

 Eskom	Report	Hendrina Power Station
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1. Introduction

Hendrina Power Station is in the process of setting up repair and refurbishment contract for Medium Voltage (MV) Motors. The contract will be for “as and when” required basis for a period of 5 years and managed by Hendrina Power Station Materials Management Department. A technical evaluation strategy is required to document the technical evaluation criteria as per the Tender Technical Evaluation Procedure 240-168966153

2. Supporting Clauses

2.1 Scope

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

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

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

No changes will be permitted to be made to the evaluation criteria once the Technical Evaluation Strategy is approved by the Engineering Manager.

2.1.1 Purpose

The purpose of this 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.

2.1.2 Integrated Business Improvement objectives

Management, assurance, and independent oversight control to ensure that the procurement process is adequately followed and that all the documentations are traceable and auditable.

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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: Tender Technical Evaluation Procedure
- [2] MV Motor Repair/Refurbishment Technical Schedule A&B
- [3] 240-89217674: Refurbishment and Repair of Power Station Motors Works Instructions
- [4] 240-56361435: Transport of Power Station Electric Motors Standard

2.2.2 Informative

- [4] None

2.3 Definitions

None

2.4 Abbreviations

Abbreviation	Explanation
TET	Technical Evaluation team
MV	Medium Voltage

2.5 Roles and Responsibilities

As per 240-168966153: Tender Technical Evaluation Procedure.

2.6 Process for Monitoring

N/A

2.7 Related/Supporting Documents

N/A

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%.

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3.2 TET members

Table 1: TET members

TET Member	TET Member Name	Designation
1	Cedrick Mabelane	Snr Engineering Technician – Electrical Engineering
2	Girly Tshehla	Snr Technician – Electrical Maintenance
3	Eugene Ellis	Snr Technician – Electrical Maintenance

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3.3 Mandatory Technical Evaluation Criteria

In accordance with 240-48929482, an assessment of 'NO' against any criterion referenced # 1 to 2 in Table 2 below shall disqualify the Tenderer from further Qualitative Evaluation.

Table 2: Mandatory Technical Evaluation Criteria

Ref #	Mandatory Technical Criteria Description	YES/ NO	Reference to Technical Specification/ Tender Returnable	Proof to be submitted to qualify
1	Confirmation that the tenderer has a local MV Motor repair workshop with capacity to test 6600V	YES/ NO	Tenderer should be able to test motors at rated voltage of 6600V	Approved stamped municipal reticulation diagram detailing the capacity of the power supply and the transformer. Take note: No Sub-contractor workshop is allowed

3.4 Qualitative Technical Evaluation Criteria

In accordance with 240-168966153, tenders that have met all the Mandatory Evaluation Criteria will be evaluated against the Qualitative Evaluation Criteria defined in Table 3 below. The scoring of qualitative criteria shall be based on the degree of achievement by the tenderer to meet the technical requirements defined in each tenderer Technical Schedule. Each item shall have the specific sub-weighting criteria that shall be scored in accordance with Table 2 of 240-168966153. For scope of works where the sub-criteria is not applicable that sub-criteria weighting, which is blank in Table 3, will be set to zero (0%) when the final specific qualitative technical evaluation criteria matrix is set by the respective End-user TET Member. The minimum weighted final score (threshold) required for the tendered scope of work to be considered FUNCTIONALLY ACCEPTABLE from a technical perspective is 70%. This threshold will provide acceptable minimum quality for the refurbishment of Eskom MV motors based on the criteria weightings in Table 3.

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The recommendation on the highest technically ranked tenderer shall be based on the final scoring comparisons and the tenderer with the highest score shall be recommended from a technical perspective, if the weighted final score exceeds the defined threshold.

Take note: The quantitative technical evaluation criteria should be interpreted with reference to the attached Schedule A&B under annexures which is a tender returnable.

Table 3: Qualitative Technical Evaluation Criteria

Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	Repair Facility and Capability		Technical Schedule	<u>35</u>	
	1.01	Covered storage area	• 2.01		1
	1.02	Crane size facility	• 2.02		2
	1.03	Cleaning facility	• 2.03		1
	1.04	Burn out oven facility as per 240-89217674 Section 4.1.3.5.1	• 2.04		2
	1.05	Curing oven facility	• 2.05		1
	1.06	Motor assessment as per 240-89217674 Section 4.1.	• 2.06		2
	1.07	Rewinding capability as per 240-89217674 Section 4.2.1.1.	• 2.07		2
	1.08	VPI tanks as per 240-89217674 Section 4.2.1.1.4	• 2.08		2
	1.09	Core repair capability as per 240-89217674 Section 4.2.1.2	• 2.09		2

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Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
	1.10	Winding shop (coil formation with relevant coil design capabilities & software)	• 2.10		2
	1.11	Rotor cage repair as per 240-89217674 Section 4.2.1.3.1	• 2.11		2
	1.12	Shaft repair done as per 240-89217674 Section 4.2.1.3.2 and 4.2.1.3.3	• 2.12		2
	1.13	Balancing machine/s (capable of balancing largest rotor size and speed on tendered motors)	• 2.13		2
	1.14	Bearings assessment and replacement done as per 240-89217674 Section 4.2.1.4	• 2.14		2
	1.15	End shield repair capability	• 2.15		2
	1.16	Concentricity checks capability	• 2.16		2
	1.17	Assembly capabilities as per 240-89217674 Section 4.2.2	• 2.17		2
	1.18	Spray booth facility	• 2.18		2
	1.19	Protective coating capability as per 240-89217674 Section 4.2.3 - Gray G29	• 2.19		2
2.	Testing Facility and Capability		Technical Schedule	<u>28</u>	
	2.01	Insulation resistance testing facility as per 240-89217674 Section 4.4.2.2.1	• 3.01		2

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Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
	2.02	High voltage testing facility as per 240-89217674 Section 4.4.2.2.3	• 3.02		3
	2.03	Phase resistance testing facility as per 240-89217674 Section 4.4.2.2.2	• 3.03		3
	2.04	Interturn testing facility as per 240-89217674 Section 4.4.2.2.6	• 3.04		3
	2.05	Stator and Rotor core testing capability as per 240-89217674 Section 4.4.2.3	• 3.05		2
	2.06	Rotor bar testing as per 240-89217674 Section 4.4.2.4.3	• 3.06		3
	2.07	Routine test as per 240-89217674 Section 4.4.5	• 3.07		3
	2.08	Performance test as per 240-89217674 Section 4.4.6	• 3.08		2
	2.09	Full load testing facility	• 3.09		
	2.10	Rotor static and dynamic balancing capability as per 240-89217674 Section 4.4.3.1 and 4.4.3.2	• 3.10		3
	2.11	Full vibration spectrum analysis capability	• 3.11		2
	2.12	Non-Destructive Testing of Shaft/Fans, etc.	• 3.12		2
3.	Skills Capability		Technical Schedule	<u>20</u>	
	3.01	Qualified armature rewinder	• 4.01		5
	3.02	Technical personnel (e.g. Engineer, Technician)	• 4.02		3

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Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
	3.03	Qualified Fitter	• 4.03		5
	3.04	Quality control personnel	• 4.04		3
	3.05	Vibration Analyser (Level 2 certificate)	• 4.05		2
	3.06	Site service personnel	• 4.06		2
4.	Transport Capability		Technical Schedule	<u>3</u>	
	4.1	Number of trucks	• 5.01		1
	4.2	Maximum tonnage capability	• 5.02		1
	4.3	Motor protection during transit as per 240-56361435	• 5.03		1
5.	Documentation		Technical Schedule	<u>3</u>	
	5.1	Motor incoming assessment report	• 6.01		1
	5.2	Failure Report sample covering failure analysis	• 6.02		1
	5.3	Minimum period of information storage of electronic data	• 6.03		1
6.	Services,		Technical Schedule	<u>4</u>	
	6.01	Field services available	• 7.01		2
	6.02	Emergency Response time	• 7.02		2

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Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
7.	Outsourced repair work		Technical Schedule	<u>1</u>	
	7.01	List of outsourced/subcontracted services	• 8.01		1
8.	Certifications and Partnerships		Technical Schedule	<u>2</u>	
	8.01	Repair and certification of Ex rated MV Motors (e.g. Ex td, na d/de)	• 9.01		1
	8.02	Partnership with other manufacturers or suppliers	• 9.02		1
9.	Production		Technical Schedule	<u>4</u>	
	9.01	Warrantee on Workmanship	• 10.01		1
	9.02	Quality control system in place (i.e. ISO 9001 Certificate)	• 10.02		1
	9.03	QCP Sample	• 10.03		1
	9.04	Safety and Environmental policies in place	• 10.04		1
				TOTAL: 100	

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The scoring of the qualitative criteria shall be based on the degree of achievement by the tenderer to meet the technical requirements.

A score is allocated as per below table.

Score	(%)	Definition
5	100	COMPLIANT <ul style="list-style-type: none">• Meet technical requirements.• No foreseen technical risk in meeting the technical requirements.
4	80	COMPLIANT WITH ASSOCIATED QUALIFICATIONS Meet technical requirements with: <ul style="list-style-type: none">• Acceptable technical risk• Acceptable exceptions• Acceptable conditions
2	40	NON-COMPLIANT <ul style="list-style-type: none">• Does not meet technical requirements.• Unacceptable technical risk• Unacceptable exception

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		<ul style="list-style-type: none">Unacceptable condition
0	0	TOTALLY DEFICIENT OR NON-RESPONSIVE
<p>Note 1: The scoring does not allow for score of 1 and 3.</p> <p>Note 2: Foreseen acceptable and unacceptable risk, exception and condition shall be unambiguously defined in the relevant tender technical evaluation strategy.</p>		

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3.5 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	X	X	X
4	X	X	X
5	X	X	X
6	X	X	X
7	X	X	X
8	X	X	X
9	X	X	X

3.6 Foreseen Acceptable/ Unacceptable Qualifications

3.6.1 Risk

Table 5: Acceptable Technical Risks

Risk	Description
1	Inviting Suppliers without an Eskom technically prequalified factory, provided that the factory availability is a tender evaluation criterion. Eskom reserve the rights to inspect the factory before contract award to verify the information.
2	Tendering without conducting Site visit/s for items described in the Scope of Work template provided by Eskom

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Table 6: Unacceptable Technical Risks

Risk	Description
1	Mandatory criteria 1 – 3 not evaluated and/or satisfied

3.6.2 Exceptions/ Conditions

Table 7: Acceptable Technical Exceptions/ Conditions

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

Table 8: Unacceptable Technical Exceptions/ Conditions

Risk	Description
1	Failure to provide manufacturing factory name, and documents for assessing compliance with mandatory technical evaluation criteria.

4. SHEQ requirements

None

5. Records to be kept.

The document details the technical criteria's to be used to evaluate the tender submission for the MV motor repairs and refurbishment. All records to be kept as per the procurement protocols.

6. Annexures

Technical Schedule A and B.

7. Development Team

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

Cedrick Mabelane – Snr Engineering Technician

8. Acknowledgements

Electrical Motors Care Forum

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