

Title: **Tender Technical Evaluation  
Strategy for Tutuka Power  
Station Ash Plant Maintenance  
Work.**

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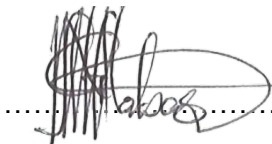
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## **1. INTRODUCTION**

The Ash Handling Plant (AHP) is designed to handle coarse and fly-ash from the boiler furnace across the six (6) units, to the Ash Disposal Facility (Ash Dump) at Tutuka Power Station. The Ash Handling Plant scope of works covers the ash disposal from all six (6) units (unit 1 to 6) from the two (2) overland ash conveyors, all the way to the Ash Disposal Facility where the ash is stored on the Ash Dump.

The intent of the maintenance strategy for the AHP is to ensure, that the plant remains reliability, available and maintainable throughout the station life. The maintenance philosophy of the plant requires that preventative maintenance, inspections, plant repairs, refurbishments, and other activities are timeously/pre-emptively conducted to preserve the condition and extend the life of the plant.

### **1.1 SCOPE**

The scope of this document is to capture the Technical Tender Evaluation Strategy (TTES) for the Ash Handling Plant maintenance work. The required work is for the service provider(s) or contractor(s) to be able to conduct and perform maintenance activities, that are based on daily inspections and required preventative maintenance plans (PMs). <sup>[1][2]</sup>

Important to note, the Submerged Scraper Conveyors (SSCs) are excluded from this maintenance contract.

#### **1.1.1 Purpose**

The purpose of this TTES is to define the Mandatory Evaluation Criteria, Qualitative Evaluation Criteria, and to define the TET member responsibilities for tender technical evaluations. The TTES serves as the basis for the tender technical evaluation process. <sup>[1][2]</sup>

#### **1.1.2 Applicability**

This document applies to the TET of Tutuka Power Station for all AHP, and supply chain enquiries.

## **1.2 NORMATIVE/INFORMATIVE REFERENCES**

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

### **1.2.1 Normative**

- [1] 240-48929482: Tender Technical Evaluation Procedure.
- [2] 240-53716726: Tender Technical Evaluation Scoring Form Template.

### **1.2.2 Informative**

- [3] 240-53716746: Tender Technical Evaluation Report
- [4] 240-44682850: Process Control Manual (PCM) for Provide Engineering during Project Sourcing.

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## **1.3 DEFINITIONS**

### **1.3.1 Classification**

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

## **1.4 ABBREVIATIONS**

<b>Abbreviation</b>	<b>Description</b>
ADF	Ash Disposal Facility
AHP	Ash Handling Plant
C&I	Control and instrumentation
DHP	Dust Handling Plant
EDWL	Engineering Design Work Lead
ISO	International Standard Organisation
LDE	Lead Discipline Engineer
PCM	Process Control Manual
PEIC	Production Engineering Integration Coal
QCP	Quality Control Plan
SHEQ	Safety, Health, Environment and Quality
TET	Technical Evaluation Team
TTES	Technical Tender Evaluation Strategy

## **1.5 ROLES AND RESPONSIBILITIES**

Below are the key roles and responsibilities as prescribed in the Tender Technical Evaluation Procedure:<sup>[1][2]</sup>

- **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 adhere to this procedure. Typically, on New Build 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.
- **Technical Evaluation Team (TET):** 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.

## **1.6 PROCESS FOR MONITORING**

Not Applicable.

## **1.7 RELATED/SUPPORTING DOCUMENTS**

Not Applicable.

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## **2. TENDER TECHNICAL EVALUATION STRATEGY**

### **2.1 TECHNICAL EVALUATION METHOD<sup>[1][2][3][4]</sup>**

A weighted score-card approach is used to evaluate the technical compliance of the tenders against the requirements. Tenderers need to have a weighted score of 70% overall or above to technically qualify for further evaluation.

The technical criteria and weighting is broken down as follows:

a) Technical: 100%

The evaluation of the tender submission will be based on the tenderer's ability to meet the Engineering requirements. A weighted score card approach will be used to evaluate the tender submission against the specifications and Employer's requirements.

The scoring method will be as follows:

<b>SCORE</b>	<b>PERCENTAGE</b>	<b>DESCRIPTION</b>
5	100	<b>COMPLIANT</b> <ul style="list-style-type: none"><li>• Meet technical requirement(s) AND;</li><li>• No foreseen technical risk(s) in meeting technical requirements.</li></ul>
4	80	<b>COMPLIANT WITH ASSOCIATED QUALIFICATIONS &amp; PROFESSIONAL BODIES</b> <ul style="list-style-type: none"><li>• Meet technical requirement(s) with;</li><li>• Acceptable technical risk(s) AND/OR;</li><li>• Acceptable exceptions AND/OR;</li><li>• Acceptable conditions.</li></ul>
2	40	<b>NON-COMPLIANT</b> <ul style="list-style-type: none"><li>• Does not meet technical requirement(s) AND/OR; Unacceptable technical risk(s) AND/OR;</li><li>• Unacceptable exceptions AND/OR;</li><li>• Unacceptable conditions.</li></ul>
0	0	<b>TOTALLY DEFICIENT OR NON-RESPONSIVE</b>
<p><b>Note 1:</b> The scoring table does not allow for scoring of 1 and 3.</p> <p><b>Note 2:</b> Foreseen acceptable and unacceptable risk(s), exceptions and conditions shall be unambiguously defined in the relevant Tender Technical Evaluation Strategy.</p>		

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The evaluation scores will be weighted as follows:

<b>Technical (100%)</b>		
1	Proven track record of maintaining of Bulk Materials Handling plants	25%
2	Proven track record of performing inspections, repairs, and or replacement of damaged component(s) and/or equipment(s).	50%
3	Proven track record of providing support to plant investigations and condition monitoring	25%
		100%
<b>Project Management (N/A)</b>		
<b>TOTAL (100%)</b>		
<b>Overall minimum threshold for qualification (70%)</b>		

## 2.2 TECHNICAL EVALUATION THRESHOLD

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

## 2.3 TET MEMBERS

**Table 1: TET Members**

<b>TET number: Section to be evaluated</b>	<b>TET Member Name</b>	<b>Designation</b>
TET 1	Egard Janse van Rensburg	Ash Plant (Ash Handling Plant) – System Engineer, Auxiliary Engineering
TET 2	Thabang Sehlare	Ash Plant (Ash Disposal Facility) – System Engineer, Auxiliary Engineering
TET 3	Rhulani Lowani	Maintenance Manager – Manager Mechanical Section

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## 2.4 MANDATORY TECHNICAL EVALUATION CRITERIA

This section will not be applicable for this maintenance contract, there are no mandatory technical requirements.

## 2.5 QUALITATIVE TECHNICAL EVALUATION CRITERIA

**Table 2: Qualitative Technical Evaluation Criteria**

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)		Criteria Sub Weighting (%)
1.	Proven track record of maintaining of Bulk Materials Handling plants			25%		100%
		Statement of the scope including the following:				
	1.1	Maintenance experience of Eskom's Ash Handling Plant and dry Ash Disposal Systems coarse ash conveyors, ash conveyors, conditioner conveyors, conveyor systems, ash stackers, spreaders, dust suppressions, irrigation systems etc.	Previous maintenance work:			
			1. <b>Maintenance Activities</b> (at least ten (10) brief history of key activities of work performed on these system(s) / equipment(s) / component(s)). As an example, describe in detail how the dust suppression systems pumps are overhauled or methodology that can be used to perform scoop-controlled fluid coupling replacements, etc.	Submitted 10	5	40%
				Submitted 7	4	
				Submitted 3	2	
				No evidence	0	
			2. <b>Maintenance Documentation</b>	Submitted 5	5	20%
			• Maintenance manuals and/or procedures,	Submitted 4	4	

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			<ul style="list-style-type: none"> <li>Preventative Maintenance (PMs),</li> <li>Quality Control Plans (QCPs),</li> <li>Check sheets,</li> <li>And maintenance plans.</li> </ul>	Submitted 2	2	
				No evidence	0	
			3. Propose at least <b>ten (10)</b> key maintenance metrics for the AHP to ensure the reliability, availability, and maintainability of the plant(s) using proposed maintenance KPI, and maintenance KPA.	Submitted 10	5	40%
				Submitted 7	4	
				Submitted 3	2	
				No evidence	0	
<b>2.</b>	Proven track record of performing inspections, repairs, and or replacement of damaged component(s) and/or equipment(s).			<b>50%</b>		<b>100%</b>
		Statement of the scope including the following:				
	2.1	The number of years that the company has been conducting maintenance in ash plant.	Years of experience on ash conveyors, conditioner conveyors, conveyor systems, ash stackers, spreaders, dust suppressions, irrigation systems etc.	10 – 15 years	5	20%
				6 – 9 years	4	
				2 – 5 years	2	
				1 year	0	
	2.2	Team experience of key personnel such as the site manager, supervisor, artisans, boiler makers, safety officer, quality control officer and others.  Submit supporting documents such as qualifications, trade tests, etc. for the maintenance team that will be performing the maintenance activities.	Organogram, CV of each team members and certificates	10 – 15 years	5	20%
				6 – 9 years	4	
				2 – 5 years	2	
				1 year	0	
	2.3	Provide an activity schedule with quantifiable hours to perform the various maintenance activities on the	Provide internal company template	100% Productivity	5	15%



		AHP (similar to a job card of various maintenance activities).		80% Productivity	4	
				40% Productivity	2	
				Not evidence	0	
	2.4	Identify key components and/or equipment on the AHP that are long lead items and provide a list of their lead times.	Supply template of the activities schedule with long lead times for long lead items.	1 - 2 months	5	15%
				3 – 4 months	4	
				5 – 6 months	2	
				7 - 8 months	0	
	2.5	Company experience on handling of spares provided by client. Supplier to submit list of critical spares which is recommended for the ash plant.	<p>List of spares for ash plant recommend for maintenance purpose to cover all the AHP components and systems.</p> <p>Below are the key equipment spares lists that must be submitted:</p> <ul style="list-style-type: none"> <li>• Coarse ash conveyors,</li> <li>• Conveyors,</li> <li>• Chutes,</li> <li>• Stackers,</li> <li>• Spreaders,</li> <li>• And conditioner conveyors.</li> </ul>	All submitted	5	15%
				Four to Five (4-5) submitted	4	
				Two (3) or less submitted	2	
				No evidence	0	
	2.6	Method statement of performing the maintenance duties on the AHP and dry Ash Disposal System.	<p>Method Statement on Maintenance works:</p> <p>Submit works descriptions, overview of how the plant reliability, availability, and maintainability will be improved and what value he</p>	Method statement submitted for conveyors, moving heads, drive alignments and	5	15%

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			appointed contractor will bring to the Tutuka Auxiliary Team.	stacker & spreader		
				Submitted four method statements	4	
				Submitted 3 and less method statements.	2	
				No method statements	0	
<b>3.</b>	Proven track record of providing support to plant investigations and condition monitoring			<b>25%</b>		<b>100%</b>
		Statement of the scope including the following:				
	3.1	Method statement of providing input/assisting in investigative reports on plant failures and plant unavailability on the AHP and dry Ash Disposal System.	Method Statement on investigative reports: Submit works descriptions, overview of how Auxiliary Engineering will be supported on perform these investigations.	Submitted five Investigations Method statement submitted for conveyors, moving heads, drive alignments and stacker & spreader	5	60%
				Submitted four investigations	4	

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				method statements		
				Submitted 3 and less investigations method statements.	2	
				No method statements.	0	
	3.2	Does the company offer other services related to AHP, dry Ash Disposal, and Bulk Materials Handling that include design, operational support and maintenance of such systems.	Submit documentary evidence of the capacity to provide the following services: <ul style="list-style-type: none"> <li>• Design</li> <li>• Operational Support</li> <li>• Maintenance</li> </ul>	All three (3) capacity proven	5	40%
				Only (2) capacity proven	4	
				Only (1) capacity proven	2	
				No evidence	0	
			<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	

## 2.6 TET MEMBER RESPONSIBILITIES

**Table 3: TET Member Responsibilities**

Qualitative Criteria Number	TET 1	TET 2	TET 3	TET 4
<b>1.</b>				
1.1	X	X	X	
<b>2.</b>				
2.1	X	X	X	
2.2	X	X	X	
2.3	X	X	X	
2.4	X	X	X	
2.5	X	X	X	
2.6	X	X	X	
<b>3.</b>				
3.1	X	X	X	
3.2	X	X	X	

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## **2.7 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS**

### **2.7.1 Risks**

**Table 4: Acceptable Technical Risks**

<b>Risk</b>	<b>Description</b>
1.	N/A
2.	N/A

**Table 5: Unacceptable Technical Risks**

<b>Risk</b>	<b>Description</b>
1.	The company that does not have experience in maintenance of ash plant
2.	Inexperience team
3.	N/A
4.	N/A

### **2.7.2 Exceptions / Conditions**

**Table 6: Acceptable Technical Exceptions / Conditions**


<b>Risk</b>	<b>Description</b>
1.	The proof of working in the similar systems that contain conveyors and similar product like fly ash and coarse ash.

**Table 7: Unacceptable Technical Exceptions / Conditions**

<b>Risk</b>	<b>Description</b>
1.	Zero experience in dealing with conveyors.

### 3. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
Egard van Rensburg	System Engineer – Ash Plant (Ash Handling Plant), Auxiliary Engineering	
Nathi Mabaso	Acting Auxiliary Engineering Manager	
Rhulani Lowani	Maintenance Manager – Manager Mechanical Section	

### 4. REVISIONS

Date	Rev.	Compiler	Remarks
November 2020	0.1	T Mamphogoro	Draft document for comment
November 2020	0.2	T Mamphogoro	Approval
June 2022	1	TO Sehlare	Amendment and update.
July 2022	2	E van Rensburg	Amendment and update.

### 5. DEVELOPMENT TEAM

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

- Thabelo Mamphogoro
- Thabang Sehlare
- Egard Janse van Rensburg

### 6. ACKNOWLEDGEMENTS

N/A

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