2005 ELECTRIC TRANSMISSION PLANNING MEETING SUMMARIES

The 2005 Transmission Planning Meetings were held around the state in May 2005. The meetings were conducted in similar fashion, as described below.

Meeting attendees were provided with a packet of materials at the registration table, including a meeting agenda, a copy of the introductory presentation, a map of the Minnesota Transmission Planning Zones depicting the location of 69 kV and above transmission lines, utility contact information, a glossary of terms and acronyms, and brochures covering the fundamentals of electric transmission. The sponsoring utilities also provided a comment form to gain feedback and comments from meeting attendees in identifying transmission needs in the area, alternatives currently under consideration in the zone, the transmission system planning process, and suggestions for other topics of interest for presentation at future transmission planning meetings. Comment cards were also available for use by attendees to ask questions during the meeting or to provide written comments relating to the meeting. Meeting attendees were encouraged, but not required to sign the attendance register, which was available at the registration table.

At each meeting, the utilities posted several charts that identified some of the many issues or challenges they encounter during the transmission planning process. Attendees were invited to review the charts and add additional issues or comments to the lists for use by transmission planners as they continue to develop and expand the electric transmission system serving the state. In addition, several poster boards were displayed throughout the meeting room including a map of the applicable planning zone and a map identifying the six (6) planning zones in Minnesota, both maps illustrating the location of 69 kV and above transmission lines. Other displays showed examples of easement rights-of-way, and various transmission line structures.

A representative from Great River Energy opened each meeting with an introductory presentation covering the state transmission plan, regulatory oversight, an overview of the transmission planning process, the fundamentals of electricity and its transmission, the role of transmission in the distribution system, regional planning, challenges of an aging transmission system, increase in electricity demand and usage, the effect of new generating facilities on the transmission system, analytical tools used to forecast deficiencies in the electric transmission system, and examples of right-of-way requirements for various structures. The slide presentation also included a visual demonstration of power flow on the transmission system with both the system intact and under critical outage conditions.

Following the introductory presentation, representatives from each of the utilities involved provided a presentation covering the various transmission needs and projects within the zone.

Attendees were encouraged to ask questions and provide comments and public input throughout the meeting. Attendees were advised of where additional materials could be found on the internet and how written comments could be submitted after the meeting.

Summary of Northeast Zone Transmission Planning Meeting

Date: May 10, 2005

Location: Hawthorn Inn & Suites
7208 Fairview Road
Baxter, Minnesota 56425

Time: 7:00 p.m.

Sponsors: Great River Energy
Minnesota Power
Xcel Energy

Attendees: Approximately twenty (20) individuals attended the meeting including two (2) members of the public, utility representatives, and representatives from the Minnesota Department of Commerce and the Minnesota Public Utilities Commission. A copy of the attendance register is attached as Exhibit A.

Needs/Projects Discussed:

Representatives from Great River Energy and Minnesota Power provided the following presentations covering current and projected electric transmission system needs in the zone, proposed projects and alternative solutions, tentative project timelines, and studies conducted in Northeast Minnesota to ensure continued reliability in the electric system serving this area:

Minnesota Power Presentations.

- Pequot Lakes-Birch Lake Voltage Issues
- Tower-Ely-Babbitt Voltage Issues
- Wrenshall-Mahtowa Voltage Issues
- Pillsbury-Bertram-Upsala-Swanville Area Voltage Issues
- Project Updates
    - Eagle Valley Substation
    - Grand Rapids Relocated Substation
    - Akeley Substation
    - Langola Substation

Great River Energy Presentations.

- Long Lake-Badoura
- Central Lakes
- Nashwauk-Shoal Lake
- Mille Lacs Area

- Pierz-Genola

General Discussion:

A representative from Minnesota Power provided a presentation covering low voltage impacts and methods to improve low voltage issues.

The utility representatives utilized the Power World software program as a visual tool to demonstrate power flow and voltage issues on the transmission system. The program allowed the presenters to simulate current and future conditions, illustrating the need for transmission in the area, and the effect the proposed solutions and alternatives have on reliability of the electric transmission system in this area.

A representative from Minnesota Power provided an update on the Transmission Improvement Planning Study (TIPS), which is part of a long range, high-level study of the electric transmission system in the Red River Valley and West Central Minnesota. The study is due to be completed later this summer and will identify one or two projects as solutions for the transmission needs in this area.

The TIPS presentation was followed by an update of the CapX 2020 initiative, a long range, high-level, technical study that focuses on electric transmission infrastructure investments needed to meet growth in demand for electricity in the state and the region. To learn more about CapX 2020, visit their website at www.capx2020.com.

Public Questions and Comments:

Audience questions addressed during the CapX 2020 presentation included: the rate of load growth in the study area; the significance of the number of system intact overloads for the three generation scenarios used in the study; the number of transmission projects required to meet 4500 MW and 6300 MW levels in the Minnesota bias scenario; and whether the model used in the study assumes that the existing generation continues to operate during the 15 year period.

Written Comments: None received

The attendees were asked to submit any further questions, comments and input they may have after the meeting directly to the utilities by using the website at www.minnelectrans.com. Click on "Contact Us" and then use the e-mail link at generalinfo@minnelectrans.com. No questions, comments or public input have been submitted to this link since the meeting.

Further Information:

The meeting slide presentations and a list of current and projected transmission needs, proposed projects and alternative solutions, projects in review and project updates for the Northeast Zone are available at www.minnelectrans.com.

The following files are available to download from the website's home page:

General Presentations.

- General Introduction and Background (PDF)
- CapX 2020 Technical Update (PDF)

Northeast Zone Meeting Presentations.

- Agenda (PDF)
- Presentation (PDF)

Click on "Northeast Zone" listed under "Planning Zones" to obtain a list of transmission needs/issues specific to this zone, projects in review and project updates.

EXHIBIT
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NE Zone
2005 Transmission
Planning Meeting
May 10, 2005 7pm
Attendance Register

Name	Address
Mike Wadley	11100 Wayzata Blvd; Minnetonka MN 55305
Rob Moser	Crow Wing Power
Andrew O'Dell	
Todd Tadych	American Transmission Company
Bob Cupit	MN Dept of Commerce St. Paul
Ken Wolf	" " " "
Darryl Shoemaker	6190 Golden Hill Drive, Minneapolis, MN 554
Doug Harren	Crow Wing Power

Summary of Twin Cities Zone Transmission Planning Meeting

Date: May 11, 2005

Location: Hilton Minneapolis/St. Paul Airport Mall of America
3800 East American Boulevard
Bloomington, Minnesota 55425

Time: 7:00 p.m.

Sponsors: Great River Energy
Xcel Energy

Attendees: Approximately thirty-five (35) individuals attended the meeting including five (5) members of the public, utility representatives, and representatives from the Minnesota Department of Commerce, the Minnesota Public Utilities Commission, the Environmental Quality Board, the Midwest Independent Transmission System Operator, Inc. (MISO), Anoka County, and the Association of Minnesota Counties. A copy of the attendance register is attached as Exhibit A.

Needs/Projects Discussed:

Representatives from Great River Energy and Xcel Energy provided the following presentations covering current and projected electric transmission system needs in the zone, proposed projects and alternative solutions, tentative project timelines, and studies conducted in the Twin Cities-Metro area to ensure continued reliability in the electric system serving this area:

Xcel Energy Presentations.

- Eden Prairie-Minnetonka Area
- Carver County-Waconia Area
- Chisago to Apple River Project
- High Bridge to Rogers Lake 115 kV line
- Twin Cities 345/115 kV transformer capacity
- Twin Cities Fault Current Issue

Great River Energy Presentations.

- Elk River-Ramsey-Bunker Lake Area
- Air Lake-Empire Area
- Plymouth-Maple Grove project

General Discussion:

A representative from Great River Energy provided an update on the CapX 2020 initiative, a long range, high-level, technical study that focuses on electric transmission infrastructure investments needed to meet growth in demand for electricity in the state and the region. To learn more about CapX 2020, visit their website at www.capx2020.com.

Public Questions, Comments and Input:

Audience questions addressed during the presentations included: what creates a fault on the transmission line; who pays for the construction of transmission lines; why is distributed generation cost prohibitive; and are the new lines under consideration ac or dc lines.

Questions raised and addressed during the CapX 2020 presentation included: how much of the 6300 MW load is located in the metro area; do you plan to look at higher load growth; what is the source of generation used in the study for the North Dakota area, coal, wind or water; and with growth and development south of the Twin Cities area, why is there no loop in the southern portion of the state.

The following is a summary of the questions, comments and public input received during the public input segment of the meeting:

- *Public Comment:* Have you studied the effects of distributed generation through the use of fuel cells or wind power? *Utility Response:* Currently there are in-home research projects underway to determine the demand and life cycle of a fuel cell, installation of a fuel cell, and wiring modifications required to meet safety codes, etc. Results from this type of research project, other studies and new technology available to the industry are provided at the annual Minnesota Power Systems Conference. At this point, fuel cells are still very expensive and the technology for its use is lacking but fuel cells may become more viable in the future with the cost and supply of other fuels.
- *Public Comment:* What is the potential for methane generation? *Utility Response:* Currently, there are places that capture methane from landfills and use it for generation. We have also seen the use of anaerobic digesters to produce electricity.

Charts – Transmission Planning Issues:

One attendee added the following issues to the chart titled "Land Use Conflicts": cemeteries, pipelines (i.e. gas), and telephone lines.

Written Comments: None received

Meeting attendees were asked to submit any further questions, comments and input they may have after the meeting directly to the utilities by using the website at www.minnelectrans.com. Click on "Contact Us" and then use the e-mail link at generalinfo@minnelectrans.com. No questions, comments or public input have been submitted to this link since the meeting.

Further Information:

Representatives from Business Voice Today videotaped segments of the Twin Cities Zone meeting and plan to produce a program from these segments and in-studio interviews, which will be aired on Metro Cable Network (MCN) Channel 6. The program will be available in approximately 600,000 homes and businesses in the seven-county Twin Cities Metro area.

The slide presentations for the Twin Cities Zone meeting along with a list of current and projected transmission needs, proposed projects and alternative solutions for this area are available at www.minnelectrans.com.

The following files are available to download from the website's home page:

General Presentations.

- General Introduction and Background (PDF)
- CapX 2020 Technical Update (PDF)

Twin Cities Zone Meeting Presentations.

- Agenda (PDF)
- Presentation (PDF)

Click on "Twin Cities Zone" listed under "Planning Zones" to obtain a list of transmission needs/issues specific to this zone.

EXHIBIT A

Attendance Register
TC Zone Meeting
May 11, 2005

Name	Mailing Address	Email
Mark McGree	Xcel	markomcgree@xemkt.com
GEORGE JOHNSON	MN EQB	GEORGE.JOHNSON@STATE.MN.US
Bob Cupit	MN Dept. of Commerce	
Todd Tadych	American Transmission Company	ttadych@atcllc.com
[illegible]	135 [illegible] Lane 55110	nejudkins@AOL.COM
Don Sharper	12275-239th Ave NW, Elk River 55330	
Saiva Andiappan	1125 Energy Park Drive, St. Paul	sandiappan@midwestiso.org
Angela Piner	4928 31st Ave So. Mpls, MN 55417	angela.piner@hdrinc.com
Colette Jurek	Xcel Energy	colette.c.jurek@xcelenergy.com
Nick Loehlein	Connexus Energy	nick.loehlein@connexusenergy.com
Michael Weber	10543 Xylon Rd Bloom mn 55438	mweber4@mn.rr.com
Steve Sherner	6890 Fitch Ave, Lk Nebagamon WI 54849	ssherner@centurytel.net
Glen Skarbakka	14920 McGinty Rd W, Wayzata MN 55391	gskarba@ieee.org
Pat Cline	Xcel Energy	

Doc# 1944529\1

Name	Mailing Address	Email
Ken Wolf	Mn DOC	Ken.wolf@state.mn.us
Brad Fields	Anoka County 2100 3rd Ave., Anoka, MN 55303	
Randy Pouter	5 Blue Goose Rd Noaks MN 55127	[illegible]
Laurie McCarter	Xcel Energy	
[illegible] Berger	Xcel Energy	
Annalee Garletz	Assoc of MN Counties 125 Charles Ave, St. Paul MN 55102	Garletz@mncounties.org
Ramesh Mannam[illegible]	4393 [illegible] Eagan MN 55123	

Summary of Southeast Zone Transmission Planning Meeting

Date: May 12, 2005

Location: Rochester Public Utilities Community Room
4000 East River Road NE
Rochester, Minnesota 55906

Time: 7:00 p.m.

Sponsors: Dairyland Power Cooperative
Great River Energy
Interstate Power and Light Company
Rochester Public Utilities
Southern Minnesota Municipal Power Agency
Xcel Energy

Attendees: Approximately thirty-five (35) individuals attended the meeting including at least twelve (12) members of the public, utility representatives, and representatives from the Minnesota Department of Commerce, the Minnesota Public Utilities Commission, Rochester-Olmsted Planning Department, and a Dodge County Commissioner. A copy of the attendance register is attached as Exhibit A.

Needs/Projects Discussed:

Representatives from Dairyland Power Cooperative, Great River Energy, Rochester Public Utilities, and Xcel Energy provided presentations covering current and projected electric transmission system needs in the zone, proposed projects and alternative solutions, tentative project timelines, and studies conducted in the Southeast Zone to ensure continued reliability in the electric system serving this area.

Great River Energy Presentations.
- Fox Lake-Winnebago 161 kV Upgrade
- Wind Outlet Transmission (Southeast Clean Energy Resource Team)

Rochester Public Utilities Presentations.
- Rochester Area and SE Minnesota – SW Wisconsin Transmission Study Update

Dairyland Power Cooperative Presentation.
- Greater La Crosse Area

Xcel Energy Presentations.
- Generation Interconnections

    - 300 MW Faribault Energy Park
    - 667 MW Mankato Energy Park
    - 350 MW Goodhue County (near Cannon Falls)
    - 72 MW near Dodge Center
- Mankato Area Study
- Lake City Area Study
- Prairie Island to Red Rock 345 kV circuit #2 Uprate

General Discussion:

A representative from Xcel Energy provided an update on the CapX 2020 initiative, a long range, high-level, technical study that focuses on electric transmission infrastructure investments needed to meet growth in demand for electricity in the state and the region. To learn more about CapX 2020, visit their website at www.capx2020.com.

Public Questions, Comments and Input:

The following questions were addressed at the meeting: could you provide more information about limits to using local generation; and what incentive do consumers have to conserve energy.

Audience questions raised following the CapX 2020 presentation included: will the lines extending into South Dakota tie into generation located in Montana; do you take line losses into account in this study; would you agree that line losses are between 25 and 30 percent; what is the relationship between load management and load growth; where do you get your figures for load growth used in your analysis; will the new transmission lines be located in an existing right-of-way; do you plan to remove some of the existing transmission lines with the new lines included in your study; and will you clarify the means in which the distributed generation sensitivities will be addressed in your studies.

The following is a summary of the public input and comments from the meeting:

- *Public Comment:* With respect to the projects listed on the meeting agenda to be presented for the Southeast Zone, do you intend to request certification of the projects through the Biennial Transmission Projects Report? *Utility Response:* There are no projects in the Southeast Zone that we will be requesting certification of through the 2005 Biennial Transmission Projects Report. If we request certification of a project, we will provide that information to you during the zone meeting along with the specific details showing the need for new transmission, the proposed project(s) and subsequent meetings to be held on those specific projects. *Public Comment:* Does that include CapX ? *Utility Response:* If CapX were to develop projects, they would have to make a choice whether to request certification of the project through the biennial plan or a standard traditional certificate of need. They would come to this zone meeting and provide the specific details relating to the project. *Additional Public Comment:* So with that distinction then CapX is not being put into the biennial plan? *Utility Response:* CapX has not made that choice yet. Let's address that question after the CapX presentation.

- *Public Comment:* Could you make the connection for me between the regional needs and the specific needs outlined in the Rochester area? *Utility Response:* The local study only looked at the Rochester load serving area. The regional study expands the load serving area and allows us to work jointly with other utilities to identify and solve the load serving needs in the area. In using this broader transmission planning approach, we plan to solve multiple transmission needs with the construction of fewer transmission lines. Instead of building four or five 161 kV lines to solve the Rochester and La Crosse area load serving needs, we are looking at a solution that requires construction of one 345 kV line. *Public Comment:* Will existing right-of-way be used? *Utility Response:* Some of the proposed solutions will use existing right-of-way and some will not.
- *Public Comment:* With respect to the Rochester area, if you did multiple smaller lines rather than one larger one wouldn't you actually have increased reliability? If one or even two of the smaller lines went out you would still be able to work around it, where if one big line goes out then don't you have a much more serious reliability problem? *Utility Response:* If you have a 345 kV solution, 345 kV on the east and 345 kV on the west and part of that line goes out, you are basically looking at an unlimited load serving ability. The 345 kV solution takes us beyond 2050 in terms of load serving capacity while building two 161 kV lines gets us out to about the middle 2020's.
- *Public Comment:* With respect to the Rochester area, are the proposed areas for the 161 kV solutions wind regime areas? What are the advantages and disadvantages of capturing some of those opportunities with 161 kV versus 345 kV? *Utility Response:* At this point, we have not looked at the routing alternatives for the 345 kV solution. Yes, it may fit in but we have no land sited for this solution.
- *Public Comment:* With respect to the Rochester area, the destination point that you have located in Wisconsin, is that because that is a reliable point? How concerned are you with reliability issues related to natural gas availability of say 5, 7, or 10 years, and how dependent is that area over in Wisconsin on combustion turbines to provide power to keep the grid up? *Utility Response:* North La Crosse is an existing 69 kV substation that is at the intersection of a pair of 161 kV lines, which was designed to ultimately be a 345 kV substation. The availability of gas in the area does not enter into any of the proposed options. *Public Comment*: The other end of the spectrum given this 345 kV option coming down from Prairie Island and extending out to 250; what is the effect on this option if in fact the Prairie Island nuclear power plant was no longer in service? No effect? *Utility Response*: No effect whatsoever. The Prairie Island nuclear plant has nothing to do with any of our proposed solutions.
- *Public Comment:* A Dodge County Commissioner raised a concern pertaining to relocating power poles located within the right-of-way. Who is going to pay the cost of relocating power poles located within the right-of-way due to a proposed road construction project? *Utility Response:* Our experience is that unless we have actually purchased land rights or easement rights, we pay to relocate our power poles. *Additional Public Comment*: Another attendee mentioned that it is a good idea for utilities and county officials to plan ahead for these types of proposed road projects.
- *Public Comment*: With respect to the greater La Crosse area, will the I-90 corridor be a logical place to site a line going from Rochester to north La Crosse or is that too far south? *Utility Response*: We will most likely use existing right-of-way but at this point, we have not looked at routing alternatives.

- *Public Comment:* With respect to the greater La Crosse area, are there plans of building a third unit in the Weston location north of Wausau? If so, will transmission lines need to be constructed? *Utility Response*: Not that we will build. WPS is going to build Weston Four; ATC is building transmission lines in connection with this project.
- *Public Comment:* I have been hearing about the coal plant down in Adams, is that on or off and is that Dairyland? *Utility Response:* Dairyland has been looking at certain power plants in the Iowa area. *Additional Public Comment:* So it's not off? *Utility Response:* No, I wouldn't say it's off. We are always looking at locations to build power plants. *Additional Utility Response:* Often transmission planners are unaware of generation projects or the development of future generation plants. This is due to MISO rules that ensure that every developer or every person that wants to develop a generating station has equal access to the inside information to decide where they want to build that plant on the system.
- *Public Comment:* The last time I attended one of these meetings in 2003, you were looking at installing a 161 kV upgrade in the Lake City area. If an upgrade was needed at that time, why did you wait unit now to do the study in this area? *Utility Response:* The delay in completing the study is due to staff changes. We are currently working to complete an accurate study of the Lake City area.
- *Public Comment:* With respect to the Lake City area study, how does the process work? Is there a means in which to obtain details of the study prior to its completion? *Utility Response:* Planned study areas are announced during Sub-regional Planning Group (SPG) meetings, which are held every few months, and interested persons are invited to participate in the study. *Public Comment:* At what point do the transmission planners involve local zoning and planning officials? *Utility Response:* With respect to the Lake City area study, the transmission planner has met with city officials and local customers to identify their transmission issues and concerns in this area. The transmission planner has also met with several department representatives at Xcel Energy to obtain feedback and comments received from customers in the area.
- *Public Comment*: What is the status of the Dodge Center line? *Utility Response:* A solution is in place, a study has been published and posted, and we are working to resolve customer issues.

A member of the audience shared the following concerns and comments regarding the CapX 2020 Technical Update, which was released in May 2005, and is available to download at www.capx2020.com:

- The forecasts are overestimated in the Cap X report; the report indicates that the figures used for the study are based on the 2004 Load Capability Study, the reserve margins are factored into that report; the Cap X report states that after taking the load and capability information you factor in the figures for the reserve margins, so you end up double-dipping. The reserve margins were already taken into account in the Loan Capability Study.
- Cap X is looking at regional needs as opposed to state needs; it is important to keep the focus on state need since this is transmission planning for the State of Minnesota.
- The point to be made is you have a "need" that is questionable and also clearly covered by new generation coming on the system; this transmission does not appear to be necessary

to meet Minnesota's transmission needs or for use in the metro area. We do not need transmission running from North Dakota to Columbia to deal with Minnesota transmission needs and or to deal with Minnesota generation for use in Minnesota. This is the Minnesota Transmission Plan.

In addition to these comments, the utilities were provided with a handout titled, "What's Wrong with CapX 2020 Assumptions?" The information outlined in the handout is summarized in the above-referenced comments. A copy of the handout will be retained by the utilities as part of the "record" or "retention documents" for a period of ten (10) years.

Charts – Transmission Planning Issues:

Attendees posted comments and suggestions on the charts describing the following transmission planning issues:

Factors in Choosing a Project.

- You need an "Alternatives Sheet" to identify the alternatives, especially non-transmission alternatives that are considered.

Social/Economic Issues.

- Its seems that local generation is related to load growth management (options and alternatives) but it is unclear how these are connected, including a description of the limitations, especially limiting factors.
- Distributed generation needs to be done as a high thermal efficiency combined heat and power model. This will save the fuel now emitted by central stations as waste heat.

Written Comments:

The utilities provided a comment form to meeting attendees in an effort to gain feedback and input for use in the transmission planning process and future transmission planning meetings. The following is a summary of the two (2) written comment forms received at the meeting:

Question: What additional information would be useful to you regarding the role of high voltage transmission lines in providing reliable electric service to Minnesota residents?
Comments: (1) Let me know when the meetings in the Lake City area are scheduled. (2) You really did a good job of explaining problems and what needs to be done.

Question: A number of projects were presented to address current and long-term transmission inadequacies. Please let us know your thoughts on the alternatives currently under consideration in this zone.

Comments: (1) I think the projects make sense but you may need more smaller lines to be able to take care of local outage problems. (2) Again, good job of explaining the Rochester and La Crosse area issues.

Question: Please provide any other comments regarding the transmission system operation, inadequacies, or system planning.
Comments: (1) I hope that more wind sites can be figured into your plans and hopefully wind will be able to be coupled with hydrogen fuel cells to be able to give constant instead of sporadic power. (2) Concern over pole location in right-of-way and future highway construction and issue of who pays for cost of moving the poles?

Question: What can we do to improve future public transmission planning meetings?
Comments: (1) I think you did a good job. (2) Provide handouts of issues listed on wall charts.

Question: Please list agenda topics you would like to see at the next transmission planning meeting.
Comment: I was concerned about your lack of information on wind generation at the last meeting held in 2003. Thank you for adding some of this information to your meeting this evening.

Meeting attendees were asked to submit any further questions, comments and input they may have after the meeting directly to the utilities by using the website at www.minnelectrans.com. Click on "Contact Us" and then use the e-mail link at generalinfo@minnelectrans.com. No questions, comments or public input have been submitted to this link since the meeting.

Further Information:

The slide presentations for the Southeast Zone meeting along with a list of current and projected transmission needs, proposed projects and alternative solutions for this area are available at www.minnelectrans.com.

The following files are available to download from the website's home page:

General Presentations.

- General Introduction and Background (PDF)
- CapX 2020 Technical Update (PDF)

Southeast Zone Meeting Presentations.

- Agenda (PDF)
- Presentation (PDF)

Click on "Southeast Zone" listed under "Planning Zones" to obtain a list of transmission needs/issues specific to this zone.

EXHIBIT A

Electric Transmission Planning Meeting
Southeast Minnesota Zone
Held in Rochester, MN
At 7:00 PM on May 12, 2005

Persons placing their name with a mailing or email address on the attendance register will receive a synopsis of the meeting and information about future transmission planning meetings.

Print Name	Mailing address	email address	Business or Group Affiliation (if applicable)
Lee Dilley	714 Highland Ave NFld.	leedilley@isglide.net	SE CERT'S
Kenric Scheevel		kjs@dairynet.com	Dairyland
Kristen Eide Tollefson	P.O. box 130 Frontenac MN	ket@pro-ns.net	C.U.R.E
David Erickson	Box 364, Hayfield, MN	✓	Dodge County Commission
Steve Schroeder	620 6th St SE Harmony MN	sjs@dairynet.com	
Todd Tadych		ttadych@atcllc.com	American Transmission Company
WARD LUTZ	900 11½ ST SW ROCHESTER MN 55902	lutz.ward@charter.net	SE CERTS
Sandi Goslee	2122 Campus Dr SE, Suite 100 Rochester 55904	goslee.sandi@co.olmsted.mn.us	Rochester-Olmsted Planning Dept
Bob Cupit	MN Dept of Commerce		
Greg Woodworth	RPU	gwoodworth@rpu.org	
Scott Nickels	RPU	snickels@rpu.org	
Ken Wolf	Mn Dept of commerce	ken.wolf@state.mn.us	MN DOC
Neil Stiller	RPU	nstiller@rpu.org	RPU
Ken Nickolai	MPUC	ken.nickolai@state.mn.us	PUC
Michelle Olson	Interstate Power & Light (Alliant)		IPL
Gerry Steffens	RPU		RPU
Walt Lorbers	RPU		
Doug Sievert	5084 Hwy 218 St. Ansgar		
Doug Solz	1489 490 St. St. Ansgar IA		
Carol Overland	402 Washington St S Northfield	overland@redwing.net	Overland Law Office
Norm ERICKSON	1303 NE 5 Ave	hermez@charter.net	REFC/CERTS

Electric Transmission Planning Meeting
Southeast Minnesota Zone
Held in Rochester, MN
At 7:00 PM on May 12, 2005

Persons placing their name with a mailing or email address on the attendance register will receive a synopsis of the meeting and information about future transmission planning meetings.

Print Name	Mailing address	email address	Business or Group Affiliation (if applicable)
Randy Anderton	5526 Longboat Rd NW	randerton@rpu.org	RPU
GENE DUENOW	4911 EPIC AVE	ST. ANSGAR IA.	
Ron Barber	2015 Petersen Dr. NW	Stewartville MN	
Jim Holst	RR4 Box 58 Lake City MN 55041		
Sig W. ANDERSON	274 HARRIER RIDGE ROAD	LAKE CITY, MN. 55041 UKRINER@ELDINC.COM	
Larry Koshire			RPU
Jeff [illegible]		jeff@winergie.com	CERT

Summary of Southwest Zone Transmission Planning Meeting

Date: May 17, 2005

Location: Travelodge Hotel
2015 North Humiston Avenue
Worthington, Minnesota 56187

Time: 7:00 p.m.

Sponsors: East River Electric Power Cooperative
Great River Energy
Interstate Power and Light Company
L&O Power Cooperative
Marshall Municipal Utilities
Missouri River Energy Services
Otter Tail Power Company
Xcel Energy

Attendees: Approximately thirty-five (35) individuals attended the meeting including members of the public, utility representatives, and representatives from the Minnesota Department of Commerce, the Minnesota Public Utilities Commission, Nobles County, Lyon County Planning and Zoning, and the City of Windom. A copy of the attendance register is attached as Exhibit A.

Needs/Projects Discussed:

Representatives from Great River Energy, Missouri River Energy Services, Otter Tail Power Company and Xcel Energy provided the following presentations covering current and projected electric transmission system needs in the zone, proposed projects and alternative solutions, tentative project timelines, and studies conducted in Southwest Minnesota to ensure continued reliability in the electric system serving this area:

Xcel Energy Presentations.

- Update on SW Minnesota wind projects
- St. James Area

Great River Energy Presentations.

- Iowa-Southern Minnesota Exploratory Study
- Dotson/Springfield Area Needs

Otter Tail Power Company Presentations.

- Appleton-Canby Area
- Big Stone II Transmission
- Northwest Exploratory Study

Missouri River Energy Services Presentations.

- Jackson Area
- Marshall Area
- Worthington Area

General Discussion:

A representative from Missouri River Energy Services provided an update on the CapX 2020 initiative, a long range, high-level, technical study that focuses on electric transmission infrastructure investments needed to meet growth in demand for electricity in the state and the region. To learn more about CapX 2020, visit their website at www.capx2020.com.

Public Questions, Comments and Input:

A local landowner expressed his views on improvements needed in the transmission planning process as it relates to landowner compensation. A few of the key issues identified by the landowner included: landowner concerns and interests must be recognized and addressed by utilities during transmission planning and line routing. Landowners must be fairly compensated by utilities for easements granted for transmission lines.

Audience questions addressed at the meeting included: what is the average distance that electricity can be transmitted; how do you plan to handle additional wind generation on the transmission system; with respect to the Big Stone II transmission study, which of the two transmission alternatives is the preferred alternative; do the alternative solutions described in the Marshall Load Serving Study require a certificate of need; is there a map that shows the location of all generation interconnection projects in the MISO queue; and what is the meaning of the term "cross system" as it relates to the Northwest Exploratory Study.

The following is a summary of the public input and comments received during the Southwest Zone meeting presentations:

- *Public Comment:* A resident from the Windom area commented that low voltages are present in the Windom area and that improvements in the transmission system are needed in this area. *Utility Response:* Bringing in a new source into this area will help serve load and improve reliability of the system in this area.
- *Public Comment:* With respect to the St. James area proposed project, what is your new estimate for filing an application for a certificate of need? *Utility Response:* We have determined the need is in 2009; we plan to file the application in February of 2006.

- *Public Comment:* With respect to the new lines planned for the St. James and Watonwan County area, are there available resources to tap into that line with new wind turbines? *Utility Response:* Yes, there would be adequate capacity if one to two wind turbines tap into that line. Of course, you would need to contact MISO and follow the proper process to have an evaluation done.

Written Comments:

The utilities provided a comment form to meeting attendees in an effort to gain feedback and input for use in the transmission planning process and future transmission planning meetings. A summary of the written comment form received at the meeting is outlined below:

Question: What additional information would be useful to you regarding the role of high voltage transmission lines in providing reliable electric service to Minnesota residents?
Comment: Include the role of local/county government; project fact sheets.

Question: A number of projects were presented to address current and long-term transmission inadequacies. Please let us know your thoughts on the alternatives currently under consideration in this zone.
Comment: With the county's involvement with wind tower permitting, what if any consideration should be given in issuing wind generation permits of 5 MW projects?

Question: Please provide any other comments you may have about the transmission system operation, inadequacies, or system planning.
Comment: Route placement is a big issue.

Question: What can we do to improve future public transmission planning meetings?
Comment: Utilities should advertise the total cost benefits of wind energy; who is paying for wind projects and who benefits from these projects. Are the wind power contacts public information?

Questions: Please list agenda topics you would like to see at the next transmission planning meeting.
Comment: Landowner issues.

The attendees were asked to submit any further questions, comments and input they may have after the meeting directly to the utilities by using the website at www.minnelectrans.com. Click on "Contact Us" and then use the e-mail link at generalinfo@minnelectrans.com. No questions, comments or public input have been submitted to this link since the meeting.

Further Information:

The slide presentations for the Southwest Zone meeting along with a list of current and projected transmission needs, proposed projects and alternative solutions for this area are available at www.minnelectrans.com.

The following files are available to download from the website's home page:

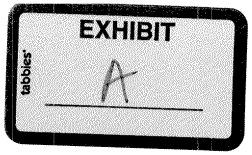
General Presentations.

- General Introduction and Background (PDF)
- CapX 2020 Technical Update (PDF)

Southwest Zone Meeting Presentations.

- Agenda (PDF)
- Presentation (PDF)

Click on "Southwest Zone" listed under "Planning Zones" to obtain a list of transmission needs/issues specific to this zone.



MinnElecTrans
Attendance Register
SW Zone Meeting
May 17, 2005

Name	Mailing Address	Email
Robert Stahl	1125 - 8th Avenue Windom MN 56101	
JIM LA ROCK	36 RESERVATION AVE. PIPESTONE, MN 56164	
Dan Wall	Box 227 Madison S.D. 57042	
Jack Potter	1306 200th ST Fairmont MN 56176	P corner @ Frontier Net. Net
Carol Schreiber	PO Box 227 Heron Lake MN 56137	tcnews@rondlk.net
Ken Booze	Box 227 Madison SD 57042	Kbooze@eastriver.coop
David Jacobson	MN Public Utilities Commission	david.jacobson@state.mn.us
Dean Schito	414 Nicollet Mall - Room 5 Minneapolis MN 55401	
MARK GRUNIG	444 9th ST City of Windom	Change address for future mailings: to 1105 First Ave. Windom MN 56101

Name	Mailing Address	Email
Brad Roos	113 4th St. So. Marshall MN 56258	
Arlyn Lindsay	113 4th St S Marshall, MN	
John Nelson	2034 170th Ave Garvin MN 56132	
JOHN NAUERTH III	42549 800 ST. LAKEFIELD, MN. 56150	PROPLOCK@FRONTIERNET.NET
Don Habicht	PO Box 458 Wthn MN 56187	[illegible]
Bob Cupit	MN Dept of Commerce St Paul	
Jerry Perkins	1103 Ross Cr	
Ken Wolf	MN Dept of Commerce	

Name	**Mailing Address**	**Email**
Wayne Smith	23688 WASS Ave Brewster 56119	WSmith@co.nobles.mn.us
John Biren	1566 170th street Russell MN 56169	CJBiren@mens.net
Charles Magyar	454 West Lake Av, Wtgn 56187	CKMagyar@i.w.net
Gary Wyatt	1961 Premier Dr. Suite 148 Mankato MN 56001	gwyatt@mna.edu

Summary of West Central Zone Transmission Planning Meeting

Date: May 18, 2005

Location: Holiday Inn Willmar
2100 East Highway 12
Willmar Minnesota 56201

Time: 7:00 p.m.

Sponsors: Great River Energy
Hutchinson Utilities Commission
Missouri River Energy Services
Otter Tail Power Company
Willmar Municipal Utilities
Xcel Energy

Attendees: Approximately twenty (20) individuals attended the meeting including two (2) members of the public, utility representatives, and representatives from the Minnesota Department of Commerce, the Minnesota Public Utilities Commission, and a staff writer with the West Central Tribune. A copy of the attendance register is attached as Exhibit A.

Needs/Projects Discussed:

Representatives from Great River Energy, Otter Tail Power Company and Xcel Energy provided the following presentations covering current and projected electric transmission system needs in the zone, proposed projects and alternative solutions, tentative project timelines, and studies conducted in West Central Minnesota to ensure continued reliability in the electric system serving this area:

Xcel Energy Presentations.

- Update of Wind Generation Outlet Transmission Projects
- Hutchinson-Glencoe-Waconia Area
- US 10/I94 Corridor Monticello to St. Cloud
- City of St. Cloud

Great River Energy Presentations.

- Elk River-Becker Area
- Willmar-Granite Falls Area
- Panther Area
- Alexandria-St. Cloud Area

Otter Tail Power Company Presentations.

- Appleton-Canby Area
- Big Stone II Transmission Study
- Northwest Exploratory Study

General Discussion:

A representative from Otter Tail Power Company provided an update on the Transmission Improvement Planning Study (TIPS), a load serving study, which is part of a long range, high-level study of the electric transmission system in the Red River Valley and West Central Minnesota. The study is due to be completed later this summer and will identify one or two projects as solutions for the transmission needs in this area.

A representative from Otter Tail Power Company provided an update on the CapX 2020 initiative, a long range, high-level, technical study that focuses on electric transmission infrastructure investments needed to meet growth in demand for electricity in the state and the region. To learn more about CapX 2020, visit their website at www.capx2020.com.

Public Questions and Comments:

The following questions were addressed during the meeting presentations: with respect to economic exchanges of power, why is it advantageous for utilities to sell power outside of its system and how does this exchange benefit consumers; does anyone make a 345 kV to 69 kV substation transformer; what is the timeline for the transmission alternatives presented in the TIPS presentation; with respect to short-term or interim solutions to transmission needs, how much of that is meant to deal with immediate problems at hand as opposed to possibly delaying or deferring the needs for larger construction projects; it appears that over time it is becoming more difficult to site and route transmission lines and get lines built, so why defer or delay construction of larger transmission projects, and would regulators rather see the utilities move these projects forward and build transmission lines; is the existing 345 kV line from Antelope Valley to Heron designed for future 500 kV operation; do transmission planners consider construction of dc lines a viable option; does the State of South Dakota finance transmission projects; and with respect to the CapX study, did the study only consider 345 kV lines.

Audience questions addressed during the Willmar to Granite Falls presentation included: if the 69 kV line from Willmar to Granite Falls is updated, will you use single or multiple poles; will the existing route be used; and are utilities allowed to route a transmission line over DNR land that has been enrolled in the CRP (Conservation Reserve Program) or must an alternate route be selected (i.e. over farmland).

The following is a summary of the public input and comments received at the West Central Zone meeting:

- *Public Comment:* With respect to the Alexandria to St. Cloud area alternatives presented, have you considered designing a 345 kV line that operates at 115 kV, which is a more long range transmission plan that will accommodate additional growth in the area? *Utility Response*: Typically a 345 kV line is used to transport power and a 115 kV line is used for serving load; a 115 kV line is needed in this area to serve local load. Our alternative solutions include a combination of both 345 kV and 115 kV lines to build an efficient infrastructure. *Public Comment:* The point I wish to raise is that these studies conducted take into consideration a long range transmission plan; utilities are not building any more transmission lines than are necessary and existing lines are utilized if possible. *Utility Response:* That's right, as we conduct our studies we often forecast load and load growth as far out as 30 years in the future.
- *Public Comment*: With respect to the Big Stone to Canby 230 kV transmission line, will the north-south route be located in South Dakota or Minnesota? *Utility Response*: It is my understanding that the north-south portion of the 230 kV line will be located in South Dakota but at this point we are working on selecting the best route for this alternative.
- *Public Comment:* With respect to the Big Stone II transmission alternatives presented, a representative from Willmar Municipal Utilities stated that he favors transmission alternative #2, which is a new line from Big Stone, South Dakota to Willmar, Minnesota. The addition of this line will be beneficial in meeting transmission needs in the Willmar and Kandiyohi County area as well as the region, and will enable the continued economic growth and vitality that is present in this area. Our community must recognize the potential value in its participation and support of this type of project.
- *Public Comment*: The utilities should be commended for their efforts and vision in conducting the CapX technical study.
- *Public Comment:* I have a question relating to transmission planning as it relates to wind energy. With the focus on wind as an energy resource, we know that there is a limited amount of time that wind is available. I believe that within the generation accreditation scenarios that wind capacity is generally recognized at approximately 25 to 30 percent. What does that do in terms of transmission planning? What happens to the rest of the transmission capacity? *Utility Response:* With wind generation bottled up in the southwest portion of the state due to insufficient transmission capacity, some developers are building wind farms near gas turbine plants so that they are able to coordinate the output of wind generation with the need for a gas turbine since the transmission is available year round for the gas turbine. The two generation resources may be used independently or simultaneously such that the total capacity at the injection point is equal to the maximum output of the gas turbine. *Additional Public Comment:* In the absence of the combustion turbine development, the wind resource and the transmission associated with it seem to be miss matched. *Utility Response:* With respect to modeling wind turbines in our studies, we do include wind at full capacity whether we look at peak conditions when loads are at their all time high or if we look at off peak conditions.

Written Comments: None received

The attendees were asked to submit any further questions, comments and input they may have after the meeting directly to the utilities by using the website at www.minnelectrans.com.

Click on "Contact Us" and then use the e-mail link at generalinfo@minnelectrans.com. No questions, comments or public input have been submitted to this link since the meeting.

Further Information:

The slide presentations for the West Central Zone meeting along with a list of current and projected transmission needs, proposed projects and alternative solutions for this area are available at www.minnelectrans.com.

The following files are available to download from the website's home page:

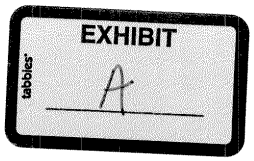
General Presentations.

- General Introduction and Background (PDF)
- CapX 2020 Technical Update (PDF)

West Central Zone Meeting Presentations.

- Agenda (PDF)
- Presentation (PDF)

Click on "West Central Zone" listed under "Planning Zones" to obtain a list of transmission needs/issues specific to this zone.



MinnElecTrans
Attendance Register
WC Zone Meeting
May 18, 2005

Name	Mailing Address	Email
JARED ALHOLINNA	GRE	
Harold Pedersen	8090 Hwy 45 NE Maynard	
Jim Metcalf	Otter Tail Power	
AL BERBOM	MN PUC	
Gary Eggen	OTP Co.	
Rod Scheel	OTP	
Bob Cupit	MN Dept of Commerce	
Mike Nitchals	Willmar Municipal Utilities	
Collin Engebretson	Glencoe Mun. Elect Utility	
David Little	West Central Tribune, Willmar	

Name	**Mailing Address**	**Email**
Tim Rogelstad	OTP	trogelstad@otpco.com
Wes Hompe	WMU	
Tom Melum	320 4th St SE Congressman Collin Peterson Office Willmar MN	tom.melum@mail.house.gov
Jason Weiers	OTP	JWeiers@otpco.com
Brian Zavesky	MRES	brianz@mrenergy.com
Dean Pawlowski	OTP	DPAWLOWSKI@OTPCO.com
Ken Wolf	MN Dept of Commerce	

Summary of Northwest Zone Transmission Planning Meeting

Date: May 19, 2005

Location: Days Inn and Conference Center
600 – 30th Avenue South
Moorhead, Minnesota 56560

Time: 7:00 p.m.

Sponsors: Great River Energy
Minnkota Power Cooperative
Missouri River Energy Services
Otter Tail Power Company
Xcel Energy

Attendees: Approximately twenty-three (23) individuals attended the meeting including five (5) members of the public, utility representatives, and representatives from the Minnesota Department of Commerce, and the Minnesota Public Utilities Commission. A copy of the attendance register is attached as Exhibit A.

Needs/Projects Discussed:

Representatives from Minnkota Power Cooperative and Otter Tail Power Company provided the following presentations covering current and projected electric transmission system needs in the zone, proposed projects and alternative solutions, tentative project timelines, and studies conducted in Northwest Minnesota to ensure continued reliability in the electric system serving this area:

Minnkota Power Cooperative Presentation.

- Lund 230/69 kV substation update

Otter Tail Power Company Presentations.

- Wilton Transformer Addition
- Otter Tail County Load Serving Study
- Northern Valley Study
- Big Stone II Transmission Study
- Northwest Exploratory Study

General Discussion:

A representative from Otter Tail Power Company provided an update on the Transmission Improvement Planning Study (TIPS), a load serving study, which is part of a long range, high level study of the electric transmission system in the Red River Valley and West Central Minnesota. The study is due to be completed later this summer and will identify one or two projects as solutions for the transmission needs in this area.

A representative from Otter Tail Power Company provided an update on the CapX 2020 initiative, a long range, high level, technical study that focuses on electric transmission infrastructure investments needed to meet growth in demand for electricity in the state and the region. To learn more about CapX 2020, visit their website at www.capx2020.com.

Public Questions and Comments:

Audience questions addressed during the meeting included: what impact does new technology have on the transmission system and what are the costs and benefits of new technology; who is responsible to monitor security on the transmission system against terrorist attacks by computer or physical damage, and is security a factor in transmission planning.

Written Comments: None received

Meeting attendees were asked to submit any further questions, comments and input they may have after the meeting directly to the utilities by using the website at www.minnelectrans.com. Click on "Contact Us" and then use the e-mail link at generalinfo@minnelectrans.com. No questions, comments or public input have been submitted to this link since the meeting.

Further Information:

The slide presentations for the Northwest Zone meeting along with a list of current and projected transmission needs, proposed projects and alternative solutions for this area are available at www.minnelectrans.com.

The following files are available to download from the website's home page:

General Presentations.

- General Introduction and Background (PDF)
- CapX 2020 Technical Update (PDF)

Northwest Zone Meeting Presentations.

- Agenda (PDF)
- Presentation (PDF)

Click on "Northwest Zone" listed under "Planning Zones" to obtain a list of transmission needs/issues specific to this zone.

EXHIBIT A

Attendance register

Minnesota Transmission Owners
2005 Northwest Zone Transmission Planning Meeting
May 19, 2005

Name	Mailing address	Email
Vicki Kirkpatrick	152 32nd Ave NE, Fargo, ND 58102	vkirkpatrick@juno.com
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Gerry Backstrom	PO Box 56 Erhard, Mn 56534	
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Dale Sollom	Minnkota Power Cooperative	dsollom@minnkota.com
Roger Minch	1110 3rd Ave N #904 W Fargo ND	RMinch@SonMarkNow.com
David Jacobson	MN Public Utilities Commission	david.jacobson@state.mn.us
Bob Cupit	MN Dept of Commerce	St. Paul
Bill Schwandt	Moorhead Public Service P.O Box 779 Moorhead, MN 56561-0779	bschwandt@mpsutility.com
Brian Zavesky	MRES	brianz@mrenergy.com

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Rod Scheel	OTP	rscheel@otpco.com

Name	Mailing address	Email
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