Direct Testimony
Walter T. Grivna

Before the North Dakota Public Service Commission
State of North Dakota

In the Matter of the Application of
Northern States Power Company, a Minnesota Corporation

For Authority to Increase Rates for
Electric Service in North Dakota

Case No. PU-07-____
Exhibit 14

Transmission

December 7, 2007

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I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Walter Grivna. My business address is 250 Marquette Avenue, Minneapolis, Minnesota 55401.

Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. I am employed by Northern States Power Company, a Minnesota corporation ("NSP-Minnesota") as Manager, Transmission Reliability Assessment in the transmission division. My responsibilities include: (i) supervising department engineers in planning the electric transmission systems for NSP-Minnesota and Northern States Power Company, a Wisconsin corporation ("NSP-Wisconsin") (jointly the "NSP Operating Companies") in Minnesota, North Dakota, South Dakota, Wisconsin and the Upper Peninsula of Michigan; (ii) overseeing the development of local and regional transmission system plans, including coordinated joint planning with the Midwest Independent Transmission System Operator, Inc. ("MISO"), the Mid-Continent Area Power Pool Regional Transmission Committee ("MAPP RTC") and other utilities to ensure reliable transmission service; (iii) recommending the construction of such plans to Xcel Energy Inc. management and the MISO; (iv) participating in and supporting MISO sponsored transmission service studies, generation interconnection studies, long range regional plan development, load service planning and other transmission planning activities required by MISO to perform its obligations under the MISO Open Access Transmission and Energy Markets Tariff ("TEMT") and the MISO Transmission Owner's Agreement ("TOA"); and (v) providing technical

support for regulatory aspects of transmission system planning activities and contract development for the NSP Operating Companies.

Q. PLEASE DESCRIBE YOUR EDUCATION AND EXPERIENCE**.**

A. I received a bachelor's degree in Electrical Engineering from the University of Minnesota in 1977, and a master's degree in Business Administration from the University of St. Thomas in 1981. I started full-time with the former Northern States Power Company, the predecessor to Xcel Energy Inc., as an engineer in 1977 and advanced to positions of increasing responsibility over my 30-year tenure. I have held my current position since May 2002.

Q. FOR WHOM ARE YOU TESTIFYING?

A. I am testifying on behalf of NSP-Minnesota operating in North Dakota ("Xcel Energy or the "Company").

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. Over recent years, the Company has invested significant capital in various transmission assets in order to meet the growing needs of our customers, maintain the integrity of the existing transmission system to ensure safe, reliable service to our customers while, at the same time, supporting our initiatives to improve and protect the environment. My testimony provides an overview of these investments, including the benefits they bring to our customers and the environment. I conclude my Direct Testimony by sharing our plans to continue to invest in the expansion of our transmission system over the next few years.

II. TRANSMISSION SYSTEM INVESTMENTS

Q. PLEASE PROVIDE AN OVERVIEW OF THE COMPANY'S TRANSMISSION SYSTEM.

A. The NSP Operating Companies are vertically integrated jurisdictional electric utilities that own and operate electric transmission facilities in five upper Midwestern states: Minnesota, North Dakota, South Dakota, Wisconsin, and the Upper Peninsula of Michigan. The NSP Operating Companies operate as an integrated transmission system ("NSP System") of approximately 7,100 line miles of transmission facilities, operate a Balancing Authority (an entity responsible for maintaining a balance between load and energy supply within it's designated Balancing Authority area), and is certified by the North American Electric Reliability Corporation ("NERC") serving approximately 1.3 million retail and wholesale customers. The NSP Operating Companies conduct planning for the integrated NSP System to serve all NSP System loads, including the loads of investor owned utilities, cooperatives and municipal load serving entities ("LSE's") connected to the NSP System, on a comprehensive basis.

The NSP Operating Companies serve approximately 1200 MW of transmission-only loads compared to a peak native load of approximately 9000 MW, and the NSP system is interconnected with more than 50 other transmission systems and LSE's, including ten neighboring Balancing Authorities.

The NSP Operating Companies are members of the MISO, a Federal Energy Regulatory Commission ("FERC") approved Regional Transmission Operator ("RTO"). The NSP Operating Companies transferred functional control of

their high voltage transmission facilities (100kV and above) to MISO effective February 1, 2002. Access to the NSP System is available through the MISO Transmission and Energy Market Tariff ("TEMT").

As members of MISO, the NSP Operating Companies fully participate in the annual MISO Transmission Expansion Planning ("MTEP") process. Approval of the MTEP by the MISO Board certifies the MISO's plan to meet the transmission needs of all stakeholders, subject to any required regulatory approval. The MTEP is developed and discussed with MISO stakeholder committees in all the stages of its development, and incorporates all transmission plans for facilities above 100 kV for member utilities. All recent and future transmission investments by the NSP Operating Companies have been, and will continue to be, approved through this process.

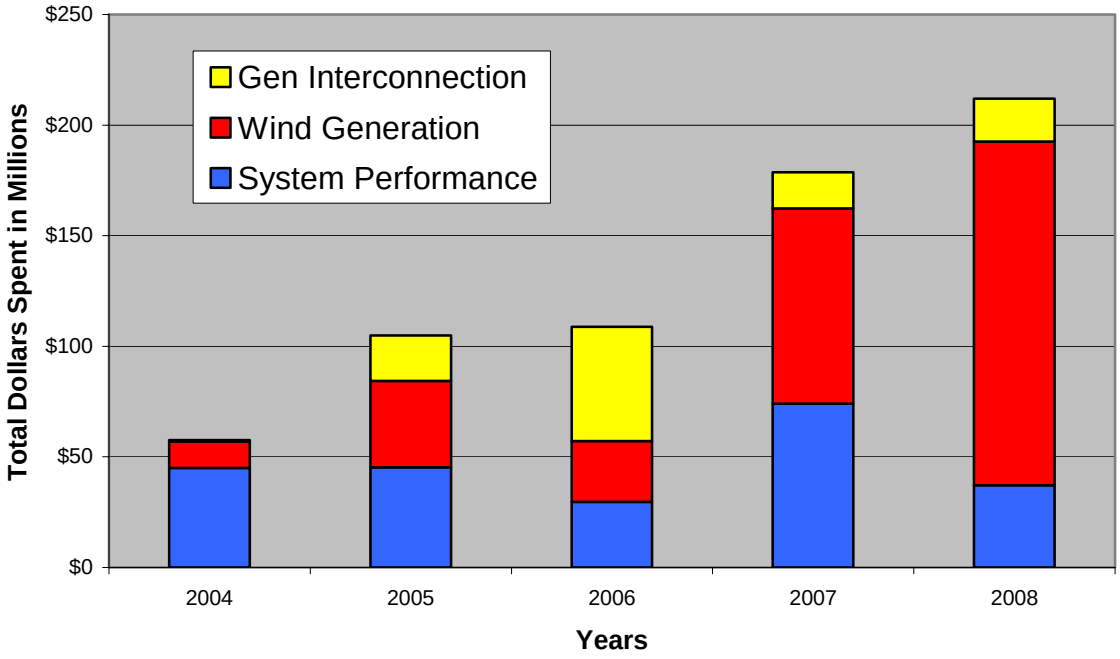
Q. PLEASE DESCRIBE HOW TRANSMISSION INVESTMENTS ARE IMPACTING THE NEED FOR THIS REQUESTED INCREASE IN RATES.

A. Since our last electric rate case in 1992, the Company has made significant investments in our transmission system. However, since 2005 the level of investment has increased substantially from previous years. Since 2005, our transmission investments have resulted in an increase to rate base of approximately $21.4 million, contributing to our rate case deficiency by approximately $2.8 million.

I have categorized our transmission investments into three separate groups: system performance investments, generation interconnection investments, and wind supporting transmission investments. Table 1 summarizes the

Company's annual transmission investments in these categories from 2004 through the 2008 test year.

Table 1



A. System Performance Investments

Q. PLEASE EXPLAIN THE SYSTEM PERFORMENCE INVESTMENTS.

A. System performance investments are the investments required to keep the transmission system operating reliably and safely while addressing load growth, infrastructure aging, obsolescence, deterioration, and other performance related issues. Some of the larger investments we have made to improve or maintain system performance include:

1. ***Sherburne County/St. Cloud Project*** This investment includes construction of a new 345/115kV transmission source at the Sherburne County substation in the far northwestern suburb of the Twin Cities, and

upgrades the capacity of 22 miles of the 115V line to St. Cloud, in central Minnesota. This project was necessary to mitigate unacceptable transmission line loadings during transmission outages. The cost of the project was approximately $16 million.

2. ***Southeast Metro Project*** This investment includes the re-construction of 6 miles of 115 kV to high capacity double circuit transmission between the Red Rock and Rogers Lake substations just south of St. Paul, Minnesota. This project was necessary to mitigate unacceptable transmission line loadings during transmission outages. The cost of this project was approximately $11.1 million.

3. ***Minnesota/Wisconsin 345 kV Rebuild Project*** This project restored degraded portions of the King-Eau Claire 345 kV line, spanning between the eastern suburbs of Saint Paul, MN and Eau Claire, Wisconsin and the Prairie Island-Pleasant Valley 345 kV line in Southeast Minnesota. Approximately 1/3 of the 144 miles of transmission line and structures were replaced. The Company's cost of this project was approximately $11 million.

4. ***Lawrence-Lincoln County, South Dakota Project*** This investment upgrades the capacity of the Lawrence -Lincoln County 115 kV line and associated substations in Sioux Falls, South Dakota. This 11 mile upgrade was necessary to mitigate unacceptable transmission line loadings during transmission outages. The cost of this project was approximately $7.2 million.

5. ***Maple River-Red River, North Dakota Project*** This project increases the capacity of the 6 mile Maple River-Red River 115 kV line and includes the installation of a second 187 MVA 230/115 kV transformer at Maple River Substation, near Fargo, North Dakota. This upgrade was necessary to accommodate load growth in the City of Fargo metropolitan area, and prevent overloads during transmission line outages. The cost of this project was $5.8 million.

B. Generation Interconnection Investments

Q. PLEASE EXPLAIN THE GENERATION INTERCONNECTION INVESTMENTS.

A. Generation interconnection investments include the investments in transmission facilities that are necessary to interconnect a generator to the transmission grid, as well as any capacity upgrades necessary to allow generation to operate without placing a reliability risk on the rest of the transmission system.

Since 2004, a number of generators have been added to the NSP System, requiring significant investments in transmission facilities. Following is a list of the new generation facilities and the transmission facilities or upgrades necessary to support them:

1. ***Blue Lake Generator # 7 and # 8 Interconnection Project*** This generation project added two combustion turbines for a combined increase of 385 MW to the Blue Lake Natural Gas Generating Plant, in Shakopee, Minnesota. It became operational in 2005. The transmission investment provides for additional substation interconnection facilities at

the Blue Lake substation, bringing the existing McLeod County - Black Dog 230 kV line into the Blue Lake substation and upgrading the capacity of the 10-mile section to the Black Dog substation. The total cost of this project was approximately $11.3 million.

2. ***Angus Anson Generator # 4 Interconnection Project*** This generation project added a 180 MW combustion turbine at the Angus Anson Peaking Plant located near Sioux Falls, South Dakota, and became operational in 2005. The transmission investment provides for 115 kV substation equipment and .3 miles of 115 kV transmission line at Split Rock Substation adjacent to the peaking plant. The total cost of this project was approximately $1.7 million.

3. ***Faribault Energy Park Interconnection Project*** This project addresses the construction of two combustion turbines (300 MW) at the Faribault Energy Park located just north of Faribault, Minnesota (approximately 30 miles south of the Twin Cities metropolitan area). The first unit became operational in 2006, and the second unit is planned to become operational in the second quarter of 2008. The transmission investment includes building a new substation, and increasing the capacity of 25 miles of 115 kV transmission and 13 miles of 69 kV transmission. The total cost of this project is approximately $33.8 million.

4. ***Mankato Energy Center Interconnection Project***. This project addresses the construction of a 380 MW combined cycle plant in Mankato, Minnesota. This plant became operational in 2006. The transmission investment provides for upgrades to the Wilmarth 345 kV, 115 kV, and 69 kV substation to accommodate the interconnection. It

also provided three short (less than .5 miles) transmission lines, one 345kV and two 115kV. The total cost of this project is approximately $18.5 million.

5. ***Highbridge Generating Station Combined Cycle Plant Project*** This project is to interconnect a new 575 MW combined-cycle generating facility at the High Bridge Generation station in St. Paul, Minnesota. This generating plant is expected to become operation in 2008. The transmission investment will replace the existing 115 kV substation at High Bridge and upgrade the capacity of 5 miles of 2 115 kV transmission circuits. This project is expected to cost approximately $18.7 million.

6. ***Colville Combustion Turbine plant Interconnection Project*** This project addresses construction of a 350 MW combustion turbine near Cannon Falls in southeast Minnesota. This generating plant is expected to become operation in 2008. The transmission investment will construct a 115 kV breaker substation, generator interconnection, and upgrades two 115-69 kV transformers. In addition, this project will upgrade the 10 mile 115 kV line to Empire, and the 6-mile Cannon Falls - Miesville, 14 mile Cannon Falls - Northfield and 5 mile Travers - GRE Travers 69 kV lines. This project is expected to cost approximately $3.8 million.

C. Wind Support Transmission Investments

Q. PLEASE EXPLAIN THE WIND SUPPORT TRANSMISSION INVESTMENTS.

A. In 1994, the Company received approval to add additional dry cask spent fuel storage at its Prairie Island nuclear plant. Without the ability to store additional

casks, the plant would not have been able to continue to operate beyond 1995. As a condition of this approval, the Company agreed to increase its use of wind generation to a total of 425 MWs by 2002, and an additional 400 MW if the Minnesota Public Utilities Commission ("MPUC") found this to be consistent with the least cost planning by 2012.

To accommodate the additional wind generation, the Company has primarily invested in two large transmission projects. The first project provides transmission facilities to support the addition of 130 MW of wind generation along the Buffalo Ridge area in Southwest Minnesota. The second project provides transmission capacity to incorporate the additional 400 MW of wind generation along the Buffalo Ridge area, complying with our requirement of 825 MW in total wind production.

The following provides more detail on these to projects.

1. ***Southwest Minnesota 425 MW Project*** This investment accommodates the addition of 130 MW of wind generation located along the Buffalo Ridge area of Southwestern Minnesota. This investment includes the construction of 54 miles of new 115 kV and 161 kV lines in southwest and southern Minnesota, 53 miles of upgraded 115 kV line, and several new substations to support the additional wind generation. This project was completed in 2007, at a total cost of approximately $81.5 million.

2. ***Southwest Minnesota 825 MW Project*** This investment accommodates the addition of 400 MW of wind generation located along

the Buffalo Ridge area of Southwestern Minnesota. This investment includes 95 miles of new 345 kV line, 64 miles of new 115 kV, and 40 miles of upgraded 115 kV line, as well as additional substation facilities. This project is scheduled to be completed by July, 2008 at an expected total cost of approximately $229 million. Approximately $100 million of the total cost is associated with the new 345 kV line.

Q. ARE THERE BENEFITS TO THESE TRANSMISSION INVESTMENTS BEYOND THEIR SUPPORT OF ADDITIONAL WIND GENERATION?

A. Yes. Today there is very little high capacity transmission between North Dakota, South Dakota, and eastern Minnesota. These new transmission facilities, particularly the new 345 kV line begins to increase the transmission capacity across the state of Minnesota and will support the Company's growing load in North Dakota.

III. CAPX 2020

Q. DOES THE COMPANY PLAN ADDITIONAL MAJOR TRANSMISSION EXPANSION?

A. Yes. It has been almost three decades since the electric network serving the Minnesota and North Dakota region has been expanded to any large degree. During this time the demand for power has continued to grow. To continue to serve the growing needs of consumers in this region, large amounts of new generation and transmission will need to be added.

As the North Dakota Public Service Commission is aware, transmission-owning utilities in the upper Midwest area are highly interconnected, and there is a long history of coordinated regional planning through the MAPP RTC and various MAPP sub-regional planning groups ("SPGs") in the years prior to the

formation of the MISO. In that same vein, the Company has become involved in an initiative of investor-owned, cooperative and municipal power agency transmission-owning and transmission dependent utilities in the historic MAPP region, that are planning and constructing new transmission infrastructure as needed to serve regional load growth, provide the additional transmission needed for new regional generation resources, and to meet regional reliability needs through approximately the year 2020. This initiative is referred to as the "CapX 2020 Transmission Expansion Intiative." In 2004, five regional utilities -- the NSP Operating Companies, Great River Energy ("GRE"), Minnesota Power ("MP"), Missouri River Energy Services ("MRES") and Otter Tail Power Company ("OTP") -- agreed to conduct the engineering studies they believed were needed to establish a framework or comprehensive plan for the development of transmission infrastructure to meet the increasing demand for electricity in Minnesota and the surrounding area. Since 2004, additional entities have joined the effort. They include: Dairyland Power Cooperative ("DPC"), Central Minnesota Municipal Power Agency ("CMMPA"), Minnkota Power Cooperative ("MPC"), Rochester Public Utilities ("RPU"), Southern Minnesota Municipal Power Agency

("SMMPA"), and Wisconsin Public Power, Inc. ("WPPI").[1] The participants in the CapX 2020 initiative include both Midwest ISO member utilities and non-Midwest ISO members. In addition, other utilities have lent their technical support in many of the detailed studies associated with this initiative.

The CapX 2020 participants have developed a comprehensive transmission vision plan that contemplates construction of needed new transmission infrastructure over a long planning horizon. More information about the initiative is available at the CapX 2020 web site (www.capx2020.com).

IV. CONCLUSION

Q. CAN YOU PLEASE SUMMARIZE YOUR CONCLUSIONS?

A. Since 2005, the Company has invested significant capital funds to support the transmission needs of our consumers, and to prepare for additional growth and future generation. Our request for an increase in rates in this proceeding will in part provide recovery of these important and necessary investments.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

[1] CMMPA is a joint action agency of 12 municipal members located in south central Minnesota. DPC is a generation and transmission ("G&T") cooperative that provides the wholesale electrical requirements and other services for 25 electric distribution cooperatives and 19 municipal utilities in Wisconsin, Minnesota, Iowa and Illinois. GRE is a G&T cooperative and provides wholesale electric service to 28 distribution cooperatives in Minnesota. MP is a division of ALLETE and supplies retail electric service to 141,000 customers and wholesale electric service to 16 municipalities in Minnesota. MPC is a G&T cooperative serving 11 member-owner distribution cooperatives in eastern North Dakota and northwestern Minnesota. MRES is a joint action agency of 23 municipal members located in Iowa, Minnesota, North Dakota and South Dakota. OTP provides electricity and energy services to more than 129,000 customers in Minnesota, North Dakota, and South Dakota. RPU is the largest municipal utility in the state of Minnesota serving 45,000 electric customers in the City of Rochester. SMMPA is a joint action agency of 18 members in central Minnesota. WPPI is a municipal joint action agency serving 46 municipal utilities in Wisconsin, Iowa and Minnesota.

STATE OF NORTH DAKOTA
BEFORE THE
PUBLIC SERVICE COMMISSION

In the Matter of the Application of Northern States Power Company, a Minnesota Corporation For Authority to Increase Rates for Electric Service in North Dakota	))))	Case No. PU-07-___

AFFIDAVIT OF
Walter T. Grivna

I, the undersigned, being duly sworn, depose and say that the foregoing is the Direct Testimony of the undersigned, and that such Direct Testimony and the exhibits or schedules sponsored by me to the best of my knowledge, information and belief, are true, correct, accurate and complete, and I hereby adopt said testimony as if given by me in formal hearing, under oath.

Walter T. Grivna

Subscribed and sworn to before me, this 5th day of December, 2007.

Notary Public

JUDITH FROEMMING
NOTARY PUBLIC – MINNESOTA
MY COMMISSION EXPIRES 1-31-2010