



**Brookings County - Hampton
345 kilovolt (kV) Transmission Line Project
Advisory Task Force**

**Lake Marion to Hampton Advisory Task Force
First Meeting – Wednesday, March 25, 2009**

DRAFT MEETING NOTES

Welcome and Introductions

The facilitator for the task force, Charlie Peterson, State of Minnesota Management Analysis & Development, welcomed task force members and all present. He asked task force members to, in “around the table” fashion, introduce themselves and to relate one expectation that they had for the work of the advisory task force. Expectations included:

- Fair and intelligent analysis of the situation leading to recommendations
- Report back a fair understanding of the situation
- Electromagnetic fields (EMF) – get and review data on health easement
- Gain a better knowledge of the routes and the criteria used to select them
- Gather concerns and issues on transmission lines and report back to Dakota County Board
- Learn about the transmission lines and routes and take information back to who representing
- Choose a route for the transmission line that is least disruptive
- Be straight and honest with people
- Make sure the transmission line does not go through the middle of town
- Assured the data is accurate, there is a logic of the process and the routing decision
- Explain why the route(s) was chosen
- Bring back to people representing information that is fair and identify a route that has least impact
- Transparent analysis on the routing of the transmission lines
- Input from these meeting will make a difference on routing
- Route(s) fit the current and future plans of power companies and communities

Why We Are Here

Charlie reviewed with the task force, the charge of the task force and a draft plan for accomplishing the charge over the course of three task force meetings (see Handouts, Appendix A). Charlie described his role as a facilitator and documenter of the task force’s work. He described the summary of work which will be the product of the task force’s work and how it will be developed. Charlie also provided ground rules for meeting logistics. Questions by task force members were discussed and addressed.

State Route Permitting Process

Scott Ek, Office of Energy Security, discussed the state permitting process. He reviewed the criteria used by the Minnesota Public Utilities Commission in making a route permitting decision and issues typically covered in an environmental impact statement (EIS) (see Handouts, Appendix A). Questions by task force members were discussed and addressed.

Project Overview

Craig Poorker, Great River Energy, provided an overview of the proposed transmission line project and the process used by Great River Energy to develop the two proposed routes. Questions by task force members were discussed and addressed. Task force members asked Craig to provide a short summary of the route selection process. He submitted (after the meeting), the following summary:

The primary set of principles guiding the route selection process was the 14 factors concerning human and environmental resources set forth in Minnesota Rules 7849.5910. The Applicants analyzed the route segments by applying the State routing criteria, guided by the input received from public and private stakeholders, at increasingly detailed levels following each round of public and agency involvement. In the analysis, the Applicants included all publicly available data concerning the natural and human environments, field-collected data, comments collected during the public meetings, non-public data obtained from government agencies, and the most current aerial photographs. Segments that best minimized impacts consistent with the State routing criteria were carried forward. All route segments suggested by stakeholders were included in the route segment analysis. The product of this process is the routes proposed in the Route Permit Application.

Identification of Impacts and Issues

Charlie led the task force through a small group discussion exercise to identify and categorize impacts and issues that should be considered in the EIS for evaluation of proposed routes and substation locations. The task force identified eleven impacts and issue areas to be evaluated in the EIS. These issue areas and specific comments are included in the table below.

Task force members also identified impacts and issues through a second means – completion of a worksheet, which was “homework” for the first meeting of the task force. These impacts and issues are included in appendices B and C.

Identification of impacts and issues

What impacts and issues need to be considered in the evaluation of proposed transmission line routes and/or sub-station locations?

Fairness (collectiveness)	Farming	Use existing right-of-ways (but not pipeline)	Wetland damage – during construction and ongoing	Construction issues – damage of roads, R.O.W., water	Rate increases
<ul style="list-style-type: none"> • People, nobody wants it, but reality someone has to look at it • North versus South (nobody wants it in their front yard) • Process is not transparent, scientific or without bias 	<ul style="list-style-type: none"> • Irrigation – easements interrupt • Farming around pole – limit crop dusting (Webster and Wheatland; Lonsdale & Webster – high amount of canning crops) 	<ul style="list-style-type: none"> • Location, best area • Use of existing R.O.W. and future planned source & demand (hook into power source and future demand) • Co-location of other public uses in R.O.W. 	<ul style="list-style-type: none"> • Wetland proximity to Big Sough (construction) • Wetland destruction; no control over easements on agriculture land. (Personally viewed crews repairing transmission line: a) completely destroyed ag. field, b) destroyed waterway protecting wetland downstream, c) ruined top soil in field, d) compacted soils for future crop growth) 	<ul style="list-style-type: none"> • Roads: construction damage, who will pay for repair • Construction time line? • Road use during construction and maintenance of line 	

Identification of impacts and issues

What impacts and issues need to be considered in the evaluation of proposed transmission line routes and/or sub-station locations?

Coordination with existing comprehensive plans and other ongoing studies – future and existing land use with respect for cultural values of community	Emergency and safety issues	Health issues – concerns for humans and wildlife, electromagnetic fields and static electricity	Negative impact on property values and loss of future property value for developed and undeveloped land	Affect on unique cultural resource – Cambodian Buddhist Temple
<ul style="list-style-type: none"> • Northwest corner of Lonsdale – proposed alternative route is in Lonsdale’s 2025 land use plan • Impact on future development areas as per city of Elko New Market’s 2030 Comp. Plan • Impact on interchange plans at CSAH 2 & I-35 and future development in that surrounding area (New Market Township) • Local government loss of control (Comp. Plan 2035); area in route wanting to remain as open (green space or ag. use) space – Eureka • Ag land – Webster, township; keep it rural • Wetlands: Vermillion River Watershed Ordinance, restrictive • Road R.O.W. – current and future 	<ul style="list-style-type: none"> • Natural pipeline – hazard to pipeline flyover. Gas line leakage and seepage to surface – gas fire (at least 3 locations: one in Wheatland Township – Sec. 22 & 23 • Safety – living with the line for evermore • Sky Harbor Air Park – 70+ aircraft 	<ul style="list-style-type: none"> • Electromagnetic fields – minimizing impact on human settlement (the World Health Organization’s review of EMF fields found a 200% increase in childhood leukemia with average exposure. The current ROW is not sufficient to protect against increased cancer risk • Health issues – EMF • Health issues not adequately addressed • Health issues (EMF, static electricity) • People living near the needed substation 	<ul style="list-style-type: none"> • Negative impact on property values • Property value; loss of future property value • Substantial economic property loss (real estate values are 20 – 30% lower due to fear of EMF emissions and their associated health risks • Buffalo, elk, dairy and beef grazing under and near power lines. Products used for human consumption. What effect on humans and animals? • Property value • Aesthetics and noise • Property values – developed land & undeveloped land 	<ul style="list-style-type: none"> • One of the largest Buddhist Temples in U.S. – 5200 members with monastery on site for monks

Public Comments to Advisory Task Force

A period of time at the end of the meeting was set aside for public comment. Key points of those that citizens that addressed that task force are listed below (points made by an individual are grouped together.)

Speaker I

- Transmission line goes through property
- Because of transmission line, will need to move house and some out-buildings
- The transmission line will impact the eagles in the area
- Father has a pacemaker and the transmission line will keep him from visiting

Speaker II

- Transmission line goes over house that has been in family since 1880
- Family members have been in the armed services and served in several wars
- Payment from property will not be sufficient

Speaker III

- The ATF time to meet and decide on issues and routes is too short
- Previously impacted by crude oil pipeline, now impacted by transmission line
- Has the need been determined for this route or section of route?
- Impacts a 100+ year old farm
- The transmission line will impact the eagles in the area

Speaker IV

- The timeline for the ATF meeting is too short, not enough time to discuss issues
- There are errors on the map and more data needs to be reviewed
- Option to use working groups between meetings to get more done
- Eminent domain provision does not provide sufficient price for property; legislation changed the process a few years ago but utilities were exempted – see Section 117.189.
- Legislation currently introduced to provide fairness on property values (not certain of passage)

Speaker V

- People around the transmission lines are in an unknown situation, tough to plan; there is a route width of 1000 feet being proposed.
- If having to sell property, they will lose money on property
- Prime property, much of it agriculture land, is being impacted by the transmission lines
- Need has not been defined, why?

Speaker VI

- The Brookings to Hampton transmission line should stop at Lake Marion and not proceed to Hampton
- There is negative visual impact of the line
- Safe issue for children, playing under and around

- If property values are reduced because of the line, the tax generated (based on the property values) will be reduced
- The transmission line has personal impact on the people in this area

Speaker VII

- At previous public meetings, comments were made to change the routes of the transmission lines but, as of yet, have not seen the changes happen
- Airplanes landing on Cedar Lake either cannot land or will have to maneuver around transmission lines, dangerous situation
- Transmission line poles are in 80 acre parcels
- Community mounds will be impacted by lines and poles
- Impact and disruption of the expansion of County Road #2

Speaker VIII

- Why the need for new easements, why is it required? Cannot the existing poles be used that follow the same or similar route? It is done for telecommunications lines.

Next Steps

Charlie reminded task force members that their homework for the next meeting was to review the route permit application and come prepared to begin discussing route alternatives that might address the impacts and issues identified in this first meeting. The next meeting date is April 15, 1:00 – 5:00 PM.



STATE OF MINNESOTA
Energy Facility Permitting



Attendance Sheet
Proposed Brookings County - Hampton 345 kV Transmission Project
Lake Marion to Hampton Advisory Task Force
March 25, 2009

PLEASE FILL IN ANY BLANKS, MAKE SURE INFORMATION IS CORRECT, AND CHECK BOX TO INDICATE ATTENDANCE

Last	First	Title	Local Government Unit	Address 1	Address 2	City	State	Zip	Phone	Email		
Bray	Bill	Water Superintendent	City of Hampton	PO Box 128		Hampton	MN	55031	651-437-8846	<i>braycathie@cc.com</i> cityofhampton@bevcomm.net	<input checked="" type="checkbox"/>	In Attendance
Chlan	Ken M.	Township Supervisor	New Market Township	27656 Texas Ave.		Webster	MN	55088	952-652-2603	kcb458@integra.net	<input checked="" type="checkbox"/>	In Attendance
Docken	Jeff	County Commissioner	Rice County	6320 Chester Ave.		Northfield	MN	55057	952-652-2876	jdocken@co.rice.mn.us	<input checked="" type="checkbox"/>	In Attendance
Dubbels	Merlin		Sciota Township	609 Gill Lane		Northfield	MN	55057	507-645-5926	NA	<input checked="" type="checkbox"/>	In Attendance
Erickson	Joel	City Administrator	City of Lonsdale	415 Central St. W	PO Box 357	Lonsdale	MN	55046	507-744-2327	jerickson@means.net	<input checked="" type="checkbox"/>	In Attendance
Helmberger	Joel			24311 Dakota Ave.		Lakeville	MN	55044	651-210-9145	jhelmberger@forwardair.com	<input checked="" type="checkbox"/>	In Attendance
Jennings	Carrie	Township Supervisor	Eureka Township	8919 280th St. W		Northfield	MN	55057	952-469-4976	carriegeo@gmail.com	<input checked="" type="checkbox"/>	In Attendance
Johnson	Trish			3940 220th St. East		Hampton	MN	55031	651-463-7899	trishj@frontiernet.net	<input checked="" type="checkbox"/>	In Attendance
Kaufenberg	Ray			24501 Dodd Blvd.		Lakeville	MN	55044	952-469-2340	ffscorp@qwestoffice.net	<input checked="" type="checkbox"/>	In Attendance
McFadden	Lawrence	Township Supervisor	Webster Township	6120 Elmore Ave.		Webster	MN	55088	507-744-2620	sunnyvalley1946@yahoo.com	<input checked="" type="checkbox"/>	In Attendance
Mertens	John	Office of Planning and Analysis	Dakota County	14955 Galaxie Ave.		Apple Valley	MN	55124	952-891-7036	john.mertens@co.dakota.mn.us	<input checked="" type="checkbox"/>	In Attendance
Nagel	Mark	Assistant City Administrator	City of Elko New Market	601 Main St.	PO Box 99	Elko New Market	MN	55054	952-461-2777	mnagel@ci.enm.mn.us	<input checked="" type="checkbox"/>	In Attendance
Salaba	Clarence	Township Supervisor	Wheatland Township	9376 60th St. W		Lonsdale	MN	55046	507-744-2274	silvmem@myclearwave.net	<input checked="" type="checkbox"/>	In Attendance



STATE OF MINNESOTA
Energy Facility Permitting



Attendance Sheet
Proposed Brookings County - Hampton 345 kV Transmission Project
Lake Marion to Hampton Advisory Task Force
March 25, 2009

PLEASE FILL IN ANY BLANKS, MAKE SURE INFORMATION IS CORRECT, AND CHECK BOX TO INDICATE ATTENDANCE

Last	First	Title	Local Government Unit	Address 1	Address 2	City	State	Zip	Phone	Email	
Stoffel	Ralph	Township Supervisor	Vermillion Township	9090 170th St. E.		Hastings	MN	55033	651-437-3500		<input checked="" type="checkbox"/> In Attendance
Wagner	Joe	County Commissioner	Scott County	18020 Xanadu Ave.		Jordan	MN	55352	612-270-2660		<input checked="" type="checkbox"/> In Attendance
Weber	Sandra	Planning Commission Castle Rock	Dakota	24650 Akron Ave.		Farmington	MN	55024	651-463-4725	sandra@crusadermfg.com	<input checked="" type="checkbox"/> In Attendance
Wintes	Robert	Township Supervisor	Greenvale Township	5975 320th St. West		Northfield	MN	58057	507-645-7395	muddymarshfarms@msn.com	<input checked="" type="checkbox"/> In Attendance
Zellmer	Russ	Township Supervisor	Castle Rock Township	25473 Alverno Ave.		Farmington	MN	55024	651-463-4064	zellfarns@frontiernet.net	<input checked="" type="checkbox"/> In Attendance
<u>Scott EK</u>			<u>OES</u>								<input checked="" type="checkbox"/> In Attendance
<u>Raymond Kirsch</u>			<u>OES</u>								<input checked="" type="checkbox"/> In Attendance
<u>Charlie Peterson</u>			<u>MAD</u>								<input checked="" type="checkbox"/> In Attendance
<u>George Petersen</u>			<u>MAD</u>								<input checked="" type="checkbox"/> In Attendance
<u>Craig Poorker</u>			<u>GRE</u>								<input checked="" type="checkbox"/> In Attendance
<u>John Wachtler</u>			<u>BARR</u>								<input checked="" type="checkbox"/> In Attendance
<u>Jennifer Walters</u>			<u>HDR</u>								<input checked="" type="checkbox"/> In Attendance
											<input type="checkbox"/> In Attendance

Appendix A

Lake Marion to Hampton Advisory Task Force March 25, 2009

Meeting Handouts



**Brookings County - Hampton
345 kilovolt (kV) Transmission Line Project
Advisory Task Force**

**Lake Marion to Hampton Advisory Task Force
First Meeting – Wednesday, March 25, 2009
1:00 to 5:00 p.m.**

***Elko New Market Area Hall
601 Main Street, New Market, MN***

AGENDA

Activity	Time
1. Welcome and agenda review	1:00
2. Introductions	1:10
3. Why we are here <ul style="list-style-type: none">▪ <i>Charge</i>▪ <i>Plan of action</i>▪ <i>Result of work</i>	1:30
4. State route permitting process <ul style="list-style-type: none">▪ <i>Role of the ATF in permitting process</i>▪ <i>PUC decision criteria</i>	1:45
5. Project overview <ul style="list-style-type: none">▪ <i>Routes and sub-station options</i>▪ <i>Questions and responses</i>	2:00
<i>Break</i>	2:30
6. Identification of impacts and issues <ul style="list-style-type: none">▪ <i>What impacts and issues need to be considered in the evaluation of proposed transmission line routes and/or sub-station locations?</i>	2:45
7. Public comment to Advisory Task Force	4:15
8. Next steps <ul style="list-style-type: none">▪ <i>Future ATF meetings – April 15 & April 29, 2009</i>▪ <i>Homework</i>	4:45
Adjourn	5:00

Thank you



**Brookings County - Hampton
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Lake Marion to Hampton Advisory Task Force

Task Force Charge:

- 1) The ATF members will assist the OES in identifying impacts and issues in the area of concern that should be evaluated in the EIS.
- 2) ATF members will assist the OES in identifying alternative transmission line routes or substation locations in Dakota, Rice and Scott counties that may maximize positive impacts and minimize or avoid negative impacts of the project in the area of concern.

Plan of Action

Meeting 1 – March 25, 2009: Review Project and Process, identify issues and impacts to be considered in EIS (Charge 1)

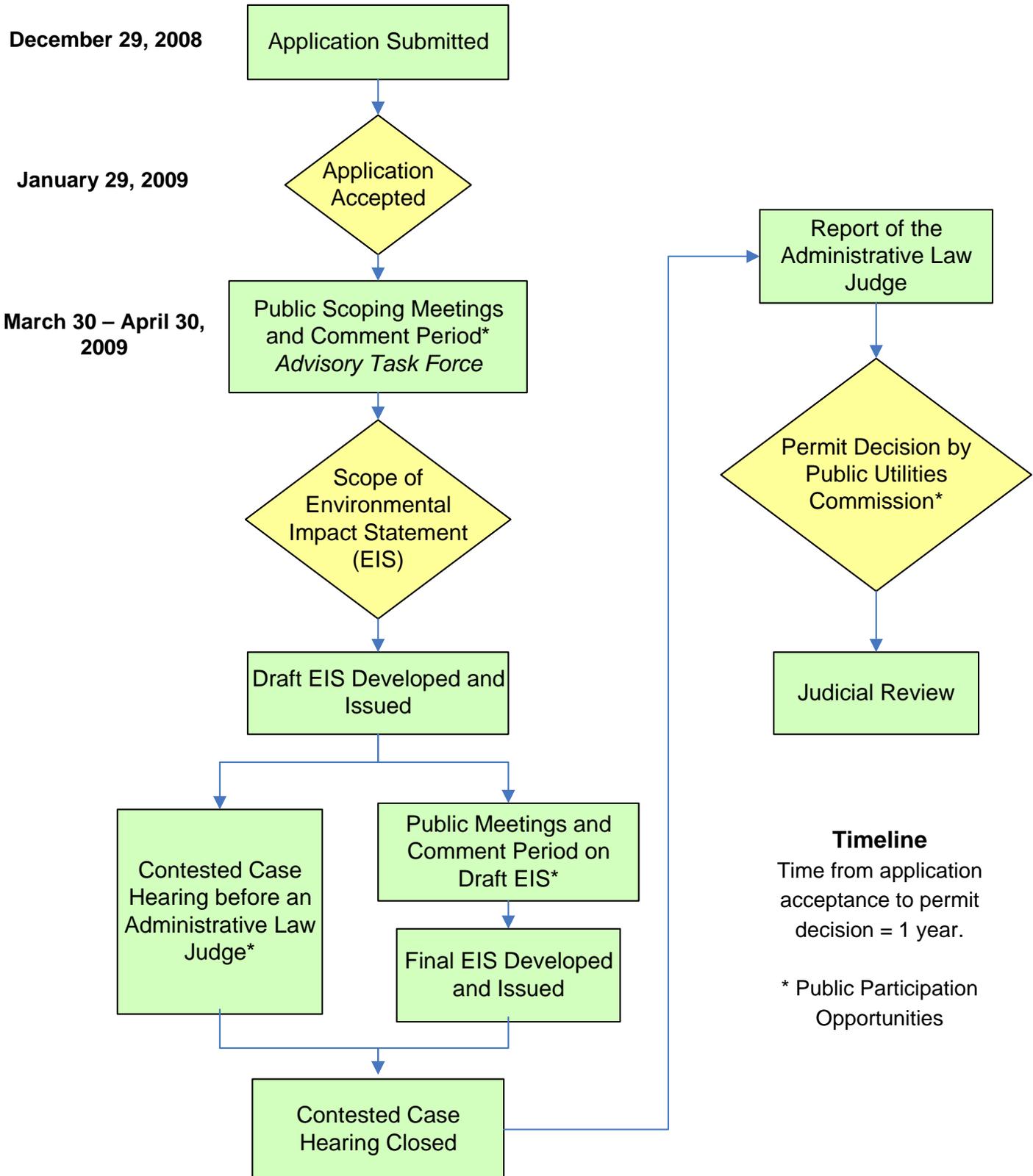
Meeting 2 – April 15, 2009: Discuss issues and impacts (Charge 1), review the two proposed routes and begin discussing alternative routes and route segments based on identified criteria (Charge 2)

Meeting 3 – April 29, 2009: Discuss alternative routes and/or route segments (Charge 2), wrap-up



HVTL Routing and Power Plant Siting Full Permitting Process

Minnesota Rules 7849





**Brookings County - Hampton
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Factors Considered in PUC's Route Permitting Decision

- a) Effects on human settlement, including, but not limited to displacement, noise, aesthetics, cultural values, recreation and public services;
- b) Effects on public health and safety;
- c) Effects on land-based economics, including, but not limited to, agriculture, forestry, tourism, and mining;
- d) Effects on archaeological and historic resources;
- e) Effects on the natural environment, including effect on air and water quality resources and flora and fauna;
- f) Effects on rare and unique natural resources;
- g) Application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;
- h) Use or paralleling of existing right-of-way, survey lines, natural division lines, and agricultural field boundaries;
- i) Use of existing large electric power generating plant sites;
- j) Use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;
- k) Electrical systems reliability;
- l) Costs of constructing, operating, and maintaining the facility which are dependent on design and route;
- m) Adverse human and natural environmental effects which cannot be avoided; and
- n) Irreversible and irretrievable commitments of resources.

Minnesota Rules 7849.5910



**Brookings County - Hampton
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Issues Typically Covered in an EIS

An EIS would typically provide information on the existing resources, potential impacts from the project, and potential mitigation for these impacts. Resources evaluated typically include:

1. Human Settlements

- a. Aesthetics – *existing scenic resources, visual impact from project*
- b. Cultural Resources – *archaeological and historic resources, also cultural values held by people in the area*
- c. Land Use – *existing land use and zoning, future plans*
- d. Socioeconomics – *population information, workforce, economic justice issues, displacement, economic development*
- e. Community Services – *fire, police, EMT, healthcare*
- f. Utility Systems – *electric, gas, oil, water, telephone infrastructure*
- g. Traffic and Transportation – *existing and planned roads, airports, railroads*
- h. Safety and Health – *safety and health during construction and operation, electromagnetic fields (EMF)*
- i. Noise – *noise during construction and operation, noise-sensitive areas*

2. Natural Environment

- a. Air Quality and Climate – *visibility, air pollution, local weather conditions (average temperature, rain, snowfall)*
- b. Geology and Soils – *geology, topography, soil classifications, erosion*
- c. Water Resources – *water quality, lakes, rivers, groundwater, floodplains, dewatering*
- d. Wetlands – *wetlands by type, wetland function*
- e. Biological Resources – *vegetation, fish and wildlife, threatened and endangered species, special natural communities, noxious weeds*

3. Economic Resources

- a. Agriculture – *prime farmland, crops, livestock, orchards, wild rice areas*
- b. Forestry – *land managed for forestry (impacts to trees typically covered under 2.e – Biological Resources)*
- c. Mining – *gravel, sand, quarries, underground mines*
- d. Recreation and Tourism – *attractions, resorts, parks, hunting, fishing, trails*

Appendix B

Lake Marion to Hampton Advisory Task Force March 25, 2009

Route Issues and Impacts Homework

City of Hampton - Bill Bray ✓

What is the Issue? Line will be too close to residential & play ^{Ground} Areas
What is the Impact? (Why is there an issue?) ~~the~~
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

1.

Impact - Aesthetics - Health Hazard - what are long term risks to families, animals etc.

What is the Issue?
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

2.

Issue - Future Planned Frontage Rds. Need Re routing
Impact to future commercial/industrial/economic growth

What is the Issue?
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

3.

- City Statement - The City of Hampton Does Not want these power lines in the immediate city area

What is the Issue?
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

4.

ISS- City 47 ramps to ^{the} 52 - Are you aware of these plans.

What is the Issue? Health
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

5.

Impact WHAT IS Done to eliminate any EMF

JOEL HAMBONER ✓

Homework assignment for Advisory Task Force

1. What is the issue? The preferred route does not fit the P.U.C. criteria for route selection. Because it prefers disturbance to many more households on the proposed route than on the alternate. And it prefers going cross country over private property rather than using existing right-of-ways as prescribed by the P.U.C.

What is the impact? Many more taxpaying residents are directly adversely effected by the uncompensated negative safety, asthetics, and deterioration in future property values caused by the transmission lines. *LAND ON preferred route VALUED AT 20,000 + PER ACRE ON ALTERNATE 5,000/ACRE*

Where is the problem located? Sections 13,14,15,16,17,18 of New Market Township as well the same in Cedar Lake Township, Scott County, MN

2. What is the issue? The preferred route crosses land that is presently zone for a density of from 5 to 8 acers per permitted home.(low density residential). And is scheduled in a future plan already accepted by the Metropolitan Council to go to higher density. While the alternate route would cross land which is zoned for 40 acres per permitted home (agricultural) and is planned by Rice county to stay agricultural in the future.

What is the impact? See part on 1.

Where is the problem located? Sections 13,14,15,16,17,18 of New Market Township as well as parts of Cedar Lake Township, Scott county, MN.

3. What is the issue? Cross of wildlife areas including the Vermillion river headwaters (a DNR designated trout stream) and conservation reserve program lands that have previously been undisturbed.

What is the impact? Negative environmental impact on wildlife and human visitors as well as residents of the area.

Where is the problem located? Sections 15,16,17,18 of New Market Township as well as parts of Cedar Lake Township. This includes a large area on the south end of Cedar Lake where Scott County just acquired a wonderful park reserve by the benevolence of a family that, it is my understanding, wished protect it from this type of issue.

4. What is the issue? Safety issue for Aviation.



✓

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Lake Marion to Hampton Advisory Task Force

Specific Route Issues and Impacts (Homework)

- 1) With the knowledge that you currently have about the proposed routes for the Brookings County – Hampton transmission line in your community, what specific route and/or sub-station issues and impacts need to be evaluated in the environmental impact statement for this project? If the issues are specific to a particular portion of one of the proposed routes, please identify the location.
- 2) Please identify your top five issues below and bring this document to the first meeting of the Advisory Task Force (use an additional sheet if necessary). We will use and collect the information at that meeting.
- 3) Your name: (optional)

Ken Chan - New Market Township

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

Examples

Example A:

Issue: Wetlands

Impact: Destruction of wetlands during construction and future maintenance.

Where located: Section 16 & 15, T145N, R32W (Farden Twp.)

Example B:

Waterfowl flyways. Birds hitting lines or avoiding areas on Route 1: Locations are the north end of Moss Lake to just south of Pike Bay in section 3 of Wilkinson Twp. and between Twin Lake and Camp Lake in section 2 of Wilkinson Twp.

Example C:

Issue: Line is too close to houses in our area

Impact: Aesthetics - we don't want to look at transmission lines

Where located: South of Sucker Lake in Cass County, near and around the boat access.

-
- What is the Issue?**
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)
1. X Health Concerns 124 homes compared to 109 homes
The density level is higher in northern route in New Market Township
The properties in township are one on 8 acres, or 2.5 acre lots compared to one on 40 in southern route
sections 17,16,15,14
-

- What is the Issue?**
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)
2. Crossing open farm land.
The route should stay with current Right of Ways
Section 19,20
Impacts will be future development issues, compensation doesn't reflect property values
-

- What is the Issue?**
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)
3. X Endangerment of wetlands not only during construction, but during subsequent years as maintenance is required. Personally viewed a crew repairing power lines by Shakopee this last week, they completely destroyed farm field and waterway with bulldozer and heavy equipment needed to repair broken power line. This could happen on any part of route. Section 14, 15, 16 New Market Township could not support this kind action.
-

- What is the Issue?**
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)
- 4.
-

- What is the Issue?**
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)
- 5.
-

What is the impact? The height of the power line creates dangers for traffic from Airlake Airport in Lakeville as it is on the edge of its flight path. It also creates danger for a pending private airstrip in New Market Township. In addition it is a direct danger to Lifelink air ambulance helicopters that operate from Airlake airport and make frequent trips to Queen Of Peace Hospital in New Prague and often must fly at low altitude because of low cloud ceilings.

Where is the problem located? The entire preferred route of the proposed power line but especially in eastern New Market Township, Scott County, MN

5. What is the issue? The radio and television airwave disruption as well as negative health issues caused by the EMFs from the lines.

What is the impact? Radio and television reception will be impaired if not destroyed by the powerlines and will cast the disruption shadow south the the City of Elko New Market.

Where is the problem located? Anywhere near or directly south of the powerlines.(ie. The city of Elko New Market.)

✓

LAKE MARION TO HAMPTON ADVISORY TASK FORCE – ROUTE ISSUES & IMPACTS

- * 1. The issue is the impact on the City of Elko New Market's 2030 Comprehensive Plan...it will cross over future development areas for ENM. The potential impact should be reviewed for route revisions.
- * 2. The issue is the impact on interchange plans at CSAH 2 and I-35. ENM is currently working with Scott County on plans to upgrade the interchange in the future, so the concern is the R-O-W needs of the transmission poles and the potential impact on interchange plans.
3. The issue is joint use of the R-O-W for the transmission lines...is there a possibility of co-locating bike/hike trails in the R-O-W?
4. The issue is impact on existing homes...the preferred route will *impact* over a hundred homes, not to mention limit future rural residential growth in the area.

MARK NAGEL
ELKO NEW MARKET



What is the Issue? Construction Time Line

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

1.

The Start - Date and
the finish Date

What is the Issue? Health Issue living next to

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

2.

EMP

What is the Issue? Construction Cost

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

3.

How will it be paid for
By Rates Increase or Taxes

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

4.

Will my family be move out of
the way of the line

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

5.

Hampton Substation -
Safety of living next to the station

Ralph Stoffo

Lake Marion to Hampton Advisory Task Force
Specific Route Issues and Impacts
Partial list of "General issues and impacts to be evaluated in EIS"
submitted by Ray Kaufenberg 3-25-09

1. Purpose of project
2. Who will benefit from the project
3. Issues and impacts from Minnesota Administrative Rules "7849.5910 Factors Considered" (See below)
4. Look at project in context of area Comprehensive Plans and future vision
5. Cumulative impacts of other proposed projects in the vicinity
6. Modifications that could reduce impacts
7. Additional alternative route (north of Lake Marion Substation to Hwy 70, then east along HWY 50)
8. Future vision for power lines, power sources, substations, hookups, energy demand
9. Political/ social/economic environment – paradigm shifts regarding energy consumption, alternative energy etc.
10. Shielding and underground line alternatives
11. Terrorist threats, grid risks
12. Financial impacts to the power line & power source plans caused by a potential prolonged US recession / depression
13. Health issues related to Electro Magnetic Fields and Static Electricity
14. Ethical and moral issues

Minnesota Administrative Rules

7849.5910 FACTORS CONSIDERED.

In determining whether to issue a permit for a large electric power generating plant or a high voltage transmission line, the commission shall consider the following:

- A. effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;
- B. effects on public health and safety;
- C. effects on ~~land-based~~ land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;
- D. effects on archaeological and historic resources;
- E. effects on the natural environment, including effects on air and water quality resources and flora and fauna;
- F. effects on rare and unique natural resources;
- G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;
- H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;
- I. use of existing large electric power generating plant sites;
- J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;
- K. electrical system reliability;
- L. costs of constructing, operating, and maintaining the facility which are dependent on design and route;
- M. adverse human and natural environmental effects which cannot be avoided; and
- N. irreversible and irretrievable commitments of resources.

Statutory Authority: *MS s 116C.66; 216B.16*

History: *27 SR 1295; L 2005 c 97 art 3 s 19*

Posted: *October 02, 2007*

Lake Marion to Hampton Advisory Task Force
Specific route issues and impacts
"Top 5 issues" - submitted by Ray Kaufenberg 3-25-09

1 Where:

CapX Appx. map MP1 - MP 224 to MP 286;
South of 245th, between DuPont and County Road #9 (Dodd Blvd)
Section 18, TWN 113, Range 20 (Eureka Township) Property owner: Boyum

Issues: (regarding CapX 2020 proposed "preferred" route)

- A Farm land value (currently for sale by Boyum widow)
- B Wetlands, pond, woods, & Vermillion Creek
- C Aesthetics & electromagnetic flux/static electricity
- D Ignores parallel existing right-of-way
- E Increases line construction costs and maintenance costs, poor accessibility
- F Disregards and exploits Cultural Values of land owners and citizens of Eureka Township

Impacts: (regarding CapX 2020 proposed "preferred" route)

- A Financial - MAJOR negative impact on current value and future development value of property. Proposed power line would cross lengthwise across widow's entire 100 acre farm. She was told a 175' tower would be placed within 75' of her house (located near Dodd Blvd).
- B Natural areas and wetlands - negative impact through destruction or disruption to secluded wetlands, wildlife, pond, wooded areas and Vermillion River creek.
- C Aesthetics/electromagnetic flux (EMF)/static electricity (SE)- 175' towers (probably non-painted) above highest trees would be major negative aesthetic for existing property owners, future land developers or buyers, and community viewshed along Dodd. EMF & SE are harmful to humans, animals, livestock, and disrupts electronic devices (cell phones, defibrulators, GPS for field mapping).

D & E

Proposed route ignores parallel existing right-of-way along 245th (where Interceptor pipeline has already acquired land and cleared trees and obstructions). Proposed route unnecessarily jags to south (running through Boyum widow's farmland) and then jags to north along Dodd Blvd. (where it negatively impacts 3 more property owners). Proposed route will cost considerably more in land acquisition & future maintenance than if it ran east along 245th. Summer maintenance will disrupt growing crops & cause compaction to fields, and winter emergency repairs may be almost unreachable through deep snow. If route ran east along 245th the existing houses in the development on 245th do not face 245th and most of them have hills and other adjacent houses to serve as buffers to power lines along 245th.

- F Cultural values of the citizens of Eureka Township have been affirmed over many years and are clearly apparent in the township's comprehensive plans, ordinances, envisioning task force reports, and way of life.

Eureka Township citizens STRONGLY value:

- 1) preserving natural areas, open spaces, and wildlife (over 90% of Eureka's land is ag, undeveloped, wetlands, and open water*).
- 2) preserving peace and quiet of rural life
- 3) preserving farming & agriculture (over 25% of ag land is in "Metropolitan Ag Preserves prgm."
- 4) limiting housing to only 1 house per quarter-quarter section (40 acres). Clustering is allowed and is proposed to be expanded across property owner boundaries in new Comp. Plan).
- 5) prohibiting most commercial/industrial (only .4 of 1% of land is commercial and industrial*)

*2008 proposed Eureka Comprehensive Plan. Figures source: Met Council & TKDA).

FORCING 175' POWERLINE TOWERS AND LINES THROUGH EUREKA TOWNSHIP --- AGAINST THE WILL OF THE CITIZENS --- IS LIKE EXPLOITING THE AMISH FOR PRESERVING THEIR SIMPLE RURAL WAY OF LIFE. IT IS MORALLY AND ETHICALLY WRONG AND GRATES AGAINST THE VERY FIBER OF BEING OF THE CITIZENS OF EUREKA TOWNSHIP. THE POWERLINES REPRESENT AN UNJUSTIFIABLE "TAKING" (THRU EMINANT DOMAIN) OF LAND THAT DENIES THE CITIZENS OF EUREKA THIER UNALIENABLE RIGHT TO THE "PURSUIT OF HAPPINESS."

2 Where:

CapX Appendix map MP1 -- MP 236 to MP 237 (Along County Road 9 /Dodd Blvd., south of 245th)
Sect. 18, TWN 113, Range 20 (Eureka Twsp) - 3 property owners: 2 west of Dodd (excluding Boyum), 1 farm east of Dodd)

Issues: (regarding CapX 2020 proposed "preferred" route)

- A** property values of 3 homes and 1 farm
- B** disruption of farming
- C** Aesthetics & electromagnetic flux (EMF) / static electricity (SE)
- D** Ignores 245th E/W right-of-way that would eliminate need to go along Dodd so. of 245th
- E** Increased line construction costs and maintenance costs, poor accessibility
- F** Disregards and exploits Cultural Values of the land owner and citizens of Eureka Township

Impacts: (regarding CapX 2020 proposed "preferred" route)

- A** Financial - for the farm east of Dodd the blacktopped frontage along Dodd is the most valuable part of the farm, especially for family housing (3 son's, evergreens planted), development of a school, church, or clustered housing. 175' towers and lines would greatly negatively impact the entire farm property value as far back as the eye can see --- which with mostly open land would be most of the 150 acre farm. Home values for 2 homes west of Dodd would also be greatly negatively impacted.
- B** Doing farm field work around towers with 40' to 100' farm equipment would be difficult and may result in chemical overspray problems; GPS field mapping may not function near power lines.
- C** Aesthetics & EMF/SE - view of 175' tower (probably non-painted) above highest trees would be major negative view for existing property owners, future land developers or buyers, and to the community viewshed along Dodd. EMF/SE harmful to humans/animals/livestock/horses; also disrupts electronic devices (cell phones, defibrillators, field GPS mapping).
- D & E** Proposed route ignores existing right-of-way east along 245th (where Interceptor pipeline has already acquired land and cleared trees). Route unnecessarily jags south of 245th (crossing Boyum widow's farm) and then jags north along Dodd effecting 3 more properties. Proposed route thru Boyum farm and along Dodd will cost more in land acquisition & future maintenance than coming straight east along 245th to Dodd and turning north. Further, the corner at 245th & Dodd could be angled to shorten line. Construction and maintenance of proposed route south of 245th & on farm east of Dodd will disrupt crops and cause compaction to fields. Winter emergency repairs on Boyum widow's property may be very problematic with deep snow. Houses in the development on 245th do not face 245th and have hills and other adjacent houses to buffer the power line view, making the straight path down 245th a better choice than to jag south & then jag north again along Dodd.
- F** Cultural values of the citizens of Eureka Township have been affirmed over many years and are clearly apparent in the township's comprehensive plans, ordinances, envisioning task force reports, and way of life. Eureka Township citizens STRONGLY value:
 - 1) preserving natural areas, open spaces, and wildlife (over 90% of Eureka's land is ag, undeveloped, wetlands, and open water*).
 - 2) preserving peace and quiet of rural life
 - 3) preserving farming & agriculture (over 25% of ag land is in "Metropolitan Ag Preserves prgm."
 - 4) limiting housing to only 1 house per quarter-quarter section (40 acres). Clustering is allowed and is proposed to be expanded across property owner boundaries in new comp. plan).
 - 5) prohibiting most commercial/industrial (only .4 of 1% of land is commercial and industrial*)

*2008 proposed Eureka Comprehensive Plan. Figures source: Met Council & TKDA).

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3 Where:

CapX proposed northern route - entire length where it passes through Eureka Township

Issues: (regarding CapX 2020 proposed "preferred" route)

- A Land and home values
- B Natural areas, wetlands, ponds, woods, Vermillion River & creek, and agricultural areas
- C Aesthetics & electromagnetic flux (EMF) / static electricity (SE)
- D Ignores better alternative route north from Lake Marian along I35, then east on HWY 70 & Hwy 50
- E Ignores better alternative route along Cnty Rd 86
- E Proposed route disregards & exploits Cultural Values of land owners and citizens of Eureka Township which could be respected if Hwy 70 & 50 E/W route was used, or alternative Cnty Rd 86 (so. side of 86)

Impacts: (regarding CapX 2020 proposed "preferred" route)

- A Financial - MAJOR negative impact on current value and future development value of all properties near the power lines (especially Eureka Estates) for aesthetic reasons and electromagnetic flux -- the real and perceived risks to health, and potential disruption of electronic devices and processes such as cell phones, defibrillators, and ag GPS field mapping.
- B Direct destruction of trees near power lines, and disruption to natural areas of Eureka Township, including wetlands & wildlife, open water, wooded areas & Vermillion River creek
- C Aesthetics & EMF /SE - view of 175' tower (probably non-painted) above highest trees would be major negative view for existing property owners, future land developers or buyers, and to the community viewshed along roads including Dodd & 240th (esp. near Eureka Estates). EMF /SE harmful to humans/animals/livestock/horses; disrupts electronic devices (cell phones, field GPS).
- D Proposed route ignores parallel existing right-of-way along Hwy 70 in Lakeville, and Hwy 50 between Lakeville and Farmington which is more appropriate for the following reasons:
 - 1) Large power lines and already purchased right-of-way exists between I35 & Pillsbury going north from the Lake Marion Substation, and then again east along Hwy 70 and Hwy 50. This would mean minimal *new* impacts, and reduced construction and acquisition costs.
 - 2) Going north from Lake Marion to Hwy 70 the power lines would go along industrial Pillsbury (near I35) where large power lines already exist and the road is primarily industrial. The power lines are more compatible with industrial because aesthetics are not as important.
 - 3) Going east from Pillsbury along Hwy 70 & Hwy 50 the power lines would go through an industrial park where large power lines already exist. The power lines are more compatible with industrial because aesthetics are not as important.
- E Alternative route along Cnty Rd 86 (to south of 86) runs outside of Eureka Township and is more appropriate (after Hwy 70 which is the most appropriate) for the following reasons:
 - 1) Cnty Rd 86 is the only straight west to east road south of metro -- this direct route west to east would save on construction costs and reduce stress and vulnerability of lines (to storm and terrorist threats) vs making higher tension zigs and zags on the proposed northern route.
 - 2) Cnty Rd 86 already has wide ditches and right of way, and shoulders on road (unlike "dangerous Dodd" with its many recent motorist deaths), so it would be a safer alternative than Dodd or 240th for motorists, and safer for trucks and construction and maintenance workers on the lines. Access for construction and repair would be easy with shoulders to park trucks.
 - 3) Discussions have already been made with MN DOT, Dakota County and Scott Cnty regarding making Cnty Rd 86 a "Principal Arterial Road" (like Cross-town 62, 494, & Cnty Rd 42) connecting E/W with access to I35. This would obviously be the most appropriate route for large power lines because a Principal Arterial Road needs 300' of right-of-way and power lines can go in this area. The future of Cnty Rd 86 will be noisy, probably much of it industrial. Home owners will want to buffer their houses with close trees and burms from this road regardless of power lines.
 - 4) Cnty Rd 86 would provide easy future accessibility along its entire E/W length for future power line hookups to wind, nuclear, or other sources --- without having to snake through to the north to connect with the proposed northern route.

F Cultural values of the citizens of Eureka Township have been affirmed over many years and are clearly apparent in the township's comprehensive plans, ordinances, envisioning task force reports, and way of life. Eureka Township citizens STRONGLY value:

- 1) preserving natural areas, open spaces, and wildlife (over 90% of Eureka's land is ag, undeveloped, wetlands, and open water*).
- 2) preserving peace and quiet of rural life
- 3) preserving farming & agriculture (over 25% of ag land is in "Metropolitan Ag Preserves prgm."
- 4) limiting housing to only 1 house per quarter-quarter section (40 acres). Clustering is allowed and is proposed to be expanded across property owner boundaries in new comp. plan).
- 5) prohibiting most commercial/industrial (only .4 of 1% of land is commercial and industrial*)

*2008 proposed Eureka Comprehensive Plan. Figures source: Met Council & TKDA).

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4 Where:

CapX Appendix map MP3 - MP 258

Along HWY 50 east of Farmington and west of Hampton

Section 1, TWSP 113 Range 19. property owner Duane Ehlers 3486 220th St. Hampton

Issues: (regarding CapX 2020 proposed "preferred" route)

A Home owner has heart defibulator - he claims he cannot live within 1,800 feet of power lines

Impacts: (regarding CapX 2020 proposed "preferred" route)

A Health - proposed power lines passing near to his property could be life threatening. Home owner would desire to be bought out at FAIR market value, or route moved to south of him (eliminating the northward jag in route)

5 Where:

CapX Appendix map MP5? -- MP 271

Proposed "alternative route" along Pillsbury avenue south of Lake Marion Substation to Hwy 86

Issues: (regarding CapX 2020 proposed "ALTERNATIVE" route)

A Ignores parallel existing right-of-way.

B Construction costs

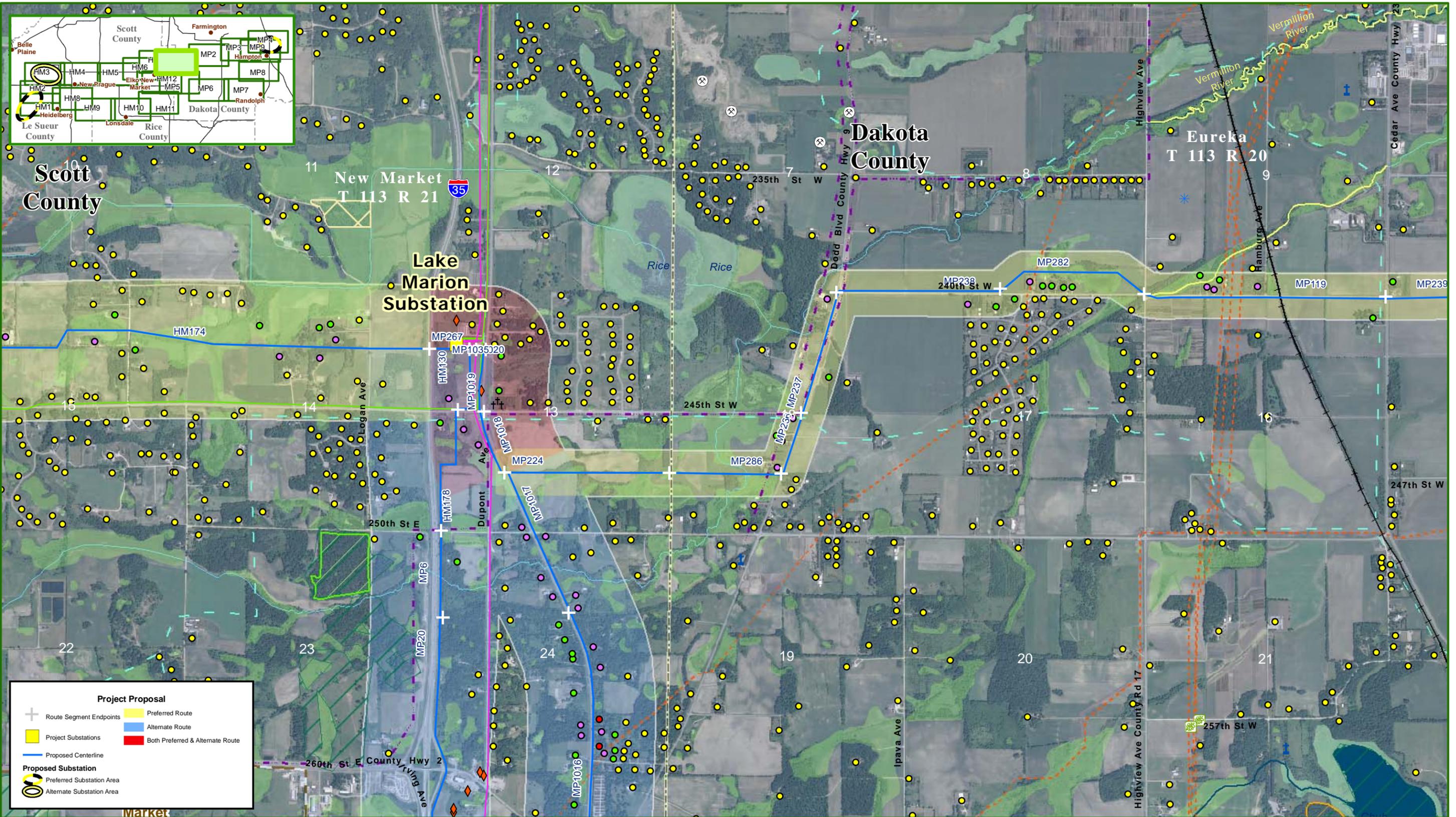
C Natural areas and woods destruction

Impacts: (regarding CapX 2020 proposed "ALTERNATIVE" route)

A proposed "alternative route" should follow exiting power line route running south of Lake Marion Substation to Hwy 86, approx 1/2 mi east of 135 and 1/2 mi west of Pillsbury avenue.

B This would lower land acquisition costs and reduce negative impacts to land owners.

C This would reduce considerably the impact to natural areas vs proposed route



CapX2020
Delivering electricity you can rely on

0 1,000 2,000 Feet
1:24,000

Data Source: Please refer to Section 12

- Transmission Lines**
- 69 kV - Existing
 - 115 kV - Existing
 - 230 kV - Existing
 - 345 kV - Existing
 - 69 kV - Proposed
 - 115 kV - Proposed
 - 230 kV - Proposed

- Cemetery
- Churches
- Parks and Recreation
- Aggregate Locations
- FCC Telecom Tower
- Certified Organic Farm
- Scenic Byway
- Planned MN DOT Upgrades
- Existing Pipeline

- Trails**
- Existing State & Regional Trail
 - Regional Planned & Proposed Trail
 - Snowmobile Trail
- MCBS Biodiversity Significance**
- Moderate Significance
 - High Significance
 - Outstanding Significance

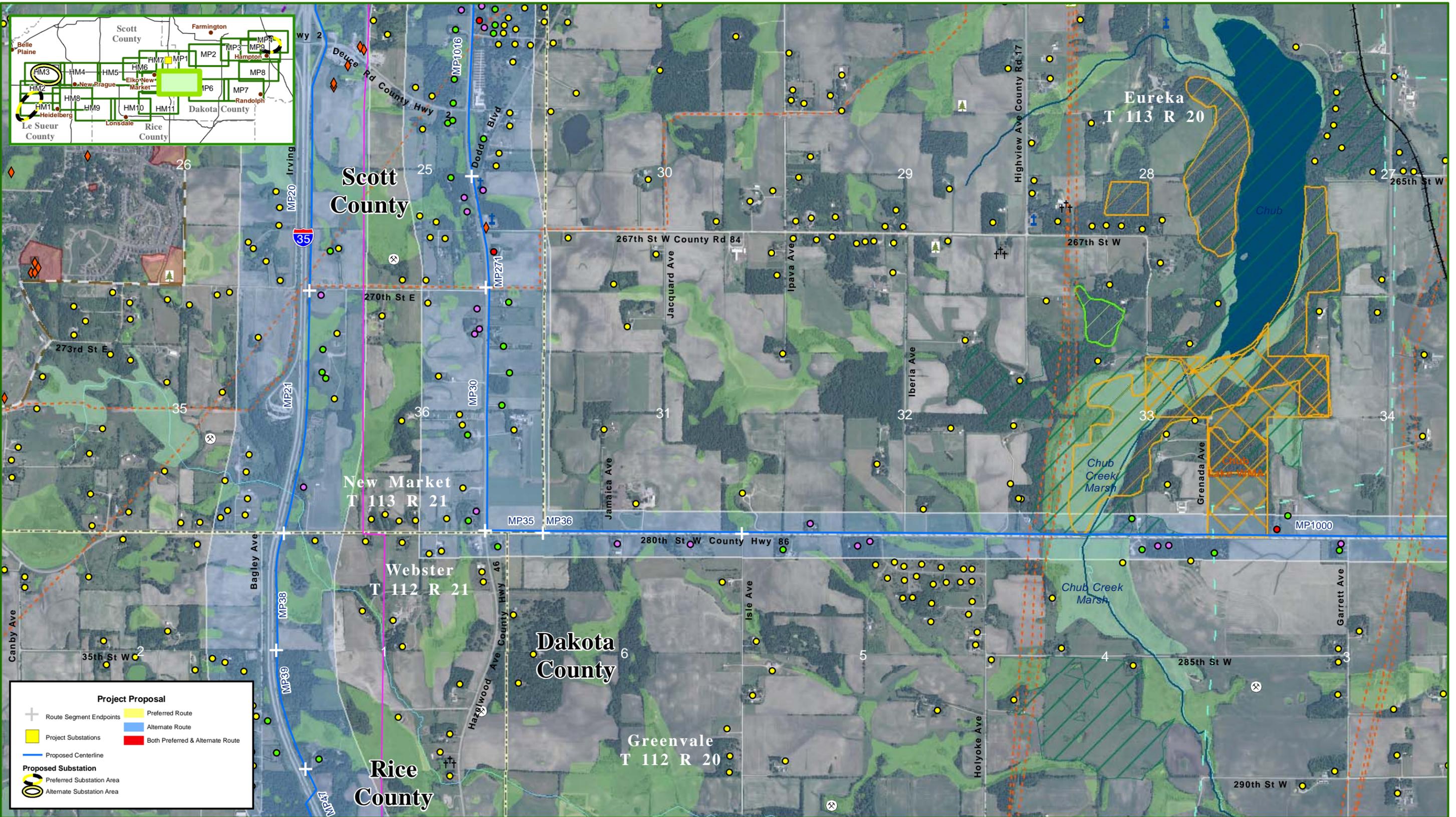
- Homes (from Proposed Centerline)**
- 75 - 150 ft
 - 150 - 300 ft
 - 300 - 500 ft
 - over 500 ft

- MN State Wild and Scenic River**
- Scenic
 - Recreational
- Hydrography and Wetlands**
- NWI Wetland
 - PWI Water
 - MN Trout Streams
 - Impaired Waters

- USFWS Easement
- MN SNA
- Metro Park
- Metro Significant
- USFWS WPA
- USFWS NWR
- MN WMA**
- State Funded
- Federally Funded

Appendix B.6 - Sheet MP1
Lake Marion Substation to
Hampton Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line



CapX2020
Delivering electricity you can rely on

1:24,000

- Transmission Lines**
- 69 kV - Existing
 - 115 kV - Existing
 - 230 kV - Existing
 - 345 kV - Existing
 - 69 kV - Proposed
 - 115 kV - Proposed
 - 230 kV - Proposed

- Cemetery
- Churches
- Parks and Recreation
- Aggregate locations
- FCC Telecom Tower
- Certified Organic Farm
- Scenic Byway
- Planned MN DOT Upgrades
- Existing Pipeline

- Trails**
- Existing State & Regional Trail
 - Regional Planned & Proposed Trail
 - Snowmobile Trail
- MCBS Biodiversity Significance**
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- 75 - 150 ft
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- USFWS Easement
 - MN SNA
 - Metro Park
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 - USFWS WPA
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- MN WMA**
- State Funded
 - Federally Funded

Appendix B.6 - Sheet MP5
Lake Marion Substation to
Hampton Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

mxdRoute_PermitAppendixB6SheetMap_11x17_L_detailed_routes.mxd 11/23/2008



Brookings County - Hampton
345 kilovolt (kV) Transmission Line Project
Advisory Task Force

Russ Zellmer

Lake Marion to Hampton Advisory Task Force

Specific Route Issues and Impacts (Homework)

- 1) With the knowledge that you currently have about the proposed routes for the Brookings County – Hampton transmission line in your community, what specific route and/or sub-station issues and impacts need to be evaluated in the environmental impact statement for this project? If the issues are specific to a particular portion of one of the proposed routes, please identify the location.
- 2) Please identify your top five issues below and bring this document to the first meeting of the Advisory Task Force (use an additional sheet if necessary). We will use and collect the information at that meeting.
- 3) Your name: (optional)

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

Example A:

Issue: Wetlands

Impact: Destruction of wetlands during construction and future maintenance.

Where located: Section 16 & 15, T145N, R32W (Farden Twp.)

Example B:

Waterfowl flyways. Birds hitting lines or avoiding areas on Route 1: Locations are the north end of Moss Lake to just south of Pike Bay in section 3 of Wilkinson Twp. and between Twin Lake and Camp Lake in section 2 of Wilkinson Twp.

Example C:

Issue: Line is too close to houses in our area

Impact: Aesthetics - we don't want to look at transmission lines

Where located: South of Sucker Lake in Cass County, near and around the boat access.

Examples

-
1. * **What is the Issue?** wetlands
What is the Impact? (Why is there an issue?) Vermillion River Watershed highly sensitive
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?) near Hampton

-
2. * **What is the Issue?** Roads
What is the Impact? (Why is there an issue?) township Roads are narrower than some Roads
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?) Through the entire township Also the wear and tear on these Roads

-
3. **What is the Issue?** Property Values
What is the Impact? (Why is there an issue?) could lower values and take Buildable lots from owner
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?) All Along Route

-
4. **What is the Issue?**
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

-
5. **What is the Issue?**
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)
-

S. Weber ✓



Brookings County - Hampton
345 kilovolt (kV) Transmission Line Project
Advisory Task Force

Lake Marion to Hampton Advisory Task Force

Specific Route Issues and Impacts
(Homework)

- 1) With the knowledge that you currently have about the proposed routes for the Brookings County – Hampton transmission line in your community, what specific route and/or sub-station issues and impacts need to be evaluated in the environmental impact statement for this project? If the issues are specific to a particular portion of one of the proposed routes, please identify the location.
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Example C:

Issue: Line is too close to houses in our area

Impact: Aesthetics - we don't want to look at transmission lines

Where located: South of Sucker Lake in Cass County, near and around the boat access.

Examples

Wetlands are in prop preferred route Castle Rock Township

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

1. Castle Rock Township
preferred route wetlands & higher population
-

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

- ② * 2. Of roads are impacted & destroyed who
fixes them & who pays for repair?
-

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

3. Economy - using less electricity.
What is the need for these power lines?
-

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

- ① * 4. Health issues - for populated areas along
230k ft. Electro Magnetic Fields.
-

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

5. GPO - Vermilion River Watershed Ordinance
Very Restrictive.
-



OFFICE OF ENERGY SECURITY

ADVISORY TASK FORCE
MEETING March 25, 2009

ISSUES AND IMPACTS

SUBMITTED BY TRISH JOHNSON
3940 220th St. East
Hampton, Mn 55031

1. **What is the issue? Electro magnetic field emissions (EMF) and minimizing impacts on human beings.**

What is the impact?

The final 2.5 miles of Xcel's primary route from the Lake Marion to Hampton substation negatively impacts the largest concentration of homes of the entire project by exposing 25 families to high levels of EMF.

These families include at least 4 adults with or in remission from cancer, 4 adults and one child with chronic illness and subsequently compromised immune systems, 10 children under the age of 11, two homes of grandparents providing daycare to grandchildren, and one daycare business with 8 children under the age of 6.

According to the ALJ December 28 2009 need findings, "because of the continued uncertainty and public concern (linking EMF exposure to adverse health effects), the MN Dept of Health recommends a "prudent avoidance" policy to minimize exposure". The World Health Organization's review of EMF fields found a 200% increase in childhood leukemia with just average exposure. The current ROW is not sufficient to protect against increased cancer risks.

Location: Dakota County, Hampton Township, 220th St. East, mile marker 14 east to mile marker 16 extending to Hwy 52.

A total of 66 households would be affected by the entire Lake Marion to Hampton substation route. According to the ALJ findings on the need issue, this extension has not been shown to add benefit to regional reliability, community load serving and generation outlet. The addition of this segment would cause substantial harm to families and the environment that may not be necessary.

Location: Lake Marion-Hampton Corners segment

2. **What is the issue? The Watt Munisotaram Cambodian Buddhist Temple. Unique cultural and religious resource.**

This Temple is the largest Buddhist Temple in the United States, with approximately 5,200 members. It hosts outdoor celebrations on a regular basis, drawing Buddhists from the entire Mid-west to attend. There is a monastery on site that houses their religious leaders. This is a unique religious and cultural resource.

What is the impact? The proposed primary route would be situated directly in their front entrance area. EMF emissions, audible noise associated with transmission lines and aesthetics would have a direct impact on this unique religious and cultural resource.

Location: 220th St. East, east of mile marker 15, north side of the highway

3. **What is the issue? Castle Rock Farms, racehorse breeding operation. Unique land use.**

The owners derive their income from contracts to breed mares and raise foals for clients in the racing industry. The animals are valued in the tens of thousands of dollars. The paddock for the horses abuts 220th Street. This is a unique land use that would be adversely affected by the power line.

What is the impact? Prolonged exposure to EMF emissions and stray voltage has been demonstrated to cause a decline in health, and even the death of, animals in close proximity. Even before health impacts are evident, customers may be unwilling to take the risks and contract for breeding in close proximity to a 345 kV high voltage line.

Location: 220th St. East, at mile marker 15.

4. **What is the issue? The Hampton Woods – minimizing environmental impacts.**

The Hampton Woods is designated as a “Metro Significant Natural Resource Area” and a Minnesota County biological Survey area of outstanding biodiversity. Dakota County has identified this parcel as a significant conservation area and there are rare and endangered plant and animal species in the vicinity.

What is the impact? The state’s stated goal is to conserve resources and minimize environmental impacts in the routing of high voltage transmission lines. This old growth hardwood forest, with its unique wild life habitat, would sustain lasting harm by construction of the proposed primary route due to transmission pole height, audible noise and EMF emissions.

Location: 220th St. East, mile marker 14 to 16

5. **What is the issue? There will be substantial economic property valuation loss.**

What is the impact? A large number of homeowners along the primary route are retired. Their major investment is their home and land. In the current economic climate, any valuation of property would be depressed. In addition, there are reputable real estate studies indicating that values of property near power lines are as much as 20-30% lower due to the fear of EMF emissions and their associated adverse health effects, the negative aesthetics of power lines and the noise they emit.

Location: 220th St. East, mile markers 14 to 16 to Hwy 52.

Submitted by Trish Johnson 3/25/09



What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

1.

Aesthetics - Destruction of beautiful rural residential & rural ag cropland & scenery along proposed alternate route located in Wheatland Township, Rice County, Sections 14, 19, 20, 21, 22, 23, 27, 28, 29 & 30. Transmission line would be placed extremely close to homes in Wheatland Township, Rice County, Sections 20, 22 & 23.

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

2.

Natural gas pipeline - Gas pipeline crossing State Highway #19 from Section 22 to 23, Wheatland Township, Rice County. Hazard to gas company aircraft for pipeline flyover check & possible gas pipe leakage & seepage to surface as has occurred in Section 23, Wheatland Township, in the past.

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

3.

Crop flyover - Hazard to low flying aircraft for crop flyover, Section 22, Wheatland Township, Rice County.

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

4.

Buffalo, elk, dairy & beef farms - buffalo, elk, dairy & beef herds will be grazing directly under or near the transmission line. Meat & dairy products are for human consumption. These herds can be found along most of the alternate route in Section 14 (buffalo); Section 20 (600+ dairy cow herd); Section 21 (dairy, elk & beef herd); Section 22 (beef herd); & Section 30 (dairy cow replacement herd).

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

5.

Century Farms - Gregg Kocina, Roland Skluzacek, Ed Smisek, Doug Ziskovsky, Rudolph Skluzacek, & Clarence & Delores Salaba. Six in Wheatland Township, Rice County, alone, located in Sections 19, 20, 21 & 22.

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

1)

- 1) Ag Land
- 2) Rice County's zoning rules have always been more ag-rural friendly. Should keep Rice County more open & rural. With more people, rural areas need more infrastructure

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

2)

2. Land issues -
Land values are affected

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

3.

3. Safety issues

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

4.

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

5.

City of Lonsdale, MA ✓

What is the Issue? Location of Alt. route located NW of Lonsdale

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

1. → location proposed relative to existing house & proposed development of Lonsdale to the NW
→ Northwest section of town

What is the Issue? Health impacts

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

2. → Lonsdale is a young family community. Potential for childhood leukemia, & chronic adult lymphocytic leukemia
→ entire community, specifically NW section of Lonsdale (EMF)

What is the Issue? Alternate route east on 60th st.

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

3. → location relative to 2025 comp. plan, it is proposed to develop Lonsdale to the north on #96 & 60th st.
→ C.R. 96 & 60th st.

What is the Issue? Property values

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

4. → area adjacent to alternate route near NW section of Lonsdale
→ NW section of Lonsdale (existing homes & developable land in city's comp. plan)

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

5.

Lake Marion to Hampton Advisory Task Force

Specific Route Issues and Impacts:

- ★ 1.) Issue: conflict with road right of way (future row needs)
Impact: potential structures would be placed within future road expansion areas that are currently undetermined
Location: along county/state /local roads

- 2.) Issue: river stream, wetland crossings proximity to natural areas
Impact: visual and ecological impacts of natural areas
Location: Chub Creek south of Chub Lake, Big Slough south of fairgrounds, South Branch of Vermillion River, Hampton Woods

- ★ 3.) Issue: Dakota County Farmland Easements
Impact: potentially routing of transmission line will conflict with terms of farmland protection easements
Location: Various locations, specific properties along CSAH 86

- 4.) Issue: division of land/landscape / efficient use of existing utility corridors (roads, pipelines,rail etc.)
Impact: future land use patterns
Location: Dakota County

- 5.) Issue: property value
Impact: loss of property value
Location: Dakota County

John Mertens, Senior Planner
Dakota County Office of Planning and Analysis

Other:

Issue: Signal Interference
Impact: Cell Phone, Radio, TV
Location: Along transmission line



Lake Marion to Hampton Homework Meeting 1.txt

Brookings County -Hampton
345 kilovolt (kV) Transmission Line Project
Advisory Task Force

Lake Marion to Hampton Advisory Task Force

Specific Route Issues and Impacts

(Homework)

1)

With the knowledge that you currently have about the proposed routes for the Brookings County - Hampton transmission line in your community, what specific route and/or sub-station issues and impacts need to be evaluated in the environmental impact statement for this project? If the issues are specific to a particular portion of one of the proposed routes, please identify the location.

2)

Please identify your top five issues below and bring this document to the first meeting of the Advisory Task Force (use an additional sheet if necessary). We will use and collect the information at that meeting.

3)

Your name: (optional)
(text)

Examples

What is the Issue?
What is the Impact? (why is there an issue?)
Where, specifically, is it located? (what part of your township, city, or county?
What part
of a proposed route?)

Example A:

Issue: Wetlands
Impact: Destruction of wetlands during construction and future maintenance.
Where located: Section 16 & 15, T145N, R32W (Farden Twp.)

Example B:

Waterfowl flyways. Birds hitting lines or avoiding areas on Route 1: Locations are the north end of Moss Lake to just south of Pike Bay in section 3 of wilkinson Twp. and between Twin Lake and Camp Lake in section 2 of wilkinson Twp.

Example C:

Issue: Line is too close to houses in our area
Impact: Aesthetics -we don't want to look at transmission lines
Where located: South of Sucker Lake in Cass County, near and around the boat access.

Specific Route Issues and Impacts
Page 1 of 2

□

Lake Marion to Hampton Homework Meeting 1.txt

What is the Issue?

What is the Impact? (why is there an issue?)

Where, specifically, is it located? (what part of your township, city, or county?)

What part of a proposed route?)

(text) Has the need for the last section of the line (Lk. Marion to Hampton) been removed because of the decision concerning the LaCrosse portion?

This portion of the line impacts the most people per line mile (in either of the proposed routes) than the line to this point. If the need for electricity is in the Twin Cities, why is the skirting the south side of them and extending east? The justification for the line in the submitted documents is specifically for Brookings to Lake Marion. The Lake Marion to Hampton portion seems tacked on and less well considered.

1.

What is the Issue?

What is the Impact? (why is there an issue?)

Where, specifically, is it located? (what part of your township, city, or county?)

What part of a proposed route?)

(text) The maps that have been presented in the report are fraught with errors in the section that I am most familiar with. 6 errors were readily identified in a quarter section. There were different kinds of errors with different possible causes: omission of new homes (data set too old?); omission of old homes (not discernible on air photos through trees?); misplacement of existing homes (different structures interpreted as homes on air photos?); completely erroneous dots on the map (GPS not working correctly or other item such as a well linked to a property address and ownership? random errors?)

The different nature of the errors and mere number makes me call into question the integrity of the data set used to select a route.

Who collected this information and how? Where is the metadata and has it been reviewed? How is the PUC reviewing the data? It seems that it needs to be reconstructed independently as a check or each and every point on the map checked in the field.

2.

What is the Issue?

What is the Impact? (why is there an issue?)

Where, specifically, is it located? (what part of your township, city, or county?)

What part of a proposed route?)

(text) We have the maps of data (whether or not we believe those data sets are robust) but we know nothing of the rules (logic, scoring mechanism) that were applied to select the route. This should have been done in a repeatable, logical fashion.

Describe that methodology and the ranking of concerns. We may want to re-rank certain aspects. For example, was cost of the line more important than proximity to homes; was protection of open space and viewsheds a consideration at all? Were open spaces always favored by the rules chosen because distance from homes was maximized?

We should have the opportunity to discuss the underlying principles that guided route selection as well as review the logic (and I mean that in a technical sense) because I certainly hope that the routing process used some kind of mathematical optimization approach. If it did not, I think that the process could be described as suffering from the human flaws associated with bias, inconsistency and multiple, overlapping agendas.

3.

What is the Issue?

What is the Impact? (why is there an issue?)

where, specifically, is it located? (what part of your township, city, or county?
what part
of a proposed route?)

(text) The proposed route crosses and stays within designated wildlife corridors in
Dakota County.

There are forward looking plans in Dakota County to preserve corridors along the
Vermillion and North Cannon waterways as well as connect greenspace from Northfield
through Chub Lake and to the north. Already, there are conservation easements in
place to make a nearly continuous corridor from the Northfield Hospital (St. Olaf
area) to the north side of Chub Lake. Powerlines are specifically disallowed in
these conservation areas and putting one in the intervening small areas currently
not in conservation disrupts the whole corridor that has been painstakingly built.
This is an issue for the secondary route through Eureka Township but also for the
end point in the Hampton woods.

There is already an affected, industrial corridor (I-35 to 70) that could be used
with less impact.

Additional costs if shielding and/or burial are required along these built-up routes
should be considered before impacting areas that currently have no obstructions and
infrastructure of this type.

4.

what is the Issue?

What is the Impact? (why is there an issue?)

where, specifically, is it located? (what part of your township, city, or county?
what part

of a proposed route?)

(text) The impact of electromagnetic field generation on humans and animals (both
domestic and wild) has not been at the forefront of the routing discussion. There
are statistically significant occurrences of childhood leukemia as well as other
cancers that are linked to the proximity to, strength of and duration of
electromagnetic fields, for example, from p. 146 of a summary report "Taken
together, the studies suggest an association between exposure to magnetic fields and
brain cancer." The causal mechanism is not completely understood. In cows that were
deliberately exposed to EMFs, the cause is thought to involve a weakening of the
blood-brain barrier and the introduction of compounds to the cerebral spinal fluid
(Burchard et al., 1998). It is also demonstrated to affect the length of the estrous
cycle in cows (Burchard et al., 1999) Recent documentation on the effects of EMFs on
the grazing habits of cows as well as the effect on migrating animals that use
magnetic field lines and biologically produced magnetite for guidance (birds, bees,
some fish) have not been considered. The region serves as a major flyway (part of
the Mississippi flyway) for migrating birds as well as butterflies.

Limited evidence for impact of EMFs in humans should not be interpreted as the
absence of a connection. To quote the National Institute of Environmental Health
Working Group Report from 1998 (convened coincidentally in Minnesota) :

"Inadequate evidence can imply one of four possibilities: (1) there are
insufficient data

for making a judgment of any kind (e.g. poor study design, making interpretation
impossible); (2) the data suggest a positive effect but, due to limitations in
design or very

weak findings, cannot be interpreted as suggesting a causal linkage; (3) the data
suggest a

negative effect but, due to limitations in design or very few findings, cannot be
interpreted

as suggesting no effect; and (4) the data are contradictory and no clear pattern is
discernible. For case (1), given a solid hypothesis, it may be beneficial to
continue to

study an inadequate finding using a better design in the same experimental system.
For

case (2), if the effect seen is of public health consequence, it should be studied
further but

with a clear hypothesis and perhaps in conjunction with other studies such as those
providing mechanistic interpretation. In case (3), unless there is a clear

scientific reason
for further study, again involving a defined hypothesis, there is little need to
continue to
study the observed effect. Finally, for case (4), the effect might be further
studied if the
scientific issues are compelling or if health concerns are raised, but it is
unlikely that

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another study of similar design would be performed. Additional studies might not be
needed. Again, a careful reader searching for scientific hypotheses for further
study
should read the more detailed descriptions of the findings presented in the three
preceding
chapters."

There are many aspects of EMF exposure that are being studied including "dose",
field strength, field vectors (direction of applied field), shape of body being
affected, whether the object is insulated or grounded...that all have to do with the
underlying physics as well as the body's response. This issue is by no means settled
and anyone who makes this assumption is acting out of ignorance of or bias to the
published literature. Because of the shape of a human body, the maximum dose in a
standing adult is in the leg and neck (p. 80).

"A key question in exposure to magnetic fields is the magnitude of the induced
electric

field. Here, the orientation of a culture dish or any other object within the
magnetic field

will have major consequences because only the component of the magnetic field that
is
perpendicular to a surface contributes to the induced electric field in the plane of
that

surface; different orientations of the magnetic field to the culture dish result in
significantly different induced electric field magnitudes and distributions. In the
immediate

vicinity of a high-voltage transmission line, the electric field induced in a human
by the

electric field of the line will generally be larger than the electric field induced
by the line's

magnetic field." p. 83

And from p. 129--a summary of the increased incidence of all cancers in humans does
find linkages to EMF exposure. 4.2.1.9 Summary

This review focuses on the best of the epidemiological studies that were available
to the

Working Group, i.e. those of exposure from full-shift measurements of extremely low
frequency (ELF) magnetic and electric fields. The one exception is the studies of
breast

cancer, in which exposure was assessed only by job title.

Leukemia

Leukemia was the first cancer to be associated with occupational exposure to EMF,
and

at least 70 epidemiological studies have provided evidence relevant to this cancer.
Most of

these were based on job titles, and judgments were made about which occupational
categories involve high exposure to EMF. In a meta-analysis, a small but
significantly

increased relative risk for leukemia and its main subtypes was found for a broad
group of

electricity-associated occupations.

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Separate evaluations were made for the two major leukemia subtypes, chronic
lymphocytic leukemia (CLL) and acute myelogenous leukemia (AML), and for all
leukemias.

Chronic lymphocytic leukemia: The association between exposure to magnetic fields
and

CLL was considered in three studies of incidence, two in Sweden (Feychting et al.,

1997;

Floderus et al., 1993) and one in Canada and France involving three separate cohorts (Theriault et al., 1994), and in one of mortality in the USA (Savitz & Loomis, 1995).

No association was found in the US mortality study. The diagnoses were, however, based on death certificates, which is problematic for leukemia subtypes and particularly for CLL, because of the long survival time.

In the Canada-France incidence study of electric utility workers, a nonsignificantly increased risk was seen overall and in two of the three cohorts. A significant increase was

seen in both of the Swedish studies. One of these (Feychting et al., 1997) provides unique

information on the potential importance of combining occupational and residential exposures for adults, but it suffers from small numbers. In addition, their exposure assessment was based on a job-exposure matrix derived from magnetic field measurements for a different population of male workers, so their occupational exposures

were not validated, especially for female workers. In the other Swedish study (Floderus et

al.) of male workers in all occupations, the risk increased with increasing exposure; the

risk was particularly strong for the highest exposure category and was increased somewhat when adjusted for exposure to potential confounders. The refusal rate in that

study, however, could have introduced bias into the results.

Although each of these studies has its limitations, the limitations are different across

studies, as are the designs and exposure assessment methods. Taken together, the studies

of incidence suggest an association between exposure to magnetic fields and CLL.

Acute myelogenous leukemia: The association between exposure to magnetic fields and AML was considered in the same studies as for CLL. A nonsignificant increase in risk was found in the US mortality study, although the use of diagnoses from death certificates is problematic, as mentioned above.

In the Canada-France study, a significantly increased risk was seen overall for exposures

above the median; this association is due mainly to a very high risk in one cohort, whereas

a much smaller risk was seen in another cohort. The differences in definition and followup

between the three studies, however, limit interpretation of the results. A

nonsignificant increase in risk was seen in the study of Feychting et al. (Feychting

et al., 1997), which became significant when restricted to the very small number of subjects who

had both high occupational and high residential exposures. Although the study of Feychting et al. provides unique information on the potential importance of combining

occupational and residential exposures in adults, it suffers from small numbers and weaknesses in exposure assessment, particularly for women. In the study of Floderus

et al. (Floderus et al., 1993), no association was seen between exposure to magnetic

fields and the risk for AML.

Leukemia: The association between exposure to magnetic fields and risk for leukemia in

general was considered in the same studies. No association was found in either of the two

US studies of mortality. The limitations of death certificate diagnoses mentioned above

are less critical for leukemia in general than they are for specific subtypes. In the Canada-France study, no significant association was seen overall, although a significant association was seen in one cohort. The differences in definition and follow-up among three studies, however, limit interpretation of the results. A marginally significant association was seen in both Swedish studies; in the study of Feychting et al. (Feychting et al., 1997), when the analyses were restricted to subjects with high occupational and residential exposures, a significant elevation in risk was seen, based on nine cases. Although the study of Feychting et al. provides unique information on the potential importance of combining occupational and residential exposures in adults, it suffers from small numbers and weaknesses in exposure assessment, particularly for women.

Brain cancer
The association between exposure to magnetic fields and brain cancer was considered in the same studies. One US study found a significant association in the highest exposure category and evidence for an exposure-response trend. The smaller US study showed no association. Both studies are based on diagnoses from death certificates, which is problematic for brain cancer owing to the difficulty in distinguishing primary cancers from metastases. A nonsignificant elevation in risk was seen in the Canada-France study and in each of the cohorts in that study. In the study of Floderus et al. (Floderus et al., 1993), an association was reported between exposure to magnetic fields and brain cancer, which was significant only in one of the intermediate exposure categories; no evidence for a dose-response relationship was observed. No association was observed in the study of Feychting et al. Although each of these studies has its limitations, the limitations are different across studies, as are the designs and exposure assessment methods. Taken together, the studies suggest an association between exposure to magnetic fields and brain cancer, although the results are somewhat inconsistent.

Male breast cancer: The relationship between the risk for male breast cancer and exposure to magnetic fields has been examined in only one study, in Sweden, in which exposures were assessed with a JEM derived from full-shift measurements of magnetic fields. No association was observed, although no adjustment for potential confounders was made.

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This association was also considered in nine studies in which only job titles were used to classify workers by exposure. Only one study involved large numbers of cases and took into account risk factors for male breast cancers. In that study, a two-fold increase of borderline significance was seen among men in all exposed occupations combined; a significant increase was seen for the category of workers in electrical trades. The exposure assessment based on job title was not validated by measurements. The other studies, which were based on smaller numbers and had various limitations, gave inconsistent results. Most of these studies were not designed a priori to test this hypothesis.

Female breast cancer: The relationship between the risk for breast cancer in women and

exposure to magnetic fields assessed with a JEM derived from full-shift measurements has been examined in only one study, in Denmark. No association was observed, but no adjustment was made for potential confounders.

Three other studies, in the USA, were based on job titles; in two, these were classified by experts into categories of probable exposure to EMF. These studies, which have methodological limitations mainly because they were not designed a priori to test an association with EMF, had mixed results.

Other cancers

Other cancer outcomes (including cancer in the offspring of exposed workers) were considered in some studies. Increased incidences of specific types of cancers were observed in some studies but were not found consistently. Many of the studies suffer from methodological limitations, which hamper interpretation of the results.

Cancers at all sites

The risk for cancers at all sites associated with occupational exposure to magnetic fields

were assessed in one US mortality study and one incidence study in Canada and France.

These two studies were based on cohorts of male electric utility workers, and exposures

were assessed by job exposure matrixes derived from contemporary full-shift monitoring

of the cohort members. The mortality study reported a very weak but significant elevation in risk, with an exposure response relationship. The study of incidence in the

Canadian and French utilities found no increased risk overall, although a small, nonsignificant elevation was observed in the Hydro Qu•bec cohort.

Evaluation

There is limited evidence that occupational exposure to extremely low frequency magnetic

fields is carcinogenic to adults. This evaluation is based on the results of studies of

chronic lymphocytic leukemia.

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[This conclusion was supported by 14 members of the working Group; there were 11 votes for "inadequate" evidence, 2 abstentions, and 2 absent.]

There is inadequate evidence for all other cancers.

[This conclusion was supported by 22 working Group members; there were 2 votes for "limited" evidence, 1 vote for "lack" of evidence, 2 abstentions, and 2 absent.]

5.

Specific Route Issues and Impacts

Page 2 of 2

□



What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

1. *Location. It's going to go somewhere, so pick best area and go with it.*

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

2. *Wild life. Wants the line in in the wildlife will adapt around it.*

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

3. *People. Nobody wants it, but reality someone has to look at it.*

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

4. *Wet lands. As long as it doesn't go over a lake I don't think wetlands is a issue.*

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

- 5.



What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

1.

Low Flying Aircraft From Sky Harbor (Approx. 70 Aircraft)
Safety is the biggest impact

Sections 14, 15, 10, 11 Webster

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

2.

- Crop Dusting ~~MAN~~ AIRCRAFT
- make it more difficult to spray fields
- we are in a high canning crop area and this could affect farmers all along the route

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

3.

Farming around utility poles

sections 13, 14, 15, 19, 20, 21, 22, 23, 24, 28, 29, 30 wheatland
sections 13, 14, 15, 16, 17, 18, 19, 20 (Webster)

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

4.

* The biggest issue is ~~the power lines~~
- The preferred route people don't want it
- The alternate route people want it even less

What is the Issue?

What is the Impact? (Why is there an issue?)

Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

5.

Aesthetics
- devalued property
- no one wants to look at these power lines in their front yard

6) Health - everyone

What is the Issue?
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

1. *Southern Route 290 is in
watershed Scioto Township.
this route has 5 irrigation systems
on this Route*

What is the Issue?
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

2. *There will be lime pit mining
possibility in the next few years
in Scioto Township*

What is the Issue?
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

3. *we do not think this route is good route*

What is the Issue?
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

4.

What is the Issue?
What is the Impact? (Why is there an issue?)
Where, specifically, is it located? (What part of your township, city, or county? What part of a proposed route?)

5.

Appendix C

Lake Marion to Hampton Advisory Task Force Homework March 25, 2009

Route Issues and Impacts Sorted by Issue Areas

Fairness (collectiveness)

- Issue:** Has the need for the last section of the line (Lake Marion to Hampton) been removed because of the decision concerning the LaCrosse portion?
- Impact:** This portion of the line impacts the most people per line mile (in either of the proposed routes) than the line to this point. If the need for electricity is in the Twin Cities, why is the skirting the south side of them and extending east? The justification for the line in the submitted documents is specifically for Brookings to Lake Marion. The Lake Marion to Hampton portion seems tacked on and less well considered.

Farming

- Issue:** Crossing open farmland
- Impact:** Impacts will be future development issues; compensation doesn't reflect property values. The route should stay with right of ways
- Location:** Section 19, 20
- Issue:** Agricultural land
- Impact:** Rice County's zoning rules have always been more agricultural-rural friendly. Should keep Rice County more open and rural. With more people, these areas need more infrastructure.
- Issue:** Farming around utility poles
- Location:** Sections 13, 14, 15, 19, 20, 21, 22, 23, 24, 28, 29, 30 (Wheatland)
Sections 13, 14, 15, 16, 17, 18, 19, 20 (Webster)
- Issue:** Century Farms – Gregg Locina, Roland Skluzacek, Ed Smisek, Doug Ziskovsky, Rudolph Skluzacek, and Clarence and Delores Salaba
- Impact:** Six in Wheatland Township, Rice County, alone
- Location:** Sections 19, 20, 21, and 22
- Issue:** Buffalo, elk, dairy, and beef farms
- Impact:** Buffalo, elk, dairy, and beef herds will be grazing directly under or near the transmission line. Meat and dairy products are for human consumption.
- Location:** These herds can be found along most of the alternate route in Section 14 (buffalo), Section 20 (600+ dairy cow herd), Section 21 (dairy, elk, and beef hers), Section 22 (beef herd), and Section 30 (dairy cow replacement herd).

Issue: Dakota County Farmland Easements
Impact: Potentially routing of transmission line will conflict with terms of farmland protection easements
Location: Various locations, specific properties along CSAH 86

Use Existing right-of-way (except for pipelines)

Issue: Conflict with road right of way (future road needs)
Impact: Potential structures would be placed within future road expansion areas that are currently undetermined
Location: Along county/state/local roads

Issue: Division of land/landscape/efficient use of existing utility corridors (roads, pipelines, rail, etc.)
Impact: Future land use patterns
Location: Dakota County

Issue: The preferred route does not fit the P.U.C. criteria for route selection. Because it prefers disturbance to many more households on the proposed route than on the alternate. And it prefers going cross-country over private property rather than using existing right-of-ways as prescribed by the P.U.C.
Impact: Many more taxpaying residents are directly adversely affected by the uncompensated negative safety, aesthetics, and deterioration in future property values caused by the transmission lines. Land on preferred route valued at \$20,000+; per acre on alternate, \$5000
Location: Sections 13, 14, 15, 16, 17, 18 of New Market Township as well the same in Cedar Lake Township, Scott County, MN

Issue: Future planned frontage roads need rerouting
Impact: Impact to future commercial/industrial/economic growth

Wetland damage – during construction and ongoing

Issue: River stream, wetland crossings proximity to natural areas
Impact: Visual and ecological impacts of natural areas
Location: Chub Creek south of Chub Lake, Big Slough south of fairgrounds, South Branch of Vermillion River, Hampton Woods

Issue: Wetlands
Impact: Vermillion River watershed highly sensitive
Location: Near Hampton

Issue: Preferred route, wetlands and higher population
Location: Castle Rock Township

Issue: Endangerment of wetlands
Impact: Endangerment of wetlands, not only during construction, but during subsequent years as maintenance is required. Personally viewed a crew repairing power lines by Shakopee this last week; they completely destroyed farm field and waterway with bulldozer and heavy equipment needed to repair broken power line. New Market Township could not support this kind of action.
Location: Sections 14, 15, 16

Issue: Wetlands comment – As long as it doesn't go over a lake, I don't think that wetlands is an issue

Construction issues – damage of roads, right-of-way, water

(2) **Issue:** Dakota County Farmland Easements
Impact: Potentially routing of transmission line will conflict with terms of farmland protection easements
Location: Various locations, specific properties along CSAH 86

Issue: Roads
Impact: Township roads are narrower than some roads; also the wear and tear on these roads
Location: Through the entire township

Issue: If roads are impacted and destroyed, who fixes them, and who pays for repair?

Issue: Construction time line
Impact: The start and finish dates

Issue: Construction cost
Impact: How will it be paid for? By rate increases or taxes?

Coordination with existing comprehensive plans and other ongoing studies: future and existing land use and respect for cultural values of community

Issue: Impact on the City of Elko New Market's 2030 Comprehensive Plan
Impact: It will cross over future development areas for ENM. The potential impact should be reviewed for route revisions

Issue: [Does not take zoning into account]
Impact: The preferred route crosses land that is presently zone for a density of from 5 to 8 acres per permitted home (low density residential). And is scheduled in a future

plan already accepted by the Metropolitan Council to go to higher density. While the alternate route would cross land which is zoned for 40 acres per permitted home (agricultural) and is planned by Rice County to stay agricultural in the future.

Location: Sections 13, 14, 15, 16, 17, 18 of New Market Township as well as parts of Cedar Lake Township, Scott County, MN

Issue: County 47 ramps to highway 52 – Are you aware of these plans?

Issue: Impact on interchange plans at CSAH 2 and I-35

Impact: ENM is currently working with Scott County on plans to upgrade the interchange in the future, so the concern is the R-O-W needs of the transmission poles and the potential impact on interchange plans.

Location: CSAH 2 and I-35

Issue: Cross of wildlife areas including the Vermillion River headwaters (a DNR-designated trout stream) and conservation reserve program lands that have previously been undisturbed.

Impact: Negative environmental impact on wildlife and human visitors as well as residents of the area

Location: Sections 15, 16, 17, 18 of New Market Township as well as parts of Cedar Lake Township. This includes a large area on the south end of Cedar Lake where Scott County just acquired a wonderful park reserve by the benevolence of a family that, it is my understanding, wished to protect it from this type of issue.

Issue: Joint use of the R-O-W for the transmission lines

Impact: Is there a possibility of co-locating bike/hike trails in the R-O-W?

Issue: Location of alternate route located NW of Lonsdale

Impact: Location proposed relative to existing house and proposed development of Lonsdale to the NW

Location: Northwest section of town

Emergency and safety issues

Issue: Safety issue for aviation

Impact: The height of the power line creates dangers for traffic from Airlake Airport in Lakeville as it is on the edge of its flight path. It also creates danger for a pending private airstrip in New Market Township. In addition it is a direct danger to Lifelink air ambulance helicopters that operate from Airlake airport and make frequent trips to Queen of Peace Hospital in New Prague and often must fly at low altitude because of low cloud ceilings.

Location: The entire preferred route of the proposed power line, but especially in eastern New Market Township, Scott County, MN

Issue: Safety issues

Issue: Low flying aircraft from Sky Harbor (approximately 70 aircraft)

Impact: Safety is the biggest impact

Location: Sections 14, 15, 10, 11, Webster

Issue: Crop flyover

Impact: Hazard to low flying aircraft for crop flyover

Location: Section 22, Wheatland Township, Rice County

Issue: Natural gas pipeline

Impact/location: Gas pipeline crossing state highway 19 from Section 22 to 23, Wheatland Township, Rice County. Hazard to gas company aircraft for pipeline flyover check, and possible gas pipe leakage and seepage to surface as has occurred in Section 23, Wheatland Township in the past.

Issue: Crop dusting aircraft

Impact: Make it more difficult to spray fields; we are in a high canning crop area, and this could affect farmers all along the route.

Rate increases

Issue: Construction cost

Impact: How will it be paid for? By rate increases or taxes?

Effect on unique cultural and religious resource – Cambodian Buddhist Temple

Issue: The Watt Munisotaram Cambodian Buddhist Temple. Unique cultural and religious resource. This Temple is the largest Buddhist Temple in the United States, with approximately 5,200 members. It hosts outdoor celebrations on a regular basis, drawing Buddhists from the entire Midwest to attend. There is a monastery on site that houses their religious leaders. This is a unique religious and cultural resource.

Impact: The proposed primary route would be situated directly in their front entrance area. EMF emissions audible noise associated with transmission lines and aesthetics would have a direct impact on this unique religious and cultural resource.

Location: 220th St. East, east of mile marker 15, north side of the highway

Health issues: concerns for humans and wildlife, electromagnetic fields and static electricity

Issue: Health

Impact: Electromagnetic fields for populated areas

Location: Along 230th St.

Issue: Health concerns

Impact: 124 homes compared to 109 homes. The density level is higher in northern route in New Market Township. The properties in township are one on 8 acres or 2.5 acre lots compared to one on 40 in southern route.

Location: Sections 17, 16, 15, 14

Issue: Health issue living next to the line

Impact: EMF

Issue: The radio and television airwave disruption as well as negative health issues caused by the EMFs from the lines

Impact: Radio and television reception will be impaired, if not destroyed, by the power lines and will cast the disruption shadow south, the City of Elko New Market

Location: Anywhere near or directly south of the power lines, i.e. the city of Elko New Market.

Issue: Health impacts

Impact: Lonsdale is a young family community. Potential for childhood leukemia, chronic adult lymphocytic leukemia

Location: Entire community, specifically NW section of Lonsdale (EMF)

Issue: Health – everyone

Issue: Health

Impact: What is done to eliminate **any** EMF?

Issue: Line will be too close to residential and playground areas

Impact: Aesthetics; health hazard – What are long-term risks to families, animals, etc.?

Issue: The impact of electromagnetic field generation on humans and animals (both domestic and wild) has not been at the forefront of the routing discussion. There are statistically significant occurrences of childhood leukemia as well as other cancers that are linked to the proximity to, strength of, and duration of electromagnetic fields, for example, from p. 146 of a summary report “Taken together, the studies suggest an association between exposure to magnetic fields and brain cancer.” The causal mechanism is not completely understood. In cows that were deliberately exposed to EMFs, the cause is thought to involve a weakening of the blood-brain barrier and the introduction of compounds to the cerebral spinal fluid (Burchard et al., 1998). It is also demonstrated to affect the length of the estrous cycle in cows (Burchard et al., 1999). Recent documentation on the effects of EMFs on the grazing habits of cows as well as the effect on migrating animals that use magnetic field lines and biologically produced magnetite for guidance (birds, bees, some fish) have not been considered. The

region serves as a major flyway (part of the Mississippi flyway) for migrating birds as well as butterflies. Limited evidence for impact of EMFs in humans should not be interpreted as the absence of a connection. To quote the National Institute of Environmental Health Working Group Report from 1998 (convened coincidentally in Minnesota): “Inadequate evidence can imply one of four possibilities: (1) there are insufficient data for making a judgment of any kind (for example, poor study design, making interpretation impossible); (2) the data suggest a positive effect but, due to limitations, in design or very weak findings, cannot be interpreted as suggesting a causal linkage; (3) the data suggest a negative effect but, due to limitations in design or very few findings, cannot be interpreted as suggesting no effect; and (4) the data are contradictory, and no clear pattern is discernible.

“For case (1), given a solid hypothesis, it may be beneficial to continue to study an inadequate finding using a better design in the same experimental system. For case (2), if the effect seen is of public health consequence, it should be studied further but with a clear hypothesis and perhaps in conjunction with other studies such as those providing mechanistic interpretation. In case (3), unless there is a clear scientific reason for further study, again involving a defined hypothesis, there is little need to continue to study the observed effect. Finally, for case (4), the effect might be further studied if the scientific issues are compelling or if health concerns are raised, but it is unlikely that (396) another study of similar design would be performed. Additional studies might not be needed. Again, a careful reader searching for scientific hypotheses for further study should read the more detailed descriptions of the findings presented in the three preceding chapters.”

There are many aspects of EMF exposure that are being studied, including “dose,” field strength, field vectors (direction of applied field), shape of body being affected, whether the object is insulated or grounded . . . that all have to do with the underlying physics as well as the body’s response. This issue is by no means settled, and anyone who makes this assumption is acting out of ignorance or bias to the published literature. Because of the shape of a human body, the maximum dose in a standing adult is in the leg and neck (p. 80).

“A key question in exposure to magnetic fields is the magnitude of the induced electric field. here, the orientation of a culture dish or any other object within the magnetic field will have major consequences because only the component of the magnetic field that is perpendicular to a surface contributes to the induced electric field in the plane of that surface; different orientations of the magnetic field to the culture dish result in significantly different induced electric field magnitudes and distributions. In the immediate vicinity of a high-voltage transmission line, the electric field induced in a human by the electric field of the line will generally be larger than the electric field induced by the line’s magnetic field.” p. 83 And from p. 129 – a summary of the increased incidence of all cancers in humans does find linkages to EMF exposure. 4.2.1.9 Summary: This review focuses on the best of

the epidemiological studies that were available to the Working Group, i.e., those of exposure from full-shift measurements of extremely low frequency (ELF) magnetic and electric fields. The one exception is the studies of breast cancer, in which exposure was assessed only by job title. Leukemia was the first cancer to be associated with occupational exposure to EMF, and at least 70 epidemiological studies have provided evidence relevant to this cancer. Most of these were based on job titles, and judgments were made about which occupational categories involve high exposure to EMF. In a meta-analysis, a small but significantly increased relative risk for leukemia and its main subtypes was found for a broad group of electricity-associated occupations. (130) Separate evaluations were made for the two major leukemia subtypes, chronic lymphocytic leukemia (CLL) and acute myelogenous leukemia (AML), and for all leukemias.

Chronic lymphocytic leukemia: The association between exposure to magnetic fields and CLL was considered in three studies of incidence, two in Sweden (Feychting et al., 1997; Floderus et al., 1993) and one in Canada and France involving three separate cohorts (Theriault et al., 1994), and in one of mortality in the USA (Savitz & Loomis, 1995). No association was found in the U.S. mortality study. The diagnoses were, however, based on death certificates, which is problematic for leukemia subtypes and particularly for CLL, because of the long survival time. In the Canada-France incidence study of electric utility workers, a nonsignificantly increased risk was seen overall and in two of the three cohorts. A significant increase was seen in both of the Swedish studies. One of these (Feychting et al., 1997) provides unique information on the potential importance of combining occupational and residential exposures for adults, but it suffers from small numbers. In addition, their exposure assessment was based on a job exposure matrix derived from magnetic field measurements for a different population of male workers, so their occupational exposures were not validated, especially for female workers. In the other Swedish study (Floderus et al.) of male workers in all occupations, the risk increased with increasing exposure; the risk was particularly strong for the highest exposure category and was increased somewhat when adjusted for exposure to potential confounders. The refusal rate in that study, however, could have introduced bias into the results. Although each of these studies has its limitations, the limitations are different across studies, as are the designs and exposure assessment methods. Taken together, the studies of incidence suggest an association between exposure to magnetic fields and CLL.

Acute myelogenous leukemia: The association between exposure to magnetic fields and AML was considered in the same studies as for CLL. A nonsignificant increase in risk was found in the U.S. mortality study, although the use of diagnoses from death certificates is problematic, as mentioned above. In the Canada-France study, a significantly increased risk was seen overall for exposures above the median; this association is due mainly to a very high risk in one cohort, whereas a much smaller risk was seen in another cohort. The differences in definition and followup between the three studies, however, limit interpretation of the results. A nonsignificant increase in risk was seen in the study of Feychting et al. (Feychting et al., 1997), which became significant when restricted to the very small number of subjects who had both high occupational and high residential

exposures. Although the study of Feychting et al. provides unique information on the potential importance of combining occupational and residential exposures in adults, it suffers from small numbers and (131) weaknesses in exposure assessment, particularly for women. In the study of Floderus et al. (Floderus et al., 1993), no association was seen between exposure to magnetic fields and the risk for AML. Leukemia: The association between exposure to magnetic fields and risk for leukemia in general was considered in the same studies. No association was found in either of the two U.S. studies of mortality. The limitations of death certificate diagnoses mentioned above are less critical for leukemia in general than they are for specific subtypes. In the Canada-France study, no significant association was seen overall, although a significant association was seen in one cohort. The differences in definition and follow-up among three studies, however, limit interpretation of the results. A marginally significant association was seen in both Swedish studies; in the study of Feychting et al. (Feychting et al., 1997), when the analyses were restricted to subjects with high occupational and residential exposures, a significant elevation in risk was seen, based on nine cases. Although the study of Feychting et al. provides unique information on the potential importance of combining occupational and residential exposures in adults, it suffers from small numbers and weaknesses in exposure assessment, particularly for women. Brain cancer: The association between exposure to magnetic fields and brain cancer was considered in the same studies. one U.S. study found a significant association in the highest exposure category and evidence for an exposure-response trend. The smaller U.S. study showed no association. Both studies are based on diagnoses from death certificates, which is problematic for brain cancer, owing to the difficulty in distinguishing primary cancers from metastases. A nonsignificant elevation in risk was seen in the Canada-France study and in each of the cohorts in that study. In the study of Floderus et al. (Floderus et al., 1993), an association was reported between exposure to magnetic fields and brain cancer, which was significant only in one of the intermediate exposure categories; no evidence for a dose-response relationship was observed. No association was observed in the study of Feychting et al. Although each of these studies has its limitations, the limitations are different across studies, as are the designs and exposure assessment methods. Taken together, the studies suggest an association between exposure to magnetic fields and brain cancer, although the results are somewhat inconsistent. Male breast cancer: The relationship between the risk for male breast cancer and exposure to magnetic fields has been examined in only one study, in Sweden, in which exposures were assessed with a JEM derived from full-shift measurements of magnetic fields. No association was observed, although no adjustment for potential confounders was made. 132 This association was also considered in nine studies in which only job titles were used to classify workers by exposure. Only one study involved large numbers of cases and took into account risk factors for male breast cancers. In that study, a two-fold increase of borderline significance was seen among men in all exposed occupations combined; a significant increase was seen for the category of workers in electrical trades. The exposure assessment based on job title was not validated by measurements. The other studies, which

were based on smaller numbers and had various limitations, gave inconsistent results. Most of these studies were not designed a priori to test this hypothesis. Female breast cancer: The relationship between the risk for breast cancer in women and exposure to magnetic fields assessed with a JEM derived from full-shift measurements has been examined in only one study, in Denmark. No association was observed, but no adjustment was made for potential confounders. Three other studies, in the USA, were based on job titles; in two, these were classified by experts into categories of probably exposure to EMF. These studies, which have methodological limitations mainly because they were not designed a priori to test an association with EMF, had mixed results. Other cancers: Other cancer outcomes (including cancer in the offspring of exposed workers) were considered in some studies. Increased incidences of specific types of cancers were observed in some studies but were not found consistently. Many of the studies suffer from methodological limitations, which hamper interpretation of the results. Cancers at all sites: The risk for cancers at all sites associated with occupational exposure to magnetic fields were assessed in one U.S. mortality study and one incidence study in Canada and France. These two studies were based on cohorts of male electric utility workers, and exposures were assessed by job-exposure matrixes derived from contemporary full-shift monitoring of the cohort members. The mortality study reported a very weak but significant elevation in risk, with an exposure-response relationship. The study of incidence in the Canadian and French utilities found no increased risk overall, although a small, nonsignificant elevation was observed in the Hydro Quebec cohort. Evaluation: There is limited evidence that occupational exposure to extremely low frequency magnetic fields is carcinogenic to adults. This evaluation is based on the results of studies of chronic lymphocytic leukemia. 133 [This conclusion was supported by 14 members of the Working Group; there were 11 votes for inadequate evidence, 2 abstentions, and 2 absent.] There is inadequate evidence for all other cancers. [This conclusion was supported by 22 Working Group members; there were 2 votes for limited evidence, 1 vote for lack of evidence, 2 abstentions, and 2 absent.]

Issue: Electro magnetic field emissions (EMF) and minimizing impacts on human beings
Impact: The final 2.1 miles of Xcel's primary route from the Lake Marion to Hampton substation negatively impacts the largest concentration of homes of the entire project by exposing 25 families to high levels of EMF.

These families include at least four adults with or in remission from cancer, four adults and one child with chronic illness and subsequently compromised immune systems, 10 children under the age of 11, two homes of grandparents providing daycare to grandchildren, and one daycare business with eight children under the age of six.

According to the ALJ December 28, 2009 need findings, "because of the continued uncertainty and public concern (linking EMF exposure to adverse health effects), the Minnesota Department of Health recommends a "prudent

avoidance” policy to minimize exposure.” The World Health Organization’s review of EMF fields found a 200 percent increase in childhood leukemia with just average exposure. The current ROW is not sufficient to protect against increased cancer risks.

Location: Dakota County, Hampton Township, 220th St. East, mile marker 14 east to mile marker 16 extending to Hwy 52.

Impact: A total of 66 households would be affected by the entire Lake Marion to Hampton substation route. According to the ALJ findings on the need issue, this extension has not been shown to add benefit to regional reliability, community load serving and generation outlet. The addition of this segment would cause substantial harm to families and the environment that may not be necessary.

Location: Lake Marion-Hampton Corners segment

Issue: Castle Rock Farms, racehorse breeding operation. Unique land use. The owners derive their income from contracts to breed mares and raise foals for clients in the racing industry. The animals are valued in the tens of thousands of dollars. The paddock for the horses abuts 220th Street. This is a unique land use that would be adversely affected by the power line.

Impact: Prolonged exposure to EMF emissions and stray voltage has been demonstrated to cause a decline in health, and even the death of, animals in close proximity. Even before health impacts are evident, customers may be unwilling to take the risks and contract for breeding in close proximity to a 345 kV high voltage line.

Location: 220th St. East, at mile marker 15.

Negative impact on property values and loss of future property value for developed and undeveloped land

Issue: Property value

Impact: Loss of property value

Location: Dakota County

Issue: Property values

Impact: Could lower values and take buildable lots from owner

Location: All along route

Issue: Land value

Impact: Land values are affected

Issue: Property values

Impact: NW section of Lonsdale (existing homes and developed land in city’s comp. plan

Location: Area adjacent to alternate route near NW section of Lonsdale

Issue: Aesthetics
Impact: Devalued property
Location: No one wants to look at these power lines in their front yard

Issue: Impact on existing homes
Impact: The preferred route will impact over a hundred homes, not to mention limit future rural residential growth in the area.

Issue: There will be substantial economic property valuation loss.
Impact: A large number of homeowners along the primary route are retired. Their major investment is their home and land. In the current economic climate, any valuation of property would be depressed. In addition, there are reputable real estate studies indicating that values of property near power lines are as much as 20 – 30 percent lower due to the fear of EMF emissions and their associated adverse health effects, the negative aesthetics of power lines and the noise they emit.
Location: 220th St. East, mile markers 14 to 16 to Hwy 52.

Miscellaneous

Issue: Signal interference
Impact: Cell phone, radio, T.V.
Location: Along transmission line

Issue: [Could affect irrigation]
Impact: This route has five irrigation systems along it
Location: Southern route 290th St in Waterford Siotce Township

Issue: Lime pit mining
Impact: There will be lime pit mining, possibility in the next ten years
Location: Sciote Township

Issue: We do not think this route is a good route

Issue: Economy
Impact: Using less electricity. What is the need for these power lines?

Issue: JPO – Vermillion River Watershed Ordinance
Impact: Very restrictive

Issue: Will any family be moved out of the way of the line?

Issue: Living next to the station
Location: Hampton substation

Issue: Preferred route – people don't want it; alternate route: people want it even less.

Issue: Location comment – It’s going to go some place, so pick best area and go with it

Issue: Wild life comment – [] will adapt around it

Issue: People comment – Nobody wants it, but reality – someone has to look at it

Issue: Comment – The city of Hampton **does not** want these power lines in the immediate city area.

Issue: Aesthetics

Impact/location: Destruction of beautiful rural residential and rural agricultural cropland and scenery along proposed alternate route located in Wheatland Township, Rice County, Sections 14, 19, 20, 21, 22, 23, 27, 28, 29, and 30. Transmission line would be placed extremely close to homes in Wheatland Township, Rice County, Sections 20, 22, and 23.

Issue: The maps that have been presented in the report are fraught with errors in the section that I am most familiar with. Six errors were readily identified in a quarter section. There were different kinds of errors with different possible causes: omission of new homes (data set too old?); omission of old homes (not discernible on air photos through trees?); misplacement of existing homes (different structures interpreted as homes on air photos?); completely erroneous dots on the map (GPS not working correctly or other item such as a well linked to a property address and ownership? Random errors?)

Impact: The different nature of the errors and mere number makes me call into question the integrity of the data set used to select a route. Who collected this information and how? Where is the metadata, and has it been reviewed? How is the PUC reviewing the data? It seems that it needs to be reconstructed independently as a check or each and every point on the map checked in the field.)

Issue: We have the maps of data (whether or not we believe those data sets are robust), but we know nothing of the rules (logic, scoring mechanism) that were applied to select the route. This should have been done in a repeatable, logical fashion.

Impact: Describe that methodology and the ranking of concerns. We may want to re-rank certain aspects. For example, was cost of the line more important than proximity to homes; was protection of open space and viewsheds a consideration at all: Were open spaces always favored by the rules chosen because distance from homes was maximized?

We should have the opportunity to discuss the underlying principles that guided route selection as well as review the logic (and I mean that in a technical sense) because I certainly hope that the routing process used some kind of mathematical optimization approach. If it did not, I think that the process could be described as suffering from the human flaws associated with bias, inconsistency, and multiple, overlapping agendas.

Issue: The proposed route crosses and stays within designated wildlife corridors in Dakota County.

Impact: There are forward-looking plans in Dakota County to preserve corridors along the Vermillion and North Cannon waterways as well as connect green space from Northfield through Chub Lake and to the north. Already, there are conservation easements in place to make a nearly continuous corridor from the Northfield Hospital (St. Olaf area) to the north side of Chub Lake. Power lines are specifically disallowed in these conservation areas, and putting one in the intervening small areas currently not in conservation disrupts the whole corridor that has been painstakingly built. This is an issue for the secondary route through Eureka Township but also for the end point in the Hampton Woods. There is already an affected, industrial corridor (I-35 to 70) that could be used with less impact. Additional costs if shielding and/or burial are required along these built-up routes should be considered before impacting areas that currently have to obstructions and infrastructure of this type.

Location: This is an issue for the secondary route through Eureka Township but also for the end point in the Hampton Woods.

Issue: The Hampton Woods – minimizing environmental impacts. The Hampton Woods is designated as a “Metro Significant Natural Resource Area” and a Minnesota County biological Survey area of outstanding biodiversity. Dakota County has identified this parcel as a significant conservation area, and there are rare and endangered plant and animal species in the vicinity.

Impact: The state’s stated goal is to conserve resources and minimize environmental impacts in the routing of high voltage transmission lines. This old growth hardwood forest, with its unique wild life habitat, would sustain lasting harm by construction of the proposed primary route due to transmission pole height, audible noise and EMF emissions.

Location: 220th St. East, mile marker 14 to 16

Lake Marion to Hampton Advisory Task Force
Specific Route Issues and Impacts
Partial list of "General issues and impacts to be evaluated in EIS"
submitted by Ray Kaufenberg 3-25-09

1. Purpose of project
2. Who will benefit from the project
3. Issues and impacts from Minnesota Administrative Rules "7849.5910 Factors Considered" (See below)
4. Look at project in context of area Comprehensive Plans and future vision
5. Cumulative impacts of other proposed projects in the vicinity
6. Modifications that could reduce impacts
7. Additional alternative route (north of Lake Marion Substation to Hwy 70, then east along HWY 50)
8. Future vision for power lines, power sources, substations, hookups, energy demand
9. Political/ social/economic environment – paradigm shifts regarding energy consumption, alternative energy etc.
10. Shielding and underground line alternatives
11. Terrorist threats, grid risks
12. Financial impacts to the power line & power source plans caused by a potential prolonged US recession / depression
13. Health issues related to Electro Magnetic Fields and Static Electricity
14. Ethical and moral issues

Minnesota Administrative Rules

7849.5910 FACTORS CONSIDERED.

In determining whether to issue a permit for a large electric power generating plant or a high voltage transmission line, the commission shall consider the following:

A. effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;

B. effects on public health and safety;

C. effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;

D. effects on archaeological and historic resources;

E. effects on the natural environment, including effects on air and water quality resources and flora and fauna;

F. effects on rare and unique natural resources;

G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;

H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;

I. use of existing large electric power generating plant sites;

J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;

K. electrical system reliability;

L. costs of constructing, operating, and maintaining the facility which are dependent on design and route;

M. adverse human and natural environmental effects which cannot be avoided; and

N. irreversible and irretrievable commitments of resources.

Statutory Authority: *MS s 116C.66; 216E.16*

History: *27 SR 1295; L 2005 c 97 art 3 s 19*

Posted: *October 02, 2007*

Lake Marion to Hampton Advisory Task Force
Specific route issues and impacts
"Top 5 issues" - submitted by Ray Kaufenberg 3-25-09

1 Where:

CapX Appx. map MP1 - MP 224 to MP 286;
South of 245th, between DuPont and County Road #9 (Dodd Blvd)
Section 18, TWN 113, Range 20 (Eureka Township) Property owner: Boyum

Issues: (regarding CapX 2020 proposed "preferred" route)

- A Farm land value (currently for sale by Boyum widow)
- B Wetlands, pond, woods, & Vermillion Creek
- C Aesthetics & electromagnetic flux/static electricity
- D Ignores parallel existing right-of-way
- E Increases line construction costs and maintenance costs, poor accessibility
- F Disregards and exploits Cultural Values of land owners and citizens of Eureka Township

Impacts: (regarding CapX 2020 proposed "preferred" route)

- A Financial - MAJOR negative impact on current value and future development value of property. Proposed power line would cross lengthwise across widow's entire 100 acre farm. She was told a 175' tower would be placed within 75' of her house (located near Dodd Blvd).
- B Natural areas and wetlands - negative impact through destruction or disruption to secluded wetlands, wildlife, pond, wooded areas and Vermillion River creek.
- C Aesthetics/electromagnetic flux (EMF)/static electricity (SE)- 175' towers (probably non-painted) above highest trees would be major negative aesthetic for existing property owners, future land developers or buyers, and community viewshed along Dodd. EMF & SE are harmful to humans, animals, livestock, and disrupts electronic devices (cell phones, defibrillators, GPS for field mapping).

D & E

Proposed route ignores parallel existing right-of-way along 245th (where Interceptor pipeline has already acquired land and cleared trees and obstructions). Proposed route unnecessarily jags to south (running through Boyum widow's farmland) and then jags to north along Dodd Blvd. (where it negatively impacts 3 more property owners). Proposed route will cost considerably more in land acquisition & future maintenance than if it ran east along 245th. Summer maintenance will disrupt growing crops & cause compaction to fields, and winter emergency repairs may be almost unreachable through deep snow. If route ran east along 245th the existing houses in the development on 245th do not face 245th and most of them have hills and other adjacent houses to serve as buffers to power lines along 245th.

- F Cultural values of the citizens of Eureka Township have been affirmed over many years and are clearly apparent in the township's comprehensive plans, ordinances, envisioning task force reports, and way of life.

Eureka Township citizens STRONGLY value:

- 1) preserving natural areas, open spaces, and wildlife (over 90% of Eureka's land is ag, undeveloped, wetlands, and open water*).
- 2) preserving peace and quiet of rural life
- 3) preserving farming & agriculture (over 25% of ag land is in "Metropolitan Ag Preserves prgm."
- 4) limiting housing to only 1 house per quarter-quarter section (40 acres). Clustering is allowed and is proposed to be expanded across property owner boundaries in new Comp. Plan).
- 5) prohibiting most commercial/industrial (only .4 of 1% of land is commercial and industrial*)

*2008 proposed Eureka Comprehensive Plan. Figures source: Met Council & TKDA).

FORCING 175' POWERLINE TOWERS AND LINES THROUGH EUREKA TOWNSHIP --- AGAINST THE WILL OF THE CITIZENS --- IS LIKE EXPLOITING THE AMISH FOR PRESERVING THEIR SIMPLE RURAL WAY OF LIFE. IT IS MORALLY AND ETHICALLY WRONG AND GRATES AGAINST THE VERY FIBER OF BEING OF THE CITIZENS OF EUREKA TOWNSHIP. THE POWERLINES REPRESENT AN UNJUSTIFIABLE "TAKING" (THRU EMINANT DOMAIN) OF LAND THAT DENIES THE CITIZENS OF EUREKA THEIR UNALIENABLE RIGHT TO THE "PURSUIT OF HAPPINESS."

2 **Where:**

CapX Appendix map MP1 -- MP 236 to MP 237 (Along County Road 9 /Dodd Blvd., south of 245th) Sect. 18, TWN 113, Range 20 (Eureka Twsp) - 3 property owners: 2 west of Dodd (excluding Boyum), 1 farm east of Dodd)

Issues: (regarding CapX 2020 proposed "preferred" route)

- A property values of 3 homes and 1 farm
- B disruption of farming
- C Aesthetics & electromagnetic flux (EMF) / static electricity (SE)
- D Ignores 245th E/W right-of-way that would eliminate need to go along Dodd so. of 245th
- E Increased line construction costs and maintenance costs, poor accessibility
- F Disregards and exploits Cultural Values of the land owner and citizens of Eureka Township

Impacts: (regarding CapX 2020 proposed "preferred" route)

- A Financial - for the farm east of Dodd the blacktopped frontage along Dodd is the most valuable part of the farm, especially for family housing (3 son's, evergreens planted), development of a school, church, or clustered housing. 175' towers and lines would greatly negatively impact the entire farm property value as far back as the eye can see --- which with mostly open land would be most of the 150 acre farm. Home values for 2 homes west of Dodd would also be greatly negatively impacted.
- B Doing farm field work around towers with 40' to 100' farm equipment would be difficult and may result in chemical overspray problems; GPS field mapping may not function near power lines.
- C Aesthetics & EMF/SE - view of 175' tower (probably non-painted) above highest trees would be major negative view for existing property owners, future land developers or buyers, and to the community viewshed along Dodd. EMF/SE harmful to humans/animals/livestock/horses; also disrupts electronic devices (cell phones, defibrulators, field GPS mapping).
- D & E Proposed route ignores existing right-of-way east along 245th (where Interceptor pipeline has already acquired land and cleared trees). Route unnecessarily jags south of 245th (crossing Boyum widow's farm) and then jags north along Dodd effecting 3 more properties. Proposed route thru Boyum farm and along Dodd will cost more in land acquisition & future maintenance than coming straight east along 245th to Dodd and turning north. Further, the corner at 245th & Dodd could be angled to shorten line. Construction and maintenance of proposed route south of 245th & on farm east of Dodd will disrupt crops and cause compaction to fields. Winter emergency repairs on Boyum widow's property may be very problematic with deep snow. Houses in the development on 245th do not face 245th and have hills and other adjacent houses to buffer the power line view, making the straight path down 245th a better choice than to jag south & then jag north again along Dodd.
- F Cultural values of the citizens of Eureka Township have been affirmed over many years and are clearly apparent in the township's comprehensive plans, ordinances, envisioning task force reports, and way of life. Eureka Township citizens STRONGLY value:
 - 1) preserving natural areas, open spaces, and wildlife (over 90% of Eureka's land is ag, undeveloped, wetlands, and open water*).
 - 2) preserving peace and quiet of rural life
 - 3) preserving farming & agriculture (over 25% of ag land is in "Metropolitan Ag Preserves prgm."
 - 4) limiting housing to only 1 house per quarter-quarter section (40 acres). Clustering is allowed and is proposed to be expanded across property owner boundaries in new comp. plan).
 - 5) prohibiting most commercial/industrial (only .4 of 1% of land is commercial and industrial*)

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3 Where:

CapX proposed northern route - entire length where it passes through Eureka Township

Issues: (regarding CapX 2020 proposed "preferred" route)

- A** Land and home values
- B** Natural areas, wetlands, ponds, woods, Vermillion River & creek, and agricultural areas
- C** Aesthetics & electromagnetic flux (EMF) / static electricity (SE)
- D** Ignores better alternative route north from Lake Marian along I35, then east on HWY 70 & Hwy 50
- E** Ignores better alternative route along Cnty Rd 86
- E** Proposed route disregards & exploits Cultural Values of land owners and citizens of Eureka Township which could be respected if Hwy 70 & 50 E/W route was used, or alternative Cnty Rd 86 (so. side of 86)

Impacts: (regarding CapX 2020 proposed "preferred" route)

- A** Financial - MAJOR negative impact on current value and future development value of all properties near the power lines (especially Eureka Estates) for aesthetic reasons and electromagnetic flux -- the real and perceived risks to health, and potential disruption of electronic devices and processes such as cell phones, defibrillators, and ag GPS field mapping.
- B** Direct destruction of trees near power lines, and disruption to natural areas of Eureka Township, including wetlands & wildlife, open water, wooded areas & Vermillion River creek
- C** Aesthetics & EMF /SE - view of 175' tower (probably non-painted) above highest trees would be major negative view for existing property owners, future land developers or buyers, and to the community viewed along roads including Dodd & 240th (esp. near Eureka Estates). EMF /SE harmful to humans/animals/livestock/horses; disrupts electronic devices (cell phones, field GPS).
- D** Proposed route ignores parallel existing right-of-way along Hwy 70 in Lakeville, and Hwy 50 between Lakeville and Farmington which is more appropriate for the following reasons:
 - 1) Large power lines and already purchased right-of-way exists between I35 & Pillsbury going north from the Lake Marion Substation, and then again east along Hwy 70 and Hwy 50. This would mean minimal *new* impacts, and reduced construction and acquisition costs.
 - 2) Going north from Lake Marion to Hwy 70 the power lines would go along industrial Pillsbury (near I35) where large power lines already exist and the road is primarily industrial. The power lines are more compatible with industrial because aesthetics are not as important.
 - 3) Going east from Pillsbury along Hwy 70 & Hwy 50 the power lines would go through an industrial park where large power lines already exist. The power lines are more compatible with industrial because aesthetics are not as important.
- E** Alternative route along Cnty Rd 86 (to south of 86) runs outside of Eureka Township and is more appropriate (after Hwy 70 which is the most appropriate) for the following reasons:
 - 1) Cnty Rd 86 is the only straight west to east road south of metro -- this direct route west to east would save on construction costs and reduce stress and vulnerability of lines (to storm and terrorist threats) vs making higher tension zigs and zags on the proposed northern route.
 - 2) Cnty Rd 86 already has wide ditches and right of way, and shoulders on road (unlike "dangerous Dodd" with its many recent motorist deaths), so it would be a safer alternative than Dodd or 240th for motorists, and safer for trucks and construction and maintenance workers on the lines. Access for construction and repair would be easy with shoulders to park trucks.
 - 3) Discussions have already been made with MN DOT, Dakota County and Scott Cnty regarding making Cnty Rd 86 a "Principal Arterial Road" (like Cross-town 62, 494, & Cnty Rd 42) connecting E/W with access to I35. This would obviously be the most appropriate route for large power lines because a Principal Arterial Road needs 300' of right-of-way and power lines can go in this area. The future of Cnty Rd 86 will be noisy, probably much of it industrial. Home owners will want to buffer their houses with close trees and burms from this road regardless of power lines.
 - 4) Cnty Rd 86 would provide easy future accessibility along its entire E/W length for future power line hookups to wind, nuclear, or other sources --- without having to snake through to the north to connect with the proposed northern route.

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4 Where:

CapX Appendix map MP3 - MP 258

Along HWY 50 east of Farmington and west of Hampton

Section 1, TWSP 113 Range 19. property owner Duane Ehlers 3486 220th St. Hampton

Issues: (regarding CapX 2020 proposed "preferred" route)

A Home owner has heart defibulator - he claims he cannot live within 1,800 feet of power lines

Impacts: (regarding CapX 2020 proposed "preferred" route)

A Health - proposed power lines passing near to his property could be life threatening. Home owner would desire to be bought out at FAIR market value, or route moved to south of him (eliminating the northward jag in route)

5 Where:

CapX Appendix map MP5? -- MP 271

Proposed "alternative route" along Pillsbury avenue south of Lake Marion Substation to Hwy 86

Issues: (regarding CapX 2020 proposed "ALTERNATIVE" route)

A Ignores parallel existing right-of-way.

B Construction costs

C Natural areas and woods destruction

Impacts: (regarding CapX 2020 proposed "ALTERNATIVE" route)

A proposed "alternative route" should follow exiting power line route running south of Lake Marion Substation to Hwy 86, approx 1/2 mi east of I 35 and 1/2 mi west of Pillsbury avenue.

B This would lower land acquisition costs and reduce negative impacts to land owners.

C This would reduce considerably the impact to natural areas vs proposed route