

	<b>Report</b>	<b>Hendrina Power Station</b>
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Title: **MV Motors Repair & Refurbishment  
Technical Evaluation Strategy  
Report**

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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- 48929482.

## **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] 240-48929482: Tender Technical Evaluation Procedure
- [2] [2] MV Motor Repair/Refurbishment Technical Schedule
- [3] [3] 240-89217674: Refurbishment and Repair of Power Station Motors Works Instructions

### **2.2.2 Informative**

- [4] None

## **2.3 Definitions**

None

## **2.4 Abbreviations**

<b>Abbreviation</b>	<b>Explanation</b>
TET	Technical Evaluation team
MV	Medium Voltage

## **2.5 Roles and Responsibilities**

As per 240-48929482: 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

<b>TET Member</b>	<b>TET Member Name</b>	<b>Designation</b>
1	Cedrick Mabelane	Snr Engineering Technician – Electrical Engineering
2	Girly Tshehla	Snr Technician – Electrical Maintenance
3	Eugene Ellis	Snr Technician – Electrical Maintenance
4	Senzo Tsabedze	Technician – Electrical Maintenance
5	Haroon Reshid	Senior Engineer – Electrical Engineering

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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 3 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	Motivation for use of the Criteria
1	Submission of completed MV motor Repair/ Refurbishment Technical Schedule A&B	YES/ NO	As per Service Information Tender Returnable.	Mandatory and qualitative evaluation phases of each tenderer cannot be conducted/ completed without this document and supporting documents as stipulated in the Technical Schedule.
2	Confirmation that the tenderer has a local MV Motor repair workshop with testing capability.	YES/ NO	1.02, 1.03, 2.09, 2.10, 3.02, 3.04, 3.05, 3.06, 3.07, 3.08 and 3.09 of MV Motor Repairs/Refurbishment See Technical Schedule A&B Tender Returnable.	Eskom motor repair/refurbishment to be done by a company with a workshop, and ability to test MV Motors at its workshop.  <b>Take note: No subcontractor workshop is allowed.</b>
3	Confirmation that the tenderer will comply to MV Motor Refurbishment and Repair of Power Station Electric Motors Work instructions (240-89217674)	YES/ NO	A signed confirmation letter that the tenderer is aware and conversant of the contents of (MV Motor Refurbishment and Repair of Power Station Electric Motor Work Instruction, document number 240-89217674) and that they shall be followed during the repairs and refurbishment of the MV motors.	To ensure proper management of repairs and refurbishment of MV Motors.

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### 3.4 Qualitative Technical Evaluation Criteria

In accordance with 240-48929482, 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 240-48929482. 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.

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.

Table 3: Qualitative Technical Evaluation Criteria

Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	<b>Repair Facility and Capability</b>		<b>Technical Schedule</b>	<b><u>35</u></b>	
	1.01	Covered storage area	• 2.01		1
	1.02	Crane size facility	• 2.02		2
	1.03	Cleaning facility	• 2.03		1

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

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Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
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
<b>2.</b>	<b>Testing Facility and Capability</b>		<b>Technical Schedule</b>	<b><u>28</u></b>	
2.01	Insulation resistance testing facility as per 240-89217674 Section 4.4.2.2.1		• 3.01		2
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		

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Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
2.10		Rotor static and dynamic balancing capability as per 240-89217674 Section 4.4.3.1 and 4.4.3.2	<ul style="list-style-type: none"> <li>3.10</li> </ul>		3
2.11		Full vibration spectrum analysis capability	<ul style="list-style-type: none"> <li>3.11</li> </ul>		2
2.12		Non-Destructive Testing of Shaft/Fans, etc.	<ul style="list-style-type: none"> <li>3.12</li> </ul>		2
<b>3.</b>	<b>Skills Capability</b>		<b>Technical Schedule</b>	<b><u>20</u></b>	
3.01		Qualified armature rewinder	<ul style="list-style-type: none"> <li>4.01</li> </ul>		5
3.02		Technical personnel (e.g. Engineer, Technician)	<ul style="list-style-type: none"> <li>4.02</li> </ul>		3
3.03		Qualified Fitter	<ul style="list-style-type: none"> <li>4.03</li> </ul>		5
3.04		Quality control personnel	<ul style="list-style-type: none"> <li>4.04</li> </ul>		3
3.05		Vibration Analyser (Level 2 certificate)	<ul style="list-style-type: none"> <li>4.05</li> </ul>		2
3.06		Site service personnel	<ul style="list-style-type: none"> <li>4.06</li> </ul>		2
<b>4.</b>	<b>Transport Capability</b>		<b>Technical Schedule</b>	<b><u>3</u></b>	
4.1		Number of trucks	<ul style="list-style-type: none"> <li>5.01</li> </ul>		1
4.2		Maximum tonnage capability	<ul style="list-style-type: none"> <li>5.02</li> </ul>		1
4.3		Motor protection during transit as per 240-56361435	<ul style="list-style-type: none"> <li>5.03</li> </ul>		1
<b>5.</b>	<b>Documentation</b>		<b>Technical Schedule</b>	<b><u>3</u></b>	

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Criteria Ref #	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
	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
<b>6.</b>	<b>Services,</b>		<b>Technical Schedule</b>	<b><u>4</u></b>	
	6.01	Field services available	• 7.01		2
	6.02	Emergency Response time	• 7.02		2
<b>7.</b>	<b>Outsourced repair work</b>		<b>Technical Schedule</b>	<b><u>1</u></b>	
	7.01	List of outsourced/subcontracted services	• 8.01		1
<b>8.</b>	<b>Certifications and Partnerships</b>		<b>Technical Schedule</b>	<b><u>2</u></b>	
	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
<b>9.</b>	<b>Production</b>		<b>Technical Schedule</b>	<b><u>4</u></b>	
	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

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<b>Criteria Ref #</b>	<b>Qualitative Technical Criteria Description</b>		<b>Reference to Technical Specification / Tender Returnable</b>	<b>Criteria Weighting (%)</b>	<b>Criteria Sub Weighting (%)</b>
9.04	Safety and Environmental policies in place		<ul style="list-style-type: none"> <li>• 10.04</li> </ul>		1
				<b>TOTAL: 100</b>	

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### 3.5 TET Member Responsibilities

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

Technical Evaluation score card.

**7. Acceptance**

This document has been seen and accepted by:

Name	Designation
Haroon Reshid	Senior Engineer
Girly Tshehla	Senior Technician
Eugene Ellis	Senior Technician
Senzo Tsabedze	Technician

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<b>Name</b>	<b>Designation</b>
Njabs Zulu	Acting Electrical Maintenance Manager
Rofhiwa Lethole	Electrical Engineering Manager

## **8. Revisions**

<b>Date</b>	<b>Rev.</b>	<b>Compiler</b>	<b>Remarks</b>
June 2023	0	Cedrick Mabelane	New documents
March 2024	1	Cedrick Mabelane	Revise contract period from 3 years to 5 years and amend TET members

## **9. Development Team**

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

Cedrick Mabelane – Snr Engineering Technician

## **10. Acknowledgements**

Electrical Motors Care Forum

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