

 Eskom	Scope of Work	Grootvlei Power Station
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1. Introduction

Grootvlei Power station is a coal fired power station that uses specialised superior quality cables for control and instrumentation. The instrumentation cables are used to connect instruments that indicate readings and performance of driven components. Instrumentation cables are multiple conductor cables that convey low energy electrical signals used for monitoring and controlling electrical components and their associated processes. These low energy electrical signals are used throughout all the plants found at Grootvlei power station which are the boiler, turbine, coal, ash, water treatment, reverse osmosis, and Vaal dam plant. The measurement and control function is of paramount importance as it enables the automation of the plants. The automation is made possible by the control and instrumentation cables that transmit signals to panels, controllers, electrical components, and other devices.

This document will outline the scope of work for the supply and delivery of various control and instrumentation cables and related items at Grootvlei Power Station, as and when required.

2. Supporting Clauses

2.1 Scope

This document will outline the scope of work for the supply and delivery of various control and instrumentation cables and related items at Grootvlei Power Station, as and when required.

2.1.1 Purpose

The purpose of this document is to formally request the supplier to supply and deliver various control and instrumentation cables and related items.

2.1.2 Applicability

This document is applicable to Grootvlei C&I Engineering and Maintenance departments.

2.1.3 Effective date

This document shall be effective from the authorisation date.

2.2 Normative/Informative References

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

2.2.1 Normative

[1] ISO 9001 Quality Management Systems

[2] 240-76960420: Guideline for Spares Procurement Technical Evaluation and Quality Inspection.

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- [3] 32-1033: Eskom Procurement and Supply Chain Management Policy.
- [4] 32-1034: Eskom Procurement and Supply Chain Management Procedure.
- [5] 240-48929482: Tender Technical Evaluation Procedure
- [6] Occupational Health and Safety Act and Regulations (85 of 1993)
- [7] ISO 14001 Safety Management System

2.2.2 Informative

- [8] 36-681 Generation Plant Safety Regulations
- [9] 240-52844017 Eskom System Reliability, Availability and Maintainability Analysis Guideline
- [10] ISO 10007 Guidelines for Configuration Management
- [11] 240-105658000 Supplier Quality Management Specification
- [12] 240-56227443 Generation Requirements for Control and Power Cables for Power Station Standard

2.3 Definitions

2.3.1 Classification

Controlled Disclosure: Controlled Disclosure to external parties (either enforced by law, or discretionary).

2.4 Abbreviations

Abbreviation	Explanation
C&I	Control and Instrumentation
DCF	Data Capturing Form
Gx	Generation
OHS Act	Occupational Health and Safety Act
QCP	Quality Check Point
QC	Quality Control
SHEQ	Safety, Health, Environment and Quality

2.5 Roles and Responsibilities

- **Engineering Manager:** Grootvlei Engineering Manager shall ensure that the respective areas understand and adhere to **[12] Generation Requirements for Control and Power Cables for Power Station Standard**.
- **System Engineer:** The delegated Engineer is responsible for compiling the scope of work that is in line with **[12] Generation Requirements for Control and Power Cables for Power Station Standard**.

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- **Suppliers:** All suppliers of the control and instrumentation cables to Eskom must be conversant with the requirements of the **Generation Requirements for Control and Power Cables for Power Station Standard** and shall comply with requirements. No deviations will be accepted, and suppliers shall ensure that they obtain clarity where required and obtain all supporting information or documents necessary to comply with this document.

2.6 Process for Monitoring

Procurement process will be used to monitor the contract placement process.

2.7 Related/Supporting Documents

Not applicable

3. WORK TO BE PERFORMED BY THE SUPPLIER

3.1 Plant description

Control and instrumentation cables are required on all plants found at Grootvlei power station. The boiler, turbine, coal, ash, water treatment, reverse osmosis and Vaal dam plants require new cables in an occasion where the existing cables are damaged from either from stress, aging, fire, smouldering, etc. It is of paramount importance that the station always has spare cables in case of an emergency to avoid extended plant down time.

3.2 Technical requirements

The scope for the supplier shall be to supply and deliver the control and instrumentation cables for all Grootvlei plants as and when required.

As a minimum, the supplier shall perform the following tasks:

- Be in possession of a clear and practical methodology for identifying, verifying, sourcing and supplying correct cables.
- Handle, transport and store control and instrumentation cables in accordance with SANS 10198-6 as referenced in the Generation Requirements for Control and Power Cables for Power Stations standard [12].
- The control and instrumentation cables supplied must be of superior quality to ensure plant availability.
- All control and instrumentation cables purchased shall be quality checked by the supplier with the quality approved methods.

3.3 Delivery and quality requirements

The following are additional *Supplier's* requirements:

- The *Supplier* will ensure that the correct cables are supplied and will replace or be liable for damage at his/her cost if incorrect or defective cables are supplied.

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- The *Employer's* (i.e., Eskom Holdings SOC) acceptance of delivered cables does not absolve the *Suppliers* of the liability to supply the correct and/or defect free cables.
- The *Supplier* may, at the *Employer's* discretion, be given access to the plant to verify the information of the installed cables.
- The *Employer* may at his/her discretion make the *Employer's* Engineer or employees or *others* available to the *Supplier* for the purpose of soliciting additional information or verifying information as the need arises.
- The *Supplier* will supply any additional information such as brochure, general arrangement drawing, certificates, detailed specification, etc.
- The *Supplier* provides the *Employer* with additional spares information and verifies information required in the data capturing forms (DCF) if provided at least three months after order placement or conclusion of the contract or (where lead time is less than three months) a week before delivery of respective spare.
- The *Supplier* shall supply preservation and storage procedure/s, where applicable.
- The *Employer* reserves the right to exclude the supply of some spare's items included in the contract with the *Supplier* should the *Employer* become aware that National Supply Contract exists or is placed by the *Employer* with Others in respect to those specific cables.
- If deemed necessary, the *Employer* may subject the *Supplier* to a quality assurance assessment at the *Supplier's* or *sub-Supplier's* premises as part of the technical evaluation or before the contract placement or at any time during the contract period.
- Complete price breakdown must be supplied with the quotation and must include the cost of transport to the respective Power Station. However, the *Employer* reserves the right to use the *Employer's* own transport.
- Cables will be opened for inspection, counting and quality control check at the *Employer's* stores.
- The *Employer* has provided the Bill of Material table with part numbers to assist the *Supplier* to meet the requirements of the Work to be performed by the *Supplier*.
- The *Employer* may make clarification sessions available to either prospective *Supplier* to further assist the prospective *Supplier* to meet the requirements of the Work to be performed by the *Supplier*.

3.4 Spares identification

The cables to be provided to be the same as the original component, in all technical respects, as those utilised on the equipment it is intended for. This includes, but is not limited to, design (including dimensions and material specifications) and manufacturing (including manufacturing processes, standards, and acceptance testing).

The *Supplier* shall be liable to replace a supplied spare that is found to be defective and/or wrong.

3.5 Information to be provided

The supplier will provide technical information that will be include in the DCF and if DCF's exist, they will be provided to the *Supplier* by Materials Management; the information contained in the

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forms can assist the *Supplier* to procure the correct spares. The DCF is required by the *Employer's* Material Management System to be able to book the item in the stores, and the information should be sufficient to procure the goods in future. Where a field is populated, the *Supplier* needs to review and verify/correct the information against the OEM part number for correctness.

The following information to be provided with the spares:

- Documentation detailing the technical characteristics of the procured spare item. This may be in the form of data sheet or brochure. The *Employer* reserves the right to reject the documentation if it is not deemed sufficient
- Any other additional information that has not been specified on the DCF / scope but necessary for storage, installation, and utilisation of cables where applicable
- Supply preservation and storage procedures of goods, where applicable
- Any spares (cables) information which has been omitted which is deemed relevant for spares identification, storage, maintenance, etc.
- In instances where the *Supplier* uses another company, other than the item OEM, to provide required information, this to be declared in advance to the *Employer*

3.6 Spares quantities

The spares quantities to be provided as stipulated on the final NEC.

3.7 Replacement parts upgraded/modified

Where cables have been upgraded / modified the *Supplier* shall indicate this to the *Employer* as part of the tender. The *Employer* shall be made aware immediately where the upgrade/modification to the component is only identified after the tender being issued. The detailed compatibility to the existing component shall be indicated. If the components to be supplied will be obsolete, or envisaged to be obsolete, in a year after tender being issued, the *Supplier* shall indicate this to the *Employer* and indicate viable alternatives thereof.

3.8 Packaging

All supplied cables shall be packaged in such a manner that they may be transported and stored for extended periods without resulting in damage to the packaged components in accordance with [12]. Different cable types shall be packaged separately such that each cable type can be stored separately. Packaging shall be such that the cable can be identified without opening the packaging. Packaging shall be of material that will not be damaged, to an extent possible, by harsh weather conditions during transportation. If that is not possible, then the packaging shall be protected against such conditions.

Where possible, packaging to be such that procured spares can be positively identified through the packaging. Where this is not possible, the packaging to be such that it allows opening and closing of packaging and still maintain the packaging integrity thereafter.

Delivery packaging to have the following details on it:

- Order number
- Physical address of the Power Station

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- Delivery note number
- Spare's part number and quantity

3.9 Exclusions

The following shall be noted as exclusions as per this scope of work:

- The *Supplier* shall not supply offloading facilities during delivery of cables.
- The *Supplier* shall not be responsible for the storage of spares after acceptance at delivery by *Employer*.

3.10 Acceptance of cables

- No incorrect or damaged cables will be accepted.
- All the cables will be inspected before payment could be processed.
- Data capturing forms information must be supplied and must meet an acceptable level.
- Where applicable; test certificates, material certificate, manuals, data sheet and signature shall be provided as required.

3.11 Constraints on how the *supplier* provides the goods

3.11.1 Work to be done by the delivery date

A clarification meeting to be held 3 weeks after issuing of the enquiry to confirm the scope of the work and to confirm cable identification. All questions can be forwarded to the *Employer* during this meeting.

All required cables to be delivered to the *Employer* 4 weeks from the day the purchase order is placed by the *Employer*. In instances where design reviews are necessitated, the 4 weeks will be from the day of design freeze. The *Employer* may request, in writing, that cables be expedited quicker if its delivery in 4 weeks may lead to a delay that may result in undesirable consequences (loss of production, loss of revenue and/or safety to personnel or environment) to the *Employer*.

3.11.2 Documentation control

The information for cables to be provided will either be in electronic format or hard copy. Other information provided with each cable type to be either in electronic format or hard copy. Information provided to be documented in such a manner that the information for each spare will be easily identifiable. All documentation supplied shall bear the OEM's official name and logo.

3.11.3 Quality assurance requirements

The cables to be provided shall conform to all quality assurance requirements that will be defined at contracting phase.

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3.11.4 Program constraints

The following shall be included in the *Supplier's* program:

- The delivery date as stipulated to be provisional. This date may change prior to delivery. The *Supplier* to indicate standing time and storage costs should the *Employer* delay the delivery date. Proof of actual costs to be provided.
- Provision to be made for delays that may be caused owing to items being sourced from outside The Republic of South Africa.

3.11.5 Insurance of the goods

The Insurance of spare components is the responsibility of the *Supplier* until delivery and acceptance by the *Employer*.

3.12 SHEQ

The *Employer* reserves the right to request certification from the *Supplier* that proves compliance to relevant SHEQ legislations, standards, and procedures. If, during procurement, the *Supplier* is found guilty of contravention of any SHEQ legislations, the *Employer* shall, at *Employer's* discretion, cancel the contract and the *Supplier* shall be liable to all the costs incurred therein.

4. ACCEPTANCE

This document has been seen and accepted by:

Name	Designation
██████████	Chief Technologist
██████████	System Engineer
██████████	Senior Advisor/ Acting C&I Engineering Manager
██████████	System Engineer

5. REVISIONS

Date	Rev.	Compiler	Remarks
March 2026	1	B.L. Mokoena	New document

6. DEVELOPMENT TEAM

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

- ██████████
- ██████████

7. ACKNOWLEDGEMENTS

N/A

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