Avery Substation and Transmission Line Project

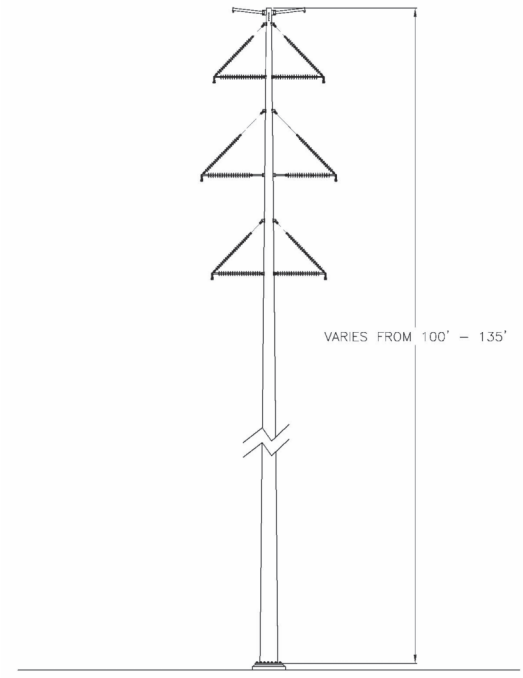
Transmission Engineering

The Avery project requires construction of a new overhead double circuit 230 kilovolt (kV) electric transmission line. The new line will allow the flow of electricity in and out of the new Avery Substation. Power for the new line will be provided by tapping into Platte River Power Authority's (PRPA) Ault-Timberline 230 kV transmission line. Xcel Energy is currently evaluating alternatives for the interconnection with PRPA.

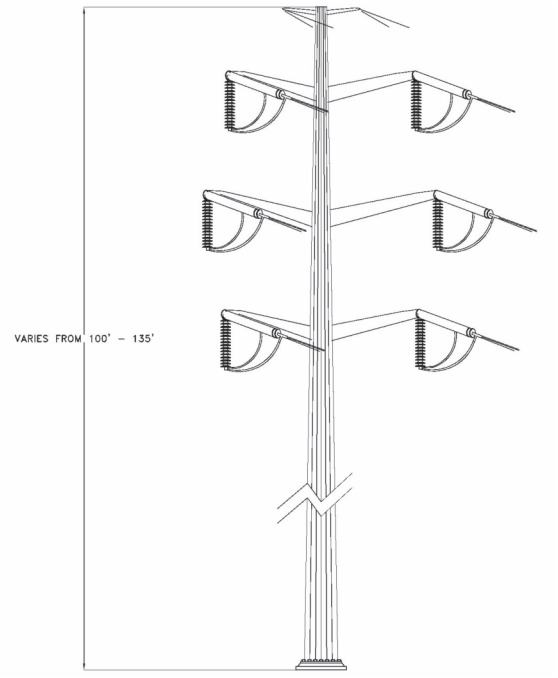
The proposed line will consist of a single weathering steel pole configuration supporting six conductors and two static lines, which provide lightning protection. The pole heights range from 80 feet to 130 feet tall and will be determined when the design is finalized. These heights will provide the necessary ground clearance for the conductor at mid-span. The proposed pole color is brownish rust and the conductor will be non-specular to reduce its reflectivity. Spans between the poles generally range from 700 feet to 1,200 feet depending on topography.

For this project, rights-of-way widths could vary between 100-150 feet for the proposed configuration. The right-of-way would be cleared of trees to meet National Electric Reliability Council standards for reliability. Dead trees outside of the right-of-way may also be cleared for added line protection.

Pole locations will be accessed on the ground during construction.



Typical Tangent Structure



Typical Deadend Structure Configuration

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