

Title: **Mersey 275kV Bus zone replacement project Technical Evaluation Strategy for Installing Control and Power Cables**

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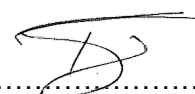
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## **1. INTRODUCTION**

This document establishes the technical evaluation strategy for the evaluation of tenders that will be received in response to the request for tenders for the work to be done at Avon and Mersey substations. This strategy is of a high level consideration and of the key aspects that will give direction to the technical evaluation process. It is in accordance with Tender Engineering Evaluation Procedure (240-48929489)[1].

This document covers the work required for the installation of control and power cables at Avon and Mersey substations.

## **2. SUPPORTING CLAUSE-S**

### **2.1 SCOPE**

The document covers the technical evaluation strategy for the evaluation of tenders for Avon and Mersey substations

The aim of this document is to provide a technical evaluation strategy to be used for the technical evaluation of tenders for the installation of control and power cables at Avon and Mersey substations. Furthermore, it will ensure transparency in the evaluation process as per the requirements set out in the Tender Evaluation Procedure (240-48929482)[1].

#### **2.1.1 Purpose**

The purpose of this tender technical evaluation strategy is to define the Mandatory Evaluation Criteria, Qualitative Evaluation Criteria and TET member responsibilities for tender technical evaluation. The technical evaluation strategy serves as basis for the tender technical evaluation process.

#### **2.1.2 Applicability**

This document shall apply to the installation of control and power cables at Avon and Mersey substations.

## **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] 240-48929482: Tender Technical Evaluation Procedure
- [2] 32-1034 : Eskom Procurement and Supply Management
- [3] SANS-10198: The Selection, Handling and Installation of Power Cables not exceeding 33kV
- [4] OHS Act, 1993: Electrical Installations Regulations 2009
- [5] OSH Act, 1993: Construction Regulations, 2014
- [6] Occupational Health and Safety Act (No.85 of 1993)
- [7] ESKPVAEY6: 2005 Operating Regulations for High Voltage Systems.
- [8] Eskom Drawing No. 0.18/33603; 0.18/33604; 0.18/33605; 0.18/33606 and 0.18/33607.

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### 2.2.2 Informative

- [9] PTM & C Cable Schedule- 240-84597622
- [10] LV Power and Control Cable with Rated Voltage Standard 600/1000V -240-56063805
- [11] SANS 10142 - The Wiring of Premises Part 1 Low Voltage Installations.
- [12] 240-56030637-General Information and Requirements for Low Voltage Cable System Standard
- [13] 240-64636794 Standard for wiring and Cable Marking in Substations

### 2.2.3 Classification

**Controlled Disclosure:** Controlled Disclosure to external parties (either enforced by law, or discretionary).

## 2.3 ABBREVIATIONS

Abbreviation	Description
CV	Curriculum Vitae
CS	Convertor Station
EDWL	Engineering Design Work Lead
LV	Low Voltage
PTM & C	Protection, Teleprotection, Metering and Control
SANS	South African Nation Standard

## 2.4 ROLES AND RESPONSIBILITIES

N/A as per 240-48929482: Tender Technical Evaluation Procedure

## 2.5 PROCESS FOR MONITORING

N/A

## 2.6 RELATED/SUPPORTING DOCUMENTS

N/A

# 3. TENDER TECHNICAL EVALAUTION STRATEGY

## 3.1 SCOPE OF WORK

The scope of work for this project will comprise the following activities:

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## **Mersey Substation**

### **1. 275kV Bus zone**

- Install the new 6BZ2410 Bus zone protection scheme (24 Bay – 3x Panels) on the allocated space as per the approved control room layout drawing.
- Install new cables as per the approved submitted cable block drawing.
- Decommission and remove existing 275kV Bus zone protection scheme (2x Panels) once the new Bus zone is fully commissioned.
- Decommission and remove existing cables to different Bays as soon as that bay is fully commissioned to the new Bus zone protection scheme.

### **3.2 TECHNICAL EVALUATION THRESHOLD**

The minimum weighted final score (threshold) required for a tender to be considered from a technical perspective is 70%.

### **3.3 TET MEMBERS**

**Table 1: TET Members**

<b>TET number</b>	<b>TET Member Name</b>	<b>Designation</b>
TET 1	Vusi Msibi	Chief Technologist
TET 2		
TET 3		

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### 3.4 TABLE 2: MANADATORY TECHNICAL EVALUATION CRITERIA

	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria
1.	Relevant company experience	SANS10198 & <a href="#">240-56030637</a>	Vital to execute the task
2.	Procedures for Cable Terminations	SANS10198 & <a href="#">240-64636794</a>	Vital to execute the task
3.	Procedure for Cable Installation	SANS10198 & <a href="#">240-56030637</a>	Vital to execute the task
4.	Procedure for Loading and Unloading Cable Drums	SANS10198 & <a href="#">240-56030637</a>	Vital to execute the task
5.	Procedures for Cable Handling and Storing	SANS 10198 & <a href="#">240-56030637</a>	Vital to execute the task
6.	Tools and equipment	SANS10198 & <a href="#">240-56030637</a>	Vital to execute the task
7.			
8.			
9.			
10.			

### 3.5 QUALITATIVE TECHNICAL EVALUATION CRITERIA

**Table 3: Removing and Installing Power and Control Cables- Qualitative Technical Evaluation Criteria**

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	Relevant company experience (Projects completed in past 5 years)		SANS10198 & 240-56030637	20	
	1.1	Number of projects	SANS10198 & 240-56030637		4
	1.2	Project Scopes and values	SANS10198 & 240-56030637		4
	1.3	C.V of qualified personnel	SANS10198 & 240-56030637		4
	1.4	Substation names and completion dates	SANS10198 & 240-56030637		4
	1.5	Client contact person and details	SANS10198 & 240-56030637		4
2.	Procedures for Cable Terminations		SANS10198 & 240-56030637	20	
	2.1	Handling of spare cores	SANS10198 & 240-56030637		8
	2.2	Ferrule numbering	SANS10198 & 240-56030637		8
	2.3	Total number of manpower dedicated to this project	SANS10198 & 240-56030637		4
3.	Procedure for Cable Installation		SANS10198 & 240-56030637	20	
	3.1	Yard stone handling	SANS10198 & 240-56030637		5
	3.2	Trench cover handling	SANS10198 & 240-56030637		5
	3.3	Cable Glanding	SANS10198 & 240-56030637		5
	3.4	Cable numbering	SANS10198 & 240-56030637		5
4.	Procedure for Loading and Unloading Cable Drums		SANS10198 & 240-56030637	15	
	4.1	Adequacy of procedure	SANS10198 & 240-56030637		15

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5.	Procedures for Cable Handling and Storing		SANS10198 & 240-56030637	15	
	5.1	Adequacy of procedure	SANS10198 & 240-56030637		15
6.	Tools and equipment		SANS10198 & 240-56030637 9	10	
	6.1	Adequacy of tools and equipment. Test Certificate of crimping tools	SANS10198 & 240-56030637		10
				TOTAL: 100	



### 3.6 TET MEMBER RESPONSIBILITIES

**Table 4: TET Member Responsibilities**

<b>Mandatory Criteria Number</b>	<b>TET 1</b>	<b>TET 2</b>	<b>TET 3</b>
Relevant company experience	X	X	X
Procedures for Cable Terminations	X	X	X
Procedure for Cable Installation	X	X	X
Procedure for Loading and Unloading Cable Drums	X	X	X
Procedures for Cable Handling and Storing	X	X	X
Tools and Equipment			
<b>Qualitative Criteria Number</b>	<b>TET 1</b>	<b>TET 2</b>	<b>TET 3</b>
Relevant company experience	X	X	X
Procedures for Cable Terminations	X	X	X
Procedure for Cable Installation	X	X	X
Procedure for Loading and Unloading Cable Drums	X	X	X
Procedures for Cable Handling and Storing	X	X	X
Tools and equipment	X	X	X

### **3.7 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS**

#### **3.7.1 Risks**

**Table 5: Acceptable Technical Risks**

<b>Risk</b>	<b>Description</b>
1.	None

**Table 6: Unacceptable Technical Risks**

<b>Risk</b>	<b>Description</b>
1.	Contractor who do not have the relevant experience

#### **3.7.2 Exceptions / Conditions**

**Table 7: Acceptable Technical Exceptions / Conditions**


<b>Risk</b>	<b>Description</b>
1.	None

**Table 8: Unacceptable Technical Exceptions / Conditions**

<b>Risk</b>	<b>Description</b>
1.	None

#### 4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
Mario Petersen	PTM & C Senior Advisor	

#### 5. REVISIONS

Date	Rev.	Compiler	Remarks
9/05/2022	1	Vusi Msibi	First Issue

#### 6. DEVELOPMENT TEAM

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

Vusi Msibi

#### 7. ACKNOWLEDGEMENTS

Mario Petersen (PTM & C Senior Advisor)

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