October 29, 2004 WO #28611

Allan W. Klein
Administrative Law Judge
Office of Administrative Hearings
100 Washington Square, Suite 1700
Minneapolis, MN 55401

SUBJECT: Air Lake-Empire 115 kV Transmission Line
Response to concerns raised during the October 11th Hearing

Dear Judge Klein:

Great River Energy (GRE) would like to respond to the following questions asked by citizens at the October 11th hearing.

Are vehicles heavier than 5 tons per axle allowed to use a designated 5 ton road?

It was stated at the hearing that 210th Street has a 5 ton load limit. Some of GRE's trucks would exceed that limit. The maintenance supervisor of Empire Township stated that the road could be used for the construction and maintenance of the transmission line. The Township may require a reimbursement agreement for any damages caused by GRE's use. The proposed construction schedule is for late fall 2005 when the threat of high water or poor road conditions is minimal. Therefore, the condition of 210th street should have no impact on construction, repair or maintenance of the line.

Why does GRE's portion of the project require a 70 foot total easement area when Xcel Energy stated it will construct within its existing 50 foot total easement area?

GRE's transmission line will be single circuit with the capability to span longer distances, which requires more easement width due to blowout of the wires. Xcel Energy's transmission line will be double circuit with distribution underbuild, which limits the distance between poles. The design used by Xcel Energy requires more poles, and thus creates less wire blowout resulting in a narrower easement requirement.

Should these types of lines be located along township roads?

Near the end of the hearing, some citizens made the comment that these types of transmission lines should not be sited along township roads and asked where these lines were typically located. The EQB responded by listing several projects it recently permitted, many of which will be along more major roadways. GRE would like to emphasize that the majority of the 115 kV lines it constructs are permitted through local entities rather than the EQB, and they are often located along these types of township roads. As a provider of service in largely rural areas, township roads often provide the most direct, economical and environmentally sound route.

Direct Dial (763) 241-2229 E-Mail daukee@grenergy.com FAX (763) 241-6003

What is the basis for the project's cost estimates?

Great River Energy's engineering contractor, Commonwealth Associates Inc., estimated the construction costs submitted at the hearing. The attachment, prepared by Commonwealth Associates, Inc, provides an explanation of how the estimates were compiled, the educated design assumptions used and the engineering standards applied.

In addition to responding to the above questions, GRE would like to reiterate its preferences for the location of the transmission line route. GRE prefers selection of either of the following corridors, each of which will involve detailed individual negotiations and require a wider corridor designation to work around parcels with future development and redevelopment potential.

- The GRE proposed route from Empire Substation to the Vermillion River Substation as described in the route permit application, with the short variation proposed by the City of Farmington (Alternative 4.1.3 in the EA) to avoid parcels near the American Legion Hall.
- The GRE proposed route from the Empire Substation to Highway 3 (including the City of Farmington variation discussed above), then following the adaptation of the proposed route through Farmington described in Section 6.1.2 of the EA.

GRE's prefers these routes because they:

- Impact the fewest number of residences and businesses
- Have minimal impact on environmental resources
- Utilize existing roadways or utility ROW for nearly the entire distances
- Where possible, follow defined boundary lines along commercial and residential properties
- Utilize existing and future (208th street extension) Vermillion River crossings
- Do not cause disruption to center-pivot irrigation systems
- Are cost-effective
- Can be constructed in a timeframe that will ensure delivery of reliable electrical energy to the area.

Thank you for the opportunity to provide these responses and comments.

Sincerely,
GREAT RIVER ENERGY

Dale Aukee
Field Representative

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Cost Estimate Assumptions and Parameters prepared by Commonwealth Associates, Inc

Structures

Self-supporting steel and wood structures are used in the concept line design. The single-circuit structures (GRE transmission only) consist of steel and wood structures while all the double circuit structures (GRE and Xcel Energy transmission) are steel. The need for steel poles and the presence of distribution underbuild adds incremental design and material project costs.

The wood structures are assumed to be 70 ft., class 1 (70/1) wood poles for a single circuit without any angle on the structure (i.e. the route is straight). The design span is approximately 275 ft to 300 ft. in residential areas and 350 ft. in rural areas. Whenever distribution underbuild is present the wood poles are assumed to be 85 ft., class H1 rather than 70/1 with a design span of 275 ft. All wood structures are assumed to be direct-embedded the typical depth (10% of pole length plus 2 feet) with standard backfill.

The steel structures are used whenever an angle in the route occurs and the area does not allow for guying, generally in residential/urban areas and at all times when supporting both Xcel Energy and GRE circuits. In rural areas, most angle structures are guyed wood structures. The double-circuit steel structures (the concept used is that of Xcel Energy's standard) are assumed to be 95 ft. tall with a design span of 350 ft. without any angle on the structure. The double-circuit steel structures used at angles are assumed to be 90 ft. to 95 ft. tall with a design span of 350 ft. The single-circuit steel structures with an angle are assumed to be 70 ft to 75 ft. tall with a design span of 300 ft. All steel structures are assumed to have a concrete foundation ranging in diameter from 5 ft. to 7 ft. with a depth ranging from 20 ft. to 25 ft.

Routes

The route lengths and single-circuit and double-circuit proportions are listed below:

The Proposed Route has an approximate length of 6.5 miles, of which 5.75 miles are single-circuit and 0.75 miles are double-circuit and utilizes 19 steel structures.

Rother Bypass #1 has an approximate length of 6.6 miles, of which 5.8 miles are single-circuit and 0.8 miles are double-circuit and utilizes 22 steel structures.

Rother Bypass #2 Modified has an approximate length of 6.2 miles, of which 5.5 miles are single-circuit and 0.7 miles are double-circuit and utilizes 23 steel structures.

Empire Citizen #1 has an approximate length of 7.0 miles, of which 5.6 miles are single-circuit and 1.4 miles are double-circuit and utilizes 29 steel structures.

Empire Citizen #2 has an approximate length of 8.7 miles, of which 6.9 miles are single-circuit and 1.8 miles are double-circuit and utilizes 32 steel structures. Along this route there is approximately 4.6 miles of distribution underbuild attached to the single circuit structures.

Empire Citizen #3 has an approximate length of 8.4 miles, of which 6.8 miles are single-circuit and 1.6 miles are double-circuit and utilizes 37 steel structures. Along this route there is approximately 0.7 miles of distribution underbuild attached to the single circuit structures.

Empire Citizen #4 has an approximate length of 7.1 miles, of which 6.1 miles are single-circuit and 1.0 mile is double-circuit and utilizes 25 steel structures.

Empire Citizen #5 has an approximate length of 9.3 miles, of which 6.1 miles are single-circuit and 3.2 miles are double-circuit and utilizes 46 steel structures. Along this route there is approximately 3.5 miles of distribution underbuild attached to the single circuit structures.

City of Farmington has an approximate length of 6.5 miles, of which 5.7 miles are single-circuit and 0.8 miles are double-circuit and utilizes 19 steel structures.

Hardware and Conductor

Typical hardware used by both GRE and Xcel Energy are assumed for these cost estimates. The conductor used for the estimates is the typical 795 kcmil 26/7 Drake.

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