

	Strategy	Engineering
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Title: **Camden PS Units 1-3 Stator
Coolant Conductivity Power
Supply - Tender Technical
Evaluation Strategy**

Unique Identifier: **383-CMDN-AABZ31-
SG0002-10**

Alternative Reference Number: **N/A**

Area of Applicability: **Engineering**

Documentation Type: **Strategy**

Revision: **2.0**

Total Pages: **14**

Next Review Date: **N/A**

Disclosure Classification: **CONTROLLED
DISCLOSURE**

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1. INTRODUCTION

The Stator Coolant Water (SCW) system plays an important role since it is used to provide a source of demineralised water to the generator stator windings for direct cooling of the stator windings and associated components.

Units 4 – 8 were initially installed with a single 220 Vac UPS. Whenever the UPS failed the Stator Coolant Water Conductivity analysers would fail and trip the unit on Stator Coolant Water Conductivity 2v3 Trip protection. Due to the high number of trips that were incurred as a result of these failures of the UPS's, a project was initiated and carried out to change the supply of the Analysers from 220 Vac to 24 Vdc instrument supplies.

Units 1 – 3 Stator Coolant Water Conductivity Analysers (*MKF 30 CQ001/02/03) are powered by 220 Vac UPS's which were installed by CED during the RTS period. Units 1 – 3 were left on the 220 Vac since they were perceived to be equipped with redundant UPS's and were therefore assumed to be reliable and not a risk at that time. However, the risk has changed and the UPS's have become unreliable due to aging and replacement cost. This has caused trips in the recent past. Whenever the UPS failed the Stator Coolant Water Conductivity Analysers would fail as well and trip the unit on Stator Coolant Water Conductivity 2v3 Trip protection

The contractor to remove U1-3 Stator Coolant Conductivity cables from the 220Vac Power Distribution panel (Panels Identification 1/2/3 0CVC20) and pull new cables from existing panel in the equipment room MAIN 24VDC PANEL (1/2/3 0CUB15), refer to appendix, to power Stator Coolant Water Conductivity Analysers (*MKF 30 CQ001/02/03)

Note: No need to design the new 24 Vdc Power Distribution panel and also signals to DCS remains unchanged.

2. SUPPORTING CLAUSES

2.1 SCOPE

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 is only applicable to Unit 1-3 Stator Coolant Conductivity Power Supply project at Camden Power Station.

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] 240-165875620 – Unit 1-3 Stator Coolant Conductivity Analysers Power Supply – Technical Specification.

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- [3] 383-CMDN-AABB-D00139-121 - Camden PS Units 1-3 Stator Coolant Water Conductivity Analysers Power Supply - Technical Specification End-of-Phase Review Report.
- [4] 383_CMDN-BAAC-D00132-6 Camden Unit 1-3 Stator Coolant Conductivity Power Supplies Required Operational Capability Rev1
- [5] 383-CMDN-AAVZ28-SP008-2 Camden Unit1-3 Coolant Conductivity Power Supply Stakeholder Requirements Definition_Rev1
- [6] 240-62196227 Eskom Life Saving Rules
- [7] 240-64550692 Label Specification and Plant Codification Procedure
- [8] 240-53114002 Engineering Change Management Procedure
- [9] 240-53114026 Project Change Management Procedure
- [10] 240-53113685 Design Review Procedure

2.2.2 Informative

2.3 DEFINITIONS

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
ac	Alternating Current
C&I	Control and Instrumentation
CED	Construction Engineering Department
COE	Centre Of Excellence
dc	Direct Current
DCS	Distributed Control System
HI	High
HIHI	High-High
KKS	Kraftwerks-Kennzeichen-System

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PS	Power Station
RTS	Return To Service
SCW	Stator Coolant Water
UPS	Uninterruptable Power Supply
Vdc	Volts Direct Current
Vac	Volts Alternating Current

2.5 ROLES AND RESPONSIBILITIES

As per 240-48929482 Rev 1, Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

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

2.7 RELATED/SUPPORTING DOCUMENTS

Refer to section 2.2.1

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 or not 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

SCORE	PERCENTAGE (%)	DESCRIPTION
5	100	COMPLIANT

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		<ul style="list-style-type: none">• Meet the technical requirement(s) AND,• No foreseen technical risk(s) in meeting technical requirements
4	80	COMPLIANT WITH ASSOCIATED QUALIFICATIONS <ul style="list-style-type: none">• Meet the technical requirement(s) with,• Acceptable technical risks AND/OR;• Acceptable exceptions AND/OR;• Acceptable conditions
2	40	NON-COMPLIANT <ul style="list-style-type: none">• Does not meet the technical requirement(s) AND/OR Unacceptable technical risk(s) AND/OR;• Unacceptable exceptions AND/OR;• Unacceptable conditions
0	0	TOTALLY DEFICIENT/NON-RESPONSIVE

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3.2 MANADATORY TECHNICAL EVALUATION CRITERIA

Table 3: Mandatory Technical Evaluation Criteria

	Mandatory Technical Criteria Description	Meet (YES / NO)	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria
1.	Tenderer shall provide proof of being registered as an Installation Electrician. [Note: Master Installation Electrician shall also be acceptable]		<ul style="list-style-type: none">• Tenderer to provide certified copies of proof of registration with the Department of Labour as an Installation Electrician.• Tenderer to provide a certified copy of Installation Electrician Card as issued by the Department of Labour	Requirement as per the Occupational Health and Safety Act (1993) SANS 10142-1:2021 Edition 3.1
2.	To be registered with the Construction Industry Development Board (CIDB) as level 1EB/1EP		<ul style="list-style-type: none">• Tender Returnable – Tenderer to provide proof of registration with the CIDB.	Contractor Work capability
3.	To be registered Professionally with ECSA for design purposes		<ul style="list-style-type: none">• Tender Returnable – Tenderer to provide proof of registration with ECSA	Contractor Work credibility

3.3 QUALITATIVE TECHNICAL EVALUATION CRITERIA

Table 4: Qualitative Technical Evaluation Criteria

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	C&I/Electrical Requirements			100	
	1.1	C&I Work Method Statement - A statement from the Contractor detailing how they plan to execute the work. What equipment and resources will be used and how they will be utilised by the Contractor to complete the work successfully.	Tender returnable – Work Method Statement Narrative.		20
	1.2	Proposed work plan: <ul style="list-style-type: none"> - Indicating intent to undertake full scope of work - Activities divided up realistically in the schedule - Timelines realistic for execution of activity 	Tender returnable – Preliminary Project schedule showing key deliverable dates and Proposed Work plan indicating intent to undertake full scope of work)		20
	1.3	Qualification of cable pullers (NQF level 4/Matric involved in similar work & indicate years' experience in cable pulling)	Tender returnable – Certified copy of matric certificate and CV Note: Certified in less than 6 months		20
	1.4	Qualification of supervisor (Electrical Engineering minimum NQF level 6 or more) involved on similar works (at least 3 years relevant experience) and To be registered Professionally with ECSA for design purposes	Tender returnable – Certified copies of qualifications and CV Note: Certified in less than 6 months		20
	1.5	List a minimum of 3 projects with similar scope of work that reflects work executed before {Submit printed proof of orders (with duration and scope of work)/contracts/ completion certificates on a letter head and attach relevant scope of work with duration of work done}.	Tender returnable – List of projects, signed reference letters and contacts.		20
					TOTAL: 100

Qualitative Technical Evaluation Criteria		Score [0,2,4,5]	Scoring Criteria
1.	C&I Work Method Statement - A statement from the Contractor detailing how they plan to execute the work. What equipment and resources will be used and how they will be utilised by the Contractor to complete the work successfully.		<p>5 = Work Method Statement submitted with an execution plan, list of resources and equipment to be used and a narrative explaining how resources and equipment will be used to perform the work.</p> <p>4 = Work Method Statement submitted missing one of the following: execution plan, list of resources, and list of equipment or a narrative explaining how resources and equipment will be used to perform the work.</p> <p>2 = Work Method Statement submitted missing three of the following: execution plan, list of resources, and list of equipment and/or a narrative explaining how resources and equipment will be used to perform the work.</p> <p>0 = Work Method Statement is not part of the submission.</p>
2.	<p>Proposed work plan:</p> <ul style="list-style-type: none"> - Indicating intent to undertake full scope of work - Activities divided up realistically in the schedule - Timelines realistic for execution of activity 		<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 conditions of proposed work plan have been met.</p> <p>0 = None of the conditions of proposed work plan have been met.</p>
3.	Qualification of cable pullers (NQF level 4/Matric involved in similar work & indicate years' experience in cable pulling), including		<p>5 = CV and certified qualification provided with more than 2 (two) and more years of experience.</p> <p>4 = CV and certified qualification provided with more than 2 (two) years of experience.</p> <p>2 = CV and certified qualification provided with more than 1 (one) year of experience.</p> <p>0 = No CV and certified qualification provided</p>

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Qualitative Technical Evaluation Criteria		Score [0,2,4,5]	Scoring Criteria
4.	Qualification of supervisor (Electrical Engineering NQF level 6 or more) involved on similar works (at least 3 years relevant experience)		<p>5 = CV and certified qualification provided with more than 3 (three) and more years of experience.</p> <p>4 = CV and certified qualification provided with more than 2 (two) years of experience.</p> <p>2 = CV and certified qualification provided with more than 1 (one) year of experience.</p> <p>0 = No CV and certified qualification provided</p>
5.	List a minimum of 3 projects with the scope of work that reflects work done on cable pulling and interface.		<p>5 = More than three signed reference letters provided with contact details.</p> <p>4 = Three signed reference letters provided with contact details.</p> <p>2 = Two references provided with contact details.</p> <p>0 = No reference part of submissions.</p>

3.4 TET MEMBER RESPONSIBILITIES

Table 5: TET Member Responsibilities

Qualitative Criteria Number	TET 1	TET 2	TET 3
1.1	X	X	X
1.2	X	X	X
1.3	X	X	X
1.4	X	X	X
1.5	X	X	X

X – REQUIRED ATTENDANCE

O – OPTIONAL

3.5 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.5.1 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.	Not meeting mandatory requirements.

3.5.2 Exceptions / Conditions

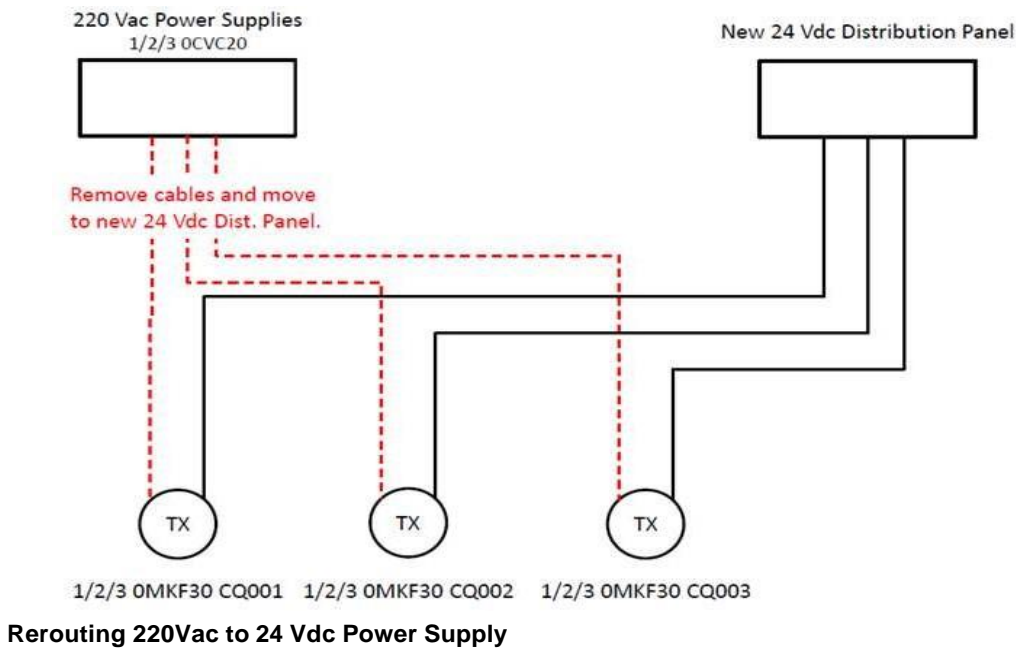
Table 8: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	None

Table 9: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	Not meeting mandatory requirements.

4. APPENDIX



Existing panel in the equipment room MAIN 24VDC PANEL (1/2/3 0CUB15)

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