Eskom National Transmission Company South Africa ™	**Standard**	**National Transmission Company South Africa**

Title: **TECHNICAL EVALUATION CRITERIA WHEN SOURCING POWER TRANSFORMERS FOR ESKOM AND NTCSA**

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Content

Page

1. Introduction 4
2. Supporting Clauses 4
2.1 Scope 4
2.1.1 Purpose 4
2.1.2 Applicability 4
2.1.3 Effective date 5
2.2 Normative/Informative References 5
2.2.1 Normative 5
2.2.1 Informative 5
2.3 Definitions 5
2.3.1 General 5
2.3.2 Classification 5
2.4 Abbreviations 6
2.5 Roles and Responsibilities 6
2.6 Process for Monitoring 6
2.7 Related/Supporting Documents 6
3. Evaluation Method and Requirements 6
3.1 Methodology 6
3.2 Mandatory Requirements 7
3.2.1 Completeness of documents 7
3.2.2 Technical Requirements 8
3.3 Discretionary Requirements 8
3.4 Factory Assessment 9
4. Annexures 9
5. Authorisation 9
6. Revisions 9
7. Development team 9
8. Acknowledgements 9
Annex A– Mandatory Requirements – Completeness of documents 10
Annex B – Mandatory Requirements – Technical Requirements 11
Annex C– Discretionary Requirements – Class 1 and Transformers 12

Figures

Figure 1:Classes of transformers in Eskom/NTCSA 4

Tables

Table 1: Scoring details 7
Table 2: Summary of the clauses that may lead to the disqualification of the supplier 8

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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/NTCSA 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. Additionally, each factory that is intended for supply of the equipment to Eskom/NTCSA will be evaluated unless a valid accreditation letter that is not more than twelve months is submitted for exemption.

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.

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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 - **completely filled Schedule AB**. It is acceptable to submit a record of an already approved design if the intention is to bid with the same design. The bidder must however be careful of the possible revisions on the specification since the design approval.

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.

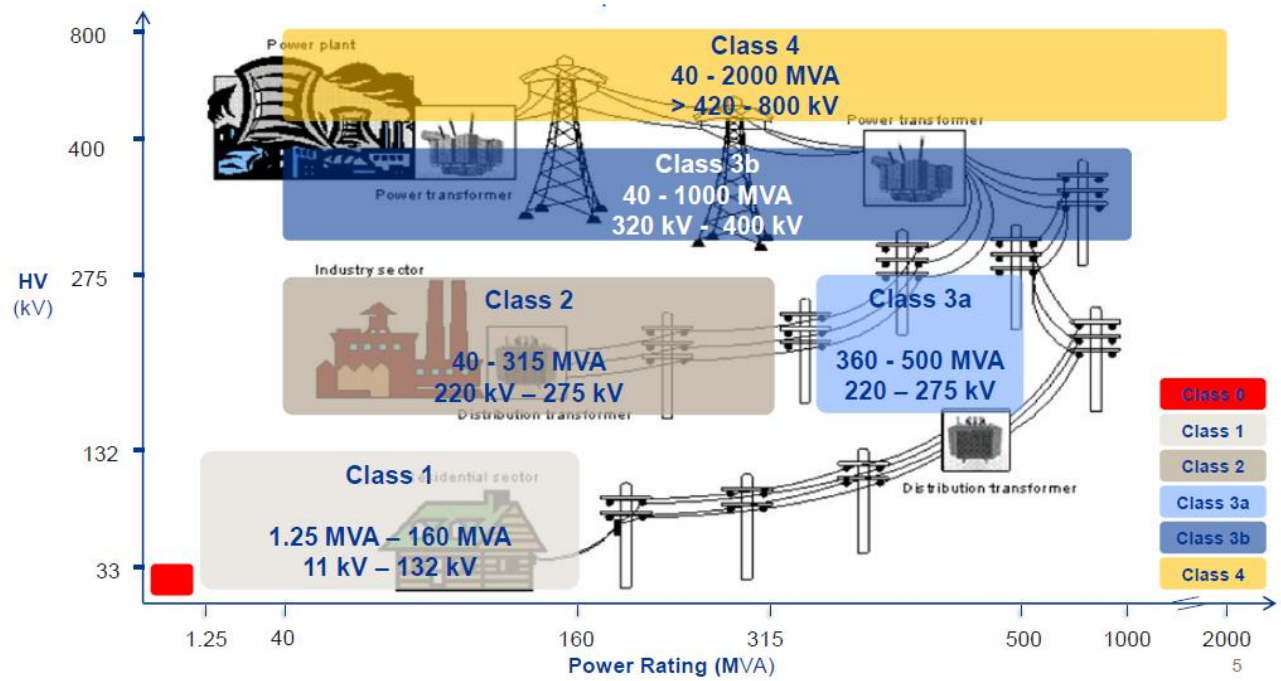


Figure 1:Classes of transformers in Eskom/NTCSA

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

The purpose of this document is to outline National Transmission Company South Africa (NTCSA) ’s standardized scoring method.

2.1.2 Applicability

This document shall apply throughout National Transmission Company South Africa SOC Ltd Reg No 2021/539129/30.

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2.1.3 Effective date

This document shall be effective from the date of authorization.

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] 240-60725684 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.

2.2.1 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 Classification

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

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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

The relevant SCOT Care Group is responsible for ensuring this document is updated, revised, and always remains current.

2.6 Process for Monitoring

The document and its relevance will be annually evaluated by the relevant SCOT Care Group.

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 the desktop exercise using tender returns. Each factory that is intended for supply of the equipment to Eskom/NTCSA will be evaluated unless a valid accreditation letter that is not more than twelve months is submitted for exemption.

Bidder must meet all the mandatory requirements and then score a minimum of 80 points out of the discretionary requirements as per Annex C.

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The scoring details can be summarized as follows:

Table 1: Scoring details

Item	Remarks
Tender returns: Mandatory	If any one of the mandatory requirements is not met, the bidder will be disqualified.
Tender returns: Discretionary or scored criteria	Each bidder must score 80 or more points otherwise will be disqualified.
Factory capability assessment	Factory capability assessments are a pre-contract requirement and are mandatory for each factory that is intended to produce units for Eskom/NTCSA. Factories with a valid accreditation, as per the Eskom/NTCSA list or are in possession of the accreditation letter that is not older than twelve months, will be exempted from the Factory capability assessment requirement.

3.2 Mandatory Requirements

The mandatory requirements are the non-negotiables, and, in this document, they 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 fill and submit both the technical and design schedules of the Technical Schedules AB. However, all the information required as per table 2 must be correctly and clearly completed. The gaps (blanks), TBA, and similar remarks in the mentioned clauses 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 disqualification for missing information. All the technical information must be clearly indexed in the submission package.

Note: The deviation schedule is part and parcel of the tender returns, whether it is filled or not. Items declared in the deviation schedules will lead to disqualification of the bid if they do not meet mandatory requirements. In case the deviation is on the discretionary item, Eskom/NTCSA will apply penalties; however, the conclusion about such a deviation will be discussed during a design review meeting. A supplier cannot claim a compensation against the rejection of the deviation and bringing the design to the minimum requirements of the specification and standards.

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Table 2: Summary of the clauses that may lead to the disqualification of the supplier

Name of document	Class 1 clauses	Class 2-4 clauses	Section
Technical Schedule	**5**	**6**	Rated Power (*Mandatory requirement*)
Technical Schedule	**9**	**8**	Vector group (*Mandatory requirement)*
Technical Schedule	**25.1**	**9.1.1**	Type of Tap changer (*Discretionary requirement*)
Technical Schedule	**25.2.3**	**9.1.3**	Tap changer electrical position *(Mandatory requirement*)
Technical Schedule	**20(20.1-20.4)**	**10 (10.1-10.7)**	Bushing's requirements (*Discretionary requirement)*
Technical Schedule	**15(15.1-15.3)**	**16.1 (16.1.1-16.1.3)**	IEC Impedance at 75 °C (*Mandatory requirement*)
Technical Schedule	**16(16.1-16.4)**	**19 (19.1-19.5)**	Temperature rises (*Mandatory requirement*)
Technical Schedule	**21.3(21.3.1-21.3.3)**	**27.1-27.3**	Transport dimensions (Length, Width, Height) (*Discretionary requirement)*
Technical Schedule	**21.3.4**	**27.4**	Transport Weight (*Discretionary requirement)*
Design Schedule	**7.1**	**1**	Winding arrangement *(Mandatory requirement*)
Design Schedule	**Clause 2-Clause 4**	**Clause 2-Clause 4**	Design data (*Discretionary requirement)*

3.2.2 Technical Requirements

These are the important parameters that the tenderers must comply with. If the proposal by the bidder does not meet the minimum requirements, the bidder will be disqualified, and such proposals must be clearly listed in the deviation schedule. Items in the deviation schedule are not accepted until discussed and concluded so during the design review.

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

3.3 Discretionary Requirements

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

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3.4 Factory Assessment

This is a pre-contract award requirement for each factory as stipulated in section 3.1 above.

4. Annexures

The annexures are applicable to the classes of transformers, mandatory tender returns, and form 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
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Thato Khanye	Engineer – Transformers and reactors

6. Revisions

Date	Rev	Compiler	Remarks
November 2025	1	M. Hlakudi	New document to supersede 240-60725684

7. Development team

This document was developed by

- Mantsie Hlakudi
- Sidwell Mtetwa
- Sanele Miya

8. Acknowledgements

The development team of 240-60725684

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Annex A– Mandatory Requirements – Completeness of documents

No	Item details	Score		Remarks
1	Are the schedules AB completely and clearly filled, plus all the information required as per Table 2 above provided?	Y	N	

Note: A “No” in any of these items will result in disqualification. For items in **table 2**, do not leave any blanks in the schedule B, where the schedule A has “xxxxxxxx”, it means Eskom/NTCSA has no specific requirements, but the bidder must fill in a value or a meaningful response.

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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? • **Class 1-Technical Schedule Clause 5-Rated Power** • **Class 2-4-Technical Schedule Clause 6-Rated Power**	Y	N	
2	Is the vector group correct? • **Class 1-Technical Schedule Clause 9-Vector group** • **Class 2-4-Technical Schedule Clause 8-Vector group**	Y	N	
3	Is the winding arrangement as per the schedule? • **Class 1-Design schedule clause 7.1-Winding arrangement** • **Class 2-4-Design schedule clause 1-Winding arrangement**	Y	N	
4	Is the tap changer positioning complying with schedules A? • **Class 1-Technical Schedule Clause 25.2.3-Tap changer position** • **Class 2-4-Technical Schedule Clause 9.1.3-Tap changer position**	Y	N	
5	Are the impedances indicated as required in schedule A? • **Class 1-Technical Schedule Clause 15(15.1-15.3)** • **Class 2-4-Technical Schedule Clause 16.1 (16.1.1-16.1.3)**	Y	N	

Note: "No" in any of these items will result in disqualification. In case the bidder supposed that Eskom made a typo, it must be clarified in time.

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Annex C– Discretionary Requirements – Class 1 and Transformers

No.	Items details	Points Awarded		
		20	**10**	**0**
1	Electrical design: • Is the average stress in the main gaps below 7kV/mm for any conversion factors within the range given in Table 4 of 240-68973110.	All parameters are within the specification	One or two areas do not meet but are below 80kV/mm	The average stress in the gaps is above 7kV/mm in more than two areas or has at least one figure that is above 7.5kV/mm
2	Mechanical design: • The presented figures show that the transformer meets the requirements of 3.4.8.1 a) and d) in 240-68973110	All parameters in all the windings are within the specification	One or two parameters OR one winding is out of specification requirements.	None of the parameters OR windings is within the specification requirements
3	Thermal design	All requirements of Technical Schedule Paragraph 19 are met	One parameter is out	More than one parameter is out
4	Magnetic Design: • The core complies in terms of the number of limbs and flux density **(par 3.5.1 of 240-689733110)** and **Design Schedule (2.9-2.11, and 16)**	All requirements of Technical Schedule Paragraph 19 are met	One parameter is out	More than one parameter is out
5	Transport / shipping dimensions • **Class 1-Technical Schedule clause 21.3(21.3.1-21.3.3)** • **Class 2-4-Technical Schedule clause 27.1-27.3**	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
6	Transport /shipping weight • **Class 1-Technical Schedule clause 21.3.4** • **Class 2-4-Technical Schedule clause 27.4**	Within the limits	Exceed with below 0.5tons	Exceeds with 0.5 tons or more

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7*	Are the bushings offered of correct technology (dry or paperless), with composite insulator and in line with the bushing's specification 240-56062799 • **Class 1-Technical Schedule clause 10 (10.1-10.7)** • **Class 2-4- Technical Schedule clause 10 (10.1-10.7)**	Meeting all the requirements		Dimensions and/or technology is not in line with the specifications
5	Is a correct type of tap changer offered? (On-Load Tap Changers or De-energized Tap Switches) • **Class 1-Technical Schedule clause 9.1.1** • **Class 2-4-Technical Schedule clause 9.1.1**	Yes		No

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

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