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Title: **TECHNICAL EVALUATION
CRITERIA FOR FIBRE OPTIC
CABLES INSTALLATION**

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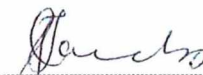
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Content

	Page
1. Introduction	3
2. Supporting clauses	3
2.1 Scope.....	3
2.1.1 Purpose	3
2.1.2 Applicability	3
2.2 Normative/Informative References	3
2.2.1 Normative	3
2.2.2 Informative.....	3
2.3 Definitions	4
2.3.1 General.....	4
2.3.2 Disclosure classification	4
2.4 Abbreviations	4
2.5 Roles and Responsibilities	5
2.6 Process for Monitoring.....	5
2.7 Related/Supporting Documents.....	5
3. Technical Tender Evaluation Procedure.....	5
3.1 Mandatory Requirements	6
3.2 Qualitative Technical Evaluation Criteria.....	6
3.2.1 Desktop Factory File Assessment.....	7
3.3 Factory Assessment	7
3.3.1 Scope	7
4. Authorization	8
5. Revisions	9
6. Development team.....	9
7. Acknowledgements.....	9
Annex A – Previous Experience in the last 5 years	10
Annex B – Fibre Optic Installation Methodology Criteria	11
Annex C – Technical Documentation Compliance	12
Annex D – Installers Score Sheet.....	13

Tables

Table 1: Mandatory Requirements.....	6
Table 2: Qualitative Requirements.....	6
Table 3: Desktop Factory File Evaluation	7
Table 4: Installer Score Sheet.....	7

1. Introduction

This document aims to describe the criteria which will govern the evaluation of tender submissions by external contractors for installation of Fibre Optic Cables (include OPGW, ADSS, and DUCT).

The criteria consist of both mandatory and technical requirements.

2. Supporting clauses

2.1 Scope

This document outlines the technical evaluation process and criteria associated with fibre optic cables installation as described by the relevant Eskom standards.

2.1.1 Purpose

The purpose of this document is to describe the criteria which are to be used when evaluating tender submissions for the fibre optic cables installation.

2.1.2 Applicability

This document shall apply throughout Eskom Distribution.

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] 240-110403330 - OPGW Hardware and Installation Requirements for Overhead Lines
- [2] 240-72274816 - Fibre Optic Cable Joint Enclosures for Aerial Cables.
- [3] 240-70732888 – Fibre Optic Cable System Acceptance Testing.
- [4] 240-70733995 – Optical Distribution Frame / Patch Panel
- [5] 240-106030205 – Fibre Optic Gantry to Substation Control Room Scope of Work Guideline
- [6] 240-60777474 – Specification for Suspension and Strain Assemblies and for Hardware for Transmission Lines
- [7] NRS 061-1 – Overhead Ground-wire with Optical Fibre Part 1: Product Specification.
- [8] NRS 061-2 - Overhead Ground-wire with Optical Fibre Part 2: Installation Guidelines.
- [9] NRS 078-1 – Long Span Self Supporting Dielectric Fibre Optic Cables Part 1: Product Specification.
- [10] NRS 078-2 - Long Span Self Supporting Dielectric Fibre Optic Cables Part 2: Installation Guidelines.
- [11] NRS 088-1 – Duct and Direct Buried Underground Fibre Optic Cable Part 1: Product Specification.
- [12] NRS 088-2 - Duct and Direct Buried Underground Fibre Optic Cable Part 2: Installation Guidelines.

2.2.2 Informative

- [1] ISO 9001 Quality Management Systems.
- [2] 32-1034 - Eskom Procurement and Supply Management Procedure.
- [3] 240-48929482 Tender Engineering Evaluation Procedure
- [4] 240-70413865 Power Delivery Operating Assessment, Authorization and Training standard.

2.3 Definitions

2.3.1 General

Definition	Description
Inquiry	A competitive or non-competitive request for information, interest, quotations or proposals made to a supplier, a group of suppliers or the market at large.
Tender	A tender refers to an open or closed competitive request for quotations / prices against a clearly defined scope / specification
Criteria	Process by which the inquiry will be evaluated and scored
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
Feasibility Study	Outputs from a line walkdown, BoQ compilation, formulation of method statements.
Deadline	Line that is de-energized
Installation	Stringing of new fibre, regulating & clamping
Live line	Line that is energized
Dressing Preparation	Installation of running blocks, detaching old hardware, if required on structure and attaching of new hardware (strain/suspension assemblies, vibration dampers, insulators & earth bonds) to tower.
Dressing	Dressing of Joint Strain Tower (includes installation of downlead clamps, slack take-up spool & joint box)
Removal	Removal (to take cable off attachment point & storing) of existing earth-wire or OPGW (only if not used to pull in new OPGW), ADSS or ADLash
Splicing	Joining / fusion of two fibre cores together or termination of fibre onto the patch panel mid-couplers & connectors

2.3.2 Disclosure classification

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

2.4 Abbreviations

Abbreviation	Description
ADSS	All-Dielectric Self Supporting
CIDB	Construction Industry Development Board
HDPE	High-density polyethylene
ISO	International Organization for Standardization
NRS	National Rationalised Specifications
ODF	Optical Distribution Frame
OEM	Original Equipment Manufacturer
OPGW	Optical Ground Wire

Abbreviation	Description
ORHVS	Operating Regulations for High Voltage Systems
OTDR	Optical Time Domain Reflectometer
SANS	South African National Standard
TET	Technical Evaluation Team

2.5 Roles and Responsibilities

- **Procurement:** Inquiry Process Owner
- **Subject Matter Expert:** Lead Technical Evaluator.
- **Technical Evaluation Team member:** The delegated Engineer / Technical specialist who are responsible to review and evaluate technical aspects of the tender documents as per predefined evaluation criteria / strategy.
- **Moderator(s):** A person(s) selected to oversee the tender technical evaluation process.

2.6 Process for Monitoring

Not applicable.

2.7 Related/Supporting Documents.

Not applicable.

3. Technical Tender Evaluation Procedure

Evaluation criteria is a process by which the inquiry is evaluated and scored to assess a supplier's capability to conclude a contract with Eskom. The evaluation report and any actions that are listed or recommended from the assessments are by no means a confirmation or guarantee that any contract will be entered into between Eskom Distribution and the potential supplier(s).

Any statements, intentions, and/or actions expressed by the evaluation team during and after the assessment shall not be interpreted as the awarding of a contract and does not constitute any liability to Eskom Distribution regarding contract placement or post-contract performance guarantees.

The evaluation criterion is designed as "**GATED**" system where the first gate **Must** be passed before proceeding to the next gate by meeting minimum required thresholds.

The Gates in this criterion comprises of a **Mandatory for Evaluation Gate** (i.e. *completed Table 1, in section 3.1 of this document*), and **Technical Evaluation Gate** (Qualitative Evaluation, Table 2, Section 3.2).

The technical evaluation procedure is specific to each cable type installation requirements. The cable types include OPGW, ADSS, and DUCT. For each of these cable types there are unique installation requirements.

The complete evaluation of any potential supplier would involve a mandatory evaluation, desktop qualitative evaluation as well as factory visit.

The following documents shall be submitted when tendering:

- a) List of key personnel, their experiences (include CVs detailing project-specific work experience for each employee) and academic qualifications. Also include total number of manpower to be dedicated to installation projects.
- b) List of relevant and comparable projects undertaken. The list shall include project name, contact details, type of Fibre Installed, Length, Completion date and Project Leader Name. The contractor shall further include any concessions made during each project execution (**Annexure A**).
- c) Fibre Installations methodologies (**Annexure B**)

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d) Provide completed Technical Documentations (**Annexure C**)

e) Provide items required on Installer Score Sheet (**Annexure D**)

All annexes quoted above shall be issued in the tender pack and the tenderer must fill the excel versions.

3.1 Mandatory Requirements

Mandatory requirements are assessed on a Yes/ NO basis as described in **Table 1** below. Submissions that receive a "No" on any of the Mandatory criteria will not proceed to the Desktop Evaluation and will immediately fail the technical evaluation.

Table 1: Mandatory Requirements

	Mandatory Technical Criteria Description	Comply (Yes/No)	Comment
1	Provide the completed Annexure A form. Previous recent experience with installation of Fibre Optic cables.		
2	Provide the fibre installation methodology documents based on Annexure B		
3	Provide completed Technical Documentations in Annexure C		
4	Provide completed Installer check sheet in Annexure D		
	Threshold	Compliance to all the above	

3.2 Qualitative Technical Evaluation Criteria

The scores for each individual item are stated in each supplied Annexes A, B and C in this document. Critical items are assigned a higher score.

Table 2: Qualitative Requirements

Item	Criteria	Weighting	Max Score
1	Previous Company related experience with Fibre Optic Installations (Annex A) for 1 - 2 projects = a score of 1 for 3 - 5 projects = a score of 3 for more than 5 projects = a score of 5	40%	5
2	Fibre optic Installation Methodology document (Annex B) OPGW = a score of 12 ADSS = a score of 12 DUCT = a score of 11	10%	35
3	Compliance with Technical documentation for material (HDPE, Sprague Tubing, Patch Panels, Patch Leads) (Annex C)	10%	10
4	Installer Score sheet (Annex D)	40%	36
	Total	100%	86
	Threshold	80%	68.8

- Item 1 requires that the table in Annex A be completed.
- Item 2 requires that the table in Annex B to be completed
- Item 3 requires that the table in Annex C to be completed

- Item 4 requires that the table in Annex D be completed.

3.2.1 Desktop Factory File Assessment

The Factory Information File shall be scored as per Table 3.

Table 3: Desktop Factory File Evaluation

Installer Scoring Criteria	Maximum Score	Threshold
Installer Score Sheet - File scored on answers to Table#4 on Factory information	36	80%/28.8

The Factory information file will also be scored for Desktop evaluation and is required to pass the threshold score (80%/28.8)

3.3 Factory Assessment

These assessments are performed to assess the tenderer's capability to enter a contract with Eskom with respect to installation of Fibre optic cables.

3.3.1 Scope

Eskom will do factory assessments to assess the ability and capacity of the tenderer to install Fibre Cable should the need arise. Eskom assessment representative(s) will arrange visits to the factories that have qualified for factory evaluations.

The Eskom assessment representative(s) will conduct the assessment and scoring using of Table 4 provided below. The requirements in the Desktop evaluation will be verified. Table 4 (Installer Score Sheet) will be used during factory visit assessment and if a tenderer scores less than the threshold of 80% during the factory assessment, they will fail the evaluation.

Table 4: Installer Score Sheet

Item	Criteria	Max Score	Actual Score
1	Capabilities in terms of personnel, -	7	
1.1	Company structure/organogram	1	
1.2	Supervisor (including CV's and experience)	2	
1.3	SHEQ officer (including CV's and experience)	1	
1.4	Splicer and commissioning technician/engineer (including CV's and experience)	1	
1.5	Linesman (including CV's and experience, authorised to work at heights)	2	
2	Capacity in terms of equipment- list of equipment under company profile. Type, size and quantity for installation of fibre cable	18.5	
2.1	Transport (People Carriers, Truck, LDV) People Carriers =score of 1 Heavy Duty Truck with Crane (at least 8 Ton) = score of 1 LDV = score of 1	3	

Item	Criteria	Max Score	Actual Score
2.2	Winch and tension set pulling capacity (greater or equal to 30 kN)	3	
2.3	Dielectric pilot rope	0.5	
2.4	Running out blocks for OPGW and ADSS	3	
2.5	Lifting Tackle & pulling blocks complete with wire rope	0.5	
2.6	Tensioning ratchet hoists	0.5	
2.7	Come along clamps	0.5	
2.8	Hydraulic Crimpers	0.5	
2.9	Hydraulic Cutters	0.5	
2.10	Tension measuring devices (Dynamometer)	2	
2.11	Specialized line construction tools and safety equipment (e.g. Safety Harness, Earth kit, Webbing & Slings, etc)	2	
2.12	Drum Jacks (with Shaft)	0.5	
2.13	Running Earths	0.5	
2.14	Manual Bobbin Stand	0.5	
2.15	Steps For Monopoles	0.5	
2.16	Ladders (including Live line ladders)	0.5	
3	ORHVS Authorization	4	
3.1	ORHVS Training Certification per supervisor (minimum 1 supervisor and must have completed ORHVS outcome 4 as a minimum)	4	
4	Fibre Testing & Splicing equipment (including calibration certificates)	6.5	
4.1	OTDR/MAX Tester	2	
4.2	Power Meter and Light Source	2	
4.4	Optical Talk Sets	0.5	
4.5	Fusion splicers	2	
	Total Maximum Score	36	
THRESHOLD (80%)		28.8	

4. Authorization

This document has been seen and accepted by:

Name and surname	Designation
T Tladi	Middle Manager Telecommunications
Thomas Jacobs	Senior Manager Technology & Engineering (Acting)

5. Revisions

Date	Rev	Compiler	Remarks
Nov 2025	2	Tshepiso Moloisane	Updated Factory Visit Requirements
Aug 2024	1	J Ramphisa	New Document

6. Development team

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

- Jerry Ramphisa
- Moses Maseko
- Lesiba Buthane
- Frans Ratau
- Tshepiso Moloisane
- Thuli Tladi

7. Acknowledgements

Not applicable.

Annex A – Previous Experience in the last 5 years

#	Project name and reference numbers	Company/Employer Name	Company/Employer Contact Details	Type of fibre installed (OPGW/ADDSS/DUCT)	Fibre length	Completion Date	Project Leader Name	Project Leader contact number
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
Contractor Scoring Criteria				Maximum Score	Actual Score			
1 - 2 Projects = a Score of 1				1				
3 - 5 Projects = a Score of 3				3				
For More than 5 projects = a Score of 5				5				
				Total Score	0			

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Annex B – Fibre Optic Installation Methodology Criteria

Item	Description	Max Score	Included (yes/no) - Select dropdown	Included (yes/no) - Select dropdown	Included (yes/no) - Select dropdown
1	Cable Installation (ADSS, OPGW and DUCT)		OPGW	ADSS	DUCT
1.1	Safety and Cleanliness	1			
1.2	Handling of Drums and Cable	1			
1.3	Pulling Tension, Bending radius, twist	1			N/A
1.4	Specialised Equipment	1			
1.5	Joint Box connectivity	1			
2 Patch Panel/Joint Box Installation					
2.1	Equipment	1			
2.2	Preparation	1			
2.3	Splicing and Testing	1			
2.4	Waste handling	1			
3 Splicing and Testing					
3.1	Equipment	1			
3.2	Pre-haul testing	1			
3.3	Splicing Procedure	1			
Total Score		12			

Annex C – Technical Documentation Compliance

Item	Description	Schedule A	Schedule B Yes/ No	Score Yes/ No
1	HDPE Sleeve for Fibre Optic Installation			
1.1	It shall abide by SANS 61386-24 (Conduit systems for cable management, Part 24: Requirements – Conduit systems buried underground)	Comply		
1.2	The material properties shall abide by the ISO 1183(Plastics) and ISO527(Plastics Determination of tensile properties) standards.	Comply		
1.3	The conduit should be made of HDPE material	Comply		
2	Sprague Tubing (CABLE COMM: FLEXIBLE CONDUIT)			
2.1	The Sprague tubing shall comply with SABS IEC 60614-1:1994	Comply		
3	Fibre Termination (Patch Panel and Patch leads) Patch Panel and Patch leads			
3.1	ODFs shall conform to the Schedule A/B Distribution Frame/Patch Panel standard 240-70733995	Comply		
3.2	Patch leads (Normal and Ruggedized)	Comply		
3.3	The ODF shall be installed in an Equipment panel according to 240-60725641: Specification for Standard (19") Equipment Panels when new is required.	Comply		
4	Fibre optic system			
4.1	Conformance to Eskom Fibre Optic Design and Installations – Substations, 240-46264031,	Comply		
4.2	Conformance to Eskom Fibre Acceptance Testing Standard, 240-70732888	Comply		
4.3	Conformance to Eskom labelling of fibre optic cables, 240-46263618	Comply		
Total Score		10		

Annex D – Installers Score Sheet

Item	Criteria	Max Score	Actual Score	Comments
1	Capabilities in terms of personnel, -	7		
1.1	Company structure/organogram	1		
1.2	Supervisor (including CV's and experience)	2		
1.3	SHEQ officer (including CV's and experience)	1		
1.4	Splicer and commissioning technician/engineer (including CV's and experience)	1		
1.5	Linesman (including CV's and experience, authorised to work at heights)	2		
2	Capacity in terms of equipment- list of equipment under company profile. Type, size and quantity for installation of fibre cable	18.5		
2.1	Transport (People Carriers, Truck, LDV) People Carriers =score of 1 Heavy Duty Truck with Crane (at least 8 Ton) = score of 1 LDV = score of 1	3		
2.2	Winch and tension set pulling capacity (greater or equal to 30 kN)	3		
2.3	Dielectric pilot rope	0.5		
2.4	Running out blocks for OPGW and ADSS	3		
2.5	Lifting Tackle & pulling blocks complete with wire rope	0.5		
2.6	Tensioning ratchet hoists	0.5		
2.7	Come along clamps	0.5		
2.8	Hydraulic Crimpers	0.5		
2.9	Hydraulic Cutters	0.5		
2.10	Tension measuring devices (Dynamometer)	2		
2.11	Specialized line construction tools and safety equipment (e.g. Safety Harness, Earth kit, Webbing & Slings, etc)	2		
2.12	Drum Jacks (with Shaft)	0.5		
2.13	Running Earths	0.5		
2.14	Manual Bobbin Stand	0.5		
2.15	Steps For Monopoles	0.5		

Item	Criteria	Max Score	Actual Score	Comments
2.16	Ladders (including Live line ladders)	0.5		
3	ORHVS Authorization			
3.1	ORHVS Training Certification per supervisor (minimum 1 supervisor and must have completed ORHVS outcome 4 as a minimum)	4		
4	Fibre Testing & Splicing equipment (including calibration certificates)	6.5		
4.1	OTDR/MAX Tester	2		
4.2	Power Meter and Light Source	2		
4.4	Optical Talk Sets	0.5		
4.5	Fusion splicers	2		
Total Score		36		
THRESHOLD (80%)		28.8		