Eskom	Strategy	Generation

Title: **LV Motor Procurement Technical Evaluation Strategy Report for Kriel Power Station**

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Compiled by	Functional Responsibility	Authorised by
……..	……..	……..
[redacted]	[redacted]	[redacted]
System Engineer	**Electrical Engineering Manager**	**Engineering Manager**
Date: 10/05/2025	Date: 12/05/2025	Date: 13/05/2025

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TABLES

1. INTRODUCTION

This document describes how tenders received for the supply of LV motors required by Kriel Power Station will be technically evaluated and scored. The team members are listed and appointed in this document along with their responsibilities. The document also describes the acceptable and unacceptable risks and qualifications and/or conditions.

2. SUPPORTING CLAUSES

2.1 SCOPE

This scope covers the procurement of Low Voltage Induction motors.

No changes will be permitted to be made to the evaluation criteria once the Technical Evaluation Strategy report has been authorised.

2.1.1 Purpose

The purpose of this document is to define the technical evaluation criteria as well as the roles and responsibilities of the Technical Evaluation Team (TET) members.

The Tender Technical Evaluation Strategy will define the following technical evaluation criteria:

- Mandatory Evaluation Criteria
- Qualitative Evaluation Criteria
- TET Member Responsibilities
- Acceptable/Unacceptable Qualifications

2.1.2 Applicability

This document applies to 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 Technical Tender Evaluation Procedure

[2] 240-77100923: Low Voltage Induction Motors Technical Schedule A&B Template

[3] 240-57617975: New LV Motors Procurement Standard

2.2.2 Informative

[4] RPE/RCA/500000026362/MAGAM01- Engineering Change Root Cause Analysis for Replacement of ACC Fan Motors Report

2.3 DEFINITIONS

None

2.3.1 Disclosure Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
N/A	Not Applicable
RPM	Revolution per Minute
TET	Technical Evaluation Team

2.5 ROLES AND RESPONSIBILITIES

Roles and responsibilities shall be as per "240-168966153: Generation Technical Tender Evaluation Procedure", summarised below:

Engineering Manager: The Engineering Managers Eskom shall ensure that all staff, in their respective areas understand and adhere to this procedure.

Engineering Design Work Lead (EDWL): The EDWL is responsible to manage the execution and adherence to this procedure. The EDWL compiles the technical evaluation reports with input from respective TET members.

Technical Evaluation Team (TET) member: The delegated engineers / technical specialists who are responsible to review and evaluate technical aspects of the tender documentation as per the Tender Technical Evaluation Strategy. Furthermore, the TET compiles a report detailing the findings of the evaluation for the respective tenders on the allocated area of responsibility as highlighted in Table 5; this is mandatory responsibility for each TET member. The report should also highlight major areas of compliance and non-compliance, risks, points to be considered for negotiations etc. in accordance with the "240-48929482: Tender Technical Evaluation Procedure". Where possible, one consolidated report will be acceptable per functional area, however the report should be supported by the respective TET member score sheets.

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

N/A

3. TENDER TECHNICAL EVALUATION STRATEGY

3.1 TET MEMBERS

The following Evaluation Team Members have been appointed to perform evaluations.

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	[redacted]	Electrical Engineer
TET 2	[redacted]	Electrical Engineer
TET 3	[redacted]	Senior Electrical Engineer

3.2 MANDATORY TECHNICAL EVALUATION CRITERIA

In accordance with 240-168966153, an assessment of 'NO' against criterion A1 to A3 in Table 2 shall disqualify the assessed tendered design from further Qualitative Evaluation.

Table 2: Mandatory Technical Evaluation Criteria for LV Induction Motors per Design

Ref #	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria
A1.	The tenderer must provide proof that the manufacturer selected has been producing LV Motors for at least 5 years. (YES/NO)	• Technical Schedule A&B 240-77100923, Section: 4.03 and 4.05. • Support Letter with letter head from the manufacture to be submitted	Experienced manufacturing is required to ensure that Eskom plant reliability is maintained, and the technology can be relied on.
A2.	Each tendered design must be electrically and mechanically interchangeable with existing motor without plant modification. (YES/NO)	• Technical Schedule A&B	Successful installation and operation of replacement motors should not be subject to implementation of enabling plant modifications.
A3.	The tenderer must confirm that the routine test certificates will be in accordance with SANS 60034.	• Eskom Standard 240-57617975, Section: 3.2.1.1.3 • Formal Letter with letter head to be submitted confirming that the routine test certificate will be in accordance with SANS 60034	Motor performance to meet minimum testing requirements.
A4.	Warranty letter	• Warranty Letter with letter head from the manufacturer stating the warranty of the motor to be submitted	To ensure motor reliability and availability.

3.3 QUALITATIVE TECHNICAL EVALUATION SCORING AND THRESHOLD

Table 3 shows the scoring method for the Qualitative Technical Evaluation Criteria as prescribed in 240-168966153.

These criteria are listed in Table 5, where each item shall be given a score of 0, 2, 4 or 5. Using the weighting for each item, the final total score will be added up and expressed as a percentage. The minimum weighted final score (threshold) required for each tendered design to be recommended for negotiation is 70%.

Table 3: Scoring Method for Qualitative Technical Evaluation Criteria

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.
Note 2: Foreseen acceptable and unacceptable risk(s), exceptions and conditions shall be unambiguously defined in the relevant Tender Technical Evaluation Strategy.

Table 4: Qualitative AQ.1 to AQ.3

No requirements met from information submitted	**0**
¼ requirements met from information submitted	2
1/2 requirements met from information submitted	4
Full requirements met from the information provided	5

3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA

In accordance with 240-168966153, the motor designs that meet all the Mandatory Evaluation Criteria will be evaluated against the Qualitative Evaluation Criteria defined in Table 5 below. The scoring of qualitative criteria shall be based on the degree of achievement by the tenderer to meet the technical requirements defined in the New LV Motor Procurement Standard document 240-57617975. Each item shall have the specific sub-weighting criteria that shall be scored in accordance with Table 5.

The minimum weighted final score (threshold) required for the designs to be considered FUNCTIONALLY ACCEPTABLE from a technical perspective is 70%. The Eskom objective of lowest life cycle costs is achieved by high quality designs that have obtained higher than 70% in the past related tenders.

Table 5: Qualitative Technical Evaluation Criteria for LV Induction Motors

Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
AQ.1	**Compliance Schedule – Electrical requirements**		Eskom Standard 240-57617975	**30**	
	1.1	Power Supply Variation	• 3.1.2.2		40
	1.2	Starting Current Requirements	• 3.1.2.4		30
	1.3	Staring Torque Requirements	• 3.1.2.5		30
AQ.2	**Compliance Schedule – Mechanical requirements**		Eskom Standard 240-57617975	**30**	
	2.1	Stator Windings and Insulating System	• 3.1.3.2		20
	2.2	Bearings	• 3.1.3.5		30
	2.3	Enclosure and Cooling	• 3.1.3.6		30
	2.4	Rating Plate and Labels	• 3.1.3.9		20
AQ.3	**Tender Quality & Delivery Period**			**10**	
	4.1	Delivery Period • **Off the shelf motor sizes with no** **5**	Tender returnable		100

Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)

• manufacturing < 4 weeks • Non-standard designs < 5 months • DC motors < 6 months	
• Off the shelf motor sizes with no manufacturing = 4 weeks • Non-standard designs < 6 months • DC motors = 6 months	4
• Off the shelf motor sizes with no manufacturing < 6 weeks • Non-standard designs < 7 months • DC motors < 8 months	2
• Off the shelf motor sizes with no manufacturing > 6 weeks • Non-standard designs > 7 months • DC motors > 8 months	0

Criteria Ref #	Qualitative Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
			TOTAL: 100	

3.5 TET MEMBER RESPONSIBILITIES

Table 6: TET Member Responsibilities for LV Induction Motors

Mandatory Criteria Number	TET 1	TET 2	TET 3
A1	X	X	X
A2	X	X	X
A3	X	X	X
A4	X	X	X
Qualitative Criteria Number	**TET 1**	**TET 2**	**TET 3**
AQ.1	X	X	X
AQ.2	X	X	X
AQ.3	X	X	X
AQ.4	X	X	X

3.6 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.6.1 Risks

Table 7: Acceptable Technical Risks

Risk	Description
1.	Inviting Suppliers without an Eskom technically prequalified factory but providing a manufacturing record of 5 years.
2.	Tendering without conducting Site visit/s for items whose mounting dimensions have been provided by Eskom.

Table 8: Unacceptable Technical Risks

Risk	Description
1.	Designs with unconfirmed size and unsuitable to application and Site operating conditions
2.	Mandatory criteria 1-4 for motor not evaluated and/or satisfied

3.6.2 Exceptions/Conditions

Table 9: Acceptable Technical Exceptions/Conditions

Risk	Description
1.	Declining to provide technical details accurately deemed intellectual proprietary.

Table 10: Unacceptable Technical Exceptions/Conditions

Risk	Description
1.	Failure to provide manufacturing factory name, and documents for assessing compliance with mandatory technical evaluation criteria.
2.	Deviations tendered that lead to non-interchangeability (electrical and mechanical).

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation
[redacted]	Electrical System Engineer
[redacted]	Electrical Engineering Manager
[redacted]	Engineering Manager
[redacted]	Chief Engineer

5. REVISIONS

Date	Rev.	Compiler	Remarks
10 June 2024	0.1	[redacted]	First Draft Issue for Review by Stakeholders
01 May 2025	1	[redacted]	Rev 1

6. DEVELOPMENT TEAM

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

[redacted]

[redacted]

7. ACKNOWLEDGEMENTS

N/A.

8. APPENDIX A: SUMMARY OF TENDER RETURNABLE FOR LV INDUCTION MOTORS

Tender returnables shall be adequately referenced with supporting documentation, provided in both hardcopy and softcopy formats.

8.1 MANDATORY REQUIREMENTS FOR LV INDUCTION MOTORS

Ref #	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Required Tender Returnable
A1.	The tenderer must provide proof that the manufacturer selected has been producing LV Motors for at least 5 years. (YES/NO) Factory may be assessed before contract award.	• Technical Schedule A&B 240-77100923, Section: 4.03 and 4.05.	a) A letter from LV Motor manufacturer confirming manufacturing record of 5 years. One letter covering all designs is acceptable.
A2.	Each tendered design must be electrically and mechanically interchangeable with existing motor. (YES/NO)	• Technical Schedule A&B comparison.	b) Completed Technical Schedule B of Technical Schedule A&B per motor design. And/or c) Manufacturer's datasheets are acceptable for standard motors less than 55kW per motor design.
A3.	The tenderer must confirm that the routine test certificates will be in accordance with SANS 60034.	• Eskom Standard 240-57617975, Section: 3.2.1.1.3	d) A letter confirming the routine tests to be in accordance with SANS 60034.
A4.	Warranty letter	• Warranty Letter with letter head from the manufacturer stating the warranty of the motor to be submitted	e) To ensure motor reliability and availability.

8.2 QUALITATIVE REQUIREMENTS FOR LV INDUCTION MOTORS

Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Required Tender Returnable
AQ.1	**Compliance Schedule – Electrical requirements**		Eskom Standard 240-57617975	**30**	**a)** Compliance Schedule
	1.1	Power Supply Variation	• 3.1.2.2		
	1.3	Starting Current Requirements	• 3.1.2.4		
	1.4	Staring Torque Requirements	• 3.1.2.5		
AQ.2	**Compliance Schedule – Mechanical requirements**		Eskom Standard 240-57617975	**30**	a) Compliance Schedule
	2.1	Stator Windings and Insulating System	• 3.1.3.2		
	2.2	Bearings	• 3.1.3.5		
	2.3	Enclosure and Cooling	• 3.1.3.6		
	2.4	Rating Plate and Labels	• 3.1.3.9		
AQ.3	**Compliance Schedule –Testing requirements**		Eskom Standard 240-57617975	**30**	a) Compliance Schedule
	3.3	Routine Tests	• 3.2.1.1.3		
AQ.4	**Tender Quality & Delivery Period**			**10**	a) Delivery Period List b) Warranty/ Guarantee period
	4.1	Delivery Period	Tender returnable		
				TOTAL: 100	