

 Eskom	Standard	Technology
--	-----------------	-------------------

Title: **TECHNICAL EVALUATION
CRITERIA FOR THE EXPEDITED
TRANSMISSION &
DISTRIBUTION SOURCING OF
TRANSFORMERS**

Unique Identifier: **240-17000056**

Alternative Reference Number: **N/A**

Area of Applicability: **Engineering**

Documentation Type: **Standard**

Revision: **Rev 1**

Total Pages: **12**

Next Review Date: **July 2026**

Disclosure Classification: **Controlled
Disclosure**

Compiled by



Mantsie Hlakudi
Chief Engineer
Transformers & Reactors

Date: 3 June 2021

Approved by



Sidwell Mtetwa
Corporate Specialist
Transformers & Reactors

Date: 3 June 2021

Authorized by



Bheki Ntshangase
Senior Manager – SE&D
Department

Date: 04/06/2021

Supported by SCOT/SC



Bheki Ntshangase
SCOT PE Chairperson

Date: 04/06/2021

Content

Content

	Page
Executive Summary.....	3
1. Introduction.....	4
2. Supporting clauses	4
2.1 Scope	4
2.1.1 Purpose.....	4
2.1.2 Applicability	4
2.2 Normative/informative references	4
2.2.1 Normative.....	5
2.2.2 Informative	5
2.3 Definitions.....	5
2.3.1 General	5
2.3.2 Disclosure classification.....	5
2.4 Abbreviations.....	5
2.5 Roles and responsibilities	5
2.6 Process for monitoring	5
2.7 Related/supporting documents	6
3. Evaluation Method and Requirements	6
3.1 Methodology	6
3.2 Mandatory Requirements	6
3.2.1 Completeness of documents	6
3.2.2 Technical Requirements	6
3.3 Discretionary Requirements.....	7
3.4 Factory Assessment.....	7
4. Annexures.....	7
5. Authorisation.....	7
6. Revisions	7
7. Development team	7
8. Acknowledgements	7
Annex A – Mandatory Requirements – Completeness of documents.....	8
Annex B – - Mandatory Requirements – Technical Requirements	9
Annex C – Discretionary Requirements – Class 2 and above Transformers Non Active Part.....	10

Figures

Figure 1: Classes of transformers in Eskom.....	4
---	---

Executive Summary

The technical tender evaluation is one of the critical gates in the enquiry chain to ensure that the bidders understand the customer's requirements and they are capable of designing, manufacturing, testing at works, prepare for shipment, transport, erect on site, commission the equipment, and can offer the required after sales technical support services. This tender technical evaluation criterion was created to evaluate all tenders for transformers and reactors, excluding those of class 0, which are already covered by document 240-77155912. Compliance with this document will ensure that all suppliers bidding to supply transformers and reactors to Eskom are evaluated fairly and transparently. It minimises the influence of an individual discretion of a person doing the evaluation. The assessment of each supplier will be based on the information the supplier provided during the tender stage and on the factory assessment.

It is important that each bidder clearly provides and references/index all the necessary information required in the technical schedules AB and Annexures of this document.

1. Introduction

This scoring criterion shall be used in conjunction with the power transformer and reactor specification documents referenced in 2.2.1 below, to ensure that all the suppliers are scored on the same basis and in a transparent manner. This document details the method of evaluating based on;

- The tender returnable are –completely filled Schedule AB and Annexure G. It is acceptable to submit a record of an already approved design if the intention is to bid with the same design.

The document shall be used for all transformers of class 1 and above as indicated in figure 1 below, and on all the oil immersed shunt reactors.

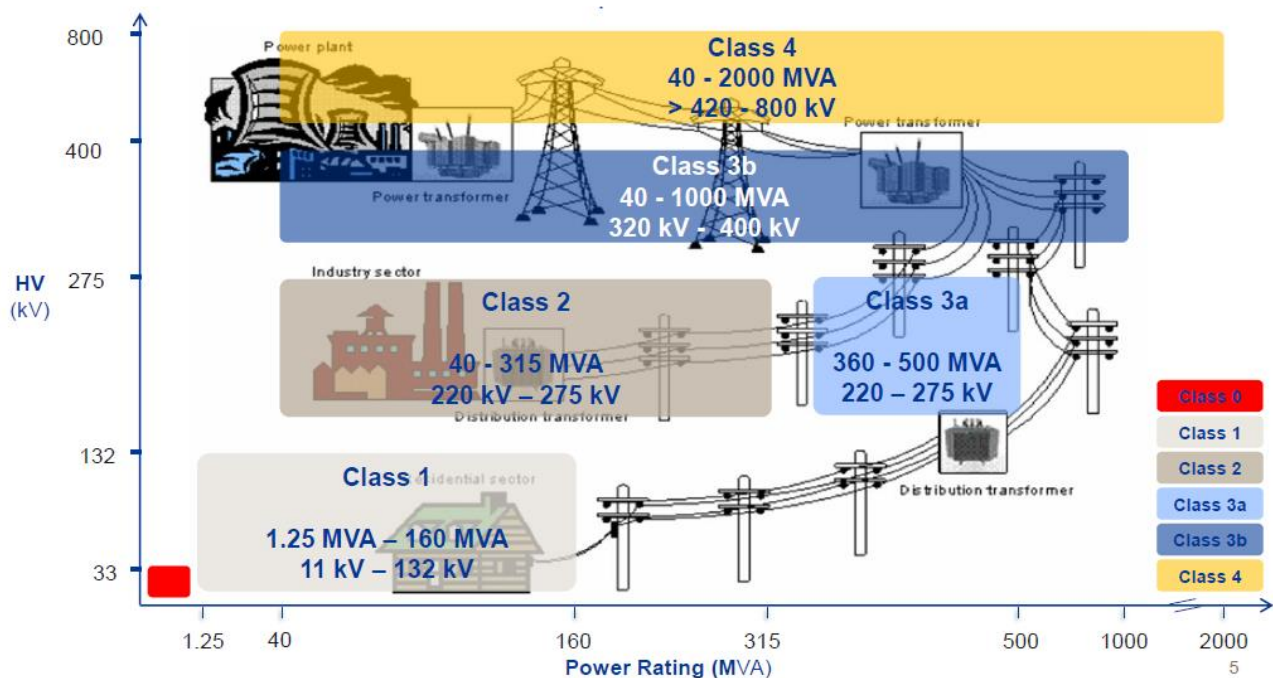


Figure 1: Classes of transformers in Eskom

2. Supporting clauses

2.1 Scope

This document covers only the evaluation criteria of the transformer and reactors tender returns. It does not specify the requirements of the mentioned equipment.

2.1.1 Purpose

This document was produced in order to record the standardized scoring method.

2.1.2 Applicability

This document shall apply only to Transmission and Distribution. It is applicable only to the interim tenders meant to supplement the CORP4565 needs.

2.2 Normative/informative references

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

ESKOM COPYRIGHT PROTECTED

2.2.1 Normative

- [1] 240-60725684 Specification for oil immersed HV and EHV Power Reactors
- [2] 240-68973110 Specification for power transformers rated above 1.25MVA and with highest voltage of 2.2kV or above

2.2.2 Informative

- [3] ISO 9001 Quality management systems
- [4] 32-1034 Eskom procurement and supply management procedure
- [5] 240-53207174 Practice note and guide on the implementation of the Preferential Procurement Policy Framework Act (PPPFA)

2.3 Definitions

2.3.1 General

Definition	Description
Contractor	Refers to the supplier or bidder
Equipment	Refers to a transformer or a reactor
Mark(s)	Means a point in the scoring system
Point(s)	Means a mark on the scoring system
Tender returns	A document(s), populated or compiled by the bidder, returned as a response to a tender and were part of the requirements at the time of issuing the enquiry.

2.3.2 Disclosure classification

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

2.4 Abbreviations

Abbreviation	Description
EHV	Extra High Voltage
HV	High Voltage
MVA (r)	Mega Volt-Amperes (reactive)
SCOT	Steering Committee of Technology
SE&D	Substation Equipment and Diagnostic

2.5 Roles and responsibilities

All the Eskom employees and/or appointed bodies involved in the tender technical evaluation shall use this criterion.

2.6 Process for monitoring

Not applicable, it is a once off document.

2.7 Related/supporting documents

The schedule A and B of the relevant AB schedules shall form part of the evaluations.

3. Evaluation Method and Requirements

3.1 Methodology

The technical tender evaluation is one of the critical gates in the enquiry chain to ensure that the bidders understand the customer's requirements and they are capable of designing, manufacturing, testing at works, prepare for shipment, transport, erect on site, commission the equipment, and can offer the required after sales technical support services. This evaluation criterion will be used to measure the suppliers or bidders in these parameters. This will be achieved by doing both the desktop exercise using tender returns and by evaluating each factory that is intended for supply of the equipment to Eskom.

All bidders start with 100 points and penalty points will be deducted as the evaluation progresses. In certain cases, depending on the nature of the enquiry (close or open) this methodology may be adjusted, however, the same criteria will apply across all bidders in a given enquiry.

The scoring details can be summarized as follows:

Item	Remarks
Tender returns: mandatory	If any one of the mandatory requirements is not met, a penalty of 25 points will be implemented and the bidder will not qualify for further assessment.
Tender returns: Discretionary or scored criteria	The only tender returns that will progress to this gate are those which remained with 80 or more marks at the end of the mandatory stage.
Factory evaluation	<p>The only tender returns that will advance to this stage are those that remained with 80 marks (points) or more after the above two gates. The factory evaluation will be done first on the highest scoring bidder based on the overall tender assessment i.e. not based purely on technical.</p> <p>Due to the nature of need and approach to the enquiry, the factory assessment is primarily waived, however, it is required that each factory supplies Annexure G information.</p>

3.2 Mandatory Requirements

The mandatory requirements are divided into two. First it is about the completeness of the documents, irrespective of the correctness or compliance of the information. The second portion is the evaluation of the submitted information against the requirements of the specifications and the international standards. These are important for operational and interchangeability reasons.

3.2.1 Completeness of documents

The bidder is required to submit all the information required and each document must be correctly completed. The gaps (blanks), TBA, and similar remarks will render the document incomplete. In the cases where the required information is provided as an attachment or accompanying page, it must be so indicated and made easy to reference. If any of the required information is not available, this will result in a deduction of 25 points for each of the missing information. All the technical information must be clearly indexed in the submission package.

3.2.2 Technical Requirements

These are the important parameters that the tenderers must comply with and are not negotiable at all. If the proposal by the bidder does not meet the minimum requirements, the bidder will be penalized 25 points for each deviation.

The list of all mandatory items is provided in Appendix A and B of this document

ESKOM COPYRIGHT PROTECTED

3.3 Discretionary Requirements

Each of the other items will be assessed as indicated in the score list of Appendix C.

3.4 Factory Assessment

Since the factories have supplied Eskom before, the factory assessment is waived and Annexure G is deemed sufficient.

4. Annexures

The annexures are applicable to the classes of transformers and Annexure G is mandatory tender return and forms part of this evaluation information.

5. Authorisation

This document has been seen and accepted by

Name and surname	Designation
Bheki Ntshangase	Senior Manager – SE&D Department
Sidwell Mtetwa	Corporate Specialist – Transformers and reactors
Khayakazi Dioka	Corporate Specialist – Transformers and reactors
Mashilo Moabelo	Senior Engineer – Transformers and reactors

6. Revisions

Date	Rev	Compiler	Remarks
June 2021	1	M Hlakudi	Moderated and simplified document 240-81581172

7. Development team

This document was developed by

- Mantsie Hlakudi

8. Acknowledgements

The development team of 240-81581172

Annex A – Mandatory Requirements – Completeness of documents

No	Item details	Score		Remarks
1	Are the schedules AB completely filled and all the information provided?	Y	N	

Note: A “No” in any of these items will be penalized 25 points. Do not leave any blanks in the schedule B, where the schedule A has “xxxxxxx”, it means Eskom has no specific requirements, but the bidder must fill in a value or a meaningful response.

Annex B – - Mandatory Requirements – Technical Requirements

No	Item details	Status		Remarks
1	Are the ratings (MVA and all voltages) offered correct as per schedule A?	Y	N	
2	Is the vector group correct?	Y	N	
3	Is the winding arrangement as per the schedule	Y	N	
4	Is the tap changer positioning complying with schedules A?	Y	N	
5	Are the impedances indicated as required in schedule A?	Y	N	

Note: “No” in any of these items will be penalized 25 points. In case the bidder supposed that Eskom made a typo, it must be clarified in time.

**Annex C – Discretionary Requirements – Class 2 and above Transformers
Non Active Part**

No.	Items details	Penalty points		
		0	3	10
1	Design evaluation with critical parameters being (dielectric, forces, thermal, and magnetic)	All parameters are within standards and best practices, plus they demonstrate reasonable safety margins	One or two parameters do not meet but can be easily addressed during design review	More than 2 parameters are not meeting the requirements.
2	Transport / shipping dimensions	All are within the specified limits	Deviations of 100mm or below from stated limits	Deviation in one or more dimensions is 100mm or above the stated limits
3	Transport /shipping weight	Within the limits	Exceed with below 0.5tons	Exceeds with 0.5 tons or more
4	Is the under-base of the transformer of correct type and thickness as per the specification?	Yes, it meets the minimum requirements	Below the specified values	
5*	Are the auxiliary requirements meeting the requirements as per individual specifications	Meeting all the requirements	Minor concerns	Major concerns and/or many components are not meeting the minimum requirements
6*	Are the bushings offered of correct technology (dry or paperless), with composite insulator and in line with the bushings specification 240-56062799	Meeting all the requirements		Dimensions and/or technology is not in line with the specifications

* Provide clear drawings of the items selected. No full catalogues are accepted, only extracts clearly indicating the selected component.

**TECHNICAL EVALUATION CRITERIA FOR THE
EXPEDITED TRANSMISSION & DISTRIBUTION
SOURCING OF TRANSFORMERS**

Unique Identifier: **240-17000056**

Revision: **Rev 1**

Page: **11 of 12**

No.	Items details	Penalty points		
		0	3	10
7	Is a correct type of tap changer offered? (On-Load Tap Changers or De-energized Tap Switches)	Yes		No

Please Note: A general catalogue, which has various sizes of components, is not a valid response unless the bidder clearly indicates which size, type, or model is selected for Eskom.

ESKOM COPYRIGHT PROTECTED

Annexure G: Power Transformers Vendor Questionnaire

Section 1 - General Questions

1.1 Please list your parent companies and subsidiaries			
	<i>List Information Here</i>		
	Parent company		
	Subsidiary 1		
	Subsidiary 2		
	Subsidiary 3		
1.2 Please indicate whether you are a manufacturer, sales or distribution company			
	Manufacturer, sales or distribution?		
1.3 Have you ever supplied Eskom with power transformers or shunt reactors before? If yes, which Division did you supply and what			
1.4 Please provide the following general financial information:			
	Key Financials	Turnover	Net Income
	Current Year (N) -projections		
	Last Year (N-1)		
	Previous Year (N-2)		

Section 2 - Supplier Profile

2.1 Which transformers are you able to manufacture and supply?				
	MVA	kV	Please indicate the annual factory capacity (total units per	
	Small power transformers			
	Medium power transformers			
	Large power transformers			
	Generation Step-Up Transformers			
2.2 Which transformers are you able to manufacture and supply?				
	MVA	kV	Please indicate the annual factory capacity (total units per	
	Distribution Transformers	1.5 MVA to 160	6.6 kV to 132	
	Transmission Transformers	2.5 MVA to 1000	11 kV to 765	
	Transmission Transformers	100 MVA to 400	400 kV to 765	
	Generation Transformers	1 MVA to 80	0.4 kV to 22	

Year of Failure	Factory failure rate	On Time Delivery Rate
2020		
2019		
2018		
2017		
2016		

ESKOM COPYRIGHT PROTECTED