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Strategy for Simulator Upgrade
Project**

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1. INTRODUCTION

Matla Power Station is intending to request *Contractors/Suppliers* to tender for the **Simulator Upgrade Project** at Matla Power Station.

The evaluation of the tender is based on the tenderer's ability to meet both mandatory and qualitative requirements specified for the **Simulator Upgrade Project**. A weighted score card approach will be used to evaluate the tenders against the *Employer's* requirements.

2. SUPPORTING CLAUSES

2.1 SCOPE

The scope of this document provides the technical evaluation strategy for the **Simulator Upgrade Project**.

2.1.1 Purpose

The purpose of this tender technical evaluation strategy is to define the mandatory and qualitative Evaluation Criteria. The outcome of the evaluation criteria will be the technical evaluation report which will be containing the recommendations of tenderers that met the minimum technical threshold thus deemed technically suitable for the provision of the required services.

The evaluation report will also outline the tenderers which could not meet either mandatory requirements or their final score was below the minimum technical threshold of 70% therefore deemed technically not suitable to provide the required services.

2.1.2 Applicability

This document is applicable to Matla Power Station.

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] 240-48929482: Tender Technical Evaluation Procedure
- [2] ISO 9001 Quality Management Systems
- [3] 240-12248652: Supplier Quality Management: List of Tender Returnable Documents
- [4] 240-105658000: Supplier Quality Management: Specification

2.2.2 Informative

- [5] 240-48929482: Tender Technical Evaluation Procedure
- [6] 373-MAT--AABZ18-PN0012-6 Simulator Upgrade Project Technical Specification
- [7] 240-154243686: Technical Requirements for Power Plant Simulators Standard.

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2.3 DEFINITIONS

Term	Definition
Simulation	The mathematical representation/modelling of physical process and control systems.
Emulation	Software solution that exactly mimics the hardware and software of the reference's plants actual control system. It's a complete replication of the actual plant's control system. Fully emulated systems use an emulation of both the control logic and the operator interface. Emulation is achieved by translating the plant control logic and graphics into the Simulator environment, effectively reproducing the functional operation of the actual controls and the graphic interface of the HMI. With an emulated solution, the simulation vendor uses the actual proprietary plant software code and data file from the DCS vendor to create the solution in the Simulator. This produces the highest fidelity Simulator solution possible. With a simulated solution, a software engineer will produce a lower fidelity, simplified functional model based on a functional description of the plant system.
Control System	It is an electronic based system to control and operate process plant. It is a system that responds to inputs from the process and/or from an operator and generates outputs that cause the process to operate in the desired manner. The two main types of control systems used in the process industry are distributed control systems (DCS) and programmable logic controllers (PLC).

2.3.1 Classification

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

2.3.2 Tender

A tender refers to an open or closed competitive request for quotations / prices against a clearly defined scope / specification.

2.4 ABBREVIATIONS

Abbreviation	Description
C&I	Control and Instrumentation
QMS	Quality management System
QCP	Quality Control Plan
TET	Technical Evaluation Team
HMI	Human machine Interface
DCS	Distributed Control System

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2.5 ROLES AND RESPONSIBILITIES

As per 240-48929482: Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

Not Applicable

2.7 RELATED/SUPPORTING DOCUMENTS

373-MAT--AABZ18-PN0012-6 Simulator Upgrade Project Technical Specification

3. TENDER TECHNICAL EVALUATION STRATEGY

3.1 TECHNICAL EVALUATION THRESHOLD

The minimum weighted final score (threshold) required for a tender to be considered from a technical perspective is 70% on the qualitative part and failure to meet the Technical Evaluation Criteria will disqualify tenderer.

3.2 TET MEMBERS

The TET members to be appointed by the DOA.

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3.3 MANDATORY TECHNICAL EVALUATION CRITERIA

Mandatory Technical Evaluation Criteria		Reference to Technical Specification / Tender Returnable	Motivation & Comments
	Declaration of compliance to the full scope of work (373-MAT--AABZ18-PN0012-6 Simulator Upgrade Project Technical Specification) and that the simulator provided meets the minimum plant model fidelity requirements as defined in (240-154243686: Technical Requirements for Power Plant Simulators Standard.)	The tenderer provides a declaration letter signed by the authorised company representative indicating compliance to the section 8. System requirements (373-MAT--AABZ18-PN0012-6 Simulator Upgrade Project Technical Specification)) and 3.2.3.5 Minimum plant model fidelity (240-154243686: Technical Requirements for Power Plant Simulators Standard.)	The contractor must demonstrate: • Intent to undertake full scope of work (373-MAT--AABZ18-PN0012-6 Simulator Upgrade Project Technical Specification) • Intent to Comply with to standard (240-154243686: Technical Requirements for Power Plant Simulators Standard.)
	Result <i>Note: A response of "NO" to any of the Mandatory Evaluation Criteria would result in a "NO".</i>		

3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA

Table 1: Qualitative Technical Evaluation Criteria

Qualitative Evaluation								
		Source of evidence/returnable	Minimum requirement	Weight	Nonresponsive 0%.	Unacceptable risk 40%.	Acceptable risk 80%.	Fully compliant 100%.
1. Company Experience Related to Simulator Projects	Submit evidence of Contracts/Orders for services rendered on simulator projects.	Submit Contract/Order numbers with Verifiable references for previous work on simulator projects in a power plant or similar highly integrated industrial plant.	Submit proof of orders, contracts, or completion certificates, including the relevant scope of work for the simulator project work/service provided, with verifiable client details.	20%	(Score 0) Zero Submission or unverifiable submission.	(Score 40) 1 order submitted	(Score 80) 2 orders submitted	(Score 100) 3 orders submitted
2. Methodology Statement for Simulator	Provide an understanding of how a simulator project will be implemented.	Detailed Methodology Statement submitted: The tenderer shall submit a comprehensive methodology statement demonstrating their approach to	Submit a detailed method statement for the simulator upgrade project covering the following aspects (points for	40%	(Score 0) Scored < 20	(Score 40) Scored >=20 points	(Score 80) Scored >=60 points	(Score 100) Scored =80 points

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		the simulator upgrade project.	each topic are indicated below): Project Management Plan: • Project organization structure and key roles. (10 points) • Quality assurance and control plan. (10 points) Technical Approach to Simulator Upgrade: • List and provide tenderers recommended specifications for proposed equipment for all Auxiliary Equipment					
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			outlined on Simulator Upgrade Project Technical Specification (9.3 Simulator hardware) (10 Points) • Cybersecurity considerations for the new system. (10 points) • Approach and / or Plan for data acquisition and modelling for the simulator (10 points) Testing and Validation Plan:					
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			• Factory Acceptance Test (FAT) (10 points) • Performance testing and validation against specifications. (10 points) • Plan for Integrated System Testing and Operator Training Validation on the simulator . (10 points)					
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3. Technical Resource Requirement	3.1 TECHNICIAN 1 X Technician Requirements Submit One CV for Technician with the following: - National Diploma/Degree certificate in engineering studies (Submit certified copy of qualifications and all relevant required certificates. Certificates must be certified and be valid)	Technician CV submitted with supporting documents. CV must include contactable references for verification.	Submit One CV for Technician with the following: 1. Minimum requirements N6 /National Technical Diploma + /National Diploma or B-Tech in Electrical Engineering / Instrumentation or International Technical/Engineering Qualifications (Foreign Qualifications) 2. Must have a minimum of 3 years field instrumentation experience 3. Must have a minimum of 2 years'	20%	(Score 0) No Submission. OR Does not meet THREE (regardless of ONE/TWO) AND/OR meets only ONE, TWO, or None.	(Score 40) ONLY THREE.	(Score 80) THREE AND ONE (But NOT TWO) OR THREE AND TWO (But NOT ONE).	(Score 100) ONE AND TWO AND THREE (All requirements).
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			experience on Melody DCS					
	3.2 TECHNICIAN 1 X Technician Requirements Submit One CV for Technician with the following: - National Diploma/Degree certificate in engineering studies (Submit certified copy of qualifications and all relevant required certificates. Certificates must be certified and be valid)	Technician CV submitted with supporting documents. CV must include contactable references for verification.	Submit One CV for Technician with the following: 1. Minimum requirements N6 /National Technical Diploma + /National Diploma or B-Tech in Electrical Engineering / Instrumentation or International Technical/Engineering Qualifications (Foreign Qualifications)	20%	(Score 0) No Submission. OR Does not meet TWO (regardless of ONE/THREE) AND/OR meets only ONE, THREE, or None.	(Score 40) ONLY TWO.	(Score 80) TWO AND THREE (But NOT ONE) OR TWO AND ONE (But NOT THREE).	(Score 100) ONE AND TWO AND THREE (All requirements).

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			2. Must have a minimum of 2 years' experience in Simulator plant models 3. Training certificate on any Model Development for simulator					
Score				100%				

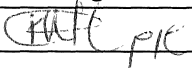
3.5 TET MEMBER RESPONSIBILITIES

Table 2: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3	TET 4	TET 5	TET 6	TET 7	TET n
1.	X	X	X					
Qualitative Criteria Number	TET 1	TET 2	TET 3	TET 4	TET 5	TET 6	TET 7	TET n
1.	X	X	X					
2.	X	X	X					
3.	X	X	X					

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
Katlego Mangope	C&I Engineering Manager	
Khumo Skosana	C&I Engineering Snr Advisor	
Lindokuhle Ngobese	Engineering Manager	

5. REVISIONS

Date	Rev.	Compiler	Remarks
October 2025	1	Nhlakanipho Molefe	New Document

6. DEVELOPMENT TEAM

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

- Katlego Mangope
- Nhlakanipho Molefe

7. ACKNOWLEDGEMENTS

None

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