Eskom	Strategy	Engineering

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1. INTRODUCTION

This document outlines the technical evaluation criteria for the reduction of partial load losses (PLL) and trips project at Kriel Power Station. The service provider identifies causes of partial load losses (PLL) and trips through the investigations and development, commissioning, and application of a thermo-hydraulic model tailored to reflect the operating characteristics and unique performance profile of each generating unit.

The scope includes a comprehensive assessment of the entire power station plant performance with a focus on trips and load losses, including auxiliary systems, and the implementation of process optimization measures based on real-time analysis and simulation.

This document defines the evaluation strategy which includes the mandatory and qualitative technical criteria that will be used to evaluate tenders received.

2. SUPPORTING CLAUSES

2.1 SCOPE

The document covers the Tender Technical Evaluation Strategy for the reduction of partial load losses (PLL) and trips project at Kriel Power Station

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 shall apply throughout Eskom Kriel 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] 240-168966153: Generation Tender Technical Evaluation Procedure

[2] 240-48929482: Tender Technical Evaluation Procedure

[3] 240-53716769: Tender Technical Evaluation Strategy

[4] 32-1034: Eskom Procurement Policy

2.2.2 Informative

[5] 559-1017698387 Scope of work for Partial Load Losses and Trip Reduction Service

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2.3 DEFINITIONS

Definition	Description
Module	

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
TET	Technical Evaluation Team
C&I	Control and Instrumentation

2.5 ROLES AND RESPONSIBILITIES

N/A as per 240-48929482: Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

559-1017698387 Scope of work for Partial Load Losses and Trip Reduction Service

3. TENDER TECHNCIAL EVALAUTION 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%.

3.2 TET MEMBERS

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	[redacted]	Manager, Kriel C&I Engineering
TET 2	[redacted]ni	Manager, Kriel P&T Engineering
TET 3	[redacted]	Manager, Kriel Process Engineering (Acting)

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3.3 MANADATORY TECHNICAL EVALUATION CRITERIA

Table 2: Mandatory Technical Evaluation Criteria

	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria
1	Thermohydraulic simulation software license.	• Ownership of Thermohydraulic simulation software license.	Requires to create a thermodynamic model

3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA SCORING MATRIX

The qualitative criteria will be scored according to the scoring matrix set out in the Tender Engineering Evaluation Procedure 240-48929482.

Table 3 shows the scoring matrix that will be used.

Table 3: Qualitative Technical Evaluation Criteria Scoring Matrix

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**
Note 1: The scoring table does not allow for scoring of 1 and 3.		

3.5 QUALITATIVE TECHNICAL EVALUATION CRITERIA SCORING MATRIX

Table 4: Qualitative Technical Evaluation Criteria

	Qualitative Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)	Evaluation Scoring Breakdown			
					0	2	4	5
1.	Method Statement	• A clear and detailed methodology outlining the approach to be used must be submitted with the proposal. • The methodology must include how the digital twin will be developed, validated, and used to identify PLL contributors and quantify their impact. • Demonstrate how these gains will be measured and reported. • This methodology will serve as a primary evaluation criterion.	30		No methodology submitted or completely inadequate.	Basic methodology submitted with limited detail and unclear implementation approach.	Good methodology with clear implementation approach, validation process, and reporting structure.	Excellent, comprehensive, and innovative methodology with clear measurable outcomes and detailed execution plan.
2.	Relevant Track Record and Experience	Demonstrated experience in similar projects involving thermo-hydraulic digital twin applications in thermal power stations showing proven success in reducing partial load losses, with emphasis on previous work at thermal Power Stations Supply documentation of previous projects showcasing how PLL reductions were achieved using similar approaches. Case studies must be submitted showing measurable results and methodologies used The experience must be referenceable and verifiable.	35		Less than 5 years relevant experience with no evidence	Less than 5 years relevant experience with case studies	Less than 8 years relevant experience with case studies	More than 8 years relevant experience with case studies

3.	Technical and Multidisciplinary Capability	The consulting team must have broad technical expertise (to be established from each submitted resume) covering all aspects of power plant operations, including • Boiler systems, • Turbines, condensers, feedwater systems, auxiliary equipment, • Plant controls and process optimization. • Data Analytics • System Modelling NB: Each resume to be not more than 1 page long	35		No information	Team Experience covers only three (3) areas of the scope as listed	Team Experience covers only four (4) areas of the scope as listed	Team Experience covers all aspects of the scope as listed
			TOTAL: 100					

3.6 TET MEMBER RESPONSIBILITIES

Table 5: TET Member Responsibilities

Mandatory Criteria Number	**TET 1**	**TET 2**	**TET 3**		
1	X	X	X		
2	X	X	X		
Qualitative Criteria Number	**TET 1**	**TET 2**	**TET 3**		

1	X	X	X		
2	X	X	X		

3.7 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.7.1 Risks

Table 6: Acceptable Technical Risks

Risk	Description
1.	Submissions with minor deviations/omissions

Table 7: Unacceptable Technical Risks

Risk	Description

1.	No verifiable reference list of the minimum required references and documents
2.	

3.7.2 Exceptions / Conditions

Table 8: Acceptable Technical Exceptions / Conditions

Risk	Description
	N/A

Table 9: Unacceptable Technical Exceptions / Conditions

Risk	Description
	N/A

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
[redacted]	Manager: Engineering	
[redacted]	Manager: Kriel Power Station C&I Engineering	
[redacted]	Manager: Kriel Power Station P&T	
[redacted]	Manager: Kriel Power Station Process Engineering	

5. REVISIONS

Date	Rev.	Compiler	Remarks
June 2025	1	[redacted]	First Issue

6. DEVELOPMENT TEAM

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

- [redacted]

7. ACKNOWLEDGEMENTS

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