Eskom	Standard	Technology

Title: **SCORING CRITERIA FOR TENDER TECHNICAL EVALUATION OF TRANSFORMERS AND REACTORS**

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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 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

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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 returns as detailed in Annexure A - G
- The factory assessment

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.

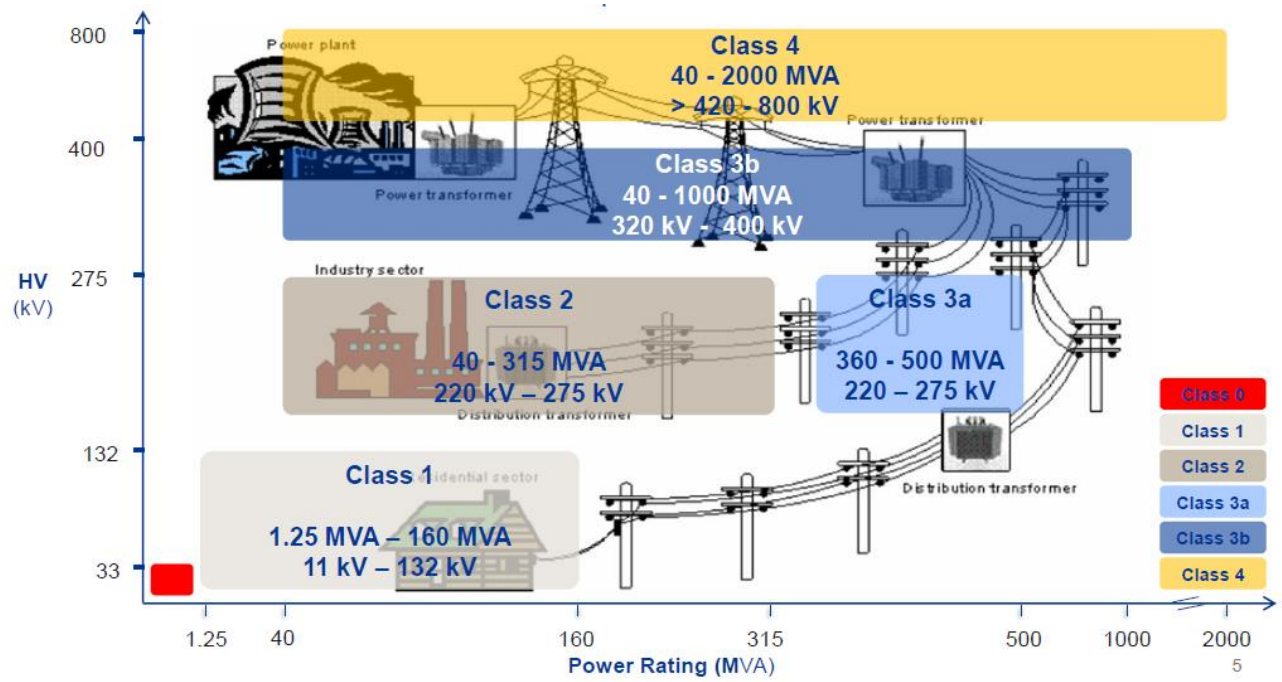

Figure 1: Classes of transformers in Eskom

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 throughout Eskom Holdings Limited Divisions. It is applicable to all the *Contractors* that shall be tendering to supply transformers and reactors to Eskom.

2.2 Normative/informative references

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

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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

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

This document and its relevance will be periodically evaluated by the relevant SCOT Care Group.

2.7 Related/supporting documents

The schedule A of the relevant AB schedules shall form part of the evaluation.

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3. Specification Minimum 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	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. In certain cases some factories may be exempted from factory evaluation depending on the supply history, however, this historical supply will not add an advantage from the scoring point of view. Only the factories that have been declared accredited after the factory assessment, i.e. no concerns or have addressed all the concerns will be able to do business with Eskom.

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, international standards and best practices.

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. Parameters that are guaranteed or offered to a value positively tighter than the Eskom's requirements will neither be penalized nor rewarded.

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

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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

The factory assessment will be done for each factory that is intended to supply Eskom with the transformers and the reactors. Companies that have more than one factory will not be getting a blanket assessment and/or approval; each factory will be evaluated on its own merit. The checks shall be done as per the spreadsheet Eskom developed in collaboration with the international consultants. Factories that may have been evaluated before, during other tenders and were declared accredited may be exempted from the factory assessment at the discretion of Eskom.

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
Titus Mather	Senior General Manager – Technology (Acting)
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Lester Geldenhuis	Transmission Transformer Task Team Chairman

6. Revisions

Date	Rev	Compiler	Remarks
July 2018	2	S Mtetwa	Revised the items on the mandatory requirements as follows • Item 2 for factory failure rate and On-Time delivery removed and will be part of the factory assessment • Design parameters evaluation moved to a scored criteria • Transport dimensions and transport weight moved to a score criteria The scored criteria was re-arranged and made to be common for all classes, including reactors. Changed the arrangement of the document from point awarding to a penalty system as per Commercial rules

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Date	Rev	Compiler	Remarks
June 2014	1	S Mtetwa	Original document

7. Development team

This document was developed by

- Sidwell Mtetwa
- Khayakazi Dioka
- Lionel Jordaan
- Adesh Singh
- Calvin Bongwe
- Mohamed Mukuddem
- Pinkie Thelejane

8. Acknowledgements

Not applicable.

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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	
2	Is Annexure G provided and completely filled?	Y	N	

Note: A "No" in any of these items will be penalized 25 points

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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?	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

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

No.	Items details	Penalty points		
		0	**5**	**15 or 20 where (*)**
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 proposal for GIC withstand capability testing provided as per the requirements on paragraph 3.3.4 of the transformer specification	Provided and with clear details	No information	
5	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	
6	Are the external clearances clearly indicated in the prelim drawings and complying with Eskom's requirements	Meeting		Not meeting
7	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
8*	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
9	Are the lists of tests listed by the bidder complying with IEC as in part 34 of the schedules	Yes, in all aspects	One deviation	More than one deviation

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No.	Items details	Penalty points		
		0	**5**	**15 or 20 where (*)**
10	Is an outline drawing showing the provision of the gas analysers?	Yes	No	
11	Is an outline drawing showing the provision of the gas online dryers, and is the gas analyser offered in the schedules?	Yes	No	
12	Is the magnetisation curve of the transformer provided?	Yes	No	
13	Is a correct type of tap changer offered? (On-Load Tap Changers or De-energized Tap Switches)	Yes		No
14	Is a valve plate provided and complying with the requirements in terms of identifying and positions in service?	Yes	No in one or both	
15*	Is the painting procedure provided and meeting the requirements of 240-56030674?	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.

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