

# Structures near power lines

## Excerpt from the Alberta Electrical Utility Code

Table 9 ~ Minimum Design Clearances from Wires and Conductors Not Attached to Buildings, Signs, and Similar Plant (all similar situations) - See Clauses 5.7.3.1 and 5.7.3.3

Wire or Conductor	Minimum clearances, in metres, from wire to					
	Buildings**	Signs, billboards, lamp and traffic sign standards, and similar plant	Horizontal to surface†	Vertical to surface	Horizontal to object‡	Vertical to object
Guy, communication cables, and drop wires	0	0.08	0	0	0.08	0.08
<b>Supply conductors</b>						
0 to 750 V	Insulated or grounded	1.0	2.5§	0.3	0.5	0.5
	Enclosed in effectively grounded metallic sheath	0	0	0	0.08	0.08
0 to 750 V	Neither insulated nor grounded, nor enclosed in effectively grounded metallic sheath	1.0	2.5§	1.0	0.5	0.5
Over 0.75 to 22 kV	Not enclosed in effectively grounded metallic sheath	3.0§§	3.0**	3.0	2.5	2.5
	Enclosed in effectively grounded metallic sheath	0	0	0	0.08	0.08
Over 22 kV***††		3.0 plus 0.01 m/kV over 22 kV	3.6 plus 0.01 m/kV over 22 kV	3.0 plus 0.01 m/kV over 22 kV	3.6 plus 0.01 m/kV over 22 kV	3.6 plus 0.01 m/kV over 22 kV

### Notes to the table

References to other tables and clauses refer to the Alberta Electrical Utility Code

\* Clearances over or adjacent to portions of a building normally traversed by pedestrians or vehicles are covered by Tables 2 and 3.

† The tabulated clearances are applicable to nonmetallic buildings or buildings whose metallic parts are effectively grounded. Otherwise, a study to determine suitable greater clearances may be necessary, due to electrostatic induction (see clause 54.7.3.3).

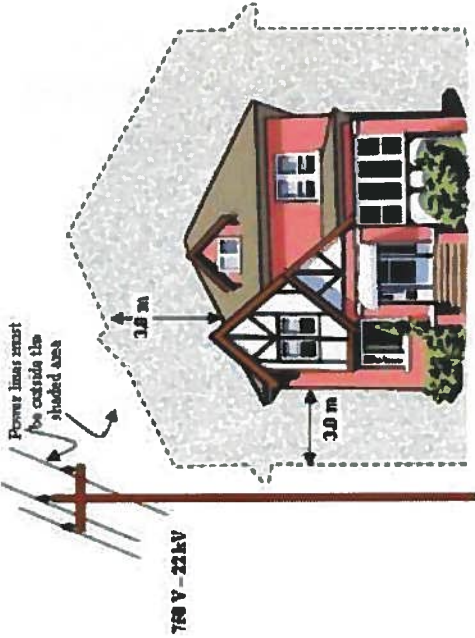
‡ To these values the conductor swing must be added, in accordance with clause 5.7.3.1.

§ This clearance may be reduced to 1 m for portions of the building considered normally inaccessible.

\*\* Carrying conductors of these voltage classes over buildings should be avoided if other suitable construction can be carried out.

†† Where it appears necessary to carry conductors of these voltage classes over buildings, additional measures should be investigated, including increased clearances, to ensure that safe and suitable use can be made of the building crossed over.

§§ This value may be reduced to 1.5 m when windows that can be opened, fire escapes and balconies are not present on the building adjacent to the conductor.



### Attention: Designers, Developers, Builders and Building Owners

Minimum clearance requirements between overhead lines and other structures are in place for your protection and safety.

- a) Regulations require minimum horizontal and vertical clearances between overhead lines and other structures.
- b) Clearance requirements vary depending on the voltage of the power line. For example, a power line operating at between 750 and 22,000 Volts requires:
  - A vertical clearance of 3.0 metres; and
  - A horizontal clearance of 3.0 metres.

See the diagram above and the table inside the brochure for more information

### Contact your Electric Power Company before developing your property.

This will reduce the likelihood of shock or electrocution. It will also help you avoid having to move a structure or paying for the relocation of a power line.

## Alberta's Safety System

Alberta Municipal Affairs works in partnership with the Safety Codes Council, municipalities, corporations, agencies, and other organizations to deliver effective community-focused public safety programs and services to Albertans.

### Questions or more information:

#### Alberta Municipal Affairs

Safety Services Branch  
16th Floor, Commerce Place  
10155 - 102 Street  
Edmonton, Alberta T5J 4L4

Phone toll-free: 1-866-421-6929  
Fax: 780-427-8686

E-mail: [safety.services@gov.ab.ca](mailto:safety.services@gov.ab.ca)  
[www.municipalaffairs.alberta.ca](http://www.municipalaffairs.alberta.ca)

#### Safety Codes Council

Suite 1000, 10665 - Jasper Avenue  
Edmonton, Alberta T5J 3S9

Toll-free within Alberta:  
Phone: 1-888-413-0099  
Fax: 1-888-424-5134  
[www.safetycodes.ab.ca](http://www.safetycodes.ab.ca)

Please place your agency or municipality contact information in the space below.

These brochures may be updated periodically. They have no legal status and cannot be used as an official interpretation of the various bylaws, codes and regulations currently in effect.

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# Safety Tips

## Structures near power lines

### A potentially dangerous combination

Failing to consider the proximity of a structure to power lines poses significant safety risks with potentially fatal consequences.

If you don't consider this proximity, you may also be faced with a costly relocation of either the structure or power line, because the distance between them was not thoroughly assessed during the planning stages.

The Alberta Electrical Utility Code has mandatory requirements for clearances between power lines and structures such as the following:

- signs;
- billboards;
- light standards;
- traffic signs;
- antennas;
- satellite dishes; or
- buildings, such as houses, apartments, and commercial or farm buildings.

# Alberta

