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Information Request No. 6

Docket No.: E002/CN-25-117
Response To: North Route Group and NO765MN
Requestor: Carol Overland
Date Received: July 7, 2026

Question:

Regarding MISO 25, Pleasant Valley – North Rochester – Hampton Corner

Application, p. 32, replacing existing 345kV circuit and adding a 345 kV circuit:

The proposed double-circuit 345 kV structures that will replace the existing 345 kV single circuit structures between the Pleasant Valley Substation and the North Rochester Substation will typically range in height from approximately 90 to 160 feet tall. **Appendix C.2** contains a typical 345 kV structure drawing.

The typical span length between 345 kV structures will be between 800 to 1,200 feet. The Applicants will install the 345 kV structures typically on drilled pier concrete foundations, usually approximately 6 feet in diameter and 30 to 40 feet in depth. Actual foundation size will be based on site-specific conditions and detailed engineering design. The 345 kV structures may also require specialty foundations due to geotechnical (soil) conditions or design needs.

The majority of the 345 kV second circuit between the North Rochester Substation and Hampton Substation will be hung on the existing double-circuit capable structures. Approximately three dozen new structures will be required at dead-end and angle locations. Davit arms, insulators, hardware, and conductors will be installed in the second circuit position at all tangent structures. One new angle structure will be needed near the North Rochester Substation.

- What is capacity of existing 345kV Pleasant Valley-North Rochester-Hampton Corner transmission line, expressed in MVA?

- Response:

- Pleasant Valley-Byron 345 kV-North Rochester 345 kV: 1195.1 MVA normal, 1195.1 MVA emergency
- Byron-North Rochester 345 kV: 1195.1 MVA normal, 1314.6 MVA emergency

- North Rochester-Hampton Corner 345 kV: 1792.7 MVA normal, 1792.7 MVA emergency
- What will capacity of the Pleasant Valley-North Rochester-Hampton Corner transmission line be with the upgraded existing line and addition of the second circuit?
 - Response: New Pleasant Valley-Byron-North Rochester-Hampton Corner Double Circuit: 1792.7 MVA normal, 1792.7 MVA emergency
- Regarding conductor specs, Application p. 33 states, “Each 345 kV line will utilize a twin bundle of twisted pair 636 kcmil ACSR conductor or a similar performing conductor. The 345 kV conductors will have a capacity equal to or greater than 3,000 amps.” Does “each 345kV line” mean a circuit, that there are two circuits, two “lines” each comprised of a twin bundle of twisted pair?
 - Response: Correct.
- Does “[t]he 345 kV conductors will have a capacity equal to or greater than 3,000 amps,” mean that each of the two circuits will have a capacity equal to or greater than 3,000 amps?”
 - Response: Correct.
- If capacity of conductors is “greater than 3,000 amps,” how high can the amperage go?
 - Response: “[O]r greater...” is used due the variability of conductor theoretical thermal capacity being dependent on environmental conditions. The 3000 amps stated is the design target for each line (circuit), which will be met under conservative environmental conditions, typically considered to be an exceptionally hot day for the region with full sun exposure and minimal cooling due to wind. It is possible under environmental conditions with greater cooling, such as winter, that the conductors could be capable of greater than 3,000 amps regardless of the system need and the actual current on the line (circuit). It is typical for ratings to fluctuate +/- 15% due to wind speed and +/- 30% due to seasonal ambient temperature.
- What’s the rating of each circuit?
 - Response: Each circuit is rated for 1792.7 MVA normal, 1792.7 MVA emergency
- If double circuit, is capacity that rating x 2?
 - Response: Each circuit is rated for 1792.7 MVA normal, 1792.7 MVA emergency

Preparers:	Jason Standing	Ben Gallay
Title:	Director, Strategic Transmission Planning	Senior Engineer (Transmission Lines)
Department	Xcel Energy	Xcel Energy
Date:	July 21, 2026	July 21, 2026