

111 Main Avenue

Brookings, SD 57006

November 4rd, 2026

South Dakota Public Utilities Commission
500 E. Capitol Ave.
Pierre, SD 57501-5070

Re: Docket EL26-026 — Request for evaluation of buried HVDC for PowerOn Midwest

Dear Commissioners:

I am writing to ask the Commission to obtain a written response from Xcel Energy and Otter Tail Power on whether a buried high-voltage direct current (HVDC) alternative was evaluated for the proposed 765 kV transmission line through Grant, Deuel, and Brookings Counties. Please include this letter and the applicants' response in the public docket.

The South Dakota application proposes approximately 90 miles of 765 kV AC transmission from Big Stone South through Brookings County to the Minnesota border. The line would continue in Minnesota toward Lakefield Junction. Because the state line marks the boundary between the two permitting proceedings, I am asking about two configurations: a buried HVDC design for the South Dakota portion and a buried HVDC design for the full Big Stone South–Brookings County–Lakefield Junction link. South Dakota facility permit application

The related Minnesota Certificate of Need application addresses HVDC in **Section 7.4.4, page 174**. It cites converter-station costs, multiple delivery points, and the lengths of the individual project segments in concluding that HVDC would be less cost-effective for the broader project. **Section 7.4.5, page 175**, addresses underground construction and cites the unavailability of commercial underground cable for 765 kV AC. Those sections leave open whether the applicants or MISO evaluated a buried DC cable system sized to meet the needs of this particular link. Minnesota Certificate of Need application, §§ 7.4.4–7.4.5

Please ask the applicants to address the following:

1. **Scope of the evaluation.** Did Xcel, Otter Tail, or MISO screen, model, or develop a cost estimate for buried HVDC for either the South Dakota portion or the full interstate link?

For each option evaluated, please identify the study, its date, the endpoints and intermediate connections assumed, and where the results can be reviewed. If an option was screened out before detailed study, please identify the criterion and supporting analysis used to exclude it.

2. **Transfer capacity and reliability.** What transfer capability must this link provide under normal conditions and after the loss of a line, transformer, or other major facility? Could an HVDC design using commercially available cable and converter equipment meet those requirements? Please identify the DC voltage, number of cable circuits, and converter ratings assumed in any analysis, and explain any grid reliability function the HVDC design could not provide.
3. **Substation connections.** How would each option connect at Big Stone South, serve the planned Brookings County connection to the 345 kV system, and connect to the Minnesota facilities? For a South Dakota-only alternative, where would the project convert back to AC? For the full interstate alternative, please explain how the Brookings County connection would be served and how many converter stations would be required.
4. **Basis for the cost conclusion.** Please provide a side-by-side estimate using the same transfer and reliability requirements. Include cable or overhead line construction, converter stations, AC substation upgrades, land and easements, losses, maintenance, and repair assumptions. Please also explain whether the converter costs and distance assumptions cited in the Minnesota application were applied specifically to this link or used as a general screening benchmark for the broader project.
5. **Landowner and construction impacts.** Please compare permanent easement width, temporary construction workspace, access requirements, soil disturbance and restoration, drain-tile crossings, and effects on ongoing farming. Please identify where towers could be eliminated and where converter stations or other aboveground facilities would still be needed.

If neither configuration received a project-specific evaluation, I ask the Commission to have the applicants explain what prevented one and whether a preliminary engineering and cost comparison can be provided before the permit decision. If any supporting material is confidential, please make the assumptions and conclusions available in a public summary to the extent possible.

Thank you for considering this request.

Sincerely,

Gordon W. Ommen