

Ministry of Labour, Human Resource Development and Training

Occupational Safety and Health Division

GUIDELINE ON WORK 'ON OR NEAR' LIVE UNINSULATED OVERHEAD CIRCUIT CONDUCTORS



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GUIDELINE ON WORK 'ON OR NEAR' LIVE UNINSULATED OVERHEAD CIRCUIT CONDUCTORS

1.0 INTRODUCTION

Working on or near live uninsulated overhead circuit conductors can be very dangerous and can even cause accidents. Several cases of fatal and serious accidents have been reported in the past to the Occupational Safety and Health Division when employees were working near live uninsulated overhead circuit conductors. These accidents have occurred when employees were involved in different types of activities, namely: working on construction sites, working on billboards, painting and maintenance of buildings, operating cranes and mobile equipment, handling long metal objects, amongst others.

The purpose of this document is to give practical guidance on the safety measures to be observed by employers, host employers, self-employed persons and employees so as to protect persons from the risks associated with live uninsulated overhead circuit conductors wherever:

- (1) live uninsulated overhead circuit conductors are present at any place of work; and
- (2) work is assigned on or near live uninsulated overhead circuit conductors giving rise to danger.

2.0 LEGAL PROVISIONS

This guideline has been prepared based on the provisions of the Occupational Safety and Health Act 2005, the Occupational Safety and Health (Electricity at Work) Regulations 2009, the Occupational Safety and Health (Safety of Scaffolds) Regulations 2013, the Occupational Safety and Health (Work at Height) Regulations 2013 and the Occupational Safety, Health and Welfare (First-aid) Regulations 1989.

3.0 GENERAL PRECAUTIONARY MEASURES

- (1) Every employer shall ensure the safety and health at work of his employees and any person not in his employment by:
 - (a) considering that all uninsulated overhead circuit conductors are live until he has confirmed that the uninsulated overhead circuit conductors are dead;
 - (b) ensuring that, prior to carrying out any work on or near uninsulated overhead circuit conductors, a suitable and sufficient assessment is made of any risk to which his employees or any person not in his employment are exposed to;
 - (c) ensuring that any work on or near uninsulated overhead circuit conductors is carried out only by competent persons or under the supervision of a competent person;

- (d) ensuring that all uninsulated overhead circuit conductors are so installed and protected as to prevent danger;
- (e) providing information, instruction, training and supervision as is necessary to ensure the safety and health at work of his employees when working on or near uninsulated overhead circuit conductors;
- (f) providing a system of work that is safe and without risks when working on or near uninsulated overhead circuit conductors by, for instance, issuing a permit to work indicating all the necessary precautionary measures that have been taken to prevent danger and providing written procedures on how the work has to be done safely;
- (g) providing and maintaining a working environment that is safe and without risks when working on or near uninsulated overhead circuit conductors by, for instance:
 - (i) maintaining such a working distance at all times so that there is no risk of injury;
 - (ii) erecting a physical barrier to prevent accidental contact with the uninsulated overhead circuit conductors;
 - (iii) always carrying long metal objects in the horizontal position and close to the ground;
 - (iv) positioning any vehicle so that no part of the vehicle can come near or into contact with the uninsulated overhead circuit conductors, even when fully extended;
 - (v) affixing danger notices and signs.
- (h) ensuring that whenever works are to be performed on or near live uninsulated overhead circuit conductors:
 - (i) his employees are provided with suitable and appropriate personal protective equipment and clothing and are wearing and using them;
 - (ii) persons not in his employment always wear and use suitable and appropriate personal protective equipment and clothing;
 - (iii) his employees and persons not in his employment always use suitable and appropriate protective equipment.
- (i) providing adequate working space, means of access and lighting (natural or artificial) where work is being done on or near uninsulated overhead circuit conductors;

- (j) ensuring that where more than one voltage system is used, all the uninsulated overhead circuit conductors of each voltage system is kept well apart so as to be readily distinguishable.
- (2) (a) Every employer or self-employed person shall, in respect of any employee from an outside undertaking who is working in his undertaking, ensure that the employer of that employee is provided with adequate information on –
- (i) the risks to that employee's safety and health arising out of, or in connection with, the conduct of his undertaking by the first-mentioned employer, or by the self-employed person; and
 - (ii) the measures taken by the first-mentioned employer, or by the self-employed person, in compliance with the requirements and prohibitions imposed upon him by, or under any enactment.
- (b) Every employer, or every self-employed person, shall ensure that any person working in his undertaking, other than the employee of the employer, is provided with appropriate instructions and adequate information regarding any risks to that person's safety and health which arise out of the conduct by that employer or self-employed person of his undertaking.
- (3) Whenever it is unreasonable to work on or near the uninsulated overhead circuit conductors while they are live, the employer shall ensure that no such work is carried out until measures are taken to:
- either
- (a) make the uninsulated overhead circuit conductors dead and earthed;
- or
- (b) replace the uninsulated overhead circuit conductors by insulated overhead conductors;
- or
- (c) replace the uninsulated overhead circuit conductors by insulated underground conductors;
- or
- (d) re-locate the uninsulated overhead circuit conductors so that they do not represent any risk.
- (4) Whenever it is reasonable to work on or near the uninsulated overhead circuit conductors while they are live, the employer shall ensure the safety and health at work of his employees and any person not in his employment by making a suitable and

sufficient assessment of the risks associated with such type of work and implement appropriate precautionary measures which shall include, inter-alia, the following measures:

- (a) assigning such work to persons who are competent to work on or near the live uninsulated overhead circuit conductors;
 - (b) providing adequate information on the live uninsulated overhead circuit conductors;
 - (c) wearing and using suitable and appropriate personal protective equipment such as insulated gloves, goggles, face shields, protective clothing, safety shoes, hard hats;
 - (d) using suitable and appropriate protective equipment such as insulated tools, insulated mats, insulated barriers or screens;
 - (e) erecting ground-level barriers to clearly demarcate the safety zone;
 - (f) affixing proper danger notices and signs.
- (5) Every employer shall provide such equipment and facilities as are adequate and appropriate for enabling first-aid to be rendered to his employees if they are injured while working on or near live uninsulated overhead circuit conductors.
- (6) (a) Where an employee has suffered injury at work, while working on or near live uninsulated overhead circuit conductors, necessitating his removal to a hospital or other similar institution, the employer shall promptly and at his own expense provide an appropriate means of conveyance.
- (b) An appointed person or first-aider shall accompany the injured employee to a hospital or other similar institution whenever the circumstances so justify.

4.0 CONCLUSION

With the rapid pace of development occurring in Mauritius, more and more activities are being carried out at height thereby exposing workers to the risk of electrocution or electric shock from work near uninsulated overhead circuit conductors. It is expected that this guideline will enable employers as well as workers to take the necessary precautionary measures to prevent any accident.

It is worth highlighting that this document aims at providing a general guidance on working 'on or near' live uninsulated overhead circuit conductors and does not necessarily cover all situations, or any particular situation, or provide a complete list of precautionary measures to be observed. It is the duty of the employer, host employer, self-employed person and employees to ensure that they comply with all existing legal provisions with a view to ensuring the safety and health while working on or near live uninsulated overhead circuit conductors.

5.0 **REFERENCES:**

- (1) Government of Mauritius, 2005, Occupational Safety and Health Act, Government Printing.
- (2) Government of Mauritius, 2009, Occupational Safety and Health (Electricity at Work) Regulations 2009, Government Printing.
- (3) Government of Mauritius, 2013, Occupational Safety and Health (Safety of Scaffolds) Regulations 2013, Government Printing
- (4) Government of Mauritius, 2013, Occupational Safety and Health (Work at Height) Regulations 2013, Government Printing
- (5) Government of Mauritius, 1989, Occupational Safety, Health and Welfare (First-aid) Regulations 1989, Government Printing.
- (6) Health and Safety Executive, 1990, Memorandum of Guidance on the Electricity at Work Regulations 1989, London, UK
- (7) Image from : <https://www.mackinac.org/new-report-explains-how-electricity-grid-works-to-deliver-power-to-your-home>