

Why is CSA S37 Important for Canadians?



What is the CSA S37?

The CSA S37 is a Canadian standard that applies to structural antennas and towers.



Icing

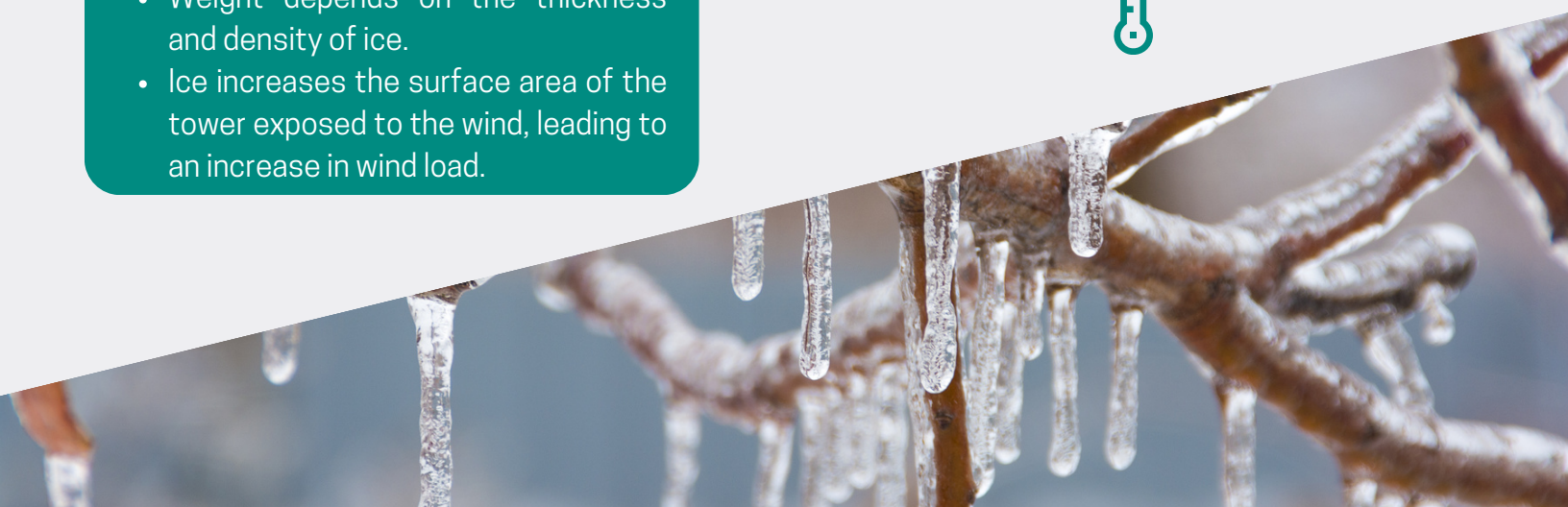
- Towers must withstand loading caused by the accumulation of ice on the surface of the tower and guyed wires.
- Ice builds up from snow or freezing rain.
- Weight depends on the thickness and density of ice.
- Ice increases the surface area of the tower exposed to the wind, leading to an increase in wind load.

What Factors Affect Tower Safety

The CSA S37 takes into consideration elements such as wind, icing, and Temperature. Each one has its separate impact, while also combining to create more extreme loads on the tower, guyed wires and anchors.

Wind Load

- Refers to the amount of air pressure that is applied to the tower and turbine.
- Air density and wind speed are factors that contribute to wind load on the tower and turbine blades.
- Wind speeds and climate elements vary all over Canada.



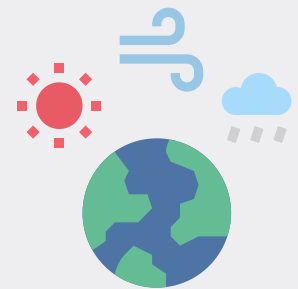
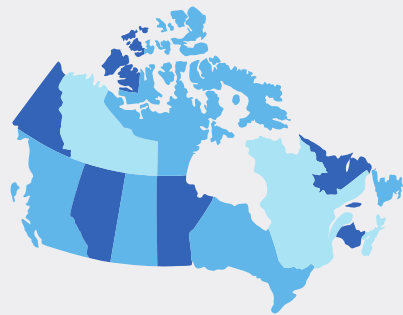


Geography

- The CSA S37 includes a large amount of data on dynamic wind pressure, icing, and climate elements for specific geographic locations across Canada.
- The combined effect of these elements across the country need to be taken into account.

Climate

- In any location where temperatures reach 0°C, ice can form.
- A temperature change can also affect wind patterns.
- Higher humidity levels can cause thicker icing on towers.



The Importance of the CSA S37

- The CSA S37 has been implemented in Canada to ensure the safety and stability of towers.
- If all CSA S37 criteria are not met, towers are unlikely to survive sporadic harsh Canadian weather .
- The main goal of the CSA S37 is to prevent towers from getting damaged or falling under extreme conditions.

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