

TITLE: STANDARD APPLICABLE TO CONTRACTORS WORKING IN CLOSE PROXIMITY TO LIVE APPARATUS	REFERENCE	REV
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Foreword

This standard was prepared by a work group comprising the following members:

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This standard supersedes the following documents:

DTOP 0100, *Standard for contractors working in close proximity to live apparatus.*

RMD 010/91, *Authorizing contractors to work on or in close proximity to Eskom HV equipment.*

1 Scope

1.1 Purpose

The purpose of this standard is to set out the requirements to be followed by contractors when working close to live apparatus.

1.2 Applicability

This standard is applicable to all contractors employed by Distribution Group.

2 Normative references

The following standards contain provisions that, through reference in the text, constitute requirements of this standard at the time of publication the revisions indicated were valid. All standards are subject to review and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent revisions of the standards listed below. Information on currently valid national and international standards may be obtained from the Information Centre at Megawatt Park and Technology Standardization Department.

SCSPVABF4:Rev.0, *Standard for barricading.*

OPR 6204:Rev.2, *Operating regulations for high voltage systems.*

3 Definition

3.1 contractor: A person or company doing contract work for Distribution Group including Eskom departments not directly involved in the operation of the plant

4 Requirements

4.1 Interface between Distribution Group and the contractor

4.1.1 When a contract is signed both parties accept certain responsibilities towards each other, that are embodied in the contract, but there are also legal responsibilities for which neither can abdicate responsibility.

Contractors are normally only contracted for their specific skills, e.g. civil works.

To expect a building contractor to be competent in terms of Occupational Health and Safety Act GMR 1, regarding Eskom's electrical plant, is completely unrealistic.

4.1.2 Any contractor carrying out work for the Distribution Group shall be bound by the provision of the Occupational Health and Safety Act 1993.

4.1.3 The responsibilities of Distribution Group and the contractor are set out in 4.2 and 4.3 respectively.

4.2 Distribution Group's responsibilities

4.2.1 Distribution Group shall be responsible for:

- a) the health, safety and welfare of its employees;
- b) the acts or omissions of its employees;
- c) the control of access to its plant/machinery; and
- d) the safe installation, proper maintenance, repair and operation of its machinery.

4.2.2 Eskom's responsibilities shall be the responsibility of the department normally responsible for the operation of the plant.

4.2.3 Distribution Group shall do the necessary switching, linking and earthing to ensure that work within the scope of the contract can be carried out safely by the contractor.

4.2.4 Distribution Group shall clearly demarcate the work area where a contractor will be given access to Eskom plant using fencing, safety netting or other acceptable means, as required by SCSPVABF4.

4.2.5 The work area shall officially be handed over to the contractor by way of a work permit form endorsed as follows:

"No person shall leave the area demarcated by fencing/netting/.....without permission from Distribution Group's representative"

4.2.6 No live conductor or apparatus shall be present inside a barricaded area or be within reach from within the barricading.

4.2.7 Live overhead conductors at or above the minimum clearance required by Electrical Machinery Regulation 15 may remain alive over the work area provided:

- a) the contract work does not encroach on the minimum safety clearances required outside townships by Electrical Machinery Regulation 15 at any stage of the contract;

- b) the work permit issued to the contractor is endorsed in addition to the endorsement required by 4.2.5 with the following:

"Live overhead conductors are present over the work site at a voltagekV. No machinery and/or equipment used in the execution of the contract may encroach within metres of the live conductors.

4.2.8 Where barricading of live apparatus, the safety clearance of which does not comply with Electrical Machinery Regulations 15, is impossible Eskom shall appoint a person, for the contract period, who can identify electrical hazards and point them out to the contractor.

4.3 Contractor's responsibilities

4.3.1 The contractor shall be responsible for:

- a) the health, safety and welfare of his employees;
- b) the acts or omissions of his own employees; and
- c) the responsibilities imposed on him by the Contract.

Annex A
(informative)

Electrical machinery regulations

		Minimum clearance in metres					
	Maximum voltage for which insulation is designed, kV r.m.s phase-to-phase	Minimum safety clearance	Above ground outside townships	Above ground in townships	Above roads in townships, proclaimed roads outside townships railways and tramways	To communication lines, other power lines or between power lines and cradles	To buildings, poles and structures not forming part of power lines
1,1	less..... or	—	4,9	5,5	6,1	0,6	3,0
7,2	0,15	5,0	5,5	6,2	0,7	3,0
12	0,20	5,1	5,5	6,3	0,8	3,0
24	0,32	5,2	5,5	6,4	0,9	3,0
36	0,43	5,3	5,5	6,5	1,0	3,0
48	0,54	5,4	5,5	6,6	1,1	3,0
72	0,77	5,7	5,7	6,9	1,4	3,2
100	1,00	5,9	5,9	7,1	1,6	3,4
145	1,45	6,3	6,3	7,5	2,0	3,8
245	1,85	6,7	6,7	7,9	2,4	4,2
300	2,35	7,2	7,2	8,4	2,9	4,7
362	2,90	7,8	7,8	9,0	3,5	5,3
420	3,20	8,1	8,1	9,3	3,8	5,6
800	5,50	10,4	10,4	11,6	6,1	8,5
533 kV d.c. *	3,70	8,6	8,6	9,8	4,3	6,1

* Maximum voltage to earth for which insulation is designed.

Provided that these figures are based on the assumption that clearances shall be determined for a minimum conductor temperature of 50 °C and a swing angle corresponding to a wind pressure of 500 Pa: Provided further that where under normal conditions power line conductors operate at a temperature above 50 °C, the clearance at the higher temperature at which the conductors operate shall be in accordance with the clearance indicated in the table.