Eskom	Strategy	Generation

Title: **Lethabo Power Station Canteen Extraction Hood Replacement Technical Evaluation Strategy**

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TABLES

1. Introduction

This document presents the tender technical evaluation strategy for Lethabo Power Station Canteen Extraction Hood Replacement project.

Lethabo Power Station, a coal-fired power plant situated in the Northern Free State, consists of six generating units, each with a capacity of 618 MW. The canteen is a standalone structure that caters to all of Lethabo Power Station catering requirements.

It is mandatory for canteens to conduct maintenance of canopies every six month, and this has been successfully carried out for the past three years. However, due to the age of the current canteen canopies, which are substandard the cost of maintaining and repairing them have increased and has become unsustainable.

During a visual inspection of the canteen, it was found that the hood in the main kitchen is severely corroded and has become detached from the Asbestos ceiling. The hood is in the process of sagging which poses a safety risk to personnel in the area. The hood is currently supported by temporary supports to prevent the hood from falling. It will therefore be required to be replaced with all auxiliary work as well.

2. Supporting Clauses

2.1 Scope

The scope for the project is broken down in the following:

2.1.1 Mechanical Scope

The mechanical scope includes, but not limited to:

- To safely remove the existing two extraction hoods,
- Design, supply, and install two new extraction hoods, complete with fresh air provision.
- Install all the required accessories for the extraction hoods, and
- To test and commission the new extraction hoods and issue relevant certificates if applicable.
- Provide as built drawings, O&M manuals, Training manual for the new installation.
- Train maintenance and engineering personnel on the operation of the new system

The engineering, quality control, inspections, plant and material selection, preparation of installation drawings, testing, balancing, commissioning and preparation of operating and maintenance manuals, are to be managed and executed by the Contactor in a systematic manner as follows:

a) Detailed Design
b) Plant and material selection;
c) Installation drawings;
d) Plant installation;
e) Testing, balancing and commissioning Documentation;
f) Quality control

g) Operating Instruction and Maintenance Manuals; and

h) Inspection Record Cards/Checklists and final hand-over

The installation shall comply to SANS 1850, latest edition. The *Contractor* shall submit the designs to the Employer for acceptance prior to installation.

2.1.2 Electrical Scope

The electrical scope includes, but is not limited to:

Disconnections & Decommissioning

- Disconnecting electrical supplies to the canteen hood and extraction equipment.
- Disconnecting and removal of all plugs.
- Disconnection of ovens, fryers, and associated cooking equipment.
- Sealing of unused or redundant cable entry points.

Verification & Design

- Verification of load requirements for all new equipment.
- Upgrading existing DB space where required (e.g., MCB resizing, addition of circuits).
- Design and layout of lighting to suit the new hood and kitchen layout.
- Verification of lighting lux levels as per lighting design and applicable standards.
- Addition of new fresh air supply system.

Installation

- Control and interlock wiring, including:
  - Interlocks between canteen hood and cooking equipment.
  - Emergency stop rewiring.
- Installation of new racking, conduit, and cabling to support the new equipment layout and new cabling.
- Installation of lighting fixtures and associated control gear.
- Earthing and bonding of all equipment as per SANS 10142.

Testing & Commissioning

- Insulation resistance tests.
- Earth continuity tests.
- Polarity checks.
- Load balance checks.
- Verification of all safety interlocks.
- Fan motor testing, including:
  - Verification and setting of overload relays.
  - Testing of motor start/stop controls.
  - Checking motor running current against nameplate values.

- Verification of correct fan rotation direction.

- Issuance of Certificate of Compliance (CoC) for the electrical installation.

Documentation

- As-built drawings, including updated cable routes, DB schedules, equipment lists, and interlock diagrams.
- Cable schedule, indicating cable sizes, types, routes, and termination points.

2.1.3 Purpose

The purpose of this tender technical evaluation strategy is to define the Mandatory Evaluation Criteria, Qualitative Evaluation Criteria and Technical Evaluation Team (TET) member responsibilities for tender technical evaluation. The technical evaluation strategy serves as basis for the tender technical evaluation process.

2.1.4 Applicability

This document applies to Lethabo Power Station and all other stakeholders involved in the project.

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] 240-168966153: Generation Tender Technical Evaluation Procedure
[2] ISO 9001 Quality Management Systems
[3] National Environmental Management Act (NEMA) 107 of 1998
[4] Construction Regulations, 2014
[5] 32-727 - Eskom Safety, Health, Environment and Quality (SHEQ) Policy
[6] Occupational Health and Safety Act No. 85 of 1993
[7] 240-99527377: Inspection Manual for Civil Works at Eskom's Power Station
[8] SANS 10400: The application of the National Building Regulation
[9] 32-245 Eskom Waste Management Standard
[10] Environmental Conservation Act, 1989 (Act 73 of 1989)
[11] 240-56364545: Structural Design and Engineering Standard
[12] 240-56364535: Architectural Design and Green Building Compliance Manual
[13] SANS 10160 (series)
[14] SANS 10142-1: The wiring of premises: Low voltage installations
[15] 240-56227443: Requirements for Control and Power Cables for Power stations Standard

[16] 240-70164623: Eskom Heating Ventilation and Air Conditioning (HVAC) Design Guideline

[17] 240-102547991 General Technical Specification for HVAC Systems Standard

[18] SANS 18501: The design and manufacture of commercial kitchen extraction/ventilation systems

[19] SANS 1238: Air-conditioning ductwork

[20] SANS 10173: The installation, testing and balancing of air-conditioning ductwork

2.2.2 Informative

[21] ISO 9001: Quality Management Systems.

2.3 Definitions

Word	Definition
Contractor/Tenderer	Party responsible for the execution of the works as set out in this document
Employer	Eskom Holdings Limited represented by Lethabo Power Station
Project Manager	Party responsible for managing the Contractor on behalf of the Employer for the execution of the works
Works	The works as described in this document

2.3.1 Classification

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

2.4 Abbreviations

Abbreviation	Description
CBMS	Central Building Management System
CoC	Certificate of Completion
C&I	Control & Instrumentation
CV	Curriculum Vitae
ECSA	Engineering Council of South Africa
HVAC	Heating, Ventilation, and Air Conditioning
KKS	Kraftwerk-Kenzeichnungs System
NCP	Network Control Panel
ISO	International Organisation for Standardisation
ITP	Inspection Test Plans
OEM	Original Equipment Manufacturers (OEMs
O&M	Operations and Maintenance
TET	Technical Evaluation Team
QCP	Quality Control Plans

2.5 Roles and Responsibilities

Compiler	The document compiler is responsible for ensuring that this document is up-to-date and that this document is not a duplication of an existing documentation, regarding the document's objectives and content.
Functional Responsibility (Discipline Manager)	The Functional Responsible Person shall determine if the document is fit for purpose before the document is submitted for authorisation.
Authoriser (Engineering Manager)	The document authoriser is a duly delegated person with the responsibility to review the document for alignment to business strategy, policy, objectives, and requirements. He/she shall authorise the release and application of the document.
Lead Discipline Engineers	Provide input to the technical tender evaluation strategy and associated engineering activities.
Configuration Management Lead	Is accountable for ensuring that the engineering documentation, engineering systems and databases are correctly configured. As part of this role, the Configuration Practitioner is responsible for the development of the configuration management plan; configuration and management of the PBS and the management of plant item Tags.

2.6 Process for monitoring

The primary process for monitoring will be governed by Design Review Procedure (240-53113685), this entails assuring that the design achieves the requirements set out in this document. Any changes to this document will be performed as per Project Engineering Change Management Procedure (240-53114026).

2.7 Related/Supporting Documents

Please refer to Section 2.2.

3. Tender Technical Evaluation Strategy

3.1 Technical Evaluation Threshold

Mandatory Technical Evaluation Criteria (gatekeepers) are 'must meet' criteria. These criteria shall not be weighted, or point scored but shall be assessed on a Yes/No basis as to whether the criteria are met. An assessment of 'No' against any criterion shall technically disqualify the tenderer and shall not be further evaluated against Qualitative Criteria.

Qualitative Technical Evaluation Criteria are weighted evaluation criteria used to identify the highest technically ranked tenderer after determining that all the Mandatory Evaluation Criteria have been met. The Qualitative Evaluation Criteria are weighted to reflect the relevant importance of each criterion.

The minimum weighted final score (threshold) required for a tender to be considered from a technical perspective is 70%. The following scoring method will be used:

Table 1: Technical Scoring Methodology

SCORE	PERCENTAGE (%)	DESCRIPTION
5	100	**COMPLIANT** • Meet the technical requirement(s) AND,

		• No foreseen technical risk(s) in meeting technical requirements
4	80	**COMPLIANT WITH ASSOCIATED QUALIFICATIONS** • Meet the technical requirement(s) with, • Acceptable technical risks AND/OR; • Acceptable exceptions AND/OR; • Acceptable conditions
2	40	**NON-COMPLIANT** • Does not meet the technical requirement(s) AND/OR Unacceptable technical risk(s) AND/OR; • Unacceptable exceptions AND/OR; • Unacceptable conditions
0	0	**TOTALLY DEFICIENT/NON-RESPONSIVE**

3.2 TET Members

From each Engineering Discipline a professional registered Engineer/Technologist and one other member is to be part of the evaluation team.

Table 2: TET Members

TET number	TET Member Name	Designation
TET 1		EDWL
TET 2		Chief Engineer – HVAC
TET 3		Senior Engineer: D&S Engineering
TET 4		Engineer Prof Electrical

3.3 Mandatory Technical Evaluation Criteria

Table 3: Mandatory Technical Evaluation Criteria

Note to tenderers!!

The Background and Experience of similar completed projects by the *Contractor* will be verified, any findings that is not a true reflecting of the submitted information will result in an immediate disqualification on the tenderer.

No'	Mandatory Technical Criteria Description (Yes/No)	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria
1.	Has the *Tenderer* confirmed that they have a track record of three or more completed projects as a minimum: for construction, commissioning and testing of HVAC systems? Submit a written confirmation stating that the supplier as completed at least 3 projects in HVAC systems	Tender Returnable Written confirmation letter stating at least 3 projects completed by the supplier in HVAC systems with Project Values complete with traceable references. Award letters or completion certificates to be provided.	Previous similar work experience and key personnel allocated to this project should be documented. This is to ensure that the Tenderer has the capability to undertake the Works.

3.4 Qualitative Technical Evaluation Criteria

The weight for the qualitative technical review will be 100% with a minimum threshold of 70% and will be based on the sections to follow.

Table 4: Qualitative Technical Evaluation Criteria

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Sub-Criteria Weight (%)
1	**HVAC General Works**			60	
	1.1	1-off Professional Registered Mechanical Technologist/Engineer with a track record of five (5) completed projects as a minimum; for design, construction, and commissioning of HVAC systems in building services environment.	• 5 = Formal Mechanical BSc/BTech qualification or equivalent international acknowledgement and has 6 or more years working experience. • 4 = Formal Mechanical BSc/BTech qualification or equivalent international acknowledgement but has 4 to 5 years working experience. • 2 = Formal Mechanical BSc/BTech qualification or		40

			equivalent international acknowledgement, but less than 3 years working experience. • 0 = Has less than 3 years' experience and no formal Mechanical BSc/BTech qualification or equivalent international acknowledgement		
	1.2	General HVAC Foreman qualification and experience on HVAC projects o Projects means HVAC systems consisting of Chillers, Cooling Towers, Pumps, AHUs, Piping, Ducts, etc.	Tender returnable – CV and Formal Trade Test on air conditioning & refrigeration or equivalent international acknowledgement certificate. Tenderers will score points for a nominated General Foreman with minimum of five (5) or more years working experience in the construction, commissioning and testing of HVAC projects; **and registered as authorised as refrigerant gas practitioner.** • 5 = Formal Trade Test on air conditioning & refrigeration or equivalent international		20

			acknowledgement, but has 5 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects; and registered as authorised as refrigerant gas practitioner. • 4 = Formal Trade Test on air conditioning & refrigeration or equivalent international acknowledgement, but has 3 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects; and registered as authorised as refrigerant gas practitioner. • 2 = No formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement, but has 3 or more years working		

			experience in construction, commissioning and testing of large HVAC or Refrigeration System projects. • 0 = No formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement.		
	1.3	Method Statement for HVAC Equipment Installation	Tender Returnable : Submission of a detailed method statement covering the following items but not limited to the installation of ducting, installation of fans, installation of sound attenuators, pressure testing of ducting, installation of flexing ducting, painting of supports, etc • 5 = Method Statement covers more than 6 items • 4 = Method Statement covers 3 to 5 items • 2 = Method Statement covers 1 to 3 items • 0 = Method Statement covers no items, irrelevant or not submitted.		20

	1.4	Quality Control Plans for HVAC Equipment installations	Tender Returnable Submission of QCPs with interventions for the following but not limited to: Ducting installation, Fan installation, South Attenuator installation, Pressure testing of ducting, Installation of flexible ducting, Painting of supports, etc • 5 = Submitted 6 or more QCPs • 4 = Submitted 4 to 5 QCPs • 2 = Submitted 1 to 3 QCPs • 0 = No QCP submitted or irrelevant		20
2	**Electrical Qualitative Technical Criteria**			40	
	2.1	The Tenderer provides ECSA certificate **and** CV of Registered Professional Electrical Technologist/ Engineer with a track record of 3 completed projects as a minimum; for design, construction, and commissioning of Electrical systems in Power Station and/or building services environment.	CV **and** ECSA certificate to be submitted with reference to 3 completed projects for design, construction, and commissioning of Electrical systems in Power Station **and/or** building services environment.	5 = Formal Electrical BSc/BTech qualification **or** equivalent international acknowledgement. The professional is registered with ECSA as a Professional Electrical Technologist **or** Engineer and has 3 or more projects with relevant experience. 4 = Formal Electrical BSc/BTech qualification **or** equivalent international acknowledgement. The	25

				professional is registered with ECSA as a Professional Electrical Technologist **or** Engineer **and** has more than 2 and less than 3 projects as relevant experience. 2 = Formal Electrical BSc/BTech qualification **or** equivalent international acknowledgement. The professional is registered with ECSA as a Professional Electrical Technologist **or** Engineer **and** less than 2 projects as relevant experience. 0 = Nonresponsive/deficient **or** No Formal Electrical BSc/BTech qualification **or** equivalent international acknowledgement **or** not registered with ECSA as a Professional Engineer **or** Technologist.	
	2.2	Registered Electrician with Department of Labour (DoL) as Master Installation Electrician or Installation Electrician in terms of Electrical Installation Regulations.	CV **and** Proof of Registration certificate for a Master Installation Electrician **or** Installation Electrician to be submitted with reference to 5 completed projects for construction, and	5 = Qualified Master Installation Electrician **or** Installation Electrician who is registered with the Department of Labour (DoL) and has 6 or more years working experience.	20

			commissioning of Electrical systems in Building Services Environment. Proof of Electrician registration with the DOL.	4 = Qualified Master Installation Electrician **or** Installation Electrician who is registered with the Department of Labour (DoL) but has 4 to 5 years working experience. 2 = Qualified Master Installation Electrician **or** Installation Electrician who is registered with the Department of Labour (DoL), but less than 3 years working experience. 0 = Has less than 3 years' experience **and** no formal qualification **or** equivalent international acknowledgement.	
	2.3	Method statement for the electrical portion of the project	*Tenderer* supplies a method statement detailing all work, assessments, design work, installation **and** commission activities.	5 = The supplied method statement is completely detailed in all aspects of the project. 4 = The supplied method statement is detailed in most aspects of the project	30

				but has some minor missing details or flaws. 2 = The supplied method statement is not sufficiently detailed to be able to execute the project effectively. 0 = No method statement submitted or submitted method statement not relevant.	
	2.4	Quality Control Plan	*Tenderer* supplies a sample QCP detailing installation **and** commission activities.	5 = The supplied QCP is completely detailed in all aspects of the project. 4 = The supplied QCP is detailed in most aspects of the project but has some minor missing details or flaws. 2 = The supplied QCP is not sufficiently detailed to be able to execute the project effectively.	15

				0 = No QCP submitted or submitted QCP submitted not relevant.	
	2.5	Compliance to Technical Specification, Eskom Standards and Procedures.	The *Tenderer* supplies a signed letter indicating compliance to Technical Specification, Eskom standards and procedures	5 = Signed letter indicating compliance to technical specification, Eskom Standards and procedures. 0 = No signed letter indicating compliance to technical specification, Eskom Standards and procedures.	10

The weight for the technical review will be 100 % with a minimum threshold of 70% and will be based on the following:

3.4.1 TET Member Responsibilities

Table 5: TET Member Responsibilities

Mandatory Criteria Number			TET 1	TET 2	TET 3	TET 4
1. Submit a written confirmation stating that the supplier as completed at least 3 projects in HVAC systems			X	X		
	Qualitative Criteria Number		**TET 1**	**TET 2**	**TET 3**	**TET 4**
1.1	1-off Professional Registered Mechanical Technologist/Engineer with a track record of five (5) completed projects as a minimum; for design, construction, and commissioning of HVAC systems in building services environment.		X	X		
1.2	General HVAC Foreman qualification and experience on HVAC projects Projects means HVAC systems consisting of Chillers, Cooling Towers, Pumps, AHUs, Piping, Ducts, etc		X	X		
1.3	Method Statement for HVAC Equipment Installation		X	X		

	Qualitative Criteria Number	TET 1	TET 2	TET 3	TET 4
1.4	Quality Control Plans for HVAC Equipment installations	X	X		
2.1	The Tenderer provides ECSA certificate **and** CV of Registered Professional Electrical Technologist/ Engineer with a track record of 3 completed projects as a minimum; for design, construction, and commissioning of Electrical systems in Power Station and/or building services environment.			X	X
2.2	Registered Electrician with Department of Labour (DoL) as Master Installation Electrician or Installation Electrician in terms of Electrical Installation Regulations.			X	X
2.3	Method statement for the electrical portion of the project			X	X
2.4	Quality Control Plan			X	X
2.5	Compliance to Technical Specification, Eskom Standards and Procedures.			X	X

3.4 Foreseen Acceptable / Unacceptable Qualifications

3.4.3 Risks

- Contractor not been able to respond to the enquiry within the stipulated time frames.

3.4.4 Exceptions / Conditions

Table 6: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	**Accept deviation with technical qualification**
2.	Method statement that has minor or missing details.

Table 7: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	**Deviation without technical qualification not accepted**
2.	**C**ontractor makes the minimum qualitative score without responding to interfacing disciplines criteria. i.e. C&I, Electrical and Config Management
3.	**Unable to meet Sections 3.4.2.6,** Confirmation that all major equipment and devices offered is supplied by the Original Equipment Manufacturers (OEMs) as well as data sheet for all major equipment's. Point of negotiation
4.	**T**he *Tenderer* fails to provide a registered electrician which is registered with the Department of Labour.
5.	**T**he *Tenderer* fails to provide an Electrical Engineer or Technologist that is register as a Professional at ECSA.
6.	The Tenderer is unable to ensure compliance with the technical specification, Eskom standards and procedures.

4 Appendices

In addition to the Tender Technical Evaluation Strategy and other related documents applicable to the Contract, the following appendices are issued by the employer, for the tenderer complete to with the relevant information.

Mandatory Criteria Point 1: The tenderer to provide testimonial certificates or completion certificates of at least three (3)

Appendix A: Track Record Description

NB: All fields with an " * " must be completed correctly.

No	Client/Customer Details	Track Record Description					Comment
	Name of company where project was executed (Customer/Client name) *	**Project Description ***	**Construction Period ***	**Contract Value (in Rands)**	**Verifiable Reference (Contact person) (Tel/Cell/Mail/Address) ***	**Testimonial/ completion Certificate attached? ***	**Any additional Comments**
01*							
02*							
03*							
04*							
05*							
06							
07							

Appendix B: Works Information Deviation Schedule