

Before the Public Service Commission
of
The State of North Dakota

In the Matter of the Application of
BASIN ELECTRIC POWER COOPERATIVE
Consolidated Application
for a Certificate of Corridor Compatibility and Route Permit
345-kV Mercer-McLean-Ward-Mountrail-Williams Cty
(Leland Olds Station to Tande 345-kV Transmission Project)

Case No. PU-24-361

Pre-filed Testimony
of
Philip Westby

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I. Introduction

Q.1. Please state your name, employer, and business address.

A.1. My name is Philip Westby. I am employed by Basin Electric Power Cooperative ("Basin Electric"). My business address is 1717 East Interstate Avenue, Bismarck, North Dakota.

Q.2. What is your position with Basin Electric?

A.2. I am the Manager of Transmission Services. My responsibilities include supervising transmission studies that affect Basin Electric and its customers. As part of this, I complete and review any study that would affect Basin Electric's existing and new facilities.

Q.3. Please describe your educational and professional background.

A.3. I am a licensed professional engineer in North Dakota. I earned a Bachelor of Science degree in Computer Engineering from North Dakota State University in 2008.

I have been employed by Basin Electric since 2009 in the Transmission Planning Division. I was hired as an Electrical Engineer and was promoted to Manager of Transmission Services in April 2023.

Q.4. What is your role with respect to the Leland Olds Station to Tande 345-kV Transmission Line Project (the "Project")?

A.4. I have been involved in evaluating the need for the Project and oversaw Basin Electric's submission of the Leland Olds Station ("LOS") to Tande transmission line project proposal for consideration in the Southwest Power Pool ("SPP") Integrated Transmission Planning ("ITP") process.

Q.5. Are you familiar with the contents of Basin Electric's Consolidated Application for a Certificate of Corridor Compatibility and Route Permit for the Project (the "Application")?

A.5. Yes. I am familiar with the Application's contents.

Q.6. What is the purpose of your testimony?

A.6. The purpose of my testimony is to provide information related to the need for the Project. I will provide general information on the SPP Transmission Planning Process and how it applies to the Project, as well as Basin Electric's Needs Analysis. My testimony, together with the Application and other supporting evidence, will demonstrate that the Project will ensure the continuing system reliability and integrity and ensure that energy needs are met and fulfilled in an orderly and timely fashion.

II. SPP Transmission Planning Process

Q.7. What is SPP?

A.7. SPP is a Regional Transmission Organization ("RTO") mandated by the Federal Energy Regulatory Commission ("FERC") to ensure reliable supplies of power, adequate transmission infrastructure, and competitive wholesale electricity prices on behalf of its members, including Basin Electric. As the RTO, SPP is responsible for transmission planning and expansion within the SPP region, which includes the Project area.

Q.8. Please generally explain SPP transmission planning.

A.8. During the SPP transmission planning process, SPP performs reliability, economic, and public policy assessments of the transmission system for its region and collaborates with stakeholders to identify solutions to the identified transmission needs. SPP performs its planning process in accordance with the North American Electric Reliability Corporation ("NERC") Reliability Standards, the SPP Tariff, and SPP Criteria.

Q.9. Please describe the SPP ITP process.

A.9. This is an annual planning cycle that assesses near- and long-term economic and reliability transmission needs. The ITP produces a 10-year transmission expansion plan each year, combining near-term, 10-year, and NERC's transmission planning (TPL-001-5¹) assessments into one study. The process seeks to target a reasonable

¹North American Reliability Corporation, TPL-001-5 — Transmission System Planning Performance Requirements, <https://nerc.com/pa/Stand/Reliability%20Standards/TPL-001-5.pdf>.

balance between long-term transmission investments and congestion costs to customers. The ITP works in concert with SPP's existing subregional planning stakeholder process and continues in parallel with the NERC TPL-001-5 compliance process.

Q.10. Please describe Basin Electric's role in the ITP process and other studies conducted.

A.10. Basin Electric works closely with SPP throughout their annual ITP process. We provide input on the study scope and assumptions, participate in model building, and provide input on needs and constraints that were identified across the system. As part of the process, Basin Electric also provides potential transmission mitigations or fixes for issues identified in our area that SPP will use to evaluate against alternatives. Additionally, Basin Electric annually performs the NERC TPL-001-5 assessment on its system. Basin Electric also conducts two seasonal operating studies, which include a summer and winter assessment, specifically related to the Bakken area each year.

Q.11. What happens once SPP identifies that a transmission project needs to be constructed?

A.11. Once a transmission project has been identified through SPP's transmission planning process, SPP issues a Notification to Construct ("NTC") to a Designated Transmission Owner ("DTO") for an approved transmission expansion project. This NTC requires a financial commitment in the near future. A DTO under the SPP Tariff that receives an NTC from SPP is required to build the transmission projects specified in the NTC.

III. Project Need and Benefits

Q.12. Which SPP transmission planning process did the Project arise out of?

A.12. The Project was developed through the 2021 SPP ITP process.

Q.13. What did the 2021 ITP process conclude?

A.13. The 2021 ITP process focused on the Bakken area. The 2021 ITP Assessment Report, which is included as an exhibit to the pre-filed testimony, identified a need to

provide an additional 345-kV path north of Lake Sakakawea and create a new delivery point on the underlying 115-kV system north of New Town. (Ex. 7 to Pre-filed Test. at 107-109.) This Project was one of the recommended projects to address this need. (*Id.*) The Report identified the Project's reliability benefits as follows: "Creates a 345 kV loop around the north side of Lake Sakakawea between two existing 345 kV stations where no 345 kV transmission exists today, and provides an alternative connection point at Finstad [now known as Crane Creek] between the load-serving 115 kV network and 345 kV system (located on the north side of Lake Sakakawea)." (*Id.* at 108.) In July 2022, as a result of the 2021 ITP process, SPP Issued NTC 210652 to Basin Electric directing construction of the Project. (Application, Appx. D at 150-158, Docket No. 1.) NTC 210652 is also included as exhibit to the pre-filed testimony. (Ex. 8 to Pre-filed Test.)

Q.14. Will the Project provide any benefits in addition to those identified by SPP?

A.14 Yes, the Project provides several additional benefits. The area north of New Town at the new Crane Creek Substation has historically outgrown the capability of the 115-kV transmission system, and, as a result, an under voltage load shedding scheme has been employed in the area for the past nine years. This scheme is designed to shed load for certain system conditions to maintain system reliability. Additionally, the Project provides another outlet from the North Dakota coal fields (the Antelope Valley and Leland Olds Stations) where there is a large amount of generation, both conventional and renewable, that needs another efficient path to get to the area of load growth.

Q.15. If the Project is not built, what would happen to the electrical transmission system in northwestern North Dakota?

A.15. Basin Electric's recent load forecasts continue to show growth in this region which causes stress to the existing infrastructure. The existing transmission capacity in this region is insufficient and unless the Project is constructed, future load growth will be restricted. Transmission congestion will be higher, and the transmission system will be less reliable because of the inability to perform planned maintenance on the critical circuits. This is a concern as maintenance outages are a necessity and the inability to reliably take them will impact all transmission customers.

Q.16. **What alternatives were considered to meet the need in the region?**

A.16. Basin Electric considered a No Action Alternative and transmission system and route alternatives. Under a No Action Alternative, the Project would not be constructed, leaving the electric system unable to effectively serve the region. This would not serve Basin Electric's and the public's needs. In addition, a No Action Alternative would be contrary to SPP's directive to Basin Electric. For these reasons, Basin Electric rejected a No Action Alternative.

Basin Electric also considered transmission system and route alternatives, which is addressed in other witnesses' pre-filed testimony. (Kleyer Pre-filed Test., Sections II and III; Nasset Pre-filed Test., Section IV.)

Q.17. **Are there any plans for expansion of this transmission line?**

A.17. There are no plans to expand this transmission line beyond this Project; however, the most recent 2024 SPP ITP study identified several additional needs in the Bakken area, including the need for another 345-kV line that provides a backup for the LOS-Crane Creek 345-kV line. Basin Electric is planning to build the double circuit portion in Mclean County as 345-kV capable to plan for this future 230-kV conversion.

IV. **Conclusion**

Q.18. **Based on your knowledge of the Project, will it ensure continued system reliability and integrity?**

A.18. Yes. The Project will support existing needs and increase transmission system capacity to support the forecasted load growth over the 10-year transmission planning horizon while meeting the NERC TPL-001-5 reliability criteria.

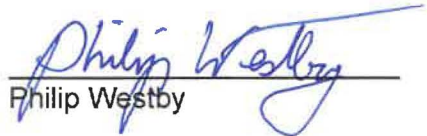
STATE OF NORTH DAKOTA
BEFORE THE
PUBLIC SERVICE COMMISSION

Basin Electric Power Cooperative)
345kV Mercer-McLean-Ward-Mountrail-Williams Cty)
Siting Application)

Case No: PU-24-361;
OAH File No. 20250009

**AFFIDAVIT OF
PHILIP WESTBY**

I, the undersigned, being duly sworn, state as follows: (1) I have read the pre-filed testimony and exhibits submitted in the above captioned matters under my name; (2) they were prepared by me or under my direction and I know their contents; and (3) they are true and correct to the best of my knowledge and belief.


Philip Westby

Subscribed and sworn to before me, this 18 day of February 2025.


Notary Public
My Commission Expires:

