

 Eskom	Report	Technology
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Title: **TECHNICAL EVALUATION
CRITERIA FOR WOOD POLES
AND CROSS-ARMS**

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Area of Applicability: **Engineering**

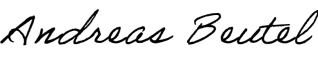
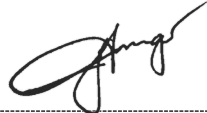
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1. Introduction

This document is aimed at setting the standard technical evaluation criteria for evaluating wood pole and cross-arm tender submissions. It covers the technical evaluation criteria for documentation (desktop) evaluation and factory evaluations for Eskom Holdings SOC (Ltd).

2. Supporting clauses

2.1 Scope

The document contains mandatory technical requirements, functional/scoring evaluation criteria and the factory evaluations criteria for wood poles and cross-arms within Eskom Holdings SOC (Ltd).

2.1.1 Purpose

This document addresses the standard documented technical evaluation criteria to be used for evaluating tender submissions in line with Eskom Holdings SOC (Ltd) requirements.

2.1.2 Applicability

This document shall apply throughout Eskom Holdings Limited Divisions.

This report shall be applicable to all technical evaluations of the tender submissions for wood poles and cross-arms as per Eskom Holdings SOC (Ltd) requirements.

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] SANS 754:2019 Eucalyptus poles, cross-arms and spacers for power distribution and communications systems.
- [2] Eskom 32-1034 Procurement and supply management procedure
- [3] 240-75881496 Procedure of handling and stacking of new wooden transmission poles
- [4] ISO 9001 Quality Management Systems.
- [5] SANS 616: Wood-preserving creosote mixtures and coal-tar mixtures
- [6] SANS 5984: Moisture content of timber and timber products (oven dry method)

2.2.2 Informative

None

2.3 Definitions

2.3.1 General

Definition	Description
Submission	The tender in accordance with the requirements of the enquiry
Technical evaluator	End-users, technical experts nominated by the end-user and Divisional technical functionaries with the necessary technical expertise.

2.3.2 Disclosure classification

Controlled Disclosure: the classification given to information that may be used by malicious/opposing/hostile elements to harm the objectives and functions of Eskom Holdings Limited.

2.4 Abbreviations

Abbreviation	Description
CG	Care Group
CoE	Centre of Excellence
Dx	Distribution
Eskom	Eskom Holdings SOC (Ltd)
NEC	New Engineering Contract
RFI	Request for Information
RFQ	Request for Quotation
SC	Study Committee
SCOT	Steering Committee of Technology
SHEQ	Safety, Health, Environment and Quality

2.5 Roles and responsibilities

The Wood Poles Care Group leader must ensure that this document is updated, renewed and current at all times.

The Manager – Dx Technology and Engineering CoE shall be responsible for the consistency and process of compiling this document.

The Technical evaluation team shall be responsible for the implementation of this document.

2.6 Process for monitoring

Not applicable.

2.7 Related/supporting documents

Not applicable.

3. Technical tender evaluation procedure

The technical evaluation procedure is specific to wood poles and cross-arms. The evaluation method has two main parts: desktop evaluation and factory assessment, which are related.

3.1 Desktop evaluation

This evaluation exercise shall be performed by the Eskom evaluating representatives. This part of the evaluation starts when submissions are opened for the first time. It begins at evaluation of the mandatory requirements gatekeeper, then proceeds to the scoring, and refers to relevant annexes of this document including Technical Schedules A and B for each item required.

The Eskom assessment representatives shall go through the details of the returnable submissions that are required and will ensure that mandatory qualification criteria are met.

The mandatory requirements are meant for establishing if all the mandatory returnables are met. All submissions that do not meet the mandatory requirements shall be immediately disqualified.

Only submissions that meet all mandatory requirements shall progress to scoring/rating evaluation. Scoring/rating consists of discretionary criteria and are assessed out of 100 points. The tender submission must score a minimum threshold of 80% from the scoring/rating evaluation to be considered technically acceptable.

Shortfalls identified during the scoring evaluation must be resolved prior to contract recommendation stage. Eskom will notify the tendering company of the deficiencies and the tendering company will have 30 days to respond demonstrating the required actions have been addressed and there must be supporting evidence where required. This is only applicable to the tenderers who have achieved the minimum 80% threshold.

3.2 Factory assessment

This assessment shall be performed on the basis of assessing the tenderer's capability to enter into a contract with Eskom with respect to the supply of wood poles and cross-arms.

The assessment shall be performed by the Eskom representatives only on tenderers who have passed desktop evaluation.

The assessment shall be conducted at the tenderer's treatment plant and Annex B of this document will be used to conduct the factory assessment.

3.2.1 Scope

The Eskom procurement representatives shall arrange a scheduled assessment (factory visit) with the tenderers that have qualified for the factory assessment. At the tenderer's poles treatment factory/plant, the Eskom assessment representatives shall conduct the assessment through the use of Annex B of this document.

Annex B shall be used to verify capability of the factory to supply wood poles and cross-arms and compliance to the equipment specification and tender submission documents. At the end of this exercise, the Eskom assessment representatives shall list all the deviations on the evaluation document. The representatives shall conduct formal discussions of the deviations in line with Eskom's requirements. At the end of the assessment, Eskom representatives and the tenderer representatives will sign the assessment document which shall continue to be used for concluding the Technical Evaluation report.

3.2.2 Assessment Purpose

Assessments are performed as part of the standard practice within Eskom to determine whether a tenderer has the capability and capacity to supply wood poles and cross-arms, from a business, technical and quality perspective. The assessment also confirms the tenderer's compliance to the equipment specification and tender submission documents. This section of this document is intended to formalise the factory assessment procedure followed for wood poles and cross-arms.

3.2.3 Confidentiality

All information reviewed, observed, recorded during and reported as a result of this assessment shall be treated as, and shall remain, highly confidential.

3.2.4 Assessment methodology

The assessment shall follow the documented tenderer capability and capacity assessment criteria as shown in annex B. These criteria are intended to assess the technical capabilities of the tenderer and the products offered, to ensure that they meet the tender requirements. During the assessment the following areas are evaluated in detail:

- Manufacturing methods
- Workshop practices

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- Testing facility and practices
- Raw material processing, storage and sub-contractor practices
- Site and other services
- Factory performance

The factory shall be scored according to the criteria outlined in the table below. The total score is out of 120. The qualifying score will be 80% of the total score. However, the tenderer that scores 80% or above shall be given a formal notice and thereafter a period of thirty days to correct all shortcomings that are required to get them to 100%. If the shortcomings are not corrected within the given time period, then the tenderer will be disqualified. This means that any shortcomings need to be rectified prior to contract award.

The full criteria are listed in Annex B.

Table 1 illustrate how the tenderers are scored for factory evaluation.

Table 1: Scoring illustration for factory evaluation

-6	Total non-compliance to the agreed requirements
-4	Major deviation to the agreed requirements
-2	Minor deviation to the agreed requirements
0	No deviation to the agreed requirements /fully compliant

4. Authorisation

This document has been seen and accepted by:

Name and surname	Designation
Mfundu Songo	Senior Manager – Dx Technology & Engineering CoE
Andreas Beutel	MV and LV SC Chairperson
Pako Meruti	Wood Poles CG Chairperson

5. Revisions

Date	Rev	Compiler	Remarks
Oct 2023	6	Pako Meruti	Referenced SANS 754: 2015 standard updated to the latest revision (SANS 754 :2019). Made Mandatory and scoring criteria as well as factory evaluation criteria much clearer. Moved mandatory technical requirement 1.12 to scoring criteria
March 2019	5	Pako Meruti	Added the Technical Schedules A and B as annex C of this document.
Aug 2018	4	Pako Meruti & Dan Dukhan	Clarified clauses 1.1.3 and 1.1.8 of the mandatory technical criteria. Clauses 1.1.3 of the mandatory technical criteria split into two. Amended numbering of mandatory technical criteria

Date	Rev	Compiler	Remarks
Aug 2017	3	Mikeshen Gounden & Pako Meruti	Referenced SANS 754: 2013 standard updated to the latest revision(SANS 754 :2015). SANS 753: 2009 removed from normative references. Minimum fibre stress for Eucalyptus poles changed from 50MPa to 63 MPa. Added Technical Schedules A and B to the related documents. Qualifying score for Scoring evaluation criteria changed to 80%. Qualifying score for factory evaluation changed to 80%. Added question about Quality of poles under mandatory requirements
Feb 2015	2	Mikeshen Gounden & Pako Meruti	Requirements for certificates and equipment not compulsory upfront, can be provided at contract award stage. Level 1 and Level 2 criteria changed to mandatory requirements and scoring respectively.
Aug 2014	0	Mikeshen Gounden & Pako Meruti	First document for the technical evaluation criteria for wood poles and cross-arms.

6. Development team

The following care group was involved in the development of this document:

Wood Poles Care Group Members

7. Acknowledgements

Not applicable.

Annex A – Technical criteria for desktop evaluation (Mandatory and Scoring/rating)

Specifications Referred to	SANS 754:2019
Voltage Class Referred to	All Networks

1. Mandatory (Compulsory) technical criteria needing 100% pass mark		
Criteria and returnable	Compliance Required	Qualification Criteria
1.1 Criterion: Are you in possession of a product certification mark as issued by SANAS accredited certification body for SANS 754:2019 (Or have you applied for the certificate)? Returnable: Tenderer to submit a valid certified copy of the above certificate at tender submission stage. - Copy of certificate must be certified by a commissioner of oaths; the commissioning must be clearly legible, and the commissioning date must not be older than three months prior to the tender closing date. - Certificate that has expired prior to tender closing date will not be accepted as valid. If no certificate is available, but, the tenderer has successfully applied for certification, then supply a LETTER (<i>at tender submission stage</i>) from a SANAS-accredited certification body indicating when it will be available. However, certificate must be submitted before contract award stage. PLEASE NOTE THAT SUBMITTING NO CERTIFICATE OR NO LETTER AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes	Mandatory
1.2 Criterion: Is technical Schedule B 100% filled out and submitted? Returnable: Tenderer to submit a fully (100%) completed Technical Schedule and, there must be no blank spaces in any field of Schedule B Technical Schedule A and B are in Annex C of this Document PLEASE NOTE THAT SUBMITTING NO 100% COMPLETED TECHNICAL SCHEDULE AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes	Mandatory
1.3 Criterion: Steam generator and pressure vessels are required by law, the Pressure Equipment Regulations (PER) to be subjected to a witnessed internal and external inspection of a hydraulic pressure test by an Approved Inspection Authority (AIA) after they are installed or re-installed and before they are commissioned. Furthermore, steam generators and pressure vessels are to be subjected to internal and external inspection and a hydraulic test, at intervals not exceeding 36 months by an AIA. Are all steam generator/s and pressure vessel/s timeously inspected by an Approved Inspection Authority as per PER and, are the inspection reports submitted? Returnable: Tenderer to submit a valid copy of the latest (no older than 36 months) steam generator/s and pressure vessel/s inspection report/s per steam generator and pressure vessel at tender submission stage. PLEASE NOTE THAT SUBMITTING NO REPORT/S AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes	Mandatory
1.4 Criterion: Are your steam generator/s and pressure vessel/s excluded from Inspection and testing by PER?	Yes/No	Mandatory

Returnable: If your steam generator/s and pressure vessel/s are excluded from the regulations (if your answer is yes in the schedule B, item 21.2), tenderer to submit a letter/s that confirms the exclusion from an AIA (or equivalent) at tender submission stage. The letter must be accompanied by a <i>Certificate of Manufacture</i> and/or <i>Certificate of Conformity</i>. OR Submit a letter from your company stating that you confirm your steam generator/s and pressure vessel/s does not need an AIA inspection and testing report as per the PER. The letter must be accompanied by a CERTIFICATE OF MANUFACTURE and/or CERTIFICATE OF CONFORMITY. PLEASE NOTE THAT SUBMITTING <u>NO LETTER OF EXCLUSION AND CERTIFICATE OF MANUFACTURE and/or CERTIFICATE OF CONFORMITY</u> OR <u>A LETTER FROM YOUR COMPANY AT TENDER SUBMISSION STAGE</u> WILL LEAD TO IMMEDIATE DISQUALIFICATION.		
1.5 Criterion: No user may use a steam generator unless such user is in possession of a valid certificate of registration issued in terms of PER. Are all steam generators registered with the Department of Labour as per the relevant clause in Pressure Equipment Regulations and, is a copy of registration certificate submitted OR a Letter if the certificate is not available? Returnable: Tenderer to submit a certified copy of the above certificate/s per steam generator at tender submission stage. Copy of certificate must be certified by a commissioner of oaths; the commissioning must be clearly legible, and the commissioning date must not be older than three months prior to the tender closing date. If no certificate/s is available, but, the tenderer has successfully applied for registration of their steam generator with the Department of Labour, then submit a LETTER (at tender submission stage) from Department of Labour indicating WHEN IT WILL BE AVAILABLE. However, certificate/s must be submitted before contract award stage. PLEASE NOTE THAT SUPPLYING NO CERTIFICATE OR NO LETTER AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes	Mandatory
1.6 Criterion: Is your steam generator/s excluded from registration with the Department of Labour by PER? Returnable: If your steam generator is excluded from the regulations (if your answer is yes in the schedule B, item 21.4), please supply a confirmation of exclusion in writing from the Department of Labour at tender submission stage. The written confirmation must be accompanied by a <i>Certificate of Manufacture</i> and/or <i>Certificate of Conformity</i>. OR If you cannot get confirmation of exclusion from the dol, then submit a letter from your company confirming that your steam generator design pressure is less than 50kpa and that you are in alignment with per. PLEASE NOTE THAT SUPPLYING NO WRITTEN CONFIRMATION OF EXCLUSION AND <u>CERTIFICATE OF MANUFACTURE and/or CERTIFICATE OF CONFORMITY</u> OR <u>A LETTER FROM YOUR COMPANY AT TENDER SUBMISSION STAGE</u> WILL LEAD TO IMMEDIATE DISQUALIFICATION. Note that: In the PER, Autoclaves are classified as steam generators, however; they do not need to be registered with DoL. Therefore, you only need to submit inspection and test report/s for them.	Yes/No	Mandatory

1.7 For Eucalyptus poles and cross-arms, is the strength of all poles and cross-arms supplied 63 MPa (mean fibre stress in bending)?	Yes	Mandatory
1.8 Is the average moisture content of poles and cross-arms not exceeding 25% and the moisture content of individual poles and cross-arms not exceeding 28% at the time of treatment?	Yes	Mandatory
1.9 Are all poles and cross-arms supplied treated to hazard class H4 and H3 respectively as a minimum?	Yes	Mandatory
1.10 Criterion: Is the treatment plant equipped with an electronic data recording unit that registers time, pressure, temperature and vacuum during each cycle of treatment (or do you plan to purchase one)? If no electronic data recording unit is available then supply a LETTER indicating when it will be available. However, the tenderer must have an electronic data recording unit before contract award stage. PLEASE NOTE THAT HAVING NO ELECTRONIC DATA RECORDING UNIT OR SUBMITTING NO LETTER WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes	Mandatory
1.11 Criterion: Does the treatment plant have calibrated cantilever and mid-point test facilities on site (or do you plan to have them)? Returnable: Tenderer to submit valid copies of the calibration certificates for the cantilever and mid-point test facilities from a SANAS accredited conformity assessment body at tender submission stage. If no calibrated cantilever and mid-point test facilities are available on site then, submit a LETTER indicating when they will be available. However, the tenderer must have calibrated cantilever and mid-point test facilities on-site before contract award stage. PLEASE NOTE THAT SUPPLYING NO CERTIFICATE OR NO LETTER AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes	Mandatory

2. Scoring/Rating (only submission that passes Mandatory gatekeepers)		
Criteria (Requirements)	Weight	Score
2.1 Pole Seasoning– weight 10 points		
2.1.1 All poles 7 m and shorter kiln dried, air seasoned or both	10	0- No Answer/incorrect answer
2.1.2 All poles longer than 7 m kiln dried		10- Correct Answer
2.1.3 All cross arms kiln dried		
2.2. Wood pole preservatives – weight 10 points		
2.2.1 Type of creosote used as per SANS 616:2012 (type 2 , 3 and 4)	10	0- No Answer/incorrect answer 10- Correct Answer
2.3. Pole treatment method – weight 40 points		
2.3.1 Is it acceptable for Eskom to conduct inspections of moisture content tests prior to treatment of poles and cross-arms at the factory?	10	0- No Answer/incorrect answer 10- Correct Answer
2.3.2. Does your treatment plant have a pressure vessel only on the premises? (No dip tanks allowed)	10	
2.3.3 Is it acceptable for Eskom to verify retention levels in poles and cross-arms at the factory?	10	
2.3.4 Is it acceptable for Eskom to conduct inspections of penetration tests of poles and cross-arms at the factory?	10	

2.4 Pre-drilled cross-arms – weight 10 points		
2.4.1 Can the following pre-drilled cross-arm sizes be supplied: 2.5 m x 120-139 mm 2.5 m x 140-159 mm 2.5 m x 160-179 mm	3 4 3	0- No Answer/incorrect answer 3 - Correct Answer (4 for 140-159 mm size)
2.5 –Nail plating-weight 10 points		
2.5.1 Percentage of nail plate on the butt and tip of Eucalyptus poles and cross-arms $\geq 70\%$	10	0- No Answer/incorrect answer 10- Correct Answer
2.6 Marking of poles and cross-arms-weight 10 points		
2.6.1 Does each pole and cross-arm bear the following information: - the identification mark of the plant at which the pole, cross-arm or spacer was treated; - the month and year during which the pole, cross-arm or spacer was treated (for example 4/12 for April 2012); - the hazard class, in accordance with Table 3 SANS 754:2019; - the species, i.e. E for eucalyptus poles; - the length of the pole, in metres; - the minimum top diameter of the class; - kiln or air dried; and - Unique number of pole	10	0- No Answer/incorrect answer 10- Correct Answer
2.7 Technical Quality Requirement – weight 10 points		
2.7.1 Criterion: Can you confirm that you have included in your Contract Quality Plan measures of resolving all Technical Quality Issues (e.g. issues regarding kiln drying poles, creosote penetration and other defects, including management of NCRs) for this tender? Returnable: Tenderer to submit a copy of a Contract Quality Plan for this tender at tender submission stage? PLEASE NOTE THAT SUPPLYING NO COPY OF A CONTRACT QUALITY PLAN AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.	10	0 - No Answer and no returnable submitted 10 - Returnable submitted

Annex B – Factory evaluation criteria

No:	Technical Questions	Score	Criteria	Evidence and comments
1	Documentation and Standards	-6		
1.1	Is the relevant standard being adhered to for the treatment of Eskom wood poles and cross-arms?		<i>If SANS 754:2019 is in place and documents are traceable then = 0</i> <i>None = -6</i>	
2	Operation: Process before drying of poles	-6		
2.1	Which wood species is used and how is it checked, handled and stored prior to drying?		<i>Acceptable species indicated, quality checked, handled, stored and catalogued according to the latest version of SANS 754, and is traceable = 0</i> <i>Some of the above criteria not met = -4</i> <i>None of the above criteria met = -6</i>	
3	Operation: Air-drying of poles 7 m and shorter (excluding stub poles and cross-arms)	-18		
3.1	All poles stacked in open formation, on suitable skids so that the lowest timber of each stack is at least 300 mm above ground?		<i>All poles and cross-arms stacked in open formation and lowest timber of each stack is at least 300 mm above ground = 0</i> <i>All poles and cross-arms stacked in open formation and lowest timber of each stack is less than 300 mm above ground = -4</i> <i>None of the above criteria met = -6</i>	
3.2	Is the surface of the seasoning ground under and around stacks well drained and kept free from bark, shavings, grass and weeds?		<i>Ground under and around stacks are well drained and kept free from bark, shavings, grass and weeds = 0</i> <i>Some of the above criteria not met = -4</i> <i>None of the above criteria met = -6</i>	
3.3	Are poles free of pre-treatment decay in them?		<i>All poles and cross-arms are free of pre-treatment decay in them = 0</i> <i>All poles and cross-arms have pre-treatment decay in them = -6</i>	

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4	Operation: Kiln-drying of poles and cross-arms	-18		
4.1	Method in place to ensure that the temperature of the kiln does not exceed 85°C during the entire period in the kiln.		Method in place and kiln temperature $\leq 85^{\circ}\text{C} = 0$ Method in place and kiln temperature $\geq 85^{\circ}\text{C} = -4$ No method in place and kiln temperature $\geq 85^{\circ}\text{C} = -6$	
4.2	Method in place to control temperature (dry bulb) and humidity (wet bulb) in the kiln.		Yes all criteria met, and it is traceable = 0 One of the criteria is met, and is traceable = -4 None of the criteria is met = -6	
4.3	Are kiln batches dried according to kiln drying schedules and are traceable records readily available for kiln drying parameters per batch of wood poles treated?		Yes, and records are readily available = 0 Yes, but records are not readily available = -2 Yes, but records are partially completed = -4 No, records are not available = -6	
NOTE	If treater air-dries and kiln-dries poles and cross arms, points scored for section 3 & section 4 will be divided by 2 to obtain an average score.	-18		
5	Operation: Treatment	-30		
5.1	Are records readily available to indicate the type of preservative used per charge of wood poles treated?		Yes, and records are readily available = 0 Yes, but records are not readily available = -2 Yes, but records are partially completed = -4 No, records are not available = -6	

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5.2	Is the average moisture of 25% for each batch of timber measured in accordance with SANS 754 specification after drying and before treatment, and does it comply with the maximum moisture of 28%?		<i>Yes, and records are readily available= 0</i> <i>Yes, but records are not readily available= -2</i> <i>Yes, but records are partially completed= -4</i> <i>No, records are not available= -6</i>	
5.3	Are the time, temperature of creosote in the cylinder, vacuum and pressure of each charge recorded and readily available?		<i>Yes, and records are readily available= 0</i> <i>Yes, but records are not readily available= -2</i> <i>Yes, but records are partially completed= -4</i> <i>No, records are not available= -6</i>	
5.4	What method is in place to ensure that the correct retention is achieved, and traceable records are readily available per charge of wood poles being treated?		<i>Method is in place and correct amounts are traceable= 0</i> <i>Method is in place but amounts are not properly traceable= -2</i> <i>Method is in place but amounts cannot be traced = -4</i> <i>No method in place and amounts cannot be traced= -6</i>	
5.5	Are traceable records readily available to indicate the penetration depths of each treated pole per batch?		<i>Yes, and records are readily available= 0</i> <i>Yes, but records are not readily available= -2</i> <i>Yes, but records are partially completed= -4</i> <i>No, records are not available= -6</i>	
6	Testing and calibration certificates	-24		
6.1	Does the treatment plant have a calibrated cantilever testing facility on-site?		<i>Cantilever testing facility on-site and calibrated=0</i> <i>Cantilever testing facility on-site but not calibrated within 3 months = -2</i> <i>No cantilever testing facility on site= -6</i>	
6.2	Is the sample size used for inspection and testing, in accordance to SANS 754?		<i>Yes, and records are readily available= 0</i> <i>Yes, but records are not readily available= -2</i> <i>Yes, but records are partially completed= -4</i> <i>No, records are not available= -6</i>	

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6.3	Does the treatment plant have a calibrated mid-point testing facility on-site?		<i>Mid-point testing facility on-site and calibrated=0</i> <i>Mid-point testing facility on-site but not calibrated within 3 months = -2</i> <i>Mid-point testing facility on site= -6</i>	
6.4	Are the oven and scale used for the oven dry test calibrated? Provide proof.		<i>Yes, and calibration can be achieved = 0</i> <i>No and calibration cannot be achieved = -6</i>	
7	SHEQ	-6		
7.1	Has the safety officer/s been trained and appointed to comply with all safety requirements of the factory?		<i>Meets all safety requirements and certification provided = 0</i> <i>Meets all safety requirements but not all certification provided= -2</i> <i>Meets all safety requirements but no certification provided = -4</i> <i>No safety officer and no certification provided = -6</i>	
8	Development and training programmes	-12		
8.1	How do you ensure continuous development of staff with respect to factory processes?		<i>Training records are available and up to date= 0</i> <i>Training records are available but not up to date = -2</i> <i>Training records are available but not recorded = -4</i> <i>No training record available = -6</i>	
8.2	Does the company have a workplace skills plan to determine the necessary qualifications needed in the entire treatment process, and do the relevant employees have their supporting certificates?		<i>Clear indication of qualified employees involved, supporting certificates provided =0</i> <i>Clear indication of qualified employees involved, not all supporting certificates provided= -2</i> <i>Clear indication of qualified employees involved, but no supporting certificates provided = -4</i> <i>No indication of qualified employees involved, no supporting certificates provided = -6</i>	

Annex C – Technical Schedules A and B

Specification reference standards: SANS 754:2019

Project Name: Enquiry No:.....

Tenderer's name: Date:

Technical Schedules A and B

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of product offered

Please provide your responses in Schedule B for the questions below. There must be no blanks in any of the fields of Schedule B [blanks, (-) and N/A are not acceptable]. Please submit this document, 100% completed as part of the tender technical returnables.

PLEASE NOTE THAT SUPPLYING NO 100% COMPLETED TECHNICAL SCHEDULES AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION

Item	Description	Schedule A	Schedule B
1.0	Do you offer the following products?	XXXXXXX	XXXXXXX
1.1	Poles	Yes/No	
1.2	Cross-arms	Yes/No	
1.3	Pre-drilled cross-arms	Yes/No	
2.0	Species of timber	XXXXXXX	XXXXXXX
2.1	Eucalyptus (Page 7 – SANS 754: 2019)	Name of eucalyptus species	
3.0	Drying of poles and cross-arms	XXXXXXX	XXXXXXX
3.1	What is the maximum time the pole is allowed to lie in the veld before it is taken to the treatment plant for drying? (to promote drainage of free water in the poles and avoid insect damage in veld)	Max 4 months	
3.2	Are all poles that are longer than 7 m kiln dried?	Yes/No	
3.3	Are all cross arms kiln dried?	Yes/No	
3.4	Are poles that are 7 m and shorter kiln dried, air seasoned or both?	Kiln/Air/Both	
3.5	What is the maximum air drying capacity of the plant per annum?	m ³	
3.6	What is the maximum kiln drying capacity of the plant per annum?	m ³	
3.7	Will you kiln dry poles and cross arms without developing any defects which are severe than maximum permissible defects as per SANS 754?	Yes/No	
3.8	Does your kiln have a proven acceptable schedule for drying differing lengths, tip diameter sizes and moistures, measuring wet and dry bulb temperatures through the cycle? Records must be kept for 5 years for auditing purposes.	Yes/No	

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Item	Description	Schedule A	Schedule B
3.9	For the kiln dried poles, is the moisture gradient of the 8 samples taken per batch after kiln drying process taken at 25 mm, 50 mm and 75 mm deep and is this plotted to get a moisture content curve before and after kiln drying? These moisture measurements must to be recorded and the records must be kept for 5 years for auditing purposes.	Yes/No	
4.0	Are the following pole lengths offered? (9 m to 18 m)	XXXXXXXX	XXXXXXXX
4.1	9 m x 140-159 mm	Yes/No	
4.2	9 m x 160-179 mm	Yes/No	
4.3	9 m x 180-199 mm	Yes/No	
4.4	10 m x 160-179 mm	Yes/No	
4.5	10 m x 180-199 mm	Yes/No	
4.6	10 m x 200-219 mm	Yes/No	
4.7	11 m x 160-179 mm	Yes/No	
4.8	11 m x 180-199 mm	Yes/No	
4.9	11 m x 200-219 mm	Yes/No	
4.10	12 m x 160-179 mm	Yes/No	
4.11	12 m x 180-199 mm	Yes/No	
4.12	12 m x 200-219 mm	Yes/No	
4.13	13 m x 160-179 mm	Yes/No	
4.14	13 m x 180-199 mm	Yes/No	
4.15	13 m x 200-219 mm	Yes/No	
4.16	14 m x 160-179 mm	Yes/No	
4.17	14 m x 180-199 mm	Yes/No	
4.18	14 m x 200-219 mm	Yes/No	
4.19	15 m x 200-219 mm	Yes/No	
4.20	16 m x 180-199 mm	Yes/No	
4.21	16 m x 200-219 mm	Yes/No	
4.22	18 m x 180-199 mm	Yes/No	
4.23	18 m x 200-219 mm	Yes/No	
5.0	Are the following pole lengths offered? (5 meters to 7 meters)	XXXXXXXX	XXXXXXXX
5.1	5 m x 80-100 mm	Yes/No	
5.2	7 m x 120-139 mm	Yes/No	
5.3	7 m x 100-119 mm	Yes/No	
6.0	Are the following cross-arm lengths offered?	XXXXXXXX	XXXXXXXX

Item	Description	Schedule A	Schedule B
	Normal (no pre-drilling)	XXXXXXX	XXXXXXX
6.1	2.5 m x 120-139 mm	Yes/No	
6.2	2.5 m x 140-159 mm	Yes/No	
6.3	2.5 m x 160-179 mm	Yes/No	
6.4	3.5 m x 140-159 mm	Yes/No	
6.5	4.5 m x 160-179 mm	Yes/No	
6.6	6.0 m x 160-179 mm	Yes/No	
6.7	8.0 m x 160-179 mm	Yes/No	
	Pre-drilled cross-arms	XXXXXXX	XXXXXXX
6.8	2.5 m x 120-139 mm	Yes/No	
6.9	2.5 m x 140-159 mm	Yes/No	
6.10	2.5 m x 160-179 mm	Yes/No	
7.0	Please indicate pole quantities per month (PQM) in cubic meters (9 meters to 18 meters)	XXXXXXX	XXXXXXX
7.1	9 m x 140-159 mm	PQM (m3)	
7.2	9 m x 160-179 mm	PQM (m3)	
7.3	9 m x 180-199 mm	PQM (m3)	
7.4	10 m x 160-179 mm	PQM (m3)	
7.5	10 m x 180-199 mm	PQM (m3)	
7.6	10 m x 200-219 mm	PQM (m3)	
7.7	11 m x 160-179 mm	PQM (m3)	
7.8	11 m x 180-199 mm	PQM (m3)	
7.9	11 m x 200-219 mm	PQM (m3)	
7.10	12 m x 160-179 mm	PQM (m3)	
7.11	12 m x 180-199 mm	PQM (m3)	
7.12	12 m x 200-219 mm	PQM (m3)	
7.13	13 m x 160-179 mm	PQM (m3)	
7.14	13 m x 180-199 mm	PQM (m3)	
7.15	13 m x 200-219 mm	PQM (m3)	
7.16	14 m x 160-179 mm	PQM (m3)	
7.17	14 m x 180-199 mm	PQM (m3)	
7.18	14 m x 200-219 mm	PQM (m3)	
7.19	15 m x 200-219 mm	PQM (m3)	
7.20	16 m x 180-199 mm	PQM (m3)	
7.21	16 m x 200-219 mm	PQM (m3)	
7.22	18 m x 180-199 mm	PQM (m3)	

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Item	Description	Schedule A	Schedule B
7.23	18 m x 200-219 mm	PQM (m3)	
8.0	Please indicate pole quantities per month (PQM) in cubic meters (5 meters to 8 meters)	XXXXXXXX	XXXXXXXX
8.1	5 m x 80-100 mm	PQM (m3)	
8.2	7 m x 120-139 mm	PQM (m3)	
8.3	7 m x 100-119 mm	PQM (m3)	
9.0	Please indicate cross-arm quantities per month (CQM) in cubic meters	XXXXXXXX	XXXXXXXX
	Normal (no pre-drilling)	XXXXXXXX	XXXXXXXX
9.1	2.5 m x 120-139 mm	CQM (m3)	
9.2	2.5 m x 140-159 mm	CQM (m3)	
9.3	2.5 m x 160-179 mm	CQM (m3)	
9.4	3.5 m x 140-159 mm	CQM (m3)	
9.5	4.5 m x 160-179 mm	CQM (m3)	
9.6	6.0 m x 160-179 mm	CQM (m3)	
9.7	8.0 m x 160-179 mm	CQM (m3)	
	Pre-drilled cross-arms	XXXXXXXX	XXXXXXXX
9.8	2.5 m x 120-139 mm	CQM (m3)	
9.9	2.5 m x 140-159 mm	CQM (m3)	
9.10	2.5 m x 160-179 mm	CQM (m3)	
10.0	Dimensions and cut of ends	XXXXXXXX	XXXXXXXX
10.1	Are dimensions and cut of ends as per SANS 754: 2019?	Yes/No	
11.0	Nail – plating	XXXXXXXX	XXXXXXXX
11.1	Are poles and cross-arms nail-plated as per SANS 754: 2019?	Yes/No	
12.0	Strength	XXXXXXXX	XXXXXXXX
12.1	For eucalyptus poles and cross-arms, is the strength of all poles and cross-arms supplied 63 MPa (mean fibre stress in bending)?	Yes/No	
12.2	At the commencement of this contract, will the tenderer have the mean poles and cross-arms strength of 63 MPa verified by their certification body for kiln dried poles by testing to destruction? 13 samples of 9 m 160-179 mm, 13 samples of 11 m 160-179 mm and 13 samples of 11 m 180-199 mm	Yes/No	
12.3	Will the mean wood pole strength of 63 Mpa be verified each subsequent year by the tenderer's certification body for kiln dried poles by testing to destruction? 13 samples of 9 m 160-179 mm, 13 samples of 11 m 160-179 mm tops and 13 samples of 11 m 180-199 mm.	Yes/No	

13.0	Moisture content	XXXXXXX	XXXXXXX
13.1	Is the average moisture content of poles and cross-arms at the time of treatment not exceeding 25% as determined in accordance with SANS 754: 2019 and the latest SANS 5984?	Yes/No	
13.2	Will all individual poles and cross-arms have moisture content less than 28% at the time of treatment as per SANS 754: 2019?	Yes/No	
13.3	Is the moisture content of poles and cross-arms determined (method) as per SANS 754: 2019 and the latest version of SANS 5984?	Yes/No	
13.4	Is it acceptable for Eskom to conduct inspections of moisture content of poles and cross-arms prior to treatment at the factory?	Yes/No	
14.0	Wood pole preservatives	XXXXXXX	XXXXXXX
14.1	Type of creosote used as per SANS 616 (please indicate type to be used)	Type 2,3 or 4	
15.0	Retention and penetration of preservatives	XXXXXXX	XXXXXXX
15.1	For eucalyptus poles and cross-arms, what minimum average creosote retention will be attained for poles and cross-arms with tip diameter 80-140 mm?	Minimum 115 kg/m3 for poles and 100 kg/m3 for cross-arms	
15.2	For eucalyptus poles and cross-arms, what minimum average creosote retention will be attained for poles and cross-arms with tip diameter 140-220 mm? (Proof of refusal will be required including pressure and temperature test results).	Minimum 115 kg/m3 for poles and 100 kg/m3 for cross-arms OR refusal	
15.3	Is the minimum penetration of 15 mm attained for creosote-treated eucalyptus poles and cross-arms?	Yes/No	
15.4	Is it acceptable for Eskom to verify retention levels in poles and cross-arms at the factory?	Yes/No	
15.5	Is it acceptable for Eskom to conduct inspections of penetration tests of poles and cross-arms at the factory?	Yes/No	
16.0	Treatment	XXXXXXX	XXXXXXX
16.1	Are all poles and cross-arms treated within one month after drying?	Yes/No	
16.2	Does your treatment plant have a pressure vessel only? (No dip tanks allowed)	Yes/No	
16.3	Is the maximum temperature of creosote in the pressure vessel when treating 95°C?	Yes/No	
16.4	Is the minimum temperature of creosote in the pressure vessel when treating 80°C?	Yes/No	

Item	Description	Schedule A	Schedule B
16.5	Criterion: Is the treatment plant equipped with an electronic data recording unit that registers time, pressure, temperature and vacuum during each cycle of treatment (or do you plan to purchase one)? If no electronic data recording unit is available then supply a LETTER indicating when it will be available. However, the tenderer must have an electronic data recording unit before contract award stage. PLEASE NOTE THAT HAVING NO ELECTRONIC DATA RECORDING UNIT OR SUBMITTING NO LETTER WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes/No	
16.6	Are all poles supplied treated to class H4 as a minimum?	Yes/No	
16.7	Are all cross-arms supplied treated to class H3 as a minimum?	Yes/No	
17.0	Sampling and testing of wood poles and cross-arms	XXXXXXX	XXXXXXX
17.1	Is the sample size used for inspection and testing, in accordance to SANS 754: 2019?	Yes/No	
17.2	Is proof-testing (cantilever and mid-point tests) of the strength of poles and cross-arms done as per SANS 754: 2019?	Yes/No	
17.3	Are tested poles and cross-arms marked with additional tags that display the individual strength tests conducted?	Yes/No	
17.4	Criterion: Does the treatment plant have calibrated cantilever and mid-point test facilities on site (or do you plan to have them)? Returnable: Tenderer to submit valid copies of the calibration certificates for the cantilever and mid-point test facilities from a SANAS accredited conformity assessment body at tender submission stage. If no calibrated cantilever and mid-point test facilities are available on site then, submit a LETTER indicating when they will be available. However, the tenderer must have a calibrated cantilever and mid-point test facilities on-site before contract award stage. PLEASE NOTE THAT SUPPLYING NO CERTIFICATE OR NO LETTER AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes/No	
17.5	Criterion: Can you confirm that you have included in your Contract Quality Plan measures of resolving all Technical Quality Issues (e.g. issues regarding kiln drying poles, creosote penetration and other defects, including management of NCRs) for this tender? Returnable: Tenderer to submit a copy of a Contract Quality Plan for this tender at tender submission stage? PLEASE NOTE THAT SUPPLYING NO COPY OF A CONTRACT QUALITY PLAN AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes/No	
18.0	Marking of poles and cross-arms	XXXXXXX	XXXXXXX
18.1	Are poles and cross-arms marked according to SANS 754: 2019?	Yes/No	
18.2	Do all poles and cross-arms have the following additional information on the labels? Kiln or Air (for kiln or air dried), and	Yes/No	

Item	Description	Schedule A	Schedule B
	Unique number of pole/cross-arm		
19.0	Life-span of the pole in service	XXXXXXX	XXXXXXX
19.1	Is the expected service life of your supplied creosote treated poles and cross-arms 30 years or more (within the normal distribution) provided a suitable 10 year inspection and Supplemental treatment program is in place on all poles?	Yes/No	
20.0	Product certification mark	XXXXXXX	XXXXXXX
20.1	Criterion: Are you in possession of a product certification mark as issued by SANAS accredited certification body for SANS 754:2019 (Or have you applied for the certificate)? Returnable: Tenderer to submit a valid certified copy of the above certificate at tender submission stage. - Copy of certificate must be certified by a commissioner of oaths; the commissioning must be clearly legible, and the commissioning date must not be older than three months prior to the tender closing date. - Certificate that has expired prior to tender closing date will not be accepted as valid. If no certificate is available, but, the tenderer has successfully applied for certification, then supply a LETTER (<i>at tender submission stage</i>) from a SANAS-accredited certification body indicating when it will be available. However, certificate must be submitted before contract award stage. PLEASE NOTE THAT SUBMITTING NO CERTIFICATE OR NO LETTER AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes/No	
21.0	Steam generators and pressure vessels inspections and registration	XXXXXXX	XXXXXXX
21.1	Criterion: Steam generator and pressure vessels are required by law, the Pressure Equipment Regulations (PER) to be subjected to a witnessed internal and external inspection of a hydraulic pressure test by an Approved Inspection Authority (AIA) after they are installed or re-installed and before they are commissioned. Furthermore, steam generators and pressure vessels are to be subjected to internal and external inspection and a hydraulic test, at intervals not exceeding 36 months by an AIA. Are all steam generator/s and pressure vessel/s timeously inspected by an Approved Inspection Authority as per PER and, are the inspection reports submitted? Returnable: Tenderer to submit a valid copy of the latest (no older than 36 months) steam generator/s and pressure vessel/s inspection report/s per steam generator and pressure vessel at tender submission stage.	Yes/No	

Item	Description	Schedule A	Schedule B
	PLEASE NOTE THAT SUBMITTING NO REPORT/S AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.		
21.2	Criterion: Are your steam generator/s and pressure vessel/s excluded from Inspection and testing by PER? Returnable: If your steam generator/s and pressure vessel/s are excluded from the regulations (if your answer is yes in the schedule B, item 21.2), tenderer to submit a letter/s that confirms the exclusion from an AIA (or equivalent) at tender submission stage. The letter must be accompanied by a <i>Certificate of Manufacture</i> and/or <i>Certificate of Conformity</i>. OR Submit a letter from your company stating that you confirm your steam generator/s and pressure vessel/s does not need an AIA inspection and testing report as per the PER. The letter must be accompanied by a CERTIFICATE OF MANUFACTURE and/or CERTIFICATE OF CONFORMITY. PLEASE NOTE THAT SUBMITTING NO LETTER OF EXCLUSION AND CERTIFICATE OF MANUFACTURE and/or CERTIFICATE OF CONFORMITY OR A LETTER FROM YOUR COMPANY AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes/No	
21.3	Criterion: No user may use steam generator unless such user is in possession of a valid certificate of registration issued in terms of PER. Are all steam generators registered with the Department of Labour as per the relevant clause in Pressure Equipment Regulations and, is a copy of registration certificate submitted OR a Letter if the certificate is not available? Returnable: Tenderer to submit a certified copy of the above certificate/s per steam generator at tender submission stage. Copy of certificate must be certified by a commissioner of oaths; the commissioning must be clearly legible, and the commissioning date must not be older than three months prior to the tender closing date. If no certificate/s is available, but, the tenderer has successfully applied for registration of their steam generator with the Department of Labour, then submit a LETTER (at tender submission stage) from Department of Labour indicating WHEN IT WILL BE AVAILABLE. However, certificate/s must be submitted before contract award stage. PLEASE NOTE THAT SUPPLYING NO CERTIFICATE OR NO LETTER AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION.	Yes/No	

Item	Description	Schedule A	Schedule B
21.4	Criterion: Is your steam generator/s excluded from registration with the Department of Labour by PER? Returnable: If your steam generator is excluded from the regulations (if your answer is yes in the schedule B, item 21.4), please supply a confirmation of exclusion in writing from the Department of Labour at tender submission stage. The written confirmation must be accompanied by a <i>Certificate of Manufacture</i> and/or <i>Certificate of Conformity</i>. OR IF YOU CANNOT GET CONFIRMATION OF EXCLUSION FROM THE DoL, THEN SUBMIT A LETTER FROM YOUR COMPANY CONFIRMING THAT YOUR STEAM GENERATOR DESIGN PRESSURE IS LESS THAN 50KPA AND THAT YOU ARE IN ALIGNMENT WITH PER. PLEASE NOTE THAT SUPPLYING NO WRITTEN CONFIRMATION OF EXCLUSION AND <u>CERTIFICATE OF MANUFACTURE and/or CERTIFICATE OF CONFORMITY OR A LETTER FROM YOUR COMPANY</u> AT TENDER SUBMISSION STAGE WILL LEAD TO IMMEDIATE DISQUALIFICATION. Note that: In the PER, Autoclaves are classified as steam generator, however; they do not need to be registered with DoL. Therefore, you only need to submit inspection and test report/s for them.	Yes/No	