

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

**IN THE MATTER OF THE APPLICATION BY NORTHERN STATES POWER
COMPANY, DOING BUSINESS AS XCEL ENERGY, AND OTTER TAIL POWER
COMPANY FOR A FACILITY PERMIT FOR A 765 KV TRANSMISSION FACILITY
AND ASSOCIATED FACILITIES IN GRANT, DEUEL, AND BROOKINGS COUNTIES,
SOUTH DAKOTA**

SD PUC DOCKET _____

**PRE-FILED DIRECT TESTIMONY OF JOSHUA GUTZMANN
ON BEHALF OF NORTHERN STATES POWER COMPANY, DOING BUSINESS AS XCEL
ENERGY, AND OTTER TAIL POWER COMPANY**

September 4, 2026

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, employer, and business address.

A. My name is Joshua Gutzmann. I am employed by Northern States Power Company, doing business as Xcel Energy (Xcel Energy). My business address is 414 Nicollet Mall, Minneapolis, Minnesota.

Q. What is your position with Xcel Energy?

A. I am employed as a Transmission Planning Manager.

Q. Briefly describe your educational and professional background.

A. I graduated from the University of Saint Thomas in 2017 with a Bachelor of Science degree in Electrical Engineering. I worked at Xcel Energy from 2013 to 2017 as an intern in Transmission Planning. After graduation I started full time in Transmission Planning as a Transmission Engineer, before moving into my current role as a Transmission Planning Manager. My role as a Transmission Planning Manager is to oversee transmission planning analysis studies and to provide guidance to the planning engineers in my division as it relates to any transmission planning activities. As part of my responsibilities, I actively participate in the Midcontinent Independent System Operator, Inc. (MISO) transmission planning processes, including the planning for the Long-Range Transmission Plan 2.1 (LRTP 2.1). My statement of qualifications is attached as **Schedule 1**.

Q. What is your role with respect to the PowerOn Midwest-Big Stone South to Brookings County to South Dakota/Minnesota Border Project (Project)?

A. I serve as the Transmission Planning representative for the Project. My responsibilities include providing transmission planning support and reviewing and validating system needs and technical assumptions and serving as a subject matter expert for the Xcel Energy Transmission Planning portion of the Project.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to:

- Provide a Project overview;
- Describe the purpose and demand for the Project; and
- Discuss how the Project will serve South Dakota customers.

Q. What exhibits are attached to your Direct Testimony?

A. The following exhibit is attached to my Direct Testimony:

- **Schedule 1**: Statement of Qualifications.

Q. Please identify which sections of the Application you are sponsoring for the record.

A. I am sponsoring the following portions of the Application:

- Section 2.2: PowerOn Midwest in Minnesota
- Section 2.3: Purpose and Benefits
- Section 7: Purpose and Demand for Transmission Facility
- Appendix E: Planning Analysis

III. PROJECT OVERVIEW

Q. Please generally describe the Project.

A. The Project includes the following facilities:

- Expanded Big Stone South Substation.
- Expanded Brookings County Substation.
- Single circuit 765 kilovolt (kV) line connecting the expanded Big Stone South Substation to the expanded 765 kV Brookings County substation and the South Dakota-Minnesota border.
- Single circuit 345 kV line connecting the expanded 345 kV Brookings County Substation.

1 **Q. Is the Project in South Dakota part of a larger interstate project?**

2 A. Yes. The Project is part of what MISO designated as LRTP project No. 22. LRTP No. 22
3 includes a 765 kV line from the South Dakota/Minnesota border to an expanded Lakefield
4 Junction Substation in Jackson County, Minnesota. LRTP No. 22 is one of 24 projects
5 MISO approved as part of the Tranche 2.1 Portfolio. The Project is also part of a group of
6 projects being developed by the PowerOn Midwest group of utilities including Xcel
7 Energy, Otter Tail Power Company and ITC Midwest LLC (PowerOn Utilities). The
8 PowerOn Utilities are developing the Minnesota portion of LRTP No. 23 along with all of
9 LRTP No. 24 and LRTP No. 25.

10
11 **IV. PURPOSE AND DEMAND FOR TRANSMISSION FACILITY**
12

13 **Q. What is MISO's role in planning the regional transmission system?**

14 A. MISO is a regional transmission organization approved by the Federal Energy Regulatory
15 Commission to manage the transmission grid on a multi-state regional basis to improve
16 reliability and cost-efficiency.

17
18 **Q. How does MISO involve transmission owners and other stakeholders in the planning
19 process?**

20 A. MISO oversees comprehensive annual planning processes involving broad stakeholder
21 engagement, including active engagement by the Applicants. For Tranche 2.1, MISO spent
22 more than 40,000 staff hours, facilitated more than 300 meetings, and captured feedback
23 to arrive at the LRTP Tranche 2.1 Portfolio.

24
25 **Q. Returning to MISO's Tranche 2.1 analyses, did you participate in the MISO
26 analyses?**

27 A. Yes. I personally participated in dozens of MISO meetings regarding LRTP Tranche 2.1.
28 Both Applicants were active participants in each phase of the MISO Tranche 2.1 analyses.
29 The Applicants provided and reviewed modeling inputs and assumptions, submitted
30 solution alternatives for MISO's consideration, and provided feedback to MISO. The

1 Applicants' primary objective was to help ensure the regional plans identified by MISO
2 met the needs of the Applicants' customers, including customers in South Dakota.

3
4 **Q. Please generally describe the Tranche 2.1 Portfolio.**

5 A. The Project and the MISO LRTP Tranche 2.1 Portfolio of 24 projects will create a new
6 "transmission backbone" network throughout the Midwest that will ultimately be
7 interconnected with an existing 2,400-mile 765 kV network in the eastern United States.
8 This new transmission backbone network will make South Dakota's connection to the
9 broader Midwest and eastern United States more robust and resilient, enabling electricity
10 transfers into and out of South Dakota and the region to meet its electrical demands in a
11 reliable and cost-effective manner.

12
13 **Q. Why did MISO determine the portfolio is needed?**

14 A. MISO concluded the Project and the other Tranche 2.1 projects are needed for:

15
16 Reliability: The LRTP Tranche 2.1 Portfolio addresses reliability issues (i.e., points on the
17 transmission grid which require solutions to meet North American Electric Reliability
18 Corporation [NERC] national reliability standards) across the MISO region.¹² The LRTP
19 Tranche 2.1 Portfolio supports energy adequacy so that energy can be delivered where it is
20 needed 24 hours a day, 7 days a week, 365 days a year. The LRTP Tranche 2.1 Portfolio
21 will also maintain system reliability through enabled demand and system stability.

22
23 Cost Effectiveness/Economic Benefits: The \$21.8 billion LRTP Tranche 2.1 Portfolio has
24 a benefit-to-cost ratio of 1.8 to 3.5 (based on MISO's 2024 analysis). This means that every
25 \$1.0 invested in transmission will result in economic benefits of \$1.8 to \$3.5. For an
26 average electrical consumer, MISO estimates that the LRTP Tranche 2.1 Portfolio is
27 estimated to cost about \$5 per 1,000 kilowatt hours (kWh) of energy used while providing
28 \$10 to \$18 of value over that same amount of usage per month in value.

29

1 Enabling Generation Transition: The LRTP Tranche 2.1 Portfolio alleviates congestion and
2 enables interconnection at different locations of approximately 116,000 megawatts (MW)
3 of new generation resources to replace retiring generation and to serve load.
4

5 **Q. How did Applicants verify the need for the Project?**

6 A. The Applicants and other PowerOn utilities confirmed the need for the Project by studying
7 the entirety of LRTPs 22-26 (Studied Projects), including the portions of those projects
8 outside of South Dakota (in Minnesota, Iowa and Wisconsin).
9

10 **Q. What were the results of those studies?**

11 A. The Studied Projects strengthen reliability across the Midwest and South Dakota by
12 moving electricity from where it is generated to where it is needed in real time. This
13 flexibility helps South Dakota maintain reliable, around-the-clock electric service at the
14 lowest practical cost. As electricity demand grows and the Midwest generation fleet
15 evolves, more power will need to move into and out of South Dakota to maintain reliability.
16 The Studied Projects in conjunction with the Minnesota transmission grid are expected to
17 bring more power into the state than leaves it.
18

19 **Q. Will the Project serve South Dakota?**

20 A. Yes. The Studied Projects, including the Project strengthen reliability across the Midwest
21 and in South Dakota by moving electricity from where it is generated to where it is needed
22 in real time. This flexibility helps South Dakota maintain reliable, around-the-clock electric
23 service at the lowest practical cost.
24

25 **Q. Why is this transfer capability so important?**

26 A. As aged baseload generation units are retired and are replaced with non-baseload units such
27 as wind, solar, batteries, and natural gas peaking units and demand for electricity increases,
28 the need for South Dakota to be able to import energy to serve South Dakota customers
29 will not only continue but will be necessary to maintain reliability every hour of every day.
30 The increase in extreme weather events also drives the need for transfer capability. During
31 these times, South Dakota may have to rely on generators multiple states away to provide

1 power to maintain the system. For example, in February 2021 during Winter Storm Uri, it
2 was necessary for MISO to import an unprecedented level of power from the eastern United
3 States to maintain reliability for the MISO region, including South Dakota and Minnesota.
4 This also was experienced in the summer of 2026, when on July 15th Miso North¹ imported
5 about 12,500 MW from other regions to support local load. The capability to import
6 gigawatts of generation from other areas is critical as loads across the region, including
7 South Dakota, grow.

8
9 **Q. How will the Project help Xcel Energy meet customer needs?**

10 A. The Project will enable the reliable flow of energy from the east to serve load in Xcel
11 Energy's service territory which includes Sioux Falls and surrounding areas.

12
13 **Q. Please explain.**

14 A. For Xcel Energy's 109,271 South Dakota customers, the majority of the time the energy
15 they use comes from Minnesota. In fact, there are times when all of the energy South
16 Dakota customers use comes from Minnesota.

17
18 **Q. What is this conclusion based on?**

19 A. I analyzed real time load flows in 2025 from the sources into Xcel Energy's load serving
20 service territory in South Dakota. If the power was from a Western Area Power
21 Administration owned line, it was assumed the energy was from either South Dakota, North
22 Dakota or Iowa because from those areas it is difficult to determine where the power
23 originated due to the number of possible sources. If it came from the Nobles County – Split
24 Rock 345 kV line, then that power was assumed from Minnesota. While it is possible some
25 of the load from Nobles could come from Iowa, it is unlikely as the Minnesota generation
26 is closely tied into the Nobles area. It is possible that some power from Western Area Power
27 Administration (WAPA) is also from Minnesota. However, for this calculation, all the
28 power from the WAPA line going north is assumed to be from South Dakota because South

¹ MISO North includes Minnesota, Iowa, North Dakota, South Dakota, parts of Wisconsin, Michigan, Illinois and Manitoba.

Dakota resources are also tied through that system. All power coming from the south in this analysis is assumed to be from Iowa because the line terminates near Sioux City, Iowa. Generation resources from the Iowa region can flow from the south into the South Dakota region.

Q. What were the results of your analysis?

A. The results showed that, in 2025, 73.16 percent of the energy served to South Dakota for Xcel Energy retail load came from Minnesota. Half of the year, the load in SD is 100 percent served by Minnesota. There are also times when total flow from Minnesota exceeds our load, so that extra energy would be passed to either WAPA, OTP or MRES. Table 1 below summarizes the results.

2025 Xcel Energy South Dakota Load Served by Minnesota Based Energy Estimate							
100% +		99%-50%		50%-25%		<25%	
Hours	% of time	Hours	% of time	Hours	% of time	Hours	% of time
4390	50%	1952	22%	1159	13%	1259	14%

2025 Total Xcel Energy SD Load Energy from MN
73.16%

Q. Will the Tranche 2.1 projects impact curtailment in the area?

A. Yes. These projects are expected to have a positive impact on curtailment and increased generation output. In the South Dakota region, the projects are expected to enable existing generators to double their output from 2.4 million megawatt hours (MWH) to 4.3 MWH by reducing curtailment by approximately 1.9 million MWH annually.

1 **Q. Can this curtailment savings be quantified?**

2 A. Because each generation owner has unique contract terms, I cannot calculate precisely the
3 monetary value of this enabled generation. However, under today's market pricing it would
4 be worth approximately \$80 per MWH for wind generation. This would equate to \$152
5 million per year for energy sales from these facilities.

6

7 **V. CONCLUSION**

8

9 **Q. Does this conclude your Direct Testimony?**

10 A. Yes.

11

12

13 Dated this 4th day of September, 2026.

14

15 /s/ Joshua Gutzmann

16 Joshua Gutzmann