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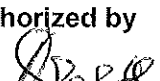
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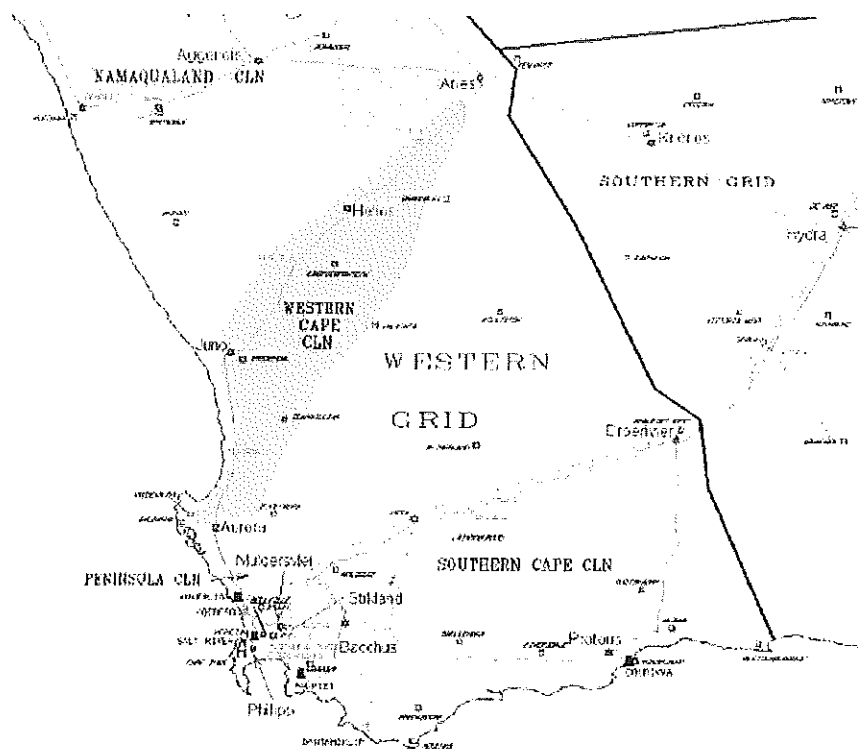


Figure 1: Geographical Location

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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 to tender for the work to be done at Weskusefleur 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 civil works required at Weskusefleur substation for the following items:

1.	Civil Works: Terrace, Foundation, Buildings, Trench/Ducts and Drainage
2.	Steelworks: Columns and Beams, Equipment Support Structures, Floodlighting Masts, Trenches and Fencing

2. SUPPORTING CLAUSES

2.1 SCOPE

This document covers the technical evaluation strategy for the evaluation of the tenders for the Koeberg 400kV Busbar Reconfiguration & Transformer Replacement Project.

The aim of this document is to provide a technical evaluation strategy that shall be used for the technical evaluation of the tenders for Weskusefleur 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].

2.1.1 Purpose

The purpose of this tender technical evaluation strategy is to define the Technical 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 Koeberg 400kV Busbar Reconfiguration & Transformer Replacement Project at Weskusefleur Substation in the Western Grid.

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 Engineering Evaluation Procedure
- [2] 32-1034: Eskom Procurement and Supply Management Procedure
- [3] 0.54/393: Transmission Substation Earthing Standard
- [4] TST41-877: Transmission Substation Design Earthing Standard

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- [5] SANS 1200: Standard Specification for Civil Engineering Construction
- [6] OHS Act, 1993: Construction Regulations, 2014
- [7] Detail Design Report: Weskufleur Substation (WKoe11P01-SE-D10)

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)

2.4 ABBREVIATIONS

Table 1: List of Abbreviations

Abbreviation	Description
CBID	Construction Industry Development Board
CV	Curriculum Vitae
EDWL	Engineering Design Work Lead
LDE	Lead Discipline Engineer
N/A	Not Applicable
OHSA	Occupational Health and Safety Act
ORHVS	Operating 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.

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2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

N/A

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3. TENDER TECHNICAL EVALUATION STRATEGY

3.1 SCOPE OF WORKS

The following is a brief outline of the scope of works to be completed at Weskusfleur Substation:

- New tunnels/trenches for Gas Insulated Line (GIL) – This will accommodate the GIL that will run from the Generation Transformer House. It is mostly situated beneath the road.
- Construct GIL to cable connection concrete box structure – This box structure will enable a stable connection point between GIL and cables.
- 400kV cable routes in protection system. (e.g. concrete culverts) – This allows for protection of the cables in the event of future excavations.
- Terrace platform – Ensures a stable platform for all foundations and steelwork.
- Foundations – Made up of main foundations for gantries and equipment foundations for equipment.
- Steelwork – Made up of main steelwork for gantries and equipment steelwork for equipment.
- Lighting Mast – Made up of steelwork and foundations.
- Fencing – Made up of the safety fence within the station as well as the inner, outer and non-lethal that makes up the boundary.
- Drainage – Consists mostly of surface drainage and includes oil drainage from the transformers.
- Roads – A ring road around the GIS building forms the main road around the station with access towards the existing Koeberg parking lot.
- Trenches – Allows all equipment cabling to be linked to the GIS building.

The above scope of works is a high level scope; however each activity involves a complex set works that accompany it. For a more detail scope of works and activities involved in this project refer to the Detail Design Report [7]

3.2 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 score required for the tender to be technically acceptable is 70%.

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Table 2: Evaluation Scoring Table

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

3.3 TET MEMBERS

Table 3: TET Members

TET number	TET Member Name	Designation
TET 1	Abdullah Kaka	Substation Engineer (Civil)
TET 2	Bilal Hajee	Substation Engineer (Civil)

3.4 TECHNICAL RETURNABLES

The following documents shall be submitted when tendering:

- Comprehensive technical schedule.
- Detailed method statement for all civil works to be undertaken.
- If applicable, list of all subcontractors with detail information regarding types of work to be undertaken as well as plant and machinery in the possession of the subcontractor.
- Detailed method of concrete mix.

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- e) List of all plant and machinery in the possession of the contractor. If applicable, any agreements with hiring companies and the complete list of plant and machinery available from the hiring company. If applicable, complete details regarding the hiring company.
- f) Detail list of information to all material suppliers.
- g) 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.
- h) 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.
- i) List of all tools and equipment to be used

3.5 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. Percentage weighting summary figures is indicated in Table 4 below. Each section carries a 25% weighting towards the final score. Please check appendix for sub criteria.

Table 4: Qualitative Technical Evaluation Criteria

1A. Civil Works A: Terrace, Roads, Drainage and General					
Item No.	Item	Weighted			
		Weight (W)	Actual (A)	Max (M)	Result(R) (A / M) X W
A1.1	Construction program/Technical Schedule (A programme with the order in which work will be done including time durations of activities from the start to the end).	10		5	
A1.2	Construction method statements (A short description of how the main activities will be constructed).	20		5	
A1.3	List of subcontractors (Company name and activity it will perform).	10		5	
A1.4	Method of concrete mix (Batching plant or Concrete ready mixed from other sources, Curing procedure).	10		5	
A1.5	List of plant and machinery (List the plant and machinery for each activity. The plant for the Terrace construction will be different from the plant for the road construction)	10		5	
A1.6	Material suppliers (Terrace construction, Concrete, Water, drainage etc.).	10		5	

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A1.7	Relevant company experience. (List of relevant and comparable projects undertaken and completed by company in the past 5 years. The list shall include: The number of projects, Project scope of work, project value, Role(contractor/subcontractor/sub contracted), Relevance of projects to Eskom scope requirements, Letters of reference(clients), Substation name, Completion date, Client contact person and details,), The contractor shall further include any concessions made during each project execution	15		5	
A1.8	Qualifications and experience of key personnel (List of key personnel, Include CV's for each employee detailing: Relevant project specific work experience, Academic Qualifications. Proof of registration with statutory and/or professional bodies, Roles, Years of relevant experience	15		5	
Result (R) = (A / M) X W					
Subsection = sum of Result (R)					%
Comments					

1B. Civil Works B: Plinths, Foundations and Trenches					
Item No.	Item	Weighted			
		Weight (W)	Actual (A)	Max (M)	Result(R) (A / M) X W
B1.1	Construction program/Technical Schedule (A programme with the order in which work will be done including time durations of activities from the start to the end).	15		5	
B1.2	Construction method statements (A short description of how the main activities will be constructed).	25		5	
B1.3	List of subcontractors (Company name and activity it will perform).	15		5	
B1.4	Method of concrete mix (Batching plant or Concrete ready mixed from other sources, Curing procedure).	15		5	
B1.5	List of plant and machinery (List the plant and machinery for each activity. The plant for the plinth construction will be different from the plant for the trenches construction)	15		5	
B1.6	Material suppliers (Reinforcement construction, Concrete, Water, drainage etc.).	15		5	
Result (R) = (A / M) X W					
Subsection = sum of Result (R)					%
Comments					

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2. Steelworks: Columns and Beams, Equipment Support Structures, Floodlighting Masts					
Item No.	Item	Weighted			
		Weight (W)	Actual (A)	Max (M)	Result(R) (A / M) X W
2.1	Construction program/Technical Schedule (A programme with the order in which work will be done including time durations of activities from the start to the end).	15		5	
2.2	Construction method statements (A short description of how the main activities will be constructed).	20		5	
2.3	List of plant and machinery (List the plant and machinery for each activity. The plant will be differ for different activities)	20		5	
2.4	Method of steel erection (Steel work has a specific method in which it must be erected).	30		5	
2.5	List of subcontractors (Company name and activity it will perform).	15		5	
Result (R) = (A / M) X W					
Subsection = sum of Result (R)					%
Comments					

3: Fencing and Earthmat					
Item No.	Item	Weighted			
		Weight (W)	Actual (A)	Max (M)	Result(R) (A / M) X W
3.1	Relevant company experience. (List of relevant and comparable projects undertaken and completed by company in the past 5 years. The list shall include: The number of projects, Project scope of work, project value, Role(contractor/subcontractor/sub contracted), Relevance of projects to Eskom scope requirements, Letters of reference(clients), Substation name, Completion date, Client contact person and details.), The contractor shall further include any concessions made during each project execution.	25		5	
3.2	Qualifications and experience of key personnel (List of key personnel, Include CV's for each employee detailing: Relevant project specific work experience, Academic Qualifications. Proof of registration with statutory and/or professional bodies, Roles, Years of relevant experience).	20		5	

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3.3	Capacity to carry out work (Organogram of technical and project management, technical and project management experience, number of technical personnel (Technicians, Artisans, Semi-skilled), company experience (number of years).	20		5	
3.4	Test and measurements methods (Procedures submitted, Procedures relevant, Procedures comprehensive, procedures for the various tests and measurements stated in this specification: Earth resistance measurements, Earth continuity measurements.	10		5	
3.5	Tools and Equipment (list of tools and equipment submitted, Adequacy of tools and equipment).	10		5	
3.6	Test and calibration certificates of lifting equipment (Copies and validity of test certificates, copies and validity of calibration certificates).	5		5	
3.7	Method of control of free issue materials.	5		5	
3.8	Construction program/Technical Schedule (A programme with the order in which work will be done including time durations of activities from the start to the end).	5		5	
Result (R) = (A / M) X W					
Subsection = sum of Result (R)				%	
Comments					

FINAL TOTAL SCORE EQUALS SUM OF SUBSECTIONS 1 to 3 AS A PERCENTAGE	
	%

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3.6 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.6.1 Risks

Table 5: Acceptable Technical Risks

Risk	Description
1. None.	

Table 6: Unacceptable Technical Risks

Risk	Description
1. Contractors who do not have the relevant experience.	

3.6.2 Exceptions / Conditions

Table 7: Acceptable Technical Exceptions / Conditions

Risk	Description
1. None.	

Table 8: Unacceptable Technical Exceptions / Conditions

Risk	Description
1. None.	

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation
Zinhle Mkhize	Substation Engineering, Senior Engineer
Andile Maneli	Substation Engineering, Middle Manager
Phineas Tlhatlhetji	Substation Engineering, Senior Manager

5. REVISIONS

Date	Rev.	Compiler	Remarks
25 January 2019	1	Abdullah Kaka	First issue
31 June 2019	2	Abdullah Kaka	Appendix with scoring sub criteria added

6. DEVELOPMENT TEAM

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

- None

7. ACKNOWLEDGEMENTS

- None

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Appendix

The following tables outline the sub criteria used during evaluations.

Construction Program/Technical Schedule (A1.1, B1.1, 2 & 3.8)	
Type of Information	Scoring
Technical schedule that has all tasks listed, start date, end dates, key milestones, realistic construction periods and all tasks complied in a Gantt chart.	5
Technical schedule that has tasks listed, start date, end dates, realistic construction periods and all tasks complied in a Gantt chart but missing some information on key milestones and tasks.	4
Technical schedule that has tasks listed, start date, end dates, complied in a Gantt chart but missing some information on key milestones and tasks but has unrealistic construction periods.	2
Technical schedule that has minimal tasks, not complied in Gantt chart, unrealistic dates and missing all milestones/no information.	0

Construction Method Statement (A1.2, B1.2 & 2.2)	
Type of Information	Scoring
Construction method statement that contains all information on legal compliance, roles and responsibilities, training and qualifications, resources, personal protective equipment, environmental concerns, health and safety concerns and has a comprehensive construction methodology.	5
Construction method statement that contains information on environmental concerns, health and safety concerns and has a comprehensive construction methodology.	4
Construction method statement that contains information on a basic construction methodology.	2
Construction method statement that contains minimal/information no information.	0

List of Subcontractors (A1.3, B1.3 & 2.5)	
Type of Information	Scoring
List of relevant subcontractors for all tasks as well as information on previous projects, location and contact information. If no subcontractor will be used this must be stated.	5
List of relevant subcontractors with contact information and location.	4
List of subcontractors with no other information.	2
List of irrelevant subcontractors/no information.	0

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Method of concrete Mix (A1.4 & B1.4)	
Type of Information	Scoring
All details of batching plant with calibration and permit certificates if applicable. For ready mix concrete, all details of company including location and contact details.	5
Batching plant details or Ready mix company stated with no additional details.	4
Incomplete information on batching plant equipment	2
No information supplied	0

List of Plant and Machinery (A1.5, B1.5 & 2.3)	
Type of Information	Scoring
Full list of all relevant plant and machinery (project specific) to be used with all certificates as well as information on hiring company if applicable.	5
List of relevant plant and machinery (project specific) with basic information on hiring company if applicable.	4
Basic list of relevant plant and machinery.	2
Irrelevant list plant and machinery or no information.	0

Material Suppliers (A1.6 & B1.6)	
Type of Information	Scoring
Comprehensive list of relevant material suppliers (project specific) with all information regarding suppliers certificates, location and contact information.	5
List of relevant material suppliers (project specific) with basic information.	4
Basic list of materials suppliers.	2
Irrelevant list of material suppliers or no information.	0

Company Experience (A1.7 & 3.1)	
Type of Information	Scoring
List of substation civil projects undertaken with completion certificates or list of civil projects greater than R20million undertaken in the past 5 years with all completion certificates.	5
Relevant list of civil projects undertaken below R20million with completion certificates	4

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Undertaken small civil works projects with completion certificates.	2
No information	0

Qualifications and Experience (A1.8 & 3.2)	
Type of Information	Scoring
Detailed list of key personnel which includes CV's, relevant project experience, academic qualifications (certificates only), proof of registration with statutory bodies (certificates only) and years of relevant experience.	5
List of key personnel that include CV's and relevant project experience, academic qualifications (certificates only).	4
List of key personnel with basic CV's	2
Irrelevant list of personnel/No information	
PS: Key personnel = Project managers, Site Supervisors, Foreman, Health and Safety and Quality.	

Method of Steel Erection (2.4)	
Type of Information	Scoring
Detailed method statement of steel erection including all information regarding, steel fixers, storage, personal protective equipment and health & safety.	5
Detailed method statement of steel erection but missing some information regarding storage, personal protective equipment.	4
Basic method statement on steel erection.	2
No information or irrelevant method statement	0

List of Tools and Equipment (3.5)	
Type of Information	Scoring
Full list of all relevant tools and equipment (project specific) to be used and all information on hiring company if applicable.	5
List of relevant tools and equipment (project specific) with basic information on hiring company if applicable.	4
Basic list of relevant tools and equipment.	2
Irrelevant list tools and equipment or no information.	0

Capacity to Carry Out Work (3.3)	
Type of Information	Scoring
High level organogram of technical and project management structure.	5

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Technical experience information on technicians, artisans or semi-skilled personnel.	
General company experience	
List of relevant tools and equipment (project specific) with basic information on hiring company if applicable.	4
Basic list of relevant tools and equipment.	2
Irrelevant list tools and equipment or no information.	0

Test and Measurements (3.4)	
Type of Information	Scoring
Comprehensive method statements on all test and procedures to be undertaken.	5
Detailed method statements on all test and procedures to be undertaken.	4
Basic method statements on all test and procedures to be undertaken.	2
Irrelevant method statements/ No information.	0

Test and Calibration Certificates of Lifting Equipment (3.6)	
Type of Information	Scoring
Comprehensive procedures on all test as well as certified calibration certificates.	5
Detailed procedures on all test and uncertified calibration certificates.	4
Basic procedures on all test and no certificates.	2
Irrelevant procedures/ No information.	0

Method of Control of Free Issue (3.7)	
Type of Information	Scoring
Comprehensive Control Document on free issue.	5
Detailed Control Document on free issue.	4
Basic Control Document on free issue.	2
No information.	0

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