

<i>The Town of Fort Frances</i>	SECTION HEALTH AND SAFETY
<u>WORKING IN THE VICINITY OF OVER-HEAD ENERGIZED ELECTRICAL LINES</u> <u>POLICY</u>	REVISED September 2006
Resolution No. 306 (09/06)	Supercedes Resolution No.
Policy Number: 5.31	PAGE 1 of 4

1. PURPOSE:

To establish a policy outlining a step-by-step procedure when working in the vicinity overhead energized electrical conductors.

2. LEGISLATION:

Reference 2006 Occupational Health & Safety Act and Regulations – Construction Projects O. Reg. 213/91).

188. (1) This section applies unless the conditions set out in clauses 189(a) and (b) are satisfied. (Under the authority of the *Owner of electrical conductor, protective devices and equipment are installed, and written measures and procedures adequate to protect the workers*)

188. (2) No object shall be brought closer to an energized over-head electrical conductor with a nominal phase-to-phase voltage rating set out in Column 1 of the Table to this subsection than the distance specified opposite to it in Column 2.

TABLE

COLUMN 1	COLUMN 2
<i>Nominal phase-to-phase voltage rating</i>	<i>Minimum distance</i>
750 to 150,000 volts	3 metres (10 feet)
more than 150,000 to 250,000 volts	4.5 metres (15 feet)
more than 250,000 volts	6 metres (20 feet)

188. (3) Subsections (4) to (9) if a crane, similar hoisting device, backhoe, power shovel or other vehicle or equipment is operated near an energized overhead electrical conductor and it is possible for a part of the vehicle or equipment or its load to encroach on the minimum distance permitted under subsection (2).

188. (4) A constructor shall,

- (a) establish and implement written measures and procedures adequate to ensure that no part of a vehicle or equipment or its load encroaches an the minimum distance permitted by subsection (2); and
- (b) make a copy of the written measures and procedures available to every employer on the project.

188. (5) The written measures and procedures shall include taking the following precautions to protect workers:

1. Adequate warning devices, visible to the operator and warning of the electrical hazard, shall be positioned in the vicinity of the hazard.
2. The operator shall be provided with written notification of the electrical hazard before beginning the work.
3. A legible sign, visible to the operator and warning of the potential electrical hazard shall be posted at the operator's station.

188. (6) Before a worker begins work that includes as activity described in subsection (3), the employer shall provide a copy of the written measures and procedures to the worker and explain to them him or her.

188. (7) The worker shall follow the written measures and procedures.

188. (8) A competent worker, designated as a signaller, shall be stationed so that he or she is in full view of the operator and has a clear view of the electrical conductor and of the vehicle or equipment and shall warn the operator each time any part of the vehicle or equipment or its load may encroach the minimum distance.

188. (9) Section 106 also applies with respect to the signaller designated under subsection (8).

2. SAFE WORK PROCEDURES

Introduction:

When working near energized electrical lines with construction equipment always use caution. Keep equipment away from wires. Even coming within certain distances can cause serious injury or death for the operator, as well as endangering the live of others near by. No matter what kind of equipment or material you're working with, touching or coming close to energized overhead or underground electrical lines is dangerous.

Procedures:

The followings steps will help you work safely if you must work in the vicinity of energized electrical lines.

1) Locate power lines:

Before beginning work, locate power lines by telephoning Fort Frances Power Corporation (274-9291) or Ontario Hydro (1-800-465-3960) (depending on the jurisdiction) for the voltage of the overhead power lines. Ask for the location and voltage of underground power lines as well. This is especially important if you are planning to use drilling or trenching equipment. If practical, have power line de-energized, barricaded or moved from the work site.

2) Advise workers:

The Supervisor or his designate shall prior to commencing work inform the workers/operators of the hazards of touching or coming too close to the lines and provided a them with a written copy of this policy. If working with plans or blueprints, mark the electrical lines on them. Place warning signs along the route of overhead and underground power lines in the work area visible to the operator(s). A legible sign visible to the operator(s) warning of the electrical hazard shall be posted within the equipment or vehicle(s).

3) Keep safely away from power lines:

The Supervisor or his designate shall familiarize workers with the safe distances to keep from power lines. The law (Reg. 188, Regulations for Construction Projects of the Occupational Health and Safety Act 2006) states minimum distances must be kept between workers or equipment and power lines. Refer to table in Section 2 – Legislation – subsection 188(2) for minimum distances.

Power lines less than 750 volts can also injure or kill someone who touches or comes too close. It's difficult to distinguish between low-voltage hydro wires, telephone and cable television wires, therefore avoid taking unnecessary chances by keeping away all wires.

Where there is a possibility that equipment, vehicle, or its load may encroach upon the minimum specified distance a **signaller** shall be designated. The signaller must be stationed in view of the operator and the hazard to warn the operator each time the equipment, vehicle or its load approaches the minimum distance.

4) Signaller:

This section applies to the requirements of a signaller as stated in Section 106 of the Occupational Health & Safety Act and Regulations – Construction Projects O. Reg. 213/91.

A signaller shall be a competent worker and shall perform no other work while acting as a signaller.

The signaller shall wear a garment (vest) that covers at least the upper of the worker and meets the requirements of Section 106. (1.1, 1.2, 1.3 and 1.4) of the OH&S Act and Regulations.

The employer shall ensure that the signaller has received adequate oral training in his/her duties and has received adequate oral and written instructions and keeps a copy of the written instructions at the project.

The signaller shall:

- a. Keep clear of the intended path of the vehicle or equipment or its load.
- b. Be in full view of the operator of the vehicle or equipment.
- c. Have a clear view of the intended travel of the vehicle, equipment or its load.
- d. Watch the part of the vehicle, equipment or its load whose path of travel the operator cannot see.

The signaller shall be in continual communication with the operator by means of a two way radio (separate channel from the regular operational channel) at all times. The signaller shall provide the operator with clear oral communication as to when any part of the vehicle, equipment or its load encroaches the minimum allowable distance as stated in the table referred to in Section 2 – Legislation – subsection 188(2).

3. STEPS TO FOLLOW – If power line is hit:

Procedures:

The followings steps will help you work safely if you must work in the vicinity of electrical lines.

1) Stay on equipment:

It's generally safe to stay on equipment that has hit or come in contact with power lines as long as you don't touch the equipment and the ground at the same time. In fact, to touch anything that is touching the ground could be fatal. The operator should remain inside the equipment or vehicle, unless there is a fire and if possible move the equipment or vehicle from the wires. If there is a fire, jump free without touching the equipment and the ground at the same time and shuffle away using small steps.

2) Keep others away:

Warn others not to approach or touch equipment/vehicle(s). Even to touch a winch or the load on the equipment could be fatal.

3) Call Fort Frances Power Corporation or Ontario Hydro:

Have someone call Fort Frances Power Corporation (274-9291) or Ontario Hydro (1-800-465-3960) (depending on jurisdiction) to get help or the power shut off.

4) Rescue:

Call 911 immediately for assistance.

Rescue can only be attempted by a person trained in using specialized live line tools and equipment. In cases involving high voltage lines, even using a wooden tool, a dry rope, hose and a wooden pole to move the victim from the hazard is dangerous.

If life is at stake and rescue must be attempted, a heavy object as mentioned above can be sometimes thrown in order to separate the victim from the hazard. Never touch the victim while still in contact with the power line.

5) First Aid:

Once the victim is free from the power line, begin first aid. If the victim is unconscious and either breathing erratically or not at all, begin artificial respiration immediately. Have someone call for an ambulance. Do not leave the victim unattended.

If in shock, reassure and keep the victim warm, but do not apply heat. Loosen clothing about the neck, chest and waist. If thirsty, give sips of water or other liquids except alcohol.

If burned, avoid handling the affected area. Do not apply lotions, break blisters or remove burnt clothing. If possible, cover the burns including clothing with a prepared sterile dressing. If the skin is blistering bandage loosely, otherwise apply bandages firmly. Do not use gauze, cotton, wool or other material that is likely to stick.

Place the unconscious victim gently on one side (recovery position). Do not attempt to give an unconscious person anything to eat or drink.

6) Reporting:

Once the victim is safe and the area cleared of the hazard, the incident is to be reported immediately to the supervisor directly in charge.