

Guidelines – Electric Transmission Line Right of Way Use

Xcel Energy Easements and Rights-of-Way



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About this Information:

- The following information is intended as a guide for when a property owner is considering making changes to their property or constructing something within the right of way.
- Prior to completing the encroachment application, please read these guidelines to determine if the proposed project is a compatible use. All encroachments must be approved by Xcel Energy prior to installation.

Explanation of Encroachment Requirements and Restrictions:

- Encroachment requests are reviewed individually and requirements will vary from case to case. The following information may be used for preliminary checks with the understanding that the final requirements may be more or less restrictive based on site conditions, nature of encroachment, maintenance and access needs, and other safety concerns.

Terms and Definitions:

- A “Transmission Structure”, “Transmission Line Structure”, “Structure”, or “Transmission Facility” is defined as any asset or infrastructure owned, operated, and maintained by Xcel Energy. This is typically synonymous and inclusive of the following terms: pole, wood pole, steel pole, tower, foundation, guy wire, anchor, ground wire, facility, equipment.
- A “Transmission Line”, “Line”, or “Circuit” may refer to the high voltage transmission line as a whole including the structures, foundations, and wires, and may also simply refer to the conductors or wires suspended above.

- Overhead “Conductors”, “Wires”, or “Lines” typically refer to the high voltage wires suspended above. This may include both the overhead wires conducting electricity and overhead “ground” or “shield” wires that do not conduct electricity.

Landscaping within the easement:

- Detailed plans for landscaping (including light standards) must be submitted to Xcel Energy for review and approval. Generally shorter varieties of trees and shrubs, 15 feet or less mature height, may be considered. If planting is permitted, the line’s voltage and the tree’s mature height and the distance from the line must be considered. For maintenance purposes there shall be no planting within 15 feet of structure sites.

Grade change within the easement:

- Increases in grade elevation within the easements are generally discouraged.
- Stockpiling of soil and/or material within the easement will not be permitted.

Fences on easements:

- If the easement area is fenced, gates must be installed to provide access to Xcel Energy for maintenance purposes. Chain link or other types of fences using metal material and constructed on or near an Xcel Energy easement should be properly grounded.

Structures, streetlights and signs on easements:

- If there are to be streetlights, signboards, identification signs or any other type of non-building structure within the easement, detailed plans must be submitted to Xcel Energy for review and approval to verify compliance with electrical code clearances. Metallic structures must be properly grounded. Any metallic structure, pole, wire or item placed in the vicinity of a high-voltage transmission line will have the potential to become electrically charged due to electrical induction. The development of an electric charge results in a potential difference between the metal installation and the ground, which can result in electrical shocks when the item is touched. Placement of such metallic installation should take into consideration the shock potential during the construction, intended use, and future maintenance activities. Items which become charged must be connected to a grounding rod or grounding system to prevent shocks.

Building on easements:

- No permanent or temporary building(s) are allowed to be located directly underneath the overhead transmission wires.
- Permanent or temporary building(s) are typically discouraged from being located within the easement area.
- Wisconsin State Law prohibits any portion of a dwelling unit from being constructed underneath transmission lines.

https://docs.legis.wisconsin.gov/code/admin_code/psc/114/III/234/2

Grade change around structure locations:

- Fill around structures and fill around or above steel structure foundations is not permitted. The grade around the structures must provide for surface water runoff – no surface water ponding around structures will be permitted. Any cost related to the adjustment of Xcel Energy’s facilities will be at the requestor’s expense.

Excavation close to structure locations:

- A minimum distance of 20 feet of supported earth must be maintained from any part of the line structure. This includes any structure, pole, tower, foundation, guy wire, anchor, or equipment. Support of the ground beyond the 20 feet may be provided by a slope no greater than three feet horizontal to one foot vertical. Support may also be provided by the use of cribbing, sheet piling, retaining wall or tunneling. The specific plan for providing the required support and the excavation plan for the proposed project must be submitted to Xcel Energy for review and approval.

Fill and grade change around guy wires and anchors:

- Fill above the steel anchor rod onto the guy wire is not permitted. The specific plan for any grade change or excavation in the vicinity of down guys and anchors must be submitted to Xcel Energy for review and approval.

Transmission Line Structure protection:

- Typically, no new roads, parking lots, or driveways are allowed within 20 feet of any structure, pole, tower, foundation, guy wire, anchor, or facility.
- Where new roads, parking lots or driveways are to be located closer than 20 feet and/or expose transmission structures to vehicular traffic, steel post or guardrail type barricades must be installed in accordance with Xcel Energy specifications. In some cases, curbing will provide adequate protection.

Proposed Aerial Crossings:

- Any proposed electric distribution, electric transmission, communications, or other type of aerial crossing above or below Xcel Energy's transmission lines must be reviewed and approved.
- Prior to designing an aerial crossing, please consult with Xcel Energy's Siting & Land Rights Department and the Transmission Line Engineering Department to determine design requirements.
- Supporting structures for crossing aerial circuits are not permitted within Xcel Energy transmission easements without prior express consent.

Fuel and refueling on easements:

- There shall be no fuel tanks stored or refueling of vehicles and equipment within the easement.

Grain Bins:

- Please coordinate with Xcel Energy prior to installing a new grain bin that would be located within 300 feet of an Xcel Energy Transmission Line in order to ensure safe construction, operation, and maintenance of the grain bin and Transmission Line while adhering to the National Electrical Safety Code (NESC).

Clearances to equipment and workers:

- Any construction near the transmission line(s) shall comply with all OSHA Safety Clearances. If this clearance cannot be maintained, the contractor or developer must arrange for a line outage by calling Xcel Energy's Transmission Line Construction department. At least four (4) weeks advance notice must be provided in order to schedule a line outage. Be advised that line outages may not be available due to weather or system operating conditions.