BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION BY BASIN ELECTRIC POWER COOPERATIVE FOR ENERGY FACILITY PERMITS FOR A 230 KV TRANSMISSION FACILITY IN HAAKON COUNTY, SOUTH DAKOTA

SD PUC DOCKET EL25-___

PRE-FILED DIRECT TESTIMONY OF BRADLEY WILKINSON ON BEHALF OF BASIN ELECTRIC POWER COOPERATIVE

August 15, 2025

I. INTRODUCTION AND QUALIFICATIONS

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

A. My name is Bradley Wilkinson. I am employed by Basin Electric Power Cooperative (Basin Electric) as a Structural Engineer. My responsibilities include the planning, development, coordination, and design for new and existing transmission and generation facilities at Basin Electric. My business address is 1717 East Interstate Avenue, Bismarck, North Dakota.

Q. On whose behalf are you providing this testimony?

A. I am providing this testimony on behalf of Basin Electric in support of its Facility Permit Application (Application) to the South Dakota Public Utilities Commission (Commission). The Application is for a permit for an extension of the existing 230-kilovolt (kV) Philip to Philip Tap transmission line (Project) to support the interconnection of the Philip Wind energy project (Philip Wind Energy Project), owned by Philip Wind Partners, LLC (Philip Wind).

Q. Briefly describe your educational background and professional experience.

A. I am a licensed Professional Engineer in North Dakota with a Bachelor's degree in Civil Engineering from North Dakota State University (2011). I have 13–14 years of experience with Basin Electric, primarily as a structural engineer. Most of my career has been dedicated to supporting new and existing generation facilities, and in recent years I have focused on high-voltage transmission projects.

II. PURPOSE OF TESTIMONY

Q. What is your role with respect to the Project?

A. I am the Project manager and a member of the design team. I am responsible for managing the Project budget schedule, and coordinating the Project efforts for routing, right-of-way (ROW) acquisition, engineering, procurement, permitting, and construction.

Q. Are you familiar with the contents of Basin Electric's Application to the Commission?

A. Yes, I am familiar with the Application's contents and assisted with its preparation.

Q. What is the purpose of your Direct Testimony?

A. The purpose of my testimony is to define the Project and describe the design, routing, and construction. My testimony, together with the Application and other supporting evidence, will demonstrate that the Project will produce minimal adverse impacts on the environment and human welfare, ensure reliability, and ensure energy needs are met.

Q. Identify the sections of the Application that you are sponsoring for the record.

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

- Section 1.0: Introduction
- Section 2.0: The Project
- Section 3.0: Project Development Summary
- Section 4.0: Facility Permit Application Compliance
- Section 5.0: Names of Participants
- Section 6.0: Names of Owner and Manager
- Section 7.0: Purpose of and Demand for Transmission Facility
- Section 8.0: Estimated Cost of Facility
- Section 9.0: General Site and Project Components Description
- Section 10.0: Alternative Sites and Siting Criteria
- Section 16.0: Effect on Land Use
- Section 17.0: Local Land Use Controls
- Section 20.0: Time Schedule
- Section 21.0: Community Impact
- Section 22.0: Summary of Potential Impacts and Avoidance, Minimization, and Mitigation Measures
- Section 23.0: Employment Estimates

- Section 24.0: Future Additions and Modifications
- Section 25.0: Reliability and Safety
- Section 26.0: List of Potential Permits and Approvals
- Section 27.0: Testimony and Exhibits
- Appendix A: Figures
- Appendix B: Completeness Checklist

Q. What other witness is testifying on behalf of Basin Electric?

A. Also testifying on behalf of Basin Electric is Mr. Ryan King, Environmental Coordinator, Basin Electric. Mr. King will testify regarding environmental review conducted for the Project, and is sponsoring Application Sections 11.0, 12.0, 13.0, 14.0, 15.0, 18.0, 19.0, and Appendices C and D.

III. BASIN ELECTRIC

Q. Please describe Basin Electric.

A. Basin Electric is a not-for-profit regional wholesale electric generation and transmission cooperative headquartered in Bismarck, North Dakota. Basin Electric provides electricity and energy services to over 130 member cooperatives serving approximately 3 million customers across nine states, including South Dakota.

IV. PROJECT DESCRIPTION

Q. Describe the Project.

A. The Project consists of an approximately 0.95-mile-long, single-circuit 230-kV transmission line extension between a switchyard (Philip North Switchyard) that will be constructed by the Western Area Power Administration (WAPA) and a dead-end transmission structure that will cut into the existing transmission line routed to the Philip Tap switching station. This new 0.95-mile transmission line will include construction of up to seven transmission structures. The Project will support the interconnection of the proposed Philip Wind Energy Project (or, Philip

Wind Project) owned by Philip Wind. Philip Wind will permit the Wind Project facilities separately with the Commission. In addition, WAPA will separately construct the Philip North Switchyard and two tie-in lines to interconnect the Philip Wind Energy Project into WAPA's existing Oahe to New Underwood 230-kV transmission line.

Q. How does the Project relate to the Wind Project?

A. The Project is needed to interconnect the Philip Wind Energy Project to the grid. The electricity generated by the Philip Wind Energy Project will be transmitted onto the grid operated by Southwest Power Pool (SPP) where it will contribute to meeting electricity demand across the SPP service territory.

Q. Is the Project essential to realizing the benefits of the Philip Wind Project?

A. Yes. The Project supports the interconnection of the proposed Philip Wind Energy Project, which will be a source of domestic, clean energy to the power grid. The electricity generated by the Philip Wind Energy Project will be transmitted by the Project onto the grid operated by SPP, where it will contribute to meeting electricity demand across the SPP service territory.

Q. What is the estimated total cost of the Project?

A. The current estimated capital cost of the Project is $2.48 million. This estimate includes permitting, engineering, financing, construction, material, ROW, and procurement of the Project Facilities.

Q. What is the anticipated schedule for construction and operation of the Project?

A. Construction of the Project is anticipated to start in September 2026 with construction of foundations and structures, followed by line stringing and tensioning. Basin Electric anticipates a Project in-service date prior to December 2026, recognizing there are multiple variables, such as land acquisition, obtaining

the necessary federal, state, and local approvals, material lead times, contractor availability, and weather conditions that could cause this schedule to change.

V. LAND RIGHTS

Q. What is the current status of ROW acquisition for the Project?

A. The Project will require easements from two landowners. Survey permissions have been granted by the two landowners needed for the Project. A 125-foot-wide ROW easement will be needed for the Project to cross private property. One of the two landowners have signed easement rights for the Project ROW, and the second landowner in currently in negotiations. Title searches going back 50+ years will be completed to identify current ownership and all encumbrances that need to be addressed.

Q. Does Basin Electric expect to use eminent domain?

A. No. Basin Electric is in the process of securing ROW for the Project and currently does not anticipate needing to use eminent domain to acquire ROW for the Project.

VI. OVERVIEW OF ROUTE SELECTION

Q. Please provide an overview of the route selection process for the Project.

A. As I note above, the Project is needed to interconnect the proposed Philip Wind Energy Project. Basin Electric did not conduct an independent analysis of alternative sites for the Philip Wind Energy Project. Rather, Basin Electric's analysis of alternatives was limited to alternative routes for the Project to connect the Project's endpoints. The Project is a direct route between those two endpoints and does not cross sensitive or protected resources. As such, Basin Electric did not further consider route alternatives.

Q. Was the route designed to minimize impacts?

A. Yes. The Project Route and structure locations are designed to avoid or minimize impacts to environmental resources.

Q. Discuss Basin Electric's Coordination with landowners and other local stakeholders when developing the Project.

A. The Project has been included within the scope of the outreach conducted for the Philip Wind Energy Project, which included coordination with local community members, local officials, Tribes, and federal, state, and local agencies. For example, multiple years of coordination and consultation occurred with the U.S. Fish and Wildlife Service (USFWS); South Dakota Game, Fish, and Parks; and the South Dakota State Historical Society, which serves as the State Historic Preservation Office (SHPO) for South Dakota. Although much of this coordination was focused on the Philip Wind Energy Project, the coordination also supported the development and routing of this Project to avoid and minimize impacts to sensitive resources.

Q. Describe some of the siting measures Basin Electric will take to minimize impacts.

A. As described in Section 3.3 of the Application, the Project will avoid or minimize disturbance to wetlands and waterways and comply with applicable requirements of the U.S. Army Corps of Engineers (USACE) Clean Water Act Section 404 permitting program where impacts are unavoidable, avoid disturbance to federally and state-owned conservation lands, avoid impacts to sites identified as potentially eligible for the National Register of Historic Places, site aboveground infrastructure away from grouse leks to the extent feasible, follow USFWS Region 6 raptor nest (non-eagle) setback buffers from preconstruction nest data, avoid crossing tree rows and woodlots to the extent practicable and minimize tree clearing and vegetation removal for the Project, and limit ground disturbance wherever practicable during construction in potentially unbroken grasslands and restrict construction vehicle movement to designated areas.

Q. Did Basin Electric consider the criteria set forth in SDCL § 49-41B-22 when routing the Project?

A. Yes. Basin applied the statutory criteria.

Q. What is the criteria laid out in SDCL § 49-41B-22?

A. SDCL § 49-41B-22 puts a burden of proof on the applicant to demonstrate by a preponderance of the evidence that:

> (1) The proposed facility will comply with all applicable laws and rules;
>
> (2) The facility will not pose a threat of serious injury to the environment nor to the social and economic condition of inhabitants or expected inhabitants in the siting area. An applicant for an electric transmission line, a solar energy facility, or a wind energy facility that holds a conditional use permit from the applicable local units of government is determined not to threaten the social and economic condition of inhabitants or expected inhabitants in the siting area;
>
> (3) The facility will not substantially impair the health, safety or welfare of the inhabitants; and
>
> (4) The facility will not unduly interfere with the orderly development of the region with due consideration having been given the views of governing bodies of affected local units of government. An applicant for an electric transmission line, a solar energy facility, or a wind energy facility that holds a conditional use permit from the applicable local units of government is in compliance with this subdivision.

As set forth in the Application, the direct testimony of Mr. King, and my direct testimony, Basin Electric has met this burden.

VII. PROJECT DESIGN AND SITING FLEXIBILITY REQUEST

Q. Discuss the Project ROW.

A. The proposed ROW is an approximately 125-foot-wide area centered on the Project route. The Project ROW will be located on approximately 14 acres of privately owned land located northwest of the town of Philip in Haakon County, South Dakota.

Q. What type of structures are proposed for the Project?

A. The Project is anticipated to construct up to seven three-phase, single-circuit transmission structures constructed on H-frame and monopole structures. The structures will have spans ranging from 200 to 950 feet, but this may vary depending on geological, environmental, or engineering constraints identified during micrositing.

Q. Describe the conductors.

A. The phase conductors are to be single bundled wire 954 ‘thousands of circular mils 54/7 aluminum conductor steel reinforced “Cardinal.” The overhead shield wires will be steel, 0.5-inch, 7-strand, extra high strength overhead ground wire and 0.571-inch optical ground wire.

Q. Describe the transmission line design parameters.

A. Project construction and design will meet the requirements of the National Electrical Safety Code (NESC) for the Heavy Loading District, Basin Electric, U.S. Department of Agriculture Rural Utilities Service design criteria, and other applicable local or national building codes. The Heavy Loading District refers to those areas that are subject to severe ice and wind loading. Minimum conductor clearance is measured at the point of greatest conductor sag and closest proximity to the ground. The transmission line will be constructed with clearances that exceed standards set by NESC. Minimum conductor height under maximum sag

conditions will exceed 26 feet for all ground surfaces. Table 9-2 in the Application includes a description of various Project design component characteristics.

Q. How will Basin Electric access the transmission structures during construction?

A. Construction access to transmission structures will involve the use of existing roads where available, a temporary access road within the Project ROW, and temporary overland access trails, if necessary. The use of temporary overland access trails between structure sites will not require new construction but will result in temporary disturbance. Occasional access from section line trails could result in temporary disturbance along the Project Route; however, such disturbance will be limited to a 16-foot-wide track (approximately) and only long enough to provide vehicle access directly to structure locations. Some additional access disturbance could occur if truck or vehicle turnarounds are needed. Existing access roads (typically paved or maintained with a gravel or aggregate base) will be used in their original condition. Basin Electric will reimburse the appropriate public entity for the repair of any damage caused by construction equipment movement and will return existing roads to original or better condition following construction.

Q. Describe temporary work sites the Project will use.

A. An approximately 100 × 150-foot (15,000-square-foot) temporary work site will be located at each structure location and within the Project Route. At this structure assembly area, the davit arms are attached, and insulators and other hardware are attached while the steel structure is on the ground. The area will be graded, if required, to ensure safe movement and operation of heavy equipment.

Q. Will there be any substation updates as part of this Project?

A. No. No substation upgrades are proposed for this Project.

Q. What siting flexibility is Basin Electric seeking from the Commission for the Project?

A. Basin Electric seeks an order condition that provides it may adjust structure locations within the 125-foot-wide ROW as long as: a) they remain within the corridor field-surveyed for both cultural resources and wetlands; b) impacts to cultural resources are avoided or mitigated in consultation with the SHPO; c) wetland impacts are avoided or are in compliance with applicable USACE regulations; d) the ROW and structures will not be located in potentially undisturbed grasslands; and e) all other applicable regulations and requirements are met. Any adjustments that do not meet these limitations are considered a "material change," and if a "material change" is proposed, Basin Electric shall file a request for approval prior to making the adjustment pursuant to the Commission's standard "material change" approval process.

Q. Are any future modifications or expansions of the Project currently planned?

A. Apart from the final alignment flexibility requested above and in the Application, Basin Electric does not currently have any plans for future additions to or modifications of to the Project.

VIII. PROJECT CONSTRUCTION

Q. Discuss the personnel that will be involved in the construction of the Project.

A. Construction of the Project is anticipated to take approximately six to eight weeks and employ approximately eight workers. It is likely that general skilled labor is available in Haakon County or the state at a scale necessary to serve the basic infrastructure and site development needs of the Project. Specialized labor will be required for certain components of Project construction, which may be imported from other areas of the state or from other states, as the relatively short duration of construction makes special training of local or regional labor impracticable.

Q. Please provide an overview of the construction process.

A. Transmission line construction will generally follow a sequential set of activities performed by workers proceeding along the length of the line. These include:

- Preconstruction surveying tasks;
- Structure site clearing and vegetation management, including ROW clearing;
- Gate installation;
- Structure assembly;
- Foundation installation;
- Structure erection;
- Ground wire and conductor stringing; and
- Cleanup and restoration.

Q. Will the Project be constructed to maintain the minimum conductor to ground clearance required by the NESC?

A. Yes.

Q. How will Basin Electric minimize impacts during construction?

A. Basin Electric has conducted extensive work to date to avoid, minimize, and/or mitigate potential environmental impacts, and will continue those efforts during construction. As described in the Application, Basin Electric employs standard construction and mitigation practices that have been developed from experience with past projects, as well as industry-specific BMPs. These BMPs address ROW clearing, erecting transmission line structures, stringing transmission lines, and minimizing environmental impacts. This includes development and implementation of a stormwater pollution prevention plan (SWPPP) and compliance with applicable stormwater, wetland/waterbody, and floodplain permitting requirements. Moreover, Basin Electric will work with landowners to minimize disruptions during construction to the extent possible, including ensuring that construction equipment is equipped with mufflers that are in good working order, and conducting construction activities during daytime hours when feasible.

IX. PROJECT OPERATION AND MAINTENANCE

Q. Describe the procedures that will be employed for inspections and maintenance of the Project.

A. Once the Project is operational, regular maintenance and inspections will be performed to ensure the Project continues to operate safely, efficiently, and reliably. Basin Electric will perform maintenance of the Project in compliance with the applicable reliability standards established by the North American Electric Reliability Corporation. Basin Electric will remove trees that pose a clearance or safety problem to the operation of the transmission line. This activity will be completed in accordance with the landowner easement.

X. LAND USE AND COMMUNITY IMPACTS

Q. Is the Project compatible with the existing land uses in the vicinity?

A. Yes. Land use crossed by the Project Route is almost entirely mixed-grass prairie, with land cover consisting predominantly of herbaceous grassland, all of which categorized as broken grassland with no acreage categorized as unbroken grassland. The Project is located entirely outside of any municipal limits and there are no residences or businesses crossing within the Project Route. The closest residence is located approximately 534 meters away from the Project ROW. There are no businesses within or near the Project ROW.

Construction of the Project will result in conversion of a small portion of the land within the Project Route (<0.1 acre). Approximately 16.4 acres of temporary ground disturbance is expected to result from Project construction, of which 15.9 acres is plains mixed grass prairie, 0.5 acres is ruderal and planted grassland, and less than 0.1 acres is pasture and hayland. Conversely, less than 0.1 acres would be permanently impacted, all of which is mixed grass prairie. The Project Route is entirely uncultivated and no impacts to crops are expected to occur. Following completion of construction, all temporary construction workspaces will be restored

to preconstruction conditions, which primarily consist of mixed grass prairie, pursuant to the lease and easement agreements.

Q. Does the Project avoid impacts to public lands?

A. Yes. No impacts to public lands, public facilities, or publicly accessible facilities are anticipated. No public facilities are within the Project Route, apart from public roads. The nearest airport is approximately 18 miles from the Project. Therefore, no impacts to airports are anticipated.

Q. Will the Project have a significant impact on noise levels?

A. No. Potential sound associated with the construction of the Project includes site clearing, grading, foundation work, and pole installation. All reasonable efforts will be made to minimize the impact of sound resulting from construction activities. Generally, noise levels during operation of the Project will be minimal. Transmission conductors can create a noise called corona under certain conditions. Corona noise has a buzzing or crackling sound and is due to corona discharges, the small amount of electricity ionizing the moist air near the conductors. Basin Electric anticipates there will be minimal noise impact from Project operations.

Q. Will the Project have an impact on existing communications systems?

A. No. The Project is not anticipated to cause interference with existing satellite, cellular, radio, TV, and GPS systems in the vicinity of the Project.

Q. Will the Project have an impact on community facilities and services?

A. No. There are no community facilities within 10 miles of the Project. Given the short-term duration and small-scale of the construction activities, the Project is not likely to increase the need for public services, including police and fire protection. Existing community facilities and services should be adequate to support the workforce during construction. In addition, the construction workforce will not

create any measurable negative impact to the local government, utilities, or community services.

Q. Is the Project compatible with existing land uses and future development along and around the Project?

A. Yes. As I discussed above, the Project is outside of any municipal boundaries and crosses almost entirely mixed-grass prairie.

Q. Will Basin Electric participate in the South Dakota one-call program?

A. Yes. Basin Electric will comply with the South Dakota One-Call system to verify existing utilities are properly marked, as needed.

Q. Does the Project substantially impair the health, safety or welfare of the inhabitants of the Project area?

A. No, the Project will not substantially impair the health, safety or welfare of the inhabitants of the Project area.

XI. LOCAL LAND USE REGULATIONS & OTHER PERMITS AND APPROVALS

Q. Does Haakon County have applicable local land use requirements?

A. No. Haakon County is unzoned and has no ordinances related to transmission lines at the time of submittal of the Application or my testimony.

Q. In addition to an Energy Facility Permit from the Commission, what other permits or approvals are required for the Project?

A. Various federal, state, or local approvals may be required for the Project. Table 26-1 in the Application identifies potential permits or approvals required for the construction and operation of the Project, and also identifies the status of each permit/approval.

Q. Will Basin Electric obtain all local, state, and federal permits and approvals required for the Project?

A. Yes.

Q. Will Basin Electric ensure the Project will comply with all applicable laws and rules?

A. Yes, the Project will comply with all applicable laws and rules.

Q. Will the Project unduly interfere with the orderly development of the region with due consideration having been given the views of governing bodies of affected local units of government?

A. No, the Project will not interfere with the orderly development of the region. As I note above, Haakon County is unzoned and the Project is consistent with current land use in the area.

XII. CONCLUSION

Q. Based on the analysis Basin Electric has conducted, has the Project been sited to minimize potential impacts?

A. Yes. As detailed in the Application, my direct testimony, and Mr. King's direct testimony, the Project has been thoughtfully routed and designed to avoid or minimize potential impacts to inhabitants, resources, and land use in and along the route.

Q. Does this conclude your testimony?

A. Yes.

Dated this 15th day of August, 2025

Bradley Wilkinson