 Eskom	Strategy	Engineering
-----------------------------------------------------------------------------------------	----------	-------------

Title: NATIONAL EPP BYPASSES – Technical Tender Evaluation Strategy for the Stringing, Earthing and Erection at Esselen Substation

Unique Identifier: CESS11P03-SE-E87

Alternative Reference Number: N/A

Area of Applicability: Engineering

Documentation Type: Strategy


Revision: 1

Total Pages: 13

Next Review Date: N/A

Disclosure Classification: CONTROLLED DISCLOSURE

Compiled by



Fredda Molusi

Substation Engineer (Elec.):

Substation Engineering

Date: 19/07/2018

Functional Responsibility



Derrick Delly

Chief Engineer (Elec.):

Substation Engineering

Date: 24/07/2018

Authorized by



NP. Tlhatlhetji

Senior Manager:

Substation Engineering

Date: 27/07/2018

## **1. CONTENTS**

	<b>Page</b>
<b>1. CONTENTS .....</b>	<b>2</b>
<b>1. INTRODUCTION.....</b>	<b>4</b>
<b>2. SUPPORTING CLAUSES .....</b>	<b>4</b>
2.1 SCOPE .....	4
2.1.1 Purpose.....	4
2.1.2 Applicability .....	4
2.2 NORMATIVE/INFORMATIVE REFERENCES .....	5
2.2.1 Normative.....	5
2.2.2 Informative .....	5
2.3 DEFINITIONS .....	5
2.3.1 Classification.....	5
2.4 ABBREVIATIONS .....	6
2.5 ROLES AND RESPONSIBILITIES .....	6
2.6 PROCESS FOR MONITORING .....	6
2.7 RELATED/SUPPORTING DOCUMENTS .....	6
<b>3. TENDER TECHNICAL EVALUATION STRATEGY .....</b>	<b>7</b>
3.1 TECHNICAL EVALUATION THRESHOLD .....	7
3.2 TET MEMBERS .....	8
3.3 TECHNICAL RETURNABLES .....	8
3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA (A) .....	10
3.5 TET MEMBER RESPONSIBILITIES .....	12
3.6 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS .....	13
3.6.1 Risks .....	13
3.6.2 Exceptions / Conditions .....	13
<b>4. AUTHORISATION .....</b>	<b>14</b>
<b>5. REVISIONS.....</b>	<b>14</b>
<b>6. DEVELOPMENT TEAM .....</b>	<b>14</b>
<b>7. ACKNOWLEDGEMENTS .....</b>	<b>14</b>

## **FIGURES**

Figure 1: Geographical Location.....	3
--------------------------------------	---

## **TABLES**

Table 1: List of Abbreviations.....	6
Table 2: Evaluation Scoring Table .....	7
Table 3: TET Members .....	8
Table 4: A: Stringing, Earthing and Erection Qualitative Technical Evaluation Criteria .....	10
Table 5: TET Member Responsibilities .....	12
Table 6: Acceptable Technical Risks.....	13
Table 7: Unacceptable Technical Risks.....	13
Table 8: Acceptable Technical Exceptions / Conditions .....	13
Table 9: Unacceptable Technical Exceptions / Conditions.....	13

## **CONTROLLED DISCLOSURE**

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

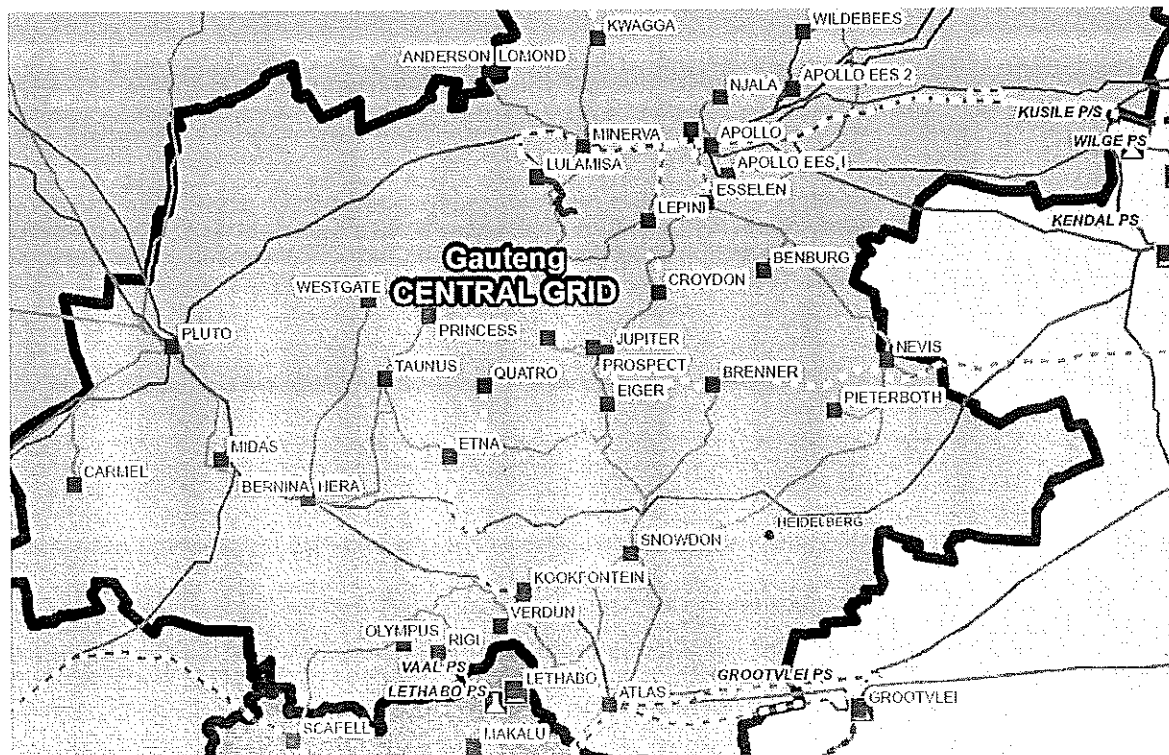


Figure 1: Geographical Location

**CONTROLLED DISCLOSURE**

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

## **1. INTRODUCTION**

This document establishes the technical evaluation strategy for the evaluation of tenders that will be received in response to the request to tender for the work to be done at Esselen Substation. This strategy is a high level consideration of the key aspects that will give direction to the technical evaluation process. It is in accordance with the Tender Engineering Evaluation Procedure (240-48929482) [1]. This document covers the work required for the stringing, earthing and erection at Esselen substation.

## **2. SUPPORTING CLAUSES**

### **2.1 SCOPE**

The aim of this document is to provide a technical evaluation strategy that shall be used for the technical evaluation of the tenders for work to be carried out at Esselen Substation. Furthermore, it will ensure transparency in the evaluation process as per the requirements set out in the Tender Engineering Evaluation Procedure (240-48929482) [1].

This document covers the technical evaluation strategy for the evaluation of the tenders for the scope of work to be carried out at Esselen Substation.

#### **2.1.1 Purpose**

The purpose of this tender technical evaluation strategy is to define the Tender Returnables, 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 National EPP Bypasses at Esselen Substation in the Central Grid.

### **CONTROLLED DISCLOSURE**

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

## **2.2 NORMATIVE/INFORMATIVE REFERENCES**

Parties using this document shall apply the most recent edition of the documents listed below:

### **2.2.1 Normative**

- [1] 240-48929482: Tender Engineering Evaluation Procedure
- [2] 32-1034: Eskom Procurement and Supply Management Procedure
- [3] 240-82736997: Stringing, Cabling, Earthing and Erection Specification for Substations
- [4] 0.54/393: Transmission Substation Earthing Standard
- [5] TST41-877: Transmission Substation Design Earthing Standard
- [6] SANS 1200: Standard Specification for Civil Engineering Construction
- [7] OHS Act, 1993: Construction Regulations, 2014
- [8] 240-101940513: Substation Earth Electrode Resistance Measurement
- [9] TST 41-642: Continuity Measurement of Transmission Substation on Earthmat System
- [10] 240-108982466) - Standard for HV Yard Stone in Eskom Substations
- [11] DST\_34-1245 – Substation Earthing

### **2.2.2 Informative**

None

## **2.3 DEFINITIONS**

### **2.3.1 Classification**

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

## **CONTROLLED DISCLOSURE**

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

## 2.4 ABBREVIATIONS

**Table 1: List of Abbreviations**

Abbreviation	Description
CV	Curriculum Vitae
EDWL	Engineering Design Work Lead
LDE	Lead Discipline Engineer
N/A	Not Applicable
OHSA	Occupational Health and Safety Act
ORHVS	Occupational Regulations for High Voltage Systems
SANS	South African National Standards
TET	Technical Evaluation Team
TST	Transmission Standard

## 2.5 ROLES AND RESPONSIBILITIES

**Engineering Manager:** All Engineering Managers throughout Eskom shall ensure that all staff, in their respective areas understand and adhere to this procedure.

**Engineering Design Work Lead (EDWL):** The EDWL is responsible to manage the execution and adherence to this procedure. Typically on New Build projects the EDWL role is fulfilled by the Lead Discipline Engineer (LDE) and on existing asset projects the EDWL role is fulfilled by the relevant System Engineer / Plant Engineer.

**Technical Evaluation Team (TET) member:** The delegated engineers / technical specialists who are responsible to review and evaluate technical aspects of the tender documentation as per the Tender Technical Evaluation Strategy.

## 2.6 PROCESS FOR MONITORING

N/A

## 2.7 RELATED/SUPPORTING DOCUMENTS

N/A

### CONTROLLED DISCLOSURE

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

### 3. TENDER TECHNICAL EVALUATION STRATEGY

#### 3.1 TECHNICAL EVALUATION THRESHOLD

The scoring for each tender will be done as per the scoring table shown below. This table is as per the requirements of Tender Engineering Evaluation Procedure [1]. The minimum weighted average required for the tender to be considered for further evaluation is 70%. The team will perform risk analysis on tenders falling below the 70% threshold to substantiate the result and to authenticate the credibility of the evaluation process and results.

Table 2: Evaluation Scoring Table

Score	Percentage	Definition
5	100	<b>COMPLIANT</b> Meet technical requirement(s) AND; No foreseen technical risk(s) in meeting technical requirements.
4	80	<b>COMPLIANT WITH ASSOCIATED QUALIFICATIONS</b> Meet technical requirement(s) with; Acceptable technical risk(s) AND/OR; Acceptable exceptions AND/OR; Acceptable conditions.
2	40	<b>NON-COMPLIANT</b> Does not meet technical requirement(s) AND/OR; Unacceptable technical risk(s) AND/OR; Unacceptable exceptions AND/OR; Unacceptable conditions.
0	0	<b>TOTALLY DEFICIENT OR NON-RESPONSIVE</b>
<p><b>Note 1:</b> The scoring table does not allow for scoring of 1 and 3.</p> <p><b>Note 2:</b> Foreseen acceptable and unacceptable risk(s), exceptions and conditions shall be unambiguously defined in the relevant Tender Technical Evaluation Strategy.</p>		

#### CONTROLLED DISCLOSURE

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

### 3.2 TET MEMBERS

**Table 3: TET Members**

<b>TET number</b>	<b>TET Member Name</b>	<b>Designation</b>
TET 1	Freddda Molusi	Substation Engineer (Electrical)
TET 2	Derrick Delly	Chief Engineer (Electrical)

### 3.3 TECHNICAL RETURNABLES

The following documents shall be submitted when tendering:

- a) List of key personnel, their experiences (include CV detailing project-specific work experience for each employee) and academic qualifications. Also include total number of manpower to be dedicated to this project.
- b) List of relevant and comparable projects undertaken. The list shall include project scope, substation name, completion date, project value and client contact person and details. The contractor shall further include any concessions made during each project execution.
- c) List of all tools and equipment to be used. (For Earthing & installation of standard precast concrete kerb as well as ballast stones)
- d) Test and measurements methods (procedures) for the various tests and measurements stated in this specification:
  - Earth resistance measurements.
  - Earth continuity measurements.
  - Insulation testing.
- e) Method statements (including detailed step-by-step procedures) for the following:
  - Earthing.
  - Brazing of earth connections.
  - Crimping.
  - Stringing and termination of conductors.
  - Stringing and termination of earth-wire
  - Installation of HV Equipment
- f) Procedure for compression of clamps.

The following documents shall be submitted **upon** tender award, prior to starting with construction:

- a) Proof of training of supervisor as responsible person in accordance with Eskom ORHVS. Copy of ORHVS certificate shall be attached.
- b) Proof of qualification of rigger
- c) Proof of qualification of operator of machinery
- d) Calibration certificates of applicable tools and equipment.

#### **CONTROLLED DISCLOSURE**

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



- e) Test certificates of lifting equipment.

**CONTROLLED DISCLOSURE**

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

### 3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA (A)

Compliant tenders will be evaluated against a set of weighted qualitative evaluation criteria. The evaluation criterion has been broken down into sections and a percentage weighting has been allocated to each section. Percentages weighting summary figures are indicated in Table 4 below.

**Table 4: A: Stringing, Earthing and Erection Qualitative Technical Evaluation Criteria**

	Qualitative Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
<b>A1</b>	<b>Relevant company experience (Projects completed in past 5 years)</b>	As per 240-82736997, section 3.5, page 17	<b>30</b>	
	1.1 Number of projects	As per 240-82736997, section 3.5, page 17		6
	1.2 Project scope	As per 240-82736997, section 3.5, page 17		6
	1.3 Project value	As per 240-82736997, section 3.5, page 17		6
	1.4 Substation name and completion date	As per 240-82736997, section 3.5, page 17		6
	1.5 Client contact person and details	As per 240-82736997, section 3.5, page 17		6
<b>A2</b>	<b>Qualifications and experience of key personnel</b>	As per 240-82736997, section 3.5, page 17	<b>20</b>	
	2.1 Academic qualifications	As per 240-82736997, section 3.5, page 17		7

	2.2	Project-specific work experience	As per 240-82736997, section 3.5, page 17		7
	2.3	Total number of manpower to be dedicated to this project	As per 240-82736997, section 3.5, page 17		6
<b>A3</b>	<b>Construction/method statements</b>		As per 240-82736997, section 3.5, page 17	<b>20</b>	
	3.1	Relevancy of method statements	As per 240-82736997, section 3.5, page 18		10
	3.2	Adequacy of method statements	As per 240-82736997, section 3.5, page 18		10
<b>A4</b>	<b>Test Procedures</b>		As per 240-82736997, section 3.5, page 18	<b>10</b>	
	4.1	Procedures relevant/ comprehensive	As per 240-82736997, section 3.5, page 18		10
<b>A5</b>	<b>Tools and Equipment</b>		As per 240-82736997, section 3.5, page 17	<b>10</b>	
	5.1	Adequacy of tools and equipment	As per 240-82736997, section 3.5, page 17		10
<b>A6</b>	<b>Procedure for compression of clamps</b>		As per 240-82736997, section 3.5, page 18	<b>10</b>	
	6.1	Procedures relevant/ comprehensive	As per 240-82736997, section 3.5, page 18		10
				<b>TOTAL: 100</b>	

3.5 TET MEMBER RESPONSIBILITIES

Table 5: TET Member Responsibilities

Qualitative Criteria (A) Number	TET 1	TET 2
A1	X	
A2	X	
A3	X	
A4	X	
A5	X	
A6	X	

**3.6 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS**

**3.6.1 Risks**

**Table 6: Acceptable Technical Risks**

Risk	Description
1. None.	

**Table 7: Unacceptable Technical Risks**

Risk	Description
1. Non - compliance to list of Technical Returnables .	
2. Contractors who do not have the relevant experience.	

**3.6.2 Exceptions / Conditions**

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

Risk	Description
1. None.	

**Table 9: Unacceptable Technical Exceptions / Conditions**

Risk	Description
1. None.	

#### **4. AUTHORISATION**

This document has been seen and accepted by:

<b>Name</b>	<b>Designation</b>
Derrick Delly	Substation Engineering, Chief Engineer (Central Grid)
Phineas Tlhatlhetji	Substation Engineering, Senior Manager

#### **5. REVISIONS**

<b>Date</b>	<b>Rev.</b>	<b>Compiler</b>	<b>Remarks</b>
19 July 2018	1	Fredda Molusi	First Issue

#### **6. DEVELOPMENT TEAM**

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

- None

#### **7. ACKNOWLEDGEMENTS**

- None

#### **CONTROLLED DISCLOSURE**

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