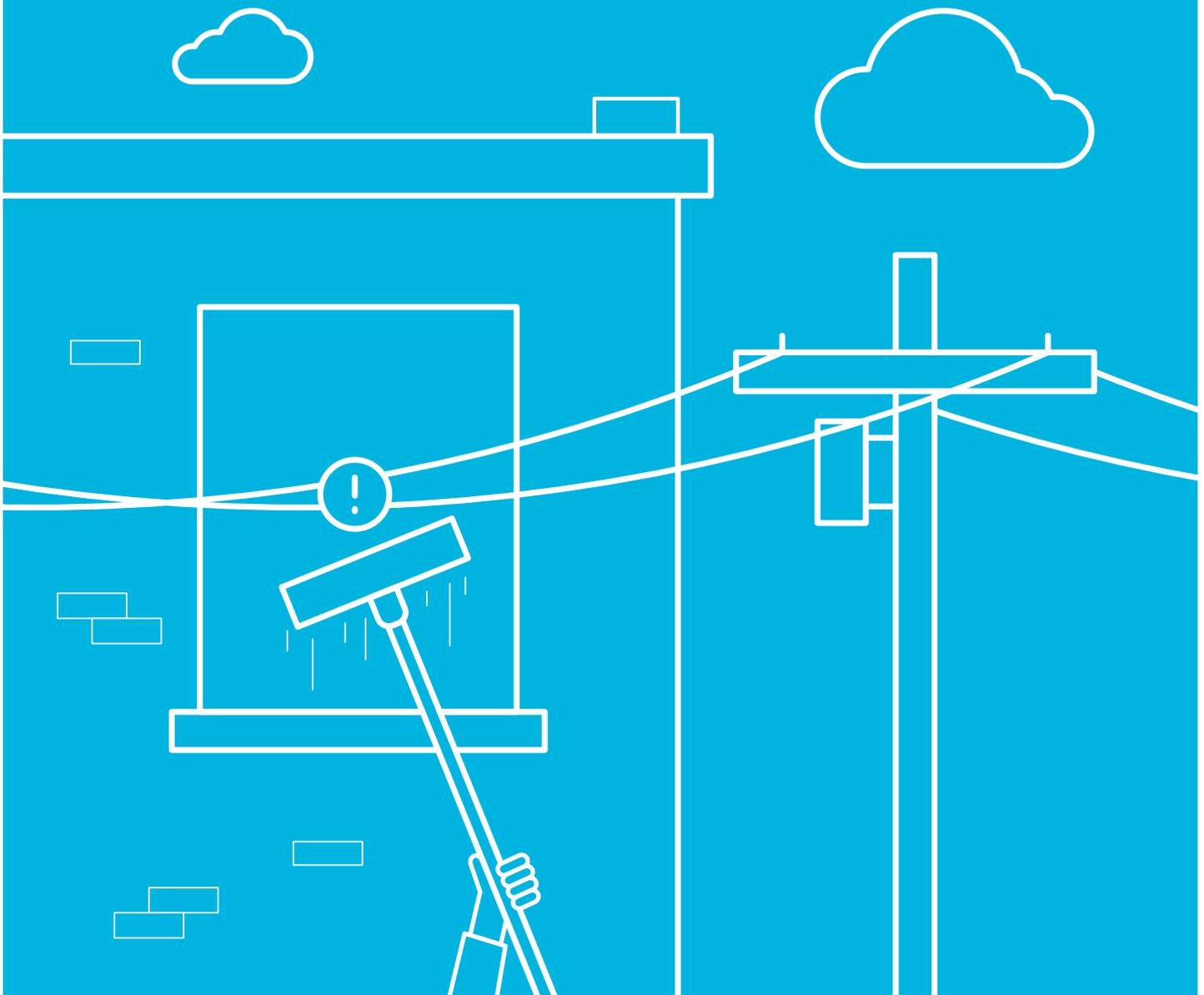


# Overhead, out of mind:

Knowledge gap contributing to on-the-job electrical contact incidents in the trades



# Overhead, out of mind: Knowledge gap contributing to on-the-job electrical contact incidents in the trades

Electrical contact incidents resulting in serious injury are more common amongst workers, especially those who work trades jobs. As the weather warms up those working outdoor jobs such as construction, landscaping and window washing are at higher risk of electrical contact incidents than other members of the public, and new research finds many have had a close call with electricity on the job or have witnessed unsafe work near overhead lines or electrical equipment. A gap in electrical safety knowledge is a contributing factor in most of these incidents.

## Highlights

- New BC Hydro data shows more trades workers are involved in serious electrical contact incidents than other members of the public.
- Over the past three years BC Hydro data shows 61 per cent of reported electrical contact incidents resulting in serious injury involved trades workers.
- Most incidents occur in the spring and summer, and those that work in outdoor trades—roofers, tree trimmers, window washers, gutter cleaners/installers, and construction workers—face the greatest risk of injury because they often work at or near the level of power lines.
- A new survey commissioned on behalf of BC Hydro supports these findings, as one in five trades workers surveyed said they have made contact or had a close call with power lines and/or equipment while working on a job.<sup>1</sup>
- Most (60 per cent) said they often work on a job where there are power lines and/or electrical equipment, while 24 per cent sometimes do.
- And alarmingly, 43 per cent said they have witnessed unsafe work being performed near power lines or equipment.
- Of these, half reported the unsafe work (53 per cent), but almost as many (42 per cent) did not end up reporting it.
- This concerning trend could be attributed to a knowledge gap. For example:
  - 19 per cent have found themselves closer than expected to power lines and/or electrical equipment.
  - 71 per cent were unable to identify the correct distance they should keep themselves and tools away from overhead power lines.
  - 52 per cent said they could benefit from more on the job electrical safety training.
- This knowledge gap exists even though over one quarter having worked on a site where there has been a downed power line, and 60 per cent have received some type of electrical safety training.

## Solutions

BC Hydro's system is safe, but electricity can be dangerous. BC Hydro wants everyone to get home safely at the end of their workday and is urging those who work around power lines and other electrical infrastructure to make safety a priority. BC Hydro advises those on the job to be aware of power lines when working around houses or buildings, or when tree-trimming, gutter cleaning, painting, window washing, or doing any other work. When working around power lines overhead, remember these tips:

- **Look up and down**—Observe the site beforehand and plan work so you can avoid contact with power lines.
- **Stay back**—You and your tools should stay at least three metres away from an overhead power line; otherwise, you are putting yourself at risk.
- **Call for help**—If you come across a fallen power line, or a tree branch or object contacts a line—stay back ten metres and call 911. Never try and move it yourself. If you must work closer than three metres to a power line at your worksite, call BC Hydro before you begin.
- **Learn about the risks:** BC Hydro offers in-person and online electrical awareness training for anyone who works near electricity, including trade workers, first responders and any members of the public working near high voltage lines. To get started with one of BC Hydro's online electrical safety awareness courses, **create a New Learner Account** or **login to an existing account** or visit [bchydro.com/safetyresources](https://www.bchydro.com/safetyresources) for more information.

<sup>1</sup> Online survey of 240 tradespeople who work near electrical lines or equipment in British Columbia surveyed between May 20–29, 2022.

## Warmer weather, greater risk

As temperatures increase those working jobs in and around BC Hydro's power system such as construction, tree trimming, house painting, or window washing typically see their workload rise, as warmer weather allows outdoor work to be done more efficiently.

However, new BC Hydro data shows trades workers, especially those working outdoor jobs, are vulnerable to more serious electrical contact incidents than other members of the public, and a new survey conducted on behalf of BC Hydro finds one in five trades workers have made contact or had a close call with power lines and/or equipment while working on a job.

This report will explore the gap in trade workers' electrical safety knowledge and what can be done to ensure everyone gets home safe at the end of the workday if they are working near power lines or other electrical infrastructure.

## Risky business

Trade workers make up a large proportion of public electrical contact injuries, as opposed to homeowners and other members of the public. Over the past three years BC Hydro data shows 61 per cent of reported electrical contact incidents resulting in serious injury involved trades workers.

Most incidents occur in the spring and summer, and those that work outdoor trades—roofers, tree trimmers, window washers, gutter cleaners/installers, and construction workers—face the greatest risk of injury because they often work at or near the level of power lines or other electrical equipment.

Most trades workers surveyed (60 per cent) said they often work on a job where there are power lines and/or electrical equipment, while 24 per cent sometimes do. And alarmingly, 43 per cent said they have witnessed unsafe work being performed near power lines or equipment. Of these, half reported the unsafe work (53 per cent), but almost as many (42 per cent) did not end up reporting it.



### WORKER SAFETY INCIDENTS REPORTED TO BC HYDRO

“While washing a window with extension pole window washer moved away from building and made contact with distribution line resulting in injury.”—July 12, 2021

“As two roofers were finishing up their work on a strata complex, they removed their ladder from the side of the building and at this point made contact with the high voltage line, leading to serious injury.”—February 12, 2020

“A construction worker’s Personal Protective Equipment vest was blown by the wind and caught on a transformer. The worker reached out with a piece of aluminum to remove it causing a flashover and suffered serious injuries.”—March 8, 2021

## Knowledge gap

On the job electrical injuries are often caused by a knowledge gap—38 per cent said they only feel somewhat informed about measures they could take to increase their safety around electricity and 71 per cent were unable to identify the correct distance they should keep themselves and tools away from overhead power lines. This is concerning considering 19 per cent have found themselves closer than expected to power lines and/or electrical equipment.

Some are also not certain how to tell if a downed power line is live—five per cent believe the line will make a buzzing noise, and four per cent believe it would be smoking or sparking—but there is often no way to tell if a line is live. That is why all lines must be treated as live until BC Hydro arrives to isolate the line and make it safe.

There is further confusion about who to call if there is a downed line on a work site. Almost half (49 per cent) said BC Hydro should be the first call, but this is incorrect. A downed line is considered an emergency, and 911 should be called immediately.

This knowledge gap exists even though over one quarter have worked on a site where there has been a downed power line, and 60 per cent have received some type of electrical safety training. However, it is important to note that 52 per cent said they could benefit from more on-the-job electrical safety training.

## GAPS IN KNOWLEDGE



**52%** of trades workers said they could benefit from more on the job electrical training



**19%** have found themselves closer than expected to power lines



**43%** have witnessed unsafe work near power lines or equipment



**71%** were unable to identify the correct distance they should keep themselves and tools away from overhead power lines

## Knowledge is power

BC Hydro's system is safe, but electricity can be dangerous. BC Hydro wants everyone to get home safely at the end of their workday and is urging those who work around power lines and other electrical infrastructure to make safety a priority.

BC Hydro advises those on the job to be aware of power lines when working around houses or buildings, or when tree-trimming, gutter cleaning, painting, window washing, or doing any other work. When working around power lines overhead, remember to look up and down, making sure to observe the site beforehand and plan work so you can avoid contact with power lines.

Also make sure that you and your tools stay at least three metres away from an overhead power line; otherwise, you are putting yourself at risk. If you come across a fallen power line, or a tree branch or object contacts a line—stay back ten metres and call 911. Never try and move it yourself. If you must work closer than three metres to a power line at your worksite, call BC Hydro before you begin.

Knowledge of risks is key to harm prevention, that is why BC Hydro offers in-person and online electrical awareness training for anyone who works near electricity, including trade workers, first responders and any member of the public working near high voltage lines. To get started with one of BC Hydro's online electrical safety awareness courses, **create a New Learner Account** or **login to an existing account** or visit [bchydro.com/safetyresources](https://bchydro.com/safetyresources) for more information.

