

Safety Alert OF THE MONTH

Updated - Aug 2016

PLEASE PASS THIS ON TO PEOPLE AND ORGANIZATIONS IN BC'S FOREST INDUSTRY

Working Safely Around Power Lines

On February 26th, 2016, a worker was fatally injured when a super snorkel that was being moved on a lowbed came into contact with a power line. The worker was electrocuted when he approached and touched the lowbed, which provided the electricity a path to ground. The incident occurred near Port McNeill.

In July 2013, there were three close call incidents involving power lines that potentially could have been very serious:

- After unloading at a mill's log sorting yard, an empty self-loading log truck loaded its trailer and drove out of the yard with the crane boom still extended. The extended boom contacted overhead service lines, which pulled down the utility pole and attached high-voltage power lines.
- A track-mounted log processor was crossing under overhead conductors when the boom of the machine contacted a telecommunications cable. The overhead power lines were not contacted and no injuries were reported.
- A mechanic was testing the brakes on a mobile crane when he inadvertently contacted a 25-kV overhead power line.

Recommended Preventative Actions:

Remember the safe limits of approach. Electricity can arc or “jump” from the wire to a conducting object like a piece of equipment or a truck. When working around powerlines, follow the Minimum Approach Distances from the Occupational Health and Safety Regulations:



Table 19-1A

Column 1 Voltage	Column 2 Minimum approach distance for working close to exposed electrical equipment or conductors	
	Metres	Feet
Phase to phase		
Over 750 V to 75 kV	3	10
Over 75 kV to 250 kV	4.5	15
Over 250 kV to 550 kV	6	20



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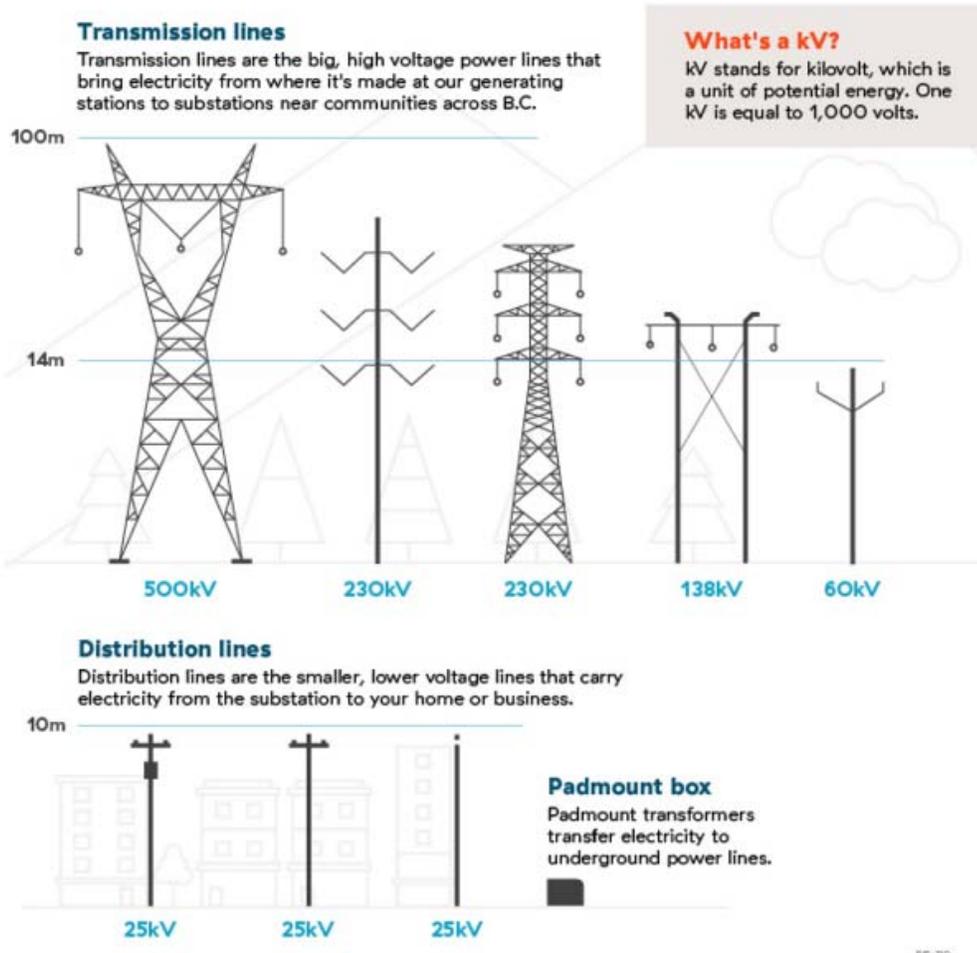
Care must also be taken when moving equipment parallel to a powerline. An arc can occur when equipment is moving parallel to the line and goes within the limits of approach.

If your operations are only moving equipment underneath the powerlines and not doing any work near the powerlines, the following table can be used.

Table 19-1B

Column 1 Voltage	Column 2 Minimum clearance distance for passing under exposed electrical equipment or conductors	
	Metres	Feet
Phase to phase		
Over 750 V to 75 kV	2	6.5
Over 75 kV to 250 kV	3	10
Over 250 kV to 550 kV	4	13

The following diagram provides a visual guide for estimating powerline voltage.



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Look up and live. Before you start work, look up and around the site and make sure you and your crew are aware of all overhead lines. Ladders, cranes and pipes are all good conductors of electricity, and remember, it doesn't need to be touching a power line to become energized.

Parking Near Powerlines. Equipment and vehicles with rubber tires can become energized when parked near high voltage powerlines even if they are not in contact with the lines. If someone touches the energized vehicle, this creates a path to ground for the electricity and a shock will result. Usually these shocks are minor, but the severity of the shock depends on the voltage of the lines, how close the vehicle is to the lines and other factors. Avoid this hazard by not parking vehicles or equipment near powerline right of ways.

Smoke and Weather Conditions. Particles from heavy smoke can act as a conductor which can result in electricity from powerlines arcing greater distances. Increase the approach distances when there is heavy smoke in the air or postpone the job until the conditions clear.

Highly humid weather conditions can also create greater arcing distances.

A downed power line is deadly. If you spot a fallen wire, keep at least 10 meters away, even if it doesn't appear to be live. If a wire falls across your vehicle or machine, don't get out—you could become a path for electricity if you touch the ground. If you must get out, hop out clear and land on both feet, then hop or shuffle until you are 10 meters clear of the vehicle.

Be aware of safety hazards below. Call before you dig, phone the local power company to avoid coming into contact with underground cables and service lines. The call is free, and it could save your life.

You hold their lives in your hands. Safety training is critical and as a supervisor or foreman, you hold your workers' lives in your hands. Don't put them at risk. Ensure that they have the critical safety training they need to go home safely to their families.



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To learn more, check out the following resources:

Part 19 Electrical Safety - Occupational Health and Safety Regulation

<https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation/part-19-electrical-safety>

BC Hydro Poster with 3 keys to electrical safety:

<http://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/safety/3-keys-of-electrical-safety-poster.pdf>

WorkSafeBC's videos on power line safety:

<https://www.worksafebc.com/en/resources/health-safety/videos/a-bright-arc/a-video-guide-to-powerline-safety-full-length?lang=en>

BC Hydro Electrical Safety Resources:

<https://www.bchydro.com/safety-outages/worker-training/safety-resources.html>

