STATE OF MINNESOTA

OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE ROUTE
PERMIT APPLICATION FOR
CAPX2020

SURREBUTTAL TESTIMONY OF

WILLIAM P. SMITH

On Behalf of

INTERVENOR

ORONOCO TOWNSHIP

June 3, 2011

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I. INTRODUCTION

Q. PLEASE STATE YOU NAME?

A. My name is William P. Smith

Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY IN THIS PROCEEDING?

A. Yes. I provided rebuttal testimony on behalf of Intervenor Oronoco Township.

Q. HAVE YOU REVIEWED THE DIRECT AND REBUTTAL TESTIMONIES OF OTHERS IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I am providing a response to rebuttal testimony provided by the Applicant's witness, Tom Hillstrom.

Q. ARE THERE ANY EXHIBITS ATTACHED TO YOUR SURREBUTTAL TESTIMONY?

A. No.

II. APPLICANT

Q. IN HIS REBUTTAL TESTIMONY, MR. HILLSTROM DISCUSSES DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT ("DHUD") REQUIREMENTS, WHICH ARE FOLLOWED BY THE FHA TO DETERMINE ELIGIBILITY FOR FHA MORTGAGE INSURANCE ON FHA-APPROVED LOANS. MR. HILLSTROM INDICATES IN HIS REBUTTAL TESTIMONY THAT PROPERTIES LOCATED OUTSIDE THE EASEMENT FOR HIGH VOLTAGE OVERHEAD TRANSMISSION STRUCTURES ARE ELIGIBLE FOR FHA-APPROVED FINANCING. DO YOU AGREE WITH MR. HILLSTROM?

A. Yes and no. I would like to begin my response to this question by defining what I referred to in my direct testimony as High Voltage Overhead Transmission infrastructure. My definition of such infrastructure refers to the entire electricity transmission apparatus and includes poles and/or towers, davit arms, conductors, and transmission lines where 60 kilovolts (kV) or greater is being transmitted. DHUD went so far as to define High Voltage Electric Transmission Lines as "hazardous" in Handbook 4150.2: Valuation Analysis for Single Family One- to Four-Unit Dwellings, ch. 2 (U.S. Department of Housing and Urban Development, June 1999).

Further distinctions between Low Voltage and High Voltage transmissions are classified in the electrical power industry by the range of voltages outline below:

- Low voltage – less than 1000 volts, used for connection between a residential or small commercial customer and the utility.

- Medium Voltage (Distribution) – between 1000 volts (1 kV) and to about 33 kV, used for distribution in urban and rural areas.
- High Voltage – sub-transmission or transmission at voltage such as 115 kV and 138 kV, used for sub-transmission and transmission of bulk quantities of electric power and connection to very large consumers.
- Extra High Voltage (transmission) – over 230 kV, up to about 800 kV, used for long distance, very high power transmission.
- Ultra High Voltage – higher than 800 kV.

I would next like to clarify the definition of the term "easement." As used in the Applicant's Draft Environmental Impact Statement ("DEIS"), the term seems synonymous with right-of-way ("ROW"). As stated, a 150 foot ROW (75 feet on either side of a centerline where poles will be installed) will be required for the proposed 345 kV High Voltage Overhead Transmission Infrastructure. Easements will be required where the ROW impacts (crosses over) public land and private land that are not owned by the Applicant. According to the DEIS, under Section 2.8 Rights-of-Way, "When the transmission line is placed across private land, a ROW agreement is required, typically an easement. . . . ." (DEIS, p. 7.)

The ROW agreement (or easement) establishes terms that bar the private property owner from preventing access to the ROW and interfering with the operations of the transmission infrastructure. In exchange, the utility company provides a payment(s) to the property owner for relinquishing his/her property rights, including planting trees and erecting structures.

Trees and structures that are within the ROW at the time the utility company acquires the easement are moved, razed, or demolished. Thus, no structures are allowed within easements that cross private property.

Therefore, Mr. Hillstrom is correct in his rebuttal testimony and in Schedule 13, page 19, to state that, if "a living unit is located outside the easement [for a high voltage transmission line] then the property is eligible for FHA financing."

Q. YOU HAVE EXPLAINED WHY YOU AGREE WITH MR. HILLSTROM'S INTERPRETATION OF THE DHUD REQUIREMENTS FOR FHA FINANCING. WOULD YOU NOW EXPLAIN WHY YOU, AT THE SAME TIME, DISAGEE?

A. Yes. I contend that FHA's requirements have not changed and that merely having structures outside the easement is not enough to meet the requirements for FHA financing. I contend that a close review of DHUD guidance to FHA will show that, in order to secure FHA financing, a structure must not only be outside the easement of high voltage overhead transmission infrastructure, but also outside the engineered fall distance of such infrastructure.

Mr. Hillstrom's rebuttal testimony includes Schedule 13, "Frequently Asked Questions," specifically page 19 of 26. Presented in Schedule 13 is an excerpt of DHUD's requirements. I would like to present the entire requirement as part of my response to Mr. Hillstrom's rebuttal testimony:

Unacceptable Locations

FHA guidelines require that a site be rejected if the property being appraised is subject to **hazards**, environmental contaminants, noxious odors, offensive sights or excessive noises to the point of endangering the physical improvements or affecting the livability of the property, **its marketability**, or the health and safety of its occupants. Rejection may also be appropriate if the future economic life of the property is shortened by obvious and compelling pressure to a higher use, making a long-term mortgage impractical.

If the condition is clearly a health and safety violation, contact the lender for further instructions before completing the appraisal. The lender must clear the condition and may require an inspection or reject the property. If there is any doubt as to the severity, report the condition and submit the completed report. For those conditions that cannot be repaired, such as site factors, the appraised value is based upon the existing conditions.

Site Hazards And Nuisances

The appraiser must note and comment on all hazards and nuisances affecting the subject property that may endanger the health and safety of the occupants and/or the structural integrity or

> **marketability of the property**, including: subsidence, operating and abandoned oil and gas wells, abandoned wells, slush pits, heavy traffic, airport noise and hazards, runway clear zones/clear zones, proximity to high pressure gas, liquid petroleum pipelines or other volatile and explosive products, **residential structures located within the fall distance of a high-voltage transmission line,** radio/TV transmission tower, etc., excessive hazard from smoke, fumes, odors, and stationary storage tanks containing flammable or explosive material.
>
> If hazards or nuisances are observed, the appraiser must describe the condition(s) and make a requirement for repair and/or for further inspection, and prepare the appraisal "subject to repairs" and/or "subject to inspection" in the **site section** of the report. Supporting documentation provided by the appraiser may include extra photos or copies of site studies or analyses, property reports, surveys or plot plans, etc.

(Handbook 4150.2, Appendix D, p. D-3 (emphasis added).)

Interestingly, DHUD's requirements, as outlined in Homeownership Center Reference Guide, Chapter 1: Appraisal and Property Requirements, Page 1-18f, speak not only to high voltage transmission infrastructure, but to other towering structures as well. Note the references below to radio/TV transmission towers, cell phone towers, etc. Thus,

it appears that DHUD (and FHA) have concerns about potential impacts of towers of all sorts on residential property's market value and residents' safety and enjoyment of their property.

It is also clear that a distinction is drawn between the easement associated with a tower (and the attached transmission line) and a tower's (and the transmission line's) "engineered fall distance." Reading the following passage from the Handbook closely, it is obvious that DHUD intended in Section 2 that "easement" should be synonymous with "engineered fall distance," because, in the case of high voltage transmission infrastructure, all structures are to be located outside the easement:

> The appraiser must indicate whether the dwelling or related property improvements is located within the easement serving a high-voltage transmission line, radio/TV transmission tower, cell phone tower, microwave relay dish or tower, or satellite dish (radio, TV cable, etc).
>
> 1) If the dwelling or related property improvement is located within such an easement, the DE Underwriter must obtain a letter from the owner or operator of the tower indicating that the dwelling and its related property improvements are not located within the tower's (engineered) fall distance in order to waive this requirement.
>
> 2) If the dwelling and related property improvements are located outside the easement [engineered fall distance added], the

property is considered eligible and no further action is necessary. The appraiser, however, is instructed to note and comment on the effect on marketability resulting from the proximity to such site hazards and nuisances.

Q. WHAT IS THE POTENTIAL THREAT TO RESIDENTIAL PROPERTIES THAT ARE OUTSIDE THE EASEMENT BUT WITHIN THE ENGINEERED FALL DISTANCE OF HIGH VOLTAGE OVERHEAD TRANSMISSION INFRASTRUCTURE?

A. First, there are no structures within the easement area of a high voltage transmission line. Any structures within the easement area will be demolished or removed when the utility company takes control of private land through its ROW Agreement. Therefore, FHA financing is not even an issue within a 150 foot-wide swath of land that is centered on the pole (i.e., 75 feet on either side of the centerline).

Next, the poles for the proposed 345 kV transmission infrastructure are up to 175 feet high. Therefore, if a structure is located 99 feet outside the easement (i.e., 174 feet from the centerline), and a 175 foot pole falls, the structure could be hit by the pole.

In addition, there are the transmission lines themselves that should be taken into consideration. With the poles spaced one-quarter mile apart, the transmission lines between poles will be at least 1,320 feet long. Given the amount of sag between the poles, another 50 feet might be added to the length of the transmission lines, bringing the total to 1,370 feet of high voltage line.

Mr. Hillstrom, in his rebuttal testimony, commented that, "The term 'fall distance' is not a term defined or utilized by the utility industry, by Xcel Energy or federal statute or regulation. The only definition for these terms is provided in DHUD Handbook 4150.2." Is Mr. Hillstrom implying that no one knows what happens when a pole falls?

In the absence of science from the utility industry, but based on reported incidences of poles actually falling and bringing transmission lines down with them (see my direct testimony), I can only imagine a 175 foot-long pole on the ground, outstretching the 75 foot wide easement, and a 1,370 foot-long, live transmission line flailing on the ground.

In addition to the physical danger to residents, motorists, and others who may find themselves outside the easement, but within the engineered fall distance of the high voltage overhead transmission infrastructure, there is the concern that properties within the engineered fall distance of infrastructure will not be eligible for FHA financing. Thus, some measurable percentage of the housing market (those who would purchase homes through FHA) would be eliminated from the market in Oronoco Township.

This analysis certainly indicates that the Modified Preferred Route, as it crosses Oronoco Township, should be avoided because of the anticipated residential development in Oronoco. Conflicts with such development will not occur in the Alternative Route north of Oronoco.

Q. CAN YOU CALCULATE THE EXTENT TO WHICH THIS IMPACT WOULD BE FELT?

A. Yes. In my direct testimony, it was stated that approximately 550 acres of land within the Suburban Residential Area would be off the market. I'd like to correct that earlier statement.

On closer examination, I want to state that approximately 550 acres of land in Oronoco Township, between Highway 52 and Highway 63, will be within the 150 foot-wide easement area of the Modified Preferred Route. (Refer to Exhibit 11 in my direct testimony.) As discussed, residential structures cannot be erected within the 150 foot-wide easement, and consequently, this land will be taken out of the market for residential development.

Of the approximate 550 acres, approximately 15.5 acres of land is currently designated as Potential Suburban and Suburban Development in the Olmsted County Future Land Use Map. This is approximately 15.5 acres of land, within Oronoco Township, currently designated for suburban-style, residential development that will be taken out of the market if the Applicant's Modified Preferred Route is selected.

While there was an error in my direct testimony as to the amount of acreage that will be taken out of suburban-style residential development, my overall assertion is that the Applicant's Modified Preferred Route will result in more extensive impacts than the other two route alternatives. See Exhibit 11 in my direct testimony where it is shown that within the 150 foot-wide easement:

- no residential structures will be allowed within 425 acres of easement for the Alternative Route;
- no residential structures will be allowed within 422 acres of easement for the Route Option;
- no residential structures will be allowed within 551 acres of easement for the Modified Preferred Route

Q. IN HIS REBUTTAL TESTIMONY, MR. HILLSTROM ASSERTS THAT RESIDENTIAL DEVELOPMENT OCCURS AROUND AND UP TO EXISTING TRANSMISSION FACILITIES. HE EVEN SHOWS AERIAL PHOTOGRAPHS THAT WERE TAKEN OVER TIME TO DEMONSTRATE THIS POINT. HOW DO YOU RESPOND TO THIS?

A. There is plenty of research that indicates just the opposite occurrence. Specifically, that:

1. There are segments of the market that avoid purchasing homes near high voltage overhead transmission infrastructure; and
2. There are people who, upon learning about potential health risks, wish they had not purchased their homes near the infrastructure.

In Mr. Hilllstrom's own rebuttal testimony, he states that there are three reasons for not selecting the existing 69kV line that runs along Highway 60 (east from Highway 52) as a good routing opportunity for the proposed 345 kV transmission line. Two of the three reasons speak directly to the need to avoid human settlement. In fact, the top two reasons speak to the need to avoid human settlement. Mr. Hillstrom specifically stated, "This line is not seen as a good routing opportunity because of the following factors:

- The line goes through the cities of Mazeppa and Zumbro Falls;
- The line has a relatively high number of homes near it; and

There is no feasible routing opportunity to connect this segment from Zumbro Falls to Kellogg other than deviating to the south of Millville to the preferred or alternative routes."

Therefore, the Applicant suggests that the impact on human development factor should supersede the non-proliferation factor. This tells us the Applicant believes the impact on human development factor is more important. By favoring the Modified Preferred Route through Oronoco Township, however, the Applicant ignores the significant negative impact on human development on the Oronoco portion of the Modified Preferred Route, both now, and even more so in the future.

Q. EXHIBIT 11 FROM YOUR DIRECT TESTIMONY DESCRIBES ACREAGES THAT WILL BE IMPACTED BY THE ROUTE OPTIONS AT VARIOUS DISTANCES FROM THE CENTERLINE OF THE PROPOSED INFRASTRUCTURE. IS THERE A RELATIONSHIP BETWEEN INFORMATION PRESENTED IN EXHIBIT 11 AND MR. HILLSTROM'S ASSERTION THAT DEVELOPMENT OCCURS AROUND AND UP TO EXISTING TRANSMISSION FACILITIES?

A. Yes, there is a relationship.

Mr. Hillstrom, in his rebuttal testimony, asserts that new residential development will locate up to and around existing high voltage transmission lines ("HVOTLs"). As I mentioned above, the literature indicates that the opposite occurrence has been observed

and is measurable. One of the measures described in the literature is the impact of HVOTLs on residential land values and selling prices, relative to distance; distance from the centerline and distance outside the easement.

Findings in the literature vary, and it would be a monumental task to catalog, inventory, and analyze each set of findings. Generally, however, research described in the literature finds that there is a relationship between the effects of HVOTLs on residential selling price (dependent variable) and that distance is a key, determining factor (independent variable). It should be pointed out that distances considered in the studies extend beyond the easement; generally from the edge of the easement, to 100 feet beyond the easement, to 300 feet, and beyond. Because the studies include visual impacts of HVOTLs on price, the distances in some studies extend out to a quarter mile. Almost every study shows that HVOTLs have a negative impact on residential selling prices. Exhibit 11 shows the amount of acreages that would be impacted by the three alternative alignment routes at various distances. The distances are:

- 0 to 75 feet, which describes a 150 foot-wide easement and 75 feet on either side of the easement's centerline.
- 75 feet to 175 feet, which takes into account a 350 foot-wide swath of land, with 175 feet on either side of the easement's centerline. If a 175 foot-high pole were to fall, it would fall within this area.
- 175 feet to 1,350 feet, which begins at the end of the 175 foot-fall distance and extends another 1,175 feet. This range of distances takes into account the impact of HVOTLs on views and vistas.

Exhibit 11 shows that impacts that would occur within these distance ranges are greater for the Modified Preferred Route than they are for the other two route alternatives. These measured impacts are:

- First, more residential land will be within the easement with the Modified Preferred Route. Thus this alternative has a greater impact on residential development.
- Second, more residential land will be within the fall distance of poles with the Modified Preferred Route. Thus, there are more locations, outside the easement, where FHA financing will not be available. (This distance does not take into account the potential for transmission lines to come down with poles, which would increase the fall distance from the length of the pole to the length of the pole plus the length of the transmission line.)
- Finally, more residential land will be within the visual impact distance with the Modified Preferred Route.

III. CONCLUSION

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.