Eskom	Strategy	Engineering

Title: **Tender Technical Evaluation Strategy – Maintenance of Hydrogen Plant at Camden Power Station**

Unique Identifier:	**229-T2137**
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	Functional Responsibility	Authorized by
.....	..... PP	.....
A. Khumalo	**O. Tilodi**	**M. Mathabatha**
Auxiliary System Engineer	**Auxiliary Engineering Manager**	**Engineering Manager**
Date: 07/03/2023	Date: 07/03/2023	Date: 14/03/2023

CONTENTS

TABLES

1. INTRODUCTION

Hydrogen is used for cooling in Camden Power Station, mainly cooling on the generators. In order to ensure a continuous and reliable supply of hydrogen, a preventive maintenance scheme must be followed as prescribed by the OEM.

Every Hydrogen generators using water electrolysis process is designed from an integrated safety perspective:

- **1st priority:** elimination of actions likely to create a hazardous situation.
- **2nd priority:** prevention of hazardous situations by integrated safety features
- **3rd priority:** mitigation of the effects of an occurring incident.

Therefore: Any contractor wishing to tender for this scope shall comply to ISO 22734-1: Hydrogen generators using water electrolysis process.

2. THIS REPORT WILL FOCUS ON THE EVALUATION OF SUPPORTING CLAUSES

2.1 SCOPE

This document covers the different aspects that will be evaluated and scored by the multi-disciplinary Technical Evaluation Team (TET) to complete the technical evaluation of the Maintenance of the Hydrogen Plant at Camden Power station enquiry. The team members are listed and appointed in this document along with their responsibilities. The document also describes the acceptable and unacceptable risks and qualifications and/or conditions.

Once the Technical Evaluation Strategy is authorized no changes will be made to the evaluation criteria without appropriate authorization.

2.1.1 Purpose

The purpose of this tender technical evaluation strategy is to define the Mandatory Evaluation Criteria, Qualitative Evaluation Criteria and Technical Evaluation Team (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 is applicable to the Camden Power Station Maintenance of Hydrogen Plant enquiry.

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 Policy

2.3 DEFINITIONS

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
CV	Curriculum Vitae
ECSA	Engineering Council of South Africa
TET	Technical Evaluation Team

2.5 ROLES AND RESPONSIBILITIES

As per 240-48929482: Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

N/A

3. TENDER TECHNCIAL EVALAUTION 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%.

Table 1: Qualitative Evaluation Criteria Scoring Table

Score	(%)	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**
Note 1: The scoring table does not allow for scoring of 1 and 3. **Note 2**: Foreseen acceptable and unacceptable risk(s), exceptions and conditions shall be unambiguously defined in the relevant Tender Technical Evaluation Strategy.		

3.2 TET MEMBERS

Table 2: TET Members

TET number	TET Member Name	Designation
TET 1	AL Khumalo	Auxiliary System Engineer – Camden
TET 2	Yamkela Mgwebi	Auxiliary System Engineer – Camden
TET 3	Giel Kruger	Senior Supervisor Tech Maintenance - Camden

3.3 MANDATORY TECHNICAL EVALUATION CRITERIA

Table 3: Mandatory Technical Evaluation Criteria

	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable
1.	Qualified Electrician	Certified copy of Training for Electrician from Hydrogenics or Cummins.
2.	Qualified Mechanical Fitter	Certified copy of Training for Mechanical Fitter from Hydrogenics or Cummins.

3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA

Table 4: Qualitative Technical Evaluation Criteria

QUALITATIVE TECHNICAL CRITERIA DESCRIPTION	REFERENCE TO TECHNICAL SPECIFICATION / TENDER RETURNABLE	CRITERIA WEIGHTING (%)	SCORE SCALE			
			FLOOR	KICK IN	AVERAGE	CEILING
CRITERIA 1: TECHNICAL		**50**	**0=0%**	**2=40%**	**4=80%**	**5=100%**
1.1 Procedures	Contractor to submit the following procedures:					
	1.1.1 Checking the functionality of the temperature switches and level switches.	7,5	Nonresponsive.	Procedure generic.	Procedure detailed but didn't include some of the aspects.	Procedure very detailed/ covered all the aspects.
	1.1.2 Checking and cleaning the electrolyzer solenoid valve.	7,5	Nonresponsive.	Procedure generic.	Procedure detailed but didn't include some of the aspects.	Procedure very detailed/ covered all the aspects.
	1.1.3 Checking the torque on the cell stacks.	7,5	Nonresponsive.	Procedure generic.	Procedure detailed but didn't include some of the aspects.	Procedure very detailed/ covered all the aspects.
	1.1.4 Replacing and calibrating the safety relief valves.	7,5	Nonresponsive.	Procedure generic.	Procedure detailed but didn't include some of the aspects.	Procedure very detailed/ covered all the aspects.
	1.1.5 Replacing solenoid and pneumatic valves.	7,5	Nonresponsive.	Procedure generic.	Procedure detailed but didn't include some of the aspects.	Procedure very detailed/ covered all the aspects.

1.2 Description of workshop equipment required to execute the scope.	Contractor to submit the followingdocuments: 1.2.1 Provide a controlled list/ register of own equipment and tools expected for the use ofany repairing/maintenance work	7,5	Totally deficient or Non responsive	Submitted listed has crucial equipmentt or toolsmissing.	Detailed list provided but not sufficient to execute scope	List of tools and equipment submitted is comprehensive and cover every equipment required to execute the scope.
1.3Componen ts Handling ,transportation and storage procedure	Provide a transportation, handling, storageand tagging and preservation procedure.	5	Procedure submitted is very basic and two or more of the following item arenot covered 1. Transportatio n 2. Handling 3.Storage & tagging 4.Preservation	Procedure submittedis very basic andone of thefollowing is not covered 1. Transpo rtation 2. Handling 3.Storage& tagging 4.Preservation	Detailed Procedure submitted and covered transportation, handling, storage and tagging and preservation.	Comprehensive procedure submitted andcovered transportation, handling, storage and tagging and preservation

QUALITATIVE TECHNICAL CRITERIA DESCRIPTION	REFERENCE TO TECHNICAL SPECIFICATION / TENDER RETURNABLE	CRITERIA WEIGHTING (%)	SCORE SCALE			
			FLOOR	**KICK IN**	**AVERAGE**	**CEILING**
CRITERIA 2: INDUSTRY INVOLVEMENT		**50**	**0=0%**	**2=40%**	**4=80%**	**5=100%**
2.1 Experience in the Maintenance of Hydrogen Generating Plant using water Electrolysis process for a minimum combined period of greater or equals to 36 months.	The following evidence is required as previous experience: 1. Signed contract and a Completion certificate 2. Purchase Orders and a completion Certificate The above shall include: • Description of the work performed ➢ Name of company where maintenance was executed ➢ Maintenance scope ➢ Maintenance period	50	Less than one year relevant experience submitted.	One-year relevant experience submitted.	Two years relevant experience submitted.	Three or more years relevant experience submitted.

3.5 TET MEMBER RESPONSIBILITIES

Table 5: TET Member Responsibilities

Mandatory Criteria Number	**TET 1**	**TET 2**	**TET 3**
1-2	X	X	X
Qualitative Criteria Number	**TET 1**	**TET 2**	**TET 3**
Section 1 - Section 3	X	X	X

X – Mandatory

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.	No information on adherence to Eskom Standards provided and ISO 22734-1

3.6.2 Exceptions / Conditions

Table 8: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	Professional Technologist is utilised and not Professional Engineer as deemed by ECSA

Table 9: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	Failure to meet plant performance requirements in terms of safety, reliability and availability
2.	

4. REVISIONS

Date	Rev.	Compiler	Remarks
December 2022	1	A. Khumalo	Original Document

5. DEVELOPMENT TEAM

- Al Khumalo
- Yamkela Mgwebi
- Giel Kruger

6. ACKNOWLEDGEMENTS

- N/A