office of energy security
Minnesota Department of Commerce

85 7th Place East, Suite 500
St. Paul, MN 55101-2198
main: 651.296.4026
tty: 651.296.2860
fax: 651.297.7891
www.energy.mn.gov

March 31, 2011

Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **Comments of the Minnesota Office of Energy Security**
Docket No. E002/CN-10-694

Dear Dr. Haar:

Attached are the comments of the Minnesota Office of Energy Security (OES) in the following matter:

> Application for a Certificate of Need for Two 115 kV High Voltage Transmission Lines in the Midtown Area of South Minneapolis, Hennepin County: Hiawatha Project.

The Petitioner is:

> Teresa M. Mogensen
> Vice President, Transmission and Operating Services
> Northern States Power Company
> 414 Nicollet Mall
> Minneapolis, Minnesota 55401-1993

The OES recommends **approval.** The OES's team of Hwikwon Ham, Christopher Davis and myself is available to answer any questions the Public Utilities Commission may have.

Sincerely,

/s/ STEVE RAKOW
Rates Analyst

SR/ja
Attachment

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS OF THE MINNESOTA OFFICE OF ENERGY SECURITY

DOCKET NO. E002/CN-10-694

I. INTRODUCTION

A. *PROCESS BACKGROUND*

1. Notice Plan

On June 23, 2010 Northern States Power Company, a Minnesota Corporation (Xcel or the Company) submitted the Company's *Certificate of Need Notice Plan: Two 115 kV Transmission Lines in the Midtown Area of South Minneapolis* (Notice Petition). The Notice Petition provided Xcel's proposed notice plan for a set of 115 kV distribution lines[1] in the city of Minneapolis, Minnesota.

Comments on the Notice Petition were filed by the Minnesota Office of Energy Security (OES) on July 13, 2010. On July 29, 2010 the Company filed reply comments.

Finally, on August 17, 2010 the Minnesota Public Utilities Commission (Commission) issued an Order that approved the proposed notice plan.

2. Completeness

On November 29, 2010 Xcel filed the Company's *Application for a Certificate of Need for Two 115 kV High Voltage Transmission Lines in the Midtown Area of South Minneapolis, Hennepin County: Hiawatha Project* (Petition). The Petition describes the proposed facilities as follows:

[1] Below, the OES discusses the definition of transmission versus distribution.

- A new 115 kV distribution substation near Hiawatha Avenue and 28th Street;
- A new 115 kV distribution substation near Oakland Avenue and 29th Street; and
- Two 115 kV distribution lines between the new substations (collectively, Hiawatha Project).

On December 27, 2010 the OES filed comments regarding the completeness of the Petition. Other parties filing comments on completeness included:

- Hennepin County, the City of Minneapolis, and the Midtown Greenway Coalition;
- East Phillips Improvement Coalition;
- Midtown Phillips Neighborhood Association, Inc.; and
- the Midtown Greenway Coalition (separately).

On January 6, 2011 Xcel submitted a supplement which provided the additional data recommended by the OES. Separately on January 7, 2011 the Company submitted reply comments on completeness.

On February 15, 2011 the Commission issued its *Order Finding Application Complete and Initiating Informal Review Process* (Second Order) which determined that Xcel's Petition was complete.

On February 17, 2011 the Commission issued its *Notice of Comment Periods* (Notice). The Notice indicated that comments on the merits of the Petition are due March 31, 2011 and reply comments are due April 29, 2011. In response to the Notice, below are the comments of the OES regarding Xcel's Petition.

B. PLANNING BACKGROUND

The Hiawatha Project is discussed within the *2009 Minnesota Biennial Transmission Projects Report* (2009 Transmission Report) as issue number 2007-TC-N3, also referred to as the South Minneapolis Distribution Study.[2] The 2009 Transmission Report explains the problems addressed by the proposed distribution line as follows:

> Customer electricity usage has grown significantly over the past decade in south Minneapolis and is expected to continue to grow. This growth has been particularly dramatic along and around Lake Street and Hiawatha Avenue due to revitalization and redevelopment efforts. In response to an increasing number of feeder circuit overloads and service interruptions on the distribution delivery system in south Minneapolis over the past

[2] See Docket No. E999/M-09-602.

> decade, Xcel Energy's Distribution Planning engineers conducted a long-term study of the south Minneapolis distribution delivery system and identified an existing deficit of approximately 55 MW.

Regarding the solution, 2009 Transmission Report states:

> Common to all three options were the addition of two new distribution substations, one in the vicinity of the former Hiawatha Substation site near Hiawatha Avenue and Lake Street, and a second new substation in the area west of Chicago Avenue and east of Interstate 35W in the Midtown area. Both substations would tap the existing Elliot Park – Southtown 115 kV transmission line, and two new looped 115 kV transmission lines would connect the substations… planning engineers determined that the common facilities should be constructed first…

Thus, the Hiawatha Project is consistent with the infrastructure improvements discussed under the South Minneapolis Distribution Study issue in the 2009 Transmission Report.

C. NATURE OF THE FACILITIES

The North American Electric Reliability Corporation (NERC) is responsible for the reliability of the bulk power system. The existing NERC Glossary of Terms defines the Bulk Electric System as follows:

> As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.

In turn, the *Direct Testimony of Jason Standing* (Docket No. E002/TL-09-38) explained at page 4:

> The two 115 kV transmission lines from the new Hiawatha Substation to the new Midtown Substation, whether overhead or underground, would be radial lines, serving load from a single source. Consequently, they are not considered part of the Bulk Electric System and North American Electric Reliability Corporation ("NERC") planning criteria do not apply.

The *Rebuttal Testimony of Larry L. Schedin, PE* at pages 3-4 disagreed with Mr. Standing:

> First, NSP can change the 115 KV configuration at any time, and re-configuration could eliminate the so-called radial nature of the two 115 KV lines…
>
> Second, Mr. Standing emphasizes bulk system integrity and ignores the importance of Midtown area customer reliability. Reconfiguration of the distribution load by "Capacity Planning" in the event of a double circuit 115 KV line outage will result in significant power outages to all the area customers because such reconfiguration will not occur automatically and may be completely impossible if storms damage any backup distribution lines. My direct testimony references a recent tornado in that area which could easily cause this to happen.
>
> Third, regardless of NERC planning criteria, my opinion is that placing a double circuit 115 KV line through this densely populated area makes the Midtown supply far more vulnerable to a total double circuit failure than simultaneous outage of two comparable underground 115 KV lines.

The *Rebuttal Testimony of Scott Zima* at pages 2-3 effectively provides Xcel's response to Mr. Schedin:

> I believe Schedin is challenging the adequacy of double circuit overhead construction design based on certain transmission planning criteria established by the North American Electrical Reliability Corporation ("NERC") for the Bulk Transmission System. As stated in Jason Standing's direct testimony at page 4 and Schedule 2, this criteria does not apply to the two 115 kV transmission lines proposed here. Furthermore, I do not agree that the proposed transmission facilities need to be located on separate right-of-way or underground to meet the Project needs, as Schedin contends. The two new lines will provide reliable power sources to the Midtown Substation and the Project will provide the necessary capacity for the Midtown area. In the event of a simultaneous outage of both 115 kV transmission lines between Hiawatha Substation and Midtown Substation, the load at Midtown Substation would be served by the distribution system components.

Based upon the above testimony OES concludes that Mr. Standing is correct; Xcel's proposal for the Hiawatha Project is a radial line serving load which is excluded from the relevant definition of the bulk electrical or transmission system. Mr. Schedin discusses other potential

configurations not proposed by the Company. Therefore, the Hiawatha Project is not a transmission project for reliability purposes and the analysis should consider Xcel's distribution reliability criteria.

II. OES ANALYSIS

Minnesota Statutes §216B.2421, subd. 2 (3) defines a large energy facility (LEF) as "any high-voltage transmission line with a capacity of 100 kilovolts or more with more than ten miles of its length in Minnesota." Since the Hiawatha Project would have a capacity of 115 kV but would be less than ten miles in length it normally would not qualify as a LEF. However, during the 2010 Minnesota state legislative session, the Minnesota legislature enacted a new certificate of need (CN) provision. The new law requires that distribution lines of the size and length proposed by Xcel, if located in an area with high population density and if the lines are within one-half mile of and parallel a below-grade bike and pedestrian path that connects with other bike paths along a river, be subject to the provisions of Minnesota Statutes §216B.243 (see 2010 Minnesota Laws, chapter 361, article 5, section 19).

Second, Minnesota Statutes §216B.243, subd. 2 states that "no large energy facility shall be sited or constructed in Minnesota without the issuance of a certificate of need by the Commission…" Therefore, a CN must be approved by the Commission before the Hiawatha Project could be sited or constructed.

There are several factors to be considered by the Commission in making a determination in CN proceedings. In a general manner, these factors are located in different sections of Minnesota Statutes. Some of the general, statutory criteria are reflected in a more specific way in Minnesota Rules 7849.0120. However, some statutory criteria do not appear to be reflected in rules. To clarify the analysis, the OES grouped all of the statutory and rule criteria into five broad categories and allocated each of the statutory and rule criteria to one of the categories. The broad categories are:

- need analysis;
- link to planning process;
- analysis of alternatives;
- socio economic analysis; and
- policy analysis.

The OES addresses each of the statutory and rule criteria below. A cross-index matching the statutory and rule criteria to the section where each is addressed along with a summary of OES's analysis is provided as Attachment1.

In general, the OES relies upon the environmental document for an analysis of the effects of the proposed facility and the alternatives upon the natural and socioeconomic environments.

A. NEED ANALYSIS

Overall, the need analysis is governed by Minnesota Rules 7849.0120 A which states that a certificate of need must be granted upon determining that:

> The probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states.

The rule then proceeds to list 5 distinct criteria. The OES presents the analysis of the need for the project in two parts. The first part is designed to address the accuracy of the forecast underlying the claimed need. The second part is designed to address any broader reliability needs claimed by Xcel. Each part is addressed separately below.

1. Forecast Analysis

a. Accuracy of the Forecast

Regarding accuracy of the forecast, Minnesota Rules 7849.0120 A (1) states that the Commission is to consider "the accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility." Regarding the accuracy of the applicant's forecast of demand, the Petition states at page 1:

> The Hiawatha Project is designed to meet the distribution needs of Xcel Energy's customers in south Minneapolis, Hennepin County, Minnesota. The demand for power has increased beyond the capability of the system due to population growth, higher load density, and recent successful urban revitalization efforts, particularly in the areas along Lake Street, Hiawatha Avenue, and the Chicago and Park Avenue corridors. Additional electrical infrastructure is required to address overload conditions on the distribution system and to improve the reliability of the power supply to residences and businesses.

And the Petition states at page 43:

> The need for the Project is not the result of any promotional activities. Rather, the need for the Project is driven by a continuing increase in demand for power and anticipated increasing demand. Planning reports issued by the City of Minneapolis planning department describe City plans to facilitate continued large-scale redevelopment in the south Minneapolis area over the next several

> years. Current and future redevelopment is concentrated along Lake Street and the Hiawatha Light Rail Transit corridors and in areas adjacent to those corridors (e.g., Midtown Exchange, Abbott Northwestern Hospital, and Minneapolis Children's Hospital).
>
> In response to growing power demands, the Company conducted a study of the south Minneapolis distribution delivery system. The Company determined that the demand on the distribution system serving the south Minneapolis area exceeded capacity by 55 MW beginning in 2006.

Thus, the actual load for the area exceeds the level at which reliable service can be provided. Based on this information the OES concludes that the accuracy of the forecast of demand is not relevant to a determination of need because the area has already experienced historical demand greater than the ability of the infrastructure to reliably provide service (i.e. N-1). Therefore, regardless of the forecast of future demand, the current level of demand indicates that transmission and/or distribution improvements are needed. In summary, the OES concludes that this subcriterion has been met.

b. Relation to State Energy Needs

Also related to forecast analysis is Minnesota Rules 7849.0120 C (1) which states that the Commission is to consider "the relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs." Regarding overall state energy needs, clearly the line in question is related to local needs generally and local reliability in particular rather than overall state energy needs. Therefore, a discussion of state energy needs is not directly relevant. However, the OES's *Energy Policy and Conservation Report 2004* (Quad Report) states at page 13 "reliable electric service is critical for the way we live today." Further, the Quad Report states that:

> Reliability of electric service can be divided into two basic components: adequacy and security. "Adequacy" is the ability of utilities to supply customer's electric service requirements, taking into account scheduled and unscheduled outages. "Security" is defined as the system's ability to withstand sudden unexpected disturbances without collapsing.

Above, the OES noted that the area has experienced demand greater than reliable supply capability. This situation appears to the OES to be a violation of the security portion of reliability as defined above. Therefore, while the proposed project is not directly related to overall state energy needs, it is necessary to restore reliable service in the local area. In summary, the OES concludes that this subcriterion has been met.

2. Reliability Analysis

Minnesota Statutes §216B.243, subd. 3 (9) states that in assessing need, the Commission shall evaluate "with respect to a high-voltage transmission line, the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system or lower costs for electric consumers in Minnesota." Regarding "enhanced regional reliability, access, or deliverability" due to the distribution line in question, the claimed need is for local load serving in the area. Therefore, the proposed distribution line will provide enhanced reliability in the area where it would be built, by restoring service to local loads to acceptable levels. However, beyond this benefit, the OES concludes that the proposed line has no further impact, positive or negative, with regard to this subcriterion.

B. LINK TO PLANNING PROCESS

1. Renewable Preference

Regarding renewable preference, there are two sections of Minnesota Statutes that apply. First, Minnesota Statutes §216B.243, subd. 3a states that:

> The Commission may not issue a certificate of need under this section for a large energy facility that generates electric power by means of a nonrenewable energy source, or that transmits electric power generated by means of a nonrenewable energy source, unless the applicant for the certificate has demonstrated to the Commission's satisfaction that it has explored the possibility of generating power by means of renewable energy sources and has demonstrated that the alternative selected is less expensive (including environmental costs) than power generated by a renewable energy source. For purposes of this subdivision, "renewable energy source" includes hydro, wind, solar, and geothermal energy and the use of trees or other vegetation as fuel.

Second, Minnesota Statutes §216B.2422, subd. 4 states that:

> The Commission shall not approve a new or refurbished nonrenewable energy facility in an integrated resource plan or a certificate of need, pursuant to section 216B.243, nor shall the Commission allow rate recovery pursuant to section 216B.16 for such a nonrenewable energy facility, unless the utility has demonstrated that a renewable energy facility is not in the public interest.

In response, the OES notes that the distribution lines in question will not interconnect any particular generation resource. Moreover, the lines are not needed to interconnect or transmit power from a new generation resource. Rather, the lines will distribute electricity from the existing transmission grid generally within the local area. Therefore, it could reasonably be stated that these renewable preference statutes do not apply.

Nonetheless, the OES notes that Xcel addressed the issue of a renewable generator as an alternative to the proposed facility. On page 73-75 of the Petition Xcel states that either wind or solar, to create 120 MW of nameplate capacity,[3] would cost $240 million (wind) or $670 million (solar). Even if a wind or solar alternative were restricted to meeting the current 55 MW demand gap, a solar or wind alternative would be prohibitively expensive compared to the proposal, which would cost $110 million (wind) or $310 million (solar). Therefore, the OES concludes that renewables are not a reasonable alternative to the Hiawatha Project. Below, OES discusses solar, wind, and biomass in greater detail.

In summary, the OES concludes that this statutory criterion has been met.

2. Demand-side Management

Regarding Demand-side Management (DSM), Minnesota Statutes §216B.243, subd. 3 states:

> No proposed large energy facility shall be certified for construction unless the applicant can show that demand for electricity cannot be met more cost effectively through energy conservation and load-management measures.

Also, Minnesota Statutes §216B.243, subd. 3(8) states that the Commission shall evaluate:

> …any feasible combination of energy conservation improvements, required under section 216B.241, that can (i) replace part or all of the energy to be provided by the proposed facility, and (ii) compete with it economically;

These statutes are reflected in Minnesota Rules 7849.0120 A(2) which requires the Commission to consider "the effects of the applicant's existing or expected conservation programs and state and federal conservation programs."

Page 47 of the Petition (and also in more detail at Appendix A.1 at page 79 of 102) indicates that peak demand in the area reached 331 MW in 2006. The impact of this load level on the Company's system is explained in Figure 24 on page 49 of the Petition (and in more detail within Appendix A.1 at page 81 of 102). Under system intact conditions (N-0), there were 12

[3] Note that Xcel's Petition indicates that the Hiawatha Project would create 120 MW of transmission capacity.

circuits that were operating at 100 percent or more of their capacity. Of those 12 circuits, 4 were operating at more than 115 percent of their capacity. The 12 circuits were loaded to a total of 12.2 MW over 100 percent of capacity. Figure 24 (and Appendix A.1) demonstrates that such severe overloading under system-intact conditions goes back to at least the year 2000. In summary, DSM would have to actually reduce total load (rather than reduce the rate of growth) by 12.2 MW (representing a 3.7 percent reduction in load in the study area) to enable all circuits to operate at less than or equal to 100 percent of capacity.

On page 40 of the Petition Xcel explains that one reliability criterion used by the Company to evaluate the distribution system is as follows:

> A distribution main feeder is generally composed of three equal sections that should serve no more than 25% of the total capacity of the main feeder. As a result, during system intact conditions, a feeder circuit with three sections should be loaded to no more than 75% of capacity (also known as utilization rate), which reserves 25% of the capacity to be used to meet the load of an adjacent feeder circuit in the event of a failure.

Page 81 of 102 of Appendix A.1 of the Petition indicates that, during 2006, Xcel's circuits experienced 54.7 MW of load in excess of the threshold (75 percent use under N-0 conditions) established by Xcel's distribution reliability criterion. Thus, DSM would have to actually reduce total load (rather than reduce the rate of growth) by 54.7 MW (representing a 16.5 percent reduction in load in the study area) to enable all circuits to meet Xcel's distribution reliability criterion of 75 percent capacity use under N-0 conditions. This is the minimum reduction necessary. As growth continues in the area, the total load reduction required will grow.

For purposes of comparison, Appendix G of the Petition indicates that Xcel's conservation improvement program (CIP) proposes to save about 90 MW to 100 MW per year across the Company's entire Minnesota service territory. Xcel's CIP provides tremendous value to Xcel's customers because over time it helps the Company defer and even avoid a significant amount of resources. However, energy conservation is not a good option for providing the load reduction needed in the Hiawatha Project area because:

1. The load reduction is too large to be able to be obtained through energy conservation projects in a small geographic area. In other words, demand reductions in St. Paul will not help alleviate the overloading in the Hiawatha area.

2. The load reduction is needed now. Even if energy conservation over time could provide the load reduction, it would not be able to provide it in a timely manner.

Thus, while energy conservation is an effective alternative for meeting future needs, it will not be able to address issues related to meeting existing demand at the levels indicated in the Petition. Therefore, OES concludes that this criterion has been met.

C. ANALYSIS OF ALTERNATIVES

Overall, the analysis of alternatives is governed by Minnesota Rules 7849.0120 B which states that a certificate of need must be granted upon determining that:

> …a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record.

The rule then proceeds to list four distinct criteria. The OES breaks down its analysis of the alternatives to the proposed facility into four broad areas:

- alternatives analysis
- reliability analysis;
- distributed generation (DG) analysis; and
- integrated gasification combined cycle (IGCC) preference.

Each area is addressed separately below.

1. Alternatives Analysis

a. Non-CN facilities analysis

Minnesota Rules 7849.0120 A (4) states that the Commission is to consider "the ability of current facilities and planned facilities not requiring certificates of need to meet the future demand." Regarding the effects of facilities not requiring CNs, these could be considered to be DG or transmission and distribution facilities not requiring a CN under Minnesota Statutes §216B.2421, subd. 2. The DG alternatives were evaluated in the context of the Petition which states that:

- there is an existing deficit of approximately 55 MW; and
- the Hiawatha Project would cost between $30 million and $43 million, depending upon the route chosen.

The OES notes that the preferred method of evaluating generation alternatives would be to use the Strategist model. Strategist is a capacity expansion model, meaning it determines the least cost expansion plan for a utility's system during a lengthy planning period. However, in these comments the OES uses a simpler calculation approach which can be more readily understood by the public.

i. Solar

First the OES considered solar as a DG alternative. The solar alternative is assumed to be sited in the local community so as to solve the distribution issues with a generation alternative rather than a wires-based alternative. Data regarding a solar alternative is provided by Xcel on page 75 of the Petition. Xcel indicates that a 400 sq. ft. solar array might have a capacity of 4.6 kW; equivalent to 11.2 watts per square feet. Using the Google Earth program,[4] the OES estimates that one block in the area of the Hiawatha Project is approximately one-eighth of a mile by one-sixteenth of a mile, or about 217,800 sq. ft. Thus, a 55 MW deficit divided by 11.5 watts per sq. ft. divided by 217,800 sq. ft. per city block equals an area to be cleared and dedicated to solar installations equivalent to about 22 city blocks just to fill the existing deficit. This analysis does not address future growth.[5]

In addition to the space requirements, the OES examined the cost implications of a solar alternative, or solar in combination with another generation technology. Xcel's proposed project is estimated to cost between $30 million and $43 million. Xcel indicates that a 400 square foot solar array might have a capacity of 4.6 kW and a cost of $26,000; equivalent to $5.65 per watt or $5,650 per kW. This capital cost can be compared to information from the U.S. Energy Information Administration (EIA) which indicates that the overnight capital cost for a small photovoltaic system (7 MW) would be about $6,050 per kW.[6] Thus, it appears that Xcel's estimate is lower than EIA's but is still reasonable. Using Xcel's cost estimate, spending $20,000 on a solar array would obtain 3.54 MW and leave $10 million to $23 million to spend on another alternative to achieve the remaining 51.46 MW needed. Further, fulfilling the entire 55 MW with a solar alternative would cost about $310 million. Clearly, the less solar included in a combined alternative, the better from both a space and cost perspective.

Adding the benefit of avoiding energy production at other facilities would not significantly change this conclusion. Assuming a 3.54 MW solar array with a 15 percent capacity factor,[7] an avoided cost of $45 per MWh, a 20-year project life, and a real discount rate of 5 percent results in a present value of about $2.7 million in terms benefits from avoided energy costs. This figure is too small to alter the overall conclusion that solar is not a reasonable alternative.

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[4] Available at: http://www.google.com/earth/index.html
[5] Note that to create an alternative of 120 MW capacity would require about an area be cleared equal to about 48 city blocks.
[6] Taken from EIA's *Updated Capital Cost Estimates for Electricity Generation Plants* (November 2010).
[7] Capacity factor adapted from: *Minnesota Solar Electric Rebate Program Report: 2002-2008*, dated April 8, 2009 and available at:
http://www.state.mn.us/mn/externalDocs/Commerce/MN_Solar_Electric_Rebate_Report_040809051301_MinnesotaSolarElectricRebateProgram.pdf

ii. Wind

The OES also explored wind as a DG alternative. Wind has a lower capacity cost than solar (reducing its up-front cost) and a higher capacity factor (increasing the avoided cost benefit). However, wind typically receives a capacity accreditation of approximately 10 percent. This means that if a utility acquires a 100 MW nameplate capacity wind farm, it can count about 10 MW of that wind toward meeting its peak demand requirements. Thus, 550 MW nameplate capacity of wind[8] (accredited at perhaps 55 MW) might cost about $2,000 per kW; resulting in a total cost of about $1.1 billion. Therefore, accounting for accredited capacity makes a wind alternative even less economic than the solar alternative when it comes to meeting capacity needs. This result illustrates why wind is typically thought of as an energy resource and not a capacity resource. In summary, wind is not a reasonable alternative and the less wind included in a combined alternative the better.

iii. Biomass

As with solar, the biomass alternative is assumed to be sited in the local community so as to solve the distribution issues with a generation alternative rather than a wires-based alternative. Xcel provided data in Appendix C.4 of the Petition. The data indicates that the capital cost for a 25 MW biomass facility would be about $3,335 per kW for a total capital cost of $83.375 million. Purchasing two units of 25 MW each would cost $166.375 million. This amount is roughly half the capital cost of the solar alternative and far smaller than the capital cost of the wind alternative after accounting for capacity accreditation.

Xcel reports in Appendix C.4 of the Petition that a 25 MW biomass facility has operations and maintenance costs of $16.10 per MWh and fuel costs of about $32.25 per MWh, for a total variable cost of $48.35. Above, the OES estimated the avoided cost benefit of solar to be about $45 per MWh. Using the same assumption,[9] the avoided cost benefit will approximately offset the variable costs of generating electricity from biomass. Thus, only the capital costs are relevant.

In summary, the above calculations demonstrate that the biomass alternative is the least cost renewable generation alternative for providing 55 MW of capacity. However, the least cost renewable generation alternative is not competitive with a wires-based alternative and the less biomass in a combined alternative the better.

[8] OES does not believe that 550 MW of wind could be sited in the vicinity of the Hiawatha project. These calculations are for illustrative purposes only.
[9] OES understands that biomass and solar will produce energy at different hours of the day. However, the difference in avoided cost will be minimal compared to the capital costs.

iv. Transmission and Distribution

Regarding the use of non-CN transmission and distribution, as noted above, the Hiawatha Project would not normally require a CN. Further, the *South Minneapolis Electric Distribution Delivery System Long-Term Study* (Distribution Study) provided in Appendix A.1 of the Petition reviewed equal and lower voltage alternatives and concluded that the Hiawatha Project was the best alternative. Also, the *South Minneapolis Interconnection* Study (Transmission Study) provided in Appendix A.2 of the Petition also reviewed alternatives of an equal or lower voltage and concluded that the Hiawatha Project was the best alternative. Based upon the Distribution Study and Transmission Study, the OES concludes that lower voltage alternatives are inferior to the Hiawatha Project.

In summary, the OES concludes that this subcriterion has been met.

2. Size, Type, and Timing

Minnesota Rules 7849.0120 B (1) states that the Commission is to consider "the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives." The OES concludes that "size" refers to the quantity of power transfers that the transmission infrastructure improvement enables, "type" refers to the transformer nominal voltages, rated capacity, surge impedance loading (SIL), and nature (AC or DC) of power transported, and "timing" refers to the on-line date for the distribution infrastructure improvements.[10] First, the OES concludes that Xcel's proposed size is reasonable because Xcel states that a "higher voltage alternative … could provide additional capacity, but it is not anticipated this capacity would be needed within the next 20 years based on current forecasting analyses."

Xcel's proposal to obtain reliable service for about 20 years from this upgrade is reasonable. Second, the OES concludes that Xcel's proposed type is reasonable because:

- Use of any other voltage would require the addition of transformers at the Hiawatha substation, substantially increasing the total cost;[11]
- Use of a DC design is not a realistic option for short, low voltage transmission lines;[12] and
- Use of the Aluminum Conductor Steel Reinforced (ACSR) and potentially composite conductors enables the need to be met within the restricted right-of-way available.[13]

[10] The discussion of size, type, and timing is based upon the *Direct Testimony and Exhibit of Samir Ouanes*, filed April 11, 2002 in Docket No. E002/CN-01-1958 (Ouanes Direct).
[11] For further data see the Company's discussion of design options, section 5.1.1 of the Petition.
[12] For further data see the Company's discussion of the DC alternative, section 5.1.3 of the Petition.
[13] See the Company's discussion of conductors, section 5.1.4 of the Petition.

Regarding timing, Xcel proposes an in-service date of second/third quarter of 2013. Considering that the load-serving issue goes back to at least 2000, the OES concludes that the Hiawatha Project should have been in service long ago. Xcel's proposed timing is reasonable considering the one-year criterion in Minnesota Rules 7849.0400.

In summary, the OES concludes that this subcriterion has been met.

3. Cost Analysis

Minnesota Rules 7849.0120 B (2) states that the Commission is to consider "the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives." In Figure 15 on page 29 of the Petition Xcel reports the total cost of the Hiawatha Project (in 2010 dollars). The estimate is broken down as follows:

- For construction of the 115 kV line;
  - $2.8 million for route A1;
  - $13.6 million for route A2;
  - $12.7 million for route A3;
  - $4.6 million for route B;
  - $5.7 million for route C; and
  - $15.5 million for route D;
- Hiawatha West substation at $15.8 million; and
- Midtown substation at $11.8 million.

Thus, the total cost is estimated to be between $30.4 million and $43.1 million depending upon the specific route selected. For Xcel's least cost proposal, the total cost is $30.4 million. The OES reviewed the economic analysis provided by Xcel in appendices A.1 and A.2 of the Petition and further details of the calculations in the Company's response to OES Information Request No. 6. Considering that the difference in line losses is minimal, the OES agrees with Xcel's calculation methods and inputs and concludes that Xcel's proposed alternative A1 is least cost amongst the alternatives provided by Xcel.[14]

In summary, the OES concludes that this subcriterion has been met.

Regarding the issue of whether the Hiawatha project should be underground or overhead, the OES Brief in Docket No. E002/CN-04-1176 (the Chisago Project) states:

[14] OES notes that all considerations regarding cost recovery will be addressed in a rate case or rider proceeding, depending upon what petition Xcel files.

> In this case both the CN docket and the routing docket are being processed simultaneously. Therefore, it is important to distinguish between alternatives that should be analyzed within the CN docket and alternatives that should be analyzed within the routing docket. For clarify [sic] of the record and administrative efficiency, each alternative should be analyzed in only one docket.
>
> For a transmission line, the primary goal of the alternatives analysis on the CN side is to determine the size, type, timing, and end points of the transmission line. The primary goal of the alternatives analysis on the routing side is to determine the best place to construct the transmission line between two end points. In other words, how to get from one end point to the other. [Footnote omitted]
> …
> the question of whether a transmission line should be placed underground versus overhead, at its core, is one of how best to connect two end points. One main question in a routing proceeding is how to connect the end points. How to connect the end-points is a different question than establishing the location of the end-points.

The OES also reviewed other parties' views regarding the underground alternative and the proper venue for the analysis as discussed in the Administrative Law Judge's November 19, 2007 *Summary of Testimony at the Public Hearings, Findings of Fact, Conclusions and Recommendations* (ALJ Report) in Docket No. E002/CN-04-1176. There were three other parties to the contested case, Xcel, Concerned River Valley Citizens, and the City of Lindstrom. The comments of several persons illustrated the position of the City of Lindstrom. First, the Mayor of the City of Lindstrom argued:

> Mayor Carlson expressed the view that the type of transmission line towers proposed for placement along Highway 8 was appropriate for placement in rural locales, but not in an increasingly urbanized center, such as downtown Lindstrom.

Remarks by Lindstrom Councilman Curt Flug expressed similar concerns:

> Mr. Flug, a member of the Lindstrom City Council, expressed the view that the revenues that would be generated from existing power demand would be sufficient to underwrite an underground alternative for placement of the transmission line in downtown Lindstrom. He detailed the efforts that he and other members of the Council are making to revitalize "a struggling city."

Remarks by State Representative Jeremy Kalin also expressed similar concerns:

> Finally, characterizing the proposed overhead routing of the transmission line along Highway 8 as "the least imaginative" option, he urged pursuit of an underground alternative. In Representative Kalin's view, an underground alternative would reduce the visual impacts and preserve tourism as Lindstrom's second largest industry.

Remarks by former State Representative Peter Nelson also expressed similar concerns:

> … placement of large transmission line support structures within [and] along an urbanized business district was not appropriate. In his view, the added costs of an underground alternative along Highway 8 was justifiable and similar to other, earlier burdens spread across the base of ratepayers.

Several other commentators from Lindstrom also commented on the underground alternative through the City of Lindstrom but did not indicate a preference for a venue for the analysis of undergrounding.

During the Chisago proceeding, Xcel's proposal included overhead and underground segments. The underground segments were only along the St. Croix River:

> Applicants propose to place the new line underground through the land use district within the Lower St. Croix National Scenic Riverway, with the exception of the river crossing located in the vicinity of the St. Croix Falls dam.

Again, Xcel did not indicate a preferred venue for the analysis of undergrounding. In summary, the OES did not locate in the ALJ's Report any discussion from the other parties regarding which docket was best positioned to make the underground versus overhead determination. Therefore, the OES surmises that the same analysis applies to the instant proceeding and concludes that the issue of underground versus overhead is best addressed in the route permit proceeding.

However, the question as to which sets of customers would pay for any undergrounding should be determined in a rate case. Since Xcel Electric currently has a rate case pending, the OES recommends that Xcel indicate in its reply comments in this proceeding: whether any costs of the proposed line are included for recovery in the rate case (Docket No. E002/GR-10-971); if so, specific amounts in each component of the rate case; if not, when Xcel expects to recover such costs. Xcel should also file this information in its rate case. Further, to allow for examination of cost recovery for any undergrounding, the OES recommends that the Commission require Xcel

to identify which set(s) of customers Xcel proposes to pay for undergrounding costs in the relevant rate proceedings.

4. Natural and Socioeconomic Environment Analysis

Minnesota Rules 7849.0120 B (3) states that the Commission is to consider "the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives." The Hiawatha Project will distribute power from the transmission grid generally within the local area. Therefore, an externality value could be calculated based upon the regional generation mix. Such an externality value would be equally applicable to all transmission and distribution alternatives. Thus, externalities do not distinguish between wires-based alternatives unless there is a significant difference in avoided losses. Appendix A.1 of the Petition, at page 60 of 102 states that the line loss differential is about 1 MW of capacity and 42,000 MWh of energy over a 20-year duration. Using the following assumptions:

- 2,100 MWh per year;[15]
- Xcel's system emissions per MWh in 2010 from Strategist from Docket No. E002/RP-10-825;
- the Commission's high externality values;
- the Commission's mid-point carbon cost value;
- a 7.42 percent discount rate; and
- a 20-year duration;

The OES calculates the cumulative present value of the externality cost to be about $657,000 in 2010 dollars. Therefore, the use of the Commission's externality values is unlikely to alter the cost rankings provided in the Petition.

Further, the OES concludes that generation alternatives to the proposed lines are not reasonable; thus, consideration of the Commission's externality and carbon cost values does not alter these conclusions.

In summary, the OES concludes that this subcriterion has been met.

5. Reliability Analysis

Minnesota Rules 7849.0120 B (4) states that the Commission is to consider "the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives." The proposed distribution line is proposed to improve reliability. As discussed above, Xcel's petition considered several alternatives such as generation, double-circuiting, non-CN alternatives, DC lines, and the no-build alternative. Based upon our review of Xcel's

[15] Figure F.1 on page 101 of Appendix A.1 indicates that the annual line-loss savings are not constant; instead they grow over time. However, the OES simplified the analysis by assuming a constant level of annual line-loss savings.

analysis, the OES concludes that each of the alternatives would result in equivalent or inferior reliability. In particular, on an MW-for-MW basis, generation is less reliable than transmission.[16] Therefore, the OES concludes that this criterion has been met.

6. DG Analysis

Minnesota Statutes §216B.2426 states that "the commission shall ensure that opportunities for the installation of distributed generation, as that term is defined in section 216B.169, subdivision 1, paragraph (c), are considered in any proceeding under section 216B.2422, 216B.2425, or 216B.243." In turn, Minnesota Statutes §216B.169 states:

> For the purposes of this section, the following terms have the meanings given them…
>
> (c) "High-efficiency, low-emissions, distributed generation" means a distributed generation facility of no more than ten megawatts of interconnected capacity that is certified by the commissioner under subdivision 3 as a high-efficiency, low-emissions facility.

Overall, the OES notes that DG as an alternative is discussed above and the OES's conclusion is that DG is not a reasonable alternative. That conclusion applies equally to the subset of DG that would qualify under Minnesota Statutes §216B.169.

7. IGCC Preference

Minnesota Statutes §216B.1694, subd. 2 (a) (5) states that an 'innovative energy project':

> … shall, prior to the approval by the commission of any arrangement to build or expand a fossil-fuel-fired generation facility, or to enter into an agreement to purchase capacity or energy from such a facility for a term exceeding five years, be considered as a supply option for the generation facility, and the commission shall ensure such consideration and take any action with respect to such supply proposal that it deems to be in the best interest of ratepayers.

This statute does not apply since the proposed facility in question is a distribution line rather than a generation facility.

[16] For example, in the Petition Xcel explains new generation might be available to operate 95 percent of the necessary hours while transmission is available to operate 99 percent of the time.

D. SOCIOECONOMIC ANALYSIS

Overall, the socioeconomic analysis is governed by Minnesota Rules 7849.0120 C which states that a certificate of need must be granted upon determining that:

> … by a preponderance of the evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health.

The rule then proceeds to list four distinct criteria. The OES relies on its Environmental Report (ER) for its socioeconomic analysis in a CN proceeding. As of the date of the submission of these comments, the ER is not yet complete. Therefore, the OES recommends that the Commission consider the ER that will be filed by the Energy Facilities Permitting Staff of the OES in the Commission's decision in this matter.

E. POLICY ANALYSIS

There are several remaining criteria in statutes and rules that are applicable to a CN but do not closely fit into the need, planning, alternatives, and socioeconomics categories discussed above. Therefore, these criteria are grouped into a final category of policy considerations. In this policy section the OES addresses criteria related to:

- policies of other agencies;
- promotional practices;
- REO compliance;
- environmental cost planning;
- transmission planning compliance; and
- carbon dioxide emissions.

1. Policies of Other Agencies

Minnesota Rules 7849.0120 D states that a certificate of need must be granted on determining that:

> … the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

The OES reviewed the list of related filings and permits potentially required provided in response to OES Information Request No. 5. However, the OES did not investigate whether those permits will be granted. Rather, the OES presumes that should the permits be granted, Xcel would comply with any permit requirements. The OES relies upon the agencies to enforce permit requirements. Of course, should any of these permits be denied, the OES assumes that the Hiawatha Project will not be constructed, regardless of the Commission's decision regarding the Petition.

Based upon the above, the OES concludes that the record does not demonstrate that Xcel will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

2. Promotional Practices

Minnesota Rules 7849.0120 A (3) states that the Commission is to consider "the effects of promotional practices of the applicant that may have given rise to the increase in the energy demand, particularly promotional practices which have occurred since 1974." Regarding the effects of promotional practices, the Petition at page 6 indicates that the promotional practices of the city of Minneapolis have given rise to the increase in energy demand. Further, the Petition at pages 8-9 indicates that there are several small area plans, which are subsets of the City of Minneapolis's comprehensive plan. Examples of such plans include:

1. the Midtown Greenway Land Use and Development Plan;
2. the Midtown Minneapolis Land Use and Development Plan;
3. the Phillips West Master Land Use Plan;
4. the Seward Longfellow Greenway Area Land Use and Predevelopment Study; and
5. the Hiawatha/Lake Street Station Area Master Plan.

The Petition states that "all five land use plans call for new and intensified development along the Midtown Greenway and in the surrounding area." Therefore, the promotional activities of the five small area plans have contributed to the increase in energy demand and will promote such growth in the future. However, the city of Minneapolis and the smaller areas are not an applicant. The OES is not aware of any relevant promotional practices of Xcel. Therefore, the OES concludes that this subcriterion has been met.

3. REO Compliance

a. Compliance with Minnesota Statutes §216B.1691

Minnesota Statutes §216B.243, subd. 3 (10) states that the Commission shall evaluate "whether the applicant or applicants are in compliance with applicable provisions of sections 216B.1691." In turn, Minnesota Statutes §216B.1691, subd. 2 states:

> Each electric utility shall make a good faith effort to generate or procure sufficient electricity generated by an eligible energy technology to provide its retail consumers, or the retail customers of a distribution utility to which the electric utility provides wholesale electric service, so that commencing in 2005, at least one percent of the electric utility's total retail electric sales to retail customers in Minnesota is generated by eligible energy technologies and seven percent of the electric utility's total retail electric sales to retail customers in Minnesota by 2010 is generated by eligible energy technologies.

Minnesota Statutes §216B.1691, subd. 2a (b) states:

> An electric utility that owned a nuclear generating facility as of January 1, 2007, must meet the requirements of this paragraph rather than paragraph (a). An electric utility subject to this paragraph must generate or procure sufficient electricity generated by an eligible energy technology to provide its retail customers in Minnesota or the retail customer of a distribution utility to which the electric utility provides wholesale electric service so that at least the following percentages of the electric utility's total retail electric sales to retail customers in Minnesota are generated by eligible energy technologies by the end of the year indicated:
>
> | | | |
> |---|---|---|
> | (1) | 2010 | 15 percent; |
> | (2) | 2012 | 18 percent; |
> | (3) | 2016 | 25 percent; |
> | (4) | 2020 | 30 percent. |
>
> Of the 30 percent in 2020, at least 25 percent must be generated by solar energy or wind energy conversion systems and the remaining five percent by other eligible energy technology. Of the 25 percent that must be generated by wind or solar, no more than one percent may be solar generated and the remaining 24 percent or greater must be wind generated.

To address this issue, the OES referred to the Commission's August 5, 2009 *Order Approving Five-Year Action Plan as Modified and Setting Filing Requirements* (Docket No. E002/RP-07-1572) which states at ordering point 5:

> The Commission finds that Xcel is in compliance with its REO/RES to obtain at least one percent of its Minnesota retail sales from renewable sources in 2008, and that the Company has plans in place to comply with its RES requirement through 2017.

In addition, on May 28, 2010, Xcel submitted its RES Compliance Report for 2009 in Docket No. E999/PR-10-267 showing its compliance with 2009 RES requirements.

Therefore, given that the Commission has found that Xcel is compliant with the REO/RES, the OES concludes that the Company has met this statutory criterion.

b. C-BED Projects

Minnesota Statutes §216B.1612 (c) states that "the Commission shall consider the efforts and activities of a utility to purchase energy from [community-based energy development] C-BED projects when evaluating its good faith effort towards meeting the renewable energy objective under section 216B.1691." To review Xcel's efforts towards C-BED projects, the OES referred to the Company's 2010 resource plan petition (Docket No. E002/RP-10-825). This document indicates that Xcel has 327 MW of C-BED projects already acquired or contracted to be on the Company's system by the end of 2012. This amount represents about 18 percent of the Company's total wind resources. Xcel has made significant efforts towards purchasing energy from C-BED projects. Therefore, the OES concludes that the Company has met this statutory criterion.

4. Environmental Cost Planning

Minnesota Statutes §216B.243, subd. 3 (12) states that the Commission shall evaluate "if the applicant is proposing a nonrenewable generating plant, the applicant's assessment of the risk of environmental costs and regulation on that proposed facility over the expected useful life of the plant, including a proposed means of allocating costs associated with that risk." In this case, Xcel is proposing a distribution line, not a generating plant. Moreover, this distribution line is not proposed to interconnect a new generating plant. Therefore, this statute does not apply.

5. Transmission Planning Compliance

Minnesota Statutes §216B.243, subd. 3 (10) states that the Commission shall evaluate "whether the applicant or applicants are in compliance with applicable provisions of … 216B.2425, subdivision 7, and have filed or will file by a date certain an application for certificate of need under this section or for certification as a priority electric transmission project under section 216B.2425 for any transmission facilities or upgrades identified under section 216B.2425, subdivision 7." In turn, Minnesota Statutes §216B.2425, subd. 7 states:

> Each entity subject to this section shall determine necessary transmission upgrades to support development of renewable energy resources required to meet objectives under section 216B.1691 and shall include those upgrades in its report under subdivision 2.

In the 2009 Transmission Report, page 313 (Docket No. E999/M-09-602), the utilities stated that they "have determined that with the addition of the CapX 2020 Group 1 projects, the transmission system in the 2016 timeframe should be adequate to meet the 2016 Minnesota RES milestones. ... beyond 2016, there is a gap between the RES milestone and the identified renewable generation that will be required, and this gap will likely require additional transmission."

Regarding next steps, the 2009 Transmission Report, pages 324 and 325 states:

> After completion of the CapX 2020 Group I projects, the next most likely transmission addition is the Corridor project. This project is an upgrade of the existing 230 kV line between Granite Falls, Minnesota and Shakopee, Minnesota. As discussed above, the Corridor Study recommended that this line be upgraded to double-circuit 345 kV operation. The initial study results described above indicate that the Corridor project will have the ability to add approximately 2000 MW of generation to the system. This transmission addition has the potential to provide enough transmission to meet the 2020 RES milestone.

There is sufficient time to allow events to develop before a date certain for a CN application would be warranted for the Corridor project. Therefore, the OES concludes that this statutory criterion has been met.

6. Carbon Dioxide Emissions

Minnesota Statutes, §216H.03 states that:

> . . . on and after August 1, 2009, no person shall: (1) construct within the state a new large energy facility that would contribute to statewide power sector carbon dioxide emissions; . . .

The Hiawatha Project is a distribution line and not a generation facility. Therefore, OES concludes that the Hiawatha Project will not contribute to statewide power sector carbon dioxide emissions. In fact, to the extent the Hiawatha Project reduces system line losses, the Hiawatha Project may lower power sector carbon dioxide emissions.

III. OES RECOMMENDATION

The OES recommends that the Commission approve Xcel's Petition for a Certificate of Need for two 115 kV distribution lines connecting the Hiawatha and Midtown substations.

The OES also recommends that questions as to which set(s) of customers should pay for any undergrounding be decided in a rate case. To assess whether any costs of the proposed facility are included in rates, the OES recommends that Xcel provide, in reply comments in the instant proceeding and in the concurrent rate case (Docket No. E002/GR-10-971) whether any cost of the proposed line is included for recovery in the rate case proceeding and, if so, specific amounts in each component of the rate case. If not, then Xcel should indicate when Xcel expects to recover such costs. Further, the OES recommends that the Commission require Xcel to provide information as to which set(s) of customers Xcel proposes to charge for undergrounding costs in the relevant rate proceedings.

/ja

Rules and Statutes Addressed in the Comments		
Statute or Rule Citation	**OES Comment**	**Location**
7849.0120 CRITERIA. A certificate of need must be granted to the applicant on determining that:		
A. the probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states, considering:		
(1) the accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility;	The accuracy of the forecast of demand is not relevant to a determination of need because the area has already experienced historical demand greater than the ability of the infrastructure to reliably provide service.	**II.A.1.a**
(2) the effects of the applicant's existing or expected conservation programs and state and federal conservation programs;	Will not be able to address issues related to meeting existing demand at the levels indicated in the Petition.	**II.B.2**
(3) the effects of promotional practices of the applicant that may have given rise to the increase in the energy demand, particularly promotional practices which have occurred since 1974;	The OES is not aware of any relevant promotional practices of Xcel.	**II.E.2**
(4) the ability of current facilities and planned facilities not requiring certificates of need to meet the future demand; and	Renewable generation is not competitive lower voltage alternatives are inferior.	**II.C.1.a**

Rules and Statutes Addressed in the Comments (*Continued*)		
(5) the effect of the proposed facility, or a suitable modification thereof, in making efficient use of resources;	Addressed in environmental report	**II.D**
B. a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record, considering:		
(1) the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives;	Xcel's proposed size is reasonable. Xcel's proposed type is reasonable. Xcel's proposed timing is reasonable.	**II.C.2**
(2) the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives;	Xcel's proposed alternative A1 is least cost.	**II.C.3**
(3) the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives; and	Use of the Commission's externality values is unlikely to alter the cost rankings.	**II.C.4**
(4) the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives;	Each of the alternatives would result in equivalent or inferior reliability.	**II.C.5**

Rules and Statutes Addressed in the Comments (*Continued*)		
C. by a preponderance of the evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health, considering:		
(1) the relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs;	The proposed project is not directly related to overall state energy needs, it is necessary to restore reliable service in the local area.	**II.A.1.b**
(2) the effects of the proposed facility, or a suitable modification thereof, upon the natural and socioeconomic environments compared to the effects of not building the facility;	Addressed in environmental report	**II.D**
(3) the effects of the proposed facility, or a suitable modification thereof, in inducing future development; and	Addressed in environmental report	**II.D**
(4) the socially beneficial uses of the output of the proposed facility, or a suitable modification thereof, including its uses to protect or enhance environmental quality; and	Not directly addressed.	**II.D**
D. the record does not demonstrate that the design construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.	The record does not demonstrate Xcel will fail to comply.	**II.E.1**

Rules and Statutes Addressed in the Comments (*Continued*)		
Minnesota Statutes §216B.243, subd. 3 (5) and (9)	The proposed line has no significant impact (beyond enhanced reliability in the area where it would be built).	**II.A.2**
Minnesota Statutes §§216B.243 subd. 3a & 216B.2422, subd. 4	Renewable generation is not a reasonable alternative.	**II.B.1**
Minnesota Statutes §216B.2426	DG is not a reasonable alternative.	**II.C6**
Minnesota Statutes §216B.1694, subd. 2 (a) (5)	This statute does not apply.	**II.C.7**
Minnesota Statutes §216B.243 subd. 3 (10) Compliance with §216B.1691	The Commission found Xcel is compliant.	**II.E.3.a**
Minnesota Statutes §216B.1612 (c)	Xcel has made significant efforts.	**II.E.3.b**
Minnesota Statutes §216B.243, subd. 3 (12)	This statute does not apply.	**II.E.4**
Minnesota Statutes §216B.243, subd. 3 (10) Compliance with §216B.2425, subd. 7	There is sufficient time to allow events to develop before a date certain is warranted.	**II.E.5**
Minnesota Statutes §216H.03	The Hiawatha Project may lower power sector carbon dioxide emissions.	**II.E.6**

CERTIFICATE OF SERVICE

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified Mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

Minnesota Office of Energy Security
Comments

Docket No. E002/CN-10-694

Dated this **31st o**f **March**, **2011**

/s/Sharon Ferguson

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Lisa	Agrimonti	lagrimonti@briggs.com	Briggs And Morgan, P.A.	2200 IDS Center80 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_10-694_CN-10-694
Julia	Anderson	Julia.Anderson@state.mn.us	Office of the Attorney General-DOC	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	No	OFF_SL_10-694_CN-10-694
Douglas	Benson	douglas.benson@state.mn.us	Department of Health	PO Box 64975 Saint Paul, MN 55155	Electronic Service	No	OFF_SL_10-694_CN-10-694
James J.	Bertrand	james.bertrand@leonard.com	Leonard Street & Deinard	Suite 2300 150 South Fifth Street Minneapolis, MN 55402	Paper Service	No	OFF_SL_10-694_CN-10-694
Steven	Bosacker		City of Minneapolis	City Hall, Room 301M 350 South Fifth Street Minneapolis, MN 554151376	Paper Service	No	OFF_SL_10-694_CN-10-694
Christopher	Clark	christopher.b.clark@xcelenergy.com	Xcel Energy	5th Floor 414 Nicollet Mall Minneapolis, MN 554011993	Paper Service	No	OFF_SL_10-694_CN-10-694
Corey	Conover	corey.conover@ci.minneapolis.mn.us	City Of Minneapolis	350 South 5th Street City Hall, Room 210 Minneapolis, MN 554022453	Electronic Service	No	OFF_SL_10-694_CN-10-694
Jeffrey A.	Daugherty	jeffrey-daugherty@centerpointenergy.com	CenterPoint Energy	800 LaSalle Ave Minneapolis, MN 55402	Paper Service	No	OFF_SL_10-694_CN-10-694
Patricia	DeBleeckere	tricia.debleeckere@state.mn.us	Public Utilities Commission	Suite 350 121 Seventh Place East St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_10-694_CN-10-694
Randall	Doneen	randall.doneen@dnr.state.mn.us	Department of Natural Resources	500 Lafayette Road St. Paul, MN 55155	Electronic Service	No	OFF_SL_10-694_CN-10-694

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Lori	Ellis	Lori.ellis@learth.org	Little Earth of United Tribes	2495 18th Avenue S Minneapolis, MN 55404	Electronic Service	No	OFF_SL_10-694_CN-10-694
Ron	Elwood	relwood@mnlsap.org	Legal Services Advocacy Project	2324 University Ave Ste 101 St. Paul, MN 55114	Electronic Service	No	OFF_SL_10-694_CN-10-694
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_10-694_CN-10-694
Jeff	Freeman	Jeff.Freeman@state.mn.us	DEED	1st National Bank Bldg 332 Minnesota St Saint Paul, MN 55101	Electronic Service	No	OFF_SL_10-694_CN-10-694
Travis	Germundson	travis.germundson@state.mn.us		520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	OFF_SL_10-694_CN-10-694
Bradley	Gunn	bjg@mgmllp.com	Malkerson Gunn Martin LLP	1900 U.S. Bank Plaza South 2200 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_10-694_CN-10-694
Eric	Gustafson	eric@corcoranneighborhood.org	Corcoran Neighborhood Organization	3451 Cedar Ave S Minneapolis, MN 55407	Electronic Service	No	OFF_SL_10-694_CN-10-694
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	No	OFF_SL_10-694_CN-10-694
Karen Finstad	Hammel	Karen.Hammel@state.mn.us	Office of the Attorney General-DOC	1400 BRM Tower 445 Minnesota Street St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_10-694_CN-10-694
Eric	Hart	hart3151@tcq.net	Longfellow Community Council	2727 26th Avenue South Minneapolis, MN 55406	Electronic Service	No	OFF_SL_10-694_CN-10-694

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Leslie	Hayashida	Leslie.M.Hayashida@wellsfargo.com	Wells Fargo & Company	Sixth & Marquette Minneapolis, MN 55479	Electronic Service	No	OFF_SL_10-694_CN-10-694
Valerie	Herring	vherring@briggs.com	Briggs and Morgan, P.A.	2200 IDS Center 80 S. Eighth Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_10-694_CN-10-694
Beverly	Heydinger	beverly.heydinger@state.mn.us	Office of Administrative Hearings	PO Box 64620 St. Paul, MN 551640620	Electronic Service	Yes	OFF_SL_10-694_CN-10-694
Shirley	Heyer	shirleymidtownphillips@msn.com	Midtown Phillips Neighborhood Association, Inc.	2426 13th Ave. S. Minneapolis, MN 55404	Electronic Service	No	OFF_SL_10-694_CN-10-694
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2265 Roswell Road Suite 100 Marietta, GA 30062	Electronic Service	No	OFF_SL_10-694_CN-10-694
Mara	Koeller	mara.n.koeller@xcelenergy.com	Xcel Energy	414 Nicollet Mall 5th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_10-694_CN-10-694
Karen	Kromar	karen.kromar@state.mn.us	MN Pollution Control Agency	520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	OFF_SL_10-694_CN-10-694
Douglas	Larson	dlarson@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_10-694_CN-10-694
Robert S	Lee	RSL@MCMLAW.COM	Mackall Crounse & Moore Law Offices	1400 AT&T Tower 901 Marquette Ave Minneapolis, MN 554022859	Paper Service	No	OFF_SL_10-694_CN-10-694
Paul J.	Lehman	paul.lehman@xcelenergy.com	Xcel Energy	414 Nicollect Mall Minneapolis, MN 554011993	Paper Service	No	OFF_SL_10-694_CN-10-694

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
John	Lindell	agorud.ecf@state.mn.us	Office of the Attorney General-RUD	900 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	No	OFF_SL_10-694_CN-10-694
Paula	Maccabee	Pmaccabee@visi.com	Just Change Law Offices	1961 Selby Avenue St. Paul, MN 55104	Paper Service	No	OFF_SL_10-694_CN-10-694
Sheldon	Mains	smains@visi.com	Seward Neighborhood Group, Incorporated	2718 East 24th Street Minneapolis, MN 55406	Electronic Service	No	OFF_SL_10-694_CN-10-694
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Paper Service	No	OFF_SL_10-694_CN-10-694
David W.	Niles		Avant Energy Services	Suite 300 200 South Sixth Street Minneapolis, MN 55402	Paper Service	No	OFF_SL_10-694_CN-10-694
Carol	Pass	cpass@runbox.com	East Phillips Improvement Coalition	2536 18th Avenue South Minneapolis, Minnesota 55404	Electronic Service	No	OFF_SL_10-694_CN-10-694
Bob	Patton	bob.patton@state.mn.us	MN Department of Agriculture	625 Robert St N Saint Paul, MN 55155-2538	Electronic Service	No	OFF_SL_10-694_CN-10-694
Jennie	Ross	jennie.ross@state.mn.us		395 John Ireland Blvd MS 620 Saint Paul, MN 55155	Electronic Service	No	OFF_SL_10-694_CN-10-694
Howard	Roston	har@mgmllp.com	Malkerson Gunn Martin LLP	220 South Sixth Street Suite 1900 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_10-694_CN-10-694
Charles	Salter	chuck.salter@co.hennepin.mn.us	Hennepin County Attorneys Office	A-2000 Government Center 300 South Sixth Street Minneapolis, Minnesota 55487	Electronic Service	No	OFF_SL_10-694_CN-10-694

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Gregory	Sautter	gregory.sautter@ci.minneapolis.mn.us	City of Minneapolis	333 South 7th Street, Suite 210 Minneapolis, MN 55403	Electronic Service	No	OFF_SL_10-694_CN-10-694
Richard	Savelkoul	rsavelkoul@felhaber.com	Felhaber, Larson, Fenlon & Vogt, P.A.	444 Cedar St Ste 2100 St. Paul, MN 55101-2136	Paper Service	No	OFF_SL_10-694_CN-10-694
Elizabeth H.	Schmiesing	eschmiesing@faegre.com	Faegre & Benson LLP	2200 Wells Fargo Center 90 S. Seventh Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_10-694_CN-10-694
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	Ste 122 9100 W Bloomington Frwy Bloomington, MN 55431	Electronic Service	Yes	OFF_SL_10-694_CN-10-694
Tim	Springer	tim@midtowngreenway.org	Midtown Greenway Coalition	2834 10th Avenue S. Greenway Level, Suite 2 Minneapolis, MN 55407	Electronic Service	No	OFF_SL_10-694_CN-10-694
Byron E.	Starns	byron.starns@leonard.com	Leonard Street and Deinard	150 South 5th Street Suite 2300 Minneapolis, MN 55402	Paper Service	No	OFF_SL_10-694_CN-10-694
William	Storm	bill.storm@state.mn.us	Department of Commerce	Room 500 85 7th Place East St. Paul, MN 551012198	Electronic Service	Yes	OFF_SL_10-694_CN-10-694
James M.	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	470 U.S. Bank Plaza 200 South Sixth Street Minneapolis, MN 55402	Paper Service	No	OFF_SL_10-694_CN-10-694
SaGonna	Thompson	Regulatory.Records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_10-694_CN-10-694
Jennifer	Thulien Smith	jennifer.thuliensmith@xcelenergy.com	Xcel Energy Services, Inc.	414 Nicollet Mall, 5th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_10-694_CN-10-694

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Lisa	Veith		City of St. Paul	400 City Hall and Courthouse 15 West Kellogg Blvd. St. Paul, MN 55102	Paper Service	No	OFF_SL_10-694_CN-10-694
Rhyddid	Watkins	rwatkins@faegre.com	Faegre & Benson	2200 Wells Fargo Center 90 South 7th Street Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_10-694_CN-10-694

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Douglas	Benson	douglas.benson@state.mn.us	Department of Health	PO Box 64975 Saint Paul, MN 55155	Electronic Service	No	SPL_SL__CN - CERTIFICATE OF NEEDS
Randall	Doneen	randall.doneen@dnr.state.mn.us	Department of Natural Resources	500 Lafayette Road St. Paul, MN 55155	Electronic Service	No	SPL_SL__CN - CERTIFICATE OF NEEDS
Jeff	Freeman	Jeff.Freeman@state.mn.us	DEED	1st National Bank Bldg 332 Minnesota St Saint Paul, MN 55101	Electronic Service	No	SPL_SL__CN - CERTIFICATE OF NEEDS
Travis	Germundson	travis.germundson@state.mn.us		520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	SPL_SL__CN - CERTIFICATE OF NEEDS
Karen	Kromar	karen.kromar@state.mn.us	MN Pollution Control Agency	520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	SPL_SL__CN - CERTIFICATE OF NEEDS
Bob	Patton	bob.patton@state.mn.us	MN Department of Agriculture	625 Robert St N Saint Paul, MN 55155-2538	Electronic Service	No	SPL_SL__CN - CERTIFICATE OF NEEDS
Jennie	Ross	jennie.ross@state.mn.us		395 John Ireland Blvd MS 620 Saint Paul, MN 55155	Electronic Service	No	SPL_SL__CN - CERTIFICATE OF NEEDS