MONTANA-DAKOTA
UTILITIES CO.
A Division of MDU Resources Group, Inc.

400 North Fourth Street
Bismarck, ND 58501
(701) 222-7900

May 31, 2013

Executive Secretary
North Dakota Public Service Commission
State Capitol Building
Bismarck, ND 58505-0480

Re: Case No. PU-13-___
Application for a Certificate of Public Convenience & Necessity for a 345 kV Transmission Line from Ellendale, ND to the North Dakota/South Dakota border and a Substation at Ellendale, North Dakota

Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc., herewith files an original and seven (7) copies of an Application for a Certificate of Public Convenience and Necessity to construct approximately 10 miles of 345 kV electric transmission line in North Dakota and construct a 345 kV interconnection substation at Ellendale, North Dakota as part of the Big Stone South to Ellendale MISO Multi Value Project (Big Stone South to Ellendale MVP). The entire MVP extends from a new substation[1] in South Dakota to a new substation to be constructed near Ellendale, North Dakota, with the project comprising a total of approximately 160 to 170 miles of 345 kV transmission line.

Montana-Dakota and Otter Tail Power Company (Otter Tail) intend to jointly own the Big Stone South to Ellendale MVP. Otter Tail will also be submitting an Application for a Certificate of Convenience and Necessity for their share of the MVP facilities to be located in North Dakota.

Montana-Dakota also submits a check in the amount of $10,000.00 as partial payment of the fee required by NDCC Chapter 49-05-04.2(2)(d). Montana-Dakota will submit additional funds as ordered by the Public Service Commission up to the $125,000.00 amount required by NDCC Chapter 49-03-02.3.

[1] The substation located near Big Stone City will be owned by Otter Tail Power Company and is part of the Big Stone South to Brookings MVP.

Montana-Dakota respectfully requests that this filing be accepted as being in full compliance with the filing requirements of this Commission.

Please refer all inquiries regarding this filing to:

Tamie A. Aberle
Director of Regulatory Affairs
Montana-Dakota Utilities Co.
400 North Fourth Street
Bismarck, ND 58501

Also, please send copies of all written inquiries, correspondence and pleadings to:

Daniel S. Kuntz
Associate General Counsel
MDU Resources Group, Inc.
P.O. Box 5650
Bismarck, ND 58506-5650

Please acknowledge receipt by stamping or initialing the duplicate copy of this letter attached hereto and returning the same in the enclosed self-addressed, stamped envelope.

Sincerely,

Tamie A. Aberle
Director of Regulatory Affairs

Attachments
cc: Daniel S. Kuntz

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF NORTH DAKOTA

In the Matter of the Application of MONTANA-DAKOTA UTILITIES CO., a Division of MDU Resources Group, Inc. for a Certificate of Public Convenience and Necessity for a 345 kV Transmission Line and Substation near Ellendale, North Dakota	)	Case No. PU-13-____

APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

I. Introduction

Montana-Dakota Utilities Co. (Montana-Dakota or Applicant), a Division of MDU Resources Group, Inc., herewith makes this application pursuant to Chapter 49-03, NDCC, for a Certificate of Public Convenience and Necessity to construct and operate approximately 10 miles of 345 kV electric transmission line and a 345 kV substation to be located near Ellendale, North Dakota (the North Dakota Facilities). The North Dakota Facilities proposed in this Application are part of the Midcontinent Independent System Operator, Inc.'s (MISO's) Multi Value Project (MVP) Portfolio, supported by Montana-Dakota and other MISO stakeholders, and approved by the MISO Board of Directors on December 8, 2011. The Big Stone South to Ellendale MVP is one of seventeen MVPs approved by MISO in Appendix A of the 2011 MISO Transmission Expansion Plan (MTEP11 Report). The Big Stone South to Ellendale MVP, in combination with the other approved MVPs is expected to reduce the wholesale cost of energy delivery for the consumer by enabling the delivery of low cost generation to load, reducing congestion costs, and increasing system reliability. Montana-Dakota and Otter Tail Power Company (Otter Tail) intend to jointly construct and own the Big Stone South

to Ellendale MVP. Montana-Dakota intends to own the substation at Ellendale and approximately fifty percent of the transmission line with Otter Tail owning the remaining share of the transmission line.

The remainder of this Application will provide additional support for Montana-Dakota's request for a Certificate of Public Convenience and Necessity to construct, and operate the North Dakota Facilities. The Application will address:

- Description of Applicant
- Standard of Review
- MISO's Multi Value Project Portfolio
- Description of the Project
- Project Need
- Affidavit of Henry L. Ford

II. Description of Applicant

Montana-Dakota is a Division of MDU Resources Group, Inc., a Delaware corporation duly authorized to do business in the State of North Dakota as a foreign corporation, and that it is doing business in the State of North Dakota as a public utility subject to the jurisdiction of and regulation by the North Dakota Public Service Commission (Commission) under Title 49, NDCC, as amended. Montana-Dakota's Certificate of Incorporation and amendments thereto have been previously filed with the Commission under Case No. PU-08-710 and such Certificate and Amendments are hereby incorporated by reference as though fully set forth herein. Applicant's full name and post office address are:

Montana-Dakota Utilities Co.,
a Division of MDU Resources Group, Inc.,
400 North Fourth Street
Bismarck, North Dakota 58501

III. Standard of Review

This Application is being made pursuant to the provisions of Chapter 49-03 of the North Dakota Century Code, and the rules and regulations promulgated by the Public Service Commission of the State of North Dakota. Under this statute, the overall standard applied by the Commission is whether public convenience and necessity will be served by the construction, ownership and operation of the North Dakota Facilities and whether the applicants are fit, willing and able to provide service.

The Big Stone South to Ellendale MVP is required to be built as part of the MISO Transmission Expansion Plan (MTEP) and Montana-Dakota is fit, willing and able to construct and operate its portion of the Project.

IV. MISO's Multi Value Project Portfolio

On July 15, 2010, MISO and the MISO transmission owners adopted revisions to the MISO Tariff to establish the MVP category of transmission projects and corresponding cost allocation provisions.[2] MVPs are transmission facilities that MISO identifies to "enable the reliable and economic delivery of energy in support of documented energy policy mandates" or laws that "address, through the development of

[2] *See* Midwest Independent Transmission System Operator, Inc. and the Midwest ISO Transmission Owners, Docket No. ER10-1791-000, at 1 (July 15, 2010) ("MVP Filing"). The MVP Filing was conditionally accepted by the FERC on December 16, 2010. *Midwest Indep. Transmission Sys. Operator, Inc.*, 133 FERC ¶ 61,221 (2010) ("MVP Order"), *order on reh'g*, 137 FERC ¶ 61,074 (2011) ("MVP Rehearing Order").

a robust transmission system, multiple reliability and/or economic issues affecting multiple transmission zones."[3] To qualify as an MVP, a transmission facility must meet one or more of the following criteria:

Criterion 1 - The project must be developed through the transmission expansion planning process for the purpose of enabling the transmission system to deliver energy reliably and economically to support documented energy policy mandates or laws that directly or indirectly govern the minimum or maximum amount of energy that can be generated by specific types of generation in a manner that is more reliable and/or more economic than it otherwise would be without the transmission upgrade; and/or

Criterion 2 - The project must provide multiple types of economic value across multiple pricing zones with a total project benefit-to-cost ratio of 1.0 or higher, as defined in Section II.C.7 of Attachment FF of the MISO Open Access Transmission, Energy and Operating Reserve Markets Tariff (Tariff). In conducting the benefit-to-cost analysis, the reduction of production costs and the associated reduction of Locational Marginal Prices (LMP) resulting from a transmission congestion relief project are not additive and are considered a single type of economic value; and/or

Criterion 3 - The project must address at least one Transmission Issue associated with a projected violation of a North American Electric Reliability Corporation (NERC) or Regional Entity standard and at least one economic-based Transmission Issue that provides economic value across multiple pricing zones. Under this criterion, the project must generate total financially quantifiable benefits in excess of the total

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[3] *See* MVP Filing at 2; *see also id.* at 20 ("[T]he MVP planning and cost allocation category is designed, among other purposes, to facilitate the interconnection of location-constrained resources (including renewable generation) in the Midwest ISO footprint and to satisfy other existing and potential future public policy requirements by removing cost barriers currently impeding such development.").

project costs based on financial benefits and project costs, as defined in Section II.C.7 of Attachment FF of the MISO Tariff.[4]

In the MVP Order, the Federal Energy Regulatory Commission (FERC) directed MISO to modify the MISO Tariff to state that MISO will consider potential MVPs on a portfolio basis.[5] In their compliance filing, MISO and the MISO transmission owners revised Attachment FF of the MISO Tariff, which governs the MTEP process, to indicate that "[a] Multi Value Project must be evaluated as part of a portfolio of projects, as designated in the transmission expansion planning process, whose benefits are spread broadly across the footprint."[6] In the MVP Rehearing Order, the Commission indicated that these revisions "accomplish precisely what the FERC intended – to clearly articulate what a portfolio is and that the aggregation of MVPs into a portfolio will occur in Midwest ISO's MTEP process in a manner that benefits will accrue throughout the entire Midwest ISO region."[7] As a result, the MTEP process is designed to evaluate potential MVPs and identify a portfolio of MVPs that provide reliability, economic, and public policy benefits across the MISO region.

V. Description of the Project

The Big Stone South to Ellendale MVP, is part of the MISO MVP Portfolio (MTEP11 MVP Portfolio) approved by the MISO Board of Directors on December 8,

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[4] *See* MVP Filing at 21 and Tab E.

[5] MVP Order at P 223.

[6] Midwest Independent Transmission System Operator, Inc. and the Midwest ISO Transmission Owners, Docket No. ER10-1791-002, at 3 (Feb. 14, 2011) ("MVP Compliance Filing"). Portfolio is defined as follows: "For Multi-Value Project purposes, means two or more Multi-Value Projects proposed to be located in one or more Transmission Pricing Zones that, when evaluated together, have the affect of addressing one or more Transmission issues." MISO Tariff at Module A § 1.513a.

[7] MVP Rehearing Order at P 367.

2011, as an MVP in Appendix A of the 2011 MISO Transmission Expansion Plan.[8] The Big Stone South to Ellendale MVP will consist of between 160 and 170 miles of single circuit 345 kV transmission line from a connection near Ellendale, North Dakota and ending near Big Stone City, South Dakota. The project will be sited in both North Dakota and South Dakota, which will require coordination for siting and construction. The estimated total cost for Montana-Dakota's portion of the North Dakota Facilities is approximately $41 million, in 2019 dollars, and the facilities are required to be in service by the end of 2019. The revenue requirement associated with the Project will be recovered through the MISO tariff and assigned to all electric loads within MISO. Montana-Dakota's retail North Dakota share represents approximately 0.49% of the total revenue requirement.

VI. Project Need

The Big Stone South to Ellendale MVP has been identified in multiple studies dating back to 2005. These studies focused on:

1) increasing the power delivery capability of the transmission system from the Dakotas to enhance the market and meet regional reliability needs [9](the Northwest Exploratory Study);
2) identifying a long-term transmission plan under different generation scenarios (the CapX2020 Vision Study);

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[8] *See* MISO Transmission Expansion Plan 2011 ("MTEP11 Report"), MTEP11 Report and related material are posted on the MISO website at: https://www.midwestiso.org/Planning/TransmissionExpansionPlanning/Pages/MTEP11.aspx.

[9] Page 136 of MTEP05 report (Section 7.2)

3) identifying transmission portfolios that would enable RPS mandates to be met at the lowest delivered wholesale energy cost[10] (the Regional Generation Outlet Study or RGOS); and,

4) identifying a regional transmission portfolio that enables the MISO Load Serving Entities to meet their Renewable Portfolio Standards (RPS)[11] that meet the criteria for MISO's MVP projects (Candidate Multi-Value Project Portfolio Analysis or CMVP Study).

The Northwest Exploratory Study, highlighted in the MTEP05 report, evaluated the incremental delivery capability from potential generation development regions in North Dakota and Southeast South Dakota that might be achieved with various transmission development scenarios.[12] The next major study was the CapX2020 Vision Study. This study included a broader study scope, with its primary purpose being serving the load in the CapX2020 footprint, which included all of Minnesota and parts of North and South Dakota, Wisconsin and Iowa. The RGOS was intended to identify a set of value based transmission portfolios necessary to enable Load Serving Entities (LSEs) to meet their RPS mandates at the lowest delivered wholesale energy cost[13] across the MISO footprint. Each of these studies provides the support for MISO's CMVP Study. In the CMVP Study, MISO conducted detailed analysis of a portfolio of "no regrets" projects, which will reduce the wholesale cost of energy delivery for the consumer by enabling the delivery of low cost generation to load, reducing congestion

[10] Page 44 of MTEP11 Report

[11] Page 48 of MTEP11 Report

[12] Page 136 of MTEP05 report (Section 7.2)

[13] Page 44 of the MTEP11 report

costs and increasing system reliability.[14] Each of these studies identified the need for the Big Stone South to Ellendale MVP.

In addition, MISO's CMVP Study further supports the inclusion of the Big Stone South to Ellendale MVP in the MTEP11 MVP Portfolio. Specifically, the study states:

> *The new 345 kV outlet from Ellendale removes overloads on the 230 kV path from Ellendale to Oakes to Forman and the 115 kV path from Ellendale to Aberdeen. Overloads on the 230/115 kV transformers at Ellendale, Forman and Heskett are also alleviated. [.....]*[15]

The study further describes the alternative projects that were considered and rejected in favor of the Big Stone South to Ellendale MVP.[16] All of the projects in the 2011 MVP Portfolio, including the Big Stone South to Ellendale MVP, are included because of the reliability, public policy, and economic benefits they provide.[17] The results of the MISO MTEP studies indicate that the projects identified as the 2011 MVP Portfolio increase reliability in the MISO footprint, opens the market to increased competition and provides access to low cost generation regardless of fuel type.[18]

While studied on a portfolio basis by MISO with the other MVPs, the Big Stone South to Ellendale MVP plainly stands out as a key link in the regional package of major

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[14] Page 46 of MTEP11 report

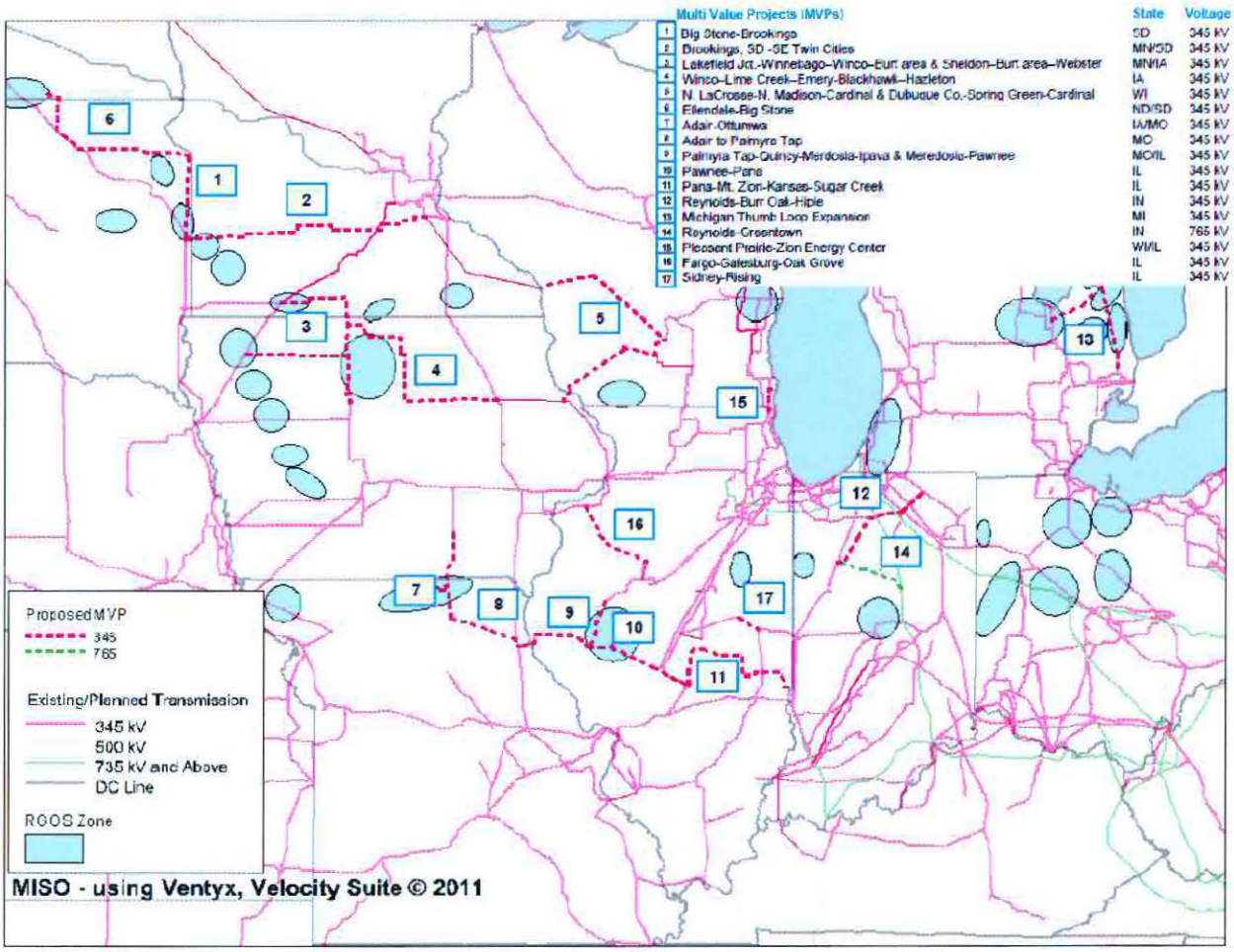
[15] See Multi Value Project Portfolio Results and Analyses (January 10, 2012) https://www.misoenergy.org/Library/Repository/Study/Candidate%20MVP%20Analysis/MVP%20Portfolio%20Analysis%20Full%20Report.pdf

[16] *See id.* at 30.

[17] Page 42 of the MTEP11 report (Section 4.1)

[18] Page 51 of MTEP11 report

transmission projects, as shown by the following map of all of the MVPs[19] and is essential to realization of the benefits to be delivered by that Portfolio. The Big Stone South to Ellendale MVP is identified as Project 6 on the following map.



Without the Big Stone South to Ellendale MVP, the Portfolio could not achieve its objective of strengthening the MISO regional grid's ability to move power from areas of

[19] The Big Stone South to Ellendale MVP, appearing at the northwestern corner of the MVP map, is designated as project number 6.

high wind power potential in western MISO—to points east. This was recognized by MISO in the MVP Report, which states:

"....this project (Big Stone South – Ellendale) reliably moves mandated renewable energy from the Dakotas to major 345 kV transmission hubs and load centers.[20]"

The MTEP 11 Report documented several reliability benefits to the bulk electric transmission system from the MVP Portfolio. Specifically, the MVP portfolio will maintain system reliability by resolving reliability violations on approximately 650 elements for more than 6,700 system conditions and mitigating 31 system instability conditions.[21]

This Project will also increase the ability to export more power out of the Dakotas. Historically, the Dakotas have had more generation than load. Generation resource development has historically been limited by the lack of transmission capability. The Big Stone South to Ellendale MVP, in conjunction with the portfolio of other MISO MVPs, will increase the ability to transport power out of the generation-rich Dakotas to loads further east.

The Big Stone South to Ellendale MVP, in conjunction with other MISO MVPs, creates other benefits to the MISO region, including North Dakota, as follows:

1. Reduced transmission line losses.[22]
2. Reduced planning reserves.[23]

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[20] MVP Report – Page 30, section 5.7.

[21] Page 42 of the MTEP11 report (Section 4.1)

[22] MTEP2011 at 67 ("The addition of the proposed MVP Portfolio to the transmission network reduces overall system losses, reducing the generation needed to serve the combined load and transmission line losses.").

3. Reduced operating reserves.[24]

4. Reduced wind generation investment.[25]

5. Reduced transmission investment[26]

Full details of these benefits are documented in the MISO MTEP11 Report.[27]

VII. Conclusion

Public convenience and necessity will be served by Montana-Dakota's and Otter Tail's construction of the North Dakota Facilities associated with the Big Stone South to Ellendale MVP. Montana-Dakota is fit, willing and able to own and operate its share of the proposed facilities. Therefore, Montana-Dakota requests that the Commission:

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[23] MTEP2011 at 67 ("The system planning reserve is calculated by determining the amount of generation required to meet a one day in 10 year Loss of Load Expectation (LOLE). It has two components: the unconstrained system Planning Reserve Margin (PRM), and the congestion contribution. The proposed MVP Portfolio reduces transmission congestion across MISO, thereby reducing the system PRM and decreasing the amount of generation needed to maintain the PRM.").

[24] MTEP2011 at 66 ("The MVPs decrease congestion on the system, increasing the transfer capability into several key areas that would otherwise have to hold additional operating reserves under certain system conditions.").

[25] MTEP2011 at 68 ("In the RGOS study, it was determined that 11 percent less wind would need to be built to meet renewable energy mandates in a combination local/regional methodology relative to a local only approach. Approximately 2.9 GW less generation capacity is required for the combination siting approach, creating present value benefits of $1.4 billion to $2.5 billion.").

[26] MTEP2011 at 68 ("In addition to relieving constraints under shoulder peak conditions, the proposed MVP Portfolio will eliminate some future baseline reliability upgrades. A model simulating 2031 summer peak load conditions was created to determine what future baseline reliability upgrades would not be needed, and this model was run both with and without the proposed MVP Portfolio. The proposed MVP portfolio eliminates the need for baseline reliability upgrades on 23 lines between 2026 and 2031. This creates benefits which have 20 and 40 year present values of $268 and $1,058 million, respectively.")

[27] MTEP2011 at 42-75.

1. Give Notice of Opportunity to request a hearing to interested parties and, if no hearing is requested within twenty days, to waive the hearing in accordance with §49-03.1-05, NDCC;

2. Enter an Order and issue a Certificate of Public Convenience and Necessity authorizing the Applicant to construct its approximately fifty percent share of the electric transmission line within the state of North Dakota and the new Ellendale substation.

3. Grant such other relief as the Commission shall deem appropriate.

Dated this 31st day of May, 2013.

Tamie A. Aberle

Subscribed and sworn to before me this 31 day of May, 2013.

(S E A L)

BROOKE STEFFES
Notary Public
State of North Dakota
My Commission Expires Sept. 27, 2017

Brooke Steffes, Notary Public
Burleigh County, North Dakota
My Commission Expires: 9/27/2017

Of Counsel:

Daniel S. Kuntz
Associate General Counsel
MDU Resources Group, Inc.
P.O. Box 5650
Bismarck, ND 58506-5650

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF NORTH DAKOTA

Application for a Certificate of Public Convenience & Necessity for a 345 kV Transmission Line from Ellendale, ND to the North Dakota/South Dakota border and an Interconnecting Substation at Ellendale, North Dakota	)	Case No. PU-13-____

AFFIDAVIT OF HENRY L. FORD

Henry L. Ford, being first duly sworn, on oath deposes and says that he is the Director of Electric Transmission Engineering for Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc., the Applicant herein, and attests to the following :

1. That public convenience and necessity will be served by Montana-Dakota's construction, ownership and operation of its approximately fifty percent share of the North Dakota segment of a 345 kV transmission line and the Substation in North Dakota, which is part of the Big Stone South to Ellendale MVP.
2. That the Big Stone South to Ellendale MVP is part of MISO's MVP portfolio, which MISO, with the interaction and support of Montana-Dakota and other stakeholders, has shown is expected to reduce the wholesale cost of energy delivery for the consumer by enabling the delivery of low cost generation to load, reducing congestion costs and increasing reliability across MISO.
3. That the Big Stone South to Ellendale MVP is required as part of MISO's MVP Portfolio included in Appendix A of the MISO approved MTEP11 Report.
4. That Applicant is fit, willing and able to own and operate the proposed facilities.

5. That it is in the public interest that Applicant be granted a Certificate of Public Convenience and Necessity as requested in this Application.

Dated this 31st day of May 2013.

Henry L. Ford
Director of Electric Transmission Engineering

Subscribed and sworn to before me this 31 day of May, 2013.

Brooke Steffes, Notary Public
Burleigh County, North Dakota
My Commission Expires: 9/27/2017

(S E A L)

BROOKE STEFFES
Notary Public
State of North Dakota
My Commission Expires Sept. 27, 2017

Of Counsel:

Daniel S. Kuntz
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