	Strategy	Generation Engineering
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Title: Tender Technical Evaluation Strategy for AGC and Generator Plant RTU Upgrade Project

Unique Identifier: AECI 0153

Alternative Reference Number: N/A

Area of Applicability: Generation Engineering

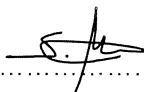
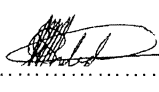
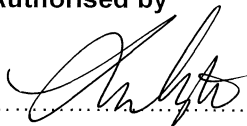
Documentation Type: Strategy

Revision: 01

Total Pages: 24

Next Review Date: AS-REQUIRED

Disclosure Classification: CONTROLLED DISCLOSURE

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Date: 12/01/2026	Date: 12-01-2026	Date: 13/01/2026

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1. INTRODUCTION

This document serves as the Tender Technical Evaluation Strategy for the Arnot Power Station AGC and Generator Plant RTU Control Systems Replacement Project.

An open enquiry invite will be issued calling for qualified bidders to participate in the tender process for the design, manufacture, factory acceptance testing, delivery, installation, commissioning, and testing of the new AGC RTU, Generator Plant A RTU, and Generator Plant B RTU control systems.

This Tender Technical Evaluation Strategy defines the approach, methodology, and criteria for evaluating the tenders received in response to the open enquiry. The evaluation process ensures that only qualified and technically competent bidders with proven capability, relevant experience, and appropriate design authority endorsement are considered for contract award.

The intent of this strategy is to ensure a transparent, consistent, and technically sound evaluation process, leading to the selection of a compliant, reliable, and sustainable RTU replacement solution that aligns with the Employer's Works Information and applicable standards and specifications.

2. SUPPORTING CLAUSES

2.1 SCOPE

This document covers the technical evaluation process and criteria for tenders received for the replacement of existing RTUs at Arnot Power Station. It defines:

- The mandatory and qualitative evaluation criteria.
- The roles and responsibilities of the Tender Evaluation Team (TET).
- The technical threshold and evaluation weighting.
- The process for managing risks, exceptions, and qualifications.

2.1.1 Purpose

The purpose of this strategy is to establish a structured and transparent framework for evaluating the technical submissions of tenderers to ensure that the selected Contractor delivers an OEM-endorsed, fully integrated, reliable RTU solution that complies with:

- The Generation AGC Design Standard for Power Plants (240-119416400).
- The South African Grid Code – Information Exchange Code.
- The Works Information for this project.

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2.1.2 Applicability

This evaluation strategy applies to the Generation Division, specifically to Arnot Power Station and Generation Engineering. It shall be applied by the appointed Tender Evaluation Team (TET) during the technical evaluation stage for this project only.

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] 240-119416400: Generation AGC Design Standard for Power Plants.
- [3] 32-1033: Eskom Procurement and Supply Chain Management Policy.
- [4] 32-1034: Eskom Procurement and Supply Management Procedure.

2.2.2 Informative

- [5] 240-44682850: PCM - Provide Engineering During Project Sourcing
- [6] 240-78921684: Process Control Manual (PCM) for Source External Suppliers
- [7] ISO 9001: Quality Management Systems

2.3 DEFINITIONS

RTU Control System: Combination of hardware and software providing data acquisition, control, and communication functions for AGC and Station Electrical Systems.

AGC RTU: Remote Terminal Unit handling Automatic Generation Control functions and interfacing with National Control.

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
AGC	Automation Generation Control
BME	Bandwidth Management Equipment
DCS	Distributed Control System
FAT	Factory Acceptance Test
OEM	Original Equipment Manufacturer

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Abbreviation	Description
RTU	Remote Terminal Unit
SAT	Site Acceptance Test
SIT	Site Integration Test
TET	Tender Evaluation Team

2.5 ROLES AND RESPONSIBILITIES

As per 240-168966153: Generation Tender Technical Evaluation Procedure for Generation

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

240-44682850: PCM - Provide Engineering During Project Sourcing

240-106871290: Technical Evaluation Team Member Appointment Letter Template

240-53716769: Tender Technical Evaluation Strategy Template

240-53716712: Tender Technical Evaluation Results Form Template

240-53716726: Tender Technical Evaluation Scoring Form Template

240-53716746: Tender Technical Evaluation Report Template

3. TENDER TECHNICAL EVALUATION STRATEGY

3.1 TECHNICAL EVALUATION THRESHOLD

The minimum weighted final score (threshold) required for a tender to be considered from a technical perspective is 75%. Only tenders achieving this threshold will proceed to commercial evaluation.

3.2 TET MEMBERS

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	Seluleko Sikhakhane	C&I Systems Engineer
TET 2	Thapelo Theledi	C&I Engineering Manager
TET 3	Dirk Maritz	Senior Supervisor – PTM SCASS
TET 4	Justice Mahlake	Senior Technician – PTM SCASS
TET 5	Cameron Govender	Senior Engineer - Electrical

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3.3 MANDATORY TECHNICAL EVALUATION CRITERIA

Table 2: Mandatory Technical Evaluation Criteria

	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria
1.	OEM or OEM-Authorized Bidder for the Proposed Replacement RTU.	Submit the following documents specific to the replacement RTU proposed and supplied by the Bidder: <ol style="list-style-type: none"> 1. OEM Authorization Letter confirming the bidder's authorization to supply, configure, and commission the proposed RTU model. 2. OEM Design-Authority Declaration confirming that the bidder's engineering, configuration, and integration methods are verified and supported by the OEM. 3. OEM Product Datasheets and Interface Manuals for the proposed RTU model. Additionally, the OEM or its authorized entity must commit in writing to: <ol style="list-style-type: none"> 1. Underwrite the RTU design and configuration. 2. Verify full compatibility with the Employer's existing systems (ABB P14 DCS, Hitachi Energy MicroSCADA, and BME). 3. Provide long-term maintenance, firmware updates, and technical support for the RTU throughout its lifecycle. 	This requirement ensures that the replacement RTU is supplied and supported by a bidder with the necessary technical authority and OEM endorsement. Limiting eligibility to the OEM or an OEM-authorized entity provides assurance that the proposed solution is engineered, configured, and supported in accordance with approved OEM standards and Eskom technical requirements. This mitigates risks associated with unauthorized intermediaries, ensures access to OEM engineering support and lifecycle management, and maintains compliance with warranty, support, and long-term operability obligations of the RTU throughout its service life.
2.	Compliance with IEC 60870-5-101/104	Submit the following documents specific to the proposed RTU communication design: <ol style="list-style-type: none"> 1. RTU Protocol Compliance Certificate or OEM Test Report confirming conformance with IEC 60870-5-101 and IEC 60870-5-104 standards. 	The RTU must fully comply with the IEC 60870-5-101 and IEC 60870-5-104 communication standards, as required by Eskom's Master and Slave Device Implementation Standards (240-61478967 and 240-61478980). These protocols govern the interoperability and communication between the AGC RTU, Generator Plant RTUs, National Control Centre (TEMSE), and the Hitachi Energy MicroSCADA.

3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA

Table 3: Qualitative Technical Evaluation Criteria

	Qualitative Technical Criteria Description	Tender Returnable	Criteria Weighting (%)	Score	Criteria Sub Weighting (%)
1.	Integration Capability	<p>Integration Capability Evidence Pack, including documented evidence of previous similar RTU integration projects demonstrating integration with at the following environments:</p> <ul style="list-style-type: none"> • DCS systems (e.g. ABB P14 or equivalent), • Hitachi Energy MicroSCADA or comparable utility-grade SCADA platform, • National Control Centre or equivalent system operator, • AGC RTU or equivalent automatic generation control environment, • Station electrical reticulation <p>For each reference project:</p> <ul style="list-style-type: none"> • Description of the RTU role and scope, • Interfaces implemented (hardwired, networked, protocols), • Confirmation of IEC 60870-5-101 and/or IEC 60870-5-104 implementation, including master/slave roles, 	25	<p>5 – Fully Compliant</p> <p>The bidder provides clear, verifiable, and project-relevant evidence demonstrating:</p> <ul style="list-style-type: none"> • Successful RTU integrations on at least one Eskom generation, transmission, or distribution project of similar complexity; and • Proven integration experience covering AGC RTU and station electrical reticulation; and • Demonstrated interfaces to National Control Centre; and • Documented implementation of IEC 60870-5-101/104, including Defined master/slave roles, • Evidence is specific, technically credible, and clearly transferable to the Arnot project context. <p>4 – Compliant</p> <p>The bidder demonstrates:</p> <ul style="list-style-type: none"> • At least one completed RTU integration project in a utility or heavy-industrial environment; and • Integration experience with either AGC RTU or station electrical reticulation (but not both); and/or 	

			<p>Ensuring strict compliance guarantees seamless signal exchange, time synchronization, and network integrity within the existing architecture. It also ensures that the replacement RTUs remain fully compatible with the Information Exchange Code (the Grid Code) and avoid re-engineering or re-certification of communication links.</p>
<p>3.</p>	<p>Proven RTU Installations in Eskom Power generation, Distribution, or Transmission Environments</p>	<p>Submit the following documents demonstrating proven experience with similar RTU installations in Eskom Generation, Distribution or Transmission:</p> <ol style="list-style-type: none"> 1. Project Reference Letters or Completion Certificates for at least one successful RTU project completed within the last 15 years. 2. Contact Details of Employer References for verification purposes. 3. Summary of Project Scope and Environment (indicating brownfield or greenfield). 4. Evidence of Testing and Commissioning Results, such as signed SAT reports or system acceptance certificates. <p>Projects may be brownfield or greenfield but must include the full RTU scope, which is engineering design, configuration, assembly, installation, testing, and commissioning.</p>	<p>This criterion reduces delivery and operational risk by ensuring that the bidder has demonstrated experience in implementing RTU systems in comparable brownfield and/or greenfield power system environments. It mitigates the risk of integration failures, extended outages, commissioning delays, and non-compliant interfaces that may arise from bidders lacking relevant RTU implementation experience.</p>

		<ul style="list-style-type: none"> Evidence of successful testing, commissioning, or OEM/client sign-off. 		<ul style="list-style-type: none"> Limited or indirect exposure to MicroSCADA or National Control environments. <p>The integration approach aligns with the Works Information but lacks depth in one or more key integration domains.</p> <p>2 – Partially Compliant</p> <p>The bidder provides:</p> <ul style="list-style-type: none"> Generic statements (e.g. “supports IEC 104”) without application context; and/or RTU experience limited to non-utility or low-complexity systems; and/or No demonstrable experience integrating with AGC, National Control, or station electrical reticulation environments. <p>Integration capability is largely conceptual, with limited evidence of execution under comparable conditions.</p> <p>0 – Non-Responsive</p> <ul style="list-style-type: none"> No integration evidence submitted; or No demonstrated RTU integration experience; or Experience limited to supply only, without system integration responsibility. 	
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<p>2.</p>	<p>Concept Design Compliance with Works Information</p>	<p>Concept Design Compliance Package, including as a minimum:</p> <ul style="list-style-type: none"> • High-level system architecture diagram covering the AGC and Generator Plant A&B RTUs • Conceptual redundancy philosophy for each RTU (e.g. CPU, power, communications) • Conceptual description and/or diagram of RTU-to-RTU interconnectivity and data exchange • Interface diagrams showing connections to Hitachi Energy MicroSCADA • Conceptual interface and fibre optic connectivity between the AGC RTU and the BME • High-level power supply and temporary power concepts for all RTUs • Compliance narrative or matrix showing alignment with the Works Information. 	<p>25</p>		
	<p>2.1 Coverage of All Replacement RTUs and Overall Architecture</p>			<p>5 – Fully Compliant All three replacement RTUs (AGC RTU, Generator Plant A RTU, and Generator Plant B RTU) are clearly addressed, each with a defined purpose. The overall system architecture is logically structured and easy to understand.</p> <p>4 – Compliant All three RTUs are addressed; however,</p>	<p>20</p>

				<p>one RTU or an aspect of the overall architecture is described at a higher level or with reduced clarity.</p> <p>2 – Partially Compliant An overall network architecture is provided, but one or more RTUs within scope are not adequately addressed, or the design focuses mainly on one RTU with limited detail on the others.</p> <p>0 – Non-Responsive No system architecture is provided, or the submission contains generic architecture not related to this project.</p>	
	2.2	RTUs Interconnectivity Concept	Evaluates the bidder's understanding of how the 3 RTUs communicate with each other and operate together to support coordinated plant operation.	<p>5 – Fully Compliant A clear, project-specific conceptual description and diagram are provided, showing RTU-to-RTU data exchange, functional relationships, and interdependencies between the AGC RTU, Generator Plant A RTU, and Generator Plant B RTU. The submission aligns with the Employer's existing architecture.</p> <p>4 – Compliant RTU interconnectivity is described and generally correct, with reference to the project RTUs. Diagrams or descriptions are provided, but detail on data flow, dependencies, or functional relationships between the RTUs is limited.</p> <p>2 – Partially Compliant A limited, project-referenced description is provided indicating how the RTUs exchange data or interact; however, the submission lacks clear explanation of how the RTUs work together, omits diagrams,</p>	20

				<p>or does not adequately describe data flow or functional dependencies.</p> <p>0 – Non-Responsive No RTU interconnectivity concept is provided, or the submission consists only of generic statements not related to this project.</p>	
	2.3	Interfaces to Hitachi Energy MicroSCADA and BME	Evaluates the conceptual interface approach between the replacement RTUs and Hitachi Energy MicroSCADA, as well as the AGC RTU interface to National Control via the BME, including communication paths and protocol usage.	<p>5 – Fully Compliant Clear conceptual interface diagrams and descriptions are provided, showing all required interfaces, including:</p> <ul style="list-style-type: none"> • how all replacement RTUs connect to Hitachi Energy MicroSCADA; and • how the AGC RTU interfaces with the BME using IEC 60870-5-101/104. <p>All interfaces are consistently described and aligned with the Works Information.</p> <p>4 – Compliant Most required interfaces are shown and generally correct; however, one or more interfaces are described at a high level only, or lack clarity on system boundaries.</p> <p>2 – Partially Compliant Only some interfaces are identified, or the submission relies on generic statements without clearly showing how the RTUs interface with MicroSCADA, the BME, or other systems within scope.</p> <p>0 – Non-Responsive No meaningful interface information is</p>	20

					submitted, or the submission fails to identify the required interfaces within the scope of the Works.	
	2.4	RTU Architecture and Redundancy Concept	Evaluates the conceptual redundancy philosophy for CPU, power, and communications for each RTU.		<p>5 – Clear, RTU-specific redundancy concepts demonstrating high availability and fault tolerance.</p> <p>4 – Generally compliant redundancy concept with minor gaps.</p> <p>2 – Generic redundancy statements without RTU-specific application.</p> <p>0 – No redundancy concept provided.</p>	20
	2.5	Power Supply Concept	Evaluates the bidder’s conceptual approach to power supply and temporary power arrangements for all three RTUs, aligned with the existing UPS and distribution board philosophy described in the Employer’s Works Information.		<p>5 – Clear and feasible power supply concept for all RTUs, including permanent and temporary supply arrangements, aligned with the Employer’s Works Information.</p> <p>4 – Generally compliant power supply concept but lacking clarity for one or more RTU or one aspect.</p> <p>2 – Generic power supply statements without RTU-specific consideration.</p> <p>0 – No power supply concept provided.</p>	20
3.	Method Statement and Execution Plan		<p>Method Statement and Execution Plan, including as a minimum:</p> <ul style="list-style-type: none"> • RTU replacement methodology for AGC, Generator Plant A & B. 	30		

		<ul style="list-style-type: none"> • Proposed online changeover approach and sequencing • Temporary works concept (power, communications, fibre, etc.) • SHEQ and Permit-to-Work (PTW) approach • Testing, verification, and handover approach • Documentation and reporting approach. 			
	<p>3.1 RTU Replacement Methodology and Overall Execution Strategy</p>	<p>Evaluates the Bidder's proposed RTU replacement methodology, including the overall execution sequence for replacing the AGC and, Generator Plant A & B RTU.</p>		<p>5 – Fully Compliant A clear, structured, and project-specific RTU replacement methodology is submitted. The methodology addresses all three RTUs, defines a logical execution sequence, and clearly states assumptions based on plant walkdowns. Key execution steps and dependencies are easy to understand.</p> <p>4 – Compliant A sound and generally project-relevant RTU replacement methodology is submitted; however, one or more key aspects are not fully addressed, such as limited detail for one RTU, an execution phase, or stated assumptions.</p> <p>2 – Partially Compliant A generic RTU replacement methodology is submitted with limited relevance to this project. The approach lacks clarity on how the AGC RTU and Generator Plant RTUs will be replaced.</p> <p>0 – Non-Responsive No meaningful RTU replacement methodology is submitted, or the</p>	<p>20</p>

					submission is not related to the project scope.	
	3.2	Online Changeover Approach	Evaluates the Bidder's conceptual approach to online changeover, aimed at maintaining continuous plant operation and minimising disruption.		<p>5 - Fully Compliant</p> <p>A clear, step-by-step online changeover plan is provided, showing how control is always maintained and how the new RTUs are tested and verified before switching over.</p> <p>4 - Compliant</p> <p>The bidder submits an online changeover strategy, but the submission provides limited detail on the sequence of steps or how the changeover will be managed.</p> <p>2 – Partially Compliant</p> <p>Online changeover referenced without explanation or reliance on outages without justification.</p> <p>0 – Non-Responsive</p> <p>No online changeover approach described.</p>	20
	3.3	Temporary Works Concept	Evaluates the Bidder's understanding of temporary works required to support RTU replacement and online changeover.		<p>5 – Fully Compliant</p> <p>The Bidder provides a clear and project relevant assessment of temporary works requirements.</p> <p>The submission either:</p> <ul style="list-style-type: none"> Defines appropriate temporary works (e.g. temporary power, communications, or interfaces) aligned with the proposed methodology, or 	20

					<ul style="list-style-type: none"> Clearly justifies why temporary works are not required, with a logical explanation consistent with the proposed online changeover approach and Works Information. <p>4 – Compliant Temporary works are addressed at a high level, or the Bidder states that temporary works are likely not required, but with limited supporting justification.</p> <p>2– Partially Compliant Generic mention of temporary works, or a statement that no temporary works are required, without sufficient explanation or linkage to the proposed methodology.</p> <p>0 – Non-Responsive No consideration of temporary works provided, and no justification offered.</p>	
	3.4	Integration and Interface Execution Approach	Evaluates the Bidder's proposed execution approach for integration with Hitachi Energy MicroSCADA, ABB P14 DCS, BME, and National Control.		<p>5 – Fully Compliant The Bidder provides a clear and structured integration execution approach that addresses all required interfaces, including:</p> <ul style="list-style-type: none"> RTU interfaces to Hitachi Energy MicroSCADA, Interfaces to ABB P14 DCS, The AGC RTU interface to the BME and National Control, and Use of IEC 60870-5-101/104 where applicable. <p>The approach includes defined execution steps and staged testing or validation</p>	20

				<p>activities to confirm correct end-to-end integration.</p> <p>4 – Compliant The Bidder defines a generally correct integration approach and identifies the key systems and interfaces; however, one or more interface aspects are described only at a high level or are not fully addressed.</p> <p>2 – Partially Compliant The submission contains generic integration statements without a clear execution approach, interface coverage, or testing sequence.</p> <p>0 – Non-Responsive No meaningful integration or interface execution approach is submitted.</p>	
	3.5	Testing, Verification, and Handover	Evaluates the Bidder's proposed approach to testing, verification, and handover, including FAT, SIT, SAT, and documentation.	<p>5 – Fully Compliant The Bidder provides a clear, structured, and end-to-end approach that addresses:</p> <ul style="list-style-type: none"> FAT, SIT, SAT, and commissioning activities for the 3 replacements RTUs. Alignment with IEC 62381 principles. Defined roles and responsibilities of the Contractor, the RTU OEM (or OEM-authorized design authority), and the Employer during testing and commissioning. Logical sequencing from testing through commissioning to handover, demonstrating continuity of the existing RTU control systems; and 	20

					<ul style="list-style-type: none"> A structured handover approach, including test records, commissioning documentation, and as-built information for the replacement RTUs. <p>4 – Compliant The Bidder presents a generally sound testing and commissioning approach for the replacement RTUs; however, one or more elements of the fully compliant response are missing or only partially defined.</p> <p>2 – Partially Compliant The submission contains a high-level or generic testing and commissioning narrative.</p> <p>0 – Non-Responsive No meaningful testing, commissioning, verification, or handover approach for the replacement RTUs is submitted.</p>	
4	Quality Management and Quality Control Approach	<p>Quality Management and Quality Control Approach document, applicable to the Works, including as a minimum:</p> <ul style="list-style-type: none"> A high-level Quality Management Plan or Quality Approach applicable to RTU replacement projects. Description of quality control processes covering installation, integration, testing, commissioning, and handover of the replacement RTUs; 	10	<p>5 – Fully Compliant The Bidder submits a clear, structured, and practical QM/QC approach that demonstrates:</p> <ul style="list-style-type: none"> Well-defined quality processes applicable to RTU replacement projects. Logical inspection and test points aligned with FAT, SIT, and SAT activities. A workable approach to managing non-conformances and corrective actions; and 		

		<ul style="list-style-type: none"> • Indicative Inspection and Test Points (ITPs) relevant to RTU installation, cabling, configuration, FAT, SIT, and SAT activities; • Approach to identification, management, and close-out of non-conformances, including corrective action and re-testing; • Document control and version management approach for quality and test records; and • Confirmation of alignment with recognised quality standards (e.g. ISO 9001 or equivalent). 		<ul style="list-style-type: none"> • Evidence that similar quality systems have been applied on comparable RTU or control system projects. <p>4 – Compliant The Bidder provides a sound and credible QM/QC approach covering the key quality activities, but with limited project-specific tailoring or reduced detail on inspection points or corrective action processes.</p> <p>2 – Partially Compliant The Bidder provides a generic quality statement or high-level reference to quality standards, with limited explanation of how quality will be applied to RTU installation, integration, testing, and commissioning activities.</p> <p>0 – Non-Responsive No Quality Management or Quality Control approach is submitted, or the submission is not relevant to the scope of the RTU replacement Works.</p>	
5	Project Plan	<p>Preliminary Project Programme, including as a minimum:</p> <ul style="list-style-type: none"> • Proposed projects start and completion dates • Key project phases and major activities • Procurement lead times for RTU hardware and critical components 	10	<p>5 – Fully Compliant</p> <p>A detailed and realistic preliminary project programme is submitted that:</p> <ul style="list-style-type: none"> • Clearly reflects the scope and sequencing of the Works • Includes logical dependencies between design, procurement, FAT, installation, commissioning, and handover 	

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		<ul style="list-style-type: none"> • Factory Acceptance Testing (FAT), delivery, installation, and commissioning milestones • Handover and close-out activities 		<ul style="list-style-type: none"> • Identifies realistic procurement lead times and commissioning durations • Demonstrates understanding of plant access constraints and interface dependencies • Aligns with the Employer's required completion objectives. <p>4 – Compliant</p> <p>A structured project programme is provided covering the main activities and milestones, but with limited detail on dependencies, procurement lead times, or commissioning sequencing.</p> <p>2 – Partially Compliant</p> <p>A high-level or generic programme is submitted showing start and end dates only, with limited activity breakdown or weak linkage to the project scope.</p> <p>0 – Non-Responsive</p> <p>No project programme submitted, or the submission is generic, unrealistic, or not aligned with the Works Information.</p>	
			<p>TOTAL: 100</p>		

3.5 TET MEMBER RESPONSIBILITIES

Table 4: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3	TET 4	TET 5	TET 6	TET 7	TET n
1		X	X					
2		X	X					
3		X	X					
Qualitative Criteria Number	TET 1	TET 2	TET 3	TET 4	TET 5	TET 6	TET 7	TET n
1	X	X	X	X				
2	X	X	X	X				
2.5					X			
3	X	X	X	X				
4	X	X	X	X				
5	X	X	X	X				

3.6 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.6.1 Risks

Table 5: Acceptable Technical Risks

Risk	Description
1.	Using technologists instead of professional engineers (if ECSA-registered)
2.	The bidder demonstrates experience in AGC RTU replacement and general RTU implementation but lacks specific experience with station electrical reticulation RTUs.

Table 6: Unacceptable Technical Risks

Risk	Description
1.	Lack of Changeover or Outage Management Strategy: Failure to provide a clear and structured plan for the online or phased replacement of RTUs, resulting in potential extended plant outages or uncontrolled changeovers. Such submissions present unacceptable operational and safety risks.
2.	Unverified or Non-OEM RTU Hardware and Software: Hardware and Software: Proposals using unproven, obsolete, or non-OEM certified RTUs or firmware without traceable OEM support, warranty, or lifecycle commitment. This poses unacceptable risk to maintainability and integration with Eskom systems.
3.	Incomplete or Missing Interface Design: Failure to address the integration between AGC RTU, Generator Plant RTUs, MicroSCADA, DCS, and BME, or submission of generic interface diagrams that omit key signal pathways or communication protocols.
4.	No Demonstrated Experience in Similar RTU Projects: Lack of verifiable experience in similar RTU projects, or submission of irrelevant project references. This indicates an unacceptable delivery and technical performance risk.
5.	Designs Requiring Major Outages or System Shutdowns: Any proposed installation or replacement approach requiring extended generation unit or station outages, or that cannot be implemented online or during short, planned shutdowns, is considered operationally unacceptable.
6.	Failure to Address Integration with Employer Systems: Omission of communication or data exchange with the Hitachi Energy MicroSCADA, ABB DCS, or BME systems. Any design that isolates or excludes these mandatory interfaces is deemed non-compliant.

3.6.2 Exceptions / Conditions

Table 7: Acceptable Technical Exceptions / Conditions


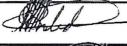

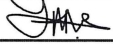


Risk	Description
1.	Limited Arnot-specific configuration detail at tender stage: The bidder provides a compliant conceptual design and methodology but notes that detailed configuration (e.g. exact signal lists, tag naming, or final addressing) will be confirmed post-award following detailed design workshops with the Employer.
2.	Alternative but compliant redundancy philosophy: The bidder proposes a redundancy approach that differs in structure from existing installations but meets or exceeds availability, fault tolerance, and Works Information requirements.
3.	Integration experience from Transmission or Distribution environments: The bidder demonstrates strong RTU and AGC integration experience in Eskom Transmission or Distribution environments, even if Generation-specific AGC replacement experience is limited.
4.	OEM lifecycle commitments subject to final contract: The bidder confirms OEM lifecycle support intent (10–15 years) subject to final commercial agreement and contract award, without diminishing technical compliance

Table 8: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	Conditional OEM support or design authority: Any proposal where OEM support, design authority, firmware updates, or lifecycle support is conditional, unclear, or dependent on third-party approval not secured at tender stage.
2.	Non-compliance with IEC 60870-5-101/104: Any deviation from or partial compliance with IEC 60870-5-101/104 communication standards for AGC, MicroSCADA, or National Control interfaces.
3.	Requirement for extended outages without justification: Any proposal that requires prolonged plant, unit, or system outages without a technically justified and Employer-approved alternative.
4.	Supply-only or reseller-only proposals: Proposals that limit responsibility to equipment supply only, without full engineering, configuration, integration, testing, and commissioning accountability.
5.	Use of obsolete or unsupported RTU platforms: Proposals based on RTU hardware or software that is nearing end-of-life, lacks a defined OEM support roadmap, or cannot meet long-term maintainability requirements.

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
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5. REVISIONS

Date	Rev.	Compiler	Remarks
October 2025	0.1	S. Sikhakhane	First Draft
January 2026	0.2	S. Sikhakhane	Incorporated comments from GX Engineering, C&I

6. DEVELOPMENT TEAM

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

- Seluleko Sikhakhane
- Thapelo Theledi
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7. ACKNOWLEDGEMENTS

- Jorge Nunes
- Isaac Sibiyi

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