

	<p style="text-align: center;"><b>Scope of work</b></p>	<p style="text-align: center;"><b>Camden Power Station</b></p>
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**Title: Scope of work for Electrical Emergency Lights, Supply, Deliver and Installation**

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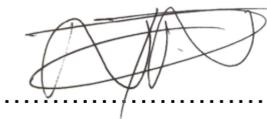
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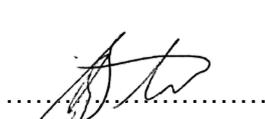
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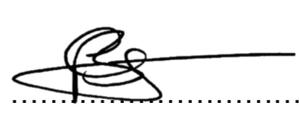
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## CONTENTS

1. Introduction .....	3
2. Supporting Clauses .....	3
2.1 Scope .....	3
2.1.1 Purpose .....	3
2.1.2 Applicability .....	3
2.1.3 Effective date .....	3
2.2 Normative/Informative References .....	3
2.2.1 Normative .....	3
2.2.2 Informative .....	4
2.3 Definitions .....	5
2.4 Abbreviations .....	5
2.5 Roles and Responsibilities .....	5
2.5.1 Supplier .....	5
2.6 Related/Supporting Documents .....	6
3. Works Information .....	6
3.1 Description of the works .....	6
3.1.1 Supply, delivery, and installation of Emergency lights for the entire plant at Camden power station .....	
3.1.2 Bill of Quantity .....	7
3.2 Documentation .....	9
3.3 Management and Reporting .....	9
3.4 Acceptance of Spares .....	9
3.4.1 <b>Spares Identification</b> .....	9
3.4.2 <b>Obsolescence</b> .....	10
3.4.3 <b>Design, Manufacturing and Testing</b> .....	10
3.4.4 <b>Replacement Parts Upgraded/modified</b> .....	10
3.4.5 <b>Packaging</b> .....	10
3.4.6 <b>Transportation</b> .....	11
3.4.7 <b>Guarantee of delivered spares and services rendered</b> .....	11
4. Acceptance .....	11
5. Revisions .....	11
6. Development Team .....	11
7. Acknowledgements .....	11
Appendix A-List of Emergency lighting spares and Installation .....	12

### CONTROLLED DISCLOSURE

## **1. Introduction**

Camden Power Station is equipped with emergency lights which were installed during Camden RTS. These emergency lights have not been working in plant. Purpose of the emergency lights is to allow workers to evacuate in an event of station blackout. These lights are equipped with batteries which last at least for 2hrs in case we lost alternating current power supply.

### **Background**

The functionality of emergency lights has been proven not functional under loss of power incidences; this has also been identified and verified when conducting the Preventative Maintenance measures, the bulkheads fittings are currently being used as normal lighting. On the 17 May 2024 Camden Power Station has experienced a total power blackout due West Ash planting flooding incident, this caused a complete station darkness for a duration of approximately to 3 hours. This incident indicated the need of having functioning and operative emergency lights in the entire plant.

## **2. Supporting Clauses**

### **2.1 Scope**

The scope of work specifies the supply, delivery, and installation of emergency lights for the entire plant Unit 1 to Unit 08 including the common plant areas, the services to be provided by the *Supplier* and conditions for acceptance. Moreover, this document serves as a guideline to enable the potential Contractor to compile and submit their quotation for the required services.

#### **2.1.1 Purpose**

The purpose of this document is to ensure suitable and capable Supplier for supply, delivery, and installation of emergency lights is identified and allocated the work for execution. In addition to the supply, delivery, and installation of emergency lights, technical support services will be provided by the Supplier.

#### **2.1.2 Applicability**

This scope is applicable to Camden Power Station, as well as other coal fire power stations (under exceptional circumstances).

#### **2.1.3 Effective date**

This document will be effective from the date of its authorization.

### **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] 240-76960420- Guideline for Spares Procurement Technical Evaluation and Quality Inspection

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- [3] 32-1033 - Eskom Procurement and Supply Chain Management Policy
- [4] 32-1034 - Eskom Procurement and Supply Chain Management Procedure
- [5] 474-132 - GBE Plant Engineering Baseline Change Management
- [6] Public Finance Management Act 1 of 1999.
- [7] The Preferential Procurement Policy Framework Act 5 of 2000.
- [8] 240-62072907 The Eskom Delegation of Authority Policy.
- [9] The Broad-Based Black Economic Empowerment Act 53 of 2003, including the Broad-Based.
- [10] Black Economic Empowerment Regulations, 2016.
- [11] Preferential Procurement Regulations 2017.
- [12] National Treasury Regulations (to the extent as indicated in the regulations).
- [13] National Treasury Standard for Infrastructure Procurement and Delivery Management (NT prescription for Infrastructure Procurement).
- [14] National Treasury Regulations (Contract Management Framework).
- [15] Promotion of Access to Information Act 2 of 2000 (PAIA).
- [16] The Companies Act, 2008 and including the Companies Regulations, 2011.
- [17] 32-173 Conflict of Interest Policy.
- [18] 32-527 The Eskom Code of Ethics Standard.
- [19] 240-81328492 Eskom Value Standardization and Cataloguing Procedure.
- [20] Prevention and Combating of Corrupt Activities Act 12 of 2004.
- [21] B-BBEE Codes of Good Practice of 2013.
- [22] 240-113650212 Eskom Supplier Integrity Pact.

### **2.2.2 Informative**

- [23] ISO 9000 Quality Management System – Fundamentals and Vocabulary
- [24] 32-727 Safety, Health, Environment, and Quality (SHEQ) Policy
- [25] Generation Plant Engineering Life Cycle Planning/Strategic Report for Direct Current Systems 2014: 474-10053
- [26] 240-62196227 Eskom Life Saving Rules
- [27] Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) (OHS Act)
- [28] Directive: Consolidated COVID 19 Direction on Occupational Health and Safety Measures in Certain Workplaces
- [29] 32-225 Declaration of Interest Procedure
- [30] 32-727 SHEQ Policy
- [31] 32-1303 Execute Maintenance Work PCM
- [32] 32-1304 Manage Maintenance Work PCM
- [33] 32-1205 Eskom Maintenance Policy
- [34] 240-53717264 Tender Office Standard.

**CONTROLLED DISCLOSURE**

[35] Eskom's Integrity Pact with Supplier

## 2.3 Definitions

Definition	Explanation
Supplier	Contractor contracted to provide a specific spares & documentation to Camden Power Station
Employer	Eskom, Camden Power Station
Employer Representative	Any person appointed in writing by Employer as the delegated Employer representative in terms of the provisions
Plant	Any structure, machinery, apparatus, or equipment which does not fall within the scope of the operating regulations for high voltage systems, and excludes, mobile, portable lifting equipment, domestic circuits' appliances, and tools.

## 2.4 Abbreviations

Abbreviation	Explanation
BOQ	Bill of Quantities
DCF	Data Capturing Form
EMD	Electrical Maintenance Department
PCM	Process Control Manual
SAP	Systems, Applications and Programmes Software
SOW	Scope of Work
CoC	Certificate of Compliance
DoL	Department of Labour
PPE	Personal Protective Equipment
ABET	Adult Basic Education and Training
HV	High Voltage

## 2.5 Roles and Responsibilities

### 2.5.1 Supplier:

- a. Provide a quotation for each listed item in Appendix A.
- b. Supply and deliver spares as requested by the Employer.
- c. Confirm correctness of the supplied spares information.
- d. Provide spares technical information.
- e. Timeously inform the Employer of any delays or when outstanding or additional information from the Employer is required.
- f. Ensure that a quality product is delivered/correct spare is supplied (technical datasheets and/or product brochures).
- g. Ensure that every effort is made to keep to the agreed program and plan.

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- h. Supply all the necessary test sheets/results, where applicable
- i. Invite the Employer or representative thereof three (3) working days in advance for witness/hold points, if applicable, as agreed
- j. All *Supplier* employees entering site complies with Eskom's policies and site regulations, adherence to Eskom's Life Saving Rules, adherence to Generation Occurrence Management Procedure, Smoking Policy, zero tolerance on alcohol usage, etc. These requirements will be detailed during the induction training process.
- k. Ensure that all staff brought onto site in connection with this SOW should be able to fluently speak, understand and write in English language.
- l. The *Supplier* ensures that all staff brought to site have a valid fitness certificate based on the specified plant man-job specification.
- m. Provide own Personal Protective Equipment (PPE).
- n. Provide SHREQ training requirements to their employees.
- o. Compile and submit work procedures/packages, quality control plans and execution timeline (project plan) for all work to be performed in the plant.

## **2.6 Related/Supporting Documents**

None

## **3. Works Information**

The Power Stations are a 24-hour day business and therefore in case of station black out emergency lights should be operation safe operation and navigation during the period this, also ensures that service continue in a safer manner and further ensures reliable business continuity.

### **3.1 Description of the works**

- Supply, delivery, and Installation emergency lights.
- Remove existing emergency lights fixtures and dispose them on designated bins.
- Install similar or equivalent emergency lights (with equal or more lux compared to the exiting one). NB: Kindly include detailed technical datasheets and luminaire photometric test reports (from any SANAS accredited laboratory or Eskom Research Testing and Development laboratory).

The scope entails the supply, delivery, and installation (remove existing and install new) of emergency lights for the entire Camden Power Station with technical specifications detailed in a spare list (BOQ) that is included herein and attached as Appendix A.

Camden Power Station is using the following specification: **FIXTURE, HIGH INTENSITY DISCHARGE: POWER: 18 W; POTENTIAL: 220 VDC; LIGHT FITTING PAINTED RED; WITHOUT LAMPS; 2X26W WITH EMERGENCY BACK-UP SYSTEM OF 2 HOURS MINIMUM.**

**Additional plant lighting spares: SEE BILL OF QUANTITIES (3.1.3) or/and APPENDIX A**

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**NB: Suppliers can quote for similar or equivalent lights that will meet the designs of the existing lights. Suppliers shall send detailed technical datasheets and luminaire photometric test reports (from any SANAS accredited laboratory or Eskom Research Testing and Development laboratory) showing comparison.**

**On the duration of 6 months, please note all the spares should conform to Eskom illumination standards.**

**NB: As per 3.4.4, Camden Power Station will accept an equivalent item of the same output if there is improved product the supplier can offer.**

Provide lifting mobile services for the purpose of executing installation if required, e.g., crane, forklift etc.

### 3.1.1 People

Minimum requirements of people employed on the Site.

All personnel should have a Minimum of 3 years' experience in the Industrial field or a Power Station Environment. This is for understanding the working environment.

- 1 X Site supervisor shall have National Diploma or National N Diploma in Electrical Engineering (HV) studies as minimum qualification and driver license.
- 1 X Safety officer with National diploma in safety management studies and SACPMCP accredited. This individual is responsible for overseeing safety, healthy and quality responsibilities for the contractor.
- 3 X Electrician shall have Grade 12/N3 and Electrical trade test as minimum qualification and valid drivers' licenses.
- 1 x Master Installation Electrician to have valid MEI license/ card together with registration letter from DoL with Technical Diploma.
- 6 X Semi-skilled with minimum qualification of Grade 10/Std 8 or ABET level 3 with an ability to read & write and also potential to be technical developed.

One electrician shall be registered with DoL, to issue CoC's, and have Registration certification with DoL.

### CONTROLLED DISCLOSURE

### 3.1.2 Bill of Quantity

Item nr	Description	Unit	Unit Number	Expected Quantity	Rate	Price
1	Installation Items					
1.1	<p>FIXTURE, HIGH INTENSITY DISCHARGE: POWER: 18 W; POTENTIAL: 220 VDC; LIGHT FITTING PAINTED RED; WITHOUT LAMPS; 2X26W WITH EMERGENCY BACK-UP SYSTEM OF 2 HOURS MINIMUM.</p> <p>NB: Alternative equivalent lights which are currently available in the market can also be supplied.</p>	EA	2000	2000		
1.2	<p>STREETLIGHT TYPE: LED, POWER 107 W, POTENTIAL: 230 V; LUMINOUS FLUX: 13975 LM; EFFICACY: 130.61 LM/W; COLOUR TEMPERATURE: 4000K; COLOR RENDERING INDEX: 70; IP:66</p>	EA	67	67		
1.3	<p>FLOODLIGHT: TYPE: LED; DIMENSIONS: LG 158 X WD 280 X HT 180 MM; MATERIAL: LM6 MARINE GRADE, EPOXY POWDER COATED ALUMINUM BODY; POWER CONSUMPTION: 54 W; LIGHT INTENSITY LEVEL: 5041 LM; MOUNT: BRACKET; EFFICACY: 93.35 LM/W; ILLUMINATION PATTERN: WIDE BEAM; COLOR TEMPERATURE: 4000K; COLOR RENDERING INDEX: 80; VOLTAGE: 230 V; POWER FACTOR: 0.95; STANDARD: SABS; THE BRACKET MUST BE ATTACHED TO THE LUMINAIRE BODY USING SPECIAL SCREWS;</p>	EA	310	310		
1.4	<p>FLOODLIGHT: LED; POWER 130 W, POTENTIAL: 230 V; LUMINOUS FLUX: 17501 LM; EFFICACY: 134.62 LM/W; COLOUR TEMPERATURE: 4000K; COLOR RENDERING INDEX: 70; IP:66</p>	EA	206	206		
2	Installation team	Hourly				

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2.1	Site Supervisor	Hourly	1	1038		
2.2	Master Installation Electrician	Hourly	1	1038		
2.3	Safety officer	Hourly	1	1038		
2.4	Electrician	Hourly	3	1038		
2.5	Semi skill	Hourly	6	1038		
2.6	Site establishment	Lot	1	1		
2.7	Site de-establishment	Lot	1	1		
2.8	Cherry picker (15m height)	Monthly	1	6		

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### **3.2 Documentation**

The following are the *Supplier's* requirements:

- a. The *Supplier* will supply any additional information such as brochure, general arrangement drawing, certificates, detailed specification, data sheet, Settings Document for programmable electronic cards, test results, service reports etc.
- b. The *Supplier* provides the *Employer* with additional spares information and verifies information required in the attached data capturing forms (DCF).
- c. The *Supplier* provides preservation and storage procedure/s, where applicable.
- d. The *Employer* may make clarification sessions available to either prospective *Supplier/s* to further assist the prospective *Supplier's* to meet the requirements of the supply scope delivered by the *Supplier*.

### **3.3 Management and Reporting**

- a. The *Supplier* to be represented at any ad-hoc meetings that may arise to address any scope and safety related matters.
- b. Liaison meetings be held with the *Employer's* Representative or his/her delegate on as and when required basis to discuss any technical details, or concerns.

### **3.4 Acceptance of Spares**

#### **3.4.1 Spares Identification**

- a) Appendix A herein and attached to this document is a list of all the spares and service to be procured under this SOW. This list corresponds to the provided electronic copy of the DCF's or SAP Specification Printout that contain more information about the required spares.

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- b) Each spare is identifiable by means of an Eskom SAP Material number (as is used in the Power Station), part description, OEM and/or OEM part number.

### **3.4.2 Obsolescence**

- a. The *Supplier* informs the Employer immediately where spares are found to be obsolete before the alternative spares is supplied,
- b. The *Supplier* indicates this to the Employer and indicate viable alternatives thereof.
- c. The Employer will review the alternatives and advice on the acceptance/rejection of the alternative thereof prior to the spares being delivered onsite.

### **3.4.3 Design, Manufacturing and Testing**

Unless an alternative spare is proposed the required spares to be the same, in all respects, as the original components. The spares conform to the same specifications as the original components. This includes all aspects such as design, materials and material specifications, manufacturing and manufacturing processes, testing, and operating and storage specifications.

### **3.4.4 Replacement Parts Upgraded/modified.**

Where equipment or spares, including the whole assembly, have been upgraded/ modified the *Supplier* indicates this to the *Employer* as part of the tender. The *Employer* made aware immediately where the upgrade/modification to the component is only identified subsequent to the tender being issued. The detailed compatibility to the existing component indicates including changes required to fit the upgraded/modified spare. This includes hardware, firmware, and software upgrade/modification. Approved alternative components be accepted provided they comply to all technical & commercial requirements.

If the components to be supplied will be obsolete, or envisaged to be obsolete, in the 3 years after tender being issued, the *Supplier* indicates this to the *Employer* and indicate viable alternatives thereof.

### **3.4.5 Packaging**

- a) All supplied spares be packaged in such a manner that they will be transported and stored without damage. This includes preventing damage due to moisture ingress, dust, and foreign objects. The Camden Power Station.
- b) Spares Preservation be used in addition to the *Supplier* Transportation and Storage procedures.
- c) Different spare types are packaged separately such that each spare type can be stored separately. Packages be such that the spare can be identified without opening the packaging. Packages be the material that will not be damaged, to an extent possible, by harsh weather conditions during transportation. If that is not possible, then the packages be protected against such conditions.
- d) Where possible, packaging to be such that procured spares can be positively identified through the packaging. Where this is not possible, the packaging to be such that it allows opening and closing of packaging and still maintain the packaging integrity thereafter.
- e) Delivery packaging includes as a minimum the following details:
  - i. Purchase Order Number
  - ii. Part Description
  - iii. Part number
  - iv. Eskom SAP Material number
  - v. Drawing number, where applicable

**CONTROLLED DISCLOSURE**

- vi. Physical address of Camden Power Station and the Supplier
- vii. Contact details of the Supplier
- viii. Delivery notes number

### **3.4.6 Transportation**

Transportation of all spares be conducted with due regard of the sensitivity of the units and in such a manner that spares are suitably protected. All possible care must be taken to ensure that the components are not subjected to undue rough handling, vibration, humidity, excessive temperatures, or abuse. When courier service is used for transportation, the courier services service provider be alert to the nature of the content of the packages and instructed to handle with care. Labels used to indicate the fragile nature of the items.

### **3.4.7 Guarantee of delivered spares and services rendered.**

All delivered spares and service rendered comes with an at least 12-months guarantee period starting from the *delivery date*.

## **4. Acceptance**

This document has been seen and accepted by:

<b>Name</b>	<b>Designation</b>

## **5. Revisions.**

<b>Date</b>	<b>Rev.</b>	<b>Compiler</b>	<b>Remarks</b>
July 2024	01		New Document
March 2025	02		

## **6. Development Team**

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

## **7. Acknowledgements**

- a.

**CONTROLLED DISCLOSURE**

## Appendix A-List of Emergency lighting spares and Installation

No.	Material Number	Description	Expected Quantity
1			
1.1		FIXTURE, HIGH INTENSITY DISCHARGE: POWER: 18 W; POTENTIAL: 220 VDC; LIGHT FITTING PAINTED RED; WITHOUT LAMPS; 2X26W WITH EMERGENCY BACK-UP SYSTEM OF 2 HOURS MINIMUM.	2000
1.2		STREETLIGHT TYPE: LED; POWER 107 W, POTENTIAL: 230 V; LUMINOUS FLUX: 13975 LM; EFFICACY: 130.61 LM/W; COLOUR TEMPERATURE: 4000K; COLOR RENDERING INDEX: 70; IP:66	67
1.3		FLOODLIGHT: TYPE: LED; DIMENSIONS: LG 158 X WD 280 X HT 180 MM; MATERIAL: LM6 MARINE GRADE, EPOXY POWDER COATED ALUMINUM BODY; POWER CONSUMPTION: 54 W; LIGHT INTENSITY LEVEL: 5041 LM; MOUNT: BRACKET; EFFICACY: 93.35 LM/W; ILLUMINATION PATTERN: WIDE BEAM; COLOR TEMPERATURE: 4000K; COLOR RENDERING INDEX: 80; VOLTAGE: 230 V; POWER FACTOR: 0.95; STANDARD: SABS; THE BRACKET MUST BE ATTACHED TO THE LUMINAIRE BODY USING SPECIAL SCREWS	310
1.4		FLOODLIGHT: LED; POWER 130 W, POTENTIAL: 230 V; LUMINOUS FLUX: 17501 LM; EFFICACY: 134.62 LM/W; COLOUR TEMPERATURE: 4000K; COLOR RENDERING INDEX: 70; IP:66	206
2		<b>Installation team</b>	
2.1		Site Supervisor	1
2.2		Master Installation Electrician	1
2.3		Safety officer	1
2.4		Electrician	3
2.5		Semi skill	6
2.5		Site establishment	1
2.6		Site de-establishment	1
2.7		Cherry picker	6M

### CONTROLLED DISCLOSURE