BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

In the Matter of the Transmission Permit for the Big Stone South to Ellendale Project

EL13-028

MONTANA-DAKOTA UTILITIES CO. AND OTTER TAIL POWER COMPANY'S ANSWERS TO GERALD PESALL'S FIRST SET OF DISCOVERY REQUESTS TO APPLICANTS DATED JANUARY 28, 2014

Montana-Dakota Utilities Co. and Otter Tail Power Company (collectively "the Owners"), for its Responses to Gerald Pesall's First Set of Discovery Requests to Applicants dated January 28, 2014, states as follows:

ANSWERS TO INTERROGATORIES

1. State the name, title, contact information and relationship to the applicants of each individual, other than counsel, who assists in preparing answers to these discovery requests.

ANSWER: The answers were prepared based on the knowledge of employees of Otter Tail Power Company, Montana-Dakota Utilities Company, Power Engineers, Inc., Kadrmas, Lee & Jackson and HDR Engineering, Inc. as a whole. The primary persons are as follows, who do not have personal knowledge of all the answers.

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EXHIBIT
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2. Describe the impact, if any, applicants contend the installation of the proposed transmission line will have to property values for real property lying under or within ½ mile of the proposed route, and any facts, studies, or expert opinions upon which that contention is based. Include in your answer both urban and rural property values.

ANSWER: Section 19.1.2 of the South Dakota Facility Permit Application ("the Application") states, among other things, that "The South Dakota Facility is not expected to have significant short- or long-term effects on . . . land values . . . ."

Owners believe that the South Dakota Facility will not have significant short- or long-term effects on land values due to the relatively minimal footprint of the Project. The Project anticipates constructing approximately 5 or 6 monopoles per mile with a span of 700-1,200 feet between poles. The permanent impact is less than 5 acres of the nearly 1,600 acres temporarily and permanently affected by the Project.

3. Describe the impact, if any, applicants contend the installation of the proposed transmission line will have on common species of livestock, including cattle, horses, swine, and poultry which are, or may be, kept under or within ¼ mile of the proposed route, and any facts, studies, or expert opinions upon which that contention is based.

ANSWER: As stated in sections 19.2.2 and 23.4.5 of the Application, no impacts are anticipated to livestock operations due to the Project for the reasons stated in these sections of the Application.

4. Describe the level of soil compaction, if any, applicants contend will result from construction and maintenance of the transmission line, the impact that compaction may have on the productivity of the property, the time, effort, and cost which would be required to restore the soil to its original condition, and the facts, studies, or expert opinions upon which that contention is based.

ANSWER: Soil compaction likely will only occur during construction of the Project. As stated in section 10.3 of the Application, any temporary compaction impact caused by the construction process will be decompacted and restored to preconstruction contours to the extent practicable. No long term impacts from soil compaction are expected because of the decompaction and remediation process described in section 10.3 of the Application.

5. State whether applicants have prepared any estimates, and if so, provide those estimates together with the facts, studies, or expert opinions upon which they are based, as to the total dollar value for:

   a. Annual lost productivity due to proposed transmission line's impact on livestock along the entire lengthy of the proposed line.

   b. Annual lost productivity due to soil compaction and interference with farming operations caused from construction and ongoing maintenance along the entire lengthy of the proposed line.

   c. Total reduction in real property values along the entire length of the proposed line, both for property lying under the proposed route and for adjacent property within ½ mile.

ANSWER: As discussed in sections 14.1.2 and 19.2 of the Application, and as indicated in answers to interrogatories numbers 2, 3, and 4 above, the permanent impact is expected to be minimal. The Owners have not prepared annual estimates of lost productivity, and no such annual estimates are required to be prepared.

6. State the impact on road maintenance requirements and costs, if any, which the applicants contend will be incurred by state and local governments as a result of increased road use during initial construction and as a result of ongoing maintenance, and the facts, studies, or expert opinions upon which that contention is based.

ANSWER: As indicated in Section 19.3 of the Application, there will be no impacts on road maintenance requirements and costs. While the roads in the vicinity of the Project will see increased usage during the construction phase of the Project, the Owners do not anticipate any permanent impacts to the area road maintenance. Any damage to area roads will be monitored and repaired during construction and following completion of construction of the Project.

7. State the number of actual residential or commercial customers in South Dakota which applicants contend will benefit from the construction of the proposed line, the facts, studies, or expert opinions upon which that contention is based, and describe in detail:

   a. The current and projected increase in service reliability those residential and commercial customers will experience, if any,

   b. The current and projected average cost for electrical services those residential and commercial customers will experience, if any.

   c. Any other measurable benefits that those residential and commercial customers may be able to observe.

ANSWER: The Project involves a high voltage transmission line, developed collaboratively as a MISO Multi-Value Project (MVP) to increase transmission capacity to provide the entire MISO footprint ("Midwest Region") the infrastructure needed to support the renewable energy mandates for all the states in the Midwest Region.

The Owners are not able to identify the number of actual residential or commercial customers in South Dakota that will benefit from the construction of the Project because transmission system modeling involved in identifying high voltage transmission facilities is not done to the individual customer level. Rather, benefits from the construction of a transmission project are identified on the basis of geographic areas. Since the need for the Project is driven by demand across the Midwest Region, benefits are quantified regionally rather than on a state-by-state basis.

The numerous benefits offered by this Project and the rest of the Multi-Value Projects ("MVPs") are described more fully in the report issued by MISO called "Multi-Value Project Portfolio – Results and Analyses" included as Appendix B.1 to the Application (specifically, see Section 8 of this report for the quantifiable benefits of the MVPs to the Midwest Region).

a. **Maintaining reliable service to customers is always a high priority of the Owners. As stated in Section 6.1 of the Application (Page 19), the construction of this Project will benefit the Owners' customers by enhancing connections across the transmission system to be better able to withstand system failures. Additionally, the Project will remove overloads on local transmission facilities as more generation facilities are constructed in the region. Furthermore, due to the interconnected nature of the transmission system, the Project will also support the transmission system outside of MISO by providing a new high voltage source to the existing transmission system.**

b. **As stated in sections 4.0 and 6.0 of the Application, the Big Stone South to Ellendale project is one of seventeen MVPs approved by MISO. The purpose of these MVPs is to reduce the wholesale cost of energy delivery for the consumers across the Midwest Region by enabling the delivery of low-cost generation to load, reduce congestion costs, and increase system reliability. Because the benefits of the MVPs are spread throughout MISO, the costs of these MVPs are shared among all customers who are served by utilities that are members of MISO. Therefore, all customers in the state of South Dakota who are served by utilities within MISO will receive quantifiable benefits and a portion of the costs associated with the MVPs. Outside of OTP and MDU, the Owners are not familiar with the portion of MVP costs other South Dakota customers will receive from these other MISO member utilities and therefore are not able to quantify the current and projected average cost for electrical services for all customers in South Dakota resulting from the Project or the rest of the MVPs.**

c. **In addition to the benefits discussed above and found within the MISO report of Appendix B.1 of the Application, other benefits of the Project are discussed in sections 4.0 and 19.1.2 of the Application. These included both short-term and long-term benefits. The presence of this Project in South Dakota will allow for flexibility in serving customer growth and new generation resources in the State by having access to a robust transmission line bolstering the existing transmission system. Interconnections to this line will be open to any interested party on a non-discriminatory basis in accordance with rules established by the Federal Energy Regulatory Commission (FERC) and administered by MISO on behalf of the Owners. Local commercial residents are expected to reap the benefits of local economic development as a result of the Project, namely from lodging, meals, and other consumer goods and services of the approximately 75-150 workers involved in activities leading up to and directly involved with the construction of the Project. The impact to the local economics, not including**

property taxes, from the Project is estimated to range from $3 million to $7 million through the construction period of the Project.

Long-term benefits to residential and commercial customers also will include a variety of taxes (property taxes, contractor tax, excise tax, sales tax, and use tax) which will increase the tax base for counties in which this facility is located. Based on the current effective composite tax rates for South Dakota, the Owners estimate a yearly property tax payment in the range of $1.75 to $2.25 million. This equals an approximate tax per mile of transmission line in the range of $11,200 to $14,500 in South Dakota based on approximately 155 miles of line. On a county by county basis, this calculates to property taxes of approximately $715,000 to $885,000 for Brown County, $535,000 to $755,000 for Day County, and $490,000 to $605,000 for Grant County.

Furthermore, the Owners' preliminary projections of sales/use taxes and contractor excise taxes paid during the project range from $5.5 million to $9 million.

8. State the number of actual residential or commercial customers in Minnesota which applicants contend will benefit from the construction of the proposed line, the facts, studies, or expert opinions upon which that contention is based, and describe in detail:

    a. The current and projected increase in service reliability those residential and commercial customers will experience, if any.

    b. The current and projected average cost for electrical services those residential and commercial customers will experience, if any.

    c. Any other measurable benefits that those residential and commercial customers may be able to observe.

ANSWER: The Project involves a high voltage transmission line, developed collaboratively as a MISO Multi-Value Project (MVP) to increase transmission capacity to provide the entire Midwest Region the infrastructure needed to support the renewable energy mandates for all the states in the Midwest Region.

The Owners are not able to identify the number of actual residential or commercial customers in Minnesota that will benefit from the construction of the Project because transmission system modeling involved in identifying high voltage transmission facilities is not done to the individual customer level. Rather, benefits from the construction of a transmission project are identified on the basis of geographic areas. Since the need for the Project is driven by demand across the Midwest Region, benefits are quantified regionally rather than on a state-by-state basis.

The numerous benefits offered by this Project and the rest of the MVPs are described more fully in the report issued by MISO called "Multi-Value Project Portfolio – Results and Analyses" included as Appendix B.1 to the Application (specifically, see Section 8 of this report for the quantifiable benefits of the MVPs to the Midwest Region).

a. **Maintaining reliable service to customers is always a priority of the Owners. As stated in Section 6.1 of the Application (Page 19), the construction of this Project will benefit the Owners' customers by enhancing connections across the transmission system to be better able to withstand system failures. Additionally, the Project will remove overloads on local transmission facilities as more generation facilities are constructed in the region. Furthermore, due to the interconnected nature of the transmission system, the Project will also support the transmission system outside of MISO by providing a new high voltage source to the existing transmission system.**

b. **As stated in sections 4.0 and 6.0 of the Application, the Big Stone South to Ellendale project is one of seventeen MVPs approved by MISO. The purpose of these MVPs is to reduce the wholesale cost of energy delivery for the consumers across the Midwest Region by enabling the delivery of low-cost generation to load, reduce congestion costs, and increase system reliability. Because the benefits of the MVPs are spread throughout MISO, the costs of these MVPs are shared among all customers who are served by utilities that are members of MISO. Therefore, all customers in the state of Minnesota who are served by utilities within MISO will receive quantifiable benefits and a portion of the costs associated with the MVPs. Outside of OTP, the Owners are not familiar with the portion of MVP costs other Minnesota customers will receive from these other MISO member utilities and therefore are not able to quantify the current and projected average cost for electrical services for customers in Minnesota resulting from the Project or the rest of the MVPs.**

c. **In addition to the benefits discussed above and found within the MISO report of Appendix B.1 of the Application, other benefits of the Project are discussed in sections 4.0 and 19.1.2 of the Application. These included both short-term and long-term benefits. Although these benefits will not be as great as the states in which construction will occur, it is feasible that Minnesota may reap the benefits of some local economic development as a result of the Project, namely from lodging, meals, and other consumer goods and services of some workers involved in activities leading up to and directly involved with the construction of the Project. Furthermore, the Project will improve the ability to serve present and future economic development in the area. Electricity is one of the foundations of the economic development in the country.**

9. State the number of actual residential or commercial customers in North Dakota which applicants contend will benefit from the construction of the proposed line,

the facts, studies, or expert opinions upon which that contention is based, and describe in detail:.

a. The current and projected increase in service reliability those residential and commercial customers will experience, if any.

b. The current and projected average cost for electrical services those residential and commercial customers will experience, if any.

ANSWER: The Project involves a high voltage transmission line, developed collaboratively as a MISO Multi-Value Project (MVP) to increase transmission capacity to provide the entire Midwest Region the infrastructure needed to support the renewable energy mandates for all the states in the Midwest Region.

The Owners are not able to identify the number of actual residential or commercial customers in North Dakota that will benefit from the construction of the Project because transmission system modeling involved in identifying high voltage transmission facilities is not done to the individual customer level. Rather, benefits from the construction of a transmission project are identified on the basis of geographic areas. Since the need for the Project is driven by demand across the Midwest Region, benefits are quantified regionally rather than on a state-by-state basis.

The numerous benefits offered by this Project and the rest of the MVPs are described more fully in the report issued by MISO called "Multi-Value Project Portfolio – Results and Analyses" included as Appendix B.1 to the Application (specifically, see Section 8 of this report for the quantifiable benefits of the MVPs to the MISO region).

a. Maintaining reliable service to customers is always a priority of the Owners. As stated in Section 6.1 of the Application (Page 19), the construction of this Project will benefit the Owners' customers by enhancing connections across the transmission system to be better able to withstand system failures. Additionally, the Project will remove overloads on local transmission facilities as more generation facilities are constructed in the region. Furthermore, due to the interconnected nature of the transmission system, the Project will also support the transmission system outside of MISO by providing a new high voltage source to the existing transmission system.

b. As stated in sections 4.0 and 6.0 of the Application, the Big Stone South to Ellendale project is one of seventeen MVPs approved by the MISO. The purpose of these MVPs is to reduce the wholesale cost of energy delivery for the consumers across the Midwest Region by enabling the delivery of low-cost generation to load, reduce congestion costs, and increase system reliability. Because the benefits of the MVPs are spread throughout MISO, the costs of these MVPs are shared among all customers who are served by utilities that are

members of MISO. Therefore, all customers in the state of North Dakota who are served by utilities within MISO will receive quantifiable benefits and a portion of the costs associated with the MVPs. Outside of OTP and MDU, the Owners are not familiar with the portion of MVP costs other North Dakota customers will receive from these other MISO member utilities and therefore are not able to quantify the current and projected average cost for electrical services for customers in North Dakota resulting from the Project or the rest of the MVPs.

c. In addition to the benefits discussed above and found within the MISO report of Appendix B.1 of the Application, other benefits of the Project are discussed in sections 4.0 and 19.1.2 of the Application. These included both short-term and long-term benefits. The presence of this Project in North Dakota will allow for flexibility in serving customer growth and new generation resources in the State by having access to a robust transmission line bolstering the existing transmission system. Interconnections to this line will be open to any interested parties on a non-discriminatory basis in accordance with rules established by the Federal Energy Regulatory Commission (FERC) and administered by MISO on behalf of the Owners. Local commercial residents are expected to reap the benefits of local economic development as a result of the Project, namely from lodging, meals, and other consumer goods and services of the workers involved in activities leading up to and directly involved with the construction of the Project.

Long-term benefits to residential and commercial customers also will include a variety of taxes which will increase the tax base for Dickey County. Furthermore, the Project will improve the ability to serve present and future economic development in the area. Electricity is one of the foundations of the economic development in the country.

10. Describe in detail nature of the Ellendale substation, to which the proposed transmission line is projected to connect, and any other transmission lines, generating facilities, or other facilities which will be directly connected to that substation.

ANSWER: The Ellendale 345-kV Substation will be constructed and owned by Montana-Dakota. It will be located about 1.5 miles west of Ellendale, North Dakota, along the west side of 87th Avenue SE in Section 9, Ellendale Township (Township 129N, Range 63W), Dickey County, and across the street from the existing Montana-Dakota Ellendale 230-kV Substation, which is located in Section 10 of Ellendale Township. The footprint of the substation will be approximately 11.3 acres. Construction of the new Ellendale 345-kV Substation will involve the installation of two 345-kV circuit breakers, one 345-kV line termination structure, five 345-kV disconnect switches, one 345-kV/230-kV 300/400/500 Mega Volt Ampere (MVA) Auto-Transformer, a 345-kV Shunt Line Reactor, eight 230-kV circuit breakers, twenty-one 230-kV disconnect switches, four 230-kV line termination

structures, associated arresters, Capacitive Voltage Transformers (CVTs), bus work, and protective relaying and controls required to support the circuit breakers. The existing Merricourt, Tatanka, and Hankinson 230-kV lines will be relocated to terminate in this substation, as well as an Ellendale 230-kV tie line back to the original Ellendale 230-kV Substation.

11. Describe in detail nature of the Big Stone substation, to which the proposed transmission line is projected to connect, and any other transmission lines, generating facilities, or other facilities which will be directly connected to that substation.

ANSWER: The Big Stone South substation will be a 345/230kV substation that will be constructed to allow two new 230kV lines and two new 345kV lines. The 230kV lines will extend between the existing Big Stone Power plant and this new substation. One 345kV line will connect this facility to the new Ellendale 345kV substation and the second 345kV line will connect this facility to the Brookings County 345kV substation.

This new substation will be located in the NE1/4 of the NW1/4 of section 24, Township 121N, Range 47W. The new substation includes four 230kV breakers for the incoming 230kV lines from the existing Big Stone Power plant 230kV substation. Two 345/230/13.8 kV, 448MVA transformers, with 25 Mvar reactors, will step-up the voltage to 345kV for two new 345kV lines. The 345kV bus will have four 345kV breakers to provide protection for these transformers and the new 345kV lines. A new control house and a fenced area of approximately 600 x 600 feet and will be located on 39 acres.

12. Describe in detail the impact, if any, applicants contend that the proposed transmission line would have on the usability and productivity of agricultural equipment which is guided by global positioning systems (GPS), or by ground base transmitter systems, when used under or within ¼ mile of the transmission line. Identify any facts, studies, or expert opinions upon which that contention is based.

ANSWER: Section 14.4 of the Application addresses any impact of the Project on the use of global positioning systems (GPS). There are two possible impacts to GPS systems: (1) a line-of-sight obstruction; and (2) electric field corona from high voltage power lines. The Project will have no effect on the usability and productivity of GPS or ground based transmitter systems.

Regarding "line of sight" obstructions, the Project's impact to GPS systems is similar to the impact from trees, buildings or other line-of-sight obstructions. Any limited line of sight impact on the GPS system caused by the Project's structures is expected to be temporary and will be eliminated once the equipment or GPS receiver moves such that the structure no longer impedes the line of sight between the receiver and the GPS satellites at issue.

Some GPS systems also make use of real-time kinematic (RTK) systems to improve the accuracy of the GPS system by making use of the ultra-high frequency radio communication range. RTK systems are ground based GPS systems. RTK signals are transmitted from antennas that are typically only a few meters high, and thus, transmission line towers are not expected to produce much blocking of the line of sight signals from these sources either. Repositioning of the RTK base station antenna should resolve any line of sight interference issues if they occur.

Regarding electric field corona from the Project, there is no expected impact. Electric field corona from high voltage transmission lines can produce radio frequency emissions, but they are primarily below the frequencies used for satellite and ground based GPS systems. Therefore, the radio frequency broadcast produced by high voltage power lines is very unlikely to interfere with or overcome GPS signals.

The Application references an IEEE study by Silva & Olsen, 2002, that studied the impact of overhead conductors on GPS signals. The study found that the overhead conductors did not block or affect the use of GPS satellite signals.

13. Describe in detail the impact, if any, applicants contend the proposed transmission line will have on wild game species common to the area where the line is to be constructed, including but not limited to its impact on whitetail deer, walleye pike, northern pike, ring-neck pheasant and Canadian geese.

ANSWER: Section 11.0 of the Application describes the anticipated effects to water resources, including fishery resources. Because the Project will span all streams and lakes, no impacts to fish species or fishing uses will occur.

Section 12.0 of the Application also describes the anticipated impacts to terrestrial wildlife species, including game species. Once constructed, the transmission line could result in impacts to avian game species through collisions. The Project will work with proper wildlife authorities, both State and Federal, to identify areas where bird diverters may need to be installed to minimize potential collisions. In addition, the transmission line will be designed considering the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection On Power Lines: State of the Art in 2006 to minimize the potential for electrocution.

The Project is not anticipated to affect the population of any game species in the region it crosses.

14. Describe in detail the methodology used to select the proposed route, the specific factors by the applicants in selecting the proposed route, including but not limited to total cost, engineering constraints, and legal concerns.

ANSWER: Section 8.1 of the Application lays out the detailed methodology used to select the proposed route. As listed on page 26 of the Application, the line route in South Dakota was selected based on several factors, including:

- **Minimizing total length and construction costs**
- **Minimizing impacts to humans and human settlements, including (but not limited to) displacement, noise, aesthetics, cultural values, recreation, and public services**
- **Consideration of effects on public health and safety**
- **Offsetting existing ROW (roadway or other utility ROW) or section lines to minimize impacts to land-based economies, including (but not limited to) agricultural fields and mining facilities**
- **Minimizing effects on archaeological, cultural properties, and historic resources**
- **Minimizing impacts to wetlands, surface waters, and rivers**
- **Minimizing impacts to rare or endangered species and unique natural resources**
- **Minimizing effects to airports or other land use conflicts**
- **Constructing the transmission lines near existing roadway ROW or close to the half section lines to minimize impacts to agricultural fields**
- **Placing structures to minimize impacts to agricultural production/allow for the movement of farm equipment**
- **Avoiding a diagonal route across agricultural fields wherever possible**
- **Preference for mono-pole structures rather than H-frame structures**

As described above, engineering constraints and costs were two of many criteria considered. Legal concerns considered in the routing process included confirming potential routes could be constructed consistent with applicable federal, state, and local laws and regulations. The proposed route was selected based upon the evaluation of the foregoing routing criteria.

The Owners continue to evaluate possible changes to the proposed route based upon discussions with landowners. The changes to the route may occur both before the hearing on the Application, and after the hearing. If a material change in the proposed route is adopted by the Owners before the hearing, the Owners will identify that change to the proposed route as part of the prefiled testimony consistent with the deadlines imposed by the Commission or at the hearing. For material route changes after the hearing, the Owners will update the Commission through the appropriate processes.

15. Describe each alternative proposed route considered by the applicants prior to selecting the currently proposed route.

ANSWER: The attached map numbered BSSE 9 shows the preliminary routes that were considered by the Owners prior to selecting the preferred route.

Between the Ellendale Substation and the general vicinity of the town of Bristol, there were two main route alternatives considered; one that follows the ultimately selected route south into South Dakota, and one that heads east from the Ellendale area for approximately 35 to 40 miles before turning south into South Dakota. This second main route alternative had several smaller alternative segments. One location with alternative segments occurs approximately ten miles east of Ellendale, where the alternatives are located 0.5 to 1 mile apart. Another set of alternative segments is located at the North Dakota/South Dakota border crossing area, where the alternatives parallel each other at a distance of approximately 2 to 5 miles apart, for a length of approximately twenty miles.

Between the Bristol area and the Big Stone South Substation, there were several other areas with minor route alternatives. These respective areas usually consist of parallel route alternatives, generally 0.5 to two miles apart.

16. For each alternative route so-identified, describe in detail how the factors set out in your answer to request #14 were considered, and the reason(s) why that alternative route was ultimately rejected.

ANSWER: Section 8.2 of the Application describes the methodology used in selecting the proposed route and rejecting the alternative routes.

The routes through western Marshall and the northwestern portion of Day counties was not selected because the preferred route is shorter in length, and expected to have better soils for construction activities and structure foundations. The Owners received several comments regarding very wet soils in the western portion of Marshall County. Additionally, from a constructability perspective, the northern portion of Day County contains many large surface waters and wetlands that would be challenging to span and may require more structures to be placed within surface waters or wetlands.

The alternative routes through Dickey and Sargent counties would require a crossing of the U.S. Fish and Wildlife Services' (USFWS) Dakota Lake National Wildlife Refuge and U.S. Bureau of Reclamation Oakes Research Area in North Dakota. In addition, one of the alternative routes would be located close to or potentially cross the Hecla Sand Prairie area in northwestern Marshall County, which is an area of conservation interest to the USFWS and they hold many grassland easements on the lands. The South Dakota Game, Fish, and Parks Department had also had concerns with the alternative routes in western Marshall County being located close to water bird colonies. Lastly, the alternative routes would cross more prairie or grassland areas through western Marshall County and Sargent and Dickey counties in North Dakota compared to the preferred route.

Additionally, the proposed route differs from the preliminary route for approximately six miles in T120N R56W (Highland Township) and T120N R57W (York Township) in Day County. The preliminary route was rejected in this area because of engineering and constructability constraints associated with crossing the Horseshoe Lake area.

17. Identify any state or federal renewable energy standards which applications contend the proposed line will enable them to meet.

ANSWER: The proposed line is one of the MVPs which, in total, will enable the most economic development and construction of renewable energy projects in the Midwest Region. This includes a combination of local and regional generation projects detailed in section 4.2 in the MVP report included as Appendix B.1 of the Application. In order to spur renewable energy projects, many states have adopted renewable energy standards, which are laws which mandate that a certain amount of energy produced or purchased by its regulated electric utilities must be generated by qualifying renewable energy projects. The transmission studies performed by MISO used in the identification of the Big Stone South to Ellendale project, along with the balance of the MVPs, were based on existing state renewable energy standards in place during the course of the study (primarily during 2011). The study results indicate that the MVP portfolio will enable transmission of 41 Million Megawatt hours (MWh) of wind energy per year across the Midwest Region. As determined through the MVP studies, this amount of wind energy is anticipated to meet the state renewable energy mandates across the Midwest Region beyond 2026.

Additional information related to the state renewable energy standards facilitated by the Project and the rest of the MVPs can be found in sections 4 and 7 of the MVP report, included as Appendix B.1 of the Application.

18. With respect to the energy to be transmitted on the proposed line, identify the existing or anticipated generating facilities from which that energy will be produced, and the amount of energy anticipated from each.

ANSWER: The Big Stone South to Ellendale 345 kV line will be an integral part of the high voltage transmission system. As such, the line will be available to carry energy from a variety of generating facilities, regardless of fuel type. Due to the interconnected nature of the regional transmission system, the generation that will flow on this line will depend on a number of variables. Too many variables exist to definitively identify the existing or anticipated generating facilities that will have energy transmitted on the Big Stone South to Ellendale 345 kV line. These variables include (among several other factors) generation patterns, load levels, and outages of existing generation or transmission. Therefore, identifying the exact amount of energy from a specific generator flowing across a particular transmission line is not possible. However, if wind-rich areas in eastern South Dakota are developed with future renewable

generation, this future generation will have energy transmitted along this Project given its geographic proximity to these wind-rich areas. BSSE 11 attached is a wind resource map with the route corridor of the Project shown on the same map. As stated in Section 4 of the Application, the Project will increase system capacity which in turn allow for additional opportunities for development of generation, including renewable energy sources, in South Dakota.

19. Describe in detail the percentage of the total energy to be transmitted on the proposed transmission line which will pass to or from the Big Stone South to Brookings County, and/or Brookings County to South East Twin Cities lines once all three projects enter service, and annually thereafter through the year 2024..

ANSWER: Once these three separate Multi-Value Projects (MVPs) are constructed, the total energy transmitted along these three projects will be highly correlated to one another, given their geographic location and electrical connectivity. The Big Stone South to Ellendale 345 kV line will share a common termination point with the Big Stone South to Brookings County 345 kV line at the Big Stone South substation. Likewise, the Big Stone South to Brookings County 345 kV line will share a common termination point with the Brookings County to South East Twin Cities line at the Brookings County substation. Identifying expected or even anticipated energy transmitted on the Big Stone South to Ellendale line in comparison to the other two projects will depend on a number of variables (as described in interrogatory #18).

Based on knowledge of the transmission system in this region, the flow of energy in this area will generally be from northwest to southeast, flowing from Ellendale to Big Stone South to Brookings County and then to the Southeast Twin Cities. However, transmission facilities often experience bi-directional flows and therefore could also flow from southeast to northwest depending on the conditions present on the transmission grid.

20. Describe in detail the insurance policies or other liability protections, if any, applicants will maintain for themselves against claims which relate to the towers, wires, and other components of the proposed transmission line, and the means by which that protection will be maintained through the useful life of the proposed transmission line.

ANSWER: The Owners maintain property and casualty insurance coverage customary for the utility industry. Operational risk management procedures are in place to help protect life and property throughout construction and operation of the proposed transmission line.

21. In the event that agricultural production activities near the proposed transmission line damage or interfere with the operation of the line (including, for example, a GPS guided tractor colliding with a monopole), describe in detail any liability

protection which applicants will provide to agricultural producers in the event of third party claims against those producers for interruption of service or other damages..

ANSWER: The Owners maintain property and casualty insurance coverages customary for the utilities industry, including general liability insurance. In the event of a claim that falls within the scope of this coverage, the law of torts would apply.

22. Describe in detail the anticipated maintenance schedule for the towers, lines, substations and other components of the proposed transmission line, and the amount of time each are anticipated to remain in operation.

ANSWER: The Owners anticipate they will inspect the towers, components, and conductors at a minimum of twice a year associated with routine maintenance. A patrol typically would be conducted in the spring and fall of each year to minimize the environmental impact. These patrols/inspections typically take two to three weeks per year and are for the most part confined to the facility right of way. If problems are discovered during these inspections, and are not emergency in nature, typically repairs can be scheduled in fall or winter. If for some reason repairs would have to be scheduled when the crops are still in the field the landowner would be compensated for any damages associated with those repairs.

The right of way would be managed as part of the Owners vegetation management program which consists of removal of trees and other vegetation that could interfere with the reliability of the facility, which usually occurs on a four year cycle. This typically takes around three or four weeks per cycle and is scheduled to be performed in the fall or winter.

The substations maintenance consists of inspections, vegetation management, equipment testing, etc. and is typically confined to the fenced area within the substation with the exception of vegetation management which includes just outside the fence and driveways. These items are completed throughout the year and typically take around eight weeks to complete.

The Owners expect the line to be in service for perpetuity. There are not currently have any plans to remove any of our transmission system. However, as noted above, the facilities will require ongoing maintenance in order to operate safely and reliably.

RESPONSES TO DOCUMENT REQUESTS

1. Tower components, insulators, footings, foundations, guy-wires, and any other attachments for the towers which will be used generally to construct the proposed

transmission line and those which would be specifically used upon property owned by Gerald Pesall.

RESPONSE: See BSSE 10 attached.

2. The exact location where the lines and towers for the proposed transmission line would be located in located Day County, South Dakota for the currently selected route and any alternative routes being considered.

RESPONSE: See BSSE 12 to 63. These documents reflect the preliminary estimates of the location of the lines and towers. The exact location of the lines and towers in Day County has not yet been determined.

3. The Big Stone Substation, including a description of any transmission lines other than the proposed transmission line which will directly connect to it.

OBJECTION: Owners object to production of these documents, which are critical energy infrastructure information which is subject to restricted access by applicable federal regulations, including 18 CFR 388.113.

4. The Brookings County substation, including a description of any transmission lines which will directly connect to it.

OBJECTION: The Owners object to disclosing this information because the Brookings County substation is not part of the Project, and the requested documents exceed the scope of permissible discovery under SDCL 15-6-26(b) and ARSD 20:10:01:01.02. The Owners further object to production of these documents, which are critical energy infrastructure information which is subject to restricted access by applicable federal regulations, including 18 CFR 388.113.

5. The Ellendale Substation, including a description of any transmission lines other than the proposed transmission line which will directly connect to it.

OBJECTION: Owners object to production of these documents, which are critical energy infrastructure information which is subject to restricted access by applicable federal regulations, including 18 CFR 388.113.

STATE OF NORTH DAKOTA)
:SS.
COUNTY OF Burleigh)

Jay Skabo, being duly sworn is the authorized agent of Montana-Dakota Utilities Co., for purposes of the response.

He states that he does not have personal knowledge of all the facts recited in the foregoing Responses of Montana-Dakota Utilities Co. and Otter Tail Power Company to Gerald Pesall's Discovery Requests, but the information has been gathered by and from employees, contractors of the owners of Big Stone South to Ellendale Project; and that the information is verified by him as being true and correct on behalf of the owners of the Big Stone South to Ellendale Project.

Dated this 26 day of February, 2014.

MONTANA-DAKOTA UTILITIES CO.

By _____
Jay Skabo
Its Vice President – Electric Supply

Subscribed and sworn to before me this 26 day of February, 2014.

_____
Notary Public – ~~South Dakota~~
(SEAL)

My Commission Expires: 9-27-17

STATE OF MINNESOTA)
:SS.
COUNTY OF Otter Tail)

Jason Weiers, being duly sworn is the authorized agent of Otter Tail Power Company, for purposes of the response.

He states that he does not have personal knowledge of all the facts recited in the foregoing Responses of Montana-Dakota Utilities Co. and Otter Tail Power Company to Gerald Pesall's Discovery Requests, but the information has been gathered by and from employees, contractors of the owners of Big Stone South to Ellendale Project; and that the information is verified by him as being true and correct on behalf of the owners of the Big Stone South to Ellendale Project.

Dated this 26 day of February, 2014.

OTTER TAIL POWER COMPANY

By Jason J Weiers
Jason Weiers
Its Manager, Delivery Planning

Subscribed and sworn to before me this 26th day of February, 2014.

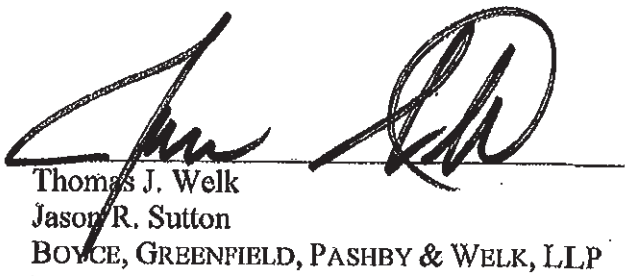
VICKI LYNN SEVERSON
NOTARY PUBLIC–MINNESOTA
My Commission Expires JAN. 31, 2015

Vicki Lynn Severson
Notary Public – South Dakota
(SEAL)

My Commission Expires: Jan. 31, 2015

AS TO OBJECTIONS:

Dated February 26, 2014



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CERTIFICATE OF SERVICE

I, Jason R. Sutton, do hereby certify that I am a member of the law firm of Boyce, Greenfield, Pashby & Welk, LLP, attorneys for Montana-Dakota Utilities Co. and Otter Tail Power Company and that on the 26th day of February 2014, a true and correct copy of Montana-Dakota Utilities Co. and Otter Tail Power Company's Answers to Gerald Pesall's First Set of Discovery Requests to Applicants Dated January 28, 2014 was served via first-class mail to the following addresses listed:

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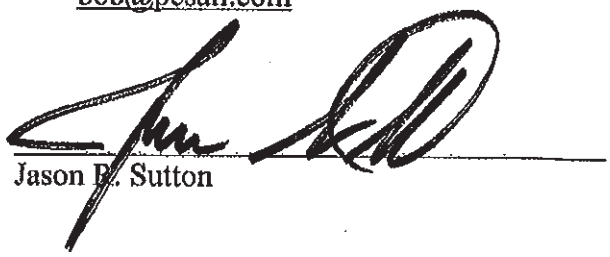

Jason R. Sutton