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Technical Evaluation Strategy  
for the Installation of additional  
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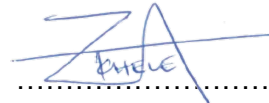
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## **1. INTRODUCTION**

Kriel Power Station is a coal fired power station which is located in Mpumalanga Province. At Kriel Power Station, The Ash Dam complex consists of three compartments namely Dam1, Dam 2 and Dam3 which has an approximate footprint of 300Ha. Eskom is required to take drain flow readings in order to monitor the amount of water draining from the Ash Dam. From investigations a number of existing drains are damaged or have failed and are not working efficiently or at all. This has been caused by the increase in height of the dams creating increased weight on the drains which has caused the drains to fail. The installations of additional drains on Kriel Ash Dam Complex has been recommended by the Approved Professional Person (APP). It is believed that installing new drains at the Ash Dam would alleviate pressure in the dam by draining water out the body of the dam which will reduce its phreatic line (water table). Reducing the phreatic line through the dam will in turn increase the stability of the slopes of the dam complex.

## **2. SUPPORTING CLAUSES**

### **2.1 SCOPE**

The scope of this document is to capture the tender technical evaluation strategy for the Kriel Power Station scope of work for the installation of additional drains at the Ash Dam Complex. The scope of the project is specifically described in the Kriel Power Station scope of work for the installation of additional drains at the Ash Dam Complex.

#### **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 applies to the Tender Evaluation Team for the installation of additional drains at the Ash Dam Complex

## **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] 240-48929482: Tender Technical Evaluation Procedure
- [3] ISO 9001 Quality Management Systems
- [4] 32-1034 Eskom Procurement Policy
- [5] Kriel Power Station scope of work for the installation of additional drains at the Ash Dam Complex

## 2.2.2 Informative

[6] 240-53113685: Design Review Procedure

[7] 240-53114026: Project Engineering Change Management Procedure

## 2.3 240-53114002: ENGINEERING CHANGE MANAGEMENT PROCEDURE 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

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

## 2.4 ABBREVIATIONS

Abbreviation	Description
APP	Approved Professional Person
ECSA	Engineering Council of South Africa
EDWL	Engineering Design Work Lead
LDE	Lead Discipline Engineer
LPS	Low Pressure Services
SHEQ	Safety, Health, Environment and Quality
TET	Technical Evaluation Team

## 2.5 ROLES AND RESPONSIBILITIES

As per Tender Technical Evaluation Procedure [1].

## 2.6 PROCESS FOR MONITORING

N/A

## 2.7 RELATED/SUPPORTING DOCUMENTS

None

## 3. TENDER TECHNICAL EVALUATION STRATEGY

### 3.1 TECHNICAL EVALUATION METHOD

The basic steps for a technical evaluation must be followed as per the Tender Technical Evaluation Procedure [2].

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 technical criteria and weighting is broken down as follows:

**a) Civil & Structural Engineering: 100%**

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	<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</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></ul>

		<ul style="list-style-type: none"> <li>Unacceptable conditions.</li> </ul>
0	0	<b>TOTALLY DEFICIENT OR NON-RESPONSIVE</b>

The evaluation scores will be weighted as follows:

<b>Engineering (100%)</b>	
Civil & Structural Engineering	100%
<b>TOTAL (100%)</b>	
<b>Overall minimum threshold for qualification (70%)</b>	

### 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 1: Core TET Members**

<b>TET number : Section to be evaluated</b>	<b>TET Member Name</b>	<b>Designation</b>
TET 1: Civil Engineering	Jason Bennett	EDWL: Civil Engineer
TET 2: Civil Engineering	Santhesh Naicker	Civil Engineer
TET 3 Civil Engineering	Nabeel Abdoola	Civil Engineer

**Table 2: Optional TET Members**

<b>TET number : Section to be evaluated</b>	<b>TET Member Name</b>	<b>Designation</b>
TET4: Civil Engineering – Khusile Power Station	Niloshen Moodley	Civil Engineer

### 3.4 MANADATORY TECHNICAL EVALUATION CRITERIA

**Table 3: Mandatory Technical Evaluation Criteria**

	<b>Mandatory Technical Criteria Description</b>	<b>Reference to Technical Specification / Tender Returnable</b>	<b>Motivation for use of Criteria</b>
1.	<p>Tenderer's relevant experience, as the principle contractor, in installation of drains into pre existing dams including drilling expertise, and associated civil infrastructures (Evidence of 5 completed drilling and drain installation projects of similar scope undertaken by the Contractor in the last 5 years in South Africa). The Contractor must submit evidence of traceable reference projects with the following information:</p> <ul style="list-style-type: none"> <li>• Project Name</li> <li>• Description of work performed</li> <li>• Project cost (for Engineering and Construction works)</li> <li>• Project start and end date</li> <li>• Name, designation and contact number of the reference person</li> </ul>	Tender Returnable – List of completed projects	Criteria assists to mitigate risk of Contractor with no prior experience executing these works.

**3.5 QUALITATIVE TECHNICAL EVALUATION CRITERIA**

**Table 4: Qualitative Technical Evaluation Criteria**

	<b>Qualitative Technical Criteria Description</b>		<b>Reference to Technical Specification / Tender Returnable</b>	<b>Criteria Weighting (%)</b>	<b>Criteria Sub Weighting (%)</b>
<b>1.</b>	<b>Civil Engineering</b>			<b>100</b>	
	1.1	<p><b>Construction Execution Plan/ Method Statement for the entire works:</b></p> <p>High-level construction execution plan/method statement for the construction works demonstrating understanding of the scope and includes the following as a minimum:</p> <ul style="list-style-type: none"> <li>• Proposed plant and equipment</li> <li>• Sourcing of materials (i.e. concrete, steel, etc.) for the works</li> <li>• Methodology and approach including compliance with required SANS and/or other applicable standards and the technical specification</li> <li>• Site establishment</li> <li>• Testing and inspection requirements</li> <li>• Quality Control Plan</li> <li>• Required temporary works (if any)</li> </ul> <p>Scoring Criteria: 5 = 100% = COMPLIANT</p>	As per List of Technical Tender Returnable within Works Information package	20	



		<ul style="list-style-type: none"> <li>• Technical proposal details fully how scope will be met and provides comprehensive methodology of approach</li> </ul> <p>4 = 80% = COMPLIANT WITH ASSOCIATED QUALIFICATIONS</p> <ul style="list-style-type: none"> <li>• Technical proposal describes how scope will be met and includes minor details on methodology of approach</li> </ul> <p>2 = 40% = NON-COMPLIANT</p> <ul style="list-style-type: none"> <li>• 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</li> </ul> <p>0 = 0% = NON RESPONSIVE</p> <p>Technical proposal does not contain methodology of approach or a description of how the works will be conducted</p>			
	1.2	<p>A proposed schedule encompassing</p> <ul style="list-style-type: none"> <li>• The CPM (Critical path method) technique is used for programme and planning milestones and key dates.</li> <li>• 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)</li> <li>• 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</li> </ul> <p>Scoring Criteria:</p>	As per List of Technical Tender Returnables within Works Information package	20	

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		<p>5 = 100% = COMPLIANT</p> <ul style="list-style-type: none"> <li>Schedule is fully compliant with the three details mentioned above</li> </ul> <p>4 = 80% = COMPLIANT WITH ASSOCIATED QUALIFICATIONS</p> <ul style="list-style-type: none"> <li>Schedule describes lacks one of the 3 details mentioned above</li> </ul> <p>2 = 40% = NON-COMPLIANT</p> <ul style="list-style-type: none"> <li>Schedule lacks 2 of the 3 details specified above.</li> </ul> <p>0 = 0% = NON RESPONSIVE</p> <ul style="list-style-type: none"> <li>Schedule not included</li> </ul>			
	<p>1.3</p>	<p><b>Key Resource Requirements for the construction team:</b></p> <p>CV's of the proposed key resources each having a minimum of 5 years' relevant experience (construction manager, site civil engineer/civil technician, site foreman).</p> <p>Construction manager to be professionally registered with SACPCMP or similar professional body. Copy of valid certificate to be provided.</p> <p>Site Civil Engineer/Civil Technician to be professionally registered with ECSA. Copy of valid certificate to be provided.</p> <p>Letter of intent signed by both parties where subcontractor to be used for resources else CV not considered</p> <p>Organogram of site team to be provided</p> <p>Scoring Criteria:</p>	<p>As per List of Technical Tender Returnables within Works Information package</p>	<p>30</p>	

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		<p>5 = 100% = COMPLIANT</p> <ul style="list-style-type: none"> <li>Meet technical requirement(s)/AND</li> <li>No foreseen technical risk(s) in meeting technical requirements</li> <li>At least 5 years relevant experience for resources</li> <li>Valid Professional registration certificates submitted for all key personnel</li> <li>Organogram submitted clearly indicating all key project personnel and associated roles.</li> </ul> <p>4 = 80% = COMPLIANT WITH ASSOCIATED QUALIFICATIONS</p> <ul style="list-style-type: none"> <li>At least 5 years relevant experience for resources.</li> <li>Valid Professional registration certificates submitted for all key personnel</li> <li>No project organogram submitted but all CV's of key personnel have been submitted indicating their role in the project</li> </ul> <p>2 = 40% = NON-COMPLIANT</p> <ul style="list-style-type: none"> <li>Less than 5 years relevant experience for resources</li> <li>Valid Professional registration certificates not submitted for all key personnel</li> </ul> <p>0 = 0% = NON RESPONSIVE</p> <ul style="list-style-type: none"> <li>No submissions made</li> </ul>			
	1.4	<p><b>Constructability analysis for the entire works.</b></p> <p>High-level constructability analysis for the works demonstrating understanding of the scope and includes the following as a minimum:minimum</p> <ul style="list-style-type: none"> <li>Constraints identified</li> </ul>	As per List of Technical Tender Returnable within Works Information package	20	

		<ul style="list-style-type: none"> <li>• Foreseeable construction risks</li> <li>• Sequence of construction</li> </ul> <p>Scoring Criteria: 5 = 100% = COMPLIANT</p> <ul style="list-style-type: none"> <li>• Constructability assessment is comprehensive and all information is provided</li> </ul> <p>4 = 80% = COMPLIANT WITH ASSOCIATED QUALIFICATIONS</p> <ul style="list-style-type: none"> <li>• Minor details of the constructability assessment are missing</li> </ul> <p>2 = 40% = NON-COMPLIANT</p> <ul style="list-style-type: none"> <li>• Minor details of the constructability assessment provided OR Technical proposal reiterates the Employer's scope of works</li> </ul> <p>0 = 0% = NON RESPONSIVE Constructability assessment not provided</p>			
	1.5	<p><b>Quality Management System/Plan:</b> The Contractor is to provide a high level quality control plan to be used in the execution of the works.</p> <p>Scoring Criteria: 5 = 100% = COMPLIANT</p> <ul style="list-style-type: none"> <li>• A comprehensive quality management system/plan is provided with all steps and intervention points for the works</li> </ul> <p>4 = 80% = COMPLIANT WITH ASSOCIATED QUALIFICATIONS</p>	As per List of Technical Tender Returnable within Works Information package	10	

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		<ul style="list-style-type: none"><li>• Minor details of the quality control plan is missing</li></ul> <p>2 = 40% = NON-COMPLIANT</p> <ul style="list-style-type: none"><li>• Major details of the quality control plan were missing OR Technical proposal reiterates the Employer's scope of works</li></ul> <p>0 = 0% = NON RESPONSIVE</p> <p>Quality management system/plan not provided</p>			
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**3.6 TET MEMBER RESPONSIBILITIES**

**Table 5: TET Member Responsibilities**

<b>Mandatory Criteria Number</b>	<b>TET 1</b>	<b>TET 2</b>	<b>TET 3</b>	<b>TET 4</b>
1	X	X	X	O
<b>Qualitative Criteria Number</b>	<b>TET 1</b>	<b>TET 2</b>	<b>TET 3</b>	<b>TET 4</b>
1.1	X	X	X	O
1.2	X	X	X	O
1.3	X	X	X	O
1.4	X	X	X	O
1.4	X	X	X	O

**3.7 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS**

**3.7.1 Risks**

**Table 6: Acceptable Technical Risks**

<b>Risk</b>	<b>Description</b>
1.	<b>Proposing Standards and Procedures (motivated in detail) other than the specified Standards and Procedures in the Technical Specifications</b>

**Table 7: Unacceptable Technical Risks**

<b>Risk</b>	<b>Description</b>
1.	Non-compliance or deviation with sections of the technical specifications and standards without adequate explanation or alternatives
2.	Exclusions of scope specified in the Technical Specifications
3.	The approach is generic and not tailored to address the specific project objectives and requirements. The approach does not consider all the critical characteristics of the work
4.	The Contractor does not show a full understanding of the scope of work
5.	The Contractor does not have the required experienced resources
6.	Civil Engineer/Civil Technician has less than 5 years relevant experience
7.	Key construction personnel have less than 5 years' relevant experience
8.	Change of Sub-Contractors after Tender award

**3.7.2 Exceptions / Conditions**

**Table 8: Acceptable Technical Exceptions / Conditions**

<b>Risk</b>	<b>Description</b>
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1.1	N/A
1.2	
1.3	
1.4	


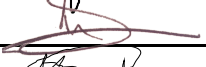


**Table 9: Unacceptable Technical Exceptions / Conditions**

<b>Risk</b>	<b>Description</b>
1.1	Deviations to any part of the technical specifications without providing alternate solutions
1.2	The technical proposal/method statement is generic, incomplete and not tailored to address the specific project objectives, scope and constraints. It does not deal with the critical constraints and hazards of the project.
1.3	
1.4	



#### 4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
Jason Bennett	Civil Engineer	
Santhesh Naicker	Civil Engineer	
Nabeel Abdoola	Civil Engineer	
Neo Muthavhine	Auxiliary Manager	

#### 5. REVISIONS

Date	Rev.	Compiler	Remarks
Jan 2021	0.1	J Bennett	Draft document for comment
Jan 2021	1.0	J Bennett	Final document

#### 6. DEVELOPMENT TEAM

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

Santhesh Naicker

#### 7. ACKNOWLEDGEMENTS

Jason Bennett

**APPENDIX A: LIST OF TECHNICAL TENDER RETURNABLES**

<b>Civil Requirements</b>	
<b>1</b>	<b>Construction Execution Plan/Method Statement</b>
	<p>Includes as a minimum</p> <ul style="list-style-type: none"> <li>• Proposed plant and equipment</li> <li>• Construction methodology and approach including compliance with required SANS and/or other applicable standards and the technical specification</li> <li>• Site establishment</li> <li>• Testing and inspection requirements</li> <li>• Proposed repair materials to be used, which is suitable to the conditions on site</li> <li>• Repair material application guarantee</li> <li>• Required temporary works (if any)</li> <li>• Project specific health, safety and environment management plan</li> </ul>
	The Technical Proposal indicates the Contractor's understanding of the works and scope to be executed.
	The Technical Proposal is to clearly demonstrate the Contractor's compliance with the full scope of work as detailed in the technical specification
<b>2</b>	<b>Contractor's Experience in the construction of steel, reinforced concrete and associated structures</b>
	<p>The risk of a contractor with no prior experience executing these works is unacceptable. A list of verifiable references within the last six (5) years must be provided for principal and/or subcontractors proposed indicating the following as a minimum:</p> <ul style="list-style-type: none"> <li>• Project name</li> <li>• Description of work performed</li> <li>• Project cost (for Engineering and construction work)</li> <li>• Project start and end date</li> <li>• Name, designation and contact number of reference person</li> </ul>
<b>3</b>	<b>Organogram of site construction team</b>
	Item identifies the role of each resource in order to evaluate them correctly
<b>4</b>	<b>CV's qualifications and relevant experience of key personnel</b>
	Item identifies relevant qualification and experience profile to demonstrate level of experience of resources. Supporting documents must include certified copies of ECSA and SACPCMP (or similar professional body) certificates (and other relevant certificates and qualifications) and CV's.
<b>5</b>	<b>Constructability analysis for the entire works.</b>

	High-level constructability analysis for the works demonstrating understanding of the scope and includes the following as a minimum:minimum <ul style="list-style-type: none"><li>• Constraints identified</li><li>• Foreseeable construction risks</li><li>• Sequence of construction</li></ul>	
<b>6</b>	<b>Quality Management System/Plan:</b>	
	The Contractor is to provide a general outline and description of the quality management system/plan to be used in the execution of the works.	