Eskom	Strategy	Engineering

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Tender Technical Evaluation Strategy For Fabric Filter Plant Service

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TABLES

1. INTRODUCTION

The Tender Technical Evaluation strategy defines the mandatory and qualitative evaluation criteria that serve as a basis for the tender evaluation process. Various tender returnable will be evaluated based on the qualitative criteria specified in this document, and the tenderers meeting the minimum threshold will be considered further.

2. SUPPORTING CLAUSES

2.1 SCOPE

This document covers the various technical aspects to be evaluated by the Tender Evaluation Team (TET) for the required scope of work on the Fabric Filter plant.

The Scope consist of the following:

- The contractor ensures that his/her personnel are authorized to take out permits to work in accordance with Plant Safety Regulations within three months of being awarded the contract. At least all the artisans and Supervisor must be authorized.
- The contractor provides a 24 hour service for any plant failures and maintenance intervention (Half loads to replace bags) which includes a standby service with a response time of 0-2 hour during normal office hours and after hours including weekends and public holidays.
- Standby resources, one mechanical fitter, one semi skilled and one assistants will be required for maintenance of the plant.
- Halfload for FFP bags change team: One fitter, two semi skilled and four assistants.
- Complete unit FFP bags change skills on as and when required base
- The contractor supports and assists in promoting the Plant Fundamental Management policies (which can be obtained from the Contract Manager or from Hendrina's document center).
- The contractor compiles a month end report of plant conditions experienced during the month and submit to boiler maintenance supervisor, contract manager and the system engineer.
- The contractor compiles weekly reports for all inspections carried out on the defective FFP bags and cages and all maintenance intervention done on the FFP equipment. **NB. Report to include Picture of severely damaged bags & cages and their exact location in the baghouse. Total number and position of bags replaced.** The weekly report to be submitted to boiler maintenance supervisor, contract manager and the system engineer.
- The contractor originates a list of daily reactive works on as and when required basis.
- The contractor provides daily planning schedule to department planner with a 5 working day target window (T-5).
- The contractor identify, scope, plan and schedule created work orders on SAP system with the planner for the period of 12 weeks i.e. T-12.

- The contractor compiles bills of materials for all spares and consumables 24 hours before commencement of works for stock items (available from Hendrina's stores) and three months before commencement of works for non-stock items (items that are not in Hendrina's stores). The bills of materials are submitted to the service manager.
- The contractor attends to all defects associated with the FFP units 1 to 10.

Filter bags and cages

- Inspect and replace defective bags.
- Inspect and replace defective cages.

Bags and cages replacement scope

1. Contractor to transport bags and cages from stores to the Unit of concern(Part of site establishment),Bags and cages must be hoisted from ground floor to the FFP landing by the hoist.
2. Contractor to remove rotating manifold arms on all modules (LH and RH) to provide access to bags and cages.
3. Contractor to carry out cages removal on all modules (LH and RH) with the use of specialised bag tools such as a spikes, small forks and big forks to be made available by the Contractor.
4. Contractor to carry out bag removal on all modules (LH and RH)
5. Contractor to carry out bag and cage Replacement on all modules (LH and RH). High temperature bags (PPS) and cages to be supplied by Eskom.
6. Contractor to remove old bags and cages to the bottom level.
7. Contractor to store all the removed bags and cages in separate skip bins. Contractor to supply the environmental FFP bags skip bins during outages and complete bag change per unit.
8. Contractor to transport all removed FFP bags from Hendrina site to approved disposal site for such material.
9. Contractor to provide proof of FFP bags disposal site certificate.
10. Contractor to remove cages from site to the station scrap yards.
11. Contractor to supply lime for coating of the bags which will be utilized during commissioning phase of the plant.
12. Contractor to apply lime to the bags during commissioning of the units. 4 tons of lime should be injected per casing, i.e.., a total of 8 tons for both the LH and the RH side applicable to unit 1-5.
13. 6 tons of lime should be injected per casing, i.e.., a total of 12 tons for both the LH and the RH side applicable to unit 6-10
14. Final Inspection to ensure that there is no debris around the plant (Good Housekeeping).
15. Site De-establishment.

Manifold drive

- Inspect gearboxes and repair if necessary.
  - Check oil level and leaks.
  - Change oil depending on the condition of the oil.
- Drain oil from drive gearboxes and replace with new.
- Check drive gears for damage and replace if required.
- Replace gasket per manifold drive.

Rotating manifolds

- Inspect and repair defects on the rotating manifold.
- Inspect and repair defects on the air distribution boxes.
- Inspect for tightness on manifold arms bolts.
- Inspect and replace nozzles on manifold arms when damaged.
- Inspect and replace manifold support bearing when damaged.

Pulse Air System

- Inspect and maintain the pulse air tanks.
- Set pressure relief valve.
- Inspect all diaphragm and pilot springs and replace cracked or damaged springs.
- Inspect and replace damaged or non-functioning Isolating valves, NRV, Solenoid valves, drain valves and pressure gages.
- Inspect pulse air piping including the flexible pipes and replace if required.
- Conduct functional test on the solenoid valves.

Air Receiver

- Inspect and maintain the air receiver.
- Set pressure relief valve.
- Inspect and replace damaged or non-functioning Isolating valves, NRV, Solenoid valves, drain valves and pressure gages.
- Inspect pulse air piping and replace if required.

Implosion dampers

- Inspect for leaks on the implosion dampers.
- Perform a functional test the implosion dampers.
- Inspect and replace the cylinders if damaged.
- Inspect and repair the protection cage if damaged.

Cell vent fans

- Lubricate the Damper locking device.
- Inspect the Damper sealing surface and repair/replace if damaged.
- Inspect Motor bracket and repair/replace if damaged.

Dust Hoppers

- Inspect and repair dust hopper walkways and handrails.
- Inspect agitating levers and chains and tension the chains.
- Inspect and replace agitating lever gaskets.
- Inspect hopper inspection and access door seals, and repair/ replace if damaged.
- Inspect internal support structure for damaged stiffener beams and repair.

- Inspect and test dust hopper level detectors for corrosion and blockages, and repair defects.
- Unblocking by poking of blocked dust hoppers and removal of FFP bags
- Poking and removal of clinkers and FFP bags from the dust hoppers
- Opening and closing of dust hopper inspections doors for inspections at all relevant levels
- Removal of the dust hopper elbows to gain access at the bottom of the dust hopper (for poking etc.)
- Installation of the dust hopper elbows after poking and clinkers removal when the dust is flowing freely.
- Clean excessive dust from the hoppers by washing into the sluiceway / trench.
- Build scaffold around the affected dust hopper.
- Isolate the section of the fabric filter plant where the blockage will be removed.
- Protective equipment and safety harness must be worn all the time while using scaffold, and also when performing the task.
- Barricade surrounding area to limit access to the dust hopper plant where work is being carried out.
- Disassemble hydrovac system elbow.
- Open all inspection doors including the access doors.
- Locate and assess the positioning and stability of the blockage.
- First attempt is to remove the blockage via the hopper inspection door using a poking rod or spikes, to make an opening for dust trapped above the blockage to flow out.
- In case above attempt fails consult with Boiler Engineering.

Note:
In case where high pressure washing is used, care must be taken that the water does not escape to the filter bags as this will have adverse impact on the performance of the bags.

- Ensure that no dust hopper heater elements are damaged during poking. The people doing the poking must ensure that they do not hit directly on the hopper inner plate but pokes directly onto the clinker.
- Continue poking until the blockage is removed, then allow dust to flow.
- To control and suppress the dust flowing out of the hopper/s, use fire hydrant hoses in the vicinity of the blocked dust hopper, with the assistance of the Hendrina emergency team.
- Continuously remove dust on top of the scaffold to avoid scaffold overloading and collapse.
- Inspect the dust hopper and ensure that it is empty and free of blockages.
- Close the hopper inspection door.

- Reassemble the hydrovac system.
- Remove scaffold and all the equipment.
- Clean the surrounding dust hopper area where work was carried out with water.

Note:

- The scaffold must be erected in such a way that it does not block the escape route in case of an emergency.
- Before any other methods are tried the first attempt is to try to break the blockage by poking.

Civil and Structures

- Visually inspect interior and exterior of FFP casing (Concrete structure).
- Visually inspect water sealing on FFP roof.
- Replace/Repair damaged dust hopper liner.
- Visually inspect external walkway gratings and handrail, if defect is noted repair.
- Inspect and replace damaged inlet screens.
- Inspect and repair turning vanes, baffles and deflector and repair panels that are holed.
- Inspect tube plate hangers and repair defects.
- Inspect tube plate for sagging/ deflection, weld cracks, holes and repair defects.
- Inspect and repair circumferential seal leaks, also open up the seal assembly and inspect the primary seal. Repair leaks if noted.
- Inspect and replace all leaking and worn out door seals.

C & I Impulse Pipework

- Inspect and repair damaged C & I pipework.

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.

2.2 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] 240-168966153 Generation Tender Technical Evaluation Procedure

[2] 240-56244749- Fabric Filter Plant Operational Procedure

[3] 240-53113965- Fabric Filter Plant Bag Specification

[4] 240-56245830- Compressed Air Plant and Associated Equipment For Fabric Filter Plant Pulse Air Cleaning Standard

[5] QM-58 Supplier Contract Quality Requirements Specifications

[6] 240-105691858 Materials Management Safe Work Procedures Transportation Requirements for Material Handling

2.2.2 Informative

[7] ISO 9001 Quality Management Systems

[8] 32-1-34 Eskom Procurement Policy

2.3 DEFINITIONS

Term	Definition
Employer	The organization (Eskom) to which the supplier will be contracted for this tender and contracts that may result therefrom
Employer's Premises	Hendrina Power Station
Industrial Storage Facility	Physical space suitable for the storage of the items specified in the scope of work
Spares	Parts that can be used for replacement

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
ISO	International Organisation of Standardisation
NEC	New Engineering Contract
OEM	Original Equipment Manufacturer
QCP/QIP	Quality Control Plan / Quality Inspection Plan
PS	Power Station
SABS	South African Bureau of Standards
SOW	Scope of Work
TET	Technical Evaluation Team
FFP	Fabric Filter Plant

RP	Responsible Person
PSR	Plant Safety Regulation

2.5 ROLES AND RESPONSIBILITIES

As per 240- 168966153: 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%.

3.2 TABLE 1: TECHNICAL SCORING METHODOLOGY

Score	Points	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. Omission of the SOW
0	0	**TOTALLY DEFICIENT OR NON-RESPONSIVE**
Note 1: The scoring table does not allow for scoring of 1 and 3.		

3.3 TET MEMBERS

3.4 MANDATORY TECHNICAL EVALUATION CRITERIA

Mandatory technical evaluation criteria (gatekeepers) are a meet criteria. These criteria shall not be weighted or scored but shall be assessed on a yes/no basis as to whether the criteria are not met. an assessment of 'no' against any criteria shall technically disqualify the tender and shall not be further evaluated against qualitative criteria. Please note that No mandatory requirements are provided for the scope of work in discussion.

3.5 QUALITATIVE TECHNICAL EVALUATION CRITERIA

Table 2: Qualitative Technical Evaluation Criteria

					TOTAL SCORE		
COMPLIANCE TO ESKOM REQUIREMENTS							
FABRIC FILTER PLANTS - GENERAL OUTAGE MAINTENANCE					**THRESHOLD SCORE (70%)**		
		CRITERIA	**SUPPLIERS RESPONSE**	**GUIDELINE NOTES**	**WEIGHT**	**ACTUAL SCORE**	**TOTAL SCORE**
1	**GENERAL MEASURES**				**10**		$\frac{Actual}{5} \times Weight$
1.1	Company Profile	Organogram showing company structure from top management down to supervisor level. Names and contact details must be provided for		5 points if content satisfies requirements, **4 points: provided** with insufficient content,2 points	**2**		

		all positions listed.		provided with unauthorized documentation 0 point for no			
1.2	Risk management	The Service Provider must have a risk identification and management process related to the complete process of executing scope of work. The document to include • Identifying hazards • Assessing risks • Putting controls in place Continually improving safety performance		5 points if content satisfies requirements, 4 points if official documents presented/send 2 points for insufficient content 0 points for no compliance	4		
1.3	Project planning	The Service Provider must have a method statement that indicates how the shared scope of work will be executed, what resources will be required and what measures will be put in place to execute the task		5 points if content satisfies requirements, 4 points if official documents presented/send 2 points for insufficient content 0 points for no compliance	4		
3	**Key Personnel Qualifications and Experience**				**40**		
3.1	Supervisor Qualification	The service provider must submit CVs of trade tested supervisors(x2) as per their organogram with a minimum qualification of N3 plus relevant experience of 3 years.		5 points for compliance, 4 points for either N3 qualification or 3 years' experience, 2 points for qualification with no experience, 0 points for no compliance.	5		

3.2	Fitter/Boilermaker Qualifications	The service provider must submit at least 4 trades tested Boilermakers with relevant experience of 3 years.		5 points for compliance, 4 points for only 3 trades tested with a minimum experience of 2 years, 2 points for Only 1 trade tested with a minimum of a year experience, 0 points for no compliance.	5		

3.3	Site Manager	Minimum Qualifications: Mechanical Diploma or mechanical trade test and project management experience of at least five (5) years of industry related business		5 points for full compliance, 4 points for less than 5 years but greater than 3 years' work experience, 2 points provided with less than 3 years experience, 0 points for non-compliance.	15		
3.4	Safety Officer	The service provider must submit at least 2 Safety officers with relevant experience of 3 years.		5 points for meeting all requirement, 4 points for only 2 years of experience, 2 points for a year experience, 0 points for nothing.	3		

3.5	Planner	The service provider must submit at least 1 Planner with relevant experience of 3 years.		5 points for meeting all requirement, 4 points for only 2 years of experience, 2 points for a year experience, 0 points for nothing.	2		
3.6	Welder	The service provider must submit at least 4 trade tested Class B welders with relevant experience of minimum 3 years		5 points for meeting all requirement, 4 points for only 3 welders with all required qualification, 2 points for 2 welders with all required qualification , 0 points for nothing.	5		
3.7	Quality Control	The service provider must submit at least 1 QC with relevant experience of 3 years		5 points for meeting all requirement, 4 points for only 2 years of experience, 2 points for a year experience, 0 points for nothing.	5		
4	**TOOLS AND EQUIPMENT**				**5**		

4.1	Asset list (Tools and Equipment) e.g spikes, small forks and big forks	The bidder should demonstrate availability of: • Bag installation tools • Cage installation tools • Lifting equipment • Welding equipment • Inspection equipment • Transport vehicles		5 points if asset list indicates sufficient equipment to execute the required work. 4 points if the list does not cover all Tools important to execute the scope. 2 points if few tools listed and are not suitable to execute the scope of work 0 points if no asset list available	5		
5	**Company Experience and Track Record**				**50**		
5.1	Work Experience	The bidder shall demonstrate successful execution of fabric filter plant projects within the last five (5) years. The bidder should provide evidence of experience in: • Fabric filter bag replacement. • Cage inspection and replacement. • Tube sheet inspections and repairs. • Hopper inspection and maintenance. • Pulse jet cleaning system maintenance. • Compressed air system maintenance.		More than 6 similar projects or services completed within the last 5 years, scores 5 points. 3–5 projects completed, scores 4 points; 1–2 projects completed, scores 2 points. 0 Project score, Scores 0 point	20		

		• Emissions optimisation and troubleshooting. • Outage planning and execution. **Supporting Evidence** • Reference letters. • Completion certificates. • Purchase orders or contracts. • Client contact details.					
5.2	Data Pack	The service provider needs to have done similar work in the industry. A minimum of at least 3 Data Packs is to be submitted. The data pack content should provide evidence of: • Fabric filter bag replacement. • Cage inspection and replacement. • Tube sheet inspections and repairs. • Hopper inspection and maintenance. • Pulse jet cleaning system maintenance. • Compressed air system maintenance.		5 points for compliance (3 data pack submitted with all required information); 4 points for partial compliance (2 or 1 data pack submitted with all required information) 2 points for partial compliance (1 data pack but not containing all required information). 0 points for no compliance	30		
				TOTAL	**100**		

TAKE NOTE: ONLY TECHNICAL SUITABLE IF TOTAL TECHNICAL SCORE IS ≥70%		

TET MEMBER RESPONSIBILITIES

Table 3: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3
1	X	X	X
2	X	X	X
Qualitative Criteria Number	**TET 1**	**TET 2**	**TET 3**
1	X	X	X
2	X	X	X
3	X	X	X
4	X	X	X
5	X	X	X
6	X	X	X

Foreseen Acceptable / Unacceptable Qualifications

3.5.1 Risks

Table 4: Acceptable Technical Risks

Risk	Description
1.	None

Table 5: Unacceptable Technical Risks

Risk	Description
1.	Supplier not meeting client specifications and no methodology and having no track record or equipment for working on FFP.

3.5.2 Exceptions / Conditions

Table 6: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	None

Table 7: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	None

4. AUTHORISATION

This document has been seen and accepted by:

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5. REVISIONS

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May 2025	0	MC Maoto	First issue

6. DEVELOPMENT TEAM

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

Moyahabo Maoto

7. ACKNOWLEDGEMENTS

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