

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

**IN THE MATTER OF THE APPLICATION BY OTTER TAIL POWER COMPANY AND
WESTERN MINNESOTA MUNICIPAL POWER AGENCY FOR A FACILITY PERMIT
FOR A 345-KV TRANSMISSION FACILITY AND ASSOCIATED FACILITIES IN
GRANT COUNTY, SOUTH DAKOTA**

SD PUC DOCKET _____

**PRE-FILED DIRECT TESTIMONY OF JASON WEIERS
ON BEHALF OF OTTER TAIL POWER COMPANY
AND WESTERN MINNESOTA MUNICIPAL POWER AGENCY**

April 15, 2024

TABLE OF CONTENTS

I.	INTRODUCTION AND QUALIFICATIONS	1
II.	PURPOSE OF TESTIMONY	3
III.	RELATIONSHIP TO PROPOSED TRANSMISSION LINE PROJECTS	4
IV.	LAND RIGHTS	8
V.	OVERVIEW OF ROUTE SELECTION	9
VI.	PROJECT DESIGN AND SITING FLEXIBILITY REQUEST	12
VII.	PROJECT CONSTRUCTION.....	17
VIII.	PROJECT OPERATION AND MAINTENANCE.....	19
IX.	LAND USE AND COMMUNITY IMPACTS	20
X.	LOCAL LAND USE REGULATIONS.....	22
XI.	OTHER PERMITS AND APPROVALS.....	22
XII.	CONCLUSION	23

1 **I. INTRODUCTION AND QUALIFICATIONS**

2 Q. PLEASE STATE YOUR NAME, EMPLOYER, AND BUSINESS ADDRESS.

3 A. My name is Jason Weiers. I am employed by Otter Tail Power Company (“Otter
4 Tail”). My business address is 215 South Cascade Street, Fergus Falls, MN 56537.

5
6 Q. WHAT IS YOUR POSITION WITH OTTER TAIL?

7 A. I am the Manager of Transmission Project Development.
8

9 Q. BRIEFLY DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL
10 BACKGROUND.

11 A. I have approximately 24 years of experience in the electric utility industry, with
12 more than 20 years of those in transmission planning. In my current role, I oversee
13 the permitting of transmission projects, which includes permitting transmission
14 facilities at the local, state, and federal levels. In addition, I am responsible for
15 developing agreements with neighboring utilities outlining the business
16 arrangements for ownership, development, construction, operations, and
17 maintenance activities related to co-owned transmission projects. In my previous
18 roles at Otter Tail, I was involved in transmission and distribution planning
19 studies, transmission project agreements, regulatory proceedings related to
20 permitting and cost recovery, capital budget development and administration, and
21 development efforts for new transmission projects. I have experience throughout
22 the stages of project development, from planning to taking a project through
23 construction and placing it in-service. I have a Bachelor of Science degree in
24 Electrical Engineering from North Dakota State University. I am also a registered
25 professional engineer in the State of Minnesota. My resume is attached as
26 **Exhibit A.**

27
28 Q. ARE YOU FAMILIAR WITH THE BIG STONE SOUTH TO ALEXANDRIA 345
29 KILOVOLT (“KV”) TRANSMISSION LINE PROJECT (“BSSA PROJECT”)?

30 A. Yes, it is a transmission line project being developed by Otter Tail and Western
31 Minnesota Municipal Power Agency (“Western Minnesota”), through its agent
32 Missouri River Energy Services (“MRES”). The BSSA Project extends from Otter
33 Tail’s existing Big Stone South Substation in Grant County, South Dakota to the
34 existing Alexandria Substation near Alexandria, Minnesota.

1 Q. WHAT IS YOUR ROLE WITH RESPECT TO THE BSSA PROJECT?

2 A. I am responsible for securing the required permits for the BSSA Project from local,
3 state, and federal agencies. I also oversee the development of project agreements
4 between Otter Tail and Western Minnesota for the BSSA Project. These
5 agreements outline roles and responsibilities for ownership, development,
6 construction, operation, and maintenance activities related to the BSSA Project.
7

8 Q. IS A PORTION OF THE BSSA PROJECT LOCATED IN SOUTH DAKOTA?

9 A. Yes. Approximately 3.5 miles of the BSSA Project are located in South Dakota.
10

11 Q. IS THE SOUTH DAKOTA PORTION OF THE BSSA PROJECT (“PROJECT”) THE
12 SUBJECT OF THE APPLICATION SUBMITTED BY OTTER TAIL AND
13 WESTERN MINNESOTA (“APPLICANTS”) CONCURRENTLY WITH YOUR
14 TESTIMONY?

15 A. Yes.
16

17 Q. WILL THE APPLICANTS CONSTRUCT, OWN, OPERATE, MAINTAIN, AND
18 MANAGE THE PROJECT?

19 A. Yes. Otter Tail and Western Minnesota will co-own and operate the Project, except
20 that the equipment and improvements required inside the Big Stone South
21 Substation will be owned solely by Otter Tail. In addition, Otter Tail is the Project
22 Manager on behalf of the Applicants and will be responsible for the construction,
23 operation, maintenance, and management of the Project.
24

25 Q. PLEASE DESCRIBE OTTER TAIL AND WESTERN MINNESOTA’S RESPECTIVE
26 BUSINESS OPERATIONS.

27 A. Otter Tail is an investor-owned electric utility company headquartered in Fergus
28 Falls, Minnesota that provides electricity and energy services to over 133,000
29 customers spanning 70,000 square miles in northeastern South Dakota, eastern
30 North Dakota, and western Minnesota. Otter Tail wholly or jointly owns
31 approximately 6,000 miles of transmission lines and approximately 1,100 MW of
32 generation capacity in these three states and is a transmission-owning member of
33 the Midcontinent Independent System Operator (“MISO”).

34 Western Minnesota is a municipal corporation and political subdivision of
35 the State of Minnesota, headquartered in Ortonville, Minnesota. Western
36 Minnesota owns generation and transmission facilities, the capacity and output of

1 which are sold to MRES. MRES, which is headquartered in Sioux Falls, South
2 Dakota, provides electricity, including conservation program services, to its 61-
3 member municipal utilities in South Dakota, Iowa, Minnesota, and South Dakota,
4 who in turn serve approximately 174,000 customers. MRES is also a transmission-
5 owning member of MISO.

6 The Applicants have extensive track records of successfully developing
7 large-scale high voltage transmission projects in the region.

8 **II. PURPOSE OF TESTIMONY**

9 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

10 A. The purpose of my Direct Testimony is to:

- 11 • provide an overview of the BSSA Project;
- 12 • discuss the purpose of, demand for, and benefits of the Project;
- 13 • discuss the Applicants' route selection process;
- 14 • discuss the Applicants' stakeholder engagement;
- 15 • provide information on the Project's design, construction, and operation;
- 16 • provide an overview of the Applicants' efforts to avoid and/or minimize
- 17 potential impacts on the local community, environment, land use, and existing
- 18 infrastructure; and
- 19 • discuss local land use approvals.

20
21 Q. WHAT EXHIBITS ARE ATTACHED TO YOUR DIRECT TESTIMONY?

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

- 23 • Exhibit A: J. Weiers Resume.

24
25 Q. PLEASE IDENTIFY WHICH SECTIONS OF THE APPLICATION YOU ARE
26 SPONSORING FOR THE RECORD.

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

- 28 • Section 1.0: Introduction
- 29 • Section 2.0: BSSA Project Overview
- 30 • Section 3.0: Project Development Summary
- 31 • Section 4.0: Facility Permit Application Compliance

- 1 • Section 5.0: Names of Participants
- 2 • Section 6.0: Names of Owner and Manager
- 3 • Section 7.0: Purpose of and Demand for Transmission Facility
- 4 • Section 8.0: Estimated Cost of Facility
- 5 • Section 9.0: General Site and Project Components Description
- 6 • Section 10.0: Alternative Sites and Siting Criteria
- 7 • Section 16.0: Land Use
- 8 • Section 17.0: Local Land Use Controls
- 9 • Section 20.0: Time Schedule
- 10 • Section 21.0: Community Impact (except 21.5)
- 11 • Section 22.0: Summary of Potential Impacts and Avoidance, Minimization, and
- 12 Mitigation Measures
- 13 • Section 23.0: Employment Estimates
- 14 • Section 24.0: Future Additions and Modifications
- 15 • Section 25.0: Reliability and Safety
- 16 • Section 26.0: List of Potential Permits and Approvals
- 17 • Section 27.0: Testimony and Exhibits
- 18 • Appendix A: Figures
- 19 • Appendix B: Completeness Checklist
- 20 • Appendix C: Correspondence and Stakeholder Consultation

21 **III. RELATIONSHIP TO PROPOSED TRANSMISSION LINE**
22 **PROJECTS**

23 Q. PLEASE DESCRIBE THE BSSA PROJECT, INCLUDING HOW IT RELATES TO
24 THE PROPOSED PROJECT.

25 A. The BSSA Project consists of new 345 kV transmission facilities between the
26 existing Big Stone South Substation near Big Stone City, South Dakota, and the
27 existing Alexandria Substation near Alexandria, Minnesota. The Project is the
28 South Dakota portion of the BSSA Project.
29

1 Q. HOW DO THE PROJECT AND THE BSSA PROJECT RELATE TO THE LARGER
2 BIG STONE SOUTH-ALEXANDRIA-BIG OAKS TRANSMISSION LINE
3 PROJECT (“BIG STONE SOUTH-ALEXANDRIA-BIG OAKS PROJECT”)?

4 A. The BSSA Project, which includes the Project, will connect to the Alexandria to
5 Riverview to Big Oaks Transmission Line Project (“Alexandria to Big Oaks
6 Project”), which will extend from Western Minnesota’s existing Alexandria
7 Substation to Great River Energy’s existing Riverview Substation and then to a new
8 Big Oaks Substation that is planned to be located near the Sherco Power Plant in
9 Becker, Minnesota. The BSSA Project, together with the Alexandria to Big Oaks
10 Project, make up the Big Stone South-Alexandria-Big Oaks Project.
11

12 Q. WHAT LED TO THE DEVELOPMENT OF THE BIG STONE SOUTH-
13 ALEXANDRIA-BIG OAKS PROJECT?

14 A. MISO has a responsibility, established by the Federal Energy Regulatory
15 Commission (“FERC”), to study the transmission system within its footprint to
16 identify necessary transmission projects to address reliability issues and relieve
17 anticipated system congestion. This study is performed on an annual basis
18 through what is called the MISO Transmission Expansion Plan (“MTEP”) cycle. As
19 part of the MTEP cycle, MISO and its stakeholders engage in a robust process to
20 develop a range of forward-looking scenarios, or Futures, which include various
21 assumptions intended to forecast multiple paths and timelines for states and
22 utilities to meet their energy goals. These Futures are then used to assess the
23 transmission system and identify transmission needed to meet the required
24 demand and deliver the necessary energy reliably and efficiently from generation
25 resources to customers. As part of the 2021 MTEP cycle (“MTEP21”), three
26 Futures were developed by MISO that incorporated varying assumptions about
27 utility and state goals, generation resource retirements, distributed energy
28 resources adoption, and electrification, among other factors. Under Future 1, the
29 “least transformational” Future (in other words, it was the most conservative
30 Future in terms of generation resource addition), 90 GW of resource additions
31 were assumed.

32 These Futures were considered in MISO’s Long Range Transmission
33 Planning (“LRTP”) study. The LRTP study is a multi-year multi-phase study to
34 identify a regional transmission “backbone” to cost-effectively maintain reliability,
35 reduce system congestion, and serve future needs. MISO based its LRTP study on
36 Future 1, as any benefits of new transmission lines that are demonstrated under

1 the Future 1 assumptions can be assumed to increase under Future 2 and Future
2 3. The Big Stone South-Alexandria-Big Oaks Project, which includes the Project,
3 was identified in the LRTP study as one part of a broader regional portfolio of
4 transmission projects needed to maintain reliability and reduce congestion in the
5 most cost-effective manner in the Midwest subregion.
6

7 Q. HAS THE PROJECT BEEN APPROVED BY MISO?

8 A. Yes. In July 2022, MISO approved the first phase or “tranche” from the LRTP
9 study – the Tranche 1 Portfolio. The Tranche 1 Portfolio consists of 18
10 transmission projects (including the Project) involving approximately 2,000 miles
11 of new and upgraded high voltage transmission equaling approximately \$10 billion
12 in investment. The Tranche 1 Portfolio represents a set of transmission projects
13 that will help to ensure a reliable, resilient, and cost-effective transmission system
14 for the Midwest subregion by 2030 and beyond.
15

16 Q. WHAT ARE THE ANTICIPATED BENEFITS OF THE LARGER BIG STONE
17 SOUTH-ALEXANDRIA-BIG OAKS PROJECT, WHICH INCLUDES THE
18 PROJECT?

19 A. The Big Stone South-Alexandria-Big Oaks Project was identified by MISO to
20 address anticipated reliability, capacity, and voltage issues on the existing 230 kV
21 system in eastern South Dakota and North Dakota and western and central
22 Minnesota. The existing 230 kV system is at its capacity, leading to concerns that
23 thermal and voltage issues could affect the transmission system’s ability to
24 effectively and efficiently serve customers’ future demand and energy
25 requirements. By adding another 345 kV circuit to the existing transmission
26 system, the Big Stone South-Alexandria-Big Oaks Project will help to resolve those
27 concerns on the 230 kV system. In addition to providing reliability and resiliency
28 benefits, the project will also provide additional transmission capacity, which will
29 increase access for new generation and reduce transmission congestion.
30

31 Q. HOW DO THE ESTIMATED COSTS OF THE PROJECTS IN THE TRANCHE 1
32 PORTFOLIO COMPARE TO THE ANTICIPATE BENEFITS?

33 A. MISO estimates that the Tranche 1 Portfolio will provide \$23.2 billion to \$52.2
34 billion in net economic benefits over the first 20 to 40 years (respectively) of the
35 portfolio being in-service – a benefit to cost ratio range of 2.6 to 3.8 for the entire
36 MISO Midwest subregion.

1 Q. IS THE PROJECT ESSENTIAL TO REALIZING THE BENEFITS OF THE
2 BROADER BIG STONE SOUTH-ALEXANDRIA-BIG OAKS PROJECT? IF SO,
3 PLEASE EXPLAIN.

4 A. Yes. The Project is a key component of not only the Big Stone South-Alexandria-
5 Big Oaks Project, but also the entire Tranche 1 Portfolio approved by MISO. As
6 such, the Project is essential to obtaining the benefits outlined above.
7

8 Q. WHAT IS THE ESTIMATED TOTAL COST OF THE PROJECT?

9 A. The estimated total capital costs for the Project are between \$29.7 million and
10 \$41.4 million. This includes: (1) the modifications to the Big Stone South
11 Substation, which are estimated between \$14.2 million to \$23.6 million; and (2)
12 costs associated with the construction of the Project's approximately 3.5-mile
13 long, 345-kV transmission line in South Dakota, which are estimated to be
14 between \$15.5 million and \$17.8 million. Estimated costs are based on the
15 proposed Route and preliminary engineering and are subject to change based on
16 the final Project design.
17

18 Q. WHAT IS THE ANTICIPATED SCHEDULE FOR CONSTRUCTION AND
19 OPERATION OF THE PROJECT?

20 A. Construction of the Project is anticipated to start in Q3 2028 and be completed in
21 Q3 2031. Commissioning (i.e. testing) of the Project is anticipated to occur
22 between Q3 2031 and Q4 2031. Following the completion of commissioning, in-
23 service operations are anticipated to commence in Q4 2031. Multiple variables,
24 such as land acquisition, obtaining the necessary federal, state, and local
25 approvals, material lead times, contractor availability, and weather conditions
26 could cause this schedule to change.
27

28 Q. WHY ARE THE APPLICANTS FILING THE APPLICATION FOR THE PROJECT
29 NOW WHEN PROJECT CONSTRUCTION IS NOT ANTICIPATED TO BEGIN
30 UNTIL Q3 2028?

31 A. On October 18, 2022, the Applicants filed a notice of intent to construct, own, and
32 maintain the BSSA Project ("Notice of Intent") with the Commission pursuant to
33 SDCL § 49-32-20. In accordance with SDCL § 49-32-20, the Applicants are
34 required to file an application pursuant to SDCL Ch. 49-41B for the Project within
35 18 months of filing the Notice of Intent. Therefore, the Applicants are required to
36 submit the Application for the Project by April 18, 2024.

1 However, the timing of construction is dependent on securing permits not
2 only in South Dakota, but also in Minnesota. In Minnesota, the Applicants must
3 obtain a certificate of need and route permit for the BSSA Project from the
4 Minnesota Public Utilities Commission (“MPUC”). A certificate of need
5 application for the Minnesota portion of the Big Stone South-Alexandria-Big Oaks
6 Project (consisting of the Minnesota portion of the BSSA Project and the
7 Alexandria to Big Oaks Project) was filed with the MPUC on September 29, 2023
8 and the process is anticipated to be completed in late 2024.¹ The Applicants plan
9 to submit a route permit application for the Minnesota portion of the BSSA Project
10 in the fourth quarter of 2024 and anticipate a permit will be issued by the MPUC
11 in the fourth quarter of 2026.

12 The Applicants plan to complete final design activities and begin
13 construction of the BSSA Project after permits have been issued by both this
14 Commission and the MPUC. As a result, construction of the Project is anticipated
15 to begin in the third quarter of 2028.

16 **IV. LAND RIGHTS**

17 Q. WHAT IS THE CURRENT STATUS OF RIGHT-OF-WAY ACQUISITION FOR
18 THE PROJECT?

19 A. The Applicants contacted landowners beginning in September 2023 to request
20 right of entry for surveys. All landowners along the proposed Route granted right
21 of entry. Beginning in March 2024, the Applicants began contacting landowners
22 to discuss obtaining easements for the proposed Route, and that process is on-
23 going. The Applicants will continue to coordinate with landowners throughout
24 Project development, construction, and operation.

25
26 Q. DO THE APPLICANTS EXPECT TO USE EMINENT DOMAIN?

27 A. No. The Applicants are in the process of securing easements for the Project and
28 currently do not anticipate needing to use eminent domain to acquire right-of-way
29 for the Project.

¹ In the Matter of the Application for a Certificate of Need for the Sig Stone South – Alexandria – Big Oaks 345 kV Transmission Project, MPUC Docket No. CN-22-538.

1 **V. OVERVIEW OF ROUTE SELECTION**

2 Q. PLEASE PROVIDE AN OVERVIEW OF THE ROUTE SELECTION PROCESS FOR
3 THE PROJECT.

4 A. In February 2023, the Applicants began evaluating transmission line routing
5 options in an area around Otter Tail’s existing Big Stone South Substation (the
6 western endpoint of the Project) and extending east to the South Dakota-
7 Minnesota border. The Applicants began by gathering GIS data from local, state
8 and federal agencies and other entities for this general area (“Study Area”) and
9 analyzing this data to identify routing constraints. Constraints identified included
10 the Ortonville Municipal Airport, population centers (Big Stone City and
11 Ortonville), Big Stone National Wildlife Refuge, the Minnesota River, and the U.S.
12 Fish and Wildlife Service (“USFWS”) Wildlife Management Areas (“WMAs”).
13 Using this information, the Applicants developed potential routing corridors
14 within the Study Area, which typically followed public roadways, section or quarter
15 section field lines, and existing transmission line corridors to minimize impacts to
16 landowners and existing land uses while allowing for easier construction and long-
17 term maintenance access.

18 Additional information was collected by conducting public open house
19 meetings and gathering landowner, stakeholder, and agency feedback. This
20 additional data was used to further narrow the potential routing corridors to one
21 approximately two-mile-wide corridor.

22 Within this narrower corridor, further analysis was conducted by collecting
23 information from field surveys to identify a proposed route. Beginning in
24 September 2023, the Applicants contacted landowners to request right of entry to
25 perform field surveys in potential routing areas. Where access was granted,
26 Applicants conducted field surveys (wetland/waterbody field delineations and
27 mapping, along with cultural resource surveys) in October and November 2023,
28 respectively, and continued those efforts in February 2024 (for cultural resource
29 surveys) and April 2024 (for cultural resources and Tribal resource surveys) once
30 all right of entry permissions had been secured from landowners along the
31 proposed Route. The Applicants also continued engaging with landowners, federal
32 and state agencies, and local governments during this timeframe. The result of this
33 extensive outreach and engagement effort is the currently proposed approximately
34 3.5-mile route (Route) depicted on Figure 1 of Appendix A.
35

1 Q. WHAT FACTORS WERE CONSIDERED IN SELECTING THE PROPOSED
2 ROUTE?

3 A. Route selection required the Applicants to balance various factors such as:
4 (1) avoiding engineering constraints (i.e., existing high voltage transmission lines
5 and other infrastructure in and around Big Stone City); (2) utilizing engineering
6 opportunities (i.e., following existing utility and road rights-of-way); (3) avoiding
7 or minimizing impacts to environmental resources (e.g., cultural resources,
8 waterbodies/wetlands, potentially undisturbed grassland, public lands); and
9 (4) minimizing impacts to landowners and existing land use in order to maximize
10 the potential to secure voluntary easements.

11
12 Q. PLEASE DISCUSS FURTHER HOW APPLICANTS UTILIZED EXISTING
13 LINEAR FEATURES WHEN SELECTING THE PROPOSED ROUTE.

14 A. The entire length of the proposed Route follows existing roadways and
15 transmission line corridors. As the Route leaves the Big Stone South Substation,
16 it goes east along 145th Street until it reaches existing transmission lines. At this
17 point, the Route turns south, where it parallels existing transmission lines. After
18 crossing 146th Street and two existing transmission lines, the Route turns east and
19 follows along the south side of existing transmission lines and 146th Street until
20 reaching the South Dakota-Minnesota border.

21
22 Q. DOES THE PROPOSED ROUTE MINIMIZE POTENTIAL IMPACTS?

23 A. Yes. As discussed throughout the Application and in the Direct Testimony of Kevin
24 Scheidecker, the proposed Route is compatible with the existing land uses, which
25 are primarily agricultural (crop production, with some pasture and hay
26 production). The proposed Route also follows existing linear corridors, which
27 minimizes potential impacts to existing land uses. Additionally, the proposed
28 Route minimizes overall line length, while avoiding and/or minimizing potential
29 impacts to existing infrastructure and environmental resources.

30
31 Q. DID THE APPLICANTS CONSIDER OTHER ROUTES AS THEY DEVELOPED
32 THE PROPOSED ROUTE? IF SO, PLEASE DISCUSS THE ALTERNATIVE
33 ROUTES CONSIDERED.

34 A. While analyzing potential routes for the Project, the Applicants considered but
35 rejected a route south of the Big Stone South Substation. The route south of the
36 Big Stone South Substation was rejected to avoid:

- 1 • Big Stone National Wildlife Refuge;
- 2 • Lac Qui Parle WMA;
- 3 • South Dakota Board of Water and Soil Resources easements;
- 4 • native plant community habitats; and
- 5 • USFWS grassland easements.

6 The Applicants also considered whether it would be possible to identify a
7 route to the north. However, given all of the constraints, the area north of the Big
8 Stone South Substation was not feasible for routing. Those constraints include:

- 9 • the urban and suburban communities of Big Stone City and Ortonville;
- 10 • the Ortonville Municipal Airport;
- 11 • a concentration of lakes including Big Stone Lake; and
- 12 • crossing a large reservoir that would not be feasible to span.

13 Potential routes to the north or south would also have increased the length
14 of the proposed transmission line, resulting in more construction disturbance and
15 long-term land impacts.

16
17 Q. PLEASE DISCUSS THE APPLICANTS' COORDINATION WITH LANDOWNERS
18 AND OTHER LOCAL STAKEHOLDERS WHEN DEVELOPING THE PROPOSED
19 ROUTE.

20 A. The Applicants have coordinated with various stakeholders during the
21 development of the proposed Route, including landowners, local community
22 members, local officials, Tribes, and federal, state, and local agencies. The
23 Applicants reached out to various federal, state, and local agencies as well as
24 stakeholders to provide a summary of the BSSA Project and request information
25 relevant to each agency/stakeholder to inform the routing analysis. For example,
26 the Applicants presented information regarding the Project to the Grant County
27 Board of Commissioners and discussed road use plans with both Grant County and
28 Big Stone Township.

29 The Applicants also hosted several public open houses in the area to provide
30 information and answer questions regarding the Project and to solicit landowner
31 and local stakeholder input on the corridors under consideration. The Applicants
32 used the input from landowners and other stakeholders to create potential
33 corridors that were ultimately refined into the proposed Route.

1 Overall, few comments or concerns were received in relation to the Project
2 and the proposed Route. The Applicants' outreach efforts are described further in
3 Section 3.1 of the Application with agency correspondence included in Appendix
4 C of the Application.

5
6 Q. WERE THE CRITERIA SET FORTH IN SDCL § 49-41B-22 CONSIDERED BY
7 THE APPLICANTS WHEN ROUTING THE PROJECT?

8 A. Yes.

9 **VI. PROJECT DESIGN AND SITING FLEXIBILITY REQUEST**

10 Q. WHAT UPGRADES WILL BE MADE TO THE EXISTING BIG STONE SOUTH
11 SUBSTATION?

12 A. The Project will include an expansion of the existing Big Stone South Substation
13 and modifications to the substation to accommodate new breaker positions and
14 additional reactive power equipment (within Otter Tail-owned property). The
15 existing ring bus configuration will be modified to a breaker-and-a-half
16 configuration by adding one additional row to the 345 kV portion of the substation.
17 The expansion will allow for new breaker positions added for the BSSA Project and
18 additional reactive power equipment. The current fenced area of the Big Stone
19 South Substation will be expanded to the south on Otter Tail-owned property to
20 accommodate this new substation equipment.

21
22 Q. OTHER THAN THE EXISTING ACCESS INTO THE BIG STONE SOUTH
23 SUBSTATION, WILL PERMANENT ACCESS ROADS OUTSIDE OF THE
24 PERMANENT ROW BE REQUIRED FOR THE PROJECT?

25 A. No.

26
27 Q. WHAT IS THE WIDTH OF THE PROPOSED PERMANENT RIGHT-OF-WAY
28 ("ROW") ALONG THE PROJECT ROUTE?

29 A. The proposed permanent ROW is an approximately 150-foot-wide area centered
30 on the Project Route.

31
32 Q. WHAT TYPE OF STRUCTURES ARE PROPOSED FOR THE PROJECT?

33 A. The Project is anticipated to be constructed on steel-monopole structures.
34 Specialty structures such as H-frame or three-pole structures may be used where

1 unique features are encountered along the route, such as crossing other
2 transmission lines.

3 The Project is expected to require up to 27 transmission structures between
4 120 and 180 feet tall with spans ranging from 400 to 1,300 feet between structures,
5 depending on geological, environmental, or engineering constraints identified
6 during micro-siting. The structures will be bolted to concrete, drilled pier
7 foundations embedded in the ground. Foundation sizes vary generally from 7 to
8 14 feet in diameter and from 25 to 60 feet in depth.

9
10 Q. PLEASE DESCRIBE THE CONDUCTORS AND ASSOCIATED
11 COMMUNICATION LINES PROPOSED FOR THE PROJECT.

12 A. The Project will include the initial installation of a single-circuit 345 kV
13 transmission line and associated communication lines, referred to as an optical
14 ground wire (“OPGW”), with a second 345 kV circuit and associated overhead
15 ground wire (“OHGW”) added in the future when conditions warrant. Each circuit
16 of the line will consist of three-phase conductors hung vertically from insulators
17 attached to davit arms on each side of the monopole structure. Each phase will
18 have a total of two conductor bundles with 18-inch, vertical spacing. The phase
19 conductors are expected to be twisted pair (“TP”), 636 ACSR “Grosbeak.” TP
20 conductors consist of two conductors placed side by side and twisted at a
21 predefined distance by the manufacturer. Each phase will consist of two of these
22 TP conductors to provide optimal current carrying capacity at 345 kV.

23 The associated communication lines proposed for the Project with the initial
24 installation of the single circuit are expected to be OPGW. OPGW is a fiber optic
25 cable with a designated set of fibers surrounded by steel wires that serve a dual
26 purpose at the top of each structure: (1) to protect the phases from lightning
27 strikes; and (2) to exchange information (i.e. communicate) between the endpoint
28 substations and other locations on the transmission system.

29
30 Q. ARE THE APPLICANTS REQUESTING AUTHORIZATION TO INSTALL A
31 SECOND 345 KV CIRCUIT AND ASSOCIATED OHGW WHEN CONDITIONS
32 WARRANT IN THE FUTURE?

33 A. Yes.

34

1 Q. IN THE APPLICATION, THE APPLICANTS PROPOSE A CONDITION
2 REGARDING ADJUSTMENTS TO THE LOCATION OF THE PROPOSED ROW
3 AND STRUCTURE LOCATIONS. WHAT IS THAT PROPOSED CONDITION?

4 A. The Applicants request the ability to make adjustments to the ROW and/or
5 structure locations within an area depicted on the Figure 4 series of Appendix A
6 (“Flexibility Area”). More specifically, Applicants propose the following
7 conditions:

8 *With respect to the Project, Applicants may adjust the 150-foot wide*
9 *ROW and the structure locations within the ROW so long as: (a) both*
10 *remain within the corridor field-surveyed for both cultural resources*
11 *and wetlands, the “Flexibility Area” shown on the Figure 4 series of*
12 *Appendix A; (b) impacts to cultural resources are avoided or mitigated*
13 *in consultation with the SHPO; (c) wetland impacts are avoided or are*
14 *in compliance with applicable [U.S. Army Corps of Engineers] USACE*
15 *regulations; (d) the ROW and structures will not be located in*
16 *potentially undisturbed grasslands (as depicted in Figure 12 and*
17 *Figure 15 of Appendix A); and (e) all other applicable regulations and*
18 *requirements are met.*

19 *Any adjustments that do not meet the above-stated limitations are*
20 *considered a “material change.” If a “material change” is proposed,*
21 *Applicants shall file a request for approval of the “material change”*
22 *prior to making the adjustment pursuant to the following approval*
23 *process:*

- 24 • *Applicants will file with the Commission and serve on the official*
25 *Service List a request for approval of a material change that includes:*
- 26 ○ *An affidavit describing the proposed adjustment(s), the reason for*
27 *the adjustment(s), the reason the adjustment(s) do(es) not comply*
28 *with one or more flexibility limitations set forth above, and*
29 *information regarding compliance with all other applicable*
30 *requirements; and*
 - 31 ○ *A map showing the approved location of the 150-foot-wide ROW*
32 *and structure locations and the proposed adjusted locations (in*
33 *different colors).*

- 1 • *Once received, the information would be reviewed by Commission*
- 2 *staff, and Commission staff will have 10 calendar days within which to*
- 3 *request further Commission review.*
- 4 • *If no further review is requested, Applicants may proceed with the*
- 5 *adjustment.*
- 6 • *If further review is requested, the Commission will issue a decision*
- 7 *regarding Applicants' request at its next available regularly scheduled*
- 8 *Commission meeting, subject to notice requirements.*

9 Wetland delineations and mapping and cultural resource field surveys have
10 been completed within the Flexibility Area.

11
12 Q. WHY ARE THE APPLICANTS PROPOSING THIS CONDITION?

13 A. The Applicants are continuing to work with landowners regarding structure
14 locations and Project design. Additionally, the Project is in the process of
15 completing additional survey and geotechnical work. To try to accommodate
16 landowner requests, and to avoid and/or minimize potential environmental
17 impacts, shifts in the ROW and/or structure locations may be needed. For this
18 reason, the Applicants request that the permit allow the flexibility requested,
19 subject to the conditions specified above.

20
21 Q. PLEASE DESCRIBE THE TEMPORARY WORKSPACE THAT WILL BE
22 REQUIRED FOR THE PROJECT DURING CONSTRUCTION.

23 A. The transmission line construction process will include the following temporary
24 use areas that will be restored following construction, unless the landowner
25 requests for them to remain after construction is complete:

- 26 • Pulling/tensioning sites will be required to facilitate conductor installation.
- 27 These sites require a flattened area approximately 200 feet x 700 feet. It is
- 28 expected there will be up to 13 of these locations required for the Project.
- 29 • Temporary access to the structures will be required to enable foundation
- 30 installation, structure assembly and erection, conductor and OPGW or OHGW
- 31 installation. This access will consist of 30-foot-wide, temporary roads
- 32 extending from existing roads to the structure sites. Temporary access roads
- 33 may be bladed, if needed, to provide a level area. To prevent rutting, temporary
- 34 mats may be installed to facilitate equipment travel to the structure sites, as
- 35 determined necessary by the contractor.

- Each structure site will require an approximately 150-foot x 200-foot temporary workspace to facilitate foundation construction, structure assembly, and erection.
- An approximately 3-acre, temporary material site may be needed to store materials.

Q. HAVE THE LOCATIONS OF THESE TEMPORARY USE AREAS BEEN FINALIZED?

A. No. The final locations of these temporary use areas are dependent upon the Project's final design and micro siting of structure locations.

Q. IN THE APPLICATION, THE APPLICANTS MAKE A COMMITMENT REGARDING THE LOCATION OF TEMPORARY USE AREAS. WHAT IS THAT COMMITMENT?

A. Applicants commit to the following with respect to the temporary use areas: (a) all necessary land rights will be secured; (b) cultural resource field surveys and wetland delineations will be conducted, if not in an area previously surveyed; (c) cultural resource impacts will be avoided or mitigated in consultation with the South Dakota State Historic Preservation Office, State Historical Society ("SHPO"); (d) wetland impacts will be avoided or will be in compliance with applicable USACE regulations; (e) potentially undisturbed grasslands (as depicted in Figure 12 and Figure 15 of Appendix A) will be avoided; and (f) all other applicable regulations and requirements will be met.

Q. ARE ANY FUTURE MODIFICATIONS OR EXPANSIONS OF THE PROJECT CURRENTLY PLANNED?

A. Other than adding the second 345 kV circuit and associated OHGW when future conditions warrant and the flexibility request (discussed above), the Applicants are not aware of any future additions, modifications, or expansions of the Project.

1 **VII. PROJECT CONSTRUCTION**

2 Q. DISCUSS THE PERSONNEL THAT WILL BE INVOLVED IN THE
3 CONSTRUCTION OF THE PROJECT.

4 A. While employment estimates specific to the Project are not available, it is
5 anticipated that construction of the BSSA Project, which includes the Project, will
6 employ approximately 100 to 150 construction workers during the construction
7 period. The majority of positions needed during construction of the Project will be
8 contracted and are expected to include, but are not limited to: project
9 management, project assistant, safety, structure hauling, structure framing and
10 setting, linemen, civil foundation drilling and installation, quality
11 assurance/quality control, construction project management, inspections, design,
12 concrete truck drivers, and an environmental manager for the 345-kV line portion
13 of the BSSA Project. Additional positions expected to be involved in the
14 construction related to the expansion of the Big Stone South Substation are
15 anticipated to be more of a balanced blend of Applicant's employees and
16 contracted employees in positions that include, but are not limited to: project
17 management, electrical technicians, relay technicians, inspections, construction,
18 design, construction management and safety. Construction of the Project is
19 anticipated to create temporary construction jobs that will provide an influx of
20 income to the area.

21
22 Q. PLEASE PROVIDE AN OVERVIEW OF THE CONSTRUCTION PROCESS.

23 A. Construction can begin once all necessary regulatory permits, authorizations, and
24 clearances are obtained. The general steps in the construction process are:

- 25 • Construction survey and staking;
- 26 • ROW clearing;
- 27 • Mobilization and preparation of staging / laydown yards;
- 28 • Grading (as needed), excavation, and foundation installation;
- 29 • Structure setting;
- 30 • Wire stringing and clipping once there are enough structures set consecutively
31 in a row to support a wire pull; and
- 32 • Cleanup of the construction areas.

1 Following the cleanup procedure, restoration and reseeded will begin
2 (outside of areas that were previously cultivated). Areas disturbed by construction
3 will be restored to preconstruction contours to the extent practicable and in
4 accordance with landowner agreements.

5
6 Q. WILL THE PROJECT BE CONSTRUCTED TO MAINTAIN THE MINIMUM
7 CONDUCTOR TO GROUND CLEARANCE REQUIRED BY THE NATIONAL
8 ELECTRICAL SAFETY CODE (“NESC”)?

9 A. Yes.

10
11 Q. HOW WILL THE APPLICANTS MINIMIZE IMPACTS DURING
12 CONSTRUCTION?

13 A. The Applicants have conducted extensive work to-date to avoid, minimize, and/or
14 mitigate potential environmental impacts, and will continue those efforts during
15 construction. As described in the Application, the Applicants will employ best
16 management practices (“BMPs”) to minimize and mitigate impacts, particularly to
17 wetlands, waterbodies, and agricultural areas. This includes development and
18 implementation of a stormwater pollution prevention plan (“SWPPP”) and
19 compliance with applicable stormwater, wetland/waterbody, and floodplain
20 permitting requirements. Mitigation measures for agricultural areas include weed
21 management during construction, and re-establishing drainage patterns and
22 contours after construction to the extent possible and in accordance with
23 applicable permits and landowner agreements.

24
25 Q. WITH RESPECT TO THE USE OF EXISTING LOCAL ROADS DURING
26 CONSTRUCTION, WILL THE APPLICANTS COORDINATE WITH LOCAL ROAD
27 AUTHORITIES REGARDING THE USE AND RESTORATION OF THOSE
28 ROADS?

29 A. Yes. The Applicants have met with Big Stone Township to discuss road use and
30 will continue that coordination. The Applicants will also coordinate with Grant
31 County regarding road use. In accordance with SDCL § 49-41B-38, the Applicants
32 will provide a road bond to the Commission in favor of the applicable road
33 authorities.

34

1 Q. WHAT STEPS WILL THE PROJECT TAKE TO PREPARE FOR A POTENTIAL
2 EMERGENCY SITUATION AT THE PROJECT SITE DURING CONSTRUCTION
3 AND WHEN THE PROJECT IS OPERATIONAL?

4 A. The Applicants will develop a workplan and an emergency response plan and
5 support workforce and community safety during Project construction. The
6 Project's general contractor will identify and secure all active construction areas to
7 prevent public access to potentially hazardous areas and will require workers to
8 follow safety standards. In the event an incident does occur, the Project's
9 emergency response plan will be implemented, and area local emergency services
10 will be contacted, as needed. In addition, the construction workforce is not
11 anticipated to impact to the local government, utilities, or community services.

12 **VIII. PROJECT OPERATION AND MAINTENANCE**

13 Q. DISCUSS THE PERSONNEL THAT WILL BE INVOLVED IN THE OPERATION
14 OF THE PROJECT.

15 A. It is anticipated that the Applicants would retain and oversee contractors for
16 operation and maintenance of the 345 kV line portion of the BSSA Project.
17 However, operation and maintenance of the expanded/upgraded Big Stone South
18 Substation would be performed primarily by existing Otter Tail employees.
19 Operation and maintenance of the 345 kV line portion of the BSSA Project and the
20 Big Stone South Substation are not expected to require new full-time positions.

21
22 Q. PLEASE DESCRIBE THE PROCEDURES THAT WILL BE EMPLOYED FOR
23 INSPECTIONS AND MAINTENANCE OF THE PROJECT.

24 A. Once the Project is operational, regular maintenance and inspections will be
25 performed to ensure the Project continues to operate safely, efficiently, and
26 reliably. The Applicants will perform maintenance of the Project in compliance
27 with the applicable reliability standards established by the North American
28 Electric Reliability Corporation ("NERC"). Generally, the Applicants will inspect
29 the transmission lines at least once per year. Inspections are typically limited to
30 the immediate Project ROW and pre-determined access points. If concerns or
31 problems are found during inspections, repairs will be performed and the
32 landowners and appropriate agencies will be notified, as needed.

33 The Big Stone South Substation would be visually inspected monthly to
34 verify that the physical equipment and fence have not been damaged, the gravel is

1 free of weeds and washouts, and the premises is free from trash. Equipment testing
2 would also be done in accordance with the NERC reliability standards. If any
3 damage or concerns are identified during inspections or testing, repairs or
4 equipment replacements will be performed, as needed.

5 **IX. LAND USE AND COMMUNITY IMPACTS**

6 Q. IS THE PROJECT COMPATIBLE WITH THE EXISTING LAND USES IN THE
7 VICINITY?

8 A. Yes. The Project is compatible with the existing land use along the proposed Route
9 and the Flexibility Area, which is primarily agricultural. Minimal existing
10 agricultural land would be taken out of production by the proposed Project,
11 primarily the area around transmission structures. Once construction is
12 completed, agricultural activities will be allowed to resume within the proposed
13 ROW between structures. Landowners will be compensated for any crop damage
14 that occurs during construction and will be compensated for granting an easement
15 for the Project.

16 Additionally, the Project is consistent with the existing built landscape in
17 the area, which includes existing linear infrastructure (e.g., BNSF railroad, U.S.
18 Highway 12, and several local roads), existing transmission corridors (i.e., a 230-
19 kV Northwestern Energy line, two 115-kV Great River Energy lines), the Big Stone
20 Power Plant (a coal-fired electric generation facility), and Big Stone City, South
21 Dakota (which consists of more densely developed residential, commercial, and
22 industrial land use). The Project would parallel existing linear infrastructure,
23 resulting in minimal change to the existing visual landscape. Additionally,
24 modifications to the Big Stone South Substation are not expected to create
25 additional impacts in the vicinity of the Project since the substation is part of the
26 existing environment.

27
28 Q. DOES THE PROJECT AVOID IMPACTS TO PUBLIC LANDS?

29 A. Yes. As discussed in the Application, the Applicants selected the proposed Route
30 in part because it avoids public lands and conservation easements. There is one
31 SDGFP Game Production Area (“GPA”) on Otter Tail-owned lands within the
32 Project ROW; however, no structures will be located on the GPA. Additionally, the
33 Applicants have consulted with SDGFP regarding the location of the Project ROW
34 and structure placement in relation to the GPA.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36

Q. WILL THE PROJECT HAVE A SIGNIFICANT IMPACT ON NOISE LEVELS?

A. No. Construction noise will be temporary. Construction activities will mostly occur during daytime hours. Additionally, construction noise levels will be minimized by ensuring that construction equipment is equipped with mufflers that are in good working order. In addition, noise from operation and maintenance of the Project after construction is completed is anticipated to be minimal.

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. In the unlikely event television or radio interference is caused by or from the operation of the Project in those areas where good reception was available prior to construction of the Project, the Applicants will evaluate the circumstances contributing to these impacts and determine the necessary actions to restore reception to pre-existing levels.

Q. WILL THE PROJECT HAVE AN IMPACT ON COMMUNITY FACILITIES AND SERVICES?

A. No. The existing emergency services are expected to be sufficient to support construction personnel during the construction phase. No significant increase in the permanent population of local communities would be expected from construction and operation of the Project, and the construction workforce is not anticipated to create any measurable impact to the local government, utilities, or community services or facilities.

Q. IS THE PROJECT COMPATIBLE WITH EXISTING LAND USES AND FUTURE DEVELOPMENT ALONG AND AROUND THE PROJECT?

A. Yes. As discussed above, the Route was selected to avoid existing population centers and other developed areas and is located primarily on agricultural lands. Additionally, the Route parallels existing linear corridors to minimize potential impacts to the landowners and existing agricultural land uses. As mentioned previously, the Applicants will continue to coordinate with landowners on final structure placement and design.

1 Q. WILL THE APPLICANTS PARTICIPATE IN THE SOUTH DAKOTA ONE-CALL
2 PROGRAM?

3 A. Yes.

4 **X. LOCAL LAND USE REGULATIONS**

5 Q. DOES THE PROJECT REQUIRE ANY LOCAL LAND USE APPROVALS?

6 A. Yes. The Project is located in two zoning districts in Grant County: the Agricultural
7 District and the Commercial/Industrial District. Within each district, the Project
8 is a conditional use requiring a conditional use permit (“CUP”). Applicants have
9 been coordinating with Grant County regarding the CUP process and plan to
10 submit a CUP application in April 2024. Closer to the time the Project begins
11 construction, Applicants will also secure a building permit for the Project.

12 Additionally, if it is not possible for final structure placement to avoid
13 floodplains, the Project may also need to obtain a floodplain development permit
14 from Grant County. Applicants have discussed the floodplain development
15 permitting process with Mr. Steve Berkner, the Grant County Floodplain
16 Administrator, and will obtain floodplain development permits, as needed.

17 **XI. OTHER PERMITS AND APPROVALS**

18 Q. IN ADDITION TO AN ENERGY FACILITY PERMIT FROM THE COMMISSION,
19 WHAT OTHER PERMITS OR APPROVALS ARE REQUIRED FOR THE
20 PROJECT?

21 A. Various federal, state, and local approvals may be required for the Project. Table
22 26-1 in the Application identifies potential permits or approvals required for the
23 construction and operation of the Project, and also identifies the status of each
24 permit/approval.

25
26 Q. WILL THE APPLICANTS OBTAIN ALL LOCAL, STATE, AND FEDERAL
27 PERMITS AND APPROVALS REQUIRED FOR THE PROJECT?

28 A. Yes.

29

1 **XII. CONCLUSION**

2 Q. BASED ON THE ANALYSIS THE APPLICANTS HAVE CONDUCTED, HAS THE
3 PROJECT BEEN SITED TO MINIMIZE POTENTIAL IMPACTS?

4 A. Yes. As detailed in the Application, my Direct Testimony and Mr. Scheidecker's
5 Direct Testimony, the Project has been thoughtfully routed and designed to avoid
6 or minimize potential impacts to inhabitants, resources, and land use in and along
7 the Route.

8

9 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

10 A. Yes.

11

12

13 Dated this 15th day of April, 2024.

14

15

16 

17 Jason Weiers