

Title: **Tender Technical Evaluation
Strategy for Boiler and Turbine
LV Boards Upgrade
(Withdrawable to Fixed Pattern
Switchgear)**

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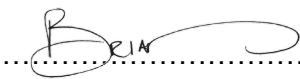
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Date: 24/05/2022

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1. INTRODUCTION

Arnot power station is approximately 50 kilometres from Middelburg town in Mpumalanga and was built as a modern 6-pack station

There is a deficiency on the Units low voltage (LV) switchgear; the withdrawable circuits/units that are larger than 7.5kW are vulnerable to failure during normal plant operation.

These are heavy and tend to misalign when racked in position thus damage the contact fingers to the busbar droppers, which then create a risk of hot connections.

As mitigation, the project is aimed at addressing the deficiency by changing the large withdrawable circuits/units to fixed pattern circuits/units.

2. SUPPORTING CLAUSES

2.1 SCOPE

The scope of work is Design, manufacture, factory inspection, delivery to site, offloading, removal of existing tiers/panels, moving new fixed pattern tiers/panels into position, cable & busbar connections, commissioning and signing of the completion certificates.

- (a) Boiler Board tiers/panels
- (b) Turbine Essential and Non-Essential Board tiers/panels

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 Arnot power station.

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] Document that detailed scope work i.e. NEC works info

2.2.2 Informative

- [1] 32-1034 Eskom Procurement and Supply Management Procedure

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2.3 DEFINITIONS

Definition	Description
AEG/GE SA Plus	Three-phase, metal enclosed, air insulated Low voltage switchgear and controlgear ASSEMBLY, factory-assembled with fixed type tiers/panels, tested and suitable for indoor applications.
Enquiry	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.

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
kW	Kilowatt
LV	Low Voltage
SANS	South African National Standard
TET	Technical Evaluation Team
QCP	Quality Control Plan

2.5 ROLES AND RESPONSIBILITIES

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

The Internal Audit Procedure - 474-59, shall monitor this process

2.7 RELATED/SUPPORTING DOCUMENTS

240-48929482 Tender Engineering Evaluation Procedure

3. TENDER TECHNICAL EVALUATION STRATEGY

3.1 TECHNICAL EVALUATION THRESHOLD

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

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Score	(%)	Definition
5	100	Compliant <ul style="list-style-type: none">• Meet technical requirement(s) and;• No foreseen technical risk(s) in meeting technical requirements.
4	70	Compliant with Associated Qualifications Meet technical requirement(s) with; <ul style="list-style-type: none">• Meet technical risk(s) and /or;• Acceptable exceptions and /or;• Acceptable conditions.
2	40	Non-Compliant <ul style="list-style-type: none">• 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

3.2 TET MEMBERS

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	Brian Mokoena	Senior Technician
TET 2	Dyke Monyane	Chief Technologist
TET 3	Makwena Mathobela	Project Coordinator

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3.3 MANADATORY TECHNICAL EVALUATION CRITERIA

Table 2: Mandatory Technical Evaluation Criteria

	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria
1.	The bidder shall provide evidence in a form of type test report for AEG/GE SA Plus LV Switchgear and proof of evidence for similar work done by means of referrals (at least one project on the AEG/GE SA Plus) in the form of company names, contact person & details.	Technical Specification	Maintain integrity of the Board and or LV Switchgear

3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA

Table 3: Qualitative Technical Evaluation Criteria

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)
1.	Electrical			100
	1.1	The quality control plan (QCP) for retrofitting new tiers/panels on AEG/GE SA plus LV Switchgear	Tender Returnable	30
	1.2	Complete general arrangement (GA) diagram re-drawn to reflect the upgraded tiers/panels for at least a single unit i.e. Unit 4 in PDF format	Tender Returnable	20
	1.3	Typical routine test certificate for AEG/GE SA plus	Tender Returnable	15
	1.4	Confirm Tier/panel will fit in the space of the existing panel (Tier dimensions to be reflected on the GA diagram)	Technical Specification	10
	1.5	Confirm conductors in the fault-free zone are according to specification	Technical Specification	10
	1.6	Confirm control conductor sheath to be 1.5 mm ² multi-strand Black for AC circuits & Grey for DC circuits	Technical Specification	5
	1.7	Confirm assembly colour to be G29: Light grey in accordance to SANS 1091	Technical Specification	5
	1.8	Confirm robust construction of door latches & that they are pad-lockable	Technical Specification	5
				TOTAL: 100

3.5 TET MEMBER RESPONSIBILITIES

Table 4: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3
1	X	X	X
Qualitative Criteria Number	TET 1	TET 2	TET 3
1.1	X	X	X
1.2	X	X	X
1.3	X	X	X
1.4	X	X	X
1.5	X	X	X
1.6	X	X	X
1.7	X	X	X
1.8	X	X	X

3.6 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.6.1 Risks

Table 5: Acceptable Technical Risks

Risk	Description
1.	N/A

Table 6: Unacceptable Technical Risks

Risk	Description
1.	Inadequate Design experience
2.	Inadequate Tender returnable

3.6.2 Exceptions / Conditions

Table 7: Acceptable Technical Exceptions / Conditions

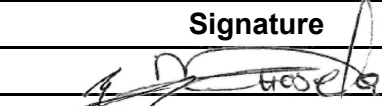


Risk	Description
1.	N/A

Table 8: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	N/A

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
Makwena Mathobela	Project Coordinator	
Martin Gumbi	Middle Manager Projects	
Mduduzi Mhlanga	Middle Manager Finance	

5. REVISIONS

Date	Rev.	Compiler	Remarks
May 2022	1	Brian Mokoena	Original Document

6. DEVELOPMENT TEAM

- Electrical Engineering Department

7. ACKNOWLEDGEMENTS

- Dyke Monyane - Chief Technologist input to the document.

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