

Electrical safety backgrounder

Electricity is all around us. It powers so many of the things we use in our daily lives, from our personal devices and household appliances to street lighting and traffic lights. Our electricity supply is delivered to us through a network of transmission lines, substations, transformers and distribution lines and some of this equipment can be found in local neighbourhoods.

It's important to know how to stay safe around electricity. Staying safe is about awareness. It's important to know what hazards to look out for and how to live and work safely around electricity.

This backgrounder provides teachers with an overview of key electrical safety hazards in the home and local community, and behaviours and actions to stay safe. The intention is not to share all of this information with students (we have selected key actions for the lesson), but rather to offer teachers a thorough background in electrical safety.

Safety at home

Inside

- Don't overload outlets. Use power bars if you need to plug in multiple appliances to one outlet.
- Keep electrical appliances away from water. Don't turn on the tap near a plugged-in appliance, and keep electrical appliances away from the bathtub.
- When disconnecting something from an outlet, make sure you use the plug when you pull it out, not the cord.
- When changing a light bulb, make sure the switch is turned to the off position first.
- Leave electrical wiring projects to the professionals. (If you do electrical wiring projects yourself, get adequate safety information and training first and have an electrical inspector approve the work.)

Outside

- Call before you dig. Contact BC One Call (1-800-474-6886) to find out where buried cables are before beginning any project that involves digging a hole.
- Be careful when using a ladder, tree pruner or extended paint roller. Know where electrical equipment is at all times. Look around and look up to ensure you're a safe distance from powerlines.



Power line safety

Know what to do near a downed power line:

- Stay at least 10 metres (or 33 feet) away from a downed line, even if it doesn't look live.
- Call 911, BC Hydro (or FortisBC electric) immediately to report the incident.
- If a wire falls over your car, don't get out unless it is safe. Call 911 and wait for help.
- If you have to get out of your vehicle (because of safety concerns):
 - Open the door and prepare to jump clear of your vehicle.
 - Jump out with your feet together.
 - Don't touch the vehicle and the ground at the same time with any part of your body or clothing. You must land with both feet together.
 - After you land, keep both feet on the ground at all times. Then calmly shuffle away with your feet together until you're at least 10 metres away from the vehicle.

Electrical shock

If someone receives an electrical shock:

- Don't touch the person if she or he is still in contact with the source of electricity (the electricity will travel from their body into yours). Have someone call 911 and FortisBC while you stay with the victim.
- If the victim has no pulse, perform CPR.
- If the victim has been burned, avoid touching those areas or any burned clothing. You may gently apply cold water to burned areas until professional help arrives.

Staying safe at FortisBC hydroelectric facilities

Visiting dams, reservoirs and generating stations can be interesting but it's important to remember that these facilities are used to generate electricity and hazards do exist.

Obey all safety warning signs:

- Keep a safe distance away from dams, powerhouses and electric equipment.
- Respect fenced, marked and gated areas and stay outside of safety booms, markers and buoys.
- Keep a safe distance from waterways that could have unstable footing or slippery banks.
- Keep children safe by supervising them at all times.



Staying safe on reservoirs:

- Depending on the demand for electricity service, reservoir water levels can rise or fall on a daily basis, so fishing, swimming or boating above or below dams and generating stations can be dangerous. Be alert for audible warnings like sirens.
- Don't stand, tie or anchor your boat below a dam since fast and unexpected changes in water flows and levels can create significant hazards.
- In winter, changing water levels and currents can cause gaps to form under ice, so activities like snowmobiling, skating, cross-country skiing and walking on reservoirs and rivers near dams and generating stations should always be avoided.
- Be aware that floating debris and concealed hazards (especially in shallow shoreline areas) can accompany changes in water levels.
- Remember, boaters are required to adhere to all regulations of the Canadian Coast Guard and always practice safe boating practices.

Safety tips to share with children

- Always obey warning signs around electricity.
- Never fly a kite near a power line. If a kite does get tangled in the wires, leave it and call FortisBC to retrieve it.
- Never go after a Frisbee® or ball, or anything that has gone into a fenced substation with electrical hazard signs. Leave it there and call FortisBC to have it retrieved.
- Don't climb trees or play near power lines, and never go near a downed powerline. As a general rule, stay a bus length away from all powerlines.
- Keep electronics away from water.

