

	Template	Project Engineering
-----------------------------------------------------------------------------------	-----------------	----------------------------

Title: TECHNICAL EVALUATION CRITERIA FOR CABLING REQUIREMENTS PAULPUTS & AGGENEIS SUBSTATION

Template Identifier: 240-180000669

Unique Identifier: Pau21P04 & Agg21P12

Area of Applicability: Engineering

Documentation Type: Template

Revision: 2

Total Pages: 25

Disclosure Classification: Controlled Disclosure

Compiled by



Nomfundo Gono
Project Engineer: PTM&C Engineering Planning & Project Support

Date: 04/10/2023

Functional Responsibility



Mario Petersen
Project Engineer: PTM&C Engineering Planning & Project Support (Acting)

Date: 04/10/2023

Authorized by



Judith Malinga
Senior Manager: PTM&C Engineering

Date: 04/10/2023

Content	Page
1. Introduction.....	4
2. Supporting clause.....	4
2.1 Scope.....	4
2.2 Normative/informative references.....	4
2.3 Definitions.....	5
2.4 Abbreviations.....	5
2.5 Roles and responsibilities.....	5
2.6 Process for monitoring.....	5
2.7 Related/supporting documents.....	5
3. Technical Tender Evaluation Procedure.....	6
4. Stage 1: Evaluation of Technical Qualitative Requirements for the supply of cables.....	6
4.1 Stage 1 Cable Types.....	7
5. Stage 2: Evaluation of Technical Qualitative Requirements for Cable Installation Termination and other cable associated activities.....	100
6. Stage 3: Deemed Offer Risk(s).....	111
7. Authorization.....	122
8. Revision History.....	122
9. Acknowledgements.....	122
Annexure B: Schedule for cable types.....	133
Annexure C: Cabling - Relevant Experience and capability.....	16
Annexure D: Cabling- Qualifications and Experience of Key personnel.....	17
Annexure E: Procedure for Cable Installation.....	18
Annexure F: Procedure for Cable Termination.....	19
Annexure G: Procedure for Loading and unloading cable drums.....	20
Annexure H: Procedure for cable handling and storing.....	21
Annexure I: Cabling - Tools and Equipment.....	22
Annexure J: Procedure for removing old cables.....	23
Annexure K: Deviation Schedule.....	24

Tables

Table 3: List of cables and approved suppliers 7

Table 4: List of fibre cables and approved suppliers 8

Table 5: Scoring of Items for the cable schedule 8

Table 6: Technical Qualitative requirement for the cable types schedule 8

Table 7: Scoring Allocation for Cabling 10

Table 8: Technical Qualitative Scoring for Cable Installation, Termination and other cable activities 10

Table 9: Deemed Offer Risk(s) Evaluation 12

1. Introduction

This document provides an overview of Eskom's technical evaluation strategy and criteria to be used when evaluating the tender submissions for:

- a. Supply, delivery, installation, and termination of cabling as detailed 240-170001091-UID number PAU21P04 Agg21P12 & High-Level Scope of Work – PTM&C Equipment for the Establishment of 400/132kV Paulputs Substation (Phase1)

2. Supporting clause.

2.1 Scope

This document contains the technical evaluation strategy and criteria relating to,

- a. Supply, delivery, installation, and termination of cabling as detailed in 240-170001091-UID number PAU21P04 Agg21P12 & High-Level Scope of Work – PTM&C Equipment for the Establishment of 400/132kV Paulputs Substation (Phase1) and details specific tender returnables required to facilitate this evaluation.

2.1.1 Purpose

The purpose of this document is to define the technical evaluation strategy and criteria and detail specific tender returnable required to facilitate this evaluation.

2.1.2 Applicability

This document shall apply to Eskom Transmission Division.

2.2 Normative/informative references

Parties using this document shall apply:

2.2.1 Normative

Note: Certain documents listed below may state applicability to Eskom Distribution, however those documents are also applicable to Eskom Transmission.

- [1] 240-170001091-UID number PAU21P04 & Agg21P12 High Level Scope of Work – PTM&C Equipment for the Establishment of 400/132kV Paulputs Substation (Phase1) .
- [2] SANS-10198: The Selection, Handling and Installation of Power Cables not exceeding 33kV
- [3] 240-56063805 – LV Power and Control Cables with Rated Voltage Standard 600/1000 V
- [4] 240-56030637– General Information and Requirements for Low Voltage Cable System Standard
- [5] 240-64636794 – Standard for wiring and Cable Marking in Substations
- [6] 240-46425213 – Cable Testing Control plant
- [7] 240-168928041 – Secondary Cable Removal Strategy in Western Grid
- [8] 240-72274830 - Multimode Fibre Optic Duct Cable Specification
- [9] NRS 088-1, Duct and direct-buried underground fibre-optic cable – Part 1: Product specification (**note: Eskom requirement unarmoured**)
- [10] 240- 64813646: Data Cable Required for X.21 Interfaces.
- [11] 240-64813538: High Frequency Coaxial Cable for Power Line Carrier Applications.
- [12] 240-64813692: Miniature Control Cable Required for Teleprotection Signals (18Z Cables).

ESKOM COPYRIGHT PROTECTED

[13] 240-64813568: Standard Indoor and Outdoor Telephone Cable.

2.3 Definitions

2.3.1 General

Definition	Description
Breaker and a half	The breaker and a half bus arrangement consist of two main busbars, each normally energised. Between each of the main busbars are similar arranged "bays" of three circuit breakers configured such that the two lines or a combination transmission line and transformer position share the centre circuit breaker.
Double Busbar	A substation layout consisting of the conventional double busbar configuration with or without bus section / bus couplers etc. A set of isolator links per busbar are used to connect the transformer bay to either busbar. In double bus bar system two identical bus bars are used in such a way that any outgoing or incoming feeder can be taken from any of the bus.
Extra High Voltage	Nominal AC voltages above 220kV up to and including 765kV.

2.3.2 Disclosure classification

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

2.4 Abbreviations

Abbreviation	Description
kV	Kilovolt
PTM&C	Protection Telecommunications Measurements & Control

2.5 Roles and responsibilities

It is proposed that:

- Eskom shall utilise this document as the basis for the technical evaluation process.
- Tenderers shall note the evaluation criteria and required tender returnables as laid out in this document and submit tenders in compliance to the stipulated requirements.

2.6 Process for monitoring

Not applicable.

2.7 Related/supporting documents

Not applicable.

3. Technical Tender Evaluation Procedure

The evaluation process has three stages, with a corresponding minimum score (threshold) required for a bid to be deemed compliant are:

- a. **Stage 1:** Stage 1 has two subcategories:
 1. Technical Qualitative Requirements for the supply of cables as cable block diagrams included in the scope which require a minimum of 80% compliance threshold. Only submissions that pass the scoring threshold of a minimum of 80% will proceed to the next subcategory.
 2. Technical Qualitative Requirements for the type of cable supplied which require a minimum of 80% compliance threshold. Only submissions that pass the scoring threshold of a minimum of 80% will proceed to the next stage.
- b. **Stage 2:** Technical Qualitative Requirements for Cable Installation, Termination and other cable associated activities which require a minimum of 80% compliance threshold. Only submissions that pass the scoring threshold of a minimum of 80% will proceed to the next stage.
- c. **Stage 3:** Deemed offer Risks which should at least be acceptable.

The technical evaluation process will follow a chronological order:

- 1) Stage 1 evaluates the technical criteria for the supply of cables and will be scored against the thresholds defined. If the Stage 1 threshold is met, then the qualifying bid will proceed to Stage 2. If the bidder fails to achieve the defined threshold, then the submission is deemed to be non-compliant and will not be considered for further evaluation. Based on the evaluation, qualifying offers with any non-compliances which Eskom deems necessary, may be recommended for negotiation as compulsory prior to contract award.
- 2) Stage 2 evaluates the technical criteria for Cable Installation, Termination and other cable associated activities will be scored against the thresholds defined. If the Stage 2 thresholds are met, then the qualifying bids will proceed to Stage 3. If the bidder fails to achieve the defined threshold, then the submission is deemed to be non-compliant and will be removed from further evaluation. Based on the evaluation, qualifying offers with any non-compliances which Eskom deems necessary, may be recommended for negotiation as compulsory prior to contract award.
- 3) Stage 3 is a report written by the evaluation team to determine and motivate whether any risks found throughout the evaluation are deemed low / acceptable / high and will serve as input to the recommendation as to whether the offer should be accepted.

The detailed methodologies for scoring in each stage are provided in Sections 4 to 6.

4. Stage 1: Evaluation of Technical Qualitative Requirements for the supply of cables

Stage 1 has two subcategories which will be evaluated.

The following returnables must be completed, signed, and submitted:

1. Annexure B: Schedule for Cable
2. Annexure K: Deviation Schedule

4.1 Stage 1 Subcategory 2: Cable Types

The cables supplied must conform to *240-56063805 LV Power and control cable with rated voltage standard*. Table 1 details the cables which have been accepted for use in Transmission substations. Eskom contracted suppliers are included for reference in Table 3.

Table 1: List of cables and approved suppliers

Cable Code	Cable Description	Eskom Supplier
BVX12DCV	CABLE ELECT:1 KV;12C;CU;2.5 MM2;STL WIRE	CBI
BVX12ECV	CABLE ELECT:1 KV;12C;CU;4 MM2;STL WIRE	CBI, M-TEC
BVX19DCV	CABLE ELECT:1 KV;19C;CU;2.5 MM2;STL WIRE	CBI, M-TEC
BVX19ECV	CABLE ELECT:1 KV;19C;CU;4 MM2;STL WIRE	CBI, M-TEC
BVX2HCV	CABLE ELECT:1 KV;2C;CU;16 MM2;STL WIRE	CBI
BVX4GCV	CABLE ELECT:1 KV;4C;CU;10 MM2;STL WIRE	CBI
BVX2ECV	CABLE ELECT:1 KV;2C;CU;4 MM2;STL WIRE	CBI
BVX37DCV	CABLE ELECT:1 KV;37C;CU;2.5 MM2;STL WIRE	CBI
BVX4NCV	CABLE ELECT:1 KV;4C;CU;4 MM2;STL WIRE	CBI
BVX4HCV	CABLE ELECT:1 KV;4C;CU;16 MM2;STL WIRE	CBI
BVX4DCV	CABLE ELECT:1 KV;4C;CU;2.5 MM2;STL WIRE	CBI
BVX4KCV	CABLE ELECT:1 KV;4C;CU;25 MM2;STL WIRE	CBI
BVX4ECV	CABLE ELECT:1 KV;4C;CU;4 MM2;STL WIRE	CBI
BVX7DCV	CABLE ELECT:1 KV;7C;CU;2.5 MM2;STL WIRE	CBI, Aberedare
BVX4QCV	CABLE ELECT:1 KV;4C;CU;120 MM2;STL WIRE	CBI
BVX7ECV	CABLE ELECT:1 KV;7C;CU;4 MM2;STL WIRE	CBI, MTEC
BVX4LCV	CABLE ELECT:1 KV;4C;CU;35 MM2;STL WIRE	CBI
BVX37ECV	CABLE ELECT:1 KV;37C;CU;4 MM2;STL WIRE	CBI, Aberedare

Eskom utilises 2 types of Duct Fibre Optic cables, which are multimode and single mode. The multimode cable is rodent resistance and shall conform to Eskom specification 240-72274830 Multimode Fibre Optic Duct Cable Specification. The single mode cable may be rodent resistant or not as per application, but it may not have any shielding/armouring. This single mode cable shall conform to NRS 088-1 (2019) Duct and Direct Buried Underground Fibre Optic Specification. The types of fibre cables are listed in Table 2 with the Eskom approved suppliers.

ESKOM COPYRIGHT PROTECTED

Table 2: List of fibre cables and approved suppliers

Cable Code	Cable Description	Eskom approved suppliers
8 core Single mode double sheath	Cable fibre OPTC:HDD; 8; DOUBLE; 9/125	CBI, AMHT, DartCom, WTD
12 core Single mode double sheath	Cable fibre OPTC:HDD; 12; DOUBLE; 9/125	CBI, AMHT, DartCom, WTD
48 core Single mode double sheath	Cable fibre OPTC:HDD; 48; DOUBLE; 9/125	CBI, AMHT, DartCom, WTD
8 core Single mode HDD	Cable fibre OPTC:HDD; 8; HDD; 9/125	CBI, AMHT, DartCom, MTEC
24 core Single mode HDD	Cable fibre OPTC:HDD; 24; HDD; 9/125	CBI, AMHT, DartCom, MTEC
48 core Single mode HDD	Cable fibre OPTC:HDD; 48; HDD; 9/125	CBI, AMHT, DartCom, MTEC
12 core multimode double sheath	Cable fibre OPTC:HDD; 12; DOUBLE; 50/125	CBI, AMHT, DartCom, WTD

The following criteria will be used to assess the tenderer's technical capability to enter a contract with Eskom with respect to the supply of specific products to meet Eskom's requirements.

Each item will be assigned a score by the Eskom evaluation team, based upon the tendered response, using Table 3.

Table 3: Scoring of Items for the cable schedule

Criteria	Score
Fully compliant	1
Non-compliant (major deviation)	0

Tender responses claiming compliance to an item (e.g., 'Comply') but which are found to be non-compliant during verification will be assigned the corresponding score by the Eskom evaluation team. Items for which compliance is not claimed (e.g., 'Do Not Comply'), but which are found to be compliant during verification will be scored as 'non-compliant' based on the original response.

All scores for Annexure B: Schedule for cable types will be tallied and shall be calculated based on the maximum possible using Table 4. There is a minimum score threshold of 80% to pass this subcategory and proceed to the next stage.

Table 4: Technical Qualitative requirement for the cable types schedule

No.	Item	Score (1/0)	Comments
1.	Full compliance to BVX12DCV, in respect of cable procured		
2.	Full compliance to BVX12ECV, in respect of cable procured		
3.	Full compliance to BVX19DCV in respect of cable procured		
4.	Full compliance to BVX19ECV in respect of cable procured		
5.	Full compliance to BVX2HCV, in respect of cable procured		

ESKOM COPYRIGHT PROTECTED

TECHNICAL EVALUATION CRITERIA FOR CABLING REQUIREMENTS PAULPUTS & AGGENEIS SUBSTATION

No.	Item	Score (1/0)	Comments
6.	Full compliance to BVX4GCV, in respect of cable procured		
7.	Full compliance to BVX2ECV, in respect of cable procured		
8.	Full compliance to BVX37DCV, in respect of cable procured		
9.	Full compliance to BVX4NCV, in respect of cable procured		
10.	Full compliance to BVX4HCV, in respect of cable procured		
11.	Full compliance to BVX4DCV, in respect of cable procured		
12.	Full compliance to BVX4KCV, in respect of cable procured		
13.	Full compliance to BVX4ECV, in respect of cable procured		
14.	Full compliance to BVX7DCV, in respect of cable procured		
15.	Full compliance to BVX4QCV, in respect of cable procured		
16.	Full compliance to BVX7ECV, in respect of cable procured		
17.	Full compliance to BVX4LCV, in respect of cable procured		
18.	Full compliance to BVX37ECV, in respect of cable procured		
19.	Full compliance to 8 core Single mode double sheath in respect of cable procured		
20.	Full compliance to 12 core Single mode double sheath, in respect of cable procured		
21.	Full compliance to 48 core Single mode double sheath, in respect of cable procured		
22.	Full compliance to 8 core Single mode HDD, in respect of cable procured		
23.	Full compliance to 24 core Single mode HDD in respect of cable procured		
24.	Full compliance to 48 core Single mode HDD, in respect of cable procured		
25.	Full compliance to 12 core multimode double sheath, in respect of cable procured		
26.	Full compliance to TPH50AX, in respect of cable procured		
27.	Full compliance to TPH25AX, in respect of cable procured		
28.	Full compliance to TPHX10AX, in respect of cable procured		
Total Score %			Threshold = 80%

ESKOM COPYRIGHT PROTECTED

5. Stage 2: Evaluation of Technical Qualitative Requirements for Cable Installation, Termination and other cable associated activities .

This section contains the technical evaluation strategy and criteria for evaluating submissions to perform installation, termination and other associated activities of the equipment listed in detailed 240-170001091-UID number PAU21P04 & Agg21P12 High Level Scope of Work – PTM&C Equipment for the Establishment of 400/132kV Paulputs Substation (Phase1).

The following criteria will be used to assess the tenderer’s technical capability to enter into a contract with Eskom with respect to cable installation, termination and other cable related activities. The assessment is based on the returnables requested in:

1. Annexure C: Cabling - Relevant Experience and capability
2. Annexure D: Cabling- Qualifications and Experience of Key personnel
3. Annexure E: Procedure for Cable Installation
4. Annexure F: Procedure for Cable Termination
5. Annexure G: Procedure for Loading and unloading cable drums
6. Annexure H: Procedure for cable handling and storing
7. Annexure I: Cabling - Tools and Equipment
8. Annexure J: Procedure for removing old cables
9. Annexure K: Deviation Schedule

Each Annexure will be assigned a score by the Eskom evaluation team using Table 5. The score for each item will be multiplied by its weight to obtain the total score per item.

Table 5: Scoring Allocation for Cabling

Score	Description
10	Deemed to fully meet requirements
7	Deemed to mostly meet requirements
2	Deemed as substantially not meeting requirements
0	Nonresponsive
Note: Scores will be allocated in the range 0 - 10 with the above as a guideline	

The cabling criteria will be adjudicated as a weighted score out of 100% and will comprise of scoring in the categories as defined in Table 6. Each category has a minimum threshold score of 80%.

Table 6: Technical Qualitative Scoring for Cable Installation, Termination and other cable activities

Qualitative Technical Criteria Description		Minimum Threshold Score	Score	Criteria Sub Weighting (%)	Criteria Weighting (%)
Relevant company experience (Projects completed in past 10 years)		80%		-	20
1.1	Number of projects			10	
1.2	Project scope			10	

ESKOM COPYRIGHT PROTECTED

Qualifications and experience of key personnel		80%			20
2.1	Academic qualifications			5	
2.2	Project-specific work experience			15	
Procedure for Cable Installation		80%			15
3.1	Yard stone handling			5	
3.2	Trench cover handling			5	
3.3	Cable glanding & numbering			5	
Procedure for Cable Termination		80%			10
4.1	Handling of spare cores			5	
4.2	Ferrule numbering			5	
Procedure for loading and unloading of cable drums		80%			5
5.1	Adequacy of procedure			5	
Procedure for cable handling and storing		80%			5
6.1	Adequacy of procedure			5	
Tools and equipment		80%			10
7.1	Adequacy of tools and equipment and test certificate of crimping tools			10	
Procedure for removing of old cables		80%			15
8.1	Adequacy of procedure			15	
	Total Score %				100%

6. Stage 3: Deemed Offer Risk(s)

Eskom's evaluation team shall compile a report summarising risks associated with any aspect of the offer:

- a) noted during the Technical Qualitative Requirements for the supply of cables,
- b) noted during the Technical Qualitative Requirements for Cable Installation, Termination and other cable associated activities
- c) based on any pricing anomalies, noted during the subsequent financial evaluation that cannot be acceptably clarified.
- d) Noted on the deviation schedule as in Annexure K: Deviation Schedule

This narrative shall be used to determine and motivate whether the risk is deemed high / acceptable / low and will serve as input to the recommendation as to whether the offer should be accepted as shown in Table 7 below. Note, the TET shall only have access to financial information post completion of the technical evaluation report. Any changes as a result of c) above will be included in an update to the initial report.

Table 7: Deemed Offer Risk(s) Evaluation

Criteria	Score	Comments
Deemed Offer Risk(s)		
Threshold	Acceptable	

7. Authorization

This document has been seen and accepted by:

Name and surname	Designation
Mario Petersen	Planning and Project Support Manager (Acting)
Quinton Labuschagne	Substation Automation Integration Manager

8. Revision History

Date	Rev	Compiler	Remarks
2023/07/25	1	N. Gono	Initial Scope
2023/10/04	2	N. Gono	Revised Bay number and added Remote End

9. Acknowledgements

Lungie Nogela

Clive Watson

Andre De La Guerre

Ian Naicker

Mario Petersen

Annexure B: Schedule for cable types

This Annexure must be completed, signed and submitted.

Schedule A: Purchasers specific requirements. Each of these requirements are equally weighted.

Schedule B: Tenders to stipulate “**Comply**” or “**Do not Comply**”. All cables supplied must be identical to the master drawings and procured from the Eskom approved suppliers order to respond “**Comply**”.

No.	Requirements	Description	Schedule A	Schedule B	Comments
1.	Full compliance to BVX12DCV, in respect of cable procured	CABLE ELECT:1 KV;12C;CU;2.5 MM2;STL WIRE	Comply		
2.	Full compliance to BVX12ECV, in respect of cable procured	CABLE ELECT:1 KV;12C;CU;4 MM2;STL WIRE	Comply		
3.	Full compliance to BVX19DCV in respect of cable procured	CABLE ELECT:1 KV;19C;CU;2.5 MM2;STL WIRE	Comply		
4.	Full compliance to BVX19ECV in respect of cable procured	CABLE ELECT:1 KV;19C;CU;4 MM2;STL WIRE	Comply		
5.	Full compliance to BVX2HCV, in respect of cable procured	CABLE ELECT:1 KV;2C;CU;16 MM2;STL WIRE	Comply		
6.	Full compliance to BVX4GCV, in respect of cable procured	CABLE ELECT:1 KV;4C;CU;10 MM2;STL WIRE	Comply		
7.	Full compliance to BVX2ECV, in respect of cable procured	CABLE ELECT:1 KV;2C;CU;4 MM2;STL WIRE	Comply		
8.	Full compliance to BVX37DCV, in respect of cable procured	CABLE ELECT:1 KV;37C;CU;2.5 MM2;STL WIRE	Comply		
9.	Full compliance to BVX4NCV, in respect of cable procured	CABLE ELECT:1 KV;4C;CU;4 MM2;STL WIRE	Comply		

ESKOM COPYRIGHT PROTECTED

Document Classification: Controlled Disclosure**TECHNICAL EVALUATION CRITERIA FOR CABLING REQUIREMENTS PAULPUTS & AGGENEIS SUBSTATION**Unique Identifier: **Pau21P04 &**Revision: **2**Page: **14 of 24**

No.	Requirements	Description	Schedule A	Schedule B	Comments
10.	Full compliance to BVX4HCV, in respect of cable procured	CABLE ELECT:1 KV;4C;CU;16 MM2;STL WIRE	Comply		
11.	Full compliance to BVX4DCV, in respect of cable procured	CABLE ELECT:1 KV;4C;CU;2.5 MM2;STL WIRE	Comply		
12.	Full compliance to BVX4KCV, in respect of cable procured	CABLE ELECT:1 KV;4C;CU;25 MM2;STL WIRE	Comply		
13.	Full compliance to BVX4ECV, in respect of cable procured	CABLE ELECT:1 KV;4C;CU;4 MM2;STL WIRE	Comply		
14.	Full compliance to BVX7DCV, in respect of cable procured	CABLE ELECT:1 KV;7C;CU;2.5 MM2;STL WIRE	Comply		
15.	Full compliance to BVX4QCV, in respect of cable procured	CABLE ELECT:1 KV;4C;CU;120 MM2;STL WIRE	Comply		
16.	Full compliance to BVX7ECV, in respect of cable procured	CABLE ELECT:1 KV;7C;CU;4 MM2;STL WIRE	Comply		
17.	Full compliance to BVX4LCV, in respect of cable procured	CABLE ELECT:1 KV;4C;CU;35 MM2;STL WIRE	Comply		
18.	Full compliance to BVX37ECV, in respect of cable procured	CABLE ELECT:1 KV;37C;CU;4 MM2;STL WIRE	Comply		
19.	Full compliance to 8 core Single mode double sheath in respect of cable procured	Cable fibre OPTC:HDD; 8; DOUBLE; 9/125	Comply		
20.	Full compliance to 12 core Single mode double sheath, in respect of cable procured	Cable fibre OPTC:HDD; 12; DOUBLE; 9/125	Comply		
21.	Full compliance to 48 core Single mode double sheath, in respect of cable procured	Cable fibre OPTC:HDD; 48; DOUBLE; 9/125	Comply		
22.	Full compliance to 8 core Single mode HDD, in respect of cable procured	Cable fibre OPTC:HDD; 8; HDD; 9/125	Comply		

ESKOM COPYRIGHT PROTECTED

When downloaded from the WEB, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the WEB.

Document Classification: Controlled Disclosure

TECHNICAL EVALUATION CRITERIA FOR CABLING REQUIREMENTS PAULPUTS & AGGENEIS SUBSTATION

Unique Identifier: **Pau21P04 &**

Revision: **2**

Page: **15 of 24**

No.	Requirements	Description	Schedule A	Schedule B	Comments
23.	Full compliance to 24 core Single mode HDD in respect of cable procured	Cable fibre OPTC:HDD; 24; HDD; 9/125	Comply		
24.	Full compliance to 48 core Single mode HDD, in respect of cable procured	Cable fibre OPTC:HDD; 48; HDD; 9/125	Comply		
25.	Full compliance to 12 core multimode double sheath, in respect of cable procured	Cable fibre OPTC:HDD; 12; DOUBLE; 50/125	Comply		
26.	Full compliance to TPH50AX, in respect of cable procured	Cable for Telecontrol	Comply		
27.	Full compliance to TPH25AX, in respect of cable procured	Cable for Telecontrol	Comply		
28.	Full compliance to TPHX10AX, in respect of cable procured	Cable for Telecontrol	Comply		

Signed by: _____

Signature: _____

Date: _____

ESKOM COPYRIGHT PROTECTED

When downloaded from the WEB, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the WEB.

Annexure C: Cabling - Relevant Experience and capability

Submit three (not more) different sets of the below sheets for recent (within the last 3 years) **cabling** projects you have conducted (e.g. three different Transmission Projects). The projects must be from different substations. Submissions with less than three sets of the below sheets would incur a penalty.

Tenderer Company Name		
What was the name of your business or company then?		
How many cabling Projects have you completed for Eskom?		
What was the name of the project?		
What was the substation name?		
What was the completion date?		
What was the Project Value?		
What were project scope of the site where you did the work (You may include GPS coordinates)?		
What are the contact details of the client that you did work for?	Name	
	Contact Person	
	Office and Cellphone numbers	
	Email address	
	Physical address	
Did you complete the work you did?		
Did you receive any non-conformances against you for the work you performed?		
<p>Signed: _____(Company Rep) Date: _____</p> <p>Rep Name: _____ Tendering Company: _____</p>		

ESKOM COPYRIGHT PROTECTED

Annexure D: Cabling- Qualifications and Experience of Key personnel

Please, complete this annexure indicating the training and courses related to this tendered project that each employee (to be involved with this tendered project) has undergone. Also provide a summary work experience specific to this project for each resource. Submit copies of the training certificates and these copies must be certified by the Commissioner of Oaths, with a signature and date not older than three months from the tender closing date. Training certificates need to be still valid on the date of tender close. Certificates that have expired prior to this date would not be accepted as valid evidence.

Name and surname of the resource.				
Position held				
Academic qualification				
Will this resource be dedicated to the project?				
Total Number of resources dedicated to the project?				
Related training and courses completed by the resource.	Date obtained	Expiry date	Max. Points	Obtained Points
Project Specific Work Experience for Resource				
Signed: _____ (Company Rep) Date: _____				
Rep Name: _____ Tendering Company: _____				

Annexure I: Cabling - Tools and Equipment

Please, complete this annexure, and submit it with the tender document. Examples are provided below; however, this is not an exhaustive list. Ensure that you list all relevant tools and equipment required for the project.

Tools to be used for construction	Description	Requirement	Serial no.	Valid test / calibration certificate no.	Indicate if owned(O) or to be hired(H)**
Technicians Toolbox	Pliers, side cutters, insulated screw drivers, strippers, etc	Per Team			
Insulation Tester		Per Team			
1ST Crimper >1mm ≤ 8mm		Per Team			
Hexagon Crimper ≤ 6mm					
Multimeter		Per Team			
Splicing Machine		Per Team			
Optical Time Domain Reflector (OTDR)		Per Team			
Power Meter or Light Source					

***When tools would be hired, a hiring letter from the reputable hiring agency is required*

DECLARATION: I hereby confirm that the tools list above is a true reflection of the tools owned or hired by my Company.

I will also ensure that all tools will be enough to cater for multiple full teams and tools that require calibration will have valid calibration certificates before the execution of work.

Signed: _____ (Company Rep)

Rep Name: _____

Date: _____

