

Strategy

Engineering

Title: Tender Technical Evaluation
Strategy for High Level Dam Si

Strategy for High Level Dam Silt

removal

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1. INTRODUCTION

Duvha Power station has 2 ash water returning dams named the low-level dam (LLD) and the high-level dam (HLD). The dams are used as a storage facility of the ash water and contaminated water at the station. The LLD is the first receiving facility after water and ash has been separated, then water gets pumped to the HLD via the ash water return (AWR) pumps. The water gets drawn off the HLD via the sluice booster pumps to the ash plant to be used for the next ashing cycle.

The HLD is consisted of four compartments which are named compartments 1 to 4. Compartment 1 and 3 has a capacity of 12 000m³ each. Compartment 2 and 4 has a capacity of 89 000m³ each. Compartments 1 and 3 have 1m suction pipeline for the process pumps which are located west of the HLD. Compartment 2 and 4 have 1 m suction line for the booster pumps which are located east side of the HLD.

During the ash depositing process at the ash dam (AD), some of the ash particles passes through and settle in the silt trap, LLD and HLD.

The tender evaluation strategy is developed for the purpose of obtaining a technically competent contractor to execute the scope of work for the cleaning or desilting of Duvha power station High level dam (HLD) compartments 2 & 4 to restore the storage capacity of the dam as well as the repair of compartment 3 dam wall which is damaged.

2. SUPPORTING CLAUSES

2.1 SCOPE

This document covers the technical evaluation criterion to be utilised for the process of evaluating the tender submissions for Cleaning of HLD and repairs of compartment 3 dam wall. The criterion consists of mandatory requirements and qualitative requirements.

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 is applicable to Duvha 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] 32-1034 Eskom Procurement and Supply Chain Management Procedure
- [3] 240-44682850: PCM Provide Engineering During Project Sourcing
- [4] 32-1033: Eskom Procurement and Supply Chain Management Policy

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2.2.2 Informative

[5] None

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		
AD	Ash Dam		
AWR	Ash Water Return		
HLD	High Level Dam		
LLD	Low Level Dam		
PCM	Process Control Management		
TET	Technical Evaluation Team		

2.5 ROLES AND RESPONSIBILITIES

240-168966153 Generation Technical Tender 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%.

3.2 TET MEMBERS

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	Vusi Chirwa	System Engineer: Civil Structures

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TET 2	Thami Khumalo	System Engineer: Auxiliary Engineering
TET 3	Mphokuhle Khohliso	System Engineer: Civil Retaining Structures

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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.	None		

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3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA

Table 3: Qualitative Technical Evaluation Criteria

	Qu	ualitative Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Description	Score	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	Civi	I and Structural Engineering Criteria				90	
	1.1	COMPLETED SIMILAR PROJECTS This covers the number of completed projects that entails silt removal/cleaning of any water returning structure for at least a minimum of level \$CE/ME CIDB magnitude. The completion certificates must reflect the following key points: • Client name, • Project description, • Project start & end date and • Name, designation and contact number of reference person In an event where the completion certificate(s) does not show all the	Completion Certificates	No completion certificate of similar scope submitted, or completion certificate only covers 2 or less key points. Completion certificate of similar scope submitted. The completion certificates only cover 2 key points, has 1-2 completion certificates. Completion certificates of similar scope only covers 3-4 key points, has 3 or more completion certificates.	2		30
		information required especially the scope executed, the tenderer shall attach supporting documents such as scope of work, contract, etc.		The 3 Completion certificates of similar scope covers all 5 key points, has 3 or more completion certificates	5		

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1.	This covers the contents of construction method statement. The methodology needs to describe how the scope will be executed in a safe manner that will not cause harm to the environment and	Method Statement	No method statement submitted, or the method statement does not address the works to be executed. Covers only two or less key points.	0	35
	people. The methodology must demonstrate understanding of the scope of work and includes the following key points as a minimum: • Management of excess water in the dam while cleaning (including pumping of water out of the		Method statement submitted but reiterates the scope of works or the method statement has major deviations of the works to be done. Covers only three key points.	2	
	 isolated compartment) Execution of Site Management and Supervision List of equipment, resource, material and etc (machinery to be suitable for silt removal) Technical execution- activities, 		Method statement addresses the works, does not deviate from the works to be done but only covers four of the key points (including Technical Execution).	4	
	construction methods, level controls Inspections and Testing / QCP		Method statement details fully how the scope will be executed and covers all the five key points.	5	
1.	3 SITE ORGANOGRAM	Signed site organogram	Organogram is not provided, or does not show names of people or does not align	0	5

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 		raye.				
	Proposed organogram of key personnel for this project which must include the following skill.		with CVs for requirement 1.4 and 1.5			
	Project managerSite Agent/EngineerSupervisor / foremen		Organogram provided with only three or less required skills	2		
	 Safety offers and SHE Rep Quality assurance personnel / technician 		Organogram provided with four required skills	4		
			Organogram provided with all five required skills	5		
1.4 EXPERIENCE PROJECT MANAGER This covers the general experience of the proposed Project Manager for the Projects with a minimum qualification of a diploma in project management, at least 5 years of experience in construction		nis covers the general experience of the oposed Project Manager for the ojects with a minimum qualification of a ploma in project management, at least	No CV or qualifications for the project manager provided or project manager is not registered with SACPCMP	0	15	15
	industry and professionally registered with SACPCMP.		Project manager has the required qualification, 3 years or less experience in construction industry, registered with SACPCMP	2		
			Project manager has the required qualification, at least 4 years experience and is registered with SACPCMP	4		

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			Project manager has a minimum qualification of a diploma in project management, at least 5 years of experience in the construction industry, and is professionally registered with SACPCMP	5	
1.5	EXPERIENCE TECHNICAL PERSONNEL (PROFESSIONAL ENGINEER OR TECHNOLOGIEST)	CV and Qualification	Technical personnel are not registered as a professional engineer		15
	This covers the experience of the proposed technical representative for this project with a minimum qualification of a B-tech in Civil engineering or Mechanical engineering, and least 4 years' experience registered as a professional engineer with ECSA.		Technical personnel registered as a professional engineer, has 2 years' experience, and has a minimum qualification of a B-Tech in Civil engineering or Mechanical engineering		
			Technical personnel registered as a professional engineer, has at least 3 years' experience and has a minimum qualification of a B-Tech in Civil engineering or Mechanical engineering		
			Technical personnel registered as a professional engineer, has at least 4 years' experience and has a		

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2.	KPI'	s for refurbishment work		minimum qualification of a B-Tech in Civil engineering or Mechanical engineering		10	
	2.1	HIGH LEVEL PROJECT SCHEDULE The tenderer to submit a Project Schedule and ensure that the works is completed within a duration of 6 months. The schedule must indicate following key points as a minimum: • Full scope of work for construction phase in accordance	Project plan/ Schedule	Project schedule does not cover the listed key points or no submission. Duration over 12 months Project schedule covers only 3 key points or less. Duration within 12 months.	2		100
	 with Works Information Breakdown and linking of all activities. Timelines for execution of activities Critical path 		Project schedule covers at least 4 of the mentioned key points. Duration within 9 months.	4			
		• Float		Project schedule covers all the key points. Duration within 6 months	5	TOTAL:	
						101AL: 100	

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3.5 TET MEMBER RESPONSIBILITIES

Table 4: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3
1	N/A	N/A	N/A
Qualitative Criteria Number	TET 1	TET 2	TET 3
1.1	Х		X
1.2	Х	Х	X
1.3	Х		X
1.4	Х		X
1.5	Х		Х
2.1	Х	Х	X

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3.6 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.6.1 Risks

Table 5: Acceptable Technical Risks

Risk	Description
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Table 6: Unacceptable Technical Risks

Risk	Description
1.	
2.	
3.	
4.	
5.	
6.	
7.	

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3.6.2 Exceptions / Conditions

Table 7: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	
1.	
2.	
3.	
4.	
5.	
6.	

Table 8: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	
2.	
3.	
4.	
5.	
6.	
7.	

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4. AUTHORISATION

This document has been seen and accepted by:

Name Designation	
Thami Khumalo	System Engineer: Auxiliary Engineering (Ash Plant)
Vusi Chirwa	System Engineer: Civil Structures

5. REVISIONS

Date	Rev.	Compiler	Remarks
April 2020	0	T Mudonde	Technical Evaluation Strategy for High Level Dam Silt Removal
October 2023	1	M Khohliso	Final document for signatures

6. DEVELOPMENT TEAM

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

7. ACKNOWLEDGEMENTS

N/A