Eskom	SCOPE	Kriel Power Station

Title: **Scope Of Work For Compressor A & B Electrical Panels At Kriel PS**

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Compiled by	Functional Responsibility	Authorized by
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1. Introduction

The purpose of the Compressor Controls Upgrade at Kriel PS is to ensure that system availability is maintained for the common Units Generator Circuit Breaker plant by solving the problem of spares obsolescence and eliminating the risk to personnel due to unmaintained compressor controls plant. The work outlined by this document is for the Contractor to perform engineering, design, manufacturing, factory acceptance test, transportation, off-loading, installation, site acceptance test and commissioning of the compressor controls at Kriel PS.

2. Supporting Clauses

2.1 Scope

This document specifies Contractor's minimum requirements for engineering work, drawings, procurement, manufacture, quality control & assurance, supply, delivery, installation, commissioning, testing and maintenance and handing over of Kriel Power Station common compressor controls in the 18kV Generator Circuit Breaker .

2.1.1 Purpose

The purpose of this document is to provide detailed requirements that will ensure that the Contractor gives Kriel Power Station reliable Control circuit assembly to maintain continuity of supply on the controls for 18kV Generator Circuit Breaker plant until Station's end of life

2.1.2 Applicability

This document is applicable to Kriel Power Station.

2.1.3 Effective date

This document comes into effect upon signing by designated personnel on the cover page.

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] ISO 9001 Quality Management Systems

2.3 Definitions

Assembly	A combination of one or more low voltage switching devices together with associated control, measuring, signalling, protective, regulating equipment, etc.., completely assembled under the responsibility of the manufacturer with all the internal electrical and mechanical interconnections and structural part.
Capability	Capability is the ability of a resource to achieve its objectives quantified as the sum of expertise and capacity.
Classification	Controlled disclosure**:** controlled disclosure to external parties (either enforced by law, or discretionary).
Switchgear	Switchgear is a generic term and includes the entire range of switching devices and their combination with associated control, measuring, protecting and regulating equipment. The assemblies of such devices and equipment with associated inter-connections, accessories, enclosures and supporting structures, intended, in principle, for use in connection with the generation, transmission, distribution and conversion of electric energy also form switchgear
System	An integrated set of constituent pieces that are combined with an operational or support environment to accomplish a defined objective. These pieces include people, hardware, software, firmware, information, procedures, facilities, services and other support facets.

2.4 Abbreviations

Abbreviation	Description
ACB	Air Circuit Breaker
OEM	Original Equipment Manufacture
QC	Quality Control
QCP	Quality Control Plan
SLD	Single Line Diagram

2.5 Roles and Responsibilities

Below are the roles and responsibilities relating to the implementation of the document.

Roles	Responsibilities
Engineering Manager	Shall be accountable for the technical compliance of the Engineering Work in accordance with technical governance framework as per Engineering Policy [240-4332798].
Electrical Plant Engineering Manager	Shall be accountable for overall technical integrity of the engineering solution provided by the electrical team.
System Engineer	The SME is responsible for providing the necessary assurance to the team that the engineering work performed is in accordance with best engineering practices and adheres to the relevant standards

2.6 Process for Monitoring

This document shall be monitored through internal and multidisciplinary reviews. Any changes in the requirements are to be managed through the Project Engineering Change Management Procedure (240-53114002).

2.7 Related/Supporting Documents

None

3. ENGINEERING AND THE *CONTRACTOR*'S DESIGN

3.1 DESCRIPTION OF THE SCOPE

Contractor to do the following:

- Do site assessment.
- Prepare quote and send to Eskom and prepare safety file and attend induction after quote acceptance.
- Make sure that either of the electrical panels runs while replacing the other.

3.2 SOW COMPRESSOR A ELECTRICAL PANEL

- Wire new electrical panel for compressor A away from site
- Deliver newly wired electrical panel compressor A to site
- Remove old electrical panel compressor A from its position while compressor B is in service and running on manual to maintain the pressure.
- Install new electrical panel compressor A on position.
- Supply and install new eight pressure switches.
- Supply and install new five water traps.

- Supply and install new eight pressure gauges.
- Supply and install cabling to auxiliaries e.g. pressure switches, water traps and other interconnected panels.
- Commission the compressor A electrical panel.
- Test that the compressor runs both on auto and Test.

3.3 COMPRESSOR B ELECTRICAL PANEL

- Wire new electrical panel for compressor B away from site.
- Deliver newly wired electrical panel compressor B to site.
- Remove old electrical panel compressor B from its position while compressor A is in service and running on manual to maintain the Pressure.
- Install new electrical panel compressor B on position.
- Supply and install new eight pressure switches.
- Supply and install new five water traps.
- Supply and install new eight pressure gauges.
- Supply and install cabling to auxiliaries e.g. pressure switches, water traps and other interconnected panels.
- Commission the compressor B electrical panel.
- Test that the compressor runs both on auto and Test.

3.4 FINAL SCOPE ON THE BOTH A & B COMPRESSORS

- Make sure that both the compressors follow the correct sequence as per the electrical drawing and its philosophy.

4. ACCEPTANCE

This document has been seen and accepted by:

Name	Designation
Godfrey Mthombene	EPE Manager
Thulane Ndlovu	APE System Engineer
Motlokwa Mokabane	EMD Technician

5. Revisions

Date	Rev.	Compiler	Remarks
May 2024	0	R Mahlaku	New Document

6. Development Team

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

- R. Mahlaku

7. Acknowledgements

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