

	SCOPE OF WORK	Transmission/Grids
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Title: **SMALL WORKS MAINTENANCE OF SUBSTATION EQUIPMENT, CIVIL, ELECTRICAL AND MECHANICAL WORK IN ESKOM NORTHEAST GRID**

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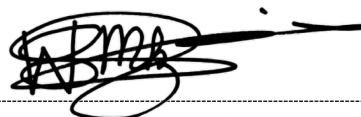
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1. Introduction

Maintenance, repairs, and new works as directed by the Employer, in the HV yards and general premises of the Transmission Substations. Substation infrastructure including general premises is an integral part of the whole Transmission Substation. The maintenance upkeep, repairs and improvements of the plant is important to maintain the whole integrity and safety of plant and personnel. This ensures good condition of plant, equipment, and other general facilities. Good condition of substation plant will promote healthy environment and conditions for plant and personnel to attain optimal performance from plant. The Grid does not have the required and appropriate resources to carry out this type or nature of work.

2. Supporting clauses

2.5 Scope

These standard covers minimum requirements for the contractor to perform maintenance and new works as directed by the Employer, in the HV Yards and general premises of the Transmission Substations on an “as and when needed” basis: in North East Grid

2.6 Applicability

This document shall apply only in North East Grid HV plant department

2.7 Normative/informative references

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.7.1 Normative

- [1] Occupational Health and Safety Act and Regulations (OHSAct), Eskom
- [2] 240-62946386 Vehicle and driver safety Management Procedure, Eskom
- [3] EPC_32-846 Operating regulations for high voltage systems, Eskom
- [4] 240-70500880 Standard for the Control and Application of Master locks and Issuing of Master Keys
- [5] DPC_34-1439, Standard for the labelling of high voltage equipment, Eskom
- [6] DGL_34-256 Scheduling of driving activities , Eskom
- [7] DMN_34-2208, Access to work sites, Eskom
- [8] DST_34-1245, Substation earthing, Eskom
- [9] 240-86768820, Standard for the maintenance of substation isolators, Eskom
- [10] 240-103004532, Maintenance of substation yard junction boxes and marshalling kiosks , Eskom

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[11] 240-69387838, Maintenance Standard for Power Transformers and Reactors (>1MVA AND >1000V) Eskom

2.7.2 Informative references

- [12] 32-9, Definition of Eskom documents, Eskom
- [13] 32-644, Eskom documentation management standard, Eskom
- [14] 474-65, Operating manual of the Steering Committee of Wires Technologies (SCOWT), Eskom
- [15] DST_34-1710, Provision and use of personal protective equipment, Eskom
- [16] DPL_32-727, Safety, health, environment, and quality (SHEQ) policy, Eskom
- [17] DPC_34-227, Pre-task planning and feedback process, Eskom
- [18] 32-9, Definition of Eskom documents, Eskom
- [19] 32-644, Eskom documentation management standard, Eskom
- [20] DPC_34-380, Identifying, analysing, documenting and observing tasks according to criticality, Eskom
- [21] DST_34-1462, Standard for the care, use, inspection and maintenance of conductive and non-conductive ladders, Eskom

2.8 Definitions

2.8.1 General

None

2.8.2 Disclosure classification

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

2.9 Abbreviations

Abbreviation	Description
ORHVS	Operating Regulations for High Voltage Systems
VT	Voltage Transformer
CT	Current Transformer
HV	High Voltage
AC	Alternating Current

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2.10 Roles and responsibilities

2.11 Process for monitoring

Not applicable.

2.12 Related/supporting documents.

Not applicable.

3. Scope of Work

MAINTENANCE OF SUBSTATION EQUIPMENT THAT ENTAILS CIVIL, ELECTRICAL AND MECHANICAL WORK IN THE NORTHEAST GRID RESTRICTED AREAS

3.1 Description of the work

Civils work scope.

- Excavations
- Trenching
- Remove and reinstate yard stones.
- Lift and replace trench covers.
- Breakdown and erect of bund walls.
- Concrete work
- Building structure/equipment foundation/bund wall.
- Install and repair barrier fences (perimeter and safety)
- Supply of 2.4m weld mesh
- Supply of 2.0m diamond mesh
- Repair electrified fences
- Hire of construction small machine and equipment
- Cold Galvanise/rust roof and paint steel and copper works
- Supply of yard stone
- Supply of structural steel
- Supply of galvanised 2 and 2.4m fence poles

Electrical work scope.

- Cabling - install and removal of AC power, Control and Telecoms cables.
- Terminate cables.
- Stringing (HV Conductor)
- Install and removal of protection/control panels.
- Dismantling and erection of CTs, VTs, Isolators, Surge Arrestors, HV Breakers, Aux Transformers
- Dismantling and erection of JB, Plug boxes and outdoor equipment cabinets.
- Supply and install chemical anchors.
- Copper earthing repairs and installation
- Supply and install access gate motors.
- Repair motorised access gate motors

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- Repair HV Yard floodlights and perimeter security light
- Supply flood light luminaires
- Supply security light luminaires
- Steelwork and fabrication work scope. Workshop/fabrications
- Dismantle and erect structures.
- Repair access gates
- Repair gate posts, hinges, and brackets
- Maintain and repair access gates including drive shafts and mechanisms.
- Maintain and repair access control booms.
- Repair indoor steel trench covers.
- Replace high risk equipment and failed plant.

Servicing of skyjack, Overhead cranes and Generators.

- Servicing and maintenance of Skyjack and generators.
- Load test of lifting equipment
- Attending to call outs and breakdowns of skyjack.

NB: The Contractor must ensure that it has a minimum of 2 competent teams that is allocated to conduct work under planned projects and emergency. The Teams should have responsible person who has ORHVS and authorised for North east Grid. This is to ensure that we address all system and network risks and restore supply

4. Authorization

This document has been seen and accepted by:

Name and surname	Designation
Siphesihle Mkhize	HV Plant Manager

5. Revisions

Date	Rev	Compiler	Remarks
25/06/2024	1	Marks Mathelele	New document

6. Development team

The following people were involved in the development of this revision and/or the original revision of this document:

- Dilahlwane Mahao

7. Acknowledgements

None

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