

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Ellen Anderson  
David Boyd  
J. Dennis O'Brien  
Phyllis Reha  
Betsy Wergin

Chair  
Commissioner  
Commissioner  
Commissioner  
Commissioner

In the Matter of the Application for a High Voltage Transmission Line Route Permit for the Hiawatha 115 kV Transmission Line Project		ISSUE DATE:  DOCKET NO. E002/TL-09-38  FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER ISSUING A HVTL PERMIT TO XCEL ENERGY
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The above-captioned matter came before the Minnesota Public Utilities Commission (the Commission) on January 10, 2012, acting on an application by Xcel Energy for a HVTL Permit to construct two new 115 kV single circuit transmission lines and two new distribution substations in south Minneapolis, in an area known as the Midtown District.

This matter was assigned to Administrative Law Judge (ALJ) Beverly Jones Heydinger to conduct a contested case hearing on the application by Xcel Energy for a route permit for the proposed Hiawatha HVTL project.

The Public Hearings were held on April 5 and April 6, 2010, at 2:00 p.m. and 7:00 p.m. at the Plaza Verde, 1516 East Lake Street, Minneapolis, Minnesota. The Evidentiary Hearing was held on April 12-21, and April 26-30, 2010, at the Public Utilities Commission, 121 Seventh Place East, Suite 350, St. Paul, Minnesota.

**STATEMENT OF ISSUE**

Should the Commission find that the Environmental Impact Statement (EIS) adequately addresses the issues identified in the scoping decision? Should the Commission issue a route permit identifying a specific route, substation locations and permit conditions for the Hiawatha 115 kV Transmission Line Project?

Based upon all of the proceedings herein, the Commission makes the following:

**FINDINGS OF FACT**

The Commission adopts the October 8, 2010, ALJ *Findings of Fact, Conclusions of Law and Recommendations* for the Hiawatha 115 kV Transmission Line Project in Hennepin county related to OAH Docket No. 15-2500-20599-2 and PUC Docket No. E002/TL-09-38, with the following additions and changes:

Finding 137 is amended to correctly reflect the stated views of the Department of Transportation and Metropolitan Council:

137. ~~In light of MnDOT's ownership of a portion of the G-4 site that includes a and its lease to the Metropolitan Council, but neither MnDOT nor the Metropolitan are opposed to making the site may not be available to the Applicant for a substation.~~<sup>1</sup>

Finding 191 is amended to correctly reflect the stated views of the Department of Transportation:

191. MnDOT considers the property at the Hiawatha West, G-4 and G-3 sites as surplus and those parcels may be available for sale, but asserts that ~~Site G-4 and~~ Site G-5 are is not available because of agreements in effect with the Metropolitan Council.<sup>2</sup>

Finding 259 is amended to remove the reference to distance (i.e. 200 to 300 feet).

259. The Midtown Greenway is an overwhelmingly popular improvement to the Project Area that benefits the diverse neighborhood and provides its residents with a recreational amenity. By placing the transmission line underground, the negative impact of placing an unattractive, large-scale transmission line can be avoided. Because of its proximity to the Midtown Greenway, the Applicant's preferred route A1 would have the greatest negative impact on the people living throughout the Project Area. All of the overhead routes would place the overhead transmission line in close proximity to hundreds of people. The underground alternatives, Route A2, Route A3 and Route D, would have a significantly smaller impact on the area residents. Also, although the effect of overhead transmission lines on home values may be difficult to measure, close proximity (~~within 200 to 300 feet~~) is one of the factors that deflates home value

Findings 314, 315, 321, 328, and 457 are amended to more accurately reflect the World Health Organization (WHO) Monograph:

314. The World Health Organization (WHO) has evaluated scientific evidence of the relationship between chronic low-intensity exposures, such as those from power lines, and adverse health effects. The WHO reported in 2007 that scientific evidence suggesting that every day, chronic low-intensity magnetic field exposure poses a health risk is based on epidemiological studies demonstrating a consistent pattern of increased risk for childhood leukemia. Although ~~the~~ laboratory and biophysicalmechanistic evidence has failed to demonstrate causation, the WHO concluded that the evidence is sufficiently strong to remain a concern and that further research in this area is warranted, but due to the uncertainties about the existence of chronic effects (like childhood leukemia), international exposure guidelines should not "be reduced to some

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<sup>1</sup> Ex. 232; Tr. Vol. 11, at 182 (Seykora)

<sup>2</sup> Ex.228; Ex. 232; Tr. Vol. 11, at 183,189 (Seykora).

arbitrary level in the name of precaution” and only little to no cost precautionary procedures should be used.<sup>3</sup>

315. Epidemiological studies have consistently shown an association between magnetic fields above 3 to 4 milligauss (mG) and childhood leukemia, but virtually all laboratory and mechanistic evidence fails to support such a relationship between magnetic fields and necessary changes in biological function.<sup>4</sup>

321. Hundreds of families in South Minneapolis would be exposed to the magnetic fields reflected in the table above, because there are 245 dwellings within 25 feet of Route A 1, 335 dwelling units within 25 feet of Route B, 206 dwelling units within 25 feet of Route C, and 730 within 25 feet of Route E. Magnetic field levels for person living on the second or third floor (from 6 to 10 meters above ground) of a dwelling within 25 feet of Route A1 are 10 to 15 times the 3 to 4 mG exposure level of concern identified by the WHO and epidemiological literature associating transmission lines with by epidemiological studies that the WHO recognizes as the level at which an increased risk of childhood leukemia has been reported, but one-twentieth the level the WHO recommends as the exposure guideline (ICNIRP, 1998—833 mG) without evidence of a link between exposure to magnetic fields and childhood leukemia.<sup>5</sup>

~~328. Underground transmission alternatives with lower magnetic and electric fields would reduce the safety and health impacts of the Hiawatha Project. If Route D is constructed, an alignment closer to the center of East 28<sup>th</sup> Street would place the transmission line farther from residential homes, children and other pedestrians.~~

457. Some members of the public expressed concern about EMF exposure from the Hiawatha Substation. The highest projected magnetic field level during peak operation at zero feet from the proposed wall or fence of the Hiawatha Substation is 13.09 mG. At 25 feet from the wall or fence, the highest projected level is 2.02 mG, which is below the ~~WHO recommendation of 3 to 4 mG level~~ that has been associated with an increased risk for childhood leukemia in epidemiological studies.<sup>6</sup> It is not likely that any person would have continuous exposure to the Hiawatha Substation site.

### ***Conclusions of Law***

The Commission adopts the October 8, 2010, ALJ *Conclusions of Law* in their entirety.

### ***Recommendations***

The ALJ’s Recommendations 1, 2, 3 and 4 are amended for the purpose of clarification and guidance as follows:

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<sup>3</sup> WHO Monograph at 11-13

<sup>4</sup> WHO Monograph at 12 and 354-356

<sup>5</sup> WHO Monograph at 12-13

<sup>6</sup> WHO Monograph at 11-12

~~1. A route permit for a high voltage transmission line corridor up to 80 feet wide, underground along Route D, subject to the following condition to minimize the impact of the Project on the persons living and working in close proximity to Route D: The route alignment shall be developed in consultation with the City of Minneapolis, and shall be as close to the center of 28th Street as possible, with due regard for the existing infrastructure, in order to assure that the alignment is at the greatest reasonable distance from the sidewalk and residential structures, and minimizes the removal or destruction of mature trees along the adjacent boulevard.~~

1. A route permit to construct a high voltage transmission line underground along Route D, with a route width of 80 feet. The transmission line alignment shall be developed in consultation with the City of Minneapolis, and shall be as close to the center of 28th Street as possible, with due regard for the existing infrastructure, in order to assure that the alignment is at the greatest reasonable distance from the sidewalk and residential structures, and minimizes the removal or destruction of mature trees along the adjacent boulevard.

~~2. The route permit shall include the Hiawatha West Substation, subject to the following conditions to minimize the impact of the Project on the persons living and working in close proximity to it: The Applicant shall consult with the City of Minneapolis about placement of the Hiawatha West Substation on the site to minimize disruption to the current and planned Midtown Greenway bicycle and pedestrian trails, and that the Applicant consult with the City of Minneapolis, MnDOT and the community groups concerning the substation's wall design, lighting and landscaping to minimize the aesthetic impact and be compatible with the surrounding structures.~~

2. The route permit shall include the Hiawatha West Substation site. The substation shall be designed and constructed to minimize the impact of the project on the persons living and working in close proximity to it to the extent practicable. The HVTL Route Permit shall contain procedures which allow an opportunity for the parties of record to provide input into a) placement of the Hiawatha West Substation on the approved site, b) the substation's wall design, lighting and landscaping. These efforts will be made to minimize disruption to the current and planned Midtown Greenway bicycle and pedestrian trails, to minimize the aesthetic impact, and assure compatibility with the surrounding structures to the extent practicable.

~~3. The route permit shall include the Midtown North Substation, subject to the following conditions to minimize the impairment of the resources and to minimize the impact of the Project on the persons living and working in close proximity to it. The Applicant shall consult with the City of Minneapolis and Hennepin County about placement of the Midtown North Substation on the site to minimize impairment or destruction of the Midtown Greenway and retain flexibility for future transit development, and shall consult with the City of Minneapolis, Hennepin County and the community groups concerning the substation's wall design, lighting and landscaping to minimize the aesthetic impact, be compatible with the surrounding structures, reduce noise, and, to the degree practicable, conform with City development plans along the Midtown Greenway.~~

3. The route permit shall include the Midtown North Substation site. The substation shall be designed and constructed to minimize the impact of the project on the persons living and

working in close proximity to it to the extent practicable. The HVTL Route Permit shall contain procedures which allow an opportunity for the parties of record to provide input into a) placement of the Hiawatha West Substation on the approved site, b) the substation's wall design, lighting and landscaping. These efforts will be made to minimize disruption to the current and planned Midtown Greenway bicycle and pedestrian trails, to minimize the aesthetic impact, and assure compatibility with the surrounding structures to the extent.

4. The route permit shall require the ~~Applicant~~ Permittee to obtain all required local, state, and federal permits and licenses, comply with the terms of those permits and licenses, and comply with all applicable rules and regulations.

Based on the Findings of Fact and Conclusions of Law contained herein and the entire record of this proceeding, the Commission hereby makes the following:

### ORDER

1. A HVTL route permit is hereby issued to Northern States Power Company, dba Xcel Energy, to construct two new 115 kV single circuit transmission lines and two new distribution substations in south Minneapolis, in the area known as the Midtown District. The approved route is underground along Route D, with a route width of 80 feet.
2. The route permit shall be issued in the form attached hereto, with maps showing the approved route and substation locations.

Approved and adopted this \_\_\_\_\_ day of \_\_\_\_\_ 2012.

BY ORDER OF THE COMMISSION

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Burl W. Haar,  
Executive Secretary

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