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## **1. INTRODUCTION**

This document presents the tender technical evaluation strategy for Eskom Research and Innovation Centre (ERIC) Heating Ventilation and Air Conditioning (HVAC) system refurbishment.

The existing Eskom Research and Innovation Centre (ERIC) Complex is situated on Lower Germiston Rd, Rosherville, Johannesburg, and was initially constructed in the early 1980's and comprises various blocks inter-connected via multi-level covered walkway links. Due to the age of the building some of the building services are over their life span and need to be replaced, and others require major repairs and service.

## **2. SUPPORTING CLAUSES**

### **2.1 SCOPE**

The scope of work is limited to the refurbishment of Eskom Research and Innovation Centre (ERIC) HVAC system. The various affected HVAC plants are to be replaced/refurbished/ upgraded as follows:

- a) ERIC Data Centre HVAC is to be replaced with new generation down-flow DX AHUs together with matching air-cooled condensers. The complete new system is to be equipped with outdoor fresh air supply to the IT room to comply with the requirements of SANS 10400-Part O.
- b) The existing Laboratory heat-pump is to be replaced with new generation heat-pump type as it has exceeded its useful life span and can no longer be serviced and maintained to provide the required hot water for the lab.

#### **2.1.1 Purpose**

The purpose of this tender technical evaluation strategy is to define the Mandatory Evaluation Criteria, Qualitative Evaluation Criteria and Technical Evaluation Team (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 Eskom Real Estate (ERE), at Eskom Research and Innovation Centre (ERIC).

## **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 Policy
- [3] 363-ERE-AABZ28-SP0004-18-Eskom Research and Innovation Centre (ERIC) HVAC Refurbishment Technical Specification.

### **2.2.2 Informative**

- [4] ISO 9001: Quality Management Systems.

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## 2.3 DEFINITIONS

N/A

### 2.3.1 Classification

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

## 2.4 ABBREVIATIONS

Abbreviation	Description
BMS	Building Management System
CoC	Certificate of Completion
C&I	Control & Instrumentation
CV	Curriculum Vitae
DX	Direct Expansion
ECSA	Engineering Council of South Africa
HVAC	Heating, Ventilation, and Air Conditioning
ISO	International Organisation for Standardisation
ITP	Inspection Test Plans
OEM	Original Equipment Manufacturer
O&M	Operations and Maintenance
TET	Technical Evaluation Team
QCP	Quality Control Plans

## 2.5 ROLES AND RESPONSIBILITIES

Compiler	The document compiler is responsible for ensuring that this document is up-to-date and that this document is not a duplication of an existing documentation, regarding the document's objectives and content.
Functional Responsibility	The Functional Responsible Person shall determine if the document is fit for purpose before the document is submitted for authorisation.
Authoriser	The document authoriser is a duly delegated person with the responsibility to review the document for alignment to business strategy, policy, objectives, and requirements. He/she shall authorise the release and application of the document.
Lead Discipline Engineers	Provide input to the technical tender evaluation strategy and associated engineering activities.
Configuration Management Lead	Is accountable for ensuring that the engineering documentation, engineering systems and databases are correctly configured. As part of this role, the Configuration Practitioner is responsible for the development of the configuration management plan; configuration and management of the PBS and the management of plant item Tags.

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## **2.6 PROCESS FOR MONITORING**

The primary process for monitoring will be governed by Design Review Procedure (240-53113685), this entails assuring that the design achieves the requirements set out in this document. Any changes to this document will be performed as per Project Engineering Change Management Procedure (240-53114026).

## **2.7 RELATED/SUPPORTING DOCUMENTS**

Please refer to Section 2.2.

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### 3. TENDER TECHNICAL EVALUATION STRATEGY

#### 3.1 TECHNICAL EVALUATION THRESHOLD

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 the criteria are met. An assessment of 'No' against any criterion shall technically disqualify the tenderer and shall not be further evaluated against Qualitative Criteria.

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%. The following scoring method will be used:

**Table 1: Technical Scoring Methodology**

<b>SCORE</b>	<b>PERCENTAGE (%)</b>	<b>DESCRIPTION</b>
5	100	<b>COMPLIANT</b> <ul style="list-style-type: none"> <li>• Meet the 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 the technical requirement(s) with,</li> <li>• Acceptable technical risks 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 the 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/NON-RESPONSIVE</b>

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### **3.2 TET MEMBERS**

From each Engineering Discipline a Professional Registered Engineer/Technologist and one other member is to be part of the evaluation team.

**Table 2: TET Members**

<b>TET number</b>	<b>TET Member Name</b>	<b>Designation</b>
TET 1	Nkosi Ndika	Chief Technologist, Gx Engineering
TET 2	Andre Van Den Berg	Senior Engineer, C&I Engineering
TET 3	Andrew Koenane	Senior Engineer, Electrical Engineering
TET 4	Kameel Burath	Engineer, Civil and Structural Engineering
TET 5	Byron Thomas	Engineer, Civil and Structural Engineering
TET 6		
TET 7		
TET 8		
TET 9		
TET 10		
TET 11		

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### 3.3 MANDATORY 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>Background and Experience of similar completed projects that includes, as a minimum, the following: Integrated multidisciplinary design of all relevant engineering disciplines (HVAC, electrical, C&amp;I, civil, structural, building etc), construction / modification / installation, certification commissioning and testing of HVAC systems for building services environment.</p> <p>The scope of work comprises of Heating Ventilation and Air Conditioning System (HVAC), associated electrical works for complete HVAC system, associated controls, and accessories for complete HVAC Works, including Building Management System interface, associated building and civil works for complete HVAC Works, and Interfacing with fire detection system</p>	<p>Provide testimonial certificates or completion certificates of at least three (3) Multidisciplinary Projects similar to the scope of work. The testimonial certificates or completion certificates is to consist of the following information:</p> <ul style="list-style-type: none"> <li>a) Name of company where project was executed</li> <li>b) Project Description</li> <li>c) Construction period</li> <li>d) Verifiable reference (Contact person)</li> </ul> <p><b>Note 1:</b> Appointment letters will not be considered.</p> <p><b>Note 2:</b> If item b, c and d is not indicated on the testimonial certificate or completion certificates, the tender is to provide the information as an attachment to the testimonial certificate or completion certificate.</p> <p><b>Note 3:</b> If the project description is not provided or not comparable to the SoW (integrated multidisciplinary, the testimonial or completion certificate will not be considered.</p> <p><b>Note 4:</b> The Tender to complete Appendix A of this document.</p>	<p>Previous similar work experience and capacity to perform the required work.</p>
2.	<p>Has the Tenderer confirmed all major equipment and devices offered is supplied by the Original Equipment Manufacturers (OEMs)?</p>	<p>A confirmation letter is to be provided by the tenderer listing Original Equipment Manufacturers (OEMs) details and technical data sheets of major equipment which includes Direct Expansion (DX) units.</p>	<ul style="list-style-type: none"> <li>a) Reliability of equipment and devices.</li> <li>b) Warranty reservation.</li> </ul>

	<p>A confirmation letter is to be provided by the tenderer</p> <p>If the equipment concerned is manufactured under licence, the tenderer is to provide a proof of licence agreement made with the OEM. The distributors or agents provide a copy of the contract agreement made with the OEM for the distribution of their equipment and the duration of the agreement should match that of the Contract.</p>		
3.	<p>Company registered with South African Refrigeration &amp; Air Conditioning Contractors Association (SARACCA)</p>	<p>Certificate as proof of company registration with SARACCA</p>	<p>Company credibility that they have been in business for more than two consecutive years with audited annual financial statements; understand the requirement of PER, SANS 10147, OSH Act; and have resources which are Authorised Refrigeration Gas Practitioners.</p>

### 3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA

The weight for the technical review will be 100% with a minimum threshold of 70% and will be based on the following:

**Table 4: Qualitative Technical Evaluation Criteria**

	Qualitative Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	<b>Engineering of the complete HVAC Works and Construction Supervision</b>		30	
1.1	1-off Professional Registered Mechanical Technologist/Engineer with a track record of 5 completed projects as a minimum; for design, construction, and commissioning of HVAC systems in building services environment.	<p>Tender returnable – CVs and ECSA certificate to be submitted with reference to 5 completed projects for design, construction, and commissioning of HVAC systems in building services environment. The Engineering of the complete HVAC works in terms of this Contract is to be executed by a qualified professional Technologist/Engineer who is a member of Engineering Council of South Africa (ECSA) or equivalent international acknowledgement.</p> <p>5 = Formal Mechanical BSc/Btech qualification or equivalent international acknowledgement and has 6 or more years working experience.</p> <p>4 = Formal Mechanical BSc/Btech qualification or equivalent international acknowledgement but has 4 to 5 years working experience.</p> <p>2 = Formal Mechanical BSc/Btech qualification or equivalent international acknowledgement, but less than 3 years working experience.</p> <p>0 = Has less than 3 years' experience and no formal Mechanical BSc/Btech qualification or equivalent international acknowledgement</p>		70
1.2	1-off Professional Registered Electrical Technologist/ Engineer with a track record of 5 completed projects as a minimum; for design, construction, and commissioning of Electrical systems in Power Station or building services environment.	<p>Tender returnable – CV and ECSA certificate to be submitted with reference to 5 completed projects for design, construction, and commissioning of Electrical systems in building services environment.</p> <p>5 = Formal Electrical BSc/Btech qualification or equivalent international acknowledgement and has 6 or more years working experience.</p>		30

			<p>4 = Formal Electrical BSc/Btech qualification or equivalent international acknowledgement but has 4 to 5 years working experience.</p> <p>2 = Formal Electrical BSc/Btech qualification or equivalent international acknowledgement, but less than 3 years working experience.</p> <p>0 = Has less than 3 years' experience and no formal Mechanical BSc/Btech qualification or equivalent international acknowledgement.</p>		
<b>2.</b>	<b>Construction of the complete HVAC works</b>			<b>30</b>	
2.1	<p>General HVAC Foreman qualification and experience on similar projects.</p> <p>The General Foreman is the person to whom the Contractor has assigned the responsibility of supervising the teams engaged in construction, commissioning and testing activities. He/She shall commit to the project for its full duration, unless otherwise agreed by the parties. Should a substitution be allowed, only a person with the same or higher qualifications and experience will be accepted. The contractor is to provide contactable references.</p>	<p>Tender returnable – Tenderers will score points for a nominated General Foreman with minimum of five (5) or more years working experience in the construction, commissioning and testing of HVAC projects.</p> <p>5 = Formal Trade Test on air conditioning &amp; refrigeration or equivalent international acknowledgement, but has 5 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects.</p> <p>4 = Formal Trade Test on air conditioning &amp; refrigeration or equivalent international acknowledgement, but has 3 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects</p> <p>2 = No formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement, but has 3 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects.</p> <p>0 = No formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement.</p>			30
2.2	<p>2-off HVAC technician qualification and experience on similar projects.</p> <p>HVAC technician is the person to whom the Contractor has assigned the responsibility for construction, service and maintenance, commissioning and testing activities. He/She shall commit to the project for its full duration, unless otherwise agreed by the</p>	<p>Tender returnable – Tenderers will score points for a nominated HVAC Service and maintenance technician with minimum of five (5) or more years working experience in the service and maintenance, construction, commissioning and testing of HVAC projects.</p> <p>5 = Formal tertiary education Mechanical degree or Diploma or equivalent international acknowledgement or Formal Trade Test on air conditioning &amp; refrigeration or equivalent international acknowledgement, but has 5 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects.</p>			40

	<p>parties. Should a substitution be allowed, only a person with the same or higher qualifications and experience will be accepted. The contractor is to provide contactable references.</p>	<p>4 = Formal tertiary education Mechanical &amp; electrical degree or Diploma or equivalent international acknowledgement or Formal Trade Test on air conditioning &amp; refrigeration or equivalent international acknowledgement, but has 3 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects</p> <p>2 = Formal tertiary education Mechanical &amp; electrical degree or Diploma or equivalent international acknowledgement or No formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement, but has 3 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects.</p> <p>0 = No Formal tertiary education or formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement.</p>		
2.3	<p>1-off Registered Electrician with Department of Labour (DoL) as Master Installation Electrician or Installation Electrician in terms of Electrical Installation Regulations to certify the electrical installation by issuing the Certificate of Compliance (CoC) on the modified installations.</p>	<p>Tender returnable – CV and Proof of Registration certificate for Master installation electrician or installation electrician to be submitted with reference to 5 completed projects for design, construction, and commissioning of Electrical systems in Building Services Environment.</p> <p>The electrical installation in terms of this Contract is to be executed by a qualified Master Installation Electrician or Installation Electrician who is registered with the Department of Labour (DoL) or equivalent international acknowledgement.</p> <p>5 = Qualified Master Installation Electrician or Installation Electrician who is registered with the Department of Labour (DoL) or equivalent international acknowledgement and has 6 or more years working experience.</p> <p>4 = Qualified Master Installation Electrician or Installation Electrician who is registered with the Department of Labour (DoL) or equivalent international acknowledgement but has 4 to 5 years working experience.</p> <p>2 = Qualified Master Installation Electrician or Installation Electrician who is registered with the Department of Labour (DoL) or equivalent international acknowledgement, but less than 3 years working experience.</p> <p>0 = Has less than 3 years' experience and no formal qualification or equivalent international acknowledgement.</p>		30

3.	<b>Testing, Commissioning &amp; Correction of Faults, Completion &amp; Handover and Training &amp; Transfer of Technology</b>		<b>15</b>	
3.1	<p>1-off HVAC Mechanical Testing and Commissioning technician qualification and experience on similar projects.</p> <p>HVAC Mechanical Testing and Commissioning technician is the person to whom the Contractor has assigned the responsibility of commissioning and testing activities. He/She shall commit to the project for its full duration, unless otherwise agreed by the parties. Should a substitution be allowed, only a person with the same or higher qualifications and experience will be accepted. The contractor is to provide contactable references.</p>	<p>Tender returnable – Tenderers will score points for a nominated HVAC Mechanical Testing and Commissioning technician with minimum of five (5) or more years working experience in the service and maintenance, construction, commissioning and testing of HVAC projects.</p> <p>5 = Formal tertiary education Mechanical degree or Diploma or equivalent international acknowledgement or Formal Trade Test on air conditioning &amp; refrigeration or equivalent international acknowledgement, but has 5 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects.</p> <p>4 = Formal tertiary education Mechanical &amp; electrical degree or Diploma or equivalent international acknowledgement or Formal Trade Test on air conditioning &amp; refrigeration or equivalent international acknowledgement, but has 3 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects</p> <p>2 = Formal tertiary education Mechanical &amp; electrical degree or Diploma or equivalent international acknowledgement or No formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement, but has 3 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects.</p> <p>0 = No Formal tertiary education or formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement.</p>		40
3.2	<p>1-off HVAC Electrical &amp; Electronics Testing and Commissioning technician qualification and experience on similar projects.</p> <p>HVAC Electrical &amp; Electronics Testing and Commissioning technician is the person to whom the Contractor has</p>	<p>Tender returnable – Tenderers will score points for a nominated HVAC Electrical &amp; Electronics Testing and Commissioning technician with minimum of five (5) or more years working experience in the service and maintenance, construction, commissioning and testing of HVAC projects.</p> <p>5 = Formal tertiary education Electrical degree or Diploma or equivalent international acknowledgement or Formal Trade Test on air conditioning &amp; refrigeration or equivalent international acknowledgement, but has 5 or more years working</p>		40

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	<p>assigned the responsibility of commissioning and testing activities. He/She shall commit to the project for its full duration, unless otherwise agreed by the parties. Should a substitution be allowed, only a person with the same or higher qualifications and experience will be accepted. The contractor is to provide contactable references.</p>	<p>experience in construction, commissioning and testing of large HVAC or Refrigeration System projects.</p> <p>4 = Formal tertiary education Electrical degree or Diploma or equivalent international acknowledgement or Formal Trade Test on air conditioning &amp; refrigeration or equivalent international acknowledgement, but has 3 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects</p> <p>2 = Formal tertiary education Electrical degree or Diploma or equivalent international acknowledgement or No formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement, but has 3 or more years working experience in construction, commissioning and testing of large HVAC or Refrigeration System projects.</p> <p>0 = No Formal tertiary education or formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement.</p>		
3.3	<p>1-off HVAC Training Specialist qualification and experience on similar projects.</p> <p>HVAC Training Specialist is the person to whom the Contractor has assigned the responsibility of Training &amp; Transfer of Technology activities (including on job &amp; classroom training). He/She shall commit to the project for its full duration, unless otherwise agreed by the parties. Should a substitution be allowed, only a person with the same or higher qualifications and experience will be accepted. The contractor is to provide contactable references.</p>	<p>Tender returnable – Tenderers will score points for a HVAC Training Specialist with minimum of five (5) or more years working experience in the training environment for servicing &amp; maintenance, construction, commissioning and testing of HVAC projects or other related projects.</p> <p>5 = Formal tertiary education Mechanical/Electrical degree or Diploma or equivalent international acknowledgement or Formal Trade Test on air conditioning &amp; refrigeration or equivalent international acknowledgement, but has 5 or more years working experience in the training environment for servicing &amp; maintenance, construction, commissioning and testing of HVAC projects or other related projects.</p> <p>4 = Formal tertiary education Electrical degree or Diploma or equivalent international acknowledgement or Formal Trade Test on air conditioning &amp; refrigeration or equivalent international acknowledgement but has 3 or more years working experience in the training environment for servicing &amp; maintenance, construction, commissioning and testing of HVAC projects or other related projects.</p> <p>2 = Formal tertiary education Electrical degree or Diploma or equivalent international acknowledgement or No formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement but has 3 or more years working experience in the training environment for servicing &amp; maintenance, construction, commissioning and testing of HVAC projects or other related projects.</p>		20

			0 = No Formal tertiary education or formal Trade Test on air conditioning or refrigeration or equivalent international acknowledgement in the training environment for servicing & maintenance, construction, commissioning and testing of HVAC projects or other related projects.		
<b>4.</b>	<b>Quality Control Inspection Test Plans (ITP) or QCP and Complete Data Books to employer's requirements</b>			<b>5</b>	
4.1	<p>1-off Quality Control Inspector qualification and experience on similar projects.</p> <p>The Quality Control Inspector is the person to whom the Contractor has assigned the responsibility of all matters relating to the on-site Quality Control Inspection Test Plan (ITP) or Quality Control Plan (QCP) activities to ensure that HVAC meet a set of standards. He/she shall commit to the project for its full duration, unless otherwise agreed by the parties. Should a substitution be allowed, only a person with the same or higher qualifications and experience will be accepted.</p>	<p>Tender returnable – Tenderers will score points for a Quality Control Inspector with minimum of five (5) or more years working experience in Quality Control and Quality Assurance related to construction, commissioning and testing of HVAC projects or other related projects.</p> <p>5 = Experienced Quality Control Inspector with proven track record and has 6 or more years working experience.</p> <p>4 = Experienced Quality Control Inspector with proven track record but has 4 to 5 years working experience.</p> <p>2 = Experienced Quality Control Inspector with proven track record, but less than 3 years working experience.</p> <p>0 = Has less than 3 years' experience.</p>			100
	<b>General</b>			<b>20</b>	
5.1	<p>Organogram of the Proposed Full Time Multidisciplinary Project Team that includes each individual's years of relevant experience</p>	<p>Provide complete project team structure (organograms) based on the full scope of work i.e., site team organogram and design team organogram. Organograms should clearly distinguish between all required engineering disciplines.</p> <p>Letter confirming the availability of project team for the duration of the project</p>			30

			<p>It is noted that team members may only be replaced with individuals of equal or higher level of competence, after Client approval.</p> <p>Project team to include the following as minimum in addition to the requirements of Qualitative Technical Criteria 1-4 above.</p> <ul style="list-style-type: none"> <li>• Project Manager/Contracts Manager</li> <li>• Project Planner</li> <li>• SHEQ team</li> <li>• Configuration and Document Management.</li> <li>• Quantity Surveyor/Cost Engineer</li> </ul> <p>5 = All key project professional CVs submitted and meets minimum years of relevant experience.</p> <p>4 = More than 5 CVs of the key required project professionals submitted that meets minimum years of relevant experience.</p> <p>2 = Less than 5 CVs of the key required project professionals submitted that meets minimum years of relevant experience.</p> <p>0 = No organogram submitted</p>		
	5.2	Technical proposal that meets requirements of project scope	<p>Technical proposal to include the following as a minimum:</p> <ol style="list-style-type: none"> <li>a) Understanding of the scope of work as detailed by the functional specification.</li> <li>b) Proposed approach and methodology which includes deliverables, and resource plan, however not limited to. Indicate by general design/construction approach and method statements how the contractor will perform the work for each sub-system of the works (HVAC, Electrical, and Building related works).</li> <li>c) Tenderer confirm compliance to the full scope of work and Technical Specification for the Works Information. Deviation form to be completed should there be a deviation to technical requirements.</li> </ol> <p>5 = Excellent response which demonstrates the ability to deliver the service far more than minimum requirements.</p>		40

			<p>4 = Good response detailing clearly how the service will be delivered above and beyond the minimum requirements.</p> <p>2 = Barely adequate levels of required scope proposal.</p> <p>0 = Less than minimum level of required scope proposal or irrelevant.</p>		
	5.3	<p>Proposed work plan</p> <ul style="list-style-type: none"> <li>• Indicating intent to undertake full scope of work whilst ERIC remains live.</li> <li>• Activities divided up realistically in schedule</li> <li>• Timelines realistic for execution of activity</li> </ul>	<p>Preliminary Project schedule showing key deliverable dates and Proposed Work plan indicating intent to undertake full scope of work whilst ERIC remains live.</p> <p>5 = All three conditions of proposed work plan have been met.</p> <p>4 = Only two conditions of proposed work plan have been met.</p> <p>2 = Only one condition of proposed work plan has been met.</p> <p>0 = None of conditions of proposed work plan have been met.</p>		20
	5.4	<p>Lead time to mobilise team to execute the site investigations and design work after contract award.</p>	<p>Tenderer to specify lead time to mobilise team to site investigations and design work after contract award.</p> <p>5 = 1 week or less.</p> <p>4 = Between 1 and 2 weeks.</p> <p>2 = Between 3 and 4 weeks.</p> <p>0 = More than 4 weeks.</p>		10
				<b>TOTAL: 100</b>	

### 3.5 TET MEMBER RESPONSIBILITIES

Table 5: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3	TET 4	TET 5	TET 6	TET 7	TET 8	TET 9	TET 10	TET 11
1. Background and Experience of at least five similar completed projects	X	X	X	O	O						
2. Confirmed major equipment and devices is supplied by OEM	X	X	X	O	O						
Qualitative Criteria Number	TET 1	TET 2	TET 3	TET 4	TET 5	TET 6	TET 7	TET 8	TET 9	TET 10	TET 11
1. Engineering of the complete HVAC Works and Construction Supervision											
1.1. 1-off Professional Registered Mechanical Technologists/ Engineers	X	X	X	O	O						
1.2. 1-off Professional Registered Electrical Technologist/ Engineer	X	X	X	O	O						
2. Completion of Construction, Defects to be fixed, Service and Repairs of the complete HVAC works											
2.1. General HVAC Foreman qualification and	X	X	X	O	O						

experience on similar projects.												
2.2. 3-off HVAC Service technician qualification and experience on similar projects.	X	X	X	O	O							
2.3. 1-off Registered Electrician with Department of Labour (DoL) as Master Installation Electrician or Installation Electrician in	X	X	X	O	O							
3. Testing, Commissioning & Correction of Faults, Completion & Handover and Training & Transfer of Technology												
3.1. 1-off HVAC Mechanical Testing and Commissioning technician qualification and experience on similar projects.	X	X	X	O	O							
3.2. 1-off HVAC Electrical & Electronics Testing and Commissioning technician qualification and experience on similar projects.	X	X	X	O	O							
3.3. 1-off HVAC Training Specialist qualification and	X	X	X	O	O							

experience on similar projects.											
4. Quality Control Inspection Test Plans (ITP) or QCP and Complete Data Books to employer's requirements	X	X	X	O	O						
5. General	X	X	X	O	O						

**X – Required Attendance**

**O – Optional**

### 3.6 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

#### 3.6.1 Risks

Table 6: Acceptable Technical Risks

Risk	Description
1.	Alternative solutions with the same or better performance

Table 7: Unacceptable Technical Risks

Risk	Description
1.	Exclusions of scope specified in the employers requirements
2.	Unclear staff organogram. i.e. the staffing plan is weak not showing clarity in allocation of tasks and responsibilities
3.	Exclusion of a project specific schedule

#### 3.6.2 Exceptions / Conditions

Table 8: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	Accept deviation with technical qualification

Table 9: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	Deviation without technical qualification not accepted

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#### 4. AUTHORISATION

This document has been seen and accepted by:

Name & Surname	Designation
Nkosi Ndika	Chief Technologist, Gx Engineering
Kameel Burath	Engineer, Civil and Structural Engineering
Byron Thomas	Engineer, Civil and Structural Engineering
Andre Van Den Berg	Senior Engineer, C&I Engineering

#### 5. REVISIONS

Date	Rev.	Compiler	Remarks
July 2023	0.1	N. Ndika	Comments and updates
July 2023	1	N. Ndika	1 <sup>st</sup> Revision finalised and issued for publication
January 2024	0.1	N. Ndika	BMS scope and Aircooled chiller plant removed.
January 2024	2	N. Ndika	2nd Revision finalised and issued for publication.

#### 6. DEVELOPMENT TEAM

All Technical Evaluation Team Members, as listed in Table 1, were involved with the development of this document.

#### 7. ACKNOWLEDGEMENTS

We would like acknowledge ERIC Facility Management team as well as ERIC operating and maintenance departments for their support during data gathering and plant walk downs.

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