AFFIDAVIT OF MR. TONY WENDLAND

STATE OF NORTH DAKOTA
BEFORE THE
NORTH DAKOTA PUBLIC SERVICE COMMISSION

In the Matter of the Application of Northern States Power Company for an Advance Determination of Prudence for the Proposed 345 kV Brookings County – Lyon County and Helena – Hampton Second-Circuit Project

Case No. PU-23-____

Exhibit 1 (TW-1)

STATE OF MINNESOTA)
IN THE)
COUNTY OF WASHINGTON)

I, Tony Wendland, under oath, state:

I. Introduction

1. My name is Tony Wendland, and I am Project Manager for Northern States Power (the Company or NSP), a utility operating company subsidiary of Xcel Energy, Inc.

2. My business address is 414 Nicollet Mall – MP8, Minneapolis, Minnesota, 55401.

3. I hold a Bachelor of Science in Construction Management from Minnesota State University - Mankato. My statement of qualifications is attached as Schedule 1.

4. As Project Manager at NSP my responsibilities include managing a portfolio of transmission projects through the entire capital project life cycle. I also provide monthly forecasting and reports regarding actual versus anticipated results.

5. Prior to my current position, I held various construction- and operation-management positions.

6. In those positions, I managed business plans and performance tracking for construction and operation of electric and natural gas transmission projects. I also managed construction and scheduling of transmission lines and substations, and supervised employees constructing transmission projects.

7. I am providing this affidavit in support of NSP's Application for an Advance Determination of Prudence (ADP) to construct the Brookings County – Lyon County and Helena – Hampton Second-Circuit Project (Project or Brookings Second-Circuit Project).

8. In my affidavit, I provide:

- A History of the Brookings County – Helena Transmission Line (Original Brookings Line) and Brookings Second-Circuit Project,
- A detailed description of the Brookings Second-Circuit Project, and
- Estimated Project costs.

II. History of the Original Brookings Line and Project Development

A. History of the Original Brookings Line

9. On October 2, 2009, NSP and co-owner Otter Tail Power Company (Otter Tail) (collectively, Original Brookings Line Applicants) applied for an ADP in North Dakota for the CapX2020 Group 1 Transmission Projects including the Original Brookings Line.[1] The owners of the Original Brookings Line were and remain: NSP, Otter Tail, Great River Energy (GRE), Central Minnesota Municipal Power Agency, and Western Minnesota Municipal Power Agency (Original Brookings Line Owners).

[1] *Otter Tail Power Co.; Advance Determination of Prudence—CapX2020 Group 1; Application; Northern States Power Company; Advance Determination of Prudence—CapX2020 Group 1; Application*, Case Nos. PU-09-676 & PU-09-678, JOINT APPLICATION FOR ADVANCE DETERMINATION OF PRUDENCE (Oct. 5, 2009). The other projects included in the CapX2020 Group 1 Transmission Projects were separate transmission lines from Fargo, North Dakota, to the Twin Cities; the Twin Cities to La Crosse, Wisconsin; and Bemidji, Minnesota, to Grant Rapids, Minnesota

10. The Original Brookings Line Applicants explained that the Brookings County to Lyon County segment (Western Segment) and Helena to Hampton segment (Eastern Segment) would be constructed with double-circuit capable structures.[2] The Original Brookings Line Applicants also stated that both circuits would be installed during initial construction of the Original Brookings Line between the Lyon County Substation and the Helena Substation.[3]

11. The Original Brookings Line Applicants and Advocacy Staff reached a settlement agreement supporting issuance of an ADP subject to resolution of outstanding cost-allocation issues.[4] The Commission accepted the settlement agreement subject to determination of continued prudence after the cost-allocation issues were resolved.[5]

12. Once the cost-allocation issues were resolved, the Commission determined the Original Brookings Line Applicants' investments in the Original Brookings Line continued to be prudent.[6]

13. The Original Brookings Line Owners subsequently constructed the Original Brookings Line, energizing the final segment in 2015.[7]

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[2] Case Nos. PU-09-676 & -678, JOINT APPLICATION FOR ADVANCE DETERMINATION OF PRUDENCE at 9 (Oct. 5, 2009).
[3] *Id.*
[4] Case Nos. PU-09-676 & -678, CAPX2020 GROUP 1 PROJECTS ADVANCE DETERMINATION OF PRUDENCE (ADP) REQUEST SETTLEMENT AGREEMENT (Sept. 22, 2010).
[5] Case Nos. PU-09-676 & -678, ORDER ADOPTING SETTLEMENT at 3 (Oct. 6, 2010).
[6] Case Nos. PU-09-676 & -678, ORDER ADOPTING SETTLEMENT at 3 (Nov. 10, 2011).
[7] Case Nos. PU-09-676 & -678, ANNUAL PROJECT UPDATE at Attachment A (Feb. 6, 2016).

B. Project Development

14. Over the course of the next eight years, congestion continued to increase significantly in the region served by the Project.

15. The Company developed the Project in direct response to increases in transmission congestion in the region.

16. MISO is taking action to increase transmission capacity, including through its Long-Range Transmission Planning (LRTP) initiative. The first group of LRTP projects (Tranche 1) includes projects that will help reduce congestion. These are large-scale projects that are not expected to be in service until 2028-2030.

17. The Tranche 1 projects are not the only opportunities for addressing issues with the transmission system. Accordingly, the Company looked at its system and considered whether there are any projects that could cost-effectively and quickly be brought on line to relieve congestion by providing additional transmission capacity.

18. Given that the Original Brookings Line was constructed with double-circuit capable structures to accommodate future generation growth, the Project was an obvious candidate for reducing congestion at a relatively low cost and with limited impacts.

19. As discussed in greater detail in Mr. Jason Standing's affidavit, to evaluate the economic benefits of the Project, the Company modeled the estimated adjusted

production costs (APC) both with and without the Project. The Company's initial modeling estimated significant APC savings from the Project.

20. On August 15, 2023, the Company filed a Certificate of Need application with the Minnesota Public Utilities Commission (MPUC).

21. Consistent with the Company's settlement agreements in Case Nos. PU-07-776 and PU-12-59, the Company is submitting this Application with the North Dakota Public Service Commission within 14 days of submitting its Certificate of Need Application with the MPUC.

III. Project Description

22. The Project includes two principal components: installation of the second circuit, and modifications and upgrades to substations.

A. Installation of Second Circuit

23. The Project involves installing a second 345 kilovolt (kV) circuit, consisting of three phases, on the double-circuit capable structures along the Western and Eastern Segments. This work will be almost entirely confined to the existing right-of-way.

24. The total length of the Project is approximately 98.5 miles.

25. The Western Segment extends approximately 59.5 miles from the Brookings County Substation near White, South Dakota, to the Lyon County Substation near Milroy, Minnesota.

26. The Eastern Segment extends 39 miles from Helena Substation near New Prague, Minnesota, to the Hampton Substation near Hampton, Minnesota.

27. The new 345 kV line will utilize bundled (twisted pair) 2x636 thousand circular mills (kcmil)[8] Aluminum Conductor Steel Reinforced or similar performance conductor.

28. The 345 kV twisted pair conductors will have a capacity of at least 3,000 amps. This type of conductor is preferred in windy areas because high winds can cause conductors to vibrate or move (gallop), especially if ice accumulates on the line. If the galloping is significant, it can cause phase-to-phase and phase-to-ground faults. The design of two twisted pair conductors in a bundled configuration reduces galloping because it allows the conductor to twist rather than move with the wind.

29. The proposed transmission line will be designed to meet or surpass relevant local and state codes including National Electrical Safety Code and NSP standards. Applicable standards will be met for construction and installation, and applicable safety procedures will be followed during design, construction, and after installation.

B. Substation Upgrades

30. To accommodate the second circuit, NSP will reconfigure the existing line at the Steep Bank Lake substation and re-route the new line around the Chub Lake

[8] A circular mil is 1/1000 of an inch.

Substation. The Company will also install new breakers at the Brookings County, Lyon County, Helena, and Hampton Substations.

1. Steep Bank Lake Substation

31. The Company will reconfigure an existing line at the Steep Bank Lake Substation, northeast of Hendricks, Minnesota, to avoid the second circuit crossing the existing transmission line. This reconfiguration will involve adding one additional structure outside of the Steep Bank Lake Substation.

32. The Company will also make changes to the relay settings at both the Steep Bank Lake and Hawks Nest Substations.

2. Chub Lake Substation

33. The Company will also need to route the second circuit around the Chub Lake Substation, northeast of Elko-New Market. The Company will construct two new dead-end structures on foundations on the south side of the Chub Lake Substation to avoid the second circuit having to go over the top of the Chub Lake Substation.

34. If the Company can reach agreement with a neighboring landowner on an easement, the Company plans to route the second circuit outside the current right-of-way over the landowner's property. Routing the second circuit outside the existing right-of-way will avoid engineering, design, and constructability issues caused by the steep topography in the existing right-of-way. Although it would present engineering, design, and constructability challenges, if the Company and the landowner are unable

to reach agreement, the Company will route the second circuit entirely within the existing right-of-way.

3. New Substation Breakers

35. The Company will also upgrade the Brookings County, Lyon County, Helena, and Hampton Substations with new 345 kV breakers.

36. The Company will install one new breaker at the Brookings County Substation, four new breakers at the Lyon County Substation, one new breaker at the Helena Substation, and four new breakers at the Hampton Substation.

37. At the Lyon County and Hampton Substations, the Company will remove the current ring-bus configuration and construct a breaker-and-a-half configuration to allow for improved operational flexibility by reducing line outages caused by breaker maintenance or failure.

C. Cedar Lake Line Facilities

38. The second-circuit davit arms along one 4.2-mile stretch of the Original Brookings Line between the Helena and Chub Lake Substations (Cedar Lake Line Facilities) are currently occupied by an existing 115 kV transmission line owned by GRE. The Structure Sharing Agreement between GRE and the owners of the other CapX2020 Brookings Owners allows the CapX2020 Brookings Owners to terminate the Structure Sharing Agreement once the second circuit is needed.

39. The CapX2020 Brookings Owners of the Original Brookings Line have provided notice of termination to GRE.

40. GRE filed a Route Permit Application on June 6, 2023, to construct a replacement line for the Cedar Lake Line Facilities in MPUC Commission Docket No. ET2/TL-23-170. That application indicates that GRE anticipates receiving a route permit in Spring 2024, which would enable energization of the replacement Cedar Lake Line Facilities by summer 2025.

41. Under this schedule, the Company anticipates that the Cedar Lake Line Facilities will be removed in the summer of 2025 and the 4.2-mile stretch vacated in time to install the Eastern Segment.

D. Transmission Line Reconfiguration Near Airport

42. As part of the Project, the Company will install eight new self-supporting weathering steel poles northwest of Castle Rock, Minnesota.

43. Eight, two-pole structures were originally constructed near the Airlake Airport to allow conductors to be installed in a horizontal configuration, rather than a vertical configuration. This horizontal configuration allows the Original Brookings Line to maintain a low profile, in compliance with Federal Aviation Administration requirements. Two phases of the circuit were installed on one steel pole and one phase was installed on the second steel pole.

44. To maintain the low profile after installation of the second circuit, eight new steel poles will be installed. One of the phases of the second circuit will be installed on the existing steel poles that currently has only a single phase. The two remaining phases of the second circuit will be installed on the new set of steel poles. Once complete, these eight structures, will consist of eight, three-steel-pole structures, with the two, three-phase circuits laid out horizontally.

IV. Project Timeline and Workforce

45. **Table TW-1** provides the permitting and construction schedule currently anticipated for the Project. This schedule is based on information known as of the date of filing and may be subject to change as further information develops or if there are delays in obtaining the necessary federal, state, or local approvals required prior to construction.

Table TW-1: Anticipated Project Schedule

Activity	Estimated Dates
North Dakota ADP Proceeding	Through Beginning of Second Quarter of 2024
Required Federal, State, and Local Permits Obtained	Through Beginning of Second Quarter of 2024
Start Project Construction – Western Segment	April 1, 2024
Western Segment In Service	September 1, 2024
Start Project Construction Eastern Segment	April 1, 2025
Eastern Segment In Service	September 15, 2025

46. NSP estimates it will engage 60 to 80 laborers for Project construction.

V. Project Costs

47. NSP developed a Project cost based on an estimated route length, rerouting costs, and substation upgrade costs.

48. There are several main categories of these cost estimates: (1) engineering, design, permitting, and land rights; (2) material procurement; and (3) construction labor and equipment. Each of these components also includes a risk reserve.

49. To prepare a cost estimate for the transmission line portions of the Project, NSP relied on its proprietary cost database. The database incorporates historical labor and material costs from similar projects. This database is updated based on current market conditions and contingency factors.

50. NSP identified potential risks that could result in additional costs. These risks include unexpected weather conditions, poor soil conditions in areas where no soil data was obtained, transmission line outage constraints, river crossings, labor shortages, and market fluctuations in material pricing and labor costs. NSP formulated cost contingencies for these risks and applied them to the three cost categories listed at the beginning of this section.

51. NSP also estimated substation upgrade costs. NSP identified the necessary upgrades for each substation. NSP then estimated material, construction, design, and permitting costs based on cost estimates for these items from previous substation improvement projects.

52. NSP estimates construction of the Project will cost $100.2 million, including transmission line costs (including materials, associated construction, permitting and design costs, and risk reserve) and substation upgrade costs (including materials, construction, permitting and design costs, and risk contingencies). If Allowance for Funds Used During Construction (AFUDC) are included, the Company estimates the total cost of the Project will be $102.0 million.

53. Tables TW-2 and TW-3 provide a breakdown of the Project costs for each segment, excluding AFUDC.

Table TW-2: Project Capital Expenditure Estimates Western Segment

Project Components	Cost
Second Circuit*	$42.9 million
Brookings County Substation Upgrade	$4.0 million
Lyon County Substation Upgrade	$11.0 million
Project Total	**$57.8 million**
* includes the cost of the Steep Bank Lake substation reconfiguration	

Table TW-3: Project Capital Expenditure Estimates Eastern Segment

Project Components	Cost
Second Circuit*	$29.9 million
Helena Substation Upgrade	$3.7 million
Hampton Substation Upgrade	$10.6 million
Project Total	**$44.2 million**
* includes the cost of the Chub Lake Substation transmission line reroute	

VI. Project Construction

54. The majority of the second circuit will be secured to the insulator by helicopter. In areas where helicopter work is infeasible, like dead-end structures, a crane will be used.

55. Construction will be split into two phases.

56. During the first phase, the Company will install the Western Segment, reconfigure an existing line at the Steep Bank Lake Substation, upgrade the Brookings County and Lyon County substations with new 345 kV breakers, and change relay settings at the Steep Bank Lake and Hawks Nest Lake substations. The first phase will last from April to September 2024.

57. No significant construction work is anticipated to occur between October 2024 and March 2025. The second phase will last from April to September 2025. During the second phase, the Company will install the second circuit for the Eastern Segment, rerouting around the Chub Lake Substation. The Company will also upgrade the Helena and Hampton substations during the second phase.

58. Construction in areas where approvals are not needed or have already been obtained may proceed while approvals for other areas are in process.

59. Ending construction in the first half of September in 2024 and 2025 will ensure the existing circuit does not need to be out of service during times of traditionally high wind in the fall. Transmission capacity in the area is generally the most congested

during these times of high wind. Likewise, putting the new line in service in September of each year will mean the additional transmission capacity will be available when the capacity is most needed.

VII. Conclusion

60. Because the major component of the Project involves installing a second circuit on double-circuit capable structures included when the Original Brookings Line was constructed, the impact of the Project to landowners and the environmental will be minimized. Most of the stringing of the second circuit will occur by helicopter, with stringing setup areas are typically located at two-mile intervals.

61. This limited impact is contrasted with the significant costs savings the Project will bring as discussed in Mr. Jason Standing's affidavit.

[SIGNATURE PAGE FOLLOWS]

Further, Affiant sayeth not.

Tony Wendland

Subscribed and sworn to before me
This 23 day of August, 2023

Notary Public

SARAH MARTIN
NOTARY PUBLIC - MINNESOTA
My Commission Expires Jan. 31, 2025

SCHEDULE 1:
STATEMENT OF QUALIFICATIONS
MR. TONY WENDLAND

Tony Wendland
Senior Project Manager, Transmission
tony.j.wendland@xcelenergy.com
414 Nicollet Mall
Minneapolis, Minnesota 55401

Experience

March 2019 – Present **Xcel Energy** **Minneapolis, MN**
Senior Project Manager – Electric Transmission

- Management and leadership for a portfolio of Transmission Line and Substation projects with an annual value of $50M to $75M
- Execute projects through the entire Transmission Capital Project Lifecycle Process which includes, permitting, land acquisition, engineering/design, material procurement, construction, and closeout.
- Manage the project scope, schedule, and cost
- Provided monthly forecasting and actual versus estimate reports

September 2018 to March 2019 - **Xcel Energy** **Maple Grove, MN**
Senior Operations Manager, Construction Management Office

- Developed strategic direction for a new organization to improve construction efficiency
- Implemented new material coordination team
- Implemented unit bid pricing with our major contractors
- Oversight and governance of all major contract work within the Transmission Construction department

August 2016 to September 2018 - **Xcel Energy** **Maple Grove, MN**
Senior Project Manager, Strategic Planning and Operational Performance

- Business planning and performance tracking for the Transmission Construction and Line operations department
- Lead cross functional teams to improve business performance
- Managed O&M budget
- Audit compliance responses and implemented the process changes

January 2014 to August 2016 - **Xcel Energy** **St. Paul, MN**
Senior Project Manager – Natural Gas

- High Pressure Natural Gas Pipeline Project management
- Managed scope, schedule, cost, and risks of large pipeline projects
- Provided monthly forecasting and actual versus estimate reports

June 2012 to January 2014 - **Xcel Energy** **Maple Grove, MN**
Field Operations Supervisor II

- Responsible for supervising employees installing foundations for electric transmission structures
- On site supervision of 12 crews
- Managed the contractor for the CapX Lacrosse foundation installation

November 2010 to June 2012 – **Xcel Energy** **Minneapolis, MN**
Project Controls Specialist

- Maintain a schedule portfolio of 100 to 200 transmission and substation construction projects using Primavera scheduling software
- Perform detailed schedule creation and periodic updates on my portfolio of projects

Education

Minnesota State University Mankato, MN
Bachelor of Science Construction Management
Minor in Business Administration

Certifications

Project Management Institute - Project Management Professional – 2/21/2013 to 2/21/2025
Project Management Institute - Scheduling Professional – 1/12/2012 to 1/11/2024