

Toolbox Talks

Weekly Tailgate Topic_

12-33

Discuss with crews on _____ [INSERT DATE]

3 Keys of Electrical Safety

Electricity is a part of our everyday lives and must be treated with respect. If you work around power lines, you need to know the 3 Keys of Electrical Safety.

The 3 Keys



1. LOOK UP & DOWN

Plan your work to prevent electrical contact – and call for assistance

Identify overhead and underground power lines



2. KEEP BACK – KNOW YOUR LIMITS

On foot, stay at least 10 metres (33 feet) away from equipment operating around power lines.

Use a spotter to make sure you keep equipment back at least 6 metres (20 feet) from power lines



3. STAY BACK & CALL FOR HELP

Stay back 10 metres (33 feet) from a fallen power line, exposed underground power line or any object in contact with a line.

If your equipment contacts a line, stay put until help arrives.



If it's a life threatening situation, jump clear of your vehicle, feet together, and shuffle away keeping both feet close together. Never contact the ground and your vehicle at the same time.

Do not attempt a rescue until directed by BC Hydro personnel.

Plan ahead to prevent an accident

Here are a few ideas to help ensure you're prepared:

- Take electrical safety training
- Get overhead power line voltage information and/or complete WorkSafeBC's 30M33 form
- Call BC Hydro Electrical Service Coordination Centre at 1 877 520 1355
- Call before you dig. BC One Call's number is 1 800 474 6886 (*6886 on your cell)

What to do in the case of electrical contact

Is there an immediate threat to life or a fire?

- If the answer is **YES**, call 911. They will contact BC Hydro to shut off the power.
- If the answer is **NO**, call 1 888 POWERON (769 3766 or *49376) to have BC Hydro shut off the power.

Electrical awareness: How electricity behaves

Ripple effect

If anything makes contact with a high voltage power line, such as a tree or an uninsulated boom on a truck, or if a broken power line falls to the ground or lands on a vehicle, electricity will flow to the ground and spread out in concentric circles like the ripples in a pool of water.

Voltage is very high at the point where electricity makes contact with the ground. The level of intensity decreases as the distance increases from the point of contact. Zero voltage is approximately 10 metres (33 feet) from the point of contact.

Step potential

Due to the difference in voltage as one moves towards or away from the source of electricity, it is possible to "step" between high and low voltage differences.

As the human body is usually a better conductor of electricity than the ground, the electricity can flow between the feet through the body with sometimes devastating results. This is referred to as "step potential."

Touch potential

Trees can be very conductive. If a tree comes into contact with a high voltage power line and a person is touching the tree or touching a ladder leaning against the tree, there will be a high to low voltage difference between the person and the ground.

This will force electrical current to flow through them to the ground and may easily result in serious injury or worse. This is referred to as "touch potential."

Shuffle or hop – don't step

If the ground becomes energized while you work, avoid shock by keeping your feet close together and shuffle away – never allowing the heel of one foot to move beyond the toe of the other.

If you cannot shuffle approximately 10 metres (33 feet) away from the energized area, put your feet together and hop, but never walk.

Courtesy of BCHydro.com

