

Before going to work near BC Hydro overhead lines or equipment, there are some important things you need to know:

- BC Hydro wires are not insulated and they are never safe to touch.
- Electricity continuously seeks a path to ground and will flow through anything—including tools, crane booms, concrete pump trucks, scissor lifts, ladders and the human body when it connects energized lines and equipment with the ground.
- The distance that you must maintain from a powerline depends upon the voltage of the line.
- The power is always on. Under normal circumstances all BC Hydro wires are always energized.
- Even during a power outage there are significant hazards present.

Plan ahead—there are procedures in place to help you to work safely. In the event of an electrical contact, a downed line, or any electrical emergency:

- Stay back 10m
- Call 911 to ensure emergency response.

WORK SAFE BC	
For intact and undamaged electrical equipment, follow WorkSafeBC Regulation Section 19.12 and Table 19-1A	
Under 750 V	1 metre
Over 750 V to 75 kV	3 metres
Over 75 kV to 250 kV	4.5 metres
Over 250 kV to 550 k	6 metres

Down. Danger. Dial.	
For down or damaged BC Hydro equipment and anything in contact with it, maintain these minimum distances:	
Distribution lines and equipment	10 metres
Transmission lines and equipment	33 metres
Manholes	33 metres

Danger—electrical contact—touch potential

Touch potential refers to touching energized equipment. This can happen when you come close to electrical equipment or when it has been damaged and comes close to you.

When something comes in contact with energized equipment, it becomes a path to ground and electricity will flow through it. Even without direct contact, at higher voltages electricity will “arc” through air.

When a person touches an energized wire, or anything in contact with that wire, they become a path to ground and electricity will flow through them. For example, if you touch a wire with your hand, current may flow through your torso and out through your feet as it travels to the ground.

Danger—energized ground—step potential

Step potential refers to the hazardous ground gradient caused by damaged energized equipment.

When a new path to ground is established, the ground will become energized. The voltage will be highest at the point where it enters the ground and will decrease over distance, creating a gradient. The difference in voltage across the gradient can be thousands of volts over very short distances, even the length of a footstep.

Each step across the gradient could result in thousands of volts pushing electrical current up one leg and down the other. Anyone nearby must minimize the size of their footstep by shuffling, heel to toe, until they are at least the minimum distance for down or damaged equipment (10 metres or 33 metres) away.

Worker training

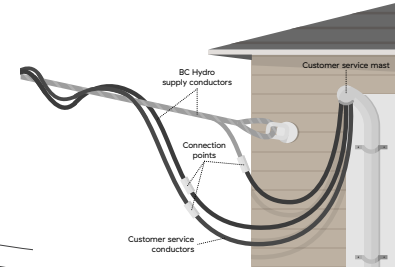
BC Hydro provides free Electrical Safety Awareness Training for First Responders. Visit bchydro.com/safetytraining

Service lines

- Typically run from a BC Hydro pole to a residence or a small business.
- Usually attached near the middle of a BC Hydro pole, or “midspan” between two poles.
- Usually either three or four wires, and there may be multiple sets of wires.
- Most service wires are covered with plastic—this is “weatherproofing” and not safe to touch.
- Energized at up to 750V—stay back at least 1m from these wires at all times

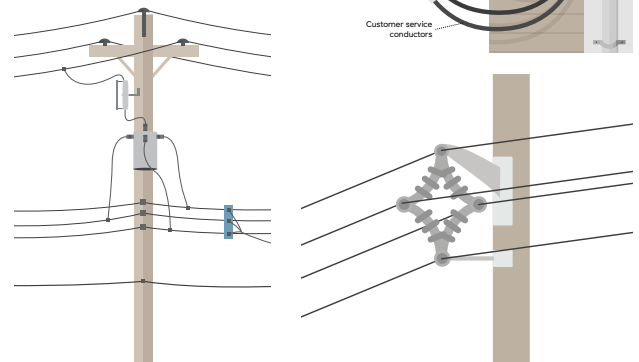
Working near service lines

- Call BC Hydro’s Express Connect Centre at **1 877 520 1355** to discuss your options.
- In many cases BC Hydro can temporarily disconnect your low voltage overhead service to allow work such as tree trimming, painting, and gutter repairs.



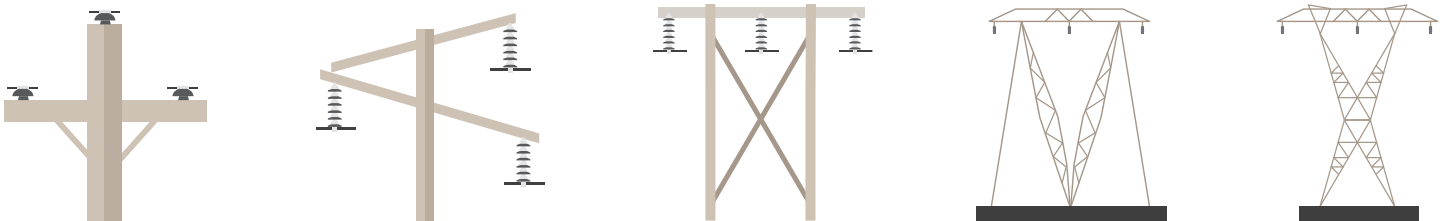
High voltage distribution lines

- These run from a BC Hydro pole to another pole, or to a large business.
- One, two, three, or four wires, and there may be multiple sets of wires.
- Usually located at or near the top of the BC Hydro pole.
- Common voltages are 12,000V and 25,000V
- Energized at over 750V—stay back at least 3m from these wires at all times



High voltage transmission lines

- These run from a BC Hydro pole or tower to another pole or tower, to a substation, or to a large industrial business.
- Three wires, energized at between 60,000V and 500,000V. There may be multiple sets of three wires on a single pole or tower.
- Stay back at least 6m from these wires at all times unless BC Hydro has identified the line voltage.
 - If BC Hydro has identified that the line voltage is between 75kV and 250kV, you may work up to 4.5m away.
 - If BC Hydro has identified that the line voltage is below 75kV, you may work up to 3m away.



Working near high voltage lines

- Call BC Hydro’s Express Connect Centre at **1 877 520 1355** to discuss your options.
- BC Hydro may be able to provide you with multiple alternatives to help you stay safe and maintain your compliance with WorkSafeBC Regulation when you need to work near high voltage lines and equipment using their “Assurance in Writing” (30M33) process.
- If you have an “Assurance in Writing” (30M33) in effect, discuss your responsibilities with WorkSafeBC.

Contact BC Hydro

Call BC Hydro’s Express Connect Centre at **1 877 520 1355** to discuss your options before starting work near overhead lines and equipment. There are procedures in place to help you to work safely.

Call **911** to report emergencies. Contact BC Hydro’s Customer Restoration Centre at **1 800 BC HYDRO (1 800 224 9376)** to report non-emergency problems and incidents.