

	Strategy	Engineering
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Title: **Tender Technical Evaluation
Strategy: Sootblower PLC
Replacement at Kendal Power
Station**

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1. Introduction

The project is for the replacement of the obsolete Sootblower Control System on unit 5; from the Modicon 884 PLC to the advanced Quantum PLC, with the same configurations that were implemented on Units 1 and 3. The retrofitting of these changes shall also be implemented on Units 2, 4 and 6. The replacement includes the refurbishment of the Mimic Panel which is the Operator's interface with the field (plant) and installation of the new SCADA HMI

2. Supporting Clauses

2.1 Scope

This document discusses the different technical aspects that will be evaluated and scored by the Technical Evaluation Team (TET) to complete the technical evaluation for the Sootblower PLC Replacement Project. The team members who will be involved in the evaluation are listed in this document along with their responsibilities. This document also describes the acceptable and unacceptable risks and qualifications and/or conditions that will be applicable to the Scope of Work. Once the Technical Evaluation Strategy is authorised, no changes will be made to the evaluation criteria without the appropriate authorisations.

2.1.1 Purpose

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

2.1.2 Applicability

This document applies to the Kendal Power Station Engineering, Maintenance, Projects and Procurement departments involved in the Sootblower PLC Replacement 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] ISO 9001 Quality Management Systems.
- [2] 240-48929482: Tender Technical Evaluation Procedure
- [3] 32-1034: Eskom Procurement Policy
- [4] 240-53114002: Engineering Change Management Procedure

2.2.2 Informative

- [5] 240-95401790 Eskom Reference Project Life Cycle Model [PLCM]
- [6] 240-53113685 Design Review Procedure
- [7] 240-53114002 Project Engineering Change Management Procedure
- [8] 36-681 Generation Plant Safety Regulations

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2.3 Definitions

2.3.1 Classification

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

2.4 Abbreviations

Definition	Description
C&I	Control and Instrumentation
PLC	Programmable Logic Computer
QCP	Quality Control Plan
SCADA	Supervisory Control and Data Acquisition
TET	Technical Evaluation Team

2.5 Roles and Responsibilities

As per 240-48929482: Tender Technical Evaluation Procedure

2.6 Process for Monitoring

The project will follow the Engineering Change Management Procedure [7], in order to provide an effective process for controlling changes to plant, technical documentation and an agreed baseline. All reviews for the project will follow the Design Review Procedure [6].

2.7 Related/Supporting Documents

- [1] 240-53716746: Tender Technical Evaluation Report Template
- [2] 240-53716712: Tender Technical Evaluation Results Form Template
- [3] 240-53716726: Tender Technical Evaluation Scoring Form Template
- [4] 240-53716769: Tender Technical Evaluation Strategy Template

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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 or not the criteria are met unless set otherwise. 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 80%. Should none of the tenderers qualify for 80% then the highest of the less than 80% up to 75% shall be considered.

3.2 TET Members

Table 1 below lists the TET members

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	Moipone Matlaila	C&I Engineer
TET 2	Nompilo Miya	C&I Engineer

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3.3 Mandatory Technical Evaluation Strategy

Table 2: Mandatory Technical Evaluation Strategy

	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria
1.	None		

3.4 Qualitative Technical Evaluation Criteria

Table 3: Qualitative Technical Evaluation Criteria

Note: Minimum threshold is 80%.

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	Human resources			50	
	1.1	<p>Capacity to execute the works outlined in the scope of work.</p> <p>Proof of the Tenderer's staff qualifications (Control and Instrumentation/ light current and computer science degree), provide curriculum vitae and copy of qualification.</p> <p>The Tenderer's personnel to perform this activity must have:</p> <ul style="list-style-type: none"> • Degree or Diploma in Electrical/Electronic Engineering with 5 or more years of experience in PLC programming and automation – 10% • Computer Science degree or National Diploma in IT with 5 or more years of experience in PLC programming and automation – 10% • Electrical or Instrument technician assistants with at least N3 certificate and 3 or more years of experience – 10% 	Tender Returnable		30
	1.2	<p>For personnel provided in 1.1 provide their PLC programming certificates.</p> <p>Score points shall be allocated according to the following:</p> <ul style="list-style-type: none"> • For Schneider PLC certificates – 20% 	Tender Returnable		20

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		<ul style="list-style-type: none"> For any PLC certificates – 10% No PLC certificates provided – 0% 			
2.	Technical			50	
	2.1	<p>Provide a Method statement on how the contractor proposes to execute the full scope of work.</p> <p>Score points shall be allocated according to the following:</p> <ul style="list-style-type: none"> No Method statement supplied or a Method statement that is not relevant to the technical scope = 0% The Method statement that outlines Technical knowledge about programming Schneider Quantum PLC and the execution of all activities (installation of the PLC, Pressure Transmitters, the SCADA HMI and Mimic panel) of the whole works but does not mention interfacing to the Historian = 10% The Method statement that outlines Technical knowledge about programming Schneider Quantum PLC and interfacing it the Historian; and the execution of all activities (installation of the PLC, Pressure Transmitters, the SCADA HMI and Mimic panel) of the whole works = 20% 	Tender Returnable		20
	2.2	<p>Provide a detailed Project Plan for the installation of the Sootblower PLC and other project activities; and the proposed duration for the whole project.</p> <p>Score points shall be allocated according to the following:</p> <ul style="list-style-type: none"> Project plan with only completion dates and lacks details of the scope to be executed in = 0% 			20

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		<ul style="list-style-type: none"> • Project plan with only completion dates and includes the activities of the scope = 10% • Realistic detailed project plan with durations of activities, milestones, quality control interventions and communication with the Employer = 20% 			
	2.3	<p>Provide a template for the proposed Quality Control Plan (QCP) to cover the full scope of work with proposed witness and hold points for the Employer's personnel.</p> <p>Score points shall be allocated according to the following:</p> <ul style="list-style-type: none"> • QCP template not provided – 0% • QCP template provided without Employer's intervention – 5% • QCP template provided with Employer's intervention (Hold/Witness points) – 10% 	Tender Returnable		10
				TOTAL: 100	100

Table 4: Qualitative Evaluation Criteria Scoring

Score	(%)	Definition
5	100	COMPLIANT Meet technical requirement(s) AND; No foreseen technical risk(s) in meeting technical requirements.
4	80	COMPLIANT WITH ASSOCIATED QUALIFICATIONS Meet technical requirement(s) with; Acceptable technical risk(s) AND/OR; Acceptable exceptions AND/OR; Acceptable conditions.
2	40	NON-COMPLIANT Does not meet technical requirement(s) AND/OR; Unacceptable technical risk(s) AND/OR; Unacceptable exceptions AND/OR; Unacceptable conditions.
0	0	TOTALLY DEFICIENT OR NON-RESPONSIVE
<p>Note 1: The scoring table does not allow for scoring of 1 and 3.</p> <p>Note 2: Foreseen acceptable and unacceptable risk(s), exceptions and conditions shall be unambiguously defined in the relevant Tender Technical Evaluation Strategy.</p>		

Table 5: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2
None	-	-
Qualitative Criteria Number	TET 1	TET 2
1.1	X	X
1.2	X	X
2.1	X	X
2.2	X	X
2.3	X	X

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4. Authorisation

This document has been seen and accepted by:

Name & Surname	Designation
Mbali Molefe	C&I Engineering Manager
Thabile Ngcaku	Project Manager
Khaya Baraza	Project Leader
Nompilo Miya	C&I Engineer
Moipone Matlaila	C&I Engineer

5. Revisions

Date	Rev.	Compiler	Remarks
August 2020	0.0	M Matlaila	Final document for signature
December 2020	1	M Matlaila	Revision of the technical criteria

6. Development Team

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

- Moipone Matlaila
- Nompilo Miya

7. Acknowledgements

N/A

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