# Electrical Work — Know The Laws of Your Province



Electrical safety regulations are essential for protecting workers who perform tasks involving energized equipment, installations, and utility systems. These regulations require employers to ensure that only qualified personnel carry out electrical work and that all electrical systems are properly installed, maintained, and operated according to national safety standards. Key measures include hazard assessments, isolation and lockout procedures, use of protective equipment, and implementation of emergency response plans. Workers must be trained to recognize and control electrical hazards and use testing tools and insulated equipment safely. While foundational safety requirements are consistent nationwide, each province and territory enforces specific rules tailored to regional conditions. Adhering to these regulations reduces the risk of shocks, burns, and electrical accidents, fostering a safer and more compliant work environment.

# **FEDERAL**

In Canada, employers must ensure electrical safety under the Canada Occupational Health and Safety Regulations, Part VIII, Sections 8.3 to 8.7. All electrical equipment must meet Canadian Electrical Code standards and be maintained accordingly. Only qualified or supervised workers may perform electrical work, especially on high-voltage systems, using proper protective equipment. Employers must ensure equipment

is isolated or guarded, and safe distances from live parts are maintained. High-voltage areas **must** be clearly marked. These measures are essential to protect workers from electrical hazards.

# PART VIII - Electrical Safety

#### **Standards**

- (1) The design, construction and installation of all electrical equipment, if feasible, **shall** meet the standards set out in the Canadian Electrical Code, Part I.
- (2) The operation and maintenance of all electrical equipment **shall** meet the standards set out in the Canadian Electrical Code. **Section 8.3 (1)(2).**

#### **Safety Procedures**

- (1) All testing or work performed on electrical equipment **shall** be performed by a qualified person or an employee under the direct supervision of a qualified person.
- (2) Where the electrical equipment has a voltage in excess of 5,200 V between any two conductors or in excess of 3,000 V between any conductor and ground,
- (a) the qualified person or the employee referred to in subsection (1) **shall** use such insulated protection equipment and tools as will protect him from injury during the performance of the work; and
- (b) the employee referred to in subsection (1) **shall** be instructed and trained in the use of the insulated protection equipment and tools. **Section 8.4 (1)(2).**
- (1) Subject to subsections (2) and (3), no employee **shall** work on electrical equipment unless the equipment is isolated.
- (2) If it is not feasible to isolate the electrical equipment

and an employee is **required** to work on live equipment, the **employer shall** instruct the employee in procedures that are safe for live conductors.

- (3) Where electrical equipment is not live but is capable of becoming live, no employee **shall** work on the equipment unless:
- (a) procedures that are safe for work on live equipment are used; or
- (b) a safety ground is connected to the equipment.
- (4) Subject to subsections (5) and (6), where an employee is working on or near electrical equipment that is live or may become live, the electrical equipment **shall** be guarded.
- (5) Subject to subsection (6), if it is not feasible for the electrical equipment referred to in subsection (4) to be guarded, the **employer shall** take measures to protect the employee from injury by insulating the equipment from the employee or the employee from the ground.
- (6) Where live electrical equipment is not guarded or insulated in accordance with subsection (4) or (5) or where the employee referred to in subsection (5) is not insulated from ground, the employee **shall** not work so near to any live part of the electrical equipment that is within a voltage range listed in column I of an item of the schedule to this Part that the distance between the body of the employee or any thing with which the employee is in contact and the live part of the equipment is less than:
- (a) the distance set out in column II of that item, where the employee is not a qualified person; or
- (b) the distance set out in column III of that item, where the employee is a qualified person.
- (7) No employee **shall** work near a live part of any electrical equipment referred to in subsection (6) if there is a risk

that an unintentional movement by the employee could bring any part of the body of the employee or any thing with which the employee is in contact closer to that live part than the distance referred to in that subsection. **Section 8.5 (1) to (7).** 

No employee **shall** work on or near high voltage electrical equipment unless he is authorized to do so by his **employer**. **Section 8.6.** 

A legible sign with the words "Danger — High Voltage" and "Danger — Haute Tension" in letters that are not less than 50 mm in height on a contrasting background **shall** be posted in a conspicuous place at every approach to live high voltage electrical equipment. **Section 8.7.** 

Further details on the Canada Occupational Health and Safety Regulations can be found at <a href="mailto:justice.gc.ca">justice.gc.ca</a>.

# **ALBERTA**

In Alberta, employers must ensure utility worker electrical safety under the Occupational Health and Safety Code, Sections 799—804. Protective equipment must meet CSA and ULC standards, and all utility work must follow CAN/ULC-S801-14. Employers must assess hazards, implement safe procedures, and coordinate with other utilities when needed. For energized systems over 750 volts, at least two qualified workers and ground-level support are required unless certified safe by an engineer. These responsibilities are essential to protect workers from electrical hazards.

# Part 40 - Utility Workers - Electrical

# **Protective Devices or Equipment**

(1) An employer must ensure that a protective device and protective equipment required by this Part meets the requirements of the following applicable standards:

- (a) CAN/ULC-60832-99, Insulating Poles (Insulating Sticks) and Universal Tool Attachments (Fittings) for Live Workings;
- (b) CAN/ULC-D60855-00, Live Working Insulating Foam Filled Tubes and Solid Rods for Live Working;
- (c) CAN/ULC-60895-04, Live Working Conductive Clothing for Use at Nominal Voltage Up to 800 kV A.C. and +/ 600 kV D.C.;
- (d) CAN/ULC-60900-99, Hand Tools for Live Working up to 1000 V a.c. and 1500 V d.c.;
- (e) CAN/ULC-60903-04, Live Working Gloves of Insulating Materials:
- (f) CAN/ULC-D60984-00, Sleeves of Insulating Material for Live Working;
- (g) CAN/ULC-D61112-01, Blankets of Insulating Material for Electrical Purposes;
- (h) CAN/ULC-D61229-00, Rigid Protective Covers for Live Working on a.c. Installations;
- (i) CAN/ULC-61236-99, Saddles, Pole Clamps (Stick Clamps) and Accessories for Live Working;
- (j) CAN/CSA-C225-00 (R2005), Vehicle Mounted Aerial Devices.

Subsection (1) applies only to new protective devices and protective equipment put into service as of the effective date of this Code.

A laboratory that performs electrical insulating materials testing to the standards listed in subsection (1) must meet the requirements of ASTM Standard D2865 06, Standard Practice for Calibration of Standards and Equipment for Electrical Insulating Materials Testing. Section 799 (1) to (3).

Safe Work Practices for Electric Utilities and Rural Electrification Associations

An electric utility and a rural electrification association **must** ensure that all work performed by utility employees is in accordance with the requirements of CAN/ULC-S801-14, Standard on Electric Utility Workplace Electrical Safety for Generation, Transmission, and Distribution. **Section 800.** 

#### Safe Work Practices for Industrial Power Producers

An industrial power producer must:

- (a) complete a written assessment of hazards associated with the production of electrical energy,
- (b) implement written safe work procedures that are made available to utility employees, and
- (c) ensure all work performed by utility employees is in accordance with the safe work procedures **required** by subsection (b). **Section 801.**

#### Coordinated Work

If utility employees:

- (a) perform work on or near a power system, and
- (b) their work activities may affect or be affected by a utility employee of another electric utility, industrial power producer or rural electrification association, the involved electric utilities, industrial power producers or rural electrification associations **must** jointly develop and follow one agreed upon set of safe work procedures for isolating electrical equipment and lines or blocking reclosing devices. **Section 802**.

#### For more information:

Communication lines, cables. Sections 83, 84 (1) to (4).

Further details on the Occupational Health and Safety Code can be found at <u>alberta.ca</u>.

# **BRITISH COLUMBIA**

In British Columbia, employers are responsible for electrical safety under Part 19, Sections 19.3 to 19.9 of the Occupational Health and Safety Regulation. Employers must test the stability of poles and structures before allowing work, keep electrical areas clear of obstructions, inform workers of hazards, and use only approved or properly protected testing equipment. Insulated elevating work platforms must be tested annually, and if they fail, they must be clearly marked as non-insulated and workers notified.

# Part 19: Electrical Safety

#### Poles and Structures

- (1) Before a worker climbs or is supported by a pole or structure, or before any work is done that will affect its stability,
- (a) the pole or structure **must** be tested for soundness and stability, and
- (b) if there is any doubt as to soundness or stability, the pole or structure **must** be effectively supported before any wires or cables are changed, and the supports **must** be left in place until workers are clear of the pole or structure.
- (2) A worker **must** not climb or be on a pole or structure supported laterally by pike poles only. **Section 19.3 (1)(2).**

#### Obstructions on Poles

- (1) Mailboxes, signs, clotheslines, or other obstructions are prohibited on or close to poles on which workers are **required** to work.
- (2) Tags authorized by the owner which are placed on a pole for identification purposes **must** be less than 1.7 m (5.5 ft) above grade, on the side of the pole which a climbing worker

will face. **Section 19.4 (1)(2).** 

# Informing Workers

A worker **must** be informed of the potential electrical hazards before being permitted to do work in proximity to energized electrical conductors or equipment.

**Note**: If excavating near underground utilities, refer to the excavation requirements in <u>Part 20 (Construction, Excavation</u> and <u>Demolition</u>). **Section 19.5**.

#### Service Rooms

If practicable, service rooms and electrical vaults **must** be used only for the purpose for which they were intended. **Section 19.6.** 

# Space Around Equipment

- (1) Passageways and working space around electrical equipment **must** be kept clear of obstructions, be arranged so as to give authorized persons ready access to all parts requiring attention, and not be used for storage.
- (2) Flammable material **must** not be stored or placed close to electrical equipment. **Section** 19.7 (1)(2).

# Testing Equipment

- (1) Electrical testing equipment may be used if it meets the requirements of:
- (a) <u>CSA Standard C22.2 No. 160-M1985 (Reaffirmed 1992),</u> <u>Voltage and Polarity Testers</u>, or
- (b) <u>CSA Standard CAN/CSA-C22.2 No. 231 Series-M89, CSA Safety</u> <u>Requirements for Electrical and Electronic Measuring and Test Equipment</u>.
- (c) Repealed. [B.C. Reg. 312/2003, effective October, 29,

- (2) Electrical testing equipment not meeting a standard specified in subsection (1) may be used if it has:
- (a) fusing or circuitry designed to protect the operator in the event of a fault resulting from inadvertent misuse of the meter, or a fault on the circuit being tested,
- (b) clearly and unambiguously marked measurement ranges,
- (c) lead wire insulation rated to the maximum voltage reading of the meter,
- (d) lead wires that are not cracked or broken, and having a current carrying capacity (ampacity) that meets or exceeds the maximum current measurement of the meter, and
- (e) a minimum exposure of metal on lead wire probes.
- (3) Appropriate safe work procedures **must** be established and followed for testing electrical equipment and circuits. **Section 19.8 (1) to (3).**

# Insulated Elevating Work Platform

- (1) In this section, "elevating work platform" has the same meaning as in section 13.1.
- (2) The **employer must** ensure that, at least once every 12 months,
- (a) an insulated elevating work platform intended for use by a worker is dielectrically tested in accordance with section 5.3.4 of <u>CSA Standard CAN/CSA-C225-10 Vehicle-mounted aerial</u> <u>devices</u>, and
- (b) the insulating capability of the platform referred to in paragraph (a) is certified by the testing agency.
- (3) If an insulated elevating work platform does not pass the

testing required by subsection (2),

- (a) the platform must be considered non-insulated, and
- (b) the **employer must** ensure that:
- (i) any markings or identification on the platform indicating insulated capability are removed or effectively covered over,
- (ii) the platform's inspection and maintenance records indicate the platform is non-insulated,
- (iii) the platform's operation and maintenance manuals are revised to indicate the platform is non-insulated, and
- (iv) before using the platform, workers are informed the platform is non-insulated. **Section 19.9 (1) to (3).**

Further details on the Occupational Health and Safety Regulation can be found at worksafebc.com.

# **MANITOBA**

In Manitoba, employers are required to ensure electrical safety under Part 38, Sections 38.2 to 38.6 and 38.16 of the Workplace Safety and Health Regulation. Employers must develop and implement safe work and emergency procedures for electrical tasks, ensure only qualified electrical workers perform electrical work, and verify compliance with the Electricians' License Act and Manitoba Electrical Code. Additionally, electrical equipment must be properly located, guarded, and matched to environmental conditions, with tools used according to manufacturer specifications and properly grounded or certified.

PART 38 - ELECTRICAL SAFETY

**GENERAL** 

Safe Work Procedures

# An employer must:

- (a) develop and implement safe work procedures for electrical work;
- (b) train workers who do electrical work in those safe work procedures; and
- (c) ensure that workers comply with those safe work procedures. **Section 38.2.**

# Emergency Procedures re: Contact with Energized Electrical Equipment

- (1) Without limiting section 38.2, an employer must:
- (a) develop emergency procedures to be followed if an electrical worker or other person may come in contact with exposed energized electrical equipment and that contact may affect his or her safety or health; and
- (b) implement those procedures if such contact occurs.
- (2) The emergency procedures under subsection (1) **must** include the procedures to be followed for rescuing, administering first aid and obtaining further medical assistance for the worker.
- (3) An **employer must** ensure that workers who will implement the emergency procedures are trained in the procedures. **Section 38.3 (1) to (3).**

#### Electrical Workers must do Electrical Work

An **employer must** ensure that, in the workplace, only an electrical worker performs electrical work. **Section 38.4.** 

# Other Requirements to be Met

An **employer must** ensure that the electrical work performed in the workplace conforms to the requirements of:

- (a) The Electricians' Licence Act;
- (b) the Manitoba Electrical Code; and
- (c) where applicable, the by-laws of the municipality. **Section 38.5**.

# **Equipment Location and Protection**

An **employer** and an owner **must** ensure that energized electrical equipment is suitably located and guarded so that it is not contacted by a worker. **Section 38.6.** 

# Appropriate Electrical Equipment and Protection

- (1) An **employer must** ensure that the environmental conditions at a workplace are assessed to determine:
- (a) the type of protection **required** to safely use electrical equipment and electrical tools; and
- (b) the appropriate electrical equipment and electrical tools to be used at the workplace.
- (2) Without limiting subsection (1), an **employer must** ensure that a worker only uses electrical equipment and electrical tools:
- (a) in accordance with the manufacturer's specifications; and
- (b) that are properly grounded, unless the electrical equipment and tools are double-insulated or bear a CSA certified label. **Section 38.16 (1)(2).**

Further details on the Workplace Safety and Health Act and Regulation can be found at <a href="mailto:gov.mb.ca">gov.mb.ca</a>.

# **NEW BRUNSWICK**

In New Brunswick, employers are required to ensure electrical safety under Part XIX, Sections 287 to 287.6 of the <a href="General">General</a>

Regulation. Employers must ensure only qualified persons work on or near energized electrical equipment or utility lines, verify the suitability and installation of electrical equipment per manufacturer specifications, and establish written lockout procedures for isolating energy sources. Before any energized work is done, a code of practice must be developed, based on CSA Standard Z462-15, and communicated to all involved workers. Employers must also maintain clear access to service switches, label energized equipment, and ensure unused equipment is safely de-energized or tagged.

#### XIX - ELECTRICAL SAFETY

#### **Oualifications**

# Qualifications to Work on Energized Electrical Equipment, Utility Line or Utility Line Equipment

- (1) An **employer shall** ensure that an employee does not work on an energized electrical equipment unless the employee is a qualified person described in paragraph (a) of the definition "qualified person" in section 286.
- (2) An **employer shall** ensure that an employee does not work on an energized electrical utility line or utility line equipment unless the employee is a qualified person described in paragraph (b) of the definition "qualified person" in section 286.
- (3) Subject to paragraph 289(2)(b), an **employer shall** ensure that an employee does not work closer to an energized electrical utility line or utility line equipment than the applicable distance set out in subsection 289(1) unless the employee is a qualified person. **Section 287 (1) to (3).**

# **Electrical Equipment**

# Room containing energized electrical equipment

(1) An employer shall ensure that the entrance to a room

containing an electrical hazard is marked with conspicuous warning signs, symbols or tags stating that entry by unauthorized persons is prohibited.

- (2) An **employer shall** ensure that no person enters or is permitted to enter a room or other enclosure with electrical hazards unless the person is:
- (a) a qualified person, or
- (b) an employee who enters the room or enclosure to complete a duty not involving an electrical hazard and the employee is instructed and trained in the electrical hazards. **Section 287.1** (1)(2).

# Suitability of Equipment and Manufacturer's Specifications

An **employer shall** ensure that electrical equipment and insulating material for electrical equipment is suitable for its use and that it is installed, maintained, modified and operated in accordance with the manufacturer's specifications. **Section 287.2.** 

# **Working on Electrical Equipment**

- (1) An **employer shall** ensure that electrical equipment has a means of isolating its energy source and that the energy source is:
- (a) lockable,
- (b) situated in a location that is familiar to all employees, and
- (c) properly identified.
- (2) An **employer shall** provide a safety lock and key to a qualified person who may be **required** to lock out the electrical equipment.
- (3) An employer shall establish a written lock out procedure

for electrical equipment and ensure that a qualified person who may be **required** to lock out the electrical equipment is adequately instructed and trained to lock out the electrical equipment.

- (4) An **employer shall** ensure that before a qualified person works on electrical equipment:
- (a) an electrically safe work condition is established, and
- (b) each qualified person who will be working on the electrical equipment:
- (i) verifies that an electrically safe work condition is established,
- (ii) locks out the electrical equipment using the safety lock and key provided by the **employer**, and
- (iii) puts a non-conductive tag on the safety lock that contains:
- (A) words directing persons not to start or operate the electrical equipment,
- (B) the qualified person's printed name and signature, and
- (C) the date and time when the tag was put on the safety lock.
- (5) Before working on electrical equipment, a qualified person **shall** verify that the requirements set out in subsection (4) have been complied with.
- (6) No person **shall** remove a safety lock or tag on electrical equipment except:
- (a) the person who installed the safety lock or tag, or
- (b) in an emergency or, when attempts are made to contact the person referred to in paragraph (a) and the person is not available, a qualified person designated by the **employer**.

Section 287.3 (1) to (6).

#### For more information:

- Working on electrical equipment. Sections 287.4 (1) to (3).
- Code of practice. Sections 287.41 (1) to (7).
- Main service switches and temporary panel boards.Section 287.5.
- When electrical equipment not in use. Section 287.6.

Further details on the General Regulation can be found at <a href="mailto:qnb.ca">qnb.ca</a>.

# **NEWFOUNDLAND & LABRADOR**

In Newfoundland and Labrador, employers are responsible for electrical safety under Sections 478 to 482, 490, 491, and 501 of the Occupational Health and Safety Regulations. Employers must ensure that all electrical installations and work conform to the Canadian Electrical Code and are performed only by qualified workers. Before working on energized systems, a hazard assessment must be done, and isolation and lockout procedures must be followed where practicable. Workspaces around electrical equipment must be kept clear and free from flammable materials, and service rooms should only be used for their intended purpose.

#### PART XXVI — ELECTRICAL OPERATIONS

# **Electrical Requirements**

- (1) An electrical installation, equipment, apparatus and appliance  ${\bf shall}$  conform to the requirements of the Canadian Electrical Code as adopted in the  ${\it Electrical Regulations}$  under the  ${\it Public Safety Act}$ .
- (2) Only a worker qualified to work on electrical conductors and equipment **shall** be authorized to do the work.

(3) Work **shall** not be done on an energized electrical conductor or equipment unless a hazard assessment is completed that includes determining the number of qualified workers that should be present while the work is being performed. **Section 478 (1) to (3).** 

#### **Poles and Structures**

Before a worker climbs or is supported by a pole or structure, or before work is done that may affect its stability:

- (a) the pole or structure **shall** be assessed for soundness and stability;
- (b) where there is doubt concerning the soundness or stability, the pole or structure **shall** be effectively supported before wires or cables are changed, and the supports **shall** be left in place until workers are clear of the pole or structure; and
- (c) poles **shall** be installed or removed using equipment manufactured for this purpose or by a method acceptable to the minister. **Section 479.**

#### Service Rooms

Where practicable, a service room or electrical vault **shall** be used only for the purpose for which it was intended. **Section 480.** 

# **Space Around Equipment**

- (1) Passageways and working space around electrical equipment:
- (a) **shall** be kept clear of obstructions and arranged to give authorized persons ready access to all parts requiring attention; and
- (b) **shall** not be used for storage.

- (2) Flammable material **shall** not be stored or placed close to electrical equipment.
- (3) A worker **shall** not use oil-base paint or other volatile flammable substance in an electrical substation or confined area where high voltage electrical current passes through. **Section 481 (1) to (3).**

# **Testing Equipment**

- (1) Electrical test equipment may be used by qualified workers if it meets the requirements of:
- (a) CSA Standard C22.2 No. 160, "Voltage and Polarity Testers"; or
- (b) CSA Standard CAN/CSA -22.2 No. 231 Series-M89, CSA "Safety Requirements for Electrical and Electronic Measuring and Test Equipment".
- (2) Appropriate safe work procedures **shall** be established and followed for testing electrical equipment and circuits. **Section 482 (1)(2).**

#### **Isolation and Lockout**

- (1) High voltage electrical equipment **shall**, where practicable, be completely isolated, grounded and locked out where **required** by these regulations before work is started on it.
- (2) Where it is not practicable to completely isolate high voltage electrical equipment an **employer shall** conduct a formal hazard assessment and develop an electrical safety program that includes:
- (a) written safe work procedures;
- (b) the number of qualified persons **required** to be present while the work is being done; and

- (c) providing appropriate electrical protective equipment, including rubber blankets, hoses, hoods, gloves, and live line tools that **shall** be selected, used, stored, tested and maintained in accordance with a standard acceptable to the minister.
- (3) A worker **shall** not work on an energized electrical conductor or equipment, unless procedures satisfactory to the minister are used and the worker is provided with and trained in the use of special tools, approved for use by an authority acceptable to the minister. **Section 490 (1) to (3).**

# Warning Signs

Before completing installation and after energizing high voltage electrical equipment, conspicuous signs visible to a worker **shall** be placed close to the equipment stating "Danger, Energized Equipment". **Section 491.** 

#### **Emergency Work**

- (1) Sections 497 to 500 do not apply to an emergency action close to energized high voltage electrical equipment or conductors that is carried out by a worker who has undergone a course of instruction approved by the minister.
- (2) During an emergency action referred to in subsection (1), every reasonable precaution **shall** be taken to control hazards, including, where practicable,
- (a) restricting entry into the area within which equipment or materials are to be moved to a worker necessarily engaged in the work;
- (b) designating a safety watcher;
- (c) where equipment is in motion, preventing a person other than the equipment operator from touching a part of the equipment or the material being moved by it; and

- (d) requiring an equipment operator to operate the controls from:
- (i) the seat provided on the equipment,
- (ii) a metal stand that is integral with the frame of the equipment and clear of the ground, or
- (iii) a metallic mat bonded to the frame of the machine and located on the ground beside the machine. **Section 501 (1)(2).**

Further details on the Occupational Health and Safety Regulations can be found at <a href="mailto:assembly.nl.ca">assembly.nl.ca</a>.

# **NOVA SCOTIA**

In Nova Scotia, employers must ensure electrical work is performed safely under Part 11, Sections 120, 122 to 125, 127, 128 of the Occupational Safety General Regulations. Electrical installations must follow the CSA C22.1 Code and only competent persons may perform the work. When working on energized systems, employers must provide certified protective equipment, implement safe procedures, and ensure that workers are trained. Additional safety measures, including safety watchers, are required for high-voltage or hazardous tasks.

# Part 11 - Electrical Safety

#### **General Provisions**

- (1) An employer shall ensure that an electrical installation is designed, installed, assembled, operated, inspected, serviced, tested, maintained, repaired and dismantled in accordance with the latest version of CSA standard CSA C22.1, "Canadian Electrical Code Part 1", Safety Standard for Electrical Installations".
- (2) An employer operating a surface mine shall ensure that an electrical installation at the surface mine is designed,

installed, assembled, operated, inspected, serviced, tested, maintained, repaired and dismantled in accordance with the latest version of CSA standard M421, "Use of Electricity in Mines". **Section 120 (1)(2).** 

An **employer shall** ensure that a person who works on an electrical installation is a competent person. **Section 122**.

#### Personal Protective Equipment

- (1) Where a person is **required** to work on an energized electrical installation, an **employer shall**, as necessary in the circumstances, provide a person with all protective equipment and devices:
- (a) necessary to work safely on an energized electrical installation; and
- (b) that comply with the latest version of the applicable standard listed below:
- (i) ASTM D120, "Standard Specification for Rubber Insulating Gloves",
- (ii) ASTM D1051, "Standard Specification for Rubber Insulating Sleeves",
- (iii) ASTM D1048, "Standard Specification for Rubber Insulating Blankets",
- (iv) ASTM D1050, "Standard Specification for Rubber Insulating Line Hose",
- (v) ASTM D1049, "Standard Specification for Rubber Insulating Covers",
- (vi) ASTM D 178, "Standard Specification for Rubber Insulating Matting",
- (vii) ASTM F696, "Standard Specification for Leather Protectors for Rubber Insulating Gloves and Mittens", and

- (viii) ASTM F711, "Standard Specification for Fiberglass-Reinforced Plastic (FRP) Rod and Tube Used in Live Line Tools".
- (2) A person who is **required** to work on an energized electrical installation **shall** use the appropriate protective equipment or devices **required** under subsection (1). **Section** 123 (1)(2).
- (1) An employer shall ensure that a person who handles an energized power line or power line equipment rated at greater than 15 000 v to ground uses hot line tools to do so, in addition to other personal protective equipment required in the circumstances.
- (2) A person may use rubber gloves instead of hot line tools to handle energized power lines or power line equipment rated at greater than 750 v phase to phase, where a written work procedure has been adopted as a code of practice by order of the Director for use in such circumstances.
- (3) An employer who has adopted a code of practice under subsection (2) shall:
- (a) provide a copy of the code of practice to each person in the workplace who is **required** to handle energized power lines or power line equipment rated at or below 15 000 v to ground;
- (b) provide training in the code of practice to each person in the workplace who is **required** to handle energized power lines or power line equipment or perform other activities in accordance with the code of practice; and
- (c) communicate the details of the code of practice and the reasons for its implementation to all persons at the location where the work is performed, and, to the extent that it relates to their work, all persons **shall** adhere strictly to the terms of the code of practice.

(4) Where an officer determines that a code of practice that is in effect pursuant to subsection (2) has not been strictly adhered to, the officer may make an order suspending the application and use of the code of practice, and the suspension shall remain in place until the Director notifies the employer that the suspension has been lifted. Section 124 (1) to (4).

#### Hazardous Work

- (1) In this Section, "switching device" means a device designed for the sole purpose of opening, closing or opening and closing one or more electrical circuits, and includes:
- (a) a circuit breaker capable of making, carrying and breaking currents under normal circuit conditions, and also making, carrying for a specified time, and breaking currents under specified abnormal conditions, such as those of a short circuit;
- (b) a cutout assembly of a fuse support with either a fuse holder, fuse carrier or disconnecting blade; and
- (c) a disconnecting or isolating device used for isolating a circuit or equipment from a source of power.
- (2) An employer shall ensure that no work is performed on an energized electrical installation rated at greater than 750 v phase to phase unless the competent person performing the work is accompanied by another competent person.
- (3) Subsection (2) does not apply to switching work carried out using a switching device where an adequate written procedure has been established by the **employer**.
- (4) Where compliance with the personal protective equipment requirements and normal work procedures in effect at the workplace is inadequate to control the risk of exposure to an electrical hazard during work on an energized electrical

installation due to an unusual factor in the nature of the work, such as the location or condition of the workplace, a competent person not actively engaged in the work **shall** be designated as a safety watcher to observe a person who is working on or near an energized electrical installation.

- (5) A safety watcher required by subsection (4) shall:
- (a) warn all persons working on or near an energized electrical installation of any potential hazards;
- (b) ensure that the requirements of this Part are complied with;
- (c) be a competent person able to evaluate relevant hazards, and competent and equipped to initiate a rescue;
- (d) be free of any other duties that might interfere with the duties outlined in this subsection;
- (e) have the authority to stop work where the task or conditions in the workplace become hazardous; and
- (f) remain in the immediate vicinity of the work. Section 125(1) to (5).

#### For more information:

- Plan of electrical installation. Sections 127 (1)(2).
- Electrical rooms. Sections 128 (1)(2).

Further details on the Occupational Safety General Regulations can be found at novascotia.ca.

# **NORTHWEST TERRITORIES**

In the Northwest Territories and Nunavut, employers must protect electrical workers under Sections 445, 446, 447, and 462 of the Occupational Health and Safety Regulations. Only qualified electrical workers may perform electrical work,

while competent workers may handle limited low-voltage tasks. **Employers must** ensure that electrical equipment is approved, maintained, and tested, and defects **must** be addressed promptly. An emergency program with rescue and medical response procedures is also **required** when there's risk of contact with energized conductors.

#### PART 30 - ADDITIONAL PROTECTION FOR ELECTRICAL WORKERS

(1) In this Part,

"electrical equipment" means electrical equipment as defined
in subsection 1(1) of the Electrical Protection Act;

"electrical work" means electrical work as defined in subsection 1(1) of the Electrical Protection Act;

"guarded" means covered, shielded, fenced, enclosed or otherwise protected by suitable covers, casings, barriers, rails, screens, mats, platforms or other equally effective means;

"high voltage" means a voltage over 750 V;

"lamp" means an artificial source of electric light;

"luminaire" means a complete lighting unit that is designed to accommodate a lamp and to connect the lamp to an electrical power supply;

"qualified electrical worker" means a qualified electrical worker as defined in subsection 1(1) of the Electrical Protection Act;

"readily accessible" means capable of being reached quickly for operation, renewal, or inspection, without requiring a worker to climb over or remove obstacles or to resort to portable means of access.

(2) Nothing in this Part is to be construed as authorizing:

- (a) the performance of work by a person if it is unlawful for the person to perform that work under the Electrical Protection Act or any other enactment;
- (b) the use of electrical equipment if it is unlawful to use that equipment under the Electrical Protection Act or any other enactment; or
- (c) the performance of work in a particular manner if it is unlawful to perform the work in that manner under the Electrical Protection Act or any other enactment.
- (3) This Part does not apply to electrical work carried on by a qualified electrical worker:
- (a) in power houses, substations or other facilities:
- (i) in which electricity is produced or from which electricity is distributed, and
- (ii) from which some or all of the electricity referred to in paragraph (a) is sold;
- (b) on railway cars or locomotives or street railway cars or locomotives; or
- (c) on transmission lines or distribution systems of electric utilities. **Section 445 (1) to (3).**

#### **Electrical Workers**

- (1) An **employer shall** not require or permit a worker to engage in electrical work unless they are a qualified electrical worker.
- (2) An employer may require or permit a competent worker:
- (a) to operate powered mobile equipment and perform nonelectrical work on or near de-energized electrical equipment;
- (b) to extend a portable power cable for routine advancement

by interconnection of approved cord connectors, cord caps or similar devices:

- (c) to change light bulbs or tubes;
- (d) to insert or replace an approved fuse, to a maximum of 750 V, that controls circuits or equipment; or
- (e) to connect and use portable electrical equipment that operates at less than 750 V to supply circuits by means of attachment plug, without overloading the circuit conductors. Section 446 (1)(2).

# **Electrical Equipment**

- (1) An **employer shall** ensure that electrical equipment used by workers is:
- (a) approved for its intended use and location;
- (b) maintained; and
- (c) tested in accordance with the manufacturer's specifications.
- (2) If defects or unsafe conditions are identified in electrical equipment, an **employer shall** ensure that:
- (a) steps are taken without delay to inform and protect the health and safety of workers who could be endangered until the defects are repaired or the conditions are corrected; or
- (b) the defects are repaired or the conditions are corrected as soon as is reasonably possible. **Section 447 (1)(2).**

### **Emergency Program**

(1) If an electrical worker could come in contact with an exposed energized conductor and that contact could endanger the worker, an **employer shall** develop and implement an emergency program that sets out the procedures to be followed

in the event of that contact.

- (2) An emergency program developed under subsection (1) **must** include procedures to:
- (a) rescue a worker who has come into contact with a live conductor;
- (b) administer first aid to a worker who has sustained an electric shock; and
- (c) obtain medical assistance.
- (3) An **employer shall** ensure that workers are adequately trained to implement an emergency program developed and implemented under this section. **Section 462 (1) to (3).**

Further details on the Occupational Health and Safety Regulations can be found at canlii.org.

# **NUNAVUT**

In Nunavut, employers must protect electrical workers under Sections 445, 446, 447, and 462 of the Occupational Health and Safety Regulations. Only qualified electrical workers may perform electrical work, while competent workers may handle limited low-voltage tasks. Employers must ensure that electrical equipment is approved, maintained, and tested, and defects must be addressed promptly. An emergency program with rescue and medical response procedures is also required when there's risk of contact with energized conductors.

#### PART 30 - ADDITIONAL PROTECTION FOR ELECTRICAL WORKERS

(1) In this Part,

"electrical equipment" means electrical equipment as defined in subsection 1(1) of the Electrical Protection Act;

"electrical work" means electrical work as defined in

subsection 1(1) of the Electrical Protection Act;

"guarded" means covered, shielded, fenced, enclosed or otherwise protected by suitable covers, casings, barriers, rails, screens, mats, platforms or other equally effective means;

"high voltage" means a voltage over 750 V;

"lamp" means an artificial source of electric light;

"luminaire" means a complete lighting unit that is designed to accommodate a lamp and to connect the lamp to an electrical power supply;

"qualified electrical worker" means a qualified electrical worker as defined in subsection 1(1) of the Electrical Protection Act;

"readily accessible" means capable of being reached quickly for operation, renewal, or inspection, without requiring a worker to climb over or remove obstacles or to resort to portable means of access.

- (2) Nothing in this Part is to be construed as authorizing:
- (a) the performance of work by a person if it is unlawful for the person to perform that work under the Electrical Protection Act or any other enactment;
- (b) the use of electrical equipment if it is unlawful to use that equipment under the Electrical Protection Act or any other enactment; or
- (c) the performance of work in a particular manner if it is unlawful to perform the work in that manner under the Electrical Protection Act or any other enactment.
- (3) This Part does not apply to electrical work carried on by a qualified electrical worker:

- (a) in power houses, substations or other facilities:
- (i) in which electricity is produced or from which electricity is distributed, and
- (ii) from which some or all of the electricity referred to in paragraph (a) is sold;
- (b) on railway cars or locomotives or street railway cars or locomotives; or
- (c) on transmission lines or distribution systems of electric utilities. **Section 445 (1) to (3).**

#### **Electrical Workers**

- (1) An **employer shall** not require or permit a worker to engage in electrical work unless they are a qualified electrical worker.
- (2) An employer may require or permit a competent worker:
- (a) to operate powered mobile equipment and perform nonelectrical work on or near de-energized electrical equipment;
- (b) to extend a portable power cable for routine advancement by interconnection of approved cord connectors, cord caps or similar devices;
- (c) to change light bulbs or tubes;
- (d) to insert or replace an approved fuse, to a maximum of 750 V, that controls circuits or equipment; or
- (e) to connect and use portable electrical equipment that operates at less than 750 V to supply circuits by means of attachment plug, without overloading the circuit conductors. **Section 446 (1)(2).**

# **Electrical Equipment**

- (1) An **employer shall** ensure that electrical equipment used by workers is:
- (a) approved for its intended use and location;
- (b) maintained; and
- (c) tested in accordance with the manufacturer's specifications.
- (2) If defects or unsafe conditions are identified in electrical equipment, an **employer shall** ensure that:
- (a) steps are taken without delay to inform and protect the health and safety of workers who could be endangered until the defects are repaired or the conditions are corrected; or
- (b) the defects are repaired or the conditions are corrected as soon as is reasonably possible. **Section 447 (1)(2).**

#### **Emergency Program**

- (1) If an electrical worker could come in contact with an exposed energized conductor and that contact could endanger the worker, an **employer shall** develop and implement an emergency program that sets out the procedures to be followed in the event of that contact.
- (2) An emergency program developed under subsection (1) **must** include procedures to:
- (a) rescue a worker who has come into contact with a live conductor;
- (b) administer first aid to a worker who has sustained an electric shock; and
- (c) obtain medical assistance.
- (3) An **employer shall** ensure that workers are adequately trained to implement an emergency program developed and

implemented under this section. Section 462 (1) to (3).

Further details on the Occupational Health and Safety Regulations can be found at canlii.org.

# **ONTARIO**

In Ontario, employers must ensure electrical safety on construction sites under Sections 181 to 187, 192, and 193 of Reg. 213/91: Construction Projects. Only certified or permitted workers may perform electrical work, and all electrical installations must be suitable, maintained, and operated safely. Employers must mark areas with exposed energized parts, keep conductive tools away from such hazards, and ensure that protective equipment like rubber gloves is tested, inspected, and used properly. Workers must be trained, and precautions must be taken to prevent hazards from energized equipment.

#### PART II - GENERAL CONSTRUCTION

#### **Electrical Hazards**

- (1) Except where otherwise **required** by this Regulation, electrical work performed on or near electrical transmission or distribution systems **shall** be performed in accordance with the document entitled "Electrical Utility Safety Rules" published by the Infrastructure Health and Safety Association and revised 2019.
- (2) Sections 182, 187, 188, 189, 190, 191 and 193 do not apply to electrical work that is performed on or near electrical transmission or distribution systems if the work is performed in accordance with the document referred to in subsection (1). Section 181 (1)(2).
- (1) No worker **shall** connect, maintain or modify electrical equipment or installations unless,

- (a) the worker holds a certificate of qualification or a provisional certificate of qualification issued under the *Building Opportunities in the Skilled Trades Act, 2021*, that is not suspended, in the trade of,
- (i) electrician construction and maintenance, or
- (ii) electrician domestic and rural, if the worker is performing work that is limited to the scope of practice for that trade; or
- (b) the worker is otherwise permitted to connect, maintain or modify electrical equipment or installations under the *Building Opportunities in the Skilled Trades Act, 2021* or the *Technical Standards and Safety Act, 2000*.
- (2) A worker who does not meet the requirements of clause (1)(a) or (b) may insert an attachment plug cap on the cord of
- electrical equipment or an electrical tool into, or remove it from, a convenience receptacle. **Section 182 (1)(2).**

Every reasonable precaution **shall** be taken to prevent hazards to workers from energized electrical equipment, installations and conductors. **Section 183**.

- (1) No person, other than a person authorized to do so by the supervisor in charge of the project, **shall** enter or be permitted to enter a room or other enclosure containing exposed energized electrical parts.
- (2) The entrance to a room or other enclosure containing exposed energized electrical parts **shall** be marked by conspicuous warning signs stating that entry by unauthorized persons is prohibited. **Section 184 (1)(2).**
- (1) Electrical equipment, installations, conductors and insulating materials **shall** be suitable for their intended use and **shall** be installed, maintained, modified and operated so as not to pose a hazard to a worker.

(2) For greater certainty, the regulations made under section 113 of the *Electricity Act*, 1998 apply to electrical equipment, installations, conductors and insulating materials and to temporary wiring installations on projects. **Section 185.** (1)(2).

Electrical equipment, installations and conductors that are not to be used for the purpose for which they were designed **shall** be,

- (a) removed; or
- (b) left in an electrically non-hazardous condition by being disconnected, de-energized, tagged and,
- (i) grounded, in the case of power lines,
- (ii) locked out, in the case of electrical equipment. **Section** 186.

Tools, ladders, scaffolding and other equipment or materials capable of conducting electricity **shall** not be stored or used so close to energized electrical equipment, installations or conductors that they can make electrical contact. **Section 187.** 

All tools, devices and equipment, including personal protective equipment, that are used for working on or near energized exposed parts of electrical equipment, installations or conductors **shall** be designed, tested, maintained and used so as to provide adequate protection to workers. **Section 192.** 

- (1) A worker who may be exposed to the hazard of electrical shock or burn while performing work **shall** use rubber gloves,
- (a) that are adequate to protect him or her against electrical shock and burn;
- (b) that have been tested and certified in accordance with subsection (2), if applicable; and

- (c) that have been air tested and visually inspected for damage and adequacy immediately before each use.
- (2) Rubber gloves rated for use with voltages above 5,000 volts AC **shall** be tested and certified to ensure that they can withstand the voltages for which they are rated,
- (a) at least once every three months, if they are in service;
- (b) at least once every six months, if they are not in service.
- (3) Rubber gloves **shall** be worn with adequate leather protectors and **shall** not be worn inside out.
- (4) Leather protectors **shall** be visually inspected for damage and adequacy immediately before each use.
- (5) Rubber gloves or leather protectors that are damaged or not adequate to protect workers from electrical shock and burn **shall** not be used.
- (6) Workers **shall** be trained in the proper use, care and storage of rubber gloves and leather protectors. **Section 193** (1) to (6).

Further details on the Reg. 213/91: CONSTRUCTION PROJECTS can be found at ontario.ca.

# PRINCE EDWARD ISLAND

In Prince Edward Island, employers are required to address electrical safety under the Occupational Health and Safety Act General Regulations, Sections 36.2 to 36.5, 36.10, 36.15 to 36.17. Employers must ensure that only competent or supervised workers perform electrical tasks, provide and maintain appropriate protective equipment, enforce the use of rubber gloves for energized work, and install guards or barriers when work is performed near live conductors. All electrical work

must comply with applicable legislation and CSA standards, and safety procedures such as barricading areas below elevated work or covering energized lines during pole installation must be in place.

#### PART 36 - ELECTRICITY

# Worker Qualifications

The **employer shall** ensure that a worker **shall** not work on any energized electrical conductor or equipment unless he is:

- (a) competent; or
- (b) an indentured apprentice under the direct supervision of a competent person. **Section 36.2.**

#### **Communication Workers**

The **employer shall** ensure that when communication workers are **required** to work on energized electrical utility conductors or equipment, such workers **shall** be competent as specified in section 36.1. **Section 36.3**.

# **Application of Electrical Inspection Act**

(1) The **employer shall** ensure that the installation, use and maintenance of any electrical wiring or equipment including temporary wiring, complies with the Electrical Inspection Act and the regulations made thereunder.

#### **Standards**

(2) The **employer shall** ensure that all newly installed electrical utility and communication lines and equipment are installed in conformance with CSA Standard C22.3 No.1-15, Overhead Systems, and CSA Standard C22.3 No.7-20, Underground Systems. **Section 36.4 (1)(2)**.

#### **Protective Devices**

(1) The **employer shall** ensure that workers do not work on energized electrical conductors or equipment unless adequate protective devices specified for protection against the voltage involved are used.

#### **Protective Gloves**

(2) When working on energized electrical conductors or equipment operating at a potential greater than 120 v nominal up to and including 5,000 v phase to phase, the **employer shall** provide and the worker **shall** use rubber gloves having a minimum rating of 10,000 v, shields and other necessary safety equipment.

#### Idem

(3) When working on energized electrical conductors or equipment in excess of 5,000 v, and not exceeding 15,000 v phase to phase, the **employer shall** provide and the worker **shall** wear rubber gloves having a minimum rating of 20,000 v or use adequate hot line tools.

# **Testing**

(4) Rubber gloves **shall** be tested at least twice a year and replaced as **required**.

#### When Gloves to be Worn

- (5) Rubber gloves **shall** be worn at all times while working on energized circuits in accordance with section 36.6 or while within the primary zone on any poles or structure carrying over 120 v phase to ground to 25000 phase to phase circuits.
- (6) In subsection (5), "primary zone" means the distance measured from a high voltage (120 v phase to ground and 25000 phase to phase) source to a suitable distance of clearance measured down or away from the pole or structure to the top of the worker's head, which in all cases **shall** be 1 200 mm (4 ft.) measured to the nearest live point and all insulator

porcelain is to be considered energized. **Section 36.5 (1) to (6).** 

# **Protective Guards and Equipment**

The **employer shall** ensure that workers **shall** not work in or around any place or structure in proximity to energized electrical conductors or equipment unless:

- (a) adequate protective guards are provided; or
- (b) the workers are wearing adequate protective equipment. **Section 36.10.**

#### **Overhead Protection**

When workers work on poles or structures where other persons may pass below, an adequate barricade **shall** be installed. **Section 36.15**.

#### **Poles Between Conductors**

The **employer shall** ensure that when setting or removing poles, light standards or any similar object between energized electrical conductors exceeding 600 v, the conductors **shall**:

- (a) be covered with adequate protective devices; or
- (b) be protected by an approved guard installed on the pole before being lifted. **Section 36.16.**

#### **Protective Measures**

The **employer shall** ensure that workers **required** to perform such work as described in section 36.16 **shall**, and workers **required** to perform the work as described in section 36.16 **shall**:

- (a) wear adequate rubber gloves;
- (b) use cant hooks or other approved controlling devices; and

(c) not get on or off the lifting machine until the pole is in a secured position. **Section 36.17.** 

Further details on the Occupational Health and Safety Act General Regulations can be found at <a href="mailto:princeedwardisland.ca">princeedwardisland.ca</a>.

# **QUÉBEC**

In Québec, employers are required to address electrical safety under the Regulation Respecting Occupational Health and Safety, Sections 312.30, 312.116, 312.117, and 312.118. Employers must ensure that underwater electrical tools do not exceed specified voltage limits and are properly insulated, grounded, and equipped with shut-off switches and ground fault detectors. Work near power lines requires written authorization from the power company, and only trained personnel may perform such tasks. Training must cover safety protocols, risk identification, and necessary precautions.

#### CHAPTER V - ELECTRICITY

**Protection against electrical hazards:** Electric voltage of devices, equipment and tools used underwater **must** not exceed 110 V in direct current or 42 V in alternating current.

Those devices, equipment and tools **must** be:

- (1) insulated;
- (2) equipped with a shut-off switch;
- (3) equipped with a ground fault detector if the power supply is alternating current from the public network or its equivalent; and
- (4) grounded, in the case of equipment. Section 312.30.

**Prior authorization:** No person may undertake work near a power line without first obtaining written authorization from the electrical power company that operates the line. **Section** 

#### 312.116.

**Training:** Only persons who have received the training **required** by the electrical power company may perform work near a power line operated by the electrical power company. The training **shall** at least pertain to:

- (1) the description of the situations requiring the power line to be turned off or the reactivation device to be switched off-circuit from the circuit breaker device that powers it;
- (2) the list of components of the power line that have an anomaly in order to detect any situation likely to compromise the worker's safety;
- (3) the safety precautions **required** to ensure that the worker is isolated from the power line being cleared;
- (4) the necessity, on the basis of the work to be carried out and the risks identified, to have a worker on the ground supervise the worker who is clearing the power line; and
- (5) the approach distances applied by the electrical power company and the additional safety precautions to be taken if the worker cannot clear the power line while respecting the applicable approach distance. **312.117** (1) to (5).

**Equipment and Tools:** Any equipment or tool likely to be used within the approach distances of a power line **shall** be designed, tested and maintained in accordance with ASTM Standard F711, Standard Specification for Fiberglass-Reinforced Plastic (FRP) Rod and Tube Used in Live Line Tools.

The insulated arms of the aerial basket lifting devices used near a power line **shall** comply with CSA Standard C225, Vehicle-mounted aerial devices. **Section 312.118.** 

Further details on the Regulation Respecting Occupational Health and Safety can be found at <a href="mailto:gouv.gc.ca">gouv.gc.ca</a>.

# **SASKATCHEWAN**

In Saskatchewan, employers are required to address electrical safety under Part 30, Sections 30-2 to 30.10, 30.18 of the Occupational Health and Safety Regulations. Employers must ensure that only qualified electrical workers perform electrical tasks, that all equipment is approved, maintained, and tested, and that proper covers, grounding, and safeguards are in place. Additional protective measures must be taken for equipment in tunnels, low-hanging luminaires, extension cords, and portable lighting.

#### PART 30 - Additional Protection for Electrical Workers

#### **Electrical Workers**

- (1) Subject to subsection (2), an **employer** or contractor **shall** permit only electrical workers to construct, install, alter, repair or maintain electrical equipment.
- (2) An **employer** or contractor may permit a competent worker who is not an electrical worker:
- (a) to operate powered mobile equipment and perform nonelectrical work on or near de-energized electrical equipment;
- (b) to extend a portable power cable for routine advancement by interconnection of approved cord connectors, cord caps or similar devices; to change light bulbs or tubes;
- (d) to insert or replace an approved fuse, to a maximum of 750 volts, that controls circuits or equipment; or to connect small portable electrical equipment that operates at less than 750 volts to supply circuits by means of attachment plugs, if the connection does not overload the circuit conductors, or to use or operate small portable electrical equipment that is connected in that way. **Section 30-2 (1)(2).**

# **Electrical Equipment**

- (1) An **employer** or contractor **shall** ensure that only approved electrical equipment is used by workers and that the electrical equipment is:
- (a) approved for the intended use and location of the electrical equipment;
- (b) maintained in proper working condition and capable of safe operation and tested in accordance with the manufacturer's recommendations.
- (2) If defects or unsafe conditions have been identified in electrical equipment, an **employer** or contractor:
- (a) **shall** ensure that:
- (i) steps are taken immediately to protect the health and safety of any worker who may be at risk until the defects are repaired or the unsafe conditions are corrected; and
- (ii) the defects are repaired or the unsafe conditions are corrected as soon as is reasonably practicable; or
- (b) **shall** ensure that the electrical equipment is disconnected and removed from use. **Section 30-3 (1)(2).**

Covers for Switches, Receptacles, Connections, etc.

An **employer** or contractor **shall** ensure that:

- (a) all switches, receptacles, luminaires and junction boxes are fitted with a cover that is approved for the intended use and location of the cover;
- (b) all wire joints or connections are:
- (i) fitted with an approved cap or other approved cover;
- (ii) enclosed in an approved box; or
- (iii) if the wire joints or connections are not permanently

installed, protected from damage by another approved means and all dead, abandoned or disused electrical conductors or equipment are removed from the place of employment or disconnected and secured to prevent inadvertent energization. Section 30-4 (1)(2).

# **Electrical Equipment in Tunnel or Manhole**

If electrical equipment is installed in a tunnel or manhole, an **employer** or contractor **shall** ensure, if reasonably practicable, that:

- (a) the tunnel or manhole is kept clear of water; and
- (b) the electrical equipment is protected from physical or mechanical damage. **Section 30-5**.

#### Luminaires

An **employer** or contractor **shall** ensure that a luminaire that is located at a height of less than 2.1 metres above a working or walking surface is protected against physical or mechanical damage by installation of a safeguard or the location of the luminaire. **Section 30-6.** 

# **Extension and Power Supply Cords**

An **employer** or contractor **shall** ensure that an electrical extension or power supply cord used for supplying energy to any electrical equipment:

- (a) is approved for the intended use and location of the electrical extension or power supply cord;
- (b) is fitted with approved cord end attachment devices that are installed in an approved manner is provided with a grounding conductor; and
- (d) is maintained and protected from physical or mechanical damage. **Section 30-7.**

#### For more information:

- Portable power cables and cable couplers. Section 30-8.
- Portable luminaires. Section 30-9 (1)(2).
- Exposed metal parts. Section 30-10.
- Emergency program. Section 30-11 (1) to (3).

Further details on the Occupational Health and Safety Regulations can be found at <a href="mailto:saskatchewan.ca">saskatchewan.ca</a>.

# **YUKON**

In Yukon, employers are required to address electrical safety under Part 9, Sections 9.02 to 9.06 of the Occupational Health and Safety Regulations. Employers must ensure that only qualified electrical workers handle installations or maintenance, poles are assessed for stability, and proper precautions are taken to prevent hazards from falling tools or electrical contact. Electrical equipment must be approved, properly maintained, and kept clear of obstructions, while insulated aerial devices must be tested annually. Employers are responsible for implementing safe work procedures, ensuring safe distances from high-voltage sources, and informing workers of any safety risks.

# Part 9 - Electrical Safety

#### **GENERAL**

# **Worker Qualifications and Duties**

A worker who installs, alters or maintains electrical equipment **shall** be an electrical worker who carries out duties in accordance with the *Electrical Protection Act.* **Section 9.02**.

#### Work on Poles

(1) Before a worker climbs a pole or is supported by a pole or

structure, or before any work is done that will affect the stability of the pole or structure:

- (a) the pole or structure **shall** be tested for soundness and stability,
- (b) if there is any doubt as to soundness or stability, the pole or structure **shall** be effectively supported before any wires or cables are changed, and the supports left in place until workers are clear of the pole or structure, and
- (c) a worker **shall** not climb or work on a pole or structure supported laterally by pike poles only.
- (2) When workers are working on poles or such structures where persons below could be injured by falling tools or materials, a temporary guard, fence or standard safety signs appropriate to the situation **shall** be placed to warn the public and workers of the danger zone.

#### **Obstructions on Poles**

- (3) Mailboxes, signs, clotheslines, or other obstructions **shall** be removed from poles on which workers are **required** to work.
- (4) Tags placed on a pole for identification purposes **shall** be positioned on the side of the pole that minimizes risk to a worker climbing the pole.

#### Ladders

(5) Metal ladders or wire reinforced side rail wooden ladders shall not be used while working around electrical equipment. Section 9.03 (1) to (5).

# **Space Around Equipment**

(1) Passageways, service rooms, electrical vaults and working spaces around electrical equipment **shall** be kept clear of

obstructions, arranged so as to give authorized persons ready access to all parts requiring attention, and not used for storage.

# Housekeeping

- (2) Flammable material **shall** not be stored or placed close to electrical equipment.
- (3) Where work is being performed, all tunnels and manholes that contain electrical cables, equipment and apparatus **shall** be kept free of debris, unused tools, materials and seepage or stagnant water. **Section 9.04 (1) to (3)**.

#### LINES AND EQUIPMENT

#### **Standards**

- (1) All electrical utility and communication lines and equipment **shall** meet the requirements of:
- (a) CSA Standard C22.3 No. 1-01, Overhead Systems, and
- (b) CSA Standard C22.3 No. 7-94, Underground Systems.

# Test Equipment

- (2) Electrical testing equipment used by workers **shall** meet the requirements of:
- (a) CSA Standard C22.2 No. 160-M1985, Voltage and Polarity Testers,
- (b) CSA Standard C22.2 No. 231 Series-M89, CSA Safety Requirements for Electrical and Electronic Measuring and Test Equipment, or
- (c) other similar standards acceptable to the board.
- (3) Appropriate safe work procedures **shall** be established by the **employer** and followed by the workers for testing

electrical equipment and circuits.

# Switches, Panels, and Services

- (4) A switch and temporary panel board controlling a service entrance, service feeder or branch circuit **shall** meet the following requirements:
- (a) a switch and temporary panel board **shall** be securely mounted on a well-constructed vertical surface, be obstruction free and have a cover over the insulated current-carrying parts,
- (b) the switch and temporary panel board **shall** be located in an area where water will not accumulate, and be within easy reach and readily accessible to workers,
- (c) the switch controlling a service centre, service feeder or branch circuit **shall** not be locked in the closed position, and
- (d) the switch controlling a service centre, service feeder or the branch circuit **shall** be housed in a lockable enclosure and be provided with a device for locking the enclosure.

# Other Electrical Equipment

(5) Where electrical transformers, capacitors or other electrical equipment are installed on exterior walls or buildings, they **shall** be located at a sufficient distance from the windows or such openings to avoid fire hazards or accidental contacts through the wall openings. **Section 9.05** (1) to (5).

#### For more information:

• Insulated aerial devices. Section 9.06 (1) to (3).

Further details on the Occupational Health and Safety Regulations can be found at <a href="https://www.wcb.yk.ca">wcb.yk.ca</a>.