

BC Hydro's guide to utility clearance requirements

From high voltage overhead distribution lines and transformers

These requirements should be considered by a developer or someone attempting to subdivide property in proximity to BC Hydro's existing high voltage overhead distribution lines and transformers:

- BC Hydro Clearance Standards: ES 43 Section B (Overhead Electrical Clearances)
- British Columbia Electrical Code (CSA Standard C22.1; Canadian Electrical Code Part 1 Rule 26.012—Dielectric Liquid-filled equipment—Outdoors)
- WorkSafeBC Occupational Health and Safety Policy 19.24 (Minimum separation Distance to be Maintained from Energized High Voltage Electrical Equipment and Conductors)

Note that this document is focused on utility clearance requirements around BC Hydro structures, and does not speak to additional building requirements such as those from the BC Building Code, which are the responsibility of the developer to consider and incorporate.

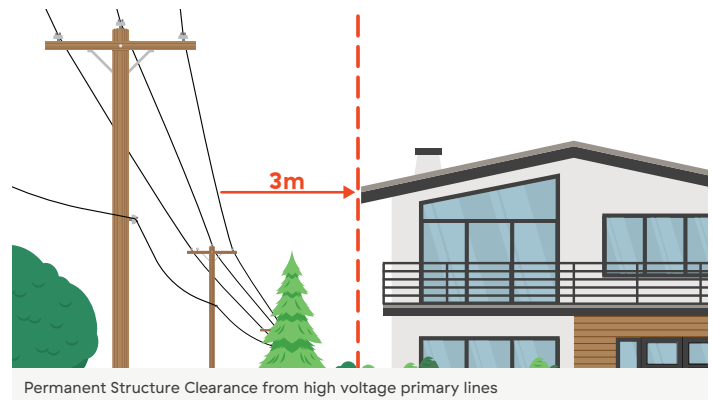
It also does not provide the recommended or required distances from transmission high voltage overhead lines, which are typically greater than what is shown here.

Building Clearances from BC Hydro Utility Structures

PERMANENT STRUCTURE CLEARANCE FROM HIGH VOLTAGE PRIMARY LINES

High voltage (750V–22,000 volts) lines, also referred to as primary lines, are the wires found at the top of utility poles which typically carry a voltage of 7,200 volts at minimum. High voltage wires are also attached to the top or side of our overhead transformers and other equipment.

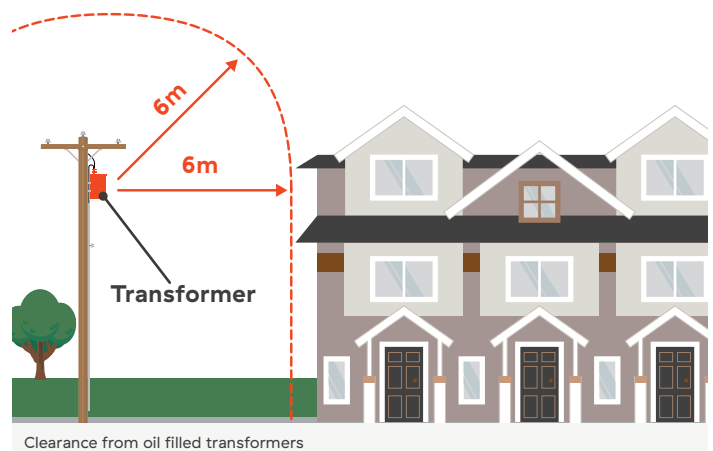
In accordance with the British Columbia Electrical Code Rule 36–110 and Table 33, building surfaces are to have a minimum clearance of three meters as per the CEC, between the outermost projection of the powerline to the outermost portion of any building feature. For span lengths greater than 75m, the utility standards CSA C22.3 No.1, may require additional clearances. Please contact BC Hydro.



CLEARANCE FROM OIL FILLED TRANSFORMERS

A transformer is a gray cylinder on a pole that steps down the high voltage to a lower voltage that is used by the customer in their home, businesses, and commercial buildings. In accordance with the British Columbia Electrical Code Rule 26–012, the design of your building must not allow any of the following to exist within a 6 meter radius of an overhead transformer.

- Any combustible surface of material on a building or structure.
- Any door or window.
- Any ventilation inlet or outlet.



It is recommended to extend the horizontal distance of 6 m to the parts of the building below the level of the equipment as burning oil falling from the transformer may cause a fire to the building. If no transformers are initially on the pole adjacent to your building, you still need to consider future transformer installations. Contact BC Hydro to understand what utility pole clearance is appropriate in your area.

WorkSafeBC Working Clearance Standards

CONSIDERATIONS FOR CONSTRUCTION OF PERMANENT STRUCTURE

For construction work near energized high-voltage electrical lines, WorkSafeBC regulations specify a working clearance distance of 3 m must be maintained by any worker, tool, machine, equipment or material. This includes equipment like ladders, power tools, scaffolding, cranes and machinery.

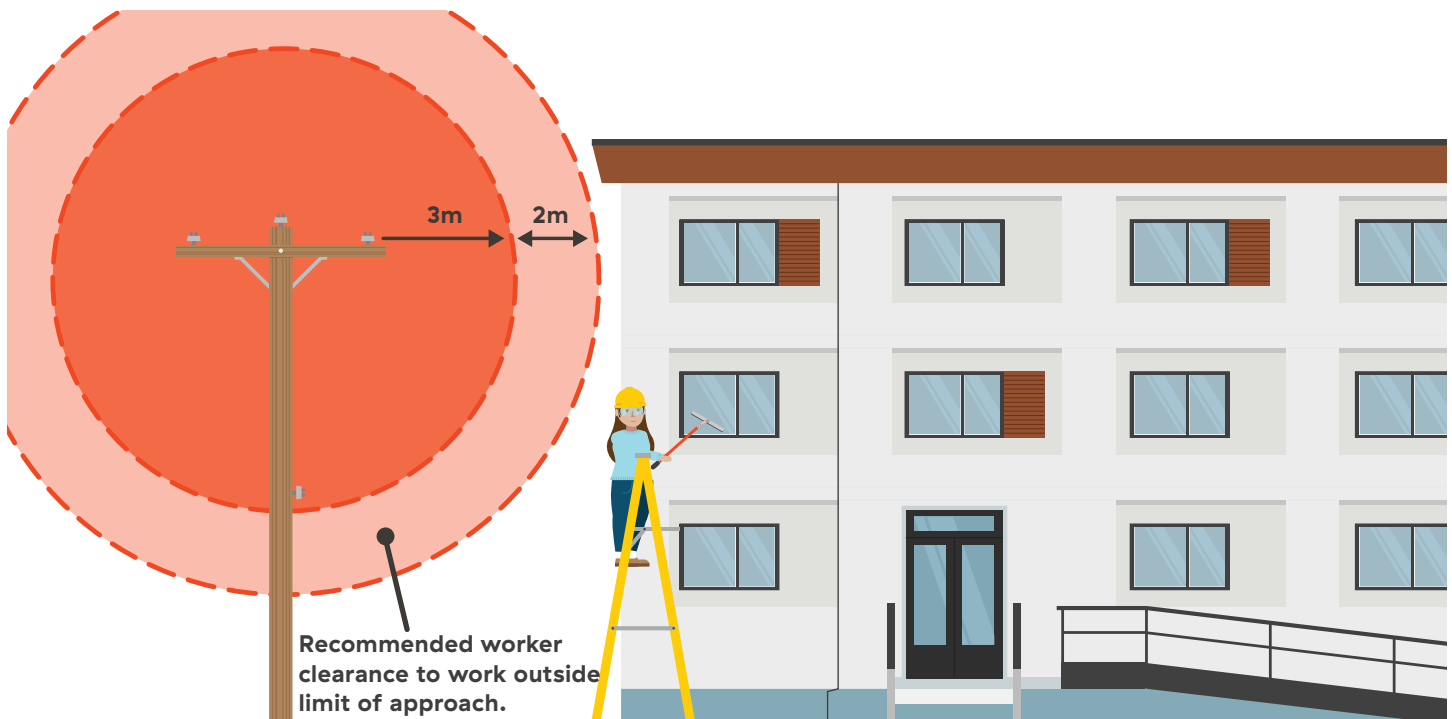
CONSIDERATIONS FOR THE USE AND MAINTENANCE OF THE PERMANENT STRUCTURE

Failure to maintain 3m of clearance between the high voltage power lines and the building can result in additional costs for the building owner. Work done on the building exterior would need to conform to WorkSafeBC's Electrical Safety Occupational Health and Safety Regulations 19.24 – 19.29. Table 19–A summarizes the required clearance for workers, and section 19.25 provides options to consider if clearances are not practical; the cost of implementing any of these options are the building owner's responsibility.

Have you considered:

- The opening of windows?
- People standing on balconies or roof tops?
- Window-washers and their equipment?
- Painters with scaffolding?
- Awnings, balconies, flag posts, lighting and signs?

Our recommendation is to allow 2 m of additional clearance beyond the WorkSafeBC working clearance requirement, to carry out such activities. For instance, a window washer, their scaffolding and the reach of their equipment must all be 3 m away from the high voltage power line. Our recommended additional 2 m clearance allows the window washer to do their job without needing costly mitigation measures to be paid for by the building owner.



3m minimum clearance as per WSBC OH&S 19.24 Table 19–1A assuming no additional mitigations applied as permitted by WSBC OHS 19.25.

Contact Us

If you have any questions regarding BC Hydro requirements or recommendations, please contact BC Hydro Express Connect at 1 877 520 1355.

