Reports: Detailed fault-finding reports and root cause analysis for major system trips or failures.
 - b. Technical Requirements implementation & Standards complying
 - c. As-Built Markups: Tracked changes to logic diagrams, P&IDs, and loop drawings resulting from modification work.
 - d. Commissioning Dossiers: Completed test sheets and calibration certificates for all work performed during outages.
 - e. Software Backups: Verified full-system backups of all Power Plants control systems, obsolete and new PLC's project files backup after any modification.
 - f. Weekly Progress Reports: Summary of activities completed, pending issues, and planned tasks for the following week.
2. Produce a full engineering data pack for the designs.
3. Produce/manufacture reverse engineered components as per design and deliver and install on site.
4. Produce signed off documents as part of the completed deliverables confirmation.

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5. Produce deliverables that are consistent with the engineering change management and PLCM processes.
6. Deliver the end products in line with the NEC3 professional services contract schedule.
7. The Consultant shall produce a progress report at an agreed frequency showing the work activities undertaken during each frequency period.
8. Produce and maintain a works schedule that they shall share with Eskom to give sight of their works activities.
9. Training to Eskom employees to upskill on Nuclear, C&I and any other related disciplines.
10. All work shall comply with the following standards and specifications:
 - a. Eskom Engineering Standards: All stipulated Applicable Design standards to be adhered to for Mechanical, electrical, Chemical, Civil and C&I work.
 - b. Cyber Security: Strict adherence to Eskom's cyber security policies regarding the use of USB drives, laptops, and network access on control system networks.
 - c. Grid Code Application: Compliance with South African Grid Code requirements regarding plant response and protection.
11.
 - a. All SHEQ requirements to be adhered to according to: Occupational Health and Safety Act (OHSA) and Eskom Life Saving Rules.
12. Produce deliverables that are consistent with the quality management processes.

4. Detailed Scope of Services

The Consultant shall provide services in the following disciplines/areas:

1. Electrical Engineering.
2. Civil Engineering.
3. Mechanical Engineering.
4. Control and Instrumentation (C&I) Engineering
5. Project Management.
6. Outage Schedule Optimisation
7. Draughting Services for all engineering disciplines.
8. Chemical Services (Water and waste management).
9. Reverse engineering, Manufacturing and Implementation

4.1 Mechanical Engineering

The Consultant shall provide the following services:

1. Comprehensive mechanical engineering services covering all Eskom Generation operations.

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2. Projects support.
3. Projects resources mobilisation.
4. Operations support.
5. Engineering development.
6. Failure investigations.
7. Engineering studies.
8. Engineering designs.
9. Create simulation models/animations of the end-state plant operations.
10. And many other mechanical engineering related activities.

4.2 Civil Engineering

The Consultant shall provide the following services:

1. Comprehensive civil engineering services covering all Eskom Generation operations.
2. Projects support.
3. Projects resources mobilisation.
4. Operations support.
5. Engineering development.
6. Failure investigations.
7. Engineering studies.
8. Engineering designs.
9. Create simulation models/animations of the end-state plant operations.
10. Various other civil engineering tasks.

4.3 Electrical Engineering

The Consultant shall provide the following C&I services:

1. Comprehensive electrical engineering services covering all Eskom Generation operations.
2. Projects support.
3. Projects resources mobilisation.
4. Operations support.
5. Engineering development.
6. Failure investigations.

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7. Engineering studies.
8. Engineering designs.
9. Safety investigations
10. HAZLOC studies
11. Failure analysis
12. Simulations & calculations
13. IEC 61850 automation
14. Quality of Supply checks
15. Transformer & motor testing
16. Tap changer testing.
17. Chargers, UPS, drives support.
18. Diesel generator support
19. Generator troubleshooting
20. Maintenance optimisation
21. Outage & commissioning support
22. Skills transfer.
23. Energy storage systems support
24. ESS design & integration
25. Testing & maintenance
26. Lifecycle training
27. Specialised Primary Plant Testing Service
28. Electrical Power Electronic Services
29. Generator Engineering Services
30. And many other mechanical engineering related activities.

4.4 Control and Instrumentation (C&I) Engineering

The Consultant shall provide the following C&I services:

1. Comprehensive C&I Engineering services covering all Eskom Generation operations.
2. C&I Projects support.
3. C&I Projects resources mobilisation.
4. C&I Operations support.

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5. C&I Engineering design development.
6. C&I systems/ plant Failure investigations.
7. C&I Engineering studies development.
8. Functional safety and protection automation for power generation assets
9. OT and OT/IT cybersecurity assessment, compliance, risk mitigation, and incident readiness
10. Process and business automation including DCS integration and maintenance workflows.
11. Hardware and C&I interfacing to support monitoring and system integration.
12. Software engineering, configuration, and custom development for plant systems
13. Data architecture, modelling, secure transfer, storage, and enterprise availability
14. Visualisation and decision-support solutions integrated into control and viewing centres.
15. Component-level electronic repair, PLC support, DCS diagnostics, reporting, and skills transfer.
16. Functional safety engineering for protection automation across the full safety lifecycle in power generation plants
17. Industrial process automation, OPC/DCS integration, and business process optimisation using 4IR technologies.
18. Advanced analytics, dashboards, AI-based predictive models, plant performance and asset health indicators.
19. Component-level electronic card, power supply, drive, and PLC repair, including diagnostics, reporting, and skills transfer.
20. Protection Automation Systems adhering to the international standards
21. Cyber Security support.
22. Digital Transformation implementation
23. Process automation support
24. Hardware and Software support
25. Analytics and Electronic Card Repair Services
26. And many other related activities.

4.5 Project Management

The Consultant shall provide the following services:

1. Full project management services package covering all Eskom Generation operations.
2. Resourcing projects with requisite projects resources.
3. Deployment of resources at the nominated site/s.
4. Projects support.
5. Projects resources mobilisation.
6. Operations support.

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7. Projects development in line with Eskom processes.
8. And many other project management related activities.

4.6 Draughting Services

The Consultant shall provide the following services:

1. Drafting services covering all Eskom Generation operations.
2. Produce drawings data packs.
3. Create 3D CAD models.
4. Create drawings that are compatible with CAD software packages like Autodesk products suite, Bentley products suite, SolidWorks.
5. Create drawings in file formats that are nominated by the Employer.
6. Create as-built drawings.
7. Produce 3D CAD models.
8. Produce installation drawings.
9. Produce installation data pack.
10. Produce quality data pack.
11. And many other related activities.

4.7 Chemical Services (Water and Waste Management)

The Consultant shall provide the following services:

1. Full services in water management, waste management, chemical services and other related services covering all Eskom Generation operations.
2. Conduct studies.
3. Conduct investigations.
4. Deployment of resources at the nominated site/s.
5. Projects support.
6. Projects resources mobilisation.
7. Operations support.
8. Ensuring continued and continuous compliance to authorities and regulatory requirements.
9. Projects development in full compliance with authorities.
10. Projects development in line with external key stakeholders like Government, regulatory spheres, etc.
11. Projects development in line with Eskom processes.
12. And many other related activities.

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4.8 Reverse Engineering

The Consultant shall provide the following services:

1. Reverse engineering on obsolete components at all Eskom Generation operations.
2. Cover all plant areas/facilities, i.e. mechanical, electrical, Chemical, Civil and C&I, etc.
3. Create simulation models/animations of the end-state plant operations.
4. Produce components that are fit for purpose.
5. Produce engineering data packs.
6. Produce quality data pack.
7. Produce manufacturing drawings.
8. Produce installation drawings.
9. Produce installation data pack.
10. Produce 3D CAD models.
11. And many other related activities.

4.9 Training

1. The consultants to provide training on Nuclear, C&I and any other related power plant discipline to upskill and support site Employees
2. Train Eskom personnel on principles of OT cybersecurity, assessment methodologies, and architectural isolation strategies for industrial control systems.
3. Train Eskom personnel on all control systems used at different Eskom Power plants
4. Use an existing online training platform to deliver blended classroom and remote training.
5. Develop and deliver structured OT cybersecurity courses suitable for Eskom personnel.

4.10 Documentation Requirements

4.10.1 General

1. All documents, except for OEM data sheets, are to be supplied in native file format (specified by Eskom) as well as in a relevant format readable by an open licence package (e.g. PDF), unless otherwise agreed to in writing.
2. Where no standard format is prescribed, the Consultant shall propose a format and contents to Eskom for acceptance.
3. All deliverables shall be written in clear and concise English (South African/UK spelling), and all values/measurements shall be expressed in SI (metric) units of measurements.

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4.10.2 Document Formatting

All document formatting to be carried out as defined in Document and Records Management Procedure 32-6.

4.10.2.1 Document and Data Numbering

All documents shall be given a unique Identification Code Number as stipulated in the Document and Records Management Procedure so that it can:

- 1) Be correctly associated with related documents, data, and components
- 2) Be referenced with precision in other documents
- 3) Be retrieved easily from storage when necessary.

These unique numbers will be requested from, and assigned by, the Eskom document control personnel assigned to the specific task. The Consultant may use their own document numbering system in tandem to the Eskom numbering, provided that the Eskom number is prominently displayed on each document. The Consultant shall also provide Eskom with a document explaining the breakdown and interpretation of their numbering system where relevant.

Revision Identifiers

All documents and data items shall have revision identifiers in the agreed format to indicate the current revision status.

Document Identification

Each document shall include as a minimum the information listed below as part of the documentation identification:

- 1) Company name
- 2) Document Title
- 3) Document Number (Eskom)
- 4) Optional: Consultant Document Number
- 5) Document Revision and Date
- 6) Approval signatures (discussed below)
- 7) Proprietary classification indicator.

Each page of the document, except for a cover page listing the above, shall include in the header the document name, document number (Eskom) and revision number, and in the footer the proprietary classification indicator and the page number (Page # of ##). This includes all attachments to the document.

Amendment History

Each document shall maintain an amendment history that includes as a minimum the following:

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- 1) Revision identifier
- 2) Revision date (either release date or effective date)
- 3) Compiler who effected the amendments
- 4) Details of the amendments made

Approval Signatures

Each document shall include the names and signatures of the document compiler, reviewer, and approver. Where any of these persons are professionally registered, this too shall be indicated.

4.10.3 Form of Document Retention

Copies of documents, records, calculations and associated raw data shall be stored in a format that can be read by the user, or converted to human readable format, regardless of the media used

Copies shall be stored in such a way that they remain legible, readily identifiable, and retrievable for the greater of (a) the lifetime of the professional services task, (b) prevailing legal requirements.

4.10.4 Document Copies and Software Formats

At the completion of the task, the Consultant shall prepare and hand over a pack of all relevant documents, records, drawings, calculations, etc. For large tasks, this may be broken down, and the individual packs submitted at the completion of each activity.

Documents are submitted as one hard (paper) copy, one (clearly legible) soft copy in PDF format, and one soft copy in native file format, on a compact disc or other agreed medium, which is uniquely identified and indicated the contents thereon.

Drawings are submitted as two hard (paper) copies, one (clearly legible) soft copy in PDF format, and one soft copy in native file format, on a compact disc or other agreed medium, which is uniquely identified and indicated the contents thereon.

Please note that where scans are required to produce a PDF copy, e.g. the quality control sheet with all stamps and signatures, then the scan shall be of sufficient quality that it remains clearly legible in soft copy format.

4.11 Responsibility of the Employer

The Employer will be responsible for:

1. Allocating space for the Consultant's site office team.
2. Arranging gate access for the Consultant. It is the responsibility of the Consultant to conform to site requirements regarding submission of necessary information, and to confirm that gate access has been arranged.

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3. Assisting the Consultant with any additional technical information required for design integration and completion of the services and works
4. Providing site induction for associated Eskom facilities
5. Reviewing and responding to the Consultant on all technical information submitted for review, within the stipulated response period as per the NEC3 professional services contract.
6. Receiving of the deliverables and performing quality and quantity checks for acceptance.
7. Informing the Consultant, in writing, of any discrepancies on the received deliverables within the contracted response time.

4.12 Responsibilities of the Consultant

The Consultant shall:

1. Report to Eskom's delegated representative for all technical deliverables.
2. Channel all commercial issues and official communication through the Employer's Agent.
3. Maintain live records of all their resources that are involved on this professional services.
4. Cede all the inventions, designs, innovations, and intellectual property produced while working under this professional services scope to Eskom.
5. Confirm receipt of purchase order and signed scope of work.
6. Ensure all SHEQ requirements for each site visited are continuously complied with, i.e. employee medicals remain valid, etc.
7. Formally notify the Employer at least two working days prior to the Employer being required for inspection at another site, to allow for travel arrangements to be made.
8. Arrange access for the Employer to the Consultant's facilities as and when required, and to specify all required items. A formal meeting invite shall be shared with the Employer.
9. Adhere to all Eskom safety, health and environmental rules when on site, including lifesaving rules.

It is the responsibility of the Consultant to abide by and follow Eskom's processes.

4.13 Management of meetings

The meetings shall be conducted by appointed Project Manager authorised by Power Station Management at different sites. The meetings will be held at both online and in-person, depending on the requirements and locations of stakeholders involved. In the meetings, the following shall be abided by:

1. Meetings shall be chaired by the Employer's Agent (Appointed Project Manager).
2. Minutes of meetings shall be compiled and communicated by the Employer's Agent.
3. Commercial meetings shall be held at an agreed frequency, where the progress report of work conducted up until that point shall be presented by the Consultant.
4. Technical meetings shall be held at an agreed frequency as well as, when necessary, due to issues arising at different sites.

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5. Online MS Teams meetings can be recorded via the MS Teams recording option.
6. Where a significant technical/non-technical concern arises, whether from the Consultant or the Employer, a formal Notice of Concern shall be issued.
7. Meetings of a special nature may be convened as and when required and agreed upon.
8. Meetings shall in no way be a replacement of the official contractual communication to the Employer for professional services scope and commercial matters.
9. Meetings shall be used for extensive engagement and clarification, but binding decisions shall only be communicated and agreed to via written correspondence.

4.14 Notice of Concern

Both the Consultant and the Employer are responsible to notify each other, in writing, of any concerns that require formal clarification or decision making for the professional services.

Both the Consultant and the Employer shall respond to the notice of concern within the contractual response period as stipulated in NEC3 professional services contract.

A template of the notice of concern shall be provided by the Employer. The use of the Consultant's own template document may be approved by the Employer's Agent.

4.15 Site visit to the Employer

The safety and wellbeing of any person entering the Power Stations and other facilities is of great importance. To ensure everyone's safety, the following requirements are to be adhered to:

4.15.1 Gate access

Gate access to the Eskom facilities is to be arranged by the Employer. The Consultant shall comply with all gate access requirements as prescribed by the Employer and the individual sites.

Before entering The Power Station, the Consultant shall declare all tools, equipment and electronic devices such as laptops, data loggers etc if they are to be removed from site. Any item that is not declared, may be confiscated when leaving The Power Station. The Consultant is to request for a declaration form before entering site.

4.15.2 Induction

1. The Consultant and all its delegates shall do induction before access is granted into the Eskom sites.
2. Induction requirements as well as necessary arrangements shall be made with each individual site. Requirements may vary from site to site; however, all employees shall be required to have identification documents.
3. Site access to all National Key Points is granted on the condition that the Consultant employees shall always be escorted by the Eskom employee (host) they are visiting.

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4.15.3 PPE requirements when at the Power Station

The following PPE shall be required (as a minimum) during site visits to the Power Station:

1. Hard hat with chin strap.
2. Eye protection.
3. Ear protection.
4. Reflective overall/jacket/vest.
5. Safety boots.

Each site will provide specifications for PPE based on the specific areas that will be visited. The Consultant shall provide the requisite PPE to their personnel, and the Consultant and their personnel shall observe the PPE notices posted at each plant area.

4.15.4 Safety

When entering the Power Stations, and any other Eskom facilities, the Consultant shall adhere to all Eskom safety rules. See the following:

1. Safety requirements:
 - a. A safety file will be required and must be approved and remain valid and updated. Each site will provide requirements for safety file as well as arrangement for approval.
 - b. All SHEQ related incidents that occur at any Eskom site shall be reported to the contract manager as well as the site SHEQ department as soon as they occur. Each site shall provide reporting details.

4.16 Environmental Requirements

Eskom will only contract with suppliers who are legally compliant to all applicable national, regional and Eskom environmental requirements for contracting.

Environmental Requirements:

a) Environmental Management System (EMS)

The Consultant should note that Eskom and its sites is ISO14001:2015 certified. The Consultant must demonstrate commitment to the development, documented, implementation and maintenance of an environmental management system (EMS) that conforms to the requirements of ISO 14001: 2015 such as environmental policy, operational procedures relating to their activities, aspects/impacts register etc. In addition, the Consultant must be aware that all Eskom sites stipulated as per scope of work have own specific Environmental Management Plan (EMP), Environmental Authorisation (EA) including any other environmental permits, licenses and environmental legislation as well as a set of procedures that the Consultant need to comply with when working on their sites.

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All activities taking place within the site must consider section 28 of the National Environmental Management Act (107 of 1998) which makes provision for the duty of care approach. The Consultant's team must commit to review and to continually improve environmental management, with the objective of improving overall environmental performance. The Consultant must ensure sufficient funding is allocated for the implementation of environmental requirements.

b) Environmental Management Plan (EMP)

The Consultant shall prepare an EMP relating to their activities that will be conducted in line with the scope of work. The environmental management plan shall identify aspects and impacts for the project and actions to prevent, minimize and manage the environmental impacts.

Relevant site-specific method statements which also address environmental measures shall be submitted for approval prior to commencement of an activity. No work shall commence without an approved method statement.

The Consultant shall comply with all relevant laws, environmental legislation and regulations, conditions of environmental approvals, environmental management plans, and Employers Policies and Procedures.

c) Other Environmental Obligations

- The Consultant shall appoint trained and competent personnel in writing, who will have the responsibilities of implementing all environmental requirements for this contract.
- The Consultant and its employees shall undergo environmental induction of their own as well as site specific SHE induction.
- The Consultant must conduct environmental awareness at regular intervals e.g. through toolbox talks.
- The Consultant must report and do investigations all environmental incidents and nonconformance.
- Such reports must include but not limited to the following information:
 - The cause of the non-conformance/incident.
 - The proposed actions to correct and prevent recurrence.
- Eskom will issue non-conformances where there are deviations from Eskom Procedures and any other environmental requirements.
- The Consultant must ensure measures are in place to manage the following at all Eskom sites:
 - Site establishment and de-establishment protocols (during delivery to site, off-loading, temporary storage, assembly, installation, and site testing and commissioning)
 - Hazardous chemical spill response
 - Fire control
 - Air, dust and noise control
 - Ablution facilities

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- Waste Management
- Emergency plan and prepared response
- Water management
- Vegetation and soil management where relevant
- Transportation, storage and handling of hazardous substances
- Traffic and transport

d)Waste Management

- Eskom has a systematic and hierarchical approach to integrated waste management as stipulated in Eskom Waste Management Standard (32-245).
- The Consultant must follow a proactive prevention approach to ensure cleaner production, effective and sensible reuse, and recycling, as well as responsible treatment and safe disposal of waste generated.
- All packaging waste must be separated, recycled or disposed in designated bins and waste areas as per specific site requirement.
- Disposals of Eskom assets such as transformer will be in compliance with the commercial policies and procedures applicable and the process approved by the approved delegated authority.
- The Eskom Investment Recovery Section is responsible for ensuring proper selling and the disposal of oil, scrap metal and other materials from transformers.
- In the unlikely event that used transformer oils are mixed with other waste oil, polychlorinated biphenyls and terphenyls (PCBs/PCTs) may also be present.
- All insulating oil removed from any electrical equipment for inclusion in the Eskom oil pool must be tested for the presence of contaminants such as PCBs, solvents, and synthetic oils.
- If PCB-contaminated material greater than 51 mg/kg is found, such must be reported and managed according to Eskom procedures.
- All waste generated onsite must be managed according to Eskom Waste Management Standard (32-245), National Environmental Management: Waste Act (NEMWA) 59 of 2008, site specific requirements and legal and any other applicable requirements.

e) Documents and Records

The following minimum records shall be kept on all sites:

- Consultant site specific Environmental Management Plan.
- Consultant site specific method statements.
- Aspects/Impacts register.
- Incident registers and investigation reports.
- Non-conformance register.
- Public Complaints register.

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- Waste disposal register.
- Hazardous Substances registers and Safety Data Sheet.
- All training and awareness records.
- Records of audit reports and audit findings close-out, where applicable.
- Records of inspections conducted.

f) Tender Submission Documentation and tender award

The following documentation shall be submitted with all tender submissions and be available upon awarding of the contract and prior to commencement of any work:

- Environmental Management System (EMS).
- If the Consultant is certified under national or international listing scheme, a copy of the certificate shall also be sent with the tender, if not, the company's environmental management system supporting documents.
- Environmental Management Plan (EMP).
- Waste Management Plan.
- Environmental Bill of quantities.

Please refer to Eskom document: 240-108987034 Eskom Environmental Standard

5. Acceptance

This document has been seen and accepted by:

Name	Designation
Azwimbavhi Mamanyuha	General Manager: NBEIL
Thomas Conradie	General Manager – Gx Engineering
Mandla Mthembu	General Manager – Project Engineering
Michael Ngobeni	General Manager: Governance
Simon Vilakazi	Senior Manager – Contract Management
Deborah Maune	Senior Manager – Office of the GE
Khaya Sobuwa	Corporate Specialist – Generation Engineering
Ntombifuthi Ngcobo	Middle Manager – Portfolio: NBEIL
Mehendra Maharaj	Middle Manager – Project Manager: NBEIL

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6. Revisions

Date	Rev.	Compiler	Remarks
May 2026	1	R Shandu	Initial Release

7. Development Team

- Richard Shandu
- Mehendra Maharaj
- Nomatshawe Gantsho
- Sheldon Beangstrom

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