Eskom	Strategy	Eskom Generation

Title: **Tender Technical Evaluation Strategy for SO_3 Process Heater Supply and Maintenance Support**

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Compiled by	Functional Responsibility	Authorised by
……..	……..	……..
W. Masemola	**R. Mahlaku**	**R. Nelwamondo**
Electrical Engineer	**Senior Technologist**	**Engineering Manager**
Date: 2022/03/16	Date: 2022/03/16	Date: 2022/03/16

Supported by

……..

T. Tsumane

Electrical Manager

Date: 16.03.2022

EXECUTIVE SUMMARY

This document describes the process to be followed in performing technical evaluations during the tender evaluation for the supply and maintenance support for the SO3 process heaters (SO3 PH) at KPS. The evaluation of tenders will be based on the tenderer's ability to meet the Mandatory Evaluation Criteria and Qualitative Evaluation Criteria requirements specified for this project. A weighted score card approach will be used to evaluate the tenders against the Employer's requirements.

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1. INTRODUCTION

Kriel Power Station (KPS) is one of Eskom's coal fired power stations in the coal fleet. The station consists of six units, and generates approximately 3000 MW to the Eskom national grid. The station has been in operation since 1979. Each generator is rated 550MVA. The generators have two pole rotors excited from a static excitation system. The static excitation system uses the generator's stator 18kV output voltage, which is then stepped-down to 680V AC via three single-phase excitation transformers. The 680V AC then goes through four parallel thyristor bridge converters where it is converted to direct current (DC) which is fed to the rotor slip rings via carbon brushes.

This document describes the process to be followed in performing technical evaluations during the tender evaluation for the supply and maintenance support for the SO_3 process heaters (SO3 PH) at KPS. The evaluation of tenders will be based on the tenderer's ability to meet the Mandatory Evaluation Criteria and Qualitative Evaluation Criteria requirements specified for this project. A weighted score card approach will be used to evaluate the tenders against the Employer's requirements.

240-48929482: Tender Technical Evaluation Procedure will followed as the governing process.

2. SUPPORTING CLAUSES

2.1 SCOPE

The scope of this document is to capture the tender technical evaluation strategy for the supply and maintenance support for the SO3 process heaters (SO3 PH) at KPS.

Table 1: Scope of work for the supply and support of SO_3 heaters for a 5 years period.

Supply & Service of SO3 Process Heater at Kriel Power Station for a period of five years						
	Description	**Stock**	**Unit**	**Qty**	**Rate**	**Amount**
1	SO3 Heater	53821	Each	15		-
2	System Maintenance		No	30		-
3	Safety File & Medicals		Yearly	3		-
4	Training **(10 Sessions)**		Sum	1		-
	TOTAL					-

2.1.1 Purpose

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

2.1.2 Applicability

This evaluation is applicable to Generation – Kriel 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 Technical Evaluation Procedure

[2] GGSS 0526

[3] 240-167118763 - Kriel Power Station SO3 Process Heater Supply and Service Scope of Work

2.2.2 Informative

[4] 240-53113685: Design Review Procedure

[5] 240-53114026: Project Engineering Change Management Procedure

[6] 240 – 53114026 Engineering Change Management Procedure

2.3 DEFINITIONS

Definition	Description
Contractor/Tenderer	Refers to the corporation appointed to perform the works
Employer	Refers to Eskom Holdings State Owned Company
Eskom Plant Engineering	Refers to the Eskom Engineering team who will perform the reviews and provide technical assistance for the work performed by the appointed Contractor.
Specification	The document/s forming part of the contract in which the methods of executing the various items of work to be done is described, as well as the nature and quality of the materials to be supplied and it includes technical schedules and drawings attached thereto as well as all samples and patterns
The Client	The end user will be Eskom who will be represented by Kriel Power Station throughout the duration of the Project.

2.3.1 Classification

a. **Confidential:** the classification given to information that may be used by malicious/opposing/hostile elements to **harm** the objectives and functions of Eskom Holdings Limited.

2.4 ABBREVIATIONS

Abbreviation	Description
APP	Approved Professional Person
ECSA	Engineering Council of South Africa
EDWL	Engineering Design Work Lead
KPS	Kriel Power Station
LDE	Lead Discipline Engineer
LPS	Low Pressure Services
SHEQ	Safety, Health, Environment and Quality
SO3 PH	Sulphur Trioxide Process Heater
TET	Technical Evaluation Team

2.5 ROLES AND RESPONSIBILITIES

As per 240-48929482: Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

240-48929482: Tender Technical Evaluation Procedure

2.7 RELATED/SUPPORTING DOCUMENTS

240-167118763 - Kriel Power Station SO3 Process Heater Supply and Service Scope of Work

3. TENDER TECHNCIAL EVALAUTION STRATEGY

3.1 TECHNICAL EVALUATION METHOD

The basic steps for a technical evaluation must be followed as per the Tender Technical Evaluation Procedure.

A two stage Technical Evaluation Strategy is set out.

Stage 1: Mandatory Technical Evaluation Criteria (gatekeepers) are ‘must meet’ criteria. These criteria shall not be weighted or point scored, but shall be assessed on a Yes/No basis as to whether or not the criteria are met. An assessment of ‘No’ against any criterion shall technically disqualify the tenderer and the tenderer shall not be further evaluated against Qualitative Criteria.

Stage 2: Qualitative Technical Evaluation Criteria are weighted evaluation criteria used to identify the highest technically ranked tenderer after determining that all the Mandatory Evaluation Criteria have been met. The Qualitative Evaluation Criteria are weighted to reflect the relevant importance of each criterion.

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

A weighted scorecard approach is used to evaluate the technical compliance of the tenders against the specifications.

The evaluation of the tender submission will be based on the tenderer's ability to meet the Engineering requirements.

The scoring method will be as follows:

SCORE	PERCENTAGE	DESCRIPTION
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**

The evaluation scores will be weighted as follows:

Evaluation score (100%)	
Engineering	100%
TOTAL (100%)	
Overall minimum threshold for qualification (70%)	

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 2: Core TET Members

TET number : Section to be evaluated	TET Member Name	Designation
TET 1: Electrical Engineering	W Masemola	System Engineer
TET 2: Electrical Engineering	R. Mahlaku	System Engineer

3.4 MANDATORY TECHNICAL TENDER TECHNICAL CRITERIA

Mandatory Technical Criteria Number	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria	Compliant (Yes)/ Non-Compliant (No)	Comment
1	Tenderers shall provide details of at least two (2) successfully implemented supply project and two (2) completed maintenance support projects in the last five (5) years related to the SO3 PH supply and maintenance support at any Site similar to KPS.	240-167118763 - Kriel Power Station SO3 Process Heater Supply and Service Scope of Work	KPS needs assurance that supplier has previous experience in this field, which involves the supply and maintenance support for all the unitised SO3 PH at KPS.		
2	Tenderer shall be capable of providing local technical support for a minimum of five (5) years, with assurance to this effect provided in writing with the tender submission.	240-167118763 - Kriel Power Station SO3 Process Heater Supply and Service Scope of Work	KPS needs assurance that supplier is able to provide service and support for the system as and when required, over a five (5) years period.		
3	Where tenderer of equipment is not the Original Equipment Manufacturer (OEM), the license agreements with OEM, their distributors and/or agents shall be in place, with proof of this provided by the tenderer in writing with the tender submission.	240-167118763 - Kriel Power Station SO3 Process Heater Supply and Service Scope of Work	KPS needs assurance that contracted supplier is able to provide a required and accurate solution, as well as service and support for the system, including but not limited to a situation where a supplier subcontracts any work related to the design,		

			construction/installation and commissioning of the SO3 PH.		
4	The design of the SO3 PH shall be a reliable, available and maintainable. A comprehensive design and operating philosophy shall be provided with the tender submission.	240-167118763 - Kriel Power Station SO3 Process Heater Supply and Service Scope of Work	KPS needs assurance that all the SO3 PH is always reliable, available and maintainable, and affords full access to all stakeholders and end-users.		

3.5 QUALITATIVE TECHNICAL EVALUATION CRITERIA

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	**Engineering and Human Resources**			**100**	
	1.1	**Design and Execution Plan/ Method Statement** Complete design and execution plan/method statement for the works demonstrating understanding of the scope and includes the following as a minimum: • Scope to be undertaken • Sourcing of materials for the works • Methodology and approach including	240-167118763 - Kriel Power Station SO3 Process Heater Supply and Service Scope of Work	40	

		compliance with required SANS and/or other applicable standards and the technical specification • Comprehensive design, construction and installation method statement of the solution proposed for KPS. Scoring Criteria: 5 = 100% = COMPLIANT • Technical proposal details fully how scope will be met and provides comprehensive methodology of approach 4 = 80% = COMPLIANT WITH ASSOCIATED QUALIFICATIONS • Technical proposal describes how scope will be met and includes minor details on methodology of approach 2 = 40% = NON-COMPLIANT • Technical proposal does not contain methodology of approach but contains high level descriptions of how the works will be conducted OR Technical proposal reiterates the Employer's scope of works 0 = 0% = NON RESPONSIVE Technical proposal does not contain methodology of approach or a description of how the works will be conducted			

	1.2	**Project Schedule** • The CPM (Critical path method) technique is used for programme and planning milestones and key dates. • The programme has in it, hold points for approving of the works by the Employers professional team (i.e. key milestones are incorporated into the programme) • The works is complete within accepted durations that are in consistence within the start and hand/over completion dates provided for in the contract data Scoring Criteria: 5 = 100% = COMPLIANT • Schedule is fully compliant with the three details mentioned above 4 = 80% = COMPLIANT WITH ASSOCIATED QUALIFICATIONS • Schedule describes lacks one of the 3 details mentioned above 2 = 40% = NON-COMPLIANT • Schedule lacks 2 of the 3 details specified above. 0 = 0% = NON RESPONSIVE • Schedule not included	240-167118763 - Kriel Power Station SO3 Process Heater Supply and Service Scope of Work	10	
		Key Resource/Human Resource Requirements:			

	1.3	CV's of the proposed key resources each having a minimum of 5 years' relevant experience (manager, engineer/technician, site foreman). Manager to be professionally registered with SACPCMP or similar professional body. Copy of valid certificate to be provided. Engineers/Technician to be professionally registered with ECSA. Copy of valid certificate to be provided. Letter of intent signed by both parties where subcontractor to be used for resources else CV not considered Organogram of site team to be provided • Site Manager or Supervisor (1 CV Minimum) • Skilled Subject matter expert (2 CVs Minimum) • Artisan (2 CVs minimum) Scoring Criteria: 5 = 100% = COMPLIANT • Meet technical requirement(s)/AND • No foreseen technical risk(s) in meeting technical requirements • At least 5 years relevant experience for resources • Valid Professional registration certificates submitted for all key personnel	240-167118763 - Kriel Power Station SO3 Process Heater Supply and Service Scope of Work	30	

		• Organogram submitted clearly indicating all key project personnel and associated roles. 4 = 80% = COMPLIANT WITH ASSOCIATED QUALIFICATIONS • At least 5 years relevant experience for resources. • Valid Professional registration certificates submitted for all key personnel • No project organogram submitted but all CV's of key personnel have been submitted indicating their role in the project 2 = 40% = NON-COMPLIANT • Less than 5 years relevant experience for resources • Valid Professional registration certificates not submitted for all key personnel 0 = 0% = NON RESPONSIVE • No submissions made			
	1.4	**Quality Management System/Plan:** The Contractor is to provide a comprehensive quality control plan to be used in the execution of the works. ISO9001:2015 certificate	240-167118763 - Kriel Power Station SO3 Process Heater Supply and Service Scope of Work	20	

		Scoring Criteria: 5 = 100% = COMPLIANT • A comprehensive quality management system/plan is provided with all steps and intervention points for the works 4 = 80% = COMPLIANT WITH ASSOCIATED QUALIFICATIONS • Minor details of the quality control plan is missing 2 = 40% = NON-COMPLIANT • Major details of the quality control plan were missing OR Technical proposal reiterates the Employer's scope of works 0 = 0% = NON RESPONSIVE Quality management system/plan not provided			

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation
L Tsumane	Electrical Engineering Manager
R. Mahlaku	Senior Technologist

5. REVISIONS

Date	Rev.	Compiler	Remarks
March 2022	1	MW Masemola	Technical Evaluation strategy for 240-167118763 - Kriel Power Station SO3 Process Heater Supply and Service Scope of Work

6. DEVELOPMENT TEAM

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

W Masemola

R Mahlaku

7. ACKNOWLEDGEMENTS

Thankful to the review team