

9551 Woodridge Circle
Eden Prairie, MN 55347
March 14, 2011

Bill Storm
State Permit Manager
Minnesota Office of Energy Security
85 7th Place East, Suite 500
St. Paul, MN 55101-2198

Re: CN-10-694

Dear Sir:

I am writing in regards to the proposed high voltage power line in south Minneapolis. I will mainly present arguments that there may be better options available that will not be explored by Xcel Energy. First, the proposed cost of this project is about \$28 million, which will be paid by Xcel's ratepayers. Suppose we took \$25 million, a \$3 million savings, and subsidized combined heat and power (CHP) and combined cooling, heating, and power (CCHP). The least expensive CHP is large reciprocating engines, which cost about \$1000 per kw, or \$1 million per MW. Since there is a 55 MW shortfall in transmission capacity, it would cost \$55 million to put in the least expensive CHP systems. Suppose we subsidized CHP at a rate of \$500 per kw, or \$500,000 per MW, then the \$25 million paid by Xcel's ratepayers would be matched by \$25 million from businesses if they felt it was a good investment. There is a 10% federal tax credit, so that \$50 million is 90% of the cost, so \$50 million really buys 55.6 MW of CHP, sufficient to remove the transmission shortfall.

What would the economics look like to a business person. They would pay \$500,000 for a 1 MW system. Interest at 4% is \$20,000 per year. A 1 MW system that had 30% electrical efficiency and 80% system efficiency with natural gas at \$8 per MMBtu would produce electricity for \$0.045/kwh. If Xcel's flat electric rate is \$0.07, the business would save or make \$0.025 per kwh. A 1 MW system would produce 1000 kwh each hour, or \$25/hr, or \$600 per day, or \$219,000 per year. This is a profit of \$199,000 per year for the business. Of course this did not include maintenance, but the main point is there is a considerable margin of error here that would allow business in south Minneapolis to prosper, Xcel's rate payers to pay less, and the power line to not be built. The state could easily commission a study and bring in four or five CHP/CCHP vendors and examine a dozen businesses in south Minneapolis to determine the viability of this option.

This is probably not legal under the current certificate of need process, but the state should consider a five year moratorium on high voltage power lines in urban areas while a comprehensive policy for power lines in urban areas is worked out. Xcel has options available to it to maintain grid stability. They have experience with utility grade batteries from NGK Insulators. They could install enough batteries to maintain grid stability for five years while this is worked out. This should come at their expense since they sat on their butts and allowed a 55 MW shortfall to occur. This would not be an entirely wasted investment by Xcel, for after five years the batteries could be removed and placed in another needy area in Xcel's electrical system, whereas the power line, if built, is a permanent blight on the landscape.

Sincerely,

V. Bruce Stenswick