necessary, if it is truly part of this Badger project getting energy out east, and then the energy can always be brought into LaCrosse on the existing lines, on the 161K, and we are not going to need these behemoth poles with this high energy.

So certainly, again, you know, the entire project of getting energy out east through us as pawns, and through this beautiful valley, and affecting all of these people here is truly concerning. And the type of planning that has gone into even thinking about a Briggs Substation across schools and across an urban area is enough to make me question the entire project, if that's the type of planning that has gone into it.

So, thank you for your time.

MODERATOR RICHTER: Okay. Joe Morris, who will be followed by Joe Nygaard.

MR. MORRIS: I think I will stand, too, if that's alright.

MODERATOR RICHTER: Yes. Take the mic and speak directly into the mic and that should be fine. Thank you.

MR. MORRIS: Thank you very much. My name is Joe Morris. I live in Winona County, Wilson Township, just south of Winona.

N-001-001

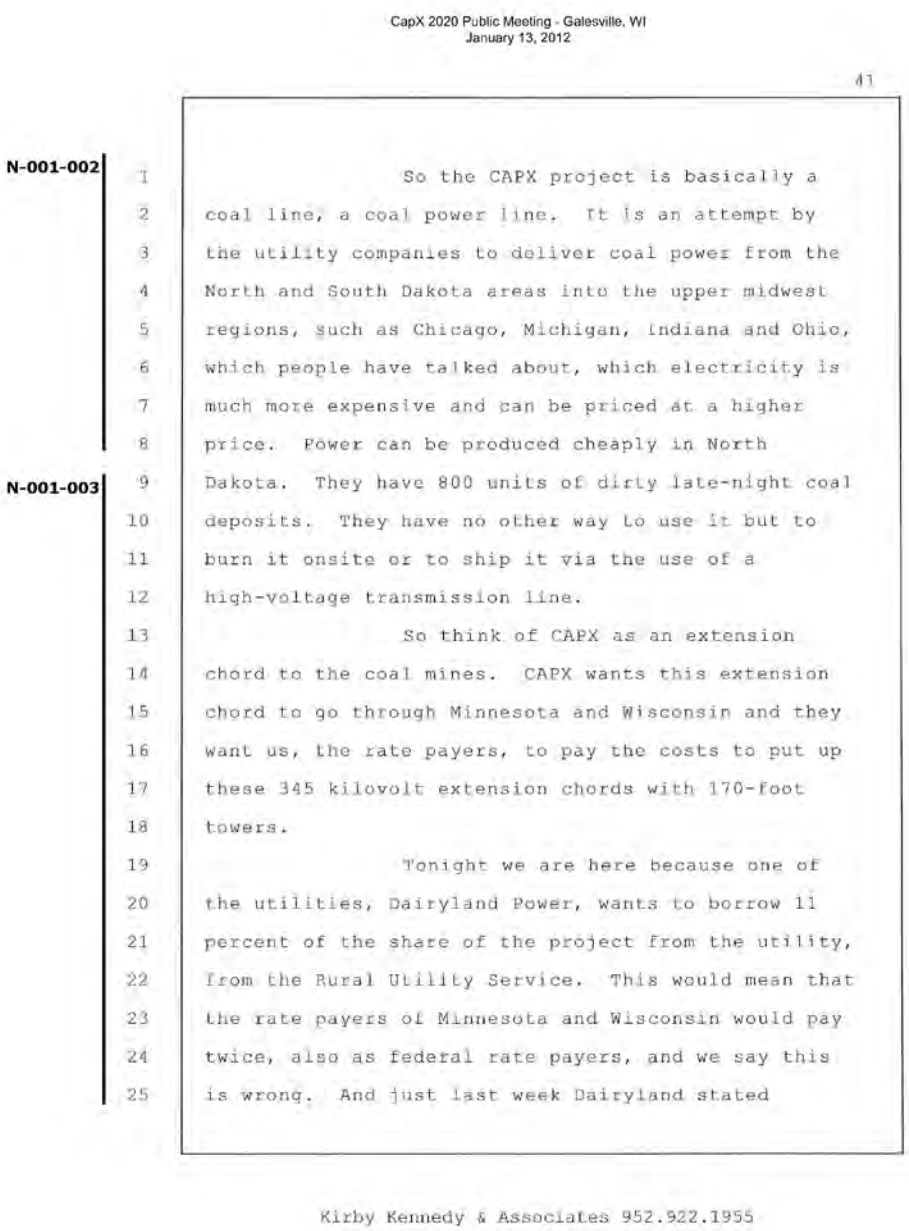
I am here representing the Citizens Energy Task Force. We are a coalition of neighbors and citizens concerned about the proposed CAPX 2020 high-voltage power lines in Minnesota and Wisconsin. And as a legally registered party in the CAPX process, we are representing the citizens who are questioning the need of these high-voltage lines and who support clean, sustainable and locally produced power sources.

We believe that the proper decision for this project is a no action alternative. Before I go into comments about why I think that, I want to note that this room is pretty packed, the parking lot out there is pretty packed, people are parking on the road out there. And in Alma, on Monday, there were 100 people in the gymnasium up there. And it just shows the interest that the people in this community and in these communities have and about the concerns they have about these power lines.

I will also note that in Minnesota there was about 20 people in Cannon Falls and about six people in Plainville and about two in Wanimingo (phonetic), or two or five in Wanimingo, so it just goes to show that the people in Wisconsin are concerned and are aware of this.

N-001-001

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A02-General Opposition.



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So the CAPX project is basically a coal line, a coal power line. It is an attempt by the utility companies to deliver coal power from the North and South Dakota areas into the upper midwest regions, such as Chicago, Michigan, Indiana and Ohio, which people have talked about, which electricity is much more expensive and can be priced at a higher price. Power can be produced cheaply in North Dakota. They have 800 units of dirty late-night coal deposits. They have no other way to use it but to burn it onsite or to ship it via the use of a high-voltage transmission line.

So think of CAPX as an extension chord to the coal mines. CAPX wants this extension chord to go through Minnesota and Wisconsin and they want us, the rate payers, to pay the costs to put up these 345 kilovolt extension chords with 170-foot towers.

Tonight we are here because one of the utilities, Dairyland Power, wants to borrow 11 percent of the share of the project from the utility, from the Rural Utility Service. This would mean that the rate payers of Minnesota and Wisconsin would pay twice, also as federal rate payers, and we say this is wrong. And just last week Dairyland stated

Kirby Kennedy & Associates 952.922.1955

N-001-002

N-001-003

N-001-002

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A10-Transmission of Electricity Generated by Burning Coal.

N-001-003

Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B03-Benefit to Local Customers Questioned.

N-001-004

publicly that unless the route chosen by the Wisconsin Public Service Commission is their preferred route, along Highway 35 and the river, they may pull out altogether. And this brings into question Dairyland's previous assessment of the local need for CAPX.

Now, there are many that are called into question and I just want to cite a couple. It has been mentioned that the Wisconsin Draft Environmental Impact Statement of the Public Utilities Commission was released in November, and I will quote it. "It is not clear that there will be sufficient population grown in the LaCrosse, Wisconsin area to justify the projected increase in demand for electricity represented in the application."

And from also the Public Service Commission of Wisconsin, the 2010 Energy Assessment, "Wisconsin has a current state of excess energy classified as a planning reserve margin of 15 percent through 2016."

(Whereupon, the three-minute time limit was in effect.)

MR. MORRIS: I would like to continue my comments later.

MODERATOR RICHTER: Yes. I think we

N-001-004

Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B04-Dairyland Power Corporation Need Questioned.

But this is not an investment to our development. This is an investment to others' development. Thanks.

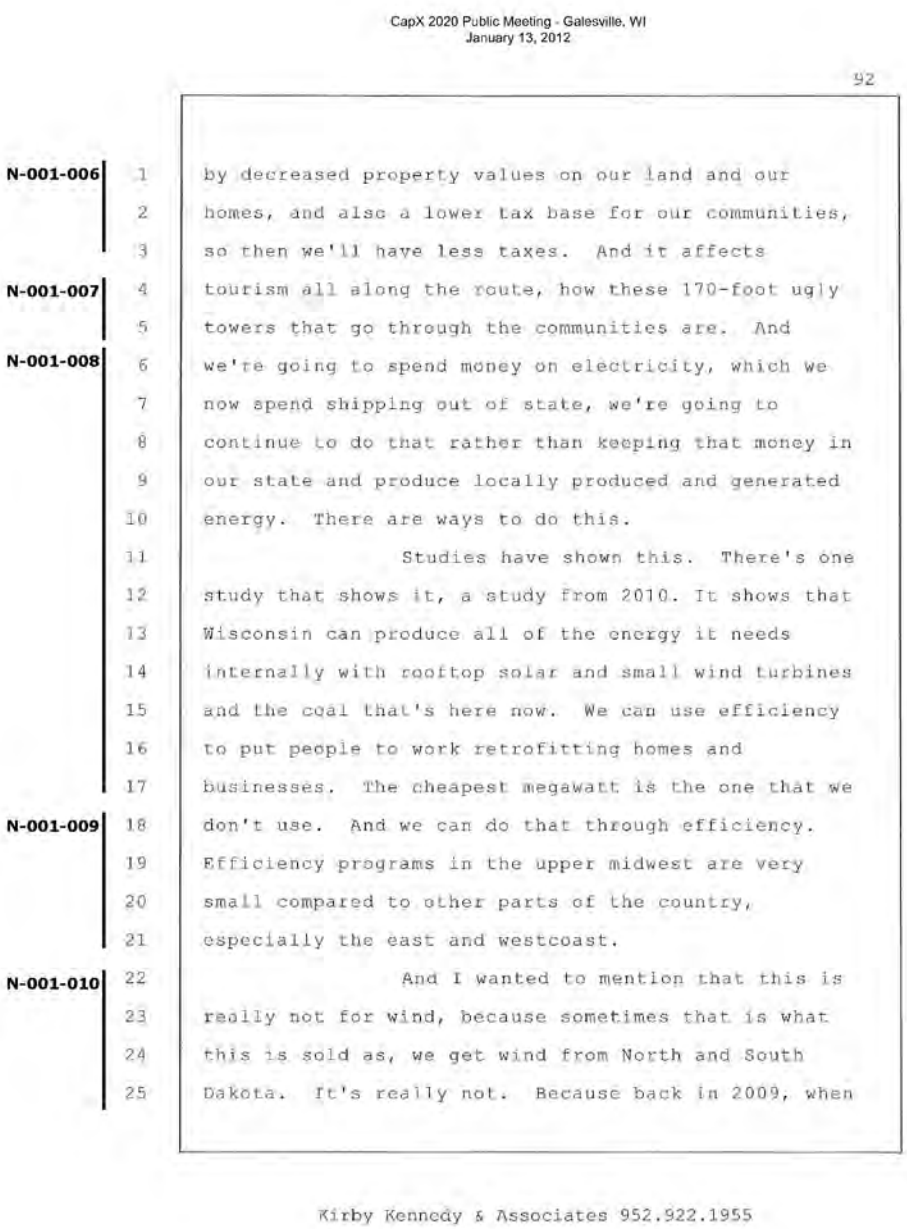
MODERATOR RICHTER: Okay. I saw three hands come up in terms of three people that would like to have an additional three minutes; is that correct? Is that pretty much everyone then? Can you show me your hands if you want to speak a second time? The three of you, okay. That will get us right about to 8:00. Others may decide they want another three minutes, but at 8:00 I'm going to give a break to the Court Reporter, and I think that is only fair, and I think we can also determine at that point if there is anyone that wants to remain after she comes back from break. I saw the gentleman with the hat first before I saw this woman. Thank you.

N-001-005

MR. MORRIS: Thanks a lot for the opportunity to speak again. I was the one that talked about this extension cord from North Dakota passed through our communities. And even though we will not benefit from that, we will bear the burden. I think it has been mentioned here by other people. I feel like it is an honor to be among the people here tonight who have testified and spoken so brilliantly and articulately about how they feel about this project. But we are going to be burdened

N-001-005

Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B03-Benefit to Local Customers Questioned.



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N-001-006 by decreased property values on our land and our homes, and also a lower tax base for our communities, so then we'll have less taxes. And it affects
N-001-007 tourism all along the route, how these 170-foot ugly towers that go through the communities are. And
N-001-008 we're going to spend money on electricity, which we now spend shipping out of state, we're going to continue to do that rather than keeping that money in our state and produce locally produced and generated energy. There are ways to do this.

Studies have shown this. There's one study that shows it, a study from 2010. It shows that Wisconsin can produce all of the energy it needs internally with rooftop solar and small wind turbines and the coal that's here now. We can use efficiency to put people to work retrofitting homes and businesses. The cheapest megawatt is the one that we
N-001-009 don't use. And we can do that through efficiency. Efficiency programs in the upper midwest are very small compared to other parts of the country, especially the east and westcoast.

N-001-010 And I wanted to mention that this is really not for wind, because sometimes that is what this is sold as, we get wind from North and South Dakota. It's really not. Because back in 2009, when

Kirby Kennedy & Associates 952.922.1955

N-001-006

Please refer to Appendix C, Table C-4, Comment Category O: Socioeconomics and Environmental Justice, O05-Property Values.

N-001-007

Please refer to Appendix C, Table C-4, Comment Category O: Socioeconomics and Environmental Justice, O07-Tourism.

N-001-008

Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C05-Use of Decentralized Generation.

N-001-009

Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C02-Demand Side Management (DSM).

N-001-010

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A10-Transmission of Electricity Generated by Burning Coal.

N-001-010

the Minnesota Public Utilities Commission approved this in Minnesota, CAPX immediately filed to try to block required renewable energy that Minnesota required on the line, in the line that hooks up with this one in Hampton, Minnesota. And the reality is that if we want to do wind is that the best wind power in the upper midwest is offshore on Lake Michigan, right near Milwaukee and Chicago, where a lot of this power is needed. And we also know that it's not about coal because the Attorney General of North Dakota has sued the Attorney General in Federal Court because in 2007 Minnesota enacted a law allowing no new coal power to come into Minnesota because we want to have renewable energy. North Dakota is wanting to overturn that law in Minnesota to the Federal Court so that they can get coal power through Minnesota.

N-001-011

And that's what we're really talking about when we talk about this power line. There are many counties that request resolution and a detailed explanation for the perceived needs of this high-voltage power line. Thank you.

MODERATOR RICHTER: Thank you.

MR. BRADY: I am David Brady again. A couple of points.

N-001-011

Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B04-Dairyland Power Corporation Need Questioned.

communities or else the communities closer should find a way to make their own energy. And that's all. Oh, I think it's great that North Dakota has all this coal, but maybe they should assign someone else closer to sell it. Maybe Canada. Thank you.

MS. RICHTER: Is there anyone else that did not get an opportunity to speak before? Yes, please.

TREVOR HOGAN: My name at Trevor Hogan, we live in Trempealeau. We've attended several of these meetings, and what we are finding out is that -- I mean, I'm listening to all you folks tonight, and it's all the same story every place we go. We don't seem to have a problem getting a bill in the mail for electric, but we do seem to have a problem getting informed about this thing. And that's all I wanted to say.

MS. RICHTER: Anyone else that wanted an opportunity?

N-002-001 GEORGE NYGARD: My name is George Nygard. I wasn't going to say anything tonight, and I was going to wait until Friday. I just want to make it really short. I'm so impressed by the statements you people made, and I want to remind people that with the PSC statements, that for their

N-002-001

Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B02-Need Questioned.

N-002-001

deed I ask that you folks that weren't informed on time, you have until basically January 23rd to make comments there. And I encourage you to do that. I just encourage you to stay with it. And I'm really impressed at how much you guys have paid attention to this and were able to site specific things in the DEIS and were keeping informed about this.

Obviously, I'm opposed to this. Technically I'm an intervener representing CETF against this. And I've been -- I don't live along any of the routes, so I'm not what we call -- it's not in my backyard, but I've read enough about this to be very convinced that -- well, there's not enough growth and need for it to warrant the building of this project, and building an extensive tower all the way from the Dakotas across our beautiful land just for something that's so dubious in its need. And the fact that we can avoid this.

And I don't think that looking at the -- I haven't read entirely through the RUS DIS, but I will say that both that and the PCS DIS did not -- they simply took out the alternatives and addressed them one by one and said, "This is not reliable enough," or "this isn't enough," but that isn't the way you address conservation of soil and

N-002-001

wind. It's a shotgun. It's not a single silver bullet that's going to address our problems. The one good thing I can say about the fact that we do have this project coming up before us is I don't think in the past that we've thought enough about our energy consumption and where we are going, and I think this will -- is a wake-up call to us.

I mean, one of the reasons that the United States is losing out to places like China is they are becoming more efficient all the time as they move into an industrial age themselves, and we are stuck in this old thing. And more is better, burn more. We are actually consuming more energy by two to one than any country on the face of the earth other than Canada and Australia. And I see if we are stuck there, why do we want to keep on doing this when most of us -- I'm a world person myself, and we have an ample opportunity, more than any other place,

N-002-002

and the USDA should be supporting this, of a decentralized generation. Thanks. Thanks for the opportunity.

MS. RICHTER: Is there anybody else that wanted to speak and hasn't had an opportunity?

MACHELLE PLANK: I spoke for Trav.

N-002-002

Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C05-Use of Decentralized Generation.

will have time. Thank you very much.

You are George, right?

MR. NYGAARD: I am.

MODERATOR RICHTER: Okay. Good. Following George will be Philip DeMaster.

N-003-001 MR. NYGAARD: It is N-Y-G-A-A-R-D. And George is probably what you know about.

I am George Nygaard. I actually came from Chaseward (phonetic), Wisconsin. I am a member of Dairyland Electric Co-Op, which is a member of Dairyland Power.

I am representing the Citizens Energy Task Force as a intervenor for the PSC. CETF has not taken a position on either route. We have been opposing this whole project on the fact that basically the need is down. I am old enough that I was one of the people that was opposing building a nuclear power plant up by Eau Claire 30 years ago, and at that time they were trying to say that the growth rate was 8.3 percent per year. These days they are saying 1.7 percent. The PSC said .78 percent, which is a factor. So, in other words, 1.7 is more than two times what everybody else is saying, including MISO, which is also saying that .78 is more realistic.

N-003-001

Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B02-Need Questioned.

N-003-001

I want to make one correction, not a correction so much as to amend what Tom Wilson said about it, which may affect some of your folks, for your time for comments before the PSC. And that is, if you weren't notified at first, and this affected a lot of people along Route 88 and around what they call the alternative option (phonetic), they were notified late by mistake, which was approximately 120 people. You have until January 23rd to make comments to the PSC, so you should be welcome to do it.

I am going to submit some written statement on this later and I have made comments in Alma, so I will say no more.

MODERATOR RICHTER: Thanks.

MR. NYGAARD: Thanks everybody.

MODERATOR RICHTER: Thank you. Philip will be followed by Linda Van Art (phonetic).

MR. DeMASTER: My name is Phil DeMaster. I live at N14739 Wright Road, Gaylesville. It is right over here on the prairie, in the town of Trempealeau.

I don't have any prepared statements. All I have to say is that this is a transmission line. I don't believe that it is intended for any local distribution and I think we are just being a

From: Edie Ehlert [mailto:edieehlert@centurytel.net]
Sent: Monday, January 30, 2012 8:00 AM
To: Strength, Stephanie - RD, Washington, DC
Cc: Rep.Nerison; sen.shilling@legis.wisconsin.gov
Subject: HVT Comments

Dear Stephanie Strength,

N-004-001

I am submitting comments on the high voltage transmission lines proposed for SW Wisconsin on behalf of the 900 supporters of Crawford Stewardship Project.

We were unable to attend the Galesville RUS meeting due to bad driving conditions and understand that written comments are accepted. Our concerns are of the American Transmission Company proposed project from north La Crosse to Madison and the Badger-Coulee project that would cut across our region of Wisconsin. We are calling for maximizing conservation, efficiency and load management, relying on renewable energy whenever possible, and support of local ownership of energy generation while minimizing size, scale, voltage, and environmental impacts of electric transmission.

Crawford Stewardship Project is opposed to the powerlines as proposed. We support Vernon and Richland County's decisions to require more information before approval. In particular, the need has not been established for these lines as energy use is not rising to the levels to require the lines. In addition, the effects of the lines on property values, livestock health, human health, and tourism have not been fully explored. The costs to ratepayers is also of grave concern.

We would like to see more studies on regional energy planning such as those projects made possible by Wisconsin's Focus on Energy program. Long range conservation and regional energy planning support more jobs, lower energy use, and build local communities.

Thank you for adding these comments to your official collection of comments.

Edie Ehlert,
Crawford Stewardship Project Coordinator

*It is the mission of the **Crawford Stewardship Project** to protect the environment of Crawford County from threats such as those posed by concentrated animal feeding operations (CAFOs) and to promote sustainable land use, local control of natural resources, and environmental justice. Crawford Stewardship Project is grateful for the generous support of Wisconsin Community Fund and RESIST, Inc. Crawford Stewardship Project is a 501(c) 3 non-profit organization registered in the state of Wisconsin. All contributions are tax deductible to the full extent allowed by law.*

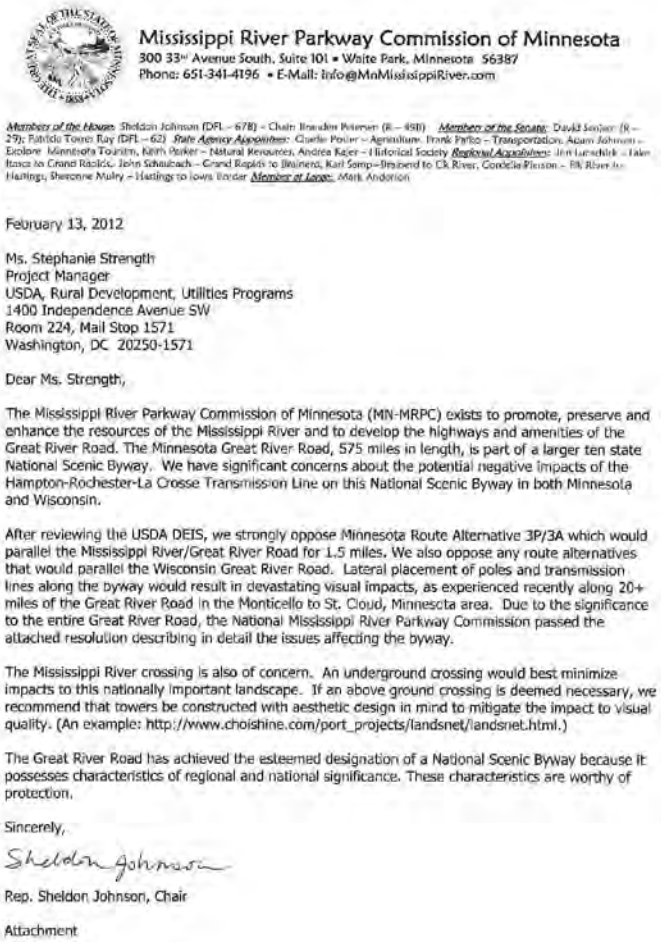
****

Edie Ehlert
Crawford Stewardship Project Coordinator
15981 Moldrem Rd
Ferryville, WI 54628
608-734-3223

edieehlert@centurytel.net
www.crawfordstewardshipproject.org

N-004-001

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A06-Comments Unrelated to RUS Draft EIS.



Mississippi River Parkway Commission of Minnesota
300 33rd Avenue South, Suite 101 • Waite Park, Minnesota 56387
Phone: 651-341-4196 • E-Mail: info@MnMississippiRiver.com

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February 13, 2012

Ms. Stephanie Strength
Project Manager
USDA, Rural Development, Utilities Programs
1400 Independence Avenue SW
Room 224, Mail Stop 1571
Washington, DC 20250-1571

Dear Ms. Strength,

N-005-001

The Mississippi River Parkway Commission of Minnesota (MN-MRPC) exists to promote, preserve and enhance the resources of the Mississippi River and to develop the highways and amenities of the Great River Road. The Minnesota Great River Road, 575 miles in length, is part of a larger ten state National Scenic Byway. We have significant concerns about the potential negative impacts of the Hampton-Rochester-La Crosse Transmission Line on this National Scenic Byway in both Minnesota and Wisconsin.

After reviewing the USDA DEIS, we strongly oppose Minnesota Route Alternative 3P/3A which would parallel the Mississippi River/Great River Road for 1.5 miles. We also oppose any route alternatives that would parallel the Wisconsin Great River Road. Lateral placement of poles and transmission lines along the byway would result in devastating visual impacts, as experienced recently along 20+ miles of the Great River Road in the Monticello to St. Cloud, Minnesota area. Due to the significance to the entire Great River Road, the National Mississippi River Parkway Commission passed the attached resolution describing in detail the issues affecting the byway.

N-005-002

The Mississippi River crossing is also of concern. An underground crossing would best minimize impacts to this nationally important landscape. If an above ground crossing is deemed necessary, we recommend that towers be constructed with aesthetic design in mind to mitigate the impact to visual quality. (An example: http://www.choishine.com/port_projects/landsnet/landsnet.html.)

N-005-003

The Great River Road has achieved the esteemed designation of a National Scenic Byway because it possesses characteristics of regional and national significance. These characteristics are worthy of protection.

Sincerely,

Sheldon Johnson

Rep. Sheldon Johnson, Chair

Attachment

N-005-001

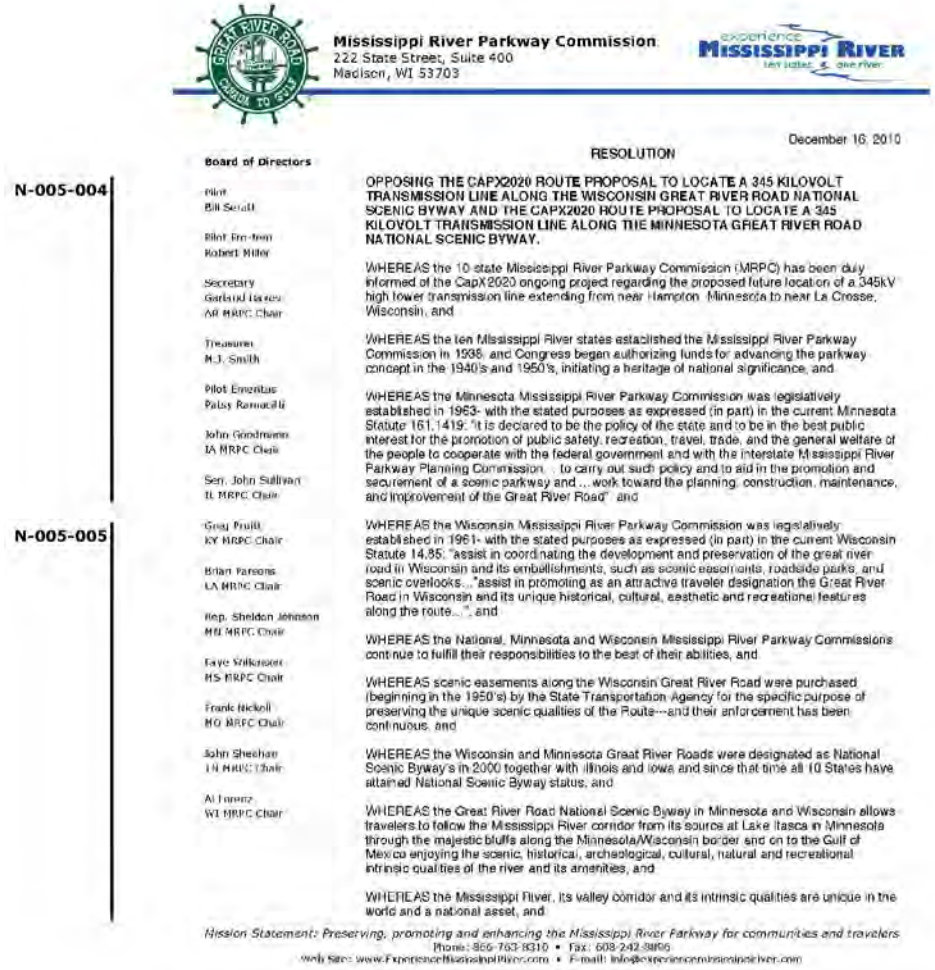
Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K03-Great River Road, Minnesota.

N-005-002

Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C10-Mississippi River Crossing.

N-005-003

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K03-Great River Road, Minnesota.



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December 16, 2010

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RESOLUTION

OPPOSING THE CAPX2020 ROUTE PROPOSAL TO LOCATE A 345 KILOVOLT TRANSMISSION LINE ALONG THE WISCONSIN GREAT RIVER ROAD NATIONAL SCENIC BYWAY AND THE CAPX2020 ROUTE PROPOSAL TO LOCATE A 345 KILOVOLT TRANSMISSION LINE ALONG THE MINNESOTA GREAT RIVER ROAD NATIONAL SCENIC BYWAY.

WHEREAS the 10 state Mississippi River Parkway Commission (MRPC) has been duly informed of the CapX2020 ongoing project regarding the proposed future location of a 345kV high tower transmission line extending from near Hampton, Minnesota to near La Crosse, Wisconsin, and

WHEREAS the ten Mississippi River states established the Mississippi River Parkway Commission in 1938, and Congress began authorizing funds for advancing the parkway concept in the 1940's and 1950's, initiating a heritage of national significance, and

WHEREAS the Minnesota Mississippi River Parkway Commission was legislatively established in 1963- with the stated purposes as expressed (in part) in the current Minnesota Statute 161.1419: "it is declared to be the policy of the state and to be in the best public interest for the promotion of public safety, recreation, travel, trade, and the general welfare of the people to cooperate with the federal government and with the Interstate Mississippi River Parkway Planning Commission . . . to carry out such policy and to aid in the promotion and securement of a scenic parkway and ... work toward the planning, construction, maintenance, and improvement of the Great River Road" and

WHEREAS the Wisconsin Mississippi River Parkway Commission was legislatively established in 1961- with the stated purposes as expressed (in part) in the current Wisconsin Statute 14.85: "assist in coordinating the development and preservation of the great river road in Wisconsin and its embellishments, such as scenic easements, roadside parks, and scenic overlooks..."assist in promoting as an attractive traveler designation the Great River Road in Wisconsin and its unique historical, cultural, aesthetic and recreational features along the route...", and

WHEREAS the National, Minnesota and Wisconsin Mississippi River Parkway Commissions continue to fulfill their responsibilities to the best of their abilities, and

WHEREAS scenic easements along the Wisconsin Great River Road were purchased (beginning in the 1950's) by the State Transportation Agency for the specific purpose of preserving the unique scenic qualities of the Route---and their enforcement has been continuous, and

WHEREAS the Wisconsin and Minnesota Great River Roads were designated as National Scenic Byway's in 2000 together with Illinois and Iowa and since that time all 10 States have attained National Scenic Byway status, and

WHEREAS the Great River Road National Scenic Byway in Minnesota and Wisconsin allows travelers to follow the Mississippi River corridor from its source at Lake Itasca in Minnesota through the majestic bluffs along the Minnesota/Wisconsin border and on to the Gulf of Mexico enjoying the scenic, historical, archeological, cultural, natural and recreational intrinsic qualities of the river and its amenities, and

WHEREAS the Mississippi River, its valley corridor and its intrinsic qualities are unique in the world and a national asset, and

Mission Statement: Preserving, promoting and enhancing the Mississippi River Parkway for communities and travelers

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N-005-004

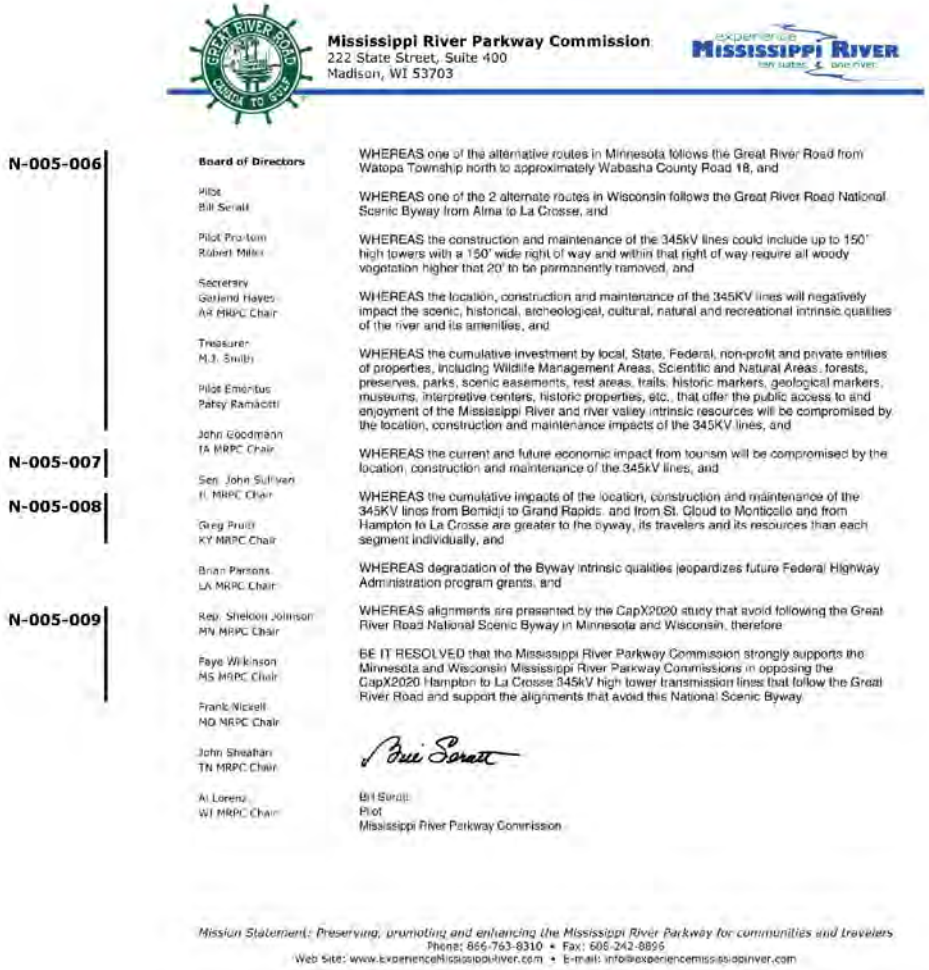
N-005-005

N-005-004

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K03-Great River Road, Minnesota.

N-005-005

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K02-Great River Road, Wisconsin.



Mississippi River Parkway Commission
222 State Street, Suite 400
Madison, WI 53703

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N-005-006

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WHEREAS one of the alternative routes in Minnesota follows the Great River Road from Watopa Township north to approximately Wabasha County Road 18, and

WHEREAS one of the 2 alternate routes in Wisconsin follows the Great River Road National Scenic Byway from Alma to La Crosse, and

WHEREAS the construction and maintenance of the 345kV lines could include up to 150' high towers with a 150' wide right of way and within that right of way require all woody vegetation higher that 20' to be permanently removed, and

WHEREAS the location, construction and maintenance of the 345KV lines will negatively impact the scenic, historical, archeological, cultural, natural and recreational intrinsic qualities of the river and its amenities, and

WHEREAS the cumulative investment by local, State, Federal, non-profit and private entities of properties, including Wildlife Management Areas, Scientific and Natural Areas, forests, preserves, parks, scenic easements, rest areas, trails, historic markers, geological markers, museums, interpretive centers, historic properties, etc., that offer the public access to and enjoyment of the Mississippi River and river valley intrinsic resources will be compromised by the location, construction and maintenance impacts of the 345KV lines, and

WHEREAS the current and future economic impact from tourism will be compromised by the location, construction and maintenance of the 345kV lines, and

WHEREAS the cumulative impacts of the location, construction and maintenance of the 345KV lines from Bemidji to Grand Rapids, and from St. Cloud to Monticello and from Hampton to La Crosse are greater to the byway, its travelers and its resources than each segment individually, and

WHEREAS degradation of the Byway intrinsic qualities jeopardizes future Federal Highway Administration program grants, and

WHEREAS alignments are presented by the CapX2020 study that avoid following the Great River Road National Scenic Byway in Minnesota and Wisconsin, therefore

BE IT RESOLVED that the Mississippi River Parkway Commission strongly supports the Minnesota and Wisconsin Mississippi River Parkway Commissions in opposing the CapX2020 Hampton to La Crosse 345kV high tower transmission lines that follow the Great River Road and support the alignments that avoid this National Scenic Byway.

Bill Seratt
Pilot
Mississippi River Parkway Commission

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N-005-006

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K03-Great River Road, Minnesota.

N-005-007

Please refer to Appendix C, Table C-4, Comment Category O: Socioeconomics and Environmental Justice, O07-Tourism.

N-005-008

Please refer to Appendix C, Table C-4, Comment Category P: Cumulative Impacts, P01-General/Other.

N-005-009

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K03-Great River Road, Minnesota.

February 13, 2012

Stephanie A. Strength
USDA, Rural Development, Utilities Programs
1400 Independence Avenue SW
Mail Stop 1570, Room 2244
Washington, D.C. 20250-1570

Dear Ms. Strength,

N-006-001 In regard to the CAPX2020 proposal, I question the legitimacy of the need for the project provided by the utilities based on their load forecasts, assumptions and the exclusion of realistic costs. I believe there are viable options to the high=voltage transmission option.

N-006-002 The Alternative Energy Assessment currently attached in the DEiS is out of date and under-developed. The assessment needs to include findings of aggressive energy efficiency programs such as "Efficiency Vermont" and others which are significantly reversing electricity growth, creating many sustainable jobs, lowering farm, household and business costs while reducing carbon emissions over time more significantly than those projected by the MTEP11 regional expansion plan of which CAPX2020 is a part.

N-006-003 The stated purpose of "Regional reliability" depends on the construction of the Midwest Transmission Expansion Plan 11 and projects in Appendixes A, B & C. Therefore, the cost of the CAPX2020 proposal should reflect the additional costs of the MTEP projects.

N-006-004 In order to provide Dairyland Power electric customers with a comprehensive picture of their investment options, the AES needs to determine the costs and benefits of a CAPX2020/MTEP 11 investment and compare this to an investment of equal value in Aggressive energy Efficiency, Demand Side Management, low voltage upgrades and development of distributed generation. I feel that the later investments could produce greater benefits that are also more consistent with the agency's mission of developing the economy and quality of life in rural America.

N-006-005 In addition, I strongly object to CAPX2020 for its negative environment impact. It is proposed to cross into Wisconsin at points where it will have a severe detrimental impact on the National Scenic Byway Great River Road. This area is protected by scenic easements that cannot be ignored. CAPX2020, as designed and proposed, would cross at Alma, WI and travel down the Great Rive Road to Holmen, WI. The high towers carrying the electrical voltage are monstrous and will severely downgrade the area for our tourism businesses, a vital part of the economic fabric of the West Coast of Wisconsin.

N-006-001
Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B02-Need Questioned.

N-006-002
Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C02-Demand Side Management (DSM).

N-006-003
Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A03-Connected Actions.

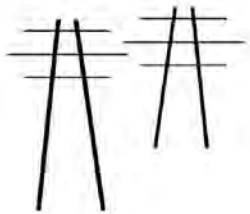
N-006-004
Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C05-Use of Decentralized Generation.

N-006-005
Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K02-Great River Road, Wisconsin.

N-006-005 I am not an expert. I am a concerned citizen and the Crawford County Commissioner on the Wisconsin Mississippi River Parkway Commission. Please give this strong consideration as this project is questionable as to need and definitely a negative for the environment and a negative for our economy.

Sincerely,

Sherry Quamme
Wisconsin Mississippi River Parkway Commission
Crawford County Commissioner
14767 Eagle Ridge Road
Ferryville, WI 54628
608-734-9077
Email: squamme@centurytel.net



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February 13, 2012

Stephanie Strength — via email: stephanie.strength@usda.gov
Environmental Protection Specialist
USDA, Rural Utilities Service
1400 Independence Avenue, SW., Stop 1571
Washington, DC 20250-1571

RE: **Comments – NoCapX 2020 and U-CAN**
CapX 2020 – Hampton-LaCrosse - Macro Corridor Modification

Dear Ms. Strength:

Thank you for the opportunity to comment on the RUS DEIS.

N-007-001 As noted in our last comment, the routes for this project that are under consideration have changed significantly, and adequate notice of the RUS process and state process and options for participation and resistance has not been provided to affected landowners and the general public.

N-007-002 Regarding coordination between RUS and states, as directed by §1794.14, coordination has been principally RUS copying, quoting or citing state EIS statements, even large pieces, but there has been no independent verification of the information presented by Dairyland/Xcel Energy, or the state agencies, most obvious regarding the magnetic field information.

N-007-003

N-007-004 As noted earlier, Part 1794 rules place limitations on actions taken by applicants before environmental review is completed, specifically, that:

> *Until RUS concludes its environmental review process, the applicant shall take no action concerning the proposed action which would have an adverse environmental impact or* ***limit the choice of reasonable alternatives being considered*** *in the environmental review process (40 CFR 1506.1).*

7 CFR §1794.15.

The Applicants have, in applications in Minnesota and Wisconsin, submitted proposals that limit the Mississippi River Crossing to ONE choice rather than the initially four and now three that are offered and being evaluated by RUS. In Minnesota, the Public Utilities Commission will have no option to choose other

N-007-001

Please refer to Appendix C, Table C-4, Comment Category D: Consultation, Coordination, and Public Involvement, D01-General/Other.

N-007-002

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A05-Reliance on Minnesota and/or Wisconsin EIS.

N-007-003

Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N02-Health Effects of EMF.

N-007-004

Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C10-Mississippi River Crossing.

N-007-004 than the Alma crossing, because it is the only crossing proposed by the applicants. The choice of Applicants to apply for just one Mississippi River crossing with no alternate crossings
Further, consideration of undergrounding has been unduly limited as being too costly. Testimony in Wisconsin claims that costs range per mile from $850,000 to more than $7.1 million. Direct Testimony of CUB's Hahn, p. 20. "The high end of this range was for the river crossing segment…" If underground costs $10 million per mile, several miles of $10 million/mile compared with several miles of $7.1 million/mile is only a difference of $2.9 million per mile for a $507 million dollar project. This cost difference is not sufficient to eliminate undergrounding of river crossings or other difficult to traverse areas.

N-007-005 Alternatives :

System alternatives such as reconductoring the old 345kV system are not addressed. Use of local generation in Wisconsin and Illinois has not been seriously considered.

N-007-006 Route alternatives are inadequate under NEPA – only one Mississippi River crossing is evaluated.

N-007-007 There are repeated citations, see e.g., p. 88, to the CapX 2020 Vision Study (2004-2005) and Jeff Webb's testimony (2008, based on 2004-2005 Vision Study). These are hopelessly outdated and are no longer credible. Further, MISO is NOT a permitting agency, it is an industry entity, not a regulator. More recent studies have been done, all focused on the market basis for this project, as a step towards increasing transfer capacity (requires Badger-Coulee/LaCrosse-Madison segment).

Congestion Zones p. 57, there is NO documentation whatsoever of a line from Hampton-Rochester-LaCrosse, without extending further, does anything at all for "congestion" in Minnesota as shown on the mpas.

If Dairyland filed an IRP in 2008, then Dairyland's most recent IRP was in 2010, they are filed every other year. P. 52.

N-007-008 Dairyland Power Cooperative is in the business, as stated on p.53, of providing wholesale power requirements for 25 separate distribution cooperatives… and wholesale power requirements for 16 municipal utilities in Wisconsin, Minnesota, and Iowa. This is service to "MEMBERS." Dairyland, under its articles of incorporation does not have authority or purpose beyond service of members, and does not have authorization to enter into a financing agreement with USDA's RUS regarding CapX 2020 because this project is beyond its authority.

N-007-009 The cost of the Hampton-Rochester-LaCrosse project has risen from $330-360 million in 2007 (MN Certificate of Need application, p. 2.18) to $507 million

N-007-010 p. 66 – regarding "ownership interest funding" and Dairyland's 11% ownership interest, is the 11% for the Hampton-Rochester-LaCrosse project in both Minnesota and Wisconsin? This should be clarified.

N-007-011 P. 96 - The table regarding eagles reflects that ALL of the proposed Mississippi River crossings have an impact on protected birds. USFWS Comment, attached, notes that utility infrastructure should be 2 miles from important eagle use areas. NONE of these three crossings, and particularly the Alma crossing, are in compliance with the recommendations in this USFWS Comment filed in the Wisconsin CapX Hampton-Rochester-LaCrosse docket.

N-007-012 EMF – see, again, attached comments of Bruce McKay, P.E., which is consistent with current statements that this is a line to help increase transfer capacity. The RUS needs to utilize current filings, such as the Applicants Supplemental Need Statement, and the Capacity Validation Study, which demonstrate the high capacity planned for this project, in concert with the LaCrosse-Madison project. Claims that amp levels of only 300 are absurd, where it is

N-007-013

N-007-005

Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C01-General/Other.

N-007-006

Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C10-Mississippi River Crossing.

N-007-007

Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B02-Need Questioned.

N-007-008

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A07-Questions Related to USDA Funding.

N-007-009

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A01-Miscellaneous.

N-007-010

Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B04-Dairyland Power Corporation Need Questioned.

N-007-011

Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I03-Birds.

N-007-012

Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B02-Need Questioned.

N-007-014

Connected Actions

The entire CapX 2020 Vision Plan (2005) and the revised interconnection announced for Badger Coulee (2011) should be taken into consideration.

This should be considered as a phased and connected action also because it fits within the larger CapX 2020 plan:

-3-

N-007-013

Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N02-Health Effects of EMF.

N-007-014

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A03-Connected Actions.

N-007-014

The interconnectedness of all of these projects is directly admitted in PUC/PSC Dockets and Applicant testimony:

1) Brookings-Hampton is literally connected at the Hampton substation. Se MN PUC Docket 08-1474.
2) Badger-Coulee (LaCrosse – Madison) is also literally connected, in LaCrosse, or perhaps at another substation if the 345 kV does not go to LaCrosse. See Applicants prefiled testimony, submitted at hearing in Alma:
   a. Testimony of ATC's Peter Holtz, p. 2-3.
   b. Testimony of ATC's Dale Bermester, p. 2, p. 4-6.
   c. Testimony of WPPI's Stephen Benning, p. 111, p. 114-117.
   d. Testimony of Xcel's Amanda King, p. 97, p. 100-102.

N-007-015

Conservation Easements
In addition to Conservation Easements, the large number of scenic easements held by WisDOT and the limitations these easements place on transmission routing must be more thoroughly addressed.

N-007-016

N-007-017

Cumulative Impacts
EIS should address cumulative impacts relative to new impacts, considering Minnesota's non-proliferation policy, as outlined in PEER (attached as Exhibit A) and state law, based on deliberate preference for route with pre-existing infrastructure corridor and compensable nature of impacts.
Non-compensable impacts, such as those to migratory birds and waterfowl should be avoided, or mitigated using undergrounding as recommended by the MN DNR (attached DNR Comment letter).

N-007-018

Geology and Soils
The Scoping Report thus far doesn't mention bluffs and other sensitive areas surrounding the Zumbro River. Bluffs are issues of concern in Minnesota and Wisconsin, where slopes are commonly greater than a 10% grade and frequently twice that. See attached Slope Map provided by Applicants. Note it is similar to the one provided on p. 176 of the EIS but the Applicants is much clearer.

N-007-019

Historic and Cultural
Century Farms are present throughout the area and are not addressed.

N-007-020

Figure 3-6 – there are MDNR Biodiversity Sites missing, particularly along the North Route by the Zumbro River.

Thank you for your consideration of these comments.

Very truly yours,

Carol A. Overland

Carol A. Overland
Attorney for NoCapX 2020 and United Citizens Action Network

N-007-015

Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I09-Conservation Easements.

N-007-016

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K02-Great River Road, Wisconsin.

N-007-017

Please refer to Appendix C, Table C-4, Comment Category P: Cumulative Impacts, P01-General/Other.

N-007-018

Please refer to Appendix C, Table C-4, Comment Category E: Geology and Soils, E05-Erosion and Slopes.

N-007-019

Please refer to Appendix C, Table C-4, Comment Category M: Historic and Cultural Resources, M03-Historic.

N-007-020

Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I01-General/Other.

all the cost-effective load management and efficiency that could be done. Is that shown anywhere? Well, certainly not in that statement. So let's go to the alternative study and see what we get here. At 3.2.1.2 title conservation -- can I finish my statement?

MS. RICHTER: Sure.

ALAN MULLER: Okay. Let me read this. "Because the effect of conservation will not appreciably reduce the projected growth and peak electric demand, this alternative would need to -- this alternative is not feasible because it is unreasonable to assume that all utilities would be able to exceed the statutory requirements" and so on. There's absolutely no factor in this information here to substantiate that.

MS. RICHTER: Thank you. Carol? And Carol will be followed by Billy Dietrich. Billy is here? Okay. Thank you.

N-008-001 CAROL OVERLAND: Hello, I'm Carol Overland. Www.Nocapx2020.Info for more information. 1110 West Avenue. First, I have a number of things over the next week, but first we'll start off, Dairyland is shutting down three units at the Alma plant. This is an article dated December 6th, 2011,

N-008-001

Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B04-Dairyland Power Corporation Need Questioned.

N-008-001

N-008-002

for the record. And if Dairyland is shutting down three units at Alma, granted they weren't used very often, but why is a Q1 rebuild needed? Got to address that.

Connective actions on page 81 of the DEIS. It is the criteria on page 81 as to what is a connected action. Two transmission lines qualifies connected under this criteria, it is just so obvious, and they are not included. The Brookings CapX to Hamptom line is literally connected at the Hampton substation. It goes from Brookings to Hampton, then Hampton, Rochester, Rochester to La Crosse. These are connected. No. 2, the -- pool line. And we have some new information that supports that these are indeed connected.

If you look at today's filings, the testimony of ATC's Peter Holtz, and I've got a copy for the record with some highlights in there for you to look at. Testimony of ATC is Dale Bermester, copy for the record. Testimony of Steven Buning. He's got a great little quote here. "What does your analysis include" -- "Why does your analysis include transmission lines that are not proposed as part of this proceeding. The upgrades which are included in the project are planned to integrate with future

N-008-002

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A03-Connected Actions.

N-008-002

development identified through the MCAP process, although the 345kV project as a higher initial cost than potential alternatives, the upgrade will have substantial economic benefit to the area in terms of increased reliability and reduced supply costs." That's a pretty direct connection.

And then also the direct testimony of Amanda King, that's from Xcel. There are many, many references in all this testimony to the connection of these projects. They are connected. There are repeated citations to the CapX Vision Study as mentioned earlier. That is 2004 and 2005 information. Old. Lots of testimony -- references to testimony of Jeff Webb from MISO. You know it's MISO not MISO. That's 2008 testimony again based on 2004/2005 information. And in that testimony you'll know -- he also says, well, I asked him, "Well, how much coal is there in Q?" he said 3,441 megawatts in Q. Then I asked him, "How much wind?" He reached into his pocket and pulls out a little PostIt, there's over 7,000 megawatts of wind in Illinois. So why on earth would anyone be paying all this money to be shipping South Dakota wind extensively to Chicago when they have got their own. It's really stupid.

About the eagles on page 96 of the

N-008-003

DEIS, there's this cute little chart talking about the river crossings and why they were eliminated. The chart reflects that all are affected. So check that out. I'll have more on this tomorrow. Stay tuned.

MS. RICHTER: Billy will be followed by Don, Jordon, Korlen and Barbara.

BILLY DIETRICH: My name is a Billy Dietrich, and I live on Highway 88. I am the mother of seven children. Their ages are four weeks to 13 years old. I also live on a registered dairy farm with 150 milking Holsteins. The USDA's web site states that rural development is committed to helping improve the economy and quality of life in all of rural America. How will these lines help my rural life?

Section 3.11 states a number of socioeconomics and environmental justice. You have not included public health and safety. I will have children getting on the bus on Highway 88 within 90 feet of where this pole will be put. This is five days a week throughout the school year. As a mother, how can I not be concerned about my children's health?

MS. RICHTER: Okay.

N-008-003

Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C10-Mississippi River Crossing.

Carol Overland
Statement Alma
#1

This was printed from The Business Journal

Dairyland Power shutting down three units at Alma power plant

The Business Journal

Date: Tuesday, December 6, 2011, 2:53pm CST

Related:

N-008-004

Energy

Dairyland Power Cooperative , a La Crosse energy cooperative that supplies electricity to 25 member distribution co-ops and 16 municipal utilities, said it will shut down three coal-fired units at its power plant in Alma.

Dairyland Power said the three 1950s-era units only have a combined capacity to generate about 60 megawatts of power. This year, the units have only produced four-tenths of 1 percent of Dairyland's energy needs through October. Two other units at the Alma station, which have a combined capacity of about 120 megawatts, will continue to generate electricity.

The shutdown of the three units aligns with the co-op's generation resource plans that include the ongoing addition of renewable energy. The closure will result in the loss of 12 jobs, but all employees will have the opportunity to transfer elsewhere within the Dairyland system.

"It is certainly difficult to make decisions that impact employees," said Bill Berg, president and CEO, "therefore Dairyland has made every effort to minimize the impact on their livelihood."

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"It is certainly difficult to make decisions that impact employees," said Bill Berg, president and CEO, "therefore Dairyland has made every effort to minimize the impact on their livelihood."

N-008-004

Please refer to Appendix C, Table C-4, Comment Category B: Purpose & Need, B04-Dairyland Power Corporation Need Questioned.

N-008-005

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Joint Application of Dairyland Power Cooperative, Northern States Power Company-Wisconsin, and Wisconsin Public Power Inc., for Authority to Construct and Place in Service 345 kV Electric Transmission Lines and Electric Substation Facilities for the CapX Twin Cities-Rochester-La Crosse Project, Located in Buffalo, Trempealeau, and La Crosse Counties, Wisconsin	**Docket No. 5-CE-136**

DIRECT TESTIMONY OF PETER H. HOLTZ ON BEHALF OF AMERICAN TRANSMISSION COMPANY LLC AND ATC MANAGEMENT INC.

INTRODUCTION

Q. Please state your name, employer, title and business address.

A. My name is Peter H. Holtz. I am currently Routing and Siting Manager for ATC Management Inc., corporate manager for American Transmission Company LLC (together "ATC"). My office is located at W234 N2000 Ridgeview Parkway Court, Waukesha, WI 53188.

Q. Please describe your background, including your educational and professional experience as it relates to this direct testimony.

A. I received a bachelor's degree in business administration from the University of Wisconsin-Madison in 1974. After graduating in 1974, I was employed by Wisconsin Electric Power Company from 1974 to 2000. In 2000, I came to ATC and was responsible for ATC's startup activities and the initial development of its public outreach and siting processes supporting a wide range of electric transmission line projects. In

N-008-005

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A03-Connected Actions.

N-008-005

2002, I became the Project Manager for the Arrowhead-Weston Project. I have subsequently served as Manager of Asset Records and Applications and in May, 2010 I assumed my current position.

Q. Please describe your current responsibilities at ATC.

A. My role is to provide support to major transmission line projects related to routing and siting, public, agency and governmental group outreach and communication. I work with project teams to adapt and apply the ATC techniques, technology approaches and methods to address siting and other related public issues and ensure project goals and deadlines are achieved.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide information as to which routes being considered in this proceeding, known as the Hampton – Rochester – La Crosse 345 kV Transmission Project (the "Project"), are preferred by ATC.

Q. Why is ATC interested in which route is selected?

A. The Project's routes provide alternative connection points between the Project and ATC's Badger Coulee Project, which are in addition to the proposed Briggs Road Substation. The goal of the Badger Coulee Project is to connect ATC's 345 kV transmission network in the Madison, Wisconsin area to a point in western Wisconsin, likely north of the La Crosse area, which is within the project area of the transmission line that is the subject of this proceeding. Routing a transmission line through the western portions of Wisconsin provides a number of challenges. As part of ATC's routing and siting process, we focus on the statutorily defined routing and siting criteria. In addition we evaluate routes based

N-008-005

on: environmental impacts; landowner impacts; constructability; input from local stakeholders; and cost.

After a series of field tours and the first set of public open houses, it became apparent that, although not impossible, ATC would encounter significant difficulties routing a 345 kV line from Interstate 90 in La Crosse, north to the proposed eastern terminus of the Project near Holmen. This area is constrained by the Mississippi River and the La Crosse Airport on the west and bluffs to the east. The area between these constraints is heavily developed. In order to identify sufficient alternative routes, ATC expanded the Badger Coulee Project's study area to include an area north of La Crosse. This area provides a number of advantages including the ability to co-locate with existing Dairyland Power Cooperative and Northern States Power Company-Wisconsin transmission lines, fewer environmental challenges and overall less development. As part of this study area expansion, ATC identified five potential locations to connect the Badger Coulee Project with the routes being considered in this proceeding.

Q. Where is ATC proposing to interconnect with the Project?

A. There are currently five identified interconnection points to the routes under consideration in this proceeding. These are shown on the attached map labeled as Exhibit 1 and located at:

- A: Northwest of Arcadia and connecting to the Project's Arcadia Route;
- B: East of State Highway 93 and connecting to the Project's Arcadia Route. Site B could also connect with the Ettrick Connector Alternative Route
- C: Southwest of Ettrick connecting to the Project's Ettrick Connector Alternative Route (part of the Arcadia-Ettrick Connector Route);

N-008-005

- D: East of U.S. Highway 53 connecting to the Project's Galesville Route (part of Q1-Galesville, Q1-Galesville with STH 88, Arcadia, or Arcadia-Ettrick Connection Routes); and
- E: In the Holmen area connecting to any of the routes being considered or the Briggs Road Substation.

Q. Does ATC have a preference for one or more of these sites?

A. As noted earlier, there are considerable challenges to routing a 345 kV transmission line to the Holmen area. This is due to identified constraints along U.S. Highway 53 in the La Crosse area and along Interstate 90. ATC believes from an overall impact and constructability basis the best sites for the Badger Coulee Project to connect to this Project are sites A, B or C, because of the ability to co-locate with existing transmission lines, fewer environmental challenges and the overall presence of less development. Connecting at these sites can be accomplished by the Commission selecting any of the routes being considered except for the Q1-Highway 35 Route (with or without the STH 88 Connector Alternative) and the Q1-Galesville Route (with or without the STH 88 Connector Alternative). Therefore, ATC prefers that the Commission select the Arcadia Route or the Arcadia Route with the Ettrick Connector Alternative for the Project proposed in this proceeding.

Q. If ATC's preferred routes are not chosen by the Commission, what will be the impact on the Badger Coulee Project?

A. Connecting the Badger Coulee Project to the Q1-Highway 35 Route or the Q1-Galesville Route will be more difficult, more expensive and have more environmental and stakeholder impacts, but the Badger Coulee transmission line could be sited and built to

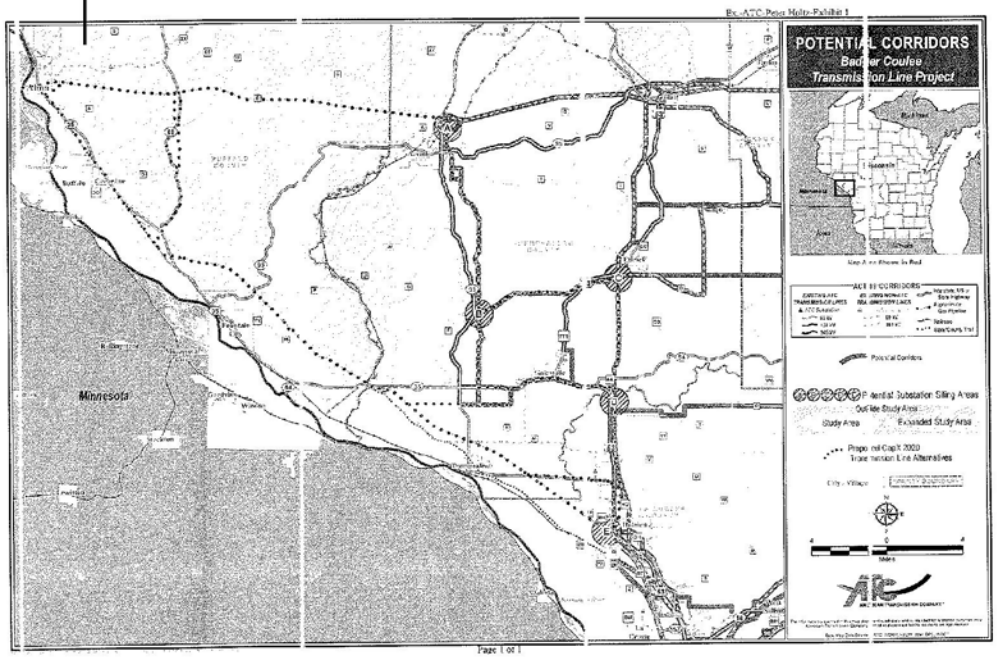
N-008-005

make this connection. Additionally, as noted in Mr. Burmester's testimony, the multiple benefits of the Badger Coulee Project will occur irrespective of the specific interconnection point selected for the Hampton-Rochester-La Crosse Project.

Q. Does this complete your direct testimony?

A. Yes.

N-008-005


Ex.-ATC Petit Holtz-Exhibit 1
POTENTIAL CORRIDORS
Badger Coulee
Transmission Line Project
Minnesota
Page 1 of 1

Carol Alma #3

12, 14, 19-23, 25, 32-4, 36, 40-1

N-008-005

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Joint Application of Dairyland Power Cooperative, Northern States Power Company-Wisconsin, and Wisconsin Public Power Inc., for Authority to Construct and Place in Service 345 kV Electric Transmission Lines and Electric Substation Facilities for the CapX Twin Cities-Rochester-La Crosse Project, Located in Buffalo, Trempealeau, and La Crosse Counties, Wisconsin

Docket No. 5-CE-136

DIRECT TESTIMONY OF DALE W. BURMESTER ON BEHALF OF AMERICAN TRANSMISSION COMPANY LLC AND ATC MANAGEMENT INC.

INTRODUCTION

Q. Please state your name, employer, title and business address.

A. My name is Dale W. Burmester. I am currently Manager of the Economic Planning Group for ATC Management Inc., the corporate manager for American Transmission Company LLC (together "ATC"). My office is located at 2 Pen Oak Court, Madison, Wisconsin 53718.

Q. Please describe ATC.

A. ATC is a transmission company as defined in §196.485(1)(ge) of the Wisconsin Statutes. ATC is the owner and operator of the transmission facilities throughout most of Wisconsin.

Q. Does ATC have an interest in this proceeding?

A. Yes.

Q. What is that interest?

N-008-005

A. ATC is conducting planning studies, feasibility analyses and public outreach efforts for a proposed 150 mile (approximately) 345 kV transmission line and associated facilities from a point in western Wisconsin to the Madison, Wisconsin area. This proposed line is also known as the Badger Coulee Project. It is anticipated that the Badger Coulee Project will interconnect at a point in western Wisconsin north of the La Crosse area, which is within the project area of the transmission line that is the subject of this proceeding, the Hampton – Rochester – La Crosse 345 kV Transmission Project (the "Project"). As a result, ATC has a substantial interest in this matter that may be directly affected by the Commission's action in this proceeding.

Q. Please describe your background, including your educational and professional experience as it relates to this direct testimony.

A. I graduated with a Bachelor of Science in Electrical Engineering from the University of Wisconsin-Madison in 1987. I have 24 years of electric utility experience in transmission planning and transmission service, having worked at Madison Gas and Electric Company, Wisconsin Power and Light Company, Alliant Energy and ATC. I am a licensed Professional Engineer in the State of Wisconsin.

Q. Please describe your responsibilities at ATC.

A. I was recently appointed Manager of the Economic Planning Group. Immediately prior to this, I was Manager of the Major Projects Group at ATC; both groups are in the Strategic Planning division at ATC. As Manager of the Economic Planning Group, I supervise five engineers that perform economic studies using, among other engineering tools, the Ventyx PROMOD program to evaluate the economic impact of proposed transmission projects under various future scenarios. In addition, I represent ATC on the

N-008-005

Midwest Reliability Organization (MRO) Planning Committee and represent MRO on the North American Electric Reliability Corporation (NERC) Planning Committee. I also chair the NERC Spare Equipment Database Task Force.

Q. What is the general purpose of your testimony?

A. The general purpose of my testimony is to describe the relationship between the Project and ATC's transmission planning activities.

Q. Please describe generally ATC's transmission planning process.

A. ATC's transmission planning process involves continually evaluating the operation of the electric transmission network, and taking a comprehensive look at various factors affecting electricity usage in the region, proposed new generation and projected levels of future electricity usage.

Q. What is ATC's 10-Year Assessment?

A. It is an annual report summarizing proposed additions and expansions to the ATC transmission system over the next ten years to ensure electric system reliability.

Q. What assumptions, if any, has ATC made in its 10-Year Assessment regarding the project proposed in this proceeding?

A. The most recent 10-Year Assessment assumes that the Project is in-service for all analyses representing the year 2016 and beyond.

Q. Are high-voltage transmission projects also part of ATC's planning process?

A. Yes. Pursuant to FERC Order 890-A, ATC regularly conducts a coordinated, open, and transparent planning process regarding its proposed transmission projects, including high-voltage projects. Further information about these projects is on the ATC website.

Q. Is ATC currently planning any such projects in the La Crosse, Wisconsin area?

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A. Yes, as noted above, ATC is planning the 345 kV Badger Coulee Project from a point in western Wisconsin, likely north of the La Crosse area, to the Madison, Wisconsin area. ATC believes that this project will provide multiple benefits in the form of improved electric system reliability, economic savings for Wisconsin utilities and energy consumers, and access to additional renewable energy for Wisconsin customers. ATC will present its case for the Badger Coulee Project in a subsequent CPCN proceeding at the PSCW, in which all interested parties will have an opportunity to participate.

Q. What is the status of the Badger Coulee Project?

A. ATC is currently identifying potential routes for the Badger Coulee Project with public involvement and will continue to do so throughout 2012. ATC will also continue its planning work on this project throughout 2012. ATC anticipates filing a CPCN application for the Badger Coulee Project in 2013. If approved by the PSCW, the expected in-service year for this project is 2018.

Q. What assumptions, if any, has ATC made in its planning for the Badger Coulee Project regarding the Project?

A. All of the studies performed to-date that have evaluated the benefits of the Badger Coulee Project assume that the Project, the Hampton – Rochester – La Crosse 345 kV transmission line, is in-service.

Q. What is the electrical relationship between the Badger Coulee Project and the Hampton-Rochester-La Crosse Project?

A. It is anticipated that the Badger Coulee Project will interconnect at a point in western Wisconsin that is within the project area of the transmission line that is the subject of this proceeding. ATC witness Peter Holtz provides additional information about ATC's

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preferences regarding the western interconnection between the Badger Coulee Project and the Hampton-Rochester-La Crosse Project. However, the multiple benefits of the Badger Coulee Project identified above will occur irrespective of the specific interconnection point to the Project proposed in this proceeding.

Q. Has ATC conducted any reliability studies relating to western Wisconsin?

A. Yes. In collaboration with our neighboring transmission owners, CapX2020, and the Midwest Independent System Operator, ATC conducted the Western Wisconsin Transmission Reliability Study (WWTRS).

Q. Please describe the nature and scope of the WWTRS.

A. The WWTRS assessed the reliability needs of the western Wisconsin area. It included several load centers such as Rochester, Minneapolis and St. Paul in Minnesota, La Crosse, Eau Claire, Madison, Stevens Point, Wisconsin Rapids and Wisconsin Dells in Wisconsin, and Dubuque in Iowa. This transmission study was part of a larger combination of benefits analysis that takes into account the electrical needs of the study area. The specific purpose of the WWTRS was to identify and document the reliability needs in the western Wisconsin area in the eight- to ten-year-out time frame and also to evaluate the extent to which different transmission options would meet these needs using various reliability measures. The WWTRS has been completed, and a public version of the study is available on-line.

Q. Did ATC make any assumptions about the Hampton-Rochester-La Crosse Project in the WWTRS?

A. Yes.

Q. What were those assumptions?

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A. All of the studies performed in the WWTRS assumed that the proposed Hampton – Rochester – La Crosse Project was in-service.

Q. Has ATC conducted any studies or performed any analyses to determine the impact of the Project on the transmission system?

A. No.

Q. Would non-completion of the Project have any effects on projects that ATC is planning?

A. Yes.

Q. What are those effects?

A. If the Project is not completed, then ATC would have to perform further planning analyses regarding the projects for which this line has been an assumption, including the Badger Coulee Project.

Q. Does ATC have a position regarding the need for the Project?

A. Yes. While ATC has not conducted its own specific studies of this line, it generally supports the applicants' position that a 345 kV line from the west that terminates in the La Crosse area would provide significant reliability, usage, and service benefits to Wisconsin customers.

Q. Does this complete your direct testimony?

A. Yes.

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AN OFFICIAL FILING
BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Joint Application of Dairyland Power Cooperative, Northern States Power Company, Wisconsin, and Wisconsin Public Power, Inc., for Authority to Construct and Place in Service 345 kV Electric Transmission Lines and Electric Substation Facilities for the CapX Twin Cities-Rochester-La Crosse Project, Located in Buffalo, Trempealeau, and La Crosse Counties, Wisconsin

Docket No: 05-CE-136

DIRECT TESTIMONY OF STEPHEN BEUNING

INTRODUCTION

Q. Please state your name and business address.

A. My name is Stephen Beuning, and my business address is Xcel Energy Services Inc. 1800 Larimer, Suite 500, Denver, Colorado.

Q. By whom are you employed and in what capacity?

A. I am employed by Xcel Energy Services, Inc., the service company for four Xcel Energy Inc. operating companies including Northern States Power Company, a Wisconsin corporation ("NSPW" or "Company") and Northern States Power Company, a Minnesota corporation ("NSPM"). The two NSP operating companies operate their high voltage transmission and generation portfolio as a joint system and allocate costs according to the Interchange Agreement on file with the Federal Energy Regulatory Commission ("FERC"). Together the two comprise the NSP System ("NSP System"). My current job position is Director of Market Operations. My responsibilities include procurement of

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transmission service and new interconnection service for the NSP System as well as regional energy market design, including congestion management and renewable integration.

Q. Please describe your educational background and professional experience.

A. I graduated from the University of Minnesota in 1984 with a Bachelor of Science in Electrical Engineering. After graduation, I joined NSPM, as a transmission system operations engineer. Over the past 27 years, I have held various managerial positions within NSP and Xcel Energy Services Inc. Prior to becoming director of Market Operations in 2004, I served in various roles in the company, including responsibility for NSP transmission tariff administration and settlements, and supervising the operations technical support group for NSP's transmission control center in Minneapolis. My resume is attached as **Ex.-Applicants-Benning-1**.

Q. For whom are you testifying?

A. I am providing testimony on behalf of NSPW, Dairyland Power Cooperative ("Dairyland"), and WPPI Energy, (collectively "Applicants") in support of the Hampton – Rochester – La Crosse 345 kV Project ("Hampton – Rochester – La Crosse 345 kV Project" or "345 kV Project"). Applicants seek approval from the Public Service Commission of Wisconsin ("PSCW") and the Wisconsin Department of Natural Resources ("WDNR") to construct the Wisconsin portion of the 345 kV Project. The Wisconsin portion includes a 345 kV line from Alma, Wisconsin to a new transmission substation located in Holmen and associated 161 kV system interconnections at the new substation ("La Crosse 345 kV Project" or "Project").

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Q. What is the purpose of your testimony in this proceeding?

A. I am testifying to provide information regarding long-term regional benefits, including regional market benefits that would result from the 345 kV Project, coupled with added future upgrades made feasible by this preferred design. The lower voltage 161 kV alternatives to the 345 kV Project that include 161 kV ties from Southeast Minnesota to La Crosse, have some relative drawbacks. They are less able to support efficient renewable resource location for compliance with Renewable Portfolio Standards ("RPS") resulting in more congestion limitations on the grid as regional utilities attain compliance with their respective RPS obligations.

Q. Please summarize your conclusions.

A. The 345 kV Project is necessary for regional reliability purposes for the long-term eastward build out, as clarified by NSPW witness Ms. Amanda King. But the 345 kV Project also constitutes a key step as part of a regional plan to attain substantial economic dispatch benefits. With the 345 kV Project development in-place, future high voltage upgrades from La Crosse to the east will reduce regional energy production costs. In contrast, as detailed in the SNS, the La Crosse 161 kV Alternative, with a 161 kV connection between Southeast Minnesota and La Crosse results in ***reduced*** transfer capability from west to east once the proposed eastward developments occur. Coupled with the lower expected capacity factor of production if significant wind resources were sited in Wisconsin, it is evident to me that the operational consequences of the 161 kV alternatives are less desirable. Little surprise, therefore, that the 161 kV alternatives would be incompatible with broader regional plans that are in development through the Midwest Independent Transmission System Operator Inc. ("MISO") regional process.

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Lastly, I describe results of a production cost analysis that indicates the 345 kV Project, with 345 kV development fully to La Crosse, will enable future 345 kV transfer capability eastward from La Crosse, resulting in lower overall regional production cost through access to low-cost, high capacity factor wind production sites west of Wisconsin and will facilitate broad economic benefits for the region when the 345 kV Project is mated with planned future upgrades.

Q. What exhibits are attached to your testimony?

A. Ex.-Applicants-Beuning-1: Resume of Stephen Beuning;

Ex.-Applicants-Beuning-2: PROMOD Analysis Summary Results; and

Ex-Applicants-Beuning-3: Present Value Analysis.

BENEFITS OF AN EFFICIENT ENERGY MARKET

Q. Applicants have stated that the 345 kV Project will improve market efficiencies. Please describe what this means.

A. Market efficiency in this context can be characterized as the use of least-cost resources within the region to supply the load requirements on the electric transmission system. At times, given the finite capability of installed grid equipment, lowest cost resources cannot be used to supply all loads due to grid congestion. When congestion occurs, the market prices show increased cost because more expensive resources were used to supply demand. Congested conditions may occur for several reasons, for example: due to outage of a transmission element resulting in reduced remaining grid capability, due to potential overload for next-contingency loss of a transmission element, due to loss or change of generator output, or congestion can arise over time due to fundamental market drivers such as demand growth and installation of low-cost supply resources.

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Q. Is regional least-cost dispatch used to supply loads in Wisconsin?

A. Yes. MISO is a Regional Transmission Organization ("RTO") established pursuant to FERC Order 2000. The MISO established a regional energy market in April of 2005. The MISO market uses security-constrained economic dispatch to ensure that grid reliability is preserved while available least-cost resources are fully dispatched to supply the electric demand. Security-constrained economic dispatch achieves least-cost supply through specialized cost-optimization software that evaluates actual physical delivery impacts on the grid.

Q. Why is an efficient energy market beneficial for consumers?

A. An efficient market reduces the average cost of wholesale energy supply, which creates conditions where these savings can be reflected in customer retail rates.

Q. Does regional least-cost dispatch ever provide indications of inefficiency?

A. Yes. One signal that provides information about the potential for regional efficiency improvements is the congestion cost incurred in the market. When congestion costs occur, this information can be used to evaluate whether the costs of transmission upgrades would be more economic than continuing to incur the higher energy supply costs in the market footprint.

Q. Do marginal congestion costs ("MCCs") therefore represent inefficient operations?

A. No, not necessarily. The capability provided by the MISO market to dispatch regional supply given these transmission constraints was a tremendous efficiency improvement compared to prior grid operations. Prior to the regional market, transmission providers withheld delivery capability to ensure reliability because provision of transmission service was a separate operational function from the regional dispatch. Therefore the

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mere existence of congestion costs is an indication of increased grid access to obtain reduced cost energy supply and in itself is not an indication of inefficient operations. For example, if the regional market incurs $10 in congestion cost, but as a result reduces overall energy supply cost by $15, then incurring the congestion cost is a better overall outcome than losing the $5 aggregate savings.

Q. **When might congestion costs indicate inefficient operations?**

A. To illustrate, if we had a perfect grid, with sufficient capability that delivery limitation never occurred, the MCC component of Locational Marginal Price ("LMP") would always be zero. In reality the construction of such a hypothetical grid would be so costly as to be impractical. And as mentioned above some amount of congestion cost indicates that the existing grid resources are being used to the full extent practical. In this regard, the balancing point for long-run efficient operations lands between zero congestion cost and high chronic congestion costs that exceed the hurdle rates for transmission system upgrades.

Q. **How can a transmission proposal be evaluated for its contribution to market efficiencies?**

A. This involves analysis of supply costs with and without the system upgrades associated with the proposal. The tool we used to perform this evaluation is called PROMOD IV ("PROMOD"). PROMOD is a software tool developed by Ventyx that analyzes the effects of various factors including fuel costs, congestion, and generator availability on market prices. As noted by Ventyx, PROMOD performs a security constrained unit commitment and economic dispatch that is co-optimized with operating reserve requirements, similar to how ISOs set schedules and determine prices. LMP may be

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reported for selected nodes, user-defined hubs, or load-weighted or generator-weighted zones; this may be further broken down into a reference price, a congestion price, and a marginal loss price.

In sum, the PROMOD software simulates market dispatch in a manner comparable to the actual security-constrained economic dispatch employed by MISO. To evaluate the contribution of the proposed transmission upgrade to regional market efficiency, PROMOD is used to model regional production cost subject to grid limitations, combined with generation delivery made feasible through the transmission upgrades. This simulates market dispatch in a manner comparable to the actual security-constrained economic dispatch employed by MISO.

Q. Does the PROMOD analysis only evaluate benefits based on reduced congestion costs?

A. No. The total benefits are based on an adjusted production cost analysis. This analysis captures changes to both congestion and energy costs as well as system loss reductions. Congestion cost in total refers to the dollar value of supply cost in excess of that which would have been possible absent limitations on the transmission grid. However, in our analysis we recognize that eliminating the congestion costs associated with supply options is only one aspect to the benefit. The 345 kV Project and the future upgrades eastward will facilitate development of wind generation resources in an area with relatively strong winds on behalf of parties with RPS. (Please see the direct testimony of Ms. King.) By creating the option to site wind generation in an area with higher wind resource, the increased capacity factor of low-cost production also results in a savings on the energy supply component to the PROMOD simulation. I characterize the combined

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savings in energy supply and congestion cost in this analysis as the adjusted production cost savings.

PRODUCTION COST ANALYSIS

Q. Did Applicants perform a production cost analysis for the 345 kV Project?

A. Yes. Applicants conducted a production cost analysis using the PROMOD software discussed above. A copy of the summary report is attached as **Ex.-Applicants-Beuning-2**.

Q. What was your role in the analysis?

A. I was part of the engineering team that developed the scenarios for the analysis and I was responsible for reviewing and confirming the outputs from the PROMOD runs.

Q. In general, what were the results of the analysis?

A. The proposed 345 kV Project, combined with future eastward grid expansion already being planned, has the potential to provide regional economic benefits including adjusted production cost savings and carbon dioxide ("CO_2") emission reductions, particularly for Wisconsin utilities with RPS obligations. In addition, as noted in Ms. King's testimony, the 345 kV Project would also result in higher reduction in system losses compared with alternative scenarios using a 161 kV local transmission link between Southeast Minnesota and La Crosse.

Q. Describe the PROMOD analysis.

A. PROMOD was used to investigate the regional production cost impact of the 345 kV Project as compared to an alternative with 161 kV development, called the 161 kV North Rochester –Briggs Road (revised to serve 750 MW) alternative ("Briggs Road Alternative"), and also assuming future system upgrades contemplated under the MISO Midwest Transmission Expansion Plan ("MTEP"), which expand eastward delivery

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capability from La Crosse, for example through 345 kV system upgrades from La Crosse to Madison. PROMOD is an extremely resource-intensive and time-consuming program, and given the time constraints for the analysis, Applicants narrowed the scenarios used in the transfer analysis in the Supplemental Need Study ("SNS"). In the SNS, Applicants evaluated the immediate change in transfer capability between Minnesota and Wisconsin in the near term across alternatives and future transfer capability under a potential future where the 345 kV system is extended further into Wisconsin. In light of the time constraints referenced above, Applicants simplified the modeling of eastward capacity expansion, but ensured these elements remained consistent between the base case and the change case, in order to pinpoint the relative differences between the 345 kV Project and the Briggs Road 161 kV alternative. In my opinion, the performance of the modeled system with eastward 345 kV expansion is indicative of the type of performance that could be expected.

MISO's regional PROMOD models (for the year 2021) were used to develop the cases for analysis. Existing generation levels were used for the lower voltage alternative and higher levels of wind were used for the 345 kV Project. The reason wind generation levels were adjusted was due to the limitations of the existing system in delivering wind to eastern Wisconsin between the 161 kV alternative case and the higher capability cases with the future 345 kV construction to eastern Wisconsin installed.

As detailed by Ms. King in the transfer analysis, the 345 kV alternative provides increased regional transfer capability over the long term. This increased regional transfer capability accommodates significant generation additions in high capacity factor

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renewable energy zones, such as zones in Southwest Minnesota, North Dakota and South Dakota which can then reliably be delivered to loads in the broader MISO footprint.

Q. Why does your analysis include transmission lines that are not proposed as part of this proceeding?

A. The upgrades which are included in the Project are planned to integrate with future development identified through the MTEP process. Although the 345 kV Project has a higher initial cost than potential alternatives, the upgrade enables future development that will have substantial economic benefit to the area in terms of increased reliability and reduced energy supply costs.

Q. Describe the specific results.

A. The output from the PROMOD cases provided estimated differences in annual MISO production cost in millions of dollars and tons of CO_2 produced. Over the 20 to 40 years beginning in 2019 (the first full year following anticipated in service date of the La Crosse-Madison 345 kV upgrades), the 345 kV Project, with its 345 kV tie to La Crosse, will allow approximately $354 to $445 million in present value benefits relative to the Briggs Road 161 kV alternative for the 345 kV Project under these assumptions. This calculation is provided in **Ex-Applicants-Beuning-3**.

Q. Would you expect the La Crosse 161 kV Alternative to provide similar PROMOD results?

A. Yes. Both the Briggs Road Alternative and the La Crosse 161 kV Alternative have 161 kV ties between Southeast Minnesota and La Crosse with similar electrical performance.

Q: How does this PROMOD analysis relate to the analysis provided in Mr. Tim Noeldner's testimony?

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A: Mr. Noeldner's analysis looked at production of an equivalent amount of energy from wind resources at different geographic locations. A wind generation capital investment in an area with a higher capacity factor produces more energy per invested dollar compared to a lower capacity factor area. This difference in energy production is used to calculate a credit toward the value of transmission necessary to link the high capacity factor source area to the low capacity factor sink area. In contrast, the PROMOD analysis evaluates the production costs for the entire region, factoring in the unit commitment, congestion and loss impacts associated with the modeled scenario. The PROMOD analysis compares one transmission construction scenario (the Briggs Road Alternative, 161 kV case) with a second scenario (the 345 kV case). Both methods are used to illustrate value associated with the transfer capability provided by the 345 kV Project, but the dollar estimates established by the two techniques are not additive.

Q. Based on the PROMOD analysis, what alternative do you recommend?

A. The PROMOD analysis shows that a 161 kV alternative to the Project actually reduces the potential for economic benefits in the long run and could increase risks to regional system reliability. Therefore I recommend that the Commission approve the 345 kV Project as proposed.

CONCLUSION

Q. Does this complete your direct testimony?

A. Yes.

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AN OFFICIAL FILING
BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Joint Application of Dairyland Power Cooperative, Northern States Power Company-Wisconsin, and Wisconsin Public Power, Inc., for Authority to Construct and Place in Service 345 kV Electric Transmission Lines and Electric Substation Facilities for the CapX Twin Cities-Rochester-La Crosse Project, Located in Buffalo, Trempealeau, and La Crosse Counties, Wisconsin

Docket No: 05-CE-136

DIRECT TESTIMONY OF AMANDA KING

INTRODUCTION

Q. Please state your name and business address.

A. My name is Amanda King, and my business address is 414 Nicollet Mall, Minneapolis, Minnesota 55401.

Q. By whom are you employed and in what capacity?

A. I am employed as a Senior Transmission Planning Engineer at Northern States Power Company, a Minnesota corporation ("NSPM"). In that capacity, I serve as the lead planning engineer assigned to the Hampton – Rochester – La Crosse 345 kV Project which consists of a 345 kV transmission line between Hampton, Minnesota and La Crosse, Wisconsin and two 161 kV transmission lines in the Rochester Area ("Hampton – Rochester – La Crosse 345 kV Project" or "345 kV Project").

Q. What portion of the 345 kV Project is under review in this proceeding?

A. The Wisconsin portion of the La Crosse 345 kV Project from Alma to the La Crosse area (the "La Crosse 345 kV Project" or "Project").

N-008-005 Q. **Please describe your educational background, professional experience and current responsibilities, including your role in the 345 kV Project.**

A. I earned a Bachelor of Science degree in Electrical Engineering from Iowa State University in 1999. From 1999 until 2001, I was employed by NSPM as a Development Manager and was responsible for project management of large distribution, substation, and transmission projects from design through construction. Since 2001, I have been employed by NSPM as a Transmission Planning Engineer, with promotion to Senior Transmission Planning Engineer in 2006. My responsibilities include determining required transmission facilities using electric system models for powerflow and voltage/system stability analyses. In addition, I develop and coordinate long term plans to ensure system reliability and efficiency. I am the lead planning engineer for the 345 kV Project. As the lead planning engineer, I have primary responsibility for the engineering analysis supporting the identified needs for this project. I am also primarily responsible for the engineering analysis to support the facilities proposed here to meet those needs. Also since 2004, I have served as NSPM's technical representative for the CapX2020 Technical Team which provides input and guidance on studies to meet the State's transmission needs. This team was originally comprised of CapX2020 engineers but has expanded to include other engineers from transmission-owning utilities in the region and is now under the auspices of the Minnesota Transmission Owners organization. I am the engineer primarily responsible for the technical analyses provided in the Certificate of Public Convenience and Necessity ("CPCN") Application. I was also responsible for the development of writing of the CapX2020 Technical Update study (May 2005) ("Vision Study"). My resume is attached as **Ex.-Applicants-King-1**.

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Q. For whom are you testifying?

A. I am providing testimony on behalf of the Applicants in this proceeding: Northern States Power Company, a Wisconsin corporation ("NSPW"), Dairyland Power Cooperative ("Dairyland"), and WPPI Energy.

Q. What is the purpose of your direct testimony?

A. The purpose of my testimony is to explain the need for the 345 kV Project and the supporting engineering analyses, including analyses of alternatives.

Q. What documents have you prepared for this docket?

A. The primary documents that I prepared are Appendix E of the CPCN Application, called the Transmission Studies Summary Report ("TSSR"), and the Supplemental Need Study ("SNS") dated August 31, 2011, **Ex.-Applicants-King-2**. I have also provided responses to various PSCW and party data requests. In addition, I prepared comments on the Draft Environmental Impact Statement regarding need. Applicants' November 28, 2011 DEIS Comments are included in the testimony of Mr. Tom Hillstrom as **Ex.-Applicants-Hillstrom-8**

Q. Are you sponsoring any exhibits with your testimony?

A. Yes. I am sponsoring the following exhibits to my testimony:

Ex.-Applicants-King-1:	Resume of Amanda King;
Ex.-Applicants-King-2:	SNS, (August 31, 2011) (PSC REF #: 152536);
Ex.-Applicants-King-3:	North American Electric Reliability Corporation ("NERC") TPL-002-0b and TPL-003-0a;
Ex.-Applicants-King-4:	Applicants' Response to PSCW Staff Data Request 04-05 (Oct. 31, 2011) (PSC REF #: 155151 (confidential) and PSC REF: # 155152 (public));

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Ex.-Applicants-King-5:	Applicants' Response to PSCW Staff Data Request 04-07 (Oct. 14, 2011), (PSC REF #:154647,154715);
Ex.-Applicants-King-6:	La Crosse Area Substation Loads, and Rochester Area Substation Loads, historical and forecast (January 2012 update);
Ex.-Applicants-King-7:	Southwest Twin Cities – Granite Falls Transmission Upgrade & MN RES Update Studies;
Ex.-Applicants-King-8:	Capacity Validation Study Report;
Ex.-Applicants-King-9:	Applicants' Response to PSCW Staff Data Request 04-03 (Oct. 7, 2011) (PSC REF #: 154341 (public); PSC REF #: 154339 (confidential)); and
Ex.-Applicants-King-10:	NSPW's Response to PSCW Staff Data Request 02-02 (April 5, 2011) (PSC REF #: 146720).

NEED CRITERIA

Q. What are the state statutory criteria for determining whether a new 345 kV high voltage transmission line is needed?

A. The CPCN statute, Wis. Stat. § 196.491 has two criteria that specifically apply to need:

> (d) Except as provided under par. (e) and s. 196.493, the commission shall approve an application filed under par. (a) 1. for a certificate of public convenience and necessity only if the commission determines all of the following:
>
> 2. The proposed facility satisfies the reasonable needs of the public for an adequate supply of electric energy. This subdivision does not apply to a wholesale merchant plant.
>
> * * *
>
> 3t. For a high-voltage transmission line that is designed for operation at a nominal voltage of 345 kilovolts or more, the high-voltage transmission line provides usage, service or increased regional reliability benefits to the wholesale and retail customers or

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members in this state and the benefits of the high-voltage transmission line are reasonable in relation to the cost of the high-voltage transmission line.

Wis. Stat. § 196.491(3)(d)(2) and (3)(d)(3t).

In addition, the Commission may decline to grant a CPCN to a public utility if the project will:

1. Substantially impair the efficiency of the service of the public utility.

2. Provide facilities unreasonably in excess of the probable future requirements.

3. When placed in operation, add to the cost of service without proportionately increasing the value or available quantity of service unless the public utility waives consideration by the commission, in the fixation of rates, of such consequent increase of cost of service.

Wis. Stat. § 196.49(3)(b), required by Wis. Stat. § 196.491(3)(d)(5).

Q. How does the Project meet these criteria?

A. The Project satisfies the requirements because it will 1) meet existing and long-term load serving requirements in the La Crosse/Winona and Rochester areas; 2) enhance the regional electric system including improved reliability, increased power transfer capability, reduced congestion, lower generation production costs, and reduced system losses; and 3) provide generation outlet support at a cost that is reasonable and prudent for the benefits provided. The Project will satisfy these needs at reasonable cost and provide regional benefits by improving the efficient dispatch of generation resources which will reduce energy costs for wholesale and retail customers in the states of Wisconsin and Minnesota over the long term and provide efficient energy delivery.

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Q. What need factors will your testimony focus on?

A. My testimony and analyses are concentrated on local community service, regional reliability, transfer capability, and generation support. NSPW witness Mr. Stephen Beuning and WPPI Energy witness Mr. Tim Noeldner are providing testimony regarding regional benefits, including production costs analyses.

NEED ANALYSIS

Mandatory Reliability Standards

Q. What reliability standards must Applicants follow when evaluating the performance of the electrical transmission system?

A. As a Wisconsin public utility, NSPW is required to furnish reasonably adequate services and facilities at reasonable and just rates. Federal Energy Regulatory Commission ("FERC") Order No. 693 requires all transmission owners, including Applicants, to comply with a large number of reliability standards, including four transmission planning ("TPL") standards. Reliability criteria is established by the NERC and overseen by FERC. The standards ensure that the regional transmission system can reliably serve customer loads under a variety of conditions. If a transmission owner is not compliant with any TPL standard requirements or related requirements involving NERC reliability criteria, FERC can assess fines ranging from $1,000 per day up to $1 million per day per violation.

The two standards that specifically relate to the need case for the Project are TPL-002-0b ("TPL-002") and TPL-003-0a ("TPL-003"). TPL-002 and TPL-003 are **Ex.-Applicants-King-3**.

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Q. What do these two standards require?

The TPL-002 criteria requires that the system operate without overloads or low voltages in the event of the loss of a single system element (transmission line, transmission transformer, or generator). The TPL-003 criteria requires that the system operate reliably for loss of multiple system elements. For example, as it relates to the Project, if a generating unit is off-line, planning engineers must be able to prove that the system can meet reliability criteria following the next potential outage.

Local Community Reliability

Q. Under what conditions do system planning engineers evaluate the capability of the transmissions system to meet demand?

A. The electrical system is designed to serve the peak demand level. In other words, when planning transmission facilities, system planners determine what the peak demand level will be at any given point in time and identify the facilities required to meet that demand. As part of the CPCN Application process, the historical loads at Winona/La Crosse and Rochester area substations were evaluated and forecasts of future loads were developed to determine whether peak load exceeds the capability of the electrical system under contingency conditions.

Q. What models were developed to analyze the system?

A. Planning engineers created different models for peak and off peak conditions for a set of years. The models were used to build powerflow cases with peak loads for a specific summer case and system topology. The power flow cases systematically run through defined outages and assess whether the loads can be reliably served under all NERC required system conditions. After each contingency, the software identifies facilities that

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became overloaded or voltages that fall below thresholds. Planning engineers then compare the levels at which problems occurred with historical and forecast substation loading information from NSPW's distribution department and Dairyland's member distribution cooperatives.

Planning engineers then took this information and identified potential solutions to alleviate the overloaded facilities and low voltages. These options are tested to determine the most reasonable alternative to address the local needs, considering performance, cost, and high level routing considerations. Planning engineers also assessed how alternatives performed on a regional level.

Q. In conducting these analyses, you stated that engineers made certain assumptions regarding system topology and generation operation. What does this mean in the La Crosse/Winona area?

A. As detailed in the TSSR, we evaluated proposed transmission projects that would affect system performance in the La Crosse/Winona areas and modeled generation based on anticipated operation.

Q. On December 7, 2011, Dairyland announced the retirement of three coal-burning units totaling 60 MW at its Alma Generating Plant. Does this change affect the results of your analyses for La Crosse?

A. No.

Q. Please explain.

A. The original modeling assumed that Alma Units 1-3 were offline. Accordingly, the retirement of those units would not change the modeling results, as they were not dispatched in the powerflow case used to analyze the local community needs.

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Q. **What engineering studies have been undertaken to assess these needs and to develop potential solutions?**

A. There have been three engineering study efforts addressing local load serving issues in the Rochester and Winona/La Crosse areas since 2000. The first was a local study relating to load serving issues in Rochester. The second was a local study relating to load serving issues in the La Crosse area. These two studies were incorporated into the written study of a third effort completed in 2006. The 2006 study, Southeastern Minnesota – Southwestern Wisconsin Reliability Enhancement Study (March 13, 2006), resulted from a joint effort to evaluate potential regional improvements that would meet reliability needs in the Rochester area and the La Crosse/Winona area alike, as well as adding system reliability to the wider southern Minnesota/western Wisconsin region. It was this study that first determined the 345 kV Project was the most reasonable alternative to meet local and regional needs. Applicants subsequently completed the TSSR and a transfer study that is contained in the SNS.

Q. **What are the community electric reliability needs in the Rochester area?**

A. In the Rochester area, electric reliability issues have arisen that are related to population growth and associated increase in electric power demands. If the double circuit 161 kV transmission line from Byron, Minnesota that interconnects to the Maple Leaf and Cascade Creek substations is out of service, the remaining transmission system can only reliably deliver 181 MW of power to area substations. In 2006 the peak load reached 330 MW, and the 2011 peak was 327 MW.

With all local generation operating, the system can support up to 362 MW of demand in the Rochester area should a transmission line be out of service. While local generation

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operated in advance of the next line or power plant outage may support additional demand, running generation for system support to prepare for the next line or power plant to go out of service is not a desirable long-term solution because it is less reliable than transmission. In addition, the energy generated from the older facilities is typically more expensive than power purchased from Midwest Independent Transmission System Operator Inc. ("MISO") competitive markets. To address these needs, additional power sources into the Rochester area are needed.

Q. What are the community electric reliability needs in the Winona/La Crosse area?

A. The electrical system's capacity to meet power demands in these communities is limited when the J.P. Madgett unit (395 MW) at Alma or Genoa-3 (377 MW) is off-line. If the Genoa-3 generator is off-line and the Alma – Marshland 161 kV transmission line is disconnected (a N-2 contingency), the La Crosse area experiences low voltage conditions at approximately 430 MW of load. When load on the system is at or above 430 MW, an outage of a generating unit and a transmission source will cause unacceptable low voltages in the La Crosse area, so low that the French Island oil combustion turbines could not be brought on line. As the La Crosse area load exceeds 500 MW, technical analysis has shown that there is the potential for voltage collapse throughout the wider region. See **Ex.-Applicants-King-4**. Because load above 430 MW cannot be reliably served under this N-2 contingency, to comply with NERC standards, load would have to be interrupted after the first outage to put the system in a condition that it can withstand the next contingency. This mitigation is required under NERC reliability standard TPL-003.

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Q. How do historical load levels in the Winona/La Crosse area compare to this 430 MW critical load level?

A. The non-coincident peak of the area substations in the study area has exceeded 430 MW since 2006 and reached a new high of 465 MW in the summer of 2011, representing a deficit of 35 MW.

Q. How does the new peak in the La Crosse/Winona area compare to other loads in the MISO system?

A. As noted in the SNS on page 29, the new peak is part of a trend for rising power demands, as evidenced by record levels experiences on July 20, 2011:

- In MISO, the demand for power in its 12-state market area peaked at 103,975 MW, exceeding the prior record of 103,246 MWs set on July 31, 2006.
- For its four-state service area, Dairyland exceeded its last peak set in 2010 of 916 MW and reached a new peak demand of 979 MW, a 6.9 percent increase year-over-year.
- The system operated by Xcel Energy and Northern States Power Company, a Minnesota corporation, over a five-state area (Minnesota, North Dakota, South Dakota, Wisconsin, and Michigan) reached a new peak of 9,533 MW of load served, 402 MW above the peak of 9,131 reached in 2010, representing a 4.4 percent increase.

Q. Does Dairyland's planned rebuild of the Genoa—La Crosse 161 kV line affect the performance of the alternatives under consideration?

A. No. The rebuild does not affect the amount of additional local load serving capacity provided by the 345 kV Project and alternatives being evaluated. See **Ex.-Applicants-King-5**.

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Q. Have the Applicants updated the La Crosse area actual substation loads and forecast information?

A. Yes. Historical loads and forecast loads have been tracked and developed since 2006, and utility practice is to update forecasts throughout the year. Therefore, there have been several forecasts submitted during the permitting process. The most recent substation load data previously provided in this docket was in the SNS. The data in the tables provided reflect a 1.18 percent annual increase for 2002 to 2020. The most current substation load table for the La Crosse area, which adds actual loads from 2011, is attached as **Ex.-Applicants-King-6.**

Q. How did Applicants develop the forecasted loads for the years 2012 to 2020?

A. For the substations in the La Crosse/Winona study area, actual loads were reported for 2002, 2006, and 2008 initially, with the growth rate over those years extrapolated by each company through 2020. Known large load additions were included, as well as substations like Holland which were added in 2009. As the Wisconsin CPCN Application was developed, 2009 and 2010 actual loads were added to the report. In the most recent forecast, **Ex.-Applicants-King-6**, for the La Crosse area, Xcel Energy applied a 1.02 percent growth rate to 2011 loads through 2020. Dairyland averaged loads from 2006 to 2011 actual loads and then grew the load at each cooperative's respective growth rate as follows: Vernon Power Cooperative, 0.7 percent, Oakdale Electric Cooperative, 1.5 percent, Tri-County Electric Cooperative, Inc., 0.7 percent, and Riverland Energy Cooperative, 1.1 percent.

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Q. Have Applicants also forecast further into the future?

A. To evaluate the lifespan of alternatives, the loads had to be projected beyond the 2020 timeframe. To achieve this, Applicants took the total study area load, including NSPM and Dairyland substations for 2020 and grew it by 1.17 percent per year through mid-century.

Q. According to Applicants, how is the identified load serving deficit expected to increase over time?

A. As shown on **Ex.-Applicants-King-6**, Applicants forecast that by the year 2020, the deficit in the Winona/La Crosse area will be approximately 100 MW. As load grows the deficit will rise.

Q. Have Applicants also updated the Rochester area load information?

A. Yes. This is included in **Ex.-Applicants-King-6**.

Regional Reliability

Q. What regional reliability considerations did planning engineers consider when developing the 345 kV Project?

A. As described in the TSSR and discussed in more detail in the SNS, there are several regional system considerations including: system efficiency, transfer capability between Wisconsin and Minnesota, congestion relief and economic dispatch of generation resources.

Generation Support

Q. Please describe the generation support needs in the Wisconsin/Minnesota area.

A. In March of 2009, Minnesota transmission owning utilities jointly worked on three transmission planning studies designed to assess transmission needs for supporting wind

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generation integration into the regional transmission system. These studies, Final Report Southwest Twin Cities – Granite Falls Transmission and Upgrade Study/Minnesota RES Update Study and the Capacity Validation Study concluded that additional transfer capability was needed to facilitate development of wind in the MISO footprint, particularly west of Wisconsin. Ex. Applicants King 7 and Ex. Applicants King 8. The studies further concluded that a 345 kV connection between Minnesota and Wisconsin was needed before significant capacity increase could occur. Lastly, the studies found that the 345 kV Project in combination with a line from La Crosse to the Madison area, would increase power transfer capability.

EVALUATION OF ALTERNATIVES

Q. Describe the alternatives Applicants evaluated in this docket.

A. Five lower voltage alternatives (and two revisions) were analyzed:

- The 161 kV La Crosse Alternative: For La Crosse, this alternative includes reconductoring/rebuilding approximately 200 miles of transmission lines in the La Crosse area and building a new 161 kV transmission line across the Mississippi River to connect to the Prairie Island source at Spring Creek Substation. It also includes a 345 kV line from Hampton to North Rochester and two 161 kV lines in the Rochester area to serve the Rochester load serving area ("Rochester Facilities").

- Reconductor Only Alternative (including 345 kV and 161 kV ties for Rochester): This alternative consists of approximately 200 miles of transmission line reconductors and rebuilds in the city of La Crosse and surrounding area and Rochester Facilities.

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- Initial 161 kV North Rochester – Briggs Road Alternative and Revised Alternative: The option includes a 161 kV line from North Rochester to Briggs Road and the Rochester Facilities. This option was first introduced in the TSSR and was shown to have a load serving capability of 550 MW. Following the TSSR, planning engineers analyzed what facilities would be necessary to have this alternative serve load to the same level realized by the 345 kV Project and the La Crosse 161 kV Alternative and concluded that to reach 750 MW load level, the alternative needed to tie in at a new substation near Alma and include all the reconductoring associated with the Reconductor Only option.
- Double Circuit 161 kV North Rochester – Briggs Road Alternative: This option includes a double circuit 161 kV line from North Rochester to Briggs Road and the Rochester Facilities.
- 230 kV North Rochester – Briggs Road Alternative: This alternative includes a 230 kV line from North Rochester to Briggs Road and the Rochester Facilities.

Q. What criteria did Applicants use to compare these alternatives?

A. Applicants considered multiple criteria, including the capacity of each alternative to serve local community reliability needs, the transfer capacity provided, system efficiency, congestion relief, generation support, siting issues, market benefits, and cost. A summary of the load serving, economic value of electric system losses, transfer capability, and siting factors is included in the SNS, **Ex.-Applicants-King-2** at pp. 52-54.

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Load Serving Capability

Q. Starting with local load serving capability. How do the alternatives compare?

A. The 345 kV Project will provide 750 MW of load serving capability in the La Crosse area, a level that will last until mid-century. The areas in Wisconsin that would experience enhanced load serving are Buffalo, Trempealeau, and La Crosse counties, including the communities of Alma, Buffalo City, Fountain City, Arcadia, Galesville, Trempealeau, Holmen, Onalaska, La Crosse, and the surrounding rural areas. Only two of the alternatives, the 161 kV North Rochester – Briggs Road (revised to serve 750 MW) alternative and the La Crosse 161 kV Alternative provide the same capability. The remaining options provide 150 to 200 MW less of capability.

Transfer Capability

Q. How did Applicants assess regional performance of alternatives?

A. For our regional analysis, Applicants conducted a transfer study and a production cost savings analysis. I was responsible for the transfer study. NSPW witness Mr. Beuning is providing testimony regarding the production cost analysis.

Q. How is transfer capability important to regional system operations?

A. As detailed in the SNS, transfer limits between Minnesota and Wisconsin affect system operators' ability to move power in response to a critical contingency or shifts in variable resources such as wind generation. The ability to move power to respond to these conditions enhances system reliability and enables the efficient dispatch of generation across the system.

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Q. What evaluation did you do of short-term and long-term transfer capability for the 345 kV Project?

A. Applicants evaluated the immediate and long-term transfer capability between Wisconsin and Minnesota of each alternative. Specifically, Applicants evaluated what transfer capability would result after construction and what transfer capability could be achieved if a 345 kV line were built to Appleton or Madison. Additional information regarding the engineering analysis is included in the SNS, **Ex.-Applicants-King-2**, and **Ex.-Applicants-King-4** and **Ex.-Applicants-King-3**.

Q. One of the scenarios you listed was a 345 kV line between La Crosse and Madison. Has this connection been studied previously?

A. Yes. In 2005, the CapX2020 group included a La Crosse – Madison connection as part of its Vision Study work. A La Crosse – Madison connection was also included in the 2009 Minnesota RES Update Study ("RES Update") of which Northern States Power Company was a key participants.

More recently, a study by American Transmission Company, Northern States Power Company and Dairyland analyzed the need for a new transmission line from La Crosse, Wisconsin to an endpoint in the Madison area. This study work culminated in the Western Wisconsin Transmission Reliability Study ("WWTRS").

Q. What did the WWTRS conclude?

A. The WWTRS assessed the reliability needs and options in western Wisconsin in the eight- to ten-year future time frame. It concluded that a 345 kV connection between the end-point of the Project (in north La Crosse) and north Madison, among other connections, would provide the most benefits in the region. This study result was

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recently confirmed by MISO which, on December 8, 2011, included the segment from the Briggs Road Substation to the North Madison Substation in its 2011 Midwest Transmission Expansion Plan or "MTEP" and designated it as a "multi-value project" or "MVP" in accordance with the requirements and specifications of MISO's tariff.

Q. Returning to the transfer analysis, please describe the results.

A. The addition of the 345 kV Project or the La Crosse 161 kV Alternative alone increases the thermal transfer capability between Minnesota and Wisconsin by 775-850 MW. However, a 345 kV connection is more robust in that it also provides for additional transfer capability as the 345 kV system is extended to the east. Transfer study analysis indicates the additional capacity, depending on the eastern termination, could reach approximately 1150 MW over current system levels (depending on the eastern terminus). This 1150 MW increase is not realized if a lower voltage alternative is constructed initially. In fact, the lower voltage alternative followed by a 345 kV line to the east of La Crosse would actually reduce thermal transfer capability below current levels by approximately 700 MW. By increasing transfer capability, the 345 kV Project enhances overall regional reliability.

System Efficiency

Q. How did Applicants assess system efficiency?

A. We assessed system efficiency by evaluating system losses. The 345 kV Project presents cost savings and reduced need for new generation capacity over a lower voltage alternative based on a reduction in system losses. The 345 kV Project provides higher loss savings versus the alternatives, from $5 million up to $36 million more in losses savings depending on the alternative. See SNS, **Ex.-Applicants-King-2** at pp. 53-54.

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Congestion

Q. What impact would the 345 kV Project have on congestion?

A. Congestion limits the ability of system operators to dispatch generation in the most economic manner. In the 2010 MTEP, MISO showed that the 345 kV Project relieved generation trapped in Minnesota that was identified in 2010 and 2014 models. Congestion in Wisconsin expands geographically to the east and to the Upper Peninsula of Michigan. Reducing congestion results in lower overall energy costs. This factor is discussed in more detail in Mr. Beuning's testimony and he will be available to answer questions regarding congestion. As shown in the transfer analysis, the lower voltage alternatives reduce transfer capability following any 345 kV transmission system expansion east of La Crosse in the future and therefore would not provide the same congestion relief as the 345 kV Project.

Generation Support

Q. How do the alternatives compare on the generation support factor?

A. Increased transfer capability not only improves system performance and reliability, but it also enables additional generation deliveries into Wisconsin from sources to the west. The 345 kV Project facilitates additional generation deliveries from the wind-rich areas of Minnesota and points west into Wisconsin which, in turn, supports policies favoring the use of renewable energy sources.

Siting

Q. What siting issues were considered when evaluating alternatives?

A. Since 2005, when a 345 kV solution was under study, we recognized it would mean a crossing of the Mississippi River and the U.S. Fish and Wildlife Service's Upper

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Mississippi River National Wildlife and Fish Refuge ("Refuge") by new transmission facilities. With this in mind, planning engineers aimed to minimize the number of crossings by maximizing the transmission capacity that can be created on an existing corridor across this natural barrier, thereby minimizing long-term impacts on environmental resources. Only the 345 kV Project meets this objective. If a lower voltage solution between Minnesota and Wisconsin were approved, it is more likely that additional crossings of the Mississippi River and Refuge would be necessary in the future.

Market Benefits

Q. Another factor you identified is market benefits. Please explain.

A. When high voltage facilities are added to the electrical grid, they impact how energy flows across the grid and the level of delivery losses. Regarding losses: for a given level of power transfer, doubling the voltage of the delivery facility reduces the electrical losses on that facility by a factor of four. So although electric delivery losses occur during any power transfer based on the amount of current flowing on the wires, higher voltage transmission upgrades result in reduced delivery losses for a given quantity of delivered power. Regarding energy flow on the grid: transmission additions result in an increased number of supply alternatives for the system load and this creates the opportunity to reduce the overall cost of energy production. Market efficiencies are explained in further detail by Mr. Beuning in his direct testimony.

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Costs

Q. How do costs of the alternatives compare?

A. When considering capital costs and the value of reduced losses, the 345 kV Project is estimated to cost $507 million. The two alternatives that also provide 750 MW of capability have lower estimated costs: 161 kV North Rochester – Briggs Road (revised to serve 750 MW) ($456 million) alternative and the La Crosse 161 kV Alternative ($491 million). However, these alternatives do not provide an equivalent level of regional reliability and market benefits as the 345 kV Project. Addressing the needs of the Rochester and La Crosse areas simultaneously results in more efficient system planning and can avoid duplication or balkanization of transmission facilities. While the resultant 345 kV Project has higher costs than certain lower voltage alternatives, a holistic solution that jointly addresses the needs of both areas as well as the need for future facilities results in the most efficient system development.

Q. Are the costs of the 345 kV Project justified?

A. When assessing the cost of the 345 kV Project versus alternatives, the total combination of local and regional performance as well as policy benefits should be assessed. When all of these factors are considered, the 345 kV Project is the most prudent investment to address the identified needs.

NON-TRANSMISSION ALTERNATIVES

Q. Did Applicants also evaluate non-transmission alternatives?

A. Yes. Applicants considered generation, including French Island generation, as well as other renewable and non-renewable alternatives.

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Q. What did Applicants conclude about the non-transmission alternatives?

A. As detailed in NSPW's response to PSCW Staff Data Request 02-02, **Ex.-Applicants-King-10**, Applicants concluded that non-transmission options were not reasonable alternatives because they could not meet the identified needs.

Q. What did Applicants conclude regarding the use of French Island generators to increase the capacity of the system to serve the Winona/La Crosse area?

A. We concluded that using the two 70 MW units of generation at the French Island plant (units #3 and #4) is not a reasonable alternative to meet any of the identified needs.

Q. Why?

A. First, generation is less reliable than transmission and therefore is a poor alternative for local load serving needs. Whereas high voltage transmission availability is more than 99.9 percent, the most reliable generation is typically unavailable 7 to 10 percent of the time. Peaking generators, like French Island, are typically unavailable 20 percent of the time or more due to increased maintenance needs. Accordingly, we disagree with the DEIS analysis' suggestion that the reliable load serving capacity of the transmission system serving the greater La Crosse area could be increased from the critical level of 430 MW to 500 MW or 570 MW by relying on 70 MW (Unit #3, which is currently mothballed) and 70 MW (Unit #4) of generation at the French Island plant.

Second, French Island generation would not meet the regional and generation support needs, nor would French Island generation provide transmission efficiencies or market benefits. Only a 345 kV solution can meet these needs as detailed in the SNS.

Third, one of the French Island units, #3, has been mothballed indefinitely and is not operational.

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Lastly, there are operational costs and environmental considerations that make reliance on French Island an inferior alternative.

Q. Did Applicants consider a "no build" alternative to the 345 kV Project for the La Crosse/Winona area and surrounding region?

A. Yes. The no-build alternative was considered and found to be unworkable. In the La Crosse/Winona area, the peak loading on the system under contingency conditions already exceeds system capability by 35 MW and this deficiency will continue to grow absent system improvements. Regionally, if the 345 kV Project is not constructed at 345 kV, transfer capability will be limited which will result in higher energy prices as detailed in Mr. Beuning's testimony, reduced capability to deliver wind from Minnesota and areas further west into Wisconsin and higher system losses. In sum, if the Project is not constructed, there will be no improvement in local reliability in the communities at risk and no regional benefits.

OTHER NEED CONSIDERATIONS

Q. Will the 345 kV Project provide capacity beyond the electrical needs of the local communities and the region?

A. No. The 345 kV Project will serve immediate and long-term demand for electricity in the Winona/La Crosse and Rochester areas and meet broader regional needs based on reasonable existing and future scenarios and to provide capacity for future transmission system expansions.

Q. Will the 345 kV Project impair the efficiency of service?

A. No. In fact, the 345 kV Project will improve overall efficiency by reducing system losses.

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CONCLUSION

Q. Does this complete your direct testimony?

A. Yes.

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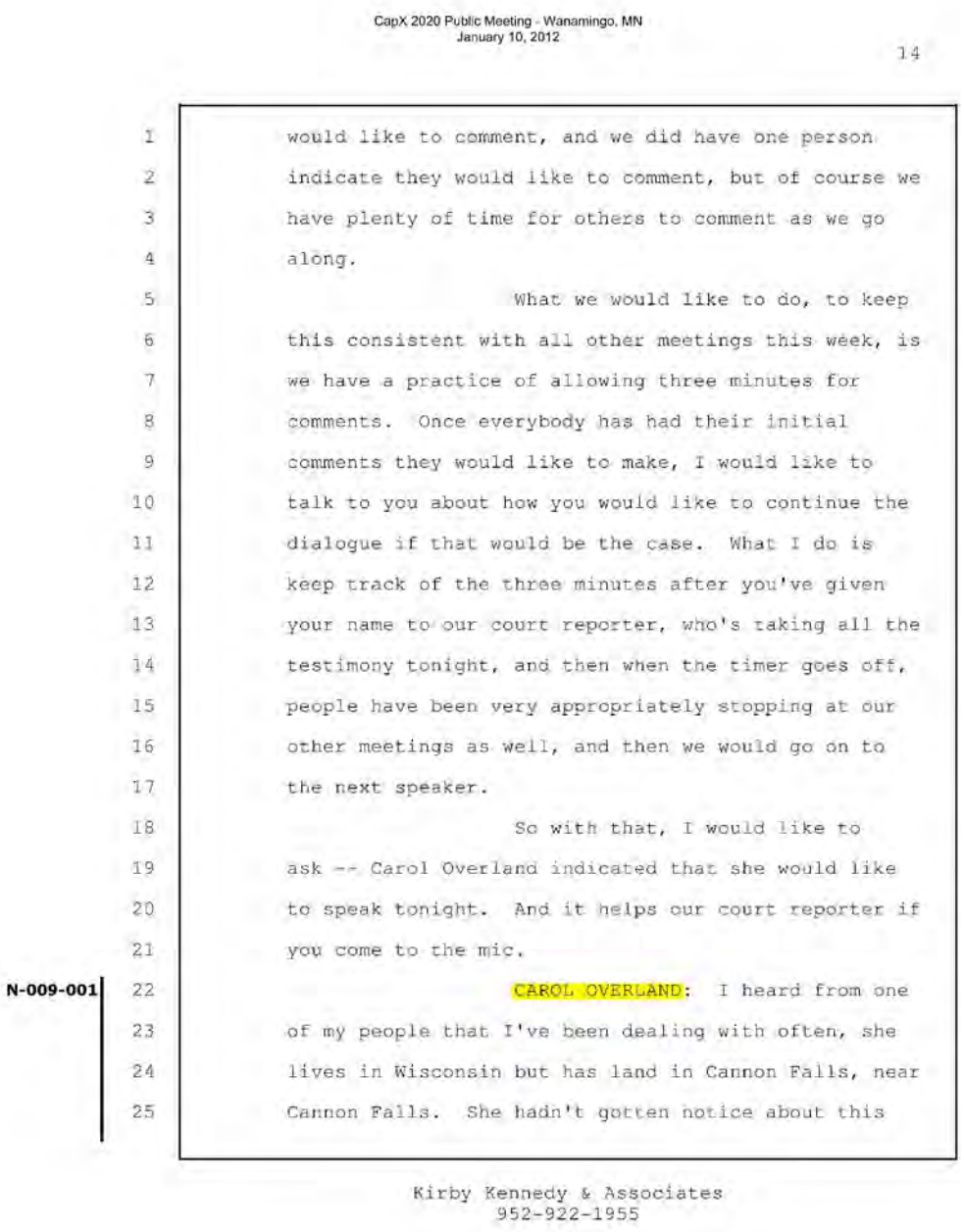

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would like to comment, and we did have one person indicate they would like to comment, but of course we have plenty of time for others to comment as we go along.

What we would like to do, to keep this consistent with all other meetings this week, is we have a practice of allowing three minutes for comments. Once everybody has had their initial comments they would like to make, I would like to talk to you about how you would like to continue the dialogue if that would be the case. What I do is keep track of the three minutes after you've given your name to our court reporter, who's taking all the testimony tonight, and then when the timer goes off, people have been very appropriately stopping at our other meetings as well, and then we would go on to the next speaker.

So with that, I would like to ask -- Carol Overland indicated that she would like to speak tonight. And it helps our court reporter if you come to the mic.

N-009-001 CAROL OVERLAND: I heard from one of my people that I've been dealing with often, she lives in Wisconsin but has land in Cannon Falls, near Cannon Falls. She hadn't gotten notice about this

Kirby Kennedy & Associates
952-922-1955

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Please refer to Appendix C, Table C-4, Comment Category D: Consultation, Coordination, and Public Involvement, D02-Notices and Meetings.

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meeting, and she is a directly affected landowner. So I was wondering how the list came about for notice? She would be writing in her own comment. But I was wondering how that -- how people were notified, how the names came together?

MS. STRENGTH: Typically we don't respond, but since this is a question about process, I'll touch on this at this time. The directly affected landowners within a certain distance of the proposed routes were sent mailings. Otherwise it is typical practice to do newspaper notices as well as the federal Register notice to get information out about public meetings and the comment period.

CAROL OVERLAND: So people that would potentially have any of the routes cross their land should have received a notice?

MS. STRENGTH: Correct.

CAROL OVERLAND: Okay. And then how far from --

MS. STRENGTH: I would have to look back at the information when we set up that mailing list. I don't recall at this point what it is, but --

CAROL OVERLAND: Okay. And I'll get more -- she will give her information when she

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writes her comments. Okay. That's it.

MS. RICHTER: Thank you, Carol. Would anybody else that's come to join us tonight like to say a few words? Comments on one of the routes? Comments on the EIS aspects of it? Content? Completion of it? Concerns you may have? Concerns you may have heard from fellow residents? Neighbors? Others?

STEPHEN HACKMAN: I will.

MS. RICHTER: Please come forward. And if you could give us the name, that would be great.

STEPHEN HACKMAN: My name is Stephen, S-T-P-E-P-H-E-N, Hackman, H-A-C-K-M-A-N. I live in rural route Mazeppa. And I was just looking through the document here on reliability, the first section, and I was wondering -- to me it seems like it falls a little short as far as -- reliability is not simply the number of faults, but the duration of faults. And I think our reference to how long we can get -- will it take to get the system back online if something should happen. Which to me would be a direct -- is it by a road, for example? Is it by a road? Can we get to it? And I think that -- I'm basing my -- I spent 20 years as an aircraft

STEPHEN HACKMAN: See where this goes.

MS. RICHTER: Carol, would you like some more time?

CAROL OVERLAND: Sure, why not. On page 96 there's reference to the eagles.

MS. RICHTER: If it's acceptable to everyone present, do you think -- what, do you need another five minutes or something, Carol?

CAROL OVERLAND: Three is fine.

MS. RICHTER: If it's acceptable to the group, I won't time this next session of sharing.

CAROL OVERLAND: I want to encourage people, warm the crowd up a little bit.

MS. RICHTER: That would be fine.

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CAROL OVERLAND: On page 96 there's this cute little chart about the crossings, and it lists Alma crossing, Winona crossing, La Crescent crossing, and what is important here is that each of these three document instances of eagles, or large numbers of migratory birds. The U.S. Fish & Wildlife comment on the EIS for Wisconsin said you really ought to have -- you can't be having transmission infrastructures within two miles of

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Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I03-Birds.

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important eagle use areas, were the terms they use. I would submit a copy of that for the record.

But clearly from that, in the Alma crossing, two active eagle nests on the Minnesota side, one adjacent to the existing line, and one 1,800 feet from the corridor, that is a little -- not quite two miles. So there's a problem there as well as with the other sites. Anywhere you cross the Mississippi River, you are going to be having these eagle problems. And that's not taken into account here. And none of these sites are in compliance with the U.S. Fish & Wildlife guidelines there. And that's it for now. Next?

MS. RICHTER: Okay. Steve, would you like to comment further? Your comment on reliability or something else.

STEPHEN HACKMAN: I thank for the time being, I've probably covered the reliability. I want to make sure -- I don't know where we left off. Maybe summarize again. In my experience, access ability means shorter duration of faults, which is cheaper. I have -- it's better for the ratepayer, and now I understand the federal taxpayer is going to be involved. And maybe that'll -- that would end the reliability comments.

MS. RICHTER: Carol, I don't have anybody else on my list. So you can have the mic for three minutes, then we'll open the mic for additional comments.

N-010-001 CAROL OVERLAND: Hello, again. Carol Overland, as you know. Third time around now. I wanted to present for the record the U.S. Fish & Wildlife comment to the Public Service Commission of Wisconsin dated December 22nd, 2011. And in particular -- let's see here. They recommend on page 8, and I'm putting -- marking it so you can't miss it. That eagle nests -- I mean, the transmission infrastructure be at least two miles from potential -- "activities that disturb roosting or foraging eagles are prohibited under the Bald and Golden Eagle Protection Act. Therefore, we also recommend surveys be completed for foraging, roosting, or wintering areas within two miles of all potential line placements. So they want to keep transmission lines at least two miles away from important eagle use areas." And that's on page 8 of the US Fish & Wildlife comment.

This was issued back in Brookings to Hampton route regarding eagles. And here on page 96 on the EIS you have a chart, and it shows very

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Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I03-Birds.

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clearly that eagles are an issue at each crossing. And there's no justification. There's only one crossing here, only the Alma crossing is proposed, and your own EIS shows that any crossing is a problem for eagles. And I'll stop there.

MS. RICHTER: Thank you. Some other people just arrived. What we are doing now is receiving any comments you would like to place on the record. And I don't know if anybody that just arrived would like to comment, but if so, please indicate and come forward. Is there anybody else in the audience that would now like to comment after having walked around and learned some additional information? Okay. Is there anybody that has commented that would like to comment again? That's also welcome. Yes, ma'am, come forward, please. You arrived a little after I gave the instructions. We allow three minutes now for your opening remarks, but we'll have plenty of time.

JOYCE OSBORNE: So can I just give it to somebody?

MS. RICHTER: Rather than reading it? Would you like to read it for the record?

JOYCE OSBORNE: Well, would it go in any way?

PSC REF#:157730

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Twin Cities Field Office
4101 American Blvd E.
Bloomington, Minnesota 55425-1665

December 22, 2011

William Fannucchi
Docket Coordinator
Public Service Commission
P.O. Box 7854
Madison, Wisconsin 53707-7854

Dear Mr. Fannucchi:

N-010-002 This letter contains U.S. Fish and Wildlife Service's (Service) comments on the Alma–La Crosse 345 kV Transmission Project Draft Environmental Impact Statement [(DEIS, Public Service Commission of Wisconsin (PSCW)] docket number 5-CE-136). The DEIS assesses the impacts of a new 345 kilovolt (kV) electric transmission line and substation, submitted as part of the CapX2020 Transmission Expansion Initiative (CapX2020) by three Wisconsin electric utilities (applicants) – Northern States Power Company–Wisconsin (NSPW), Dairyland Power Cooperative (DPC), and WPPI Energy (WPPI). In Wisconsin the 345 kV line would extend from the Minnesota boundary in the Mississippi River west of Alma, Wisconsin, in Buffalo County, through Trempealeau County to a new 345/161 kV substation, known as the Briggs Road Substation, to be built on the southwest side of Holmen, Wisconsin, in La Crosse County.

Upper Mississippi River National Wildlife and Fish Refuge and Trempealeau National Wildlife Refuge – Statutory Context

The proposed routes include sections that would cross through and near Upper Mississippi River National Wildlife & Fish Refuge (Upper Mississippi River NFWR). Congress established the Refuge on June 7, 1924 "a. as a refuge and breeding place for migratory birds included in the convention between the United States and Great Britain for the protection of migratory birds, concluded August 16, 1916, and b. to such extent as the Secretary of Interior may by regulations prescribe, as a refuge and breeding place for other wild birds, game animals, fur-bearing animals, and for the conservation of wild flowers and flowering plants, and c. to such extent as the Secretary of Interior may by regulations prescribe as a refuge and breeding place for fish and other aquatic animal life."

The Upper Mississippi River NFWR and the Trempealeau National Wildlife Refuge, which lies near a section of one proposed route, are part of the National Wildlife Refuge System, which has its beginning in 1903 when President Theodore Roosevelt used an executive order to set aside tiny Pelican Island in Florida as a refuge and breeding ground for birds. The system has grown since then to over 550 refuges, conserving critical habitats for all kinds of fish and wildlife across all 50 states. "Upper Miss" is the flagship refuge of the Mississippi Flyway, where an

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Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I01-General/Other.

N-010-002

estimated 40 percent of the North American Continent's waterfowl and a substantial portion of its other migratory birds travel, rest, feed and nest each year.

The mission of the National Wildlife Refuge System, as defined in the Refuge Improvement Act of 1997, is "to administer a national network of lands and waters for the conservation, management and where appropriate, restoration of fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans." The refuge system is administered by the U.S. Fish and Wildlife Service, an agency of the Department of the Interior, with the stated mission of "working with others to conserve, protect and enhance fish, wildlife and plants for the continuing benefit of the American people."

Under the National Environmental Policy Act of 1969 and the National Wildlife Refuge Improvement Act of 1997, major actions affecting the environment require full consideration of potential impacts, public involvement and an interdisciplinary approach to decision-making that considers a reasonable range of alternatives. Decisions reached that affect refuge lands and waters must meet certain standards relative to compatibility, biological integrity, diversity and environmental health. Wherever possible, efforts must be made to avoid adverse impacts by selecting least damaging alternatives to public trust resources.

Migratory Birds/Bald and Golden Eagles – Statutory Context

The Service has the legal mandate and the trust responsibility to maintain healthy migratory bird populations for the benefit of the American public and is authorized by more than 25 primary conventions, treaties, and laws to ensure the conservation of more than 800 species of migratory birds and their habitats. The Service is committed to undertaking an unprecedented level of cooperation and coordination to protect and conserve these international treasures.

Originally passed in 1940, the Bald and Golden Eagle Protection Act provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle ((*Aquila chrysaetos*) by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit (16 U.S.C. 668(a); 50 CFR 22). "Take" includes pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb (16 U.S.C. 668c; 50 CFR 22.3).

Endangered Species Act – Statutory Context

When Congress passed the Endangered Species Act (ESA) in 1973, it recognized that our rich natural heritage of "esthetic, ecological, educational, recreational, and scientific value to our Nation and its people." The purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. The Service has primary responsibility for terrestrial and freshwater organisms listed under the ESA. Partnerships with States are critical to our efforts to conserve listed species. Section 6 of the ESA encourages States to develop and maintain conservation programs for threatened and endangered species.

N-010-002 In addition to endangered and threatened species, the Service also maintains a list of "candidate" species. These are species for which the FWS has enough information to warrant proposing them for listing but is precluded from doing so by higher listing priorities. While listing actions of higher priority go forward, the FWS works with States, Tribes, private landowners, private partners, and other Federal agencies to carry out conservation actions for these species to prevent further decline and possibly eliminate the need for listing. Conservation of candidate species maximizes management options for landowners and for the species, minimizes the cost of recovery, and reduces the potential for restrictive land use policies that may be necessary in the future.

Comments on Proposed Routes

Our comments below focus on the three major routes proposed by the applicants – the Q1-Highway 35 Route, the Q1-Galesville Route, and the Arcadia Route. We also provide comments on the "Original Q1 Route," which was not proposed by the applicants, but was described in the DEIS.

N-010-003 **Q1–Highway 35 Route**

"The surest ways to prevent birds from colliding with a proposed power line are either not to build it, to bury it underground, or to route it well away from areas known or considered likely to support collision-prone species" (Jenkins et al. 2010). From a wildlife management perspective, and particularly focusing on Service trust species that circulate out into the surrounding countryside from state and federal public lands, alternatives that route power lines well away from the Mississippi River corridor (i.e., Arcadia and Blair alternatives) are most likely to minimize impacts. Power line routes should be located as far as possible from the Refuge, wooded bluffs, floodplain wetlands and lower stream reaches that form the complex habitat matrix that buffers the Refuge and helps preserve water quality and scenic beauty. Burying, removal or doubling of lines should be considered, wherever feasible and appropriate.

As is well described in the DEIS, the Q1-Highway 35 Route would have substantial adverse impacts to migratory birds, large and important forested wetlands in the Black River bottoms, and to the eastern massasauga rattlesnake (*Sistrurus catenatus*), an official candidate for listing under the Endangered Species Act. As is stated in the DEIS (p. 130), the Q1-Highway 35 Route "… is located close to, and in some place adjacent to, a number of large and important federal- and state-owned natural resource areas" and would cross the Refuge in three locations.

The Service has a number of concerns that cumulatively underscore risks and potential ecological costs to migratory birds of routing the 345 kV transmission line near the Mississippi River.

- There is a large chicken production plant in Arcadia and a number of chicken production barns between Buffalo Country Road P and the Black River. These producers spread chicken waste, including carcasses, in fields from Arcadia to Galesville and along Wisconsin State Highway 35. It is not unusual to see 50-100 bald eagles sitting in these

N-010-003

Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I04-Special Status Species.

N-010-003

fields eating chicken remains. Several hundred bald eagles may move back and forth daily between these fields and the Mississippi River, where they normally roost, nest and fish. The abundant and readily available food source on surrounding agricultural lands is a powerful attractant. Under frequently foggy or otherwise inclement weather conditions in spring or fall when the eagles are most abundant, this attraction could present significant strike hazards where the 345 kV line would closely parallel the Mississippi River or other areas where eagles have gathered to roost or forage. More thorough investigation of these potential impacts is needed for the Q1-Highway 35 and Q1-Galesville Routes.

- Substantial numbers of waterfowl, including ducks and geese, as well as sandhill cranes move between the agricultural fields and the Refuge, especially around dawn and dusk. These birds are flying from tree-top height to an altitude of a few hundred feet as they cross to and from the Mississippi River. Existing power lines paralleling or crossing the river are generally at or below tree-top height. Building additional lines that rise more than twice the height of the trees may have the effect of "fencing" in the river. The potential for bird strikes, especially for large birds like geese and ducks, cranes and herons, and eagles and hawks, will increase. Moreover, flight patterns of waterfowl may be significantly altered. Some waterfowl may avoid flying over power lines in open (e.g., marsh) habitats, preferring instead to fly over the lines where they cross through forested habitats and are below tree-top levels (Shimada 2001). The dense fog that often blankets the river and surrounding lands can compound the hazard. For each alternative, the final EIS should evaluate the relative impacts on daily or seasonal flight patterns linking birds that rest or roost along the river to agricultural fields where they traditionally feed or search for prey.

- Because the river corridor and adjoining bluffs or farmlands are frequently blanketed with thick fog, even at night, at dusk or dawn, when songbirds may be using the tops of trees to orient their flight path and elevation, power lines or towers extending well above the tree tops may present a significant strike hazard. In 1980, a significant bird strike was documented at a single television transmission tower near Galesville, WI. An estimated 3,000-5,000 songbirds were killed on a foggy night in August when they struck the tower and support wires. The frequency of such events is unknown because systematic searches or studies are rare.

N-010-004

Eastern Massasauga

Conservation of eastern massasauga in and around the Van Loon Wildlife Area and the Nelson-Trevino Research Natural Area while the species is still just a candidate for listing under the Endangered Species Act may maximize management options for all landowners whose lands are inhabited by the species and may avoid or minimize the cost of actions needed to recover the species in the future. If further consideration is given to the Q1–Highway 35 Route, surveys for eastern massasauga should be conducted in the area that would be directly and indirectly affected by project activities. The survey areas should be identified with assistance from the Service and the WDNR. Indirect effects may result, for example, from invasive species that occupy the site after construction of the project is complete. The applicants should design surveys in

N-010-004

Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I04-Special Status Species.

N-010-004 coordination with the Service and Wisconsin Department of Natural Resources. If the Q1-Highway 35 route is selected, the applicants should also develop measures to avoid, minimize, and mitigate adverse effects to eastern massasauga in coordination with the two resource agencies.

U.S. Fish and Wildlife Service's protocol for conducting surveys for eastern massasauga is available on the Internet - http://www.fws.gov/midwest/endangered/reptiles/eama-survey.html. This protocol is now about ten years old, however, and should be used with the following qualifications, based on new information:

- Begin monitoring soil surface temperatures no later than one week after the first spring thaw (i.e., when soil surface temperatures first exceed zero degrees Celsius). Monitoring soil temperatures is especially important when weather is unseasonably warm or rainy because soil temperatures may rise quickly under those conditions. Robust monitoring of soil surface temperatures is important to ensure that survey effort is maximized during the 3-4 week period after eastern massasaugas have left their burrows and have not yet dispersed
- Eastern massasaugas begin leaving burrows when surface soil temperatures rise to about 11-12 degrees Celsius. Therefore, begin surveys when surface soil temperatures reach 9-12 degrees. Surveys should be conducted before eastern massasaugas disperse – within the four weeks after surface soil temperatures reach 12 degrees Celsius. Eastern massasaugas are most likely to be detected during this period.
- At least 100 hours of survey effort may be needed to detect eastern massasauga where populations are small.

Additional information is available in our handbook for land managers (http://www.fws.gov/midwest/endangered/reptiles/pdf/eama-mgmt-guide.pdf) and at our website, http://www.fws.gov/midwest/Endangered/reptiles/index.html#massasauga.

Finally, the attached draft 'recovery scorecard', produced by biologists in our Chicago, Illinois Field Office, also contains avoidance, minimization, and mitigation measures that may be useful and applicable to the proposed action, depending on final project design.

N-010-005 **Blair Route**
An existing 161kV line and right-of-way runs from Alma to Blair, with an additional segment running south to Ettrick and Holmen. This line was eliminated from consideration early in the project primarily because it was judged to be somewhat longer and more costly than other alternatives. There are, however, other considerations besides length and cost that need to be fully evaluated. We recommend that the Blair option be fully analyzed in the final EIS for the following reasons:

- The length of the Blair option is only slightly longer than the Arcadia option and the entire Blair route apparently follows established 161kV routes across existing easements, where impacts are already present. This suggests potential savings in both impacts and costs.

N-010-005

Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C12-Blair Route.

N-010-005

- The Blair option places the line the greatest possible distance from the refuge and Mississippi River corridor, where ecological as well as some economic impacts are likely to be greatest. By avoiding areas affected by high fog and poor visibility at different times of the day and year, there is less likelihood that bird strikes will occur. There is also reduced impact to residences, communities and farms concentrated along the Great River Road and National Scenic Byway, which generate millions of dollars of tourism and recreation revenues in this area alone.
- As with the Arcadia Route, the Blair route would minimize habitat destruction, species disturbance and impacts to wetlands in the vicinity of the refuge and to the Black River bottomlands and the Wisconsin Department of Natural Resources' Van Loon Wildlife Area. The Blair route would primarily cross agricultural land, where most crop production could still be sustained on these regularly disturbed lands. A cursory inspection of land use and density of human habitation from aerial photos suggests that, in considering general impacts and cost and benefit tradeoffs, further analysis and consideration of this route is warranted.

N-010-006

Q1-Galesville Route

This route would avoid the significant adverse impacts to the Black River bottoms and to the Refuge that would result from implementation of the Q1-Highway 35 Route. The Q1-Galesville route, however, closely parallels the Mississippi River for much of its length and would result in substantial impacts to migratory bird habitat and would present significant risks to birds flying to and from Refuge lands. Therefore, our comments on the Q1-Highway 35 Route above that focus on the hazards of placing the new 345 kV line near the river also generally apply to this proposed route.

Arcadia Route

The Arcadia route would avoid the Mississippi River corridor "and the Black River bottomlands and the Van Loon Wildlife Area almost entirely" (DEIS, p. XXI). The Arcadia Route would cause adverse impacts to migratory birds by destroying and altering upland forest, but bird collision risk for the 345 kV line may be the least among the proposed routes due to its distance from the Mississippi River.

N-010-007

Original Q1 Route

The applicants did not propose the "Original Q1 Route", but the DEIS includes "comparable information" regarding this route "so that the Commission can make informed decisions if it determines that it should be considered." The Original Q1 Route (also referred to in the DEIS as the "Q1 Route") would follow an existing power line that runs through an expired right-of-way (ROW) on the Upper Mississippi River NWFR.

The Service does not regard the Original Q1 Route as a viable alternative. Regulations and policy concerning uses on national wildlife refuges prohibit new uses or projects that fragment habitat and such projects include roads, bridges, and power lines. Addition of the 345 kV line through this route would approximately double the width of the current (expired) ROW through the Refuge, would require additional clearing of approximately 5 acres of forested wetlands,

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N-010-006

Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I03-Birds.

N-010-007

The original Q1 Route alignment through the Black River Bottoms is not evaluated as an alternative for the Proposal in the EIS.

N-010-007 introduce additional lines that would increase the likelihood of bird collisions, and would likely cause adverse effects to eastern massasauga.

There are practicable alternatives to placement of the 345 kV line through the expired right-of-way on the Refuge. Therefore, the Service stands by the position stated in Refuge Manager Kevin Foerster's 16 August 2010 letter to Mr. Thomas Hillstrom (Xcel Energy) that expansion of the expired right-of-way to accommodate a rebuild of the 161 kV line and the new 345 kV line should not be considered as a viable alternative. This position was reaffirmed in Regional Director Tom Melius's 7 December 2011 letter to Ms. Stephanie Strength (USDA-Rural Utilities Service). The Service's position regarding this route is well summarized in the DEIS (p. 131).

N-010-008 **Effects to Bald Eagles and Other Migratory Birds**

Take of bald eagles and golden eagles is prohibited by the Bald and Golden Eagle Protection Act (BGEPA). Under BGEPA, take means pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb. The law defines "disturb" as, "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." Take is prohibited even if it results from, but is not the purpose of, carrying out an otherwise lawful activity.

It is likely that the proposed action, regardless, of which proposed route is selected, will disturb nesting or wintering bald eagles; impacts to golden eagles, which spend winters in the project area, is also possible. Therefore, we would recommend that the applicants contact the Service's eagle permits coordinator for Minnesota and Wisconsin, Ms. Margaret Rheude, at (612) 725-3548 ext. 2202, to discuss the potential need for a BGEPA permit. Please note that while permits are available for disturbance and unintentional mortality of bald eagles, no permits currently exist for take of the eastern population of golden eagles.

Bald eagles may construct new nests within route alternative corridors before construction begins. In addition, the project may result in the disturbance of nesting, foraging, or roosting bald eagles or other forms of take even if the route most favorable to eagles is selected. In the National Bald Eagle Management Guidelines(U.S. Fish and Wildlife Service 2007), the Service recommends siting transmission utility lines away from nests, foraging areas, and communal roost sites in order to avoid collisions, and to bury utility lines in important eagle areas. To ensure that locations where project activities may disturb nesting bald eagles are completely and correctly described, it will be necessary for the applicant to develop accurate and up-to-date information regarding the precise locations of bald eagle nests and other Important Eagle Use Areas (see below) in proximity to proposed power line routes.

Surveys should be conducted to ensure that likely impacts of the project to bald and golden eagles are well understood before project construction. Bald eagles typically complete construction of new nests in central and southwestern Wisconsin by March 31. Therefore, we recommend conducting aerial surveys for bald eagle nests during the month of April that

N-010-008

Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I03-Birds.

N-010-008 immediately precedes any planned construction activities. If construction on a power line segment is planned to begin in July, for example, an analysis of potential impacts to nesting bald eagles should be based on an aerial survey conducted during the immediately preceding April. The Implementation Guidance for Eagle Take Permits under 50 CFR 22.26 and 50 CFR 22.27 indicates that because breeding home ranges of bald eagles can extend up to two miles from the nest, new potentially lethal infrastructure should be sited at least two miles away from Important Eagle Use Areas. Therefore, we recommend surveying all areas within two miles of proposed power line routes. Nests of other migratory birds, especially other raptors and colonial nesting waterbirds [e.g., great blue heron *Ardea herodias*)], should also be noted. In addition, surveys for wintering golden eagles should be conducted throughout the project corridor. Golden eagle surveys should be planned in coordination with the Service, Wisconsin DNR, and the National Eagle Center in Wabasha, Minnesota. The National Eagle Center has an ongoing project, in cooperation with Minnesota Audubon, Wisconsin DNR, and Minnesota DNR to track and study golden eagles wintering along the Upper Mississippi River.

Nests are only one component of Important Eagle Use Areas, which are defined under Code of Federal Regulations (50 Section 22.3) as, "an eagle nest, foraging area, or communal roost site that eagles rely on for breeding, sheltering, or feeding, and the landscape features surrounding such a nest, foraging area, or roost site that are essential for the continued viability of the site for breeding, feeding, or sheltering eagles." Activities that disturb roosting or foraging eagles are prohibited under the Bald and Golden Eagle Protection Act. Therefore, we also recommend surveys be completed for foraging, roosting, or wintering areas within two miles of all potential line placements. Use of these locations by bald eagles can change throughout the year; therefore, we recommend a fall (pre-ice-up) and a winter (post-ice-out) survey to determine the location and use of these areas by bald eagles. Activity of other migratory birds should also be noted at this time, including waterfowl and water bird concentration areas.

Bird Collisions with Power Lines

The DEIS too briefly addresses the nature and magnitude of the risk to birds posed by power lines placed near the heavily used Mississippi River corridor and over the Black River. Birds in the following groups are most susceptible to power line collisions in the project area: large ducks, geese and swans, pelicans, large herons and waders, rails, cranes, passerines (songbirds), and solitary, high-speed predators such as falcons.

Within each of these groups, the following species are either common or abundant during at least one season in the project area, especially on and along the Mississippi River and Black River bottomlands (U.S. Fish and Wildlife Service 2006):

- Large ducks (>1000 g) – redhead, red-breasted merganser, mallard, American black duck, canvasback, and common merganser
- Geese – Canada goose
- Swans – tundra swan
- Pelicans – American white pelican
- Large herons and waders – Great egret and great blue heron
- Rails – American coot, Virginia rail, and sora

N-010-008

- Cranes – sandhill cranes
- Solitary, high speed predators – American kestrel and peregrine falcons

There are also 63 species of Passerine (songbird) species that are common or abundant on the Refuge during one or more seasons (U.S. Fish and Wildlife Service 2006).

On June 26, 2001, a nonessential experimental population of the whooping crane was designated under the Endangered Species Act in a 20-state area of the eastern United States including Wisconsin and Minnesota. Whooping cranes have been released in Wisconsin since 2001 and currently the Midwest flock numbers about 100 birds. Whooping cranes that are members of this population sometimes range widely from the core of their range near Necedah, WI and occasionally use shallow wetland feeding habitat available along the Mississippi River.

Jenkins et al. (2010) make some useful generalizations that should be addressed in the final EIS to assess and compare the levels of hazard that the various alternatives would pose to migratory birds:

- "Routing lines over or close to water bodies is clearly problematic…";
- "…certain topographic features – valley heads, ridge tops – are probably also high risk options";
- "lines should be kept as low as possible, (ii) span lengths should be kept as short as possible, (iii) cabling used should be as thick as possible, (iv) vertically separated arrays of lines should be avoided as much as possible, (v) lines of similar height and structure with common sources and destinations should run in close parallel in effectively a common servitude, and (vi) lines with very different heights and configurations should be kept well apart." (Jenkins et al. 2010, p. 274).

This additional information should also be considered in the final EIS:

- Local resident waterbirds may fly higher at night than during the day (Deng & Frederick 2001). Therefore, reducing the height of power lines may at least partially offset the increased hazard that the lines pose to birds that fly at night (e.g., great blue herons, black-crowned night herons, etc.).

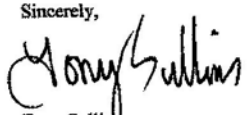
Minimization and Mitigation of Bird Electrocutions and Collisions

We recommend that the applicants follow recommendations made by Avian Power Line Interaction Committee (Avian Power Line Interaction Committee & U.S. Fish and Wildlife Service 2005; Avian Power Line Interaction Committee (APLIC) 1994) to minimize and mitigate impacts to birds that may result from collisions, electrocutions, and other factors. According to the Avian Power Line Interaction Committee an updated edition of one of these resources – *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994* – will be available soon. We assume that this updated document will contain improved measures to mitigate bird collisions. We recommend that the applicants determine whether the project's structure designs are consistent with any changes from the 1994 document and, if not, to modify any structure designs to further reduce the likelihood of bird collisions, as appropriate.

N-010-008 The DEIS mentions the use of bird flight diverters to reduce the risk of bird collisions with the power lines. Based on the review by Jenkins et al. (2010), diverters should thicken the appearance of the line by at least 20 cm over a length of at least 10–20 cm and be placed with sufficient regularity (at least every 5–10 m) on either the earth wires (preferably) or the conductors to lower collision rates.

Thank you for the opportunity to provide comments on the DEIS. Please contact Phil Delphey at (612)725-3548, extension 2206, if you have any questions regarding these comments.

Sincerely,



Tony Sullins
Field Office Supervisor

cc: Mr. Kevin Foerster, Upper Mississippi River National Wildlife and Fish Refuge, Winona, MN
Ms. Vickie Hirschboeck, Trempealeau National Wildlife Refuge, Trempealeau, WI
Mr. Pete Fasbender, U.S. Fish and Wildlife Service, Green Bay, WI

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Avian Power Line Interaction Committee, and U.S. Fish and Wildlife Service. 2005. Avian Protection Plan (APP) Guidelines. The Edison Electric Institute, Washington, DC. 84 p.

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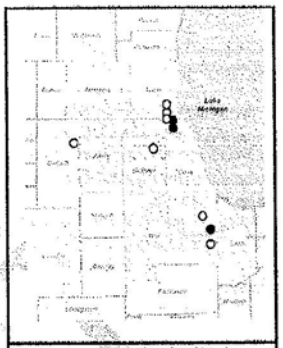
U.S. Fish and Wildlife Service. 2007. National bald eagle management guidelines 23 p.

N-010-009

Eastern Massasauga Rattlesnake

(*Sistrurus c. catenatus*)



Eastern massasauga rattlesnake – historic range in northeast Illinois. Black circles indicate records since 2000, open circles indicate pre-2000 records.

Became Candidate Species – October 25, 1999 (64 FR 57533 57547

Baseline

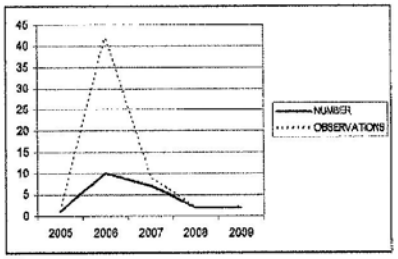
The first well-documented occurrences of the "EMR" in northeast Illinois were made in the mid-1800's by naturalist Robert Kennicott, near what is present-day Glenview. By the mid-1900's confirmed records were available from near Crete (Cook and Will counties), Thornton (Cook County), Wood Dale (DuPage County), Cortland (DeKalb County), and along the DesPlaines River, roughly from Glenview (Cook County) to Lincolnshire (Lake County). By 2000, EMRs were still found only in northern Cook County and along Plum Creek in extreme eastern Will and southeast Cook counties. Intensive mark-recapture surveys between 2005-2009 found no individuals in the southern localities. Also, despite an increase in observations in 2006-2007 (due to even more intensive surveys than previously conducted), data indicated that the total population (limited to one site) along the Upper DesPlaines River may number fewer than 15, and declining.

Recovery

The Illinois DNR's EMR Recovery Plan (2010 DRAFT) requires at least one viable population (>40 adult females), stable for three generations (9-12 years) in northeast Illinois. Until 2009, attempts to recover populations in northeast Illinois were based on habitat restoration (e.g., removal of invasive woody plants). However, due to continuing decline, and imminent extirpation, local stakeholder agencies, as well as both Lincoln Park and Brookfield Zoos began collecting the remaining EMRs from known northeast Illinois sites, to attempt recovery of the population through captive breeding and eventual reintroduction of captive-bred offspring. In the meantime, the Service and other stakeholder agencies recommend, and pursue additional habitat restoration at historic sites, in order to ensure that there are places to reintroduce captive bred EMRs. Because this is a venomous snake, education and outreach will also be crucial to its recovery.

Site Name	Last Observed	Number Individuals: Observations (by year)
Cortland (DeKalb County)	1871	-
Crete-Steger (Plum Creek, Cook County)	2001	1:1 (2001)
Crete (Goodenow Grove, Will County	1999	1:1 (1999)
Thornton (Cook County)	Late 1980's	-
Wheeling (Portwine, Cook County)	2000	1:1 (2000)
Wheeling (Willow-Sanders; Cook County)	2009	1:1 (2005); 10:49 (2006); 7:9 (2007); 2:5 (2008); 2:2 (2009).
Riverwoods (Lake County)	1999	1:1
Wood Dale (DuPage County)	1980	-

Number of Individual EMR's and Observation Since 2005



N-010-009

Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I04-Special Status Species.

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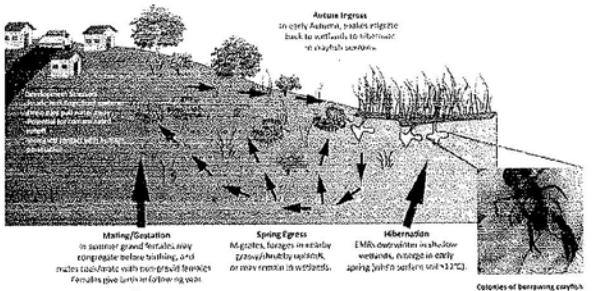
Eastern Massasauga Rattlesnake



Life Cycle

Threats (loss of resource quantity, quality, or disruption of a process needed for species survival)

- Habitat loss and degradation
- Barriers to movement
- Small population size
- High, or avoidable/unnecessary mortality, esp. to adults

Stressors (clear descriptors of what can be avoided, minimized, or mitigated)

- Wetland fill, or drainage/farm tiles
- Prolonged drought
- Severe floods
- Augmented predator populations
- Unattended cats, dogs.
- Invasive species
- Road mortality
- Poaching/illegal collecting
- Burning during active season
- Soil compaction in EMR hibernacula

Avoidance and minimization of effects (to EMR during project activities)

- Install and maintain trenched-in silt fencing between EMR habitat and project areas
- Avoid measures (ditching, tiles) that would alter water table
- Avoid new hard features (e.g., roads or trails) that would fragment existing EMR habitat
- Restoration should use heavy machinery in EMR habitat only when ground is hard-frozen
- Familiarize work crews with EMR identification
- Establish protocol for removing EMRs if encountered in work zones
- Have expert qualified to handle live EMRs "on-call" in case any are encountered during project
- Restrict prescribed burn window to November 1 through late March (or when surface soil temperatures first rise to >9°C)
- Upon project completion, overseed disturbed soil with native grasses and sedges
- Regularly maintain short (<5" tall) mowed strips of turf grass at least 3m wide along roads

Mitigation Opportunities

- Increase area of suitable habitat at locations of historic populations within the DesPlaines River and Plum Creek Drainages
- Improve condition of existing habitat – remove invasive plants, restore hydrology
- Provide assistance with surveys at historic localities
- Provide assistance to efforts of Lincoln Park and Brookfield Zoos to recover local populations through captive breeding

Short-term objectives (2010) of CIFO

- Work with IDNR and Illinois EMR Recovery Team to finalize and begin implementing state recovery plan for the species
- Survey historic sites in northeast Illinois and continue to salvage live EMRs for captive breeding program
- Farm tile survey and restore at least 4 acres of wetland hydrology at active site in DesPlaines River Drainage
- Work with Forest preserve Districts of Cook and Lake counties to identify funding sources for EMR habitat restoration
- Partner with other local stakeholders to identify opportunities to increase public awareness and support for EMR
- Work closely with Lincoln Park Zoo and the AZA Species Survival Plan on rangewide *in-situ* and *ex-situ* conservation needs

N-011-001

then we'll proceed. Carol?

CAROL OVERLAND: On table 3-9, which is on page 315, it is in the EMF -- I know there was somewhere in there where it said that everything has been independently verified, and the EMF levels are way off, and the potential for EMF is much, much higher than what it says. So I want that to be corrected for the EIS. It talks about current. For example, at the top, recurrent level of like 140 down to 106 of amps. And that's absurd because this is a line that a single circuit has potential of 20/50 MVA. So we'll get much, much higher EMF than that.

The second row represents two 345kV lines, and again, each circuit is bundled, right? And so you are looking at four 100 potential MVA. Those would be the limits of this line. So your circuits, your amps would be much, much, much higher. So just some independent verification of what the potential is. They are saying what this -- there's no indication either of what date this would be -- wait, 2015 peak, which it's not going to be running by 2015. That's just not going to happen.

And 2025 peak, now you need to look at what the potential is once this goes from La

N-011-001

Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N02-Health Effects of EMF.

N-011-001

Crosse to Madison. They are talking about increasing the transfer capacity of 3,000 to 5,000. All of that would not be typically in this particular section, but there aren't many options going over to Wisconsin. And so when you are talking about increasing the transfer capacity by that many MVA, you are going to have a lot more amps running through it than that. This is absurd. It's ten times lower than it should be, and probably 20 times. That doesn't cut it.

So I want to see that corrected, independently verified, not what they say, but what the range could potentially be. It's in the record that the potential for MVA is 2015, and do you believe that? And you've got 400, and it should show that, a range of EMF levels. Thank you.

MS. RICHTER: Thank you. Now, those are the only two that indicated tonight that they would like to speak, but would anyone else like to come forward to make some remarks or provide us with comments associated with the environmental impact statement draft? Please. Again, the three-minutes still applies, but then we'll have more time afterwards.

EDWARD FLIES: My name is Edward

takes -- encompasses other countries well. I know there's a representative for Partners with Flight with US Fisheries in Wildlife in the Cities. And I apologize, I can't say who he is, but my suggestion is when you are looking at the Mississippi River and all those concerns, there's also other habitats that are very, very important to birds, forests, and inland species. And keeping those forests intact as much as possible are also a part of the plan in addition to prairies and et cetera and grasslands.

So I would like to suggest you refer to the Partners in Flight concept and conservation plan, if you could. And thank you.

MS. RICHTER: Thank you, Suzanne. Carol.

N-011-002

CAROL OVERLAND: I need to get my money's worth. On page 22 of the DEIS, where it's talking about the assisting right-of-way and there's a section under the Minnesota side that says, "Following transmission lines, roads, or property lines" -- and then when I look at the Wisconsin, it doesn't have that category of property lines. Now, in Minnesota the property lines part is -- and the rules of statute, I can't remember offhand which -- but it refers to utilizing property line to minimize

N-011-002

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A04-Grammatical and Minor Corrections.

N-011-002

impacts to agriculture. And it's not in the section about existing right-of-way. So this is in the wrong place. It needs to be on page 20, perhaps under land resources where it talks about, you know, land cover and agriculture and permanent impacts. That's where that should be. It doesn't belong in the existing right-of way in Minnesota.

I think that that's why, you know, the difference between Minnesota and Wisconsin rules, why the property lines is listed here. Our Department of Commerce incorrectly does that as well, and it doesn't belong there. So I would like to see that moved somewhere else. And it should only be addressing whether the route follows the transmission line, but -- not the transmission line, and then not following transmission lines or roads as the statute does.

N-011-003

Then I have another question because I wanted to get clarification. Because I heard from a landowner in Wisconsin who has property in Cannon Falls and then from the Hackmans and then the Rohlfings that notice was not sent out to directly affected landowners? Is that correct?

MS. STRENGTH: Correct.

CAROL OVERLAND: So the only way

N-011-003

Please refer to Appendix C, Table C-4, Comment Category D: Consultation, Coordination, and Public Involvement, D02-Notices and Meetings.

N-011-003

people would know about this is reading my site or reading the newspaper in the very back or reading the Federal Register?

MS. STRENGTH: And additionally, those who had requested receiving a copy of the draft when it was available. I don't think there was any other areas.

CAROL OVERLAND: And then 88 also?

MS. HAGERTY: There were two notices in the paper. There was the large one that was further back, and then there was a small one up front.

CAROL OVERLAND: Which paper?

MS. HAGERTY: There's a big list.

CAROL OVERLAND: Because here in the paper -- I mean, was it -- you are saying it was like the local papers in the area or the legal papers or --

MS. STRENGTH: No, it would be the local papers that are typically read in whichever community we are trying to notice along the lines.

MS. HAGERTY: Essentially, the same ones that have been for the meetings except that for the southern routes that were eliminated, some of those newspapers were no longer included. But they

N-011-003

were basically the same ones that had been used.

MS. STRENGTH: When she's referring to the two different ads, the first is what you call a display ad, that's what's draws your attention to it and then leads you to the legal section where you can get more detail.

CAROL OVERLAND: Right.

MS. HAGERTY: And the map.

CAROL OVERLAND: Got it. So that's why people didn't receive notice?

MS. STRENGTH: That's not standard practice, yeah, correct.

CAROL OVERLAND: Okay. Got it. And that's it for now.

MS. STRENGTH: Okay.

MS. RICHTER: Would anybody else like to make any comments? Yes, please.

STEPHEN HACKMAN: My name is Stephen Hackman, S-T-E-P-H-E-N, H-A-C-K-M-A-N. I just have one area, page 84, you are talking of use of existing generation and new generation. One of the items I noticed is there's not a lot of discussion about gas, gas fired generation. It does talk a little bit about the ramp-up times for the coal units. And it's my understanding there was an

can take your comments tonight. You could also approach the court reporter who will be here until 8:00 if you would like to just give a private comment onto the record. That's very fine. And we welcome you to continue to ask those present the questions you might have using the board and the map, and we'll just wait to see if anybody else would like to comment.

N-011-004

CAROL OVERLAND: Just one quick one. Sorry, I just got to bee in my bonnet here. Figure 3-5, major roadways and transmission lines. Page 296. The transmission lines pictured just north of Zumbrota, the 345, the Byron line, it just sort of stops in the middle of the cornfield. They just stop. That's not right. They are right just north of Zumbrota. This line connects up to by Red Wing, and this one is some other line -- I can't remember. Anyway, there's a line here that stops in the middle of a cornfield. So if it happens with those two, I imagine it's happening with a few others. So this transmission line and roadway map is off, and it should be corrected -- oh, that's a pipeline it says. So okay. It's a pipeline, and the pipeline stops in the middle of nowhere, and that's not correct. So this map needs some updating. Thank you.

N-011-004
Comment noted.

I just started gathering data myself. But at the same time, I know that we need energy. And if, indeed, Illinois and Ohio need energy, that they don't have the ability to create it locally, if some of us want to travel there, we will take it for granted that there is going to be electricity when we get there. We will go get in our car or get in a airplane and fly to Chicago, and we will probably take it for granted that we have all of the power that we want when we get there.

MODERATOR RICHTER: Thank you.

MR. DORR: Thank you.

MODERATOR RICHTER: Carol. And Carol will be followed by Joan Kent.

N-012-001 MS. OVERLAND: Carol Overland, O-V-E-R-L-A-N-D, representing "No CAPX 2020." And you can get more information at www.nocapx2020.info.

There are a lot of you here. How many are here because you got a phone call or read it on the Internet? Can I have a show of hands? How many of you are here because you read about it in the newspaper? And how many of you are here because -- we did the Internet already. Never mind.

It is good to see so many of you here. And I wanted to address the EMF issues which I

N-012-001

Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N02-Health Effects of EMF.

N-012-001

raised the other day. And I have with me for the record a copy of an affidavit of Bruce McKay, who is a professional engineer. And in the EIS, around Page 315, there is a section on EMFs. It reports that the amp levels to be 106 to 140 or 322 to 415 for double circuit. But the testimony of Larry Schedin, Attachment J, from the Minnesota Certificate of Need, that says that, "Twin bundled 954 kcm ACSS, 345 kv have a capacity rating of 3700. 3700. That is a little different than 322 to 415.

We need to show in this EIS for the potential range for EMFs. And going up to that, those limits, yes, that's a very real potential, and they can run up to that for a half-hour before they have to ramp it down, under the rules.

So that needs to be done. That needs to be corrected here. It is ten times off, make it 20 times off, by that factor. There are many. So, I urge you to do some independent verification.

Thank you.

MODERATOR RICHTER: And Joan will be followed by Victoria Hirschboeck.

MS. KENT: My name is Joan Kent. I am a resident of Lafarge (phonetic), which is in Vernon County. The Wisconsin Public Service

Overland?

N-012-002

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Route Permit Application by Xcel Energy, Dairyland Power Cooperative, Souther Minnesota Municpal Power Agency, Rochester Public Utilities , and WPPI Energy for a 345 kV Transmission Line from Hampton, Minnesota, to Rochester, Minnesota, to La Crosse, Wisconsin

OAH DOCKET NO. 3-2500-21181-2
PUC DOCKET NO. E002/TL-09-1448

AFFIDAVIT OF BRUCE McKAY, P.E.

Bruce McKay, P.E., after affirming or being duly sworn on oath, states and deposes as follows:

1. My name is Bruce McKay. I am an electrical engineer, and licensed Professional Engineer, in the state of Minnesota.

2. My experience is primarily in the areas of industrial power distribution and industrial automation and control. I have 16 years experience in these areas as a licensed Master Electrician, followed by 14 years as a licensed Professional Engineer to date.

3. I am a landowner near Henderson, MN, and therefore am not directly affected by the proposed Hampton-Rochester-La Crosse 345 kV Transmission Project.

4. I have participated in CapX2020 Task Force meetings held in Henderson, attended one day of PUC hearings in St. Paul, and attended, including making comments and submitting statements, all but one of the Public Hearings held in the Le Sueur-Henderson area over the last few years.

5. Attached as Exhibit A is a true and correct copy of the CapX2020 Engineering, Design, Construction, and Operational Characteristics, Section 3.1.1 Hampton-Rochester-La Crosse 345 kV Transmission Line, found on page 3-3 of the January 15, 2010, Route Permit Application for the Hampton-Rochester-La Crosse 345 kV Transmission Project, wherein it states that "Two 954 Aluminum Conductor Steel Supported (ACSS) conductors will be used per phase."

6. Attached as Exhibit B is a true and correct copy of Direct Testimony of Larry L. Schedin, Attachment J, showing various conductor specifications, including:

   a. In the chart on page 3, Summer Thermal Ratings for a Twin bundled 954 kcm 54/19 ACSS, 345 KV, of 3700 amps and 2211 MVA.
   b. In the chart on page 5, Winter Thermal Ratings for a Twin bundled 954 kcm 54/7 ACSS, 345 KV, of 4064 amps and 2428 MVA.

EXHIBIT NO. (9)
ANN M. HOLLAND

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Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N02-Health Effects of EMF.

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c. For the purposes of this Affidavit, I am using the Summer Ratings, but it should be noted that Winter Ratings are approximately an additional 9.8% higher than the Summer Ratings.

7. The first purpose of this statement is to point out the fact that the CapX2020 Magnetic Field tables and charts that I've been able to find in Hampton-Rochester-La Crosse 345 kV Transmission Project documents all fail to address the full potential Magnetic Field along the transmission lines. Each table and chart that I've seen displays Magnetic Field data calculated from estimated Peak and estimated Average System Conditions (Current (Amps)) rather than from transmission line design capacities. An example of such a table is presented in the attached Exhibit C, a true and correct copy of the CapX2020 Engineering, Design, Construction, and Operational Characteristics, Table 3.6-2: Calculated Magnetic Fields (mG) for Proposed 345 kV Transmission Line Designs (3.28 Feet Aboveground), found on pages 3-28 and 3-29 of the January 15, 2010, Route Permit Application for the Hampton-Rochester-La Crosse 345 kV Transmission Project.

8. The second purpose of this statement is to point out the fact that a table such as Exhibit C underestimates the Magnetic Field that would be created if the transmission line was utilized to its full potential capacity, or to 80% of its full potential capacity. The attached Exhibit D is a true and correct copy of "McKay Magnetic Field Calculations" which presents an example of Magnetic Field calculations based on estimated transmission line currents as compared to Magnetic Field calculations based on future potential (design) transmission line currents.

a. By following through STEPS 1, 2, 3-Single Circuit, and 4-Single Circuit in Exhibit D, you can see that with one Circuit in Service, for 2015 PEAK, the Calculated PEAK MAGNETIC FIELDS increase by 1323% and for 2015 AVERAGE, the Calculated AVERAGE MAGNETIC FIELDS increase by 1323% when design capacities are used for the calculations rather than using estimated load currents.
b. By following through STEPS 1, 2, 3-Double Circuit, and 4-Double Circuit in Exhibit D, you can see that with two Circuits in Service, for 2015 PEAK, the Calculated PEAK MAGNETIC FIELDS increase by 2646% and for 2015 AVERAGE, the Calculated AVERAGE MAGNETIC FIELDS increase by 2646% when design capacities are used for the calculations rather than using estimated load currents.
c. Please Note: Exhibit D is presented as a conceptual example. Actual design capacities and associated Magnetic Field calculations would need to be and should be provided by the Applicants.

9. The third purpose of this statement is to stress that right-of-way widths to protect the health and safety of those along the proposed transmission line need to be based on Calculated Magnetic Field's derived from design capacities, NOT on Calculated Magnetic Field's derived from estimated transmission line currents. A right-of-way based on the Applicant's low transmission line current estimates does not sufficiently protect people near the transmission lines.

10. Please feel free to contact me with any comments or questions you have.

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Further your affiant sayeth naught.

Dated: April 20, 2011

Bruce McKay

Bruce McKay, PE
e-mail: bmckay.aces@gmail.com
cell: 612-386-5983

Signed and sworn to before me this
20 day of April, 2011.

Notary Public

WERNER H. GIESEN
Notary Public
State of Minnesota
My Commission Expires
January 31, 2015

N-012-002

EXHIBIT A

Line Configurations and Specifications

Hampton-LaCrosse Application

Section 3 Project Description

p. 3-3

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3.1.1 Hampton–Rochester–La Crosse 345 kV Transmission Line

For the Project's proposed 345 kV line, the Applicant proposes primarily to use single-pole, self-weathering steel, double-circuit capable structures. Self-weathering steel alloys were developed to eliminate the need for painting and are commonly used by the Applicant and throughout the industry. The steel alloy develops a stable, rust-like appearance (dark reddish-brown color) when exposed to the weather for several years. The wetting and drying cycles cause rust to form a protective layer on its surface, preventing further rusting. The layer develops and regenerates continuously when subjected to the influence of the weather.

These single-pole steel structures would range from 130 to 175 feet in height. Spans could range from 600 to 1,000 feet, but would typically be 700 to 1,000 feet. In some areas, only one circuit would be strung and the other side of the pole would be available for adding a second circuit in the future, when conditions warrant. In other areas, the unused side of the 345/345 kV structure would be used to carry a lower voltage line on the second set of arms until a second 345 kV circuit is needed. Tubular steel pole structures are typically placed on large pier foundations of cast-in-place, reinforced concrete.

Two 954 Aluminum Conductor Steel Supported (ACSS) conductors will be used per phase. One or two shield wires will be used to protect the conductors from lightning strikes. One of these shield wires will incorporate fiber optic to facilitate relay control communications between substations and between substations, utility offices such as control centers. Fiber optics will be used only for utility purposes.

Figure 3.1-1 depicts a representative double-circuit 345 kV single pole structure.

The Mississippi River presents unique considerations that will require the use of multiple-circuit, specialty structures. A portion of this crossing is on Upper Mississippi River Wildlife Refuge lands managed by the USFWS. A Special Use Permit will be required to cross the Refuge and the Applicant will work closely with the USFWS to identify the most appropriate structure design.

An existing double-circuit transmission line crosses the Mississippi River and Refuge at the Project's proposed crossing location. The existing line crosses approximately 0.5 mile of Refuge lands and includes two structures on Refuge property. The line is constructed on a 180-foot-wide permitted ROW. An area approximately 125 feet wide and 1,900 feet long is maintained cleared of trees. The two main river crossing structures are 180 feet tall.

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EXHIBIT B

Amps and MVA for Line Configurations and Specifications

Direct Testimony of Larry L. Schedin, Attachment J
CapX 2020 Certificate of Need
PUC Docket E002, ET2/CN-06-1115

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☐ **Non Public Document – Contains Trade Secret Data**
☐ **Public Document – Trade Secret Data Excised**
☒ **Public Document**

Xcel Energy
Docket No.: E002, ET2/CN-06-1115
Response To: Elizabeth Goodpaster and Mary Marrow MCEA/Wind on the Wires
Information Request No. 3
Date Received: March 27, 2008

Question:

With reference to the Application Volume I, Sec. 2.4 (pages 2.9) entitled "Transmission Line Characteristics" and Applicants' response to DOC/OES Information Rquest No. 2, please provide thermal MVA ratings, surge impedance loadings (SIL), MVA and thermal ampere capacity ratings (amplacities) under summer normal, summer emergency, winter normal and winter emergency conditions for the following conductors and voltages:

(a) Single 795ACSR, 115 KV
(b) Single 795 ACSS, 115 KV
(c) Twin bundled 795 ACSR, 115 KV
(d) Twin bundled 795 ACSS, 115 KV
(e) Single 954 ACSS, 115 KV
(f) Single 795 ACSS, 161 KV
(g) Single 954 ACSS, 161 KV
(h) Single 795 ACSR, 230 KV
(i) Single 795 ACSS, 230 KV
(j) Single 954 ACSS, 230 KV
(k) Twin bundled 795 ACSR, 345 KV
(l) Twin bundled 954 ACSS, 345 KV
(m) Triple bundled 954 ACSS, 500 KV
(n) Triple bundled conductor as used on the Forbes – Chisago 500 KV line

In your response, please define the conditions for summer normal, summer emergency, winter normal and winter emergency conditions (ambient temp, wind speed, degree rise, allowable sag, etc.), and specify the regulatory authority setting the foregoing standards and the reference to applicable rules.

1

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Response:

The thermal ratings of the requested conductors and voltages are noted in the table below. Conductor ratings are based on the "IEEE Standard for calculation of Bare Overhead Conductor Temperature and Ampacity Under Steady-State Conditions," ANSI/IEEE Standard 738. Alcoa SAG10 Ratekit was used to calculate conductor ratings.

A regulatory authority does not set the conductor steady state thermal rating variables. The CapX2020 Member Utilities Transmission Line Standards Committee ("Committee") developed the conductor steady state thermal rating variables for summer ratings based upon member utilities' standard of practice..

The summer steady state thermal rating variables are as follows:

- Conductor orientation relative to north: 90 degrees
- Atmosphere: Clear
- Air Temperature: 40 degrees C for Summer
- Wind Speed: 2 ft/sec
- Wind angle relative to conductor: 90 degrees
- Elevation above sea level: 1000 ft
- Latitude: 45 degrees N
- Date: July 8
- Solar time: 12 hours
- Coefficient of emissivity: 0.7
- Coefficient of absorption: 0.9
- 200 degrees C maximum operating temperature for ACSS
- 100 degrees C maximum operating temperature for ACSR

The Committee defined the Emergency Line Rating as equal to the steady state thermal rating.

The Committee specified that conductors meet minimum clearances to ground based upon voltage and nature of surface under the conductor (*i.e.*, roads, interstate highway, railroads, etc.). The minimum specified clearances were chosen to assure that the final constructed lines meet or exceed the National Electrical Safety Code ("NESC") minimum clearances. Conductor sags are to be calculated based upon conductor size, conductor temperature, span length, design tension, structure heights and loading conditions. Vertical clearances shall be applied to the greatest sag resulting from either the maximum operating temperature of 200°C (for the ACSS

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conductor) and 100°C (for the ACSR conductor) or the maximum loaded condition (ice plus wind).

Conductor	Summer Thermal Ampacity Rating	Summer Thermal MVA Rating
Single 795 kcm 26/7 ACSR, 115 KV	965 amps	192 MVA
Single 795 kcm 26/7 ACSS, 115 KV	1655 amps	330 MVA
Twin bundled 795 kcm 26/7 ACSR, 115 KV	1930 amps	384 MVA
Twin bundled 795 kcm 26/7 ACSS, 115 KV	3310 amps	659 MVA
Single 954 kcm 54/19 ACSS, 115 KV	1850 amps	368 MVA
Single 795 kcm 26/7 ACSS, 161 KV	1655 amps	462 MVA
Single 954 kcm 54/19 ACSS, 161 KV	1850 amps	516 MVA
Single 795 kcm 26/7 ACSR, 230 KV	965 amps	384 MVA
Single 795 kcm 26/7 ACSS, 230 KV	1655 amps	659 MVA
Single 954 kcm 54/19 ACSS, 230 KV	1850 amps	737 MVA
Twin bundled 795 kcm 26/7 ACSR, 345 KV	1930 amps	1153 MVA
Twin bundled 954 kcm 54/19 ACSS, 345 KV	3700 amps	2211 MVA
Triple bundled 954 kcm 54/19 ACSS, 500 KV	5550 amps	4806 MVA
Triple bundled conductor as used on the Forbes – Chisago 500 KV line (Triple bundled 1192.5 kcm 45/7 ACSR)	3648 amps	3159 MVA

The Committee did not develop steady state thermal rating variables for winter ratings. Xcel Energy – NSP Operating Territory uses 0°C for the winter rating air temperature for calculating the rating during the winter operating season of November 1 to April 30. The April 30 date produces the lowest allowable line rating of the winter rating period, so it is used in the following table. The April 30 date and 0°C air temperature were used in conjunction with the other steady state thermal

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rating variables developed by the Committee to develop the following winter rating table.

The winter steady state thermal rating variables used for the following Xcel Energy – NSP Operating Territory/ CAPX2020 Member Utilities Transmission Line Standards Committee rating table are as follows:

- Conductor orientation relative to north: 90 degrees
- Atmosphere: Clear
- Air Temperature: 0 degrees C for Winter
- Wind Speed: 2 ft/sec
- Wind angle relative to conductor: 90 degrees
- Elevation above sea level: 1000 ft
- Latitude: 45 degrees N
- Date: April 30
- Solar time: 12 hours
- Coefficient of emissivity: 0.7
- Coefficient of absorption: 0.9
- 200 degrees C maximum operating temperature for ACSS
- 100 degrees C maximum operating temperature for ACSR

Conductor	Winter (April 30) Thermal Ampacity Rating	Winter (April 30) Thermal MVA Rating
Single 795 kcm 26/7 ACSR, 115 KV	1286 amps	256 MVA
Single 795 kcm 26/7 ACSS, 115 KV	1819 amps	362 MVA
Twin bundled 795 kcm 26/7 ACSR, 115 KV	2572 amps	512 MVA
Twin bundled 795 kcm 26/7 ACSS, 115 KV	3638 amps	725 MVA
Single 954 kcm 54/7 ACSS, 115 KV	2032 amps	405 MVA
Single 795 kcm 26/7 ACSS, 161 KV	1819 amps	507 MVA
Single 954 kcm 54/7 ACSS, 161 KV	2032 amps	567 MVA
Single 795 kcm 26/7 ACSR, 230 KV	1286 amps	512 MVA

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Conductor	Winter (April 30) Thermal Ampacity Rating	Winter (April 30) Thermal MVA Rating
Single 795 kcm 26/7 ACSS, 230 KV	1819 amps	725 MVA
Single 954 kcm 54/7 ACSS, 230 KV	2032 amps	809 MVA
Twin bundled 795 kcm 26/7 ACSR, 345 KV	2572 amps	1537 MVA
Twin bundled 954 kcm 54/7 ACSS, 345 KV	4064 amps	2428 MVA
Triple bundled 954 kcm 54/7 ACSS, 500 KV	6096 amps	5279 MVA
Triple bundled conductor as used on the Forbes – Chisago 500 KV line (Triple bundled 1192.5 kcm 45/7 ACSR)	4875 amps	4222 MVA

Surge Impedance

The following table shows typical ranges of surge impedances found on the CapX2020 member systems. Designs for the proposed CapX2020 transmission lines are not far enough along to provide more accurate surge impedances for these lines.

Conductor Configuration	Surge Impedance
Single Bundled Conductor – 115, 161 & 230 KV Configurations a, b, f & h	350 – 375 Ohms
Twin bundled Conductor - 115 KV Configurations c & d	250 - 300 Ohms
Twin bundled Conductor - 345 KV Configurations k & l	270 –285 Ohms
Triple bundled Conductor - 500 kV Configuration n	250 – 300 Ohms
Configurations e, g, i, j and m	Not Used

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Response By: Brad Hill/David K. Olson
Title: Principal Specialty Engineer
Department: Transmission Engineering/Substation Engineering
Company: Xcel Energy
Telephone: 612-330-6826/612-330-5909
Date: April 21, 2008

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EXHIBIT C

Applicant Magnetic Field Calculations

Table 3.6-2: Calculated Magnetic Fields for Proposed 345kV Transmission Line Designs
Hampton-LaCrosse Project RoutingApplication p. 3-28 - 3-29

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Table 3.6-2:
Calculated Magnetic Fields (mG) for Proposed 345 kV Transmission Line Designs (3.28 Feet Aboveground)

Structure Type	Geographical Segment	System Condition	Current (amps)	-300	-200	-100	-75	-50	0	50	75	100	200	300
Single- Pole Davit Arm 345/345 kV Double-Circuit with one Circuit in Service	Preferred Route: Hampton to Cannon Falls; Non-US-52 segments Zumbrota area to North Rochester Alternate Route: Hampton to North Rochester	2015 Peak	140 A	0.38	0.79	2.35	3.41	5.24	13.58	9.64	5.88	3.77	1.04	0.46
		2015 Average	112 A	0.30	0.63	1.88	2.73	4.19	10.87	7.71	4.71	3.01	0.83	0.37
		2025 Peak	132 A	0.36	0.74	2.22	3.22	4.94	12.81	9.09	5.55	3.56	0.98	0.43
		2025 Average	105 A	0.29	0.60	1.78	2.58	3.97	10.29	7.30	4.45	2.85	0.79	0.35
Single-Pole Davit Arm 345/345 kV with 69 kV Underbuild with 1 Active 345 kV Circuit	Preferred Route: US-52 segments Cannon Falls to Zumbrota area	2015 Peak	140/325	0.74	1.65	6.20	10.42	20.73	70.89	8.50	3.77	2.51	1.01	0.52
		2015 Average	112/260	0.59	1.32	4.96	8.33	16.58	56.71	6.80	3.02	2.01	0.81	0.41
		2025 Peak	132/328	0.73	1.62	6.14	10.36	20.71	71.85	8.89	3.92	2.54	0.99	0.50
		2025 Average	105/262	0.58	1.30	4.91	8.28	16.55	57.37	7.09	3.12	2.03	0.79	0.40
Single-Pole Davit Arm 345/345 kV Double-Circuit with one Circuit in Service	N. Rochester to Alma	2015 Peak	403 A	1.12	2.33	6.97	10.11	15.54	40.27	28.58	17.44	11.17	3.09	1.35
		2015 Average	322 A	0.87	1.81	5.41	7.85	12.06	31.24	22.17	13.53	8.67	2.40	1.05
		2025 Peak	415 A	1.12	2.33	6.97	10.11	15.54	40.27	28.58	17.44	11.17	3.09	1.35
		2025 Average	332 A	0.90	1.87	5.57	8.09	12.43	32.21	22.86	13.95	8.94	2.47	1.08

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Table 3.6-2:
Calculated Magnetic Fields (mG) for Proposed 345 kV Transmission Line Designs (3.28 Feet Aboveground)

Structure Type	Geographical Segment	System Condition	Current (amps)	-300	-200	-100	-75	-50	0	50	75	100	200	300
Single-Pole Davit Arm 161 kV Single-Circuit	N. Rochester to Northern Hills	2015 Peak	95 A	0.20	0.43	1.50	2.42	4.39	14.29	5.41	2.79	1.65	0.42	0.18
		2015 Average	76 A	0.16	0.34	1.20	1.94	3.51	11.43	4.33	2.23	1.32	0.33	0.14
		2015 Peak	98 A	0.20	0.43	1.52	2.45	4.43	14.44	5.47	2.82	1.66	0.42	0.18
		2015 Average	77 A	0.16	0.34	1.22	1.96	3.56	11.56	4.38	2.26	1.33	0.34	0.15

N-012-002

EXHIBIT D

McKay Magnetic Field Calculations

Calculated Magnetic Field Tables for Proposed 345 kV Transmission Line Designs

Exhibit D- CALCULATED MAGNETIC FIELD TABLES 110417 1129.xls SHEET: milligauss TABLES 4/20/2011, 11:56 AM

STEP 1

THIS TABLE CONTAINS THE EDGE/MIDDLE/EDGE AND DATA FROM THE TOP TWEEN IN THE TABLE FROM EXHIBIT E

TABLE 3.6-2:

Calculated Magnetic Fields (mG) for Proposed 345 kV Transmission Line Designs (3.28 Feet Aboveground)

STRUCTURE TYPE	GEOGRAPHICAL SEGMENT	SYSTEM CONDITION	CURRENT (AMPS)	-300'	-200'	-100'	-75'	-50'	0'	50'	75'	100'	200'	300'
SINGLE- POLE DAITI ARM 345/345 kV DOUBLE-CIRCUIT WITH ONE CIRCUIT IN SERVICE	PREFERRED ROUTE: HAMPTON TO CANNON FALLS: NON-US-52 SEGMENTS ZUMBROTA AREA TO NORTH ROCHESTER ALTERNATE ROUTE: HAMPTON TO NORTH ROCHESTER	2015 PEAK	140.00	0.98	0.79	2.33	3.41	5.24	11.58	9.64	5.88	3.77	1.04	0.48
		2015 AVERAGE	112.00	0.50	0.63	1.88	2.76	4.19	10.87	7.71	4.71	3.03	0.83	0.37

STEP 2

MVA CALCULATED FROM THE CURRENTS IN TABLE 3.6-2:

345.00 kV

140.00 Amps PEAK ESTIMATED

1.73 3 Phase

[illegible] MVA PEAK CALCULATED

345.00 kV

112.00 Amps AVERAGE ESTIMATED

1.73 3 Phase

[illegible] MVA AVERAGE CALCULATED

STEP 4- SINGLE CIRCUIT

THIS TABLE CONTAINS DATA SCALED FROM THE TABLE IN STEP 1 USING CURRENTS CALCULATED IN STEP 3- SINGLE CIRCUIT

TABLE 3.6-2 SCALED for SINGLE CIRCUIT DESIGN CAPACITY:

Calculated Magnetic Fields (mG) for Proposed 345 kV Transmission Line Designs (3.28 Feet Aboveground)

STRUCTURE TYPE	GEOGRAPHICAL SEGMENT	SYSTEM CONDITION	CURRENT (AMPS)	-300'	-200'	-100'	-75'	-50'	0'	50'	75'	100'	200'	300'
SINGLE- POLE DAHT ARM 345/345 kV DOUBLE-CIRCUIT WITH ONE CIRCUIT IN SERVICE	PREFERRED ROUTE: HAMPTON TO CANNON FALLS: NON-US-52 SEGMENTS ZUMBROTA AREA TO NORTH ROCHESTER ALTERNATE ROUTE: HAMPTON TO NORTH ROCHESTER	2015 PEAK	1927.23	5.03	10.41	31.09	45.11	69.33	179.67	127.54	77.79	49.88	13.76	6.09
		2015 AVERAGE	1481.78	3.87	8.34	24.87	36.12	55.43	143.81	102.00	62.31	39.82	10.98	4.90

STEP 3- SINGLE CIRCUIT

CURRENT CALCULATED FROM SINGLE CIRCUIT MVA DESIGN CAPACITY:

[illegible] MVA PEAK [illegible]

345.00 kV

1927.23 Amps PEAK CALCULATED

[illegible] MVA AVERAGE [illegible]

345.00 kV

1.73 3 Phase

[illegible] Amps AVERAGE CALCULATED

STEP 4- DOUBLE CIRCUIT

THIS TABLE CONTAINS AREA SCALED FROM THE TABLE IN STEP 1 USING CURRENTS CALCULATED IN STEP 3- DOUBLE CIRCUIT

TABLE E4-3 SCALED for DOUBLE CIRCUIT DESIGN CAPACITY:

Calculated Magnetic Fields (mG) for Proposed 345 kV Transmission Line Designs (3.28 Feet Aboveground)

STRUCTURE TYPE	GEOGRAPHICAL SEGMENT	SYSTEM CONDITION	CURRENT (AMPS)	-300'	-200'	-100'	-75'	-50'	0'	50'	75'	100'	200'	300'
SINGLE- POLE DAHT ARM 345/345 kV DOUBLE-CIRCUIT WITH ONE CIRCUIT IN SERVICE	PREFERRED ROUTE: HAMPTON TO CANNON FALLS: NON-US-52 SEGMENTS ZUMBROTA AREA TO NORTH ROCHESTER ALTERNATE ROUTE: HAMPTON TO NORTH ROCHESTER	2015 PEAK	3704.45	10.05	20.90	62.18	90.23	138.65	359.33	255.08	155.59	99.76	27.52	12.17
		2015 AVERAGE	2963.89	7.94	16.67	49.75	72.24	110.88	287.66	204.05	124.64	79.65	21.96	9.78

STEP 5- DOUBLE CIRCUIT

CURRENT CALCULATED FROM DOUBLE CIRCUIT MVA DESIGN CAPACITY:

[illegible] MVA PEAK [illegible]

345.00 kV

1704.45 Amps PEAK CALCULATED

[illegible] MVA AVERAGE [illegible]

345.00 kV

1.73 3 Phase

[illegible] Amps AVERAGE CALCULATED

NOTES: 1. MVA = (kV * Amps * 1.73) /3000
2. Amps = (MVA * 1000) / (kV * 1.73)
3. For a given physical and electrical configuration, milligauss at one location is proportional to current (Amps) (for example, double the current and the milligauss level also doubles).
4. For a given physical and electrical configuration and constant current, the milligauss level changes as the inverse square of the distance from away from the source (for example, move 2 times as far away and the milligauss level decreases to 1/4 of what it was).

*. MVA PEAK DESIGN CAPACITY IS FROM A COMBINATION OF THE DATA PRESENTED IN EXHIBITS A, B, AND C.

**. MVA AVERAGE DESIGN CAPACITY WAS CHOSEN TO BE ABOUT 80% OF PEAK DESIGN CAPACITY

My Wisconsin comment - most applies to RUS DEIS

December 21, 2011

William Fannucchi
Docket Coordinator
Public Service Commission
P.O.Box7854
Madison, WI 53707-7854

via email: william.fannucchi@wisconsin.gov

RE: United Citizen Action Network's Comments – DEIS
CapX 2020 Hampton-Rochester-LaCrosse Transmission Project
PSC Docket No.: 05-CE-136

Dear Mr. Fannucchi:

N-013-001

Thank you for the opportunity to submit these comments. I am the Vice President of United Citizen Action Network, intervenors against CapX 2020 in Minnesota's Certificate of Need docket and the Fargo, Brookings and Hampton-Rochester-LaCrosse routing dockets. The Minnesota Hampton-Rochester-LaCrosse transmission project is the same project as has been proposed in Wisconsin.

As an active participant in the CapX 2020 Hampton-Rochetser-LaCrosse Transmission Project docket in Minnesota, I have much first hand experience and access to other documentation and information about this project, and take issue with statements in the DEIS. I have worked with our attorney to gather the information and submit this comment – I ask that you carefully review the documentation I'm providing to you.

I was present at EIS Scoping and DEIS Comment meetings, and public hearings as well as evidentiary hearings. U-CAN was represented at all the Minnesota EIS Scoping and DEIS Comment meetings, and has collectively reviewed each and every comment made as disclosed in the Final EIS. I was also present at a 2008 RUS Scoping meeting in Wanamingo, and have reviewed the comments made to RUS on the scope of its EIS.

My primary concern is with the lack of alternatives to the one Mississippi River crossing, and the statement on p. 36 regarding Mississippi River crossings in the DEIS:

> *The applicants' decision on the proposed crossing was reinforced during the state of Minnesota EIS scoping process in the spring of 2010.The Minnesota Office of Energy Security (OES) convened two advisory task forces and a public scoping comment period on the issues and route alternatives that should be evaluated in the Minnesota EIS. If the comments from the task forces and the public did not indicate that the LaCrosse crossing should be reevaluated in addition to the Alma crossing, then the scope of the Minnesota EIS would include the Alma crossing as the only crossing. The OES scoping decision in August 2010 confirmed the Alma crossing as the one to be carried through*

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Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C10-Mississippi River Crossing.

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the two states' review processes. See appendix D, the Executive Summary of the Minnesota EIS, page 1[1].

Wisconsin PSC DEIS, p. 36 (emphasis added).

Where did this idea come from? It sure didn't come from the record in the Minnesota routing proceeding or the EIS. This statement is just not correct. I do not understand the basis for this statement, and I do not believe it is legal that only one Mississippi River crossing was proposed for both Minnesota and Wisconsin routing dockets. There must be alternatives.

When this project was granted a Certificate of Need, four river crossings were proposed for consideration.Alma, Winona, Trempeauleau and LaCrosse. FOUR. For the RUS Macro-Corridor Study for the Hampton-Rochester-LaCrosse Transmission Project, three crossings were proposed, in Alma, Winona, and LaCrosse. THREE.

During the Minnesota routing docket, where only one Mississippi River crossing was in the application, many people, many times, stated that more than one Mississippi River crossing should be considered. U-CAN filed Motions before the PUC and the Administrative Law Judge raising this issue. We were ignored. We will raise this issue again when the PUC

Looking at the many objections by U-CAN, the objections and questions in public meetings, and the filings in Minnesota, even the MOES filings, there's no basis for this paragraph. People demanded alternative Mississippi River crossings, people questioned why there was only one and said there should be more. The Minnesota Scoping Decision did not say anything close to what this paragraph states. It's false.

The DEIS paragraph is also absurd because MOES doesn't decide what Wisconsin should review in its "review process." That is for Wisconsin to decide.

Please, remove this false paragraph and give a truthful explanation of why only one river crossing is being considered.

The truth is in the record. I have reviewed materials from the Minnesota docket with our attorney, and have found the following instances where the issue of the Mississippi River crossing was raised, where we questioned why there was only one and said that alternatives must be considered. Please look at these and check for yourself to verify – the people and the Task Force did make comments to include other Mississippi River crossings. The Minnesota Dept. of Commerce ignored our concerns.

Completeness Determination

February 23,2010 NoCapX 2020 and U-CAN Comments on Completeness

Under Minn. Stat. § 216E.03, Subd. 3, the January 19, 2010 application is not complete because there are not two distinct corridors. The Applicants have not met one of the most basic application criteria. NO CAPX 2020 and United Citizens Action Network (U-

[1] Section 6 of the Minnesota OES EIS discusses the factors supporting the "Kellogg Crossing" at Alma in detail. It also discusses alternative crossing methods. CapX Hampton-Rochester-LaCrosse345kVand161kV Transmission Lines Project Environmental Impact Statement, August 2011. (footnote from PSC DEIS, p. 36)

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CAN) request that the Commission declare the Application incomplete unless and until at least two separate and distinct routes are provided.

February 24, 2010 Maccabee Comments on Completeness

I have represented Citizens Energy Task Force in the certificate or need proceedings pertaining to the CapX2020 La Crosse Project. I am writing herein as a member of the public to request that the Public Utilities Commission reject the route permit application in the above-captioned matter as incomplete and in violation of Minnesota Statutes 216E.03, Subd. 3 and Minnesota Rules 7850.1900, Subp. 2.C mandating the following:

Any person seeking to construct a large electric power generating plant or a highvoltage transmission line must apply to the commission for a site or route permit. The application shall contain such information as the commission may require. The applicant shall propose at least two sites for a large electric power generating plant and two routes for a high-voltage transmission line. (Minn. Stat. 216E.03, Subd. 3) An application for a route permit for a high voltage transmission line shall contain the following information:

> *C. at least two proposed routes for the proposed high voltage transmission line and identification of the applicant's preferred route and the reasons for the preference. (Minn. R. 7850, Subp. 2).*

In the Application for a Route Permit for the CapX2020 La Crosse Project, the failure to provide at least two proposed routes for the high voltage transmission line is a very substantial deviation from legal requirements. The proposed overhead route at Alma is within the Upper Mississippi River National Wildlife and Fish Refuge and would place migratory birds, nesting eagles and habitat at risk. Yet there is only one route proposed at this critical Mississippi River crossing.

March 9, 2010 PUC Completeness determination: Order by Commission for ATFs, upon Motion that more than one is necessary, two were established, one that shall "*examine issues at the Mississippi River crossing*" (#3). Also, the Commission stated in the order:

> *V. In light of the expressed and anticipated public interest in the Mississippi River crossing issues and due to the sensitivity of the environment and inter-governmental issues raised by any such crossing, the charge of at least one of the task forces should consist of or include examination of the issues surrounding the line's Mississippi River crossing to Wisconsin, above ground, underground, at Alma, or elsewhere.*

March 10, 2010 Mississippi River Revival and Citizens Energy Task Force request for task force regarding Mississippi River crossing:

> *2) The charge of this Advisory Task Force, consistent with previous communications from the US Fish and Wildlife Service to Xcel Energy on February 19, 2008 and May 4, 2009, would be to conduct a comprehensive examination of an underground alternative to minimize impacts on the River, the Refuge and flora and fauna of concern. The Task Force would obtain information on impacts of overhead transmission lines on birds using the Mississippi River Flyway as well as visual and other environmental impacts on the River, Refuge*

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and surrounding communities. The Task Force would review benefits and costs of underground crossings at any point along the river from Alma to La Crescent. Staff would seek information on underground crossings from sources other than the Applicants, including contractors with experience in constructing underground transmission lines in sensitive environmental locations.

20103-47862-01 PUBLIC 09-1448 TL MISSISSIPPI RIVER REVIVAL AND CITIZENS ENERGY TASK FORCE LETTER 03/10/2010

EIS Scoping Comments

June 3, 2010 North Rochester-Mississippi Advisory Task Force. Comments on the Applicants preferred 345 kv route:

*Only one location for the crossing of Mississippi River proposed by Applicant; **need to look at additional options**; going underground (a line was placed under the St. Croix Wild and Scenic Riverway); additional crossing points for the Mississippi River need to be considered.*

MINNESOTA EIS SCOPING COMMENTS REFERENCING RIVER CROSSING OPTIONS (online at: http://energyfacilities.puc.state.mn.us/resource.html?Id=28492):

Pg 5- Mississippi River Parkway Commission of MN- "underground river crossing should not be ruled out as a possibility".

Pg 8- MN DNR. Comment page 4. 'A thorough analysis of underground engineering of possible crossings is recommended. This analysis may include locations other than previously described aerial crossings if engineering for underground configuration is more practical at another location." Jamie Schrenzel. April 29, 2011

Pg 11- MN DNR. Comment page 4. "The DEIS should include a robust description of possible underground crossings of the Mississippi River.....Underground route crossing options discussed in the DEIS should not only include an underground crossing at the location(s) best suited for considering aerial crossings, but should include an underground route at the location(s) best suited for engineering an underground route, which may or may not be in the same location as the Alma crossing. ...A comparison of impacts and mitigation should be included for aerial and underground crossings of the Mississippi ..... It would be informative if the DEIS contained a brief discussion of the possible extent of impacts in Wisconsin, particularly related to how the choice of the Mississippi River crossing location affects routing in Wisconsin and Minnesota...." Jamie Schrenzel. May 10, 2010.

SCOPING MEETINGS: May, 2010 – Comments regarding River Crossings (available online at: http://energyfacilities.puc.state.mn.us/resource.html?Id=28492)

May 4. Plainview. 6:30 PM.

Laura Kreofsky. Questioning why Alma? In comparison to other crossings? Hillstrom lengthy explanation of why Alma chosen by Applicants

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Steve Walker. LaCrosse now too expensive to "buy" trucking company on industrial land. At one time the route was going 90 to LaCrosse

May 6.Cannon Falls 1:30.

Michael Collins. Why not use 52 to I-90 into LaCrosse using path already cut (check RPA Appendix for I-90 to LaCrosse route study…)

APPEAL OF SCOPING DECISION

NoCapX 2020 and U-CAN appealed the Scoping Decision, specifically regarding its failure to include more than one Mississippi River crossing:

> **2. The EIS must include analysis of more than one river crossing**
>
> The scoping decision includes only one river crossing, the solitary Alma river crossing proposed by applicants. This is not sufficient alternatives analysis under MEPA. A project this large, with impacts legally acknowledged as significant, must include additional alternatives. This request for review and analysis additional options to be included in the EIS was raised in the Task Force that covered the river crossing, yet I cannot find any alternative to the Alma crossing in the scoping decision. This is such an obvious scoping flaw that it's difficult to see a need for additional words! The RUS EIS is analyzing at least three locations, in Alma, Winona, and LaCrosse, and technical alternatives as well – this information is available online, at the link cited above. The Scoping decision should include river crossing options included in the RUS EIS.

20108-53324-01 PUBLIC 09-1448 TL NOCAPX 2020 AND UCAN OTHER--APPEAL OF EIS SCOPING DECISION 08/09/2010

DEIS Comments

FEIS-DEIS COMMENTS/TESTIMONY: 2011 (See MOES' FEIS Appendix O)

ID#1- Appendix O. Dept. of Interior. "All three river crossings……" paragraph 2

ID # 123. Pg O-282. Denise Leedham. Utilize highwyays 52 and I-90.

ID# 162. Pg. O-362. Lee Naus. Utilize Highways 52 & I-90 (across Mississippi).

ID# 168. Pg. O-379. US Dept of Interior. 2008. First and second choices of Mississippi crossing….. Also the "I-90 corridor" on second page of this letter…

ID# 168. Pg. O-399. NoCAPX and UCAN . Multiple crossings….168E.

ID# 204. Pg. O-477. Patricia Steffes. Utilize Hwy. 52 & I-90, facility in LaCrosse.

ID# 211. Pg. O-493. Tina Trihey Porter. Utilize I-90 (across Mississippi).

ID# 216. Bob Wallace. Pg. O-500. Assumed that I-90 corridor was being considered….

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ID# 224. Joe Morse. Pg. O-517. More than one Mississippi River crossing.

ID# 238. Mike Collins. Pg. O-550. Utilize Hwy. 52 to I-90, and east (across Mississippi to LaCrosse…)

ID# 242. Kia Hackman. Pg. O-557. Utilize Highways 52 & 90 (across Mississippi)..

ID# 251. Larry Paul. Pg. O-577. Utilize Hwy 52 & I-90 to LaCrosse (across Mississippi)..

ID# 263. Carolyn Campbell. Pg. O-606. Thought the alternate route was Interstate 90.

ID# 271. Alan Muller. Pg. O-648. No build alternative. I never got this before, and thought this was good! After review of RUS…..

Comments at hearings

ALJ PUBLIC HEARINGS: 2011 (available online at: http://energyfacilities.puc.state.mn.us/documents/25731/CapX%20DEIS%20Comment%20Speadsheet_web_20110513.pdf)

Dave Sykora, MN/DOT. June 15. Pine Island. 6:30. Starts on Pg 69. "I have a general sense there is a feeling among many people in the community that the reason this route doesn't go down to I-90 and over to LaCrosse is because MNDOT said you can't go there. And I'd like to clarify that. That did not happen." Contunues to talk about using the I-90 corridor… So in the meetings, he, too, was hearing about I-90 across the Mississippi River to LaCrosse……

June 14. Plainview. 1:30. Robert Wallace. Pg 59. "I hear of this project over a year ago, but at the time routes being considered were along the I-90 corridor in the Winona and Houston County area…"

June 14. Plainview. 6:30. Pat Melvin. 'I support the transmission line from the 52 corridor to the I-90 to LaCrosse corridor…"

Barb Stussy. June 15. Pine Island 1:30. Pg 66. First USDA rural development. It was a macro corridor study…"

There were so many comments requesting more than one Mississippi River be considered and analyzed, there were so many comments requesting specific alternatives, and given the purpose and specific language of the Scoping Decision, the paragraph I've quoted above is false:

> *The applicants' decision on the proposed crossing was reinforced during the state of Minnesota EIS scoping process in the spring of2010.The Minnesota Office of Energy Security (OES) convened two advisory task forces and a public scoping comment period on the issues and route alternatives that should be evaluated in the Minnesota EIS.* ***If the comments from the task forces and the public did not indicate that the LaCrosse crossing should be reevaluated in addition to the Alma crossing, then the scope of the Minnesota EIS would include the Alma crossing as the only crossing.*** *The OES scoping decision in August 2010* ***confirmed*** *the Alma crossing as*

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*the one to be carried through the **two states'** review processes. See appendix D, the Executive Summary of the Minnesota EIS, page 1[2].*

Wisconsin PSC DEIS, p. 36 (emphasis added).

What is PSC rationale for only one Mississippi crossing?

In light of these comments from the public and Task Force, the statement on page 36 of the DEIS does not make sense:

> *The applicants' decision on the proposed crossing was reinforced during the state of Minnesota EIS scoping process in the spring of2010.The Minnesota Office of Energy Security (OES) convened two advisory task forces and a public scoping comment period on the issues and route alternatives that should be evaluated in the Minnesota EIS. **If the comments from the task forces and the public did not indicate that the LaCrosse crossing should be reevaluated in addition to the Alma crossing, then the scope of the Minnesota EIS would include the Alma crossing as the only crossing.** The OES scoping decision in August 2010 **confirmed** the Alma crossing as the one to be carried through the **two states'** review processes. See appendix D, the Executive Summary of the Minnesota EIS, page 1[3].*

Wisconsin PSC DEIS, p. 36 (emphasis added).

Please correct this and provide an explanation for acceptance of only one Mississippi River crossing in the Application, and no alternatives reviewed in the DEIS, and provide legal authority for this position and explain how this is appropriate as environmental review.

Also, please add the RUS Macro-Corridor Study and Alternative Evaluation Study to the PSC's FEIS.

Thank you for considering my Comment. Please add me to your project mailing list and send me a copy of the Final Environmental Impact Statement.

Sincerely,

Joyce Osborn
United Citizens Action Network (U-CAN)
P.O. Box 1165
Burnsville, MN 55337
(952) 435-5984

(please use this address as I do not have email)

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[2] Section 6 of the Minnesota OES EIS discusses the factors supporting the "Kellogg Crossing" at Alma in detail. It also discusses alternative crossing methods. CapX Hampton-Rochester-LaCrosse345kVand161kV Transmission Lines Project Environmental Impact Statement, August 2011. (footnote from PSC DEIS, p. 36).

N-014-001

we have Erik and Angela Shepard. Did you both want to speak as separate individuals?

MR. SHEPARD: No, just myself.

MODERATOR RICHTER: Okay. Thank you, Erik. So first Al.

MR. LORENZ: My name is Al Lorenz and I'm Chairman of the Wisconsin Mississippi River Parkway Commission, which by state statute is the designated agency for the Great River Road National Scenic Highway. We appreciate this opportunity to comment on the Draft EIS.

Our Wisconsin Mississippi River Parkway Commission has been deeply involved with meetings and discussions with Xcel Energy, Dairyland Power Corporation, the Rural Utility Service, Wisconsin Public Service Commission, Wisconsin Department of Transportation, plus other agencies concerning the CAPX 2020 project since it was initially proposed back in 2009.

Our official position, as we clearly stated in meetings and in formal correspondence is that we oppose the (inaudible) alignment due to the significant detrimental aesthetic impact of the proposed project on the Great River Road National Scenic Highway. We have carefully reviewed the Draft

N-014-001

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K02-Great River Road, Wisconsin.

N-014-001

EIS and have found nothing to change our position.

The 250-mile Great River Road in Wisconsin, along with the Great River Road in the nine other states along the Mississippi River, was approved by Congress in 1938 as a national parkway and is a cherished Wisconsin treasure. Our Wisconsin Parkway Commission was created by Wisconsin Statute in 1961, codified in the state statutes, and our statutory duties are to assist in coordinating the development and preservation of the Great River Road in Wisconsin, it's embellishments such as scenic easements and roadside parks and scenic overlooks.

In the year 2000 the Great River Road was officially designated by Congress as a National Scenic Byway, and at the same time in Wisconsin, as a State Scenic Byway, to stress its significance as a national cultural resource as well as a state cultural resource.

The National Scenic Byway designation acknowledges the route as a special resource to be preserved for future generations and that it will continue to offer visitors an outstanding memorable experiences and opportunities regarding the byway's intrinsic qualities of scenic views, preservation of history, archeology of natural areas, and more.

N-014-001

In effect it has become a tribal destination, even worldwide.

In 1961 the Wisconsin legislature created state statute 1560 to protect scenic resources along special highways and appropriating funds for the acquisition of scenic easements. During the 1960's the Wisconsin Department of Transpportation acquired at least 557 scenic easements, 300 feet in width, to protect the natural value for which the Great River Parkway was designated.

Constructing 150- to 170-foot high towers and 150 clear-cut easements would impact the scenic easements held by the DOT, as well as impacting those areas outside of the scenic easements between the Mississippi River and the eastern high bluffs that are well within the view shared by the traveler (phonetic).

Of significant note is our understanding --

(Whereupon, the three-minute time limit was in effect.)

I have provided a copy already.

MODERATOR RICHTER: Okay. Erik will be followed by Joanne Schnell.

WISCONSIN
MISSISSIPPI RIVER
PARKWAY COMMISSION

AMERICA'S BYWAYS

January 13, 2012

Wisconsin Mississippi River Parkway Commission (WIMRPC) Comments on the USDA Rural Utility Service's "Draft Environmental Statement for the Hampton-La Crosse CAPX 2020 Transmission Line Project"-------By Alan Lorenz, Chairman, WIMRPC.

N-015-001

My name is Alan Lorenz and I am Chairman of the WIMRPC which is by State Statute, the designated agency for the Great River Road National Scenic Byway.

We appreciate this opportunity to comment on the Draft Environment Impact Statement (DEIS).

Our WIMRPC has been deeply involved in meetings and discussions with Xcel Energy, Dairyland Power Corporation, the Rural Utility Service, the Wisconsin Public Service Commission, the Wisconsin Department of Transportation plus other agencies concerning the CAPX2020 Project since it was initially proposed in 2009.

Our official position, as we have clearly stated at meetings and in formal correspondence, is that we oppose the Alternate Q1 alignment due to the significant detrimental aesthetic impacts of the proposed project to the GRRNSB. We have carefully reviewed the DEIS and have found nothing to change our position.

The 250 mile GRR in Wisconsin, along with the GRR in the 9 other States along the Mississippi River, was approved by Congress in 1938 as a National Parkway and as a cherished Wisconsin treasure.

Our WIMRPC was created by Wisconsin Statute in 1961 and codified as amended at Wis. Stat. 14.85. Among our statutory duties are to "assist in coordinating the development and preservation of the GRR in Wisconsin, and its embellishments such as scenic easements, roadside parks, and scenic overlooks".

In the year 2000 the GRR was officially designated by Congress as a National Scenic Byway and at the same time in Wisconsin as a State Scenic Byway to stress its significance as a National cultural resource as well as being a State cultural resource.

National Scenic Byway designation acknowledges this route as a precious resource to be preserved for future generations that will continue to offer visitors outstanding memorable experiences and

W4927 Hoeth Street, La Crosse, WI 54601 • Telephone: 608/788-8264 • E-Mail: alanlorenz@centurytel.net

N-015-001

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K02-Great River Road, Wisconsin.

N-015-001

opportunities regarding the Byway's intrinsic qualities such as scenic views, recreation, history, archeology and natural areas and more. In effect it has become a travel destination even worldwide.

In 1961 the Wisconsin legislature created Stat. 15.60 to protect scenic resources along special highways and appropriated funds for the acquisition of scenic easements. During the 1960's the Wisconsin Department of Transportation (WisDOT) acquired at least 557 scenic easements (300 feet in width) to protect the values for which this National Parkway, the GRRNSB was designated.

Constructing Alternate QI with its 150-170 foot high towers and 150 clear cut easements, would impact these scenic easements held by WisDOT as well as impacting those areas outside the scenic easements between the Mississippi River and eastern high bluffs that are well within the view shed of the Corridor's travelers.

Of significant note, it is our understanding that Wis Statute 182.017(2) provides that no high voltage line may at any time obstruct or incommode (causing inconvenience or distress) the public user of the GRRNSB.

In addition it is also our understanding that WisDOT Policy as approved by the Federal Highway Administration prohibits new utility installations on Highway R/W in areas where scenic easements have been acquired on or adjacent to highway R/W.

In summary, our WIMRPC strongly opposes Alternate QI and it is our judgment that the DEIS does not adequately address the significant importance of the GRRNSB designation, does not clearly define the potential negative aesthetic impacts of Alternate QI on the scenic beauty and other intrinsic qualities of the Byway, does not adequately address the impacts to WISDOT's long held scenic easements with their protective State policies and additionally fails to address the long term local and State economic impacts that may well occur if this section of Wisconsin's GRRNSB is negatively impacted by the construction of a major high voltage transmission line.

The WIMRPC will provide addition written comments about this Draft EIS prior to the close of the comment period on January 30th, 2012.

N-016-001

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K02-Great River Road, Wisconsin.

WISCONSIN
MISSISSIPPI RIVER
PARKWAY COMMISSION

January 20, 2012

Stephanie A. Strength, USDA, Rural Development, Utilities Program
1400 Independence Avenue SW, Mail Stop 1571, Room 2244
Washington, D.C. 20250-1571

Dear Ms Strength:

N-016-001

This memo and attachments express the Wisconsin Mississippi River Parkway Commission (WIMRPC) review comments pertaining to the Draft Environmental Impact Statement (DEIS) for the Hampton Minnesota and LaCrosse Wisconsin Transmission System Improvement Project (the Proposal) - particularly in regards to "...rebuilding Dairyland's North La Crosse – Alma 161 KV line (Q1), which may be at least partly co-located with the Proposal." The WIMRPC is by State Statute the designated agency for the Great River Road National Scenic Byway (WIGRRNSB).

The Q1 and the Q1 – STH35GRRNSB routing alternatives follow in part and involves several crossing of the Wisconsin Great River Road National Scenic Byway. WIMRPC carefully reviewed the RUS DEIS (attachment 1) and found it seriously lacking re (1) presenting the virtues (and long history) of the WIGRRNSB and (2) describing the negative impacts of erecting visual dominating High Towers (attachment 2) along the Byway which meanders the majestic Mississippi River corridor. A spectacular corridor providing Wisconsin a precious resource that offers visitors, both domestic and foreign, various opportunities and memorable experiences regarding the Byways intrinsic qualities i.e. scenic views and vistas, recreation, history, archeology, varied culture, natural areas and more and has become a destination even worldwide.

The WIMRPC has intently monitored the CAPx2020 study process and have been deeply involved in meetings and discussions with the Proposals' sponsor and participating Federal and State Agencies. By letter of December 25, 2011 the WIMRPC responded to the DEIS prepared by the Wisconsin Public Service Commission (attachment 3) and presented verbal and written testimony (attachments 4 & 5) at the RUS Public Hearings in Alma and Centerville Wisconsin during the second week of January 2012.

The WIMRPC official position, as repeatedly stated at the aforementioned meetings, public hearings and in the written communication regarding the Wisconsin Public Service Commission DEIS is that **of opposing the Q1 routing alternative.** The routing alternatives that follow and repeatedly crosses the GRRNSB create negative impacts on the intrinsic qualities of the Byway – particularly significant negative visual impacts on the views and view-sheds by the imposing High Towers (150 ft) and the 150 ft clear cut utility right of way.

Sincerely,

Al Lorenz

Al Lorenz, Chairman
Wisconsin Mississippi River Parkway Commission
W 4927 Hoeth Street
LaCrosse, Wisconsin 54601

Attachment #1

Wisconsin Mississippi River Parkway Commission Review Comments
Draft Environmental Impact Statement
Hampton – Rochester – La Crosse 345 KV Transmission System Improvement Project
January 20, 2012

N-016-001

The WIMRPC has carefully reviewed the Draft Environmental Impact Statement prepared by Rural Utilities Service (RUS) dated December 2011. We have found nothing that would change our position that the Q1 alignment that follows the GRRNSB not be approved. Furthermore we wish to state the following for the record regarding what the WIMRPC has, at this point, determined as lacking and misleading in the DEIS document:

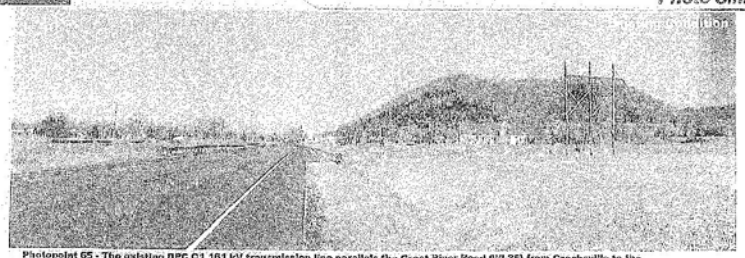
- The referenced Q1- STH 35 title should be consistently labeled as Q1– STH35GRR to signify that STH 35 is more than a typical STH. Likewise all the exhibits and routing on maps should include the GRR and NSB logo marker shield. Furthermore at the earliest reference to Q1 –STH35GRRin the DEIS an appendix page should be referenced that describes the full and broad essence of the GRR and NSB designations including elaboration of he intrinsic qualities i.e. scenic, recreation, archeological, historical, cultural and natural..
- The DEIS fails to describe the essence and purpose of WIDOT purchasing scenic easements along the GRR. The DEIS on page 288 states "Moreover, an NSB refers not only to the highway itself "but also to the corridor through which it passes." What the DEIS lacks however is specific elaboration about the negative effects that a Q1-STH35 transmission line would impose on the extended function of the easements to perpetuate view sheds. Regardless whether the proposed transmission line is located within the scenic easement (which WIDOT has stated they would not permit) or at any location that dominants or hinder views sheds from the GRRNSB is a critical negative impact.
- In regard to the Q1 – STH 35 alignment no mention is made of the several crossing of the GRRNSB by the proposed transmission line– which in themselves will create negative focal points for the GRRNSB traveler.
- Page 14 2nd paragraph (also first paragraph page 102 and page 130) states "The northern 8 miles of this Q1 corridor is near Wisconsin Highway 35 (no reference to GRRNSB) …." However much of this segment of Q1, as proposed, is located within (not near) the scenic easements. While scenic easements are mentioned in this paragraph no mention is made of the encroachment by the proposed transmission line and the 150 foot clear cut ROW. Also no mention of the several proposed transmission line crossing of the GRRNSB all of which create significant negative visual impacts.
- Page 65 Table 1-3 - no mention of permit necessary from WIDOT re scenic easements.
- Page 100 2.3.2 – "the changes from the MCS final corridors and route options center on avoidance options…the first uses WI-35 at the south end….". Avoidance option ???? re using the GRRNSB on the south end confronts scenic easements, negative visual impacts and DNR objection of proposed transmission line locating in Black River Bottoms.
- Page 112 3rd paragraph re Q1 routing -mention of scenic easements should be included.
- Page 130 - no acknowledgement of WIMRPC having expressed their concern.
- Pages 132, 148, 163,– references to STH 35 but not GRRNSB.
- Pages 219 and 220 – These exhibits show the GRR logo – GRRNSB logos should be shown on all similar maps & exhibits.
- Page 256 – "… transmission line alignment of 400 feet from roadway …. to avoid scenic easements." 150 foot clear cut utility ROW would extend into 350 scenic easements. Also no mention of scenic easements or reference to view shed in last paragraph page 255
- Page 281 – need extended paragraph explaining virtues of GRR and NSB in this section of DEIS.
- Pages 286, 287 and 288 – reference is made of virtues of GRRNSB but no explanation the proposed transmission lines negative impacts on those virtues There are not 635 designated NSB s- (rather only 151).

Attachment #1 cont.

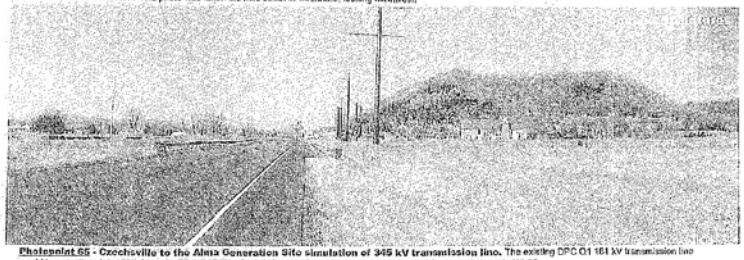
N-016-001

- Page 292 – lengthy discussion on impacts to a canoe launch and rustic campsite in Van Loon is in contrast to the absence of similar discussion in the DEIS for the various negative impacts on the GRRNSB.
- Page 293 – note that the consultant classification of views (which was never accepted by WIDOT or WIMRPC) as poor includes presence of utility structures . Also locating the transmission line at 400 from centerline of roadway still extends 150 clear cut area into scenic easements.
- Pages 294 and 295 "Measures to Reduce Impacts" - "Great River specific to the Q! – STH 35 route". The measures listed are "good sounding" statements – however not sure how effective. "Re-routing 161 further away…" (where is Figure 5 Maps 1 through 3?) ;".. modify structure types to narrow ROW retain a screen of trees …" (how many and how effective i.e.. leaves gone and top of towers still visible); "Reduce number of poles located in scenic easements.." (where? still very visible i.e. affect view sheds); "Use alternative pole finishes…" (it is the size and dominance that is the visual problem); "Move poles were requested by WIDOT to make them less visible…" (Where? how much less visible?)

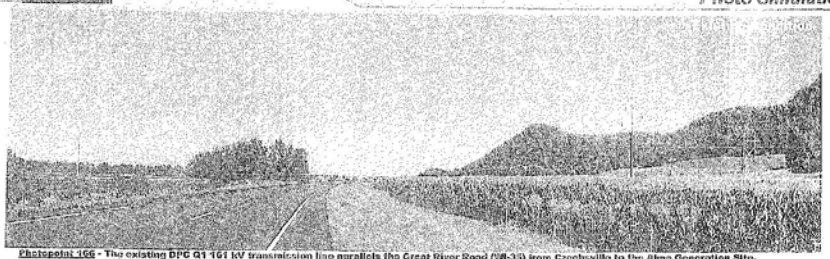
  "Impact could also be avoided at GRRNSB in both Minnesota and Wisconsin by selecting another route" (O.K. !!!)
- Page 296 Figure 3-15 and Page 303 Figure 3-16 Detail of map to small and confusing
- Page 301 " Accordingly, a thorough NEPA analysis should address the human (social and cultural) and natural aspects of the environment , and the relationship between them". This apply to GRRNSB?
- Page 304 "Pursuant to 36 CFR 800.16(d) … Area of Potential Effect (APE) is defined as … includes the 1000 foot-wide route for each alternative…." However the APE must also address visual effects." Hmmm – wonder how this might apply?
- Page 307 "there are no currently listed National Registered Historical Properties within any Wisconsin corridors" Is Alma's downtown within the corridor?
- Page 325 "Tourism …" …no data found to suggest that impact may occur…" "See Section 3.7 re visual impacts for a discussion (which is really no help)
- Page 347 - Visual Resources "The impacts are generally incremental, as few areas have no visual intrusion of man made structures." Not incremental to GRRNSB.



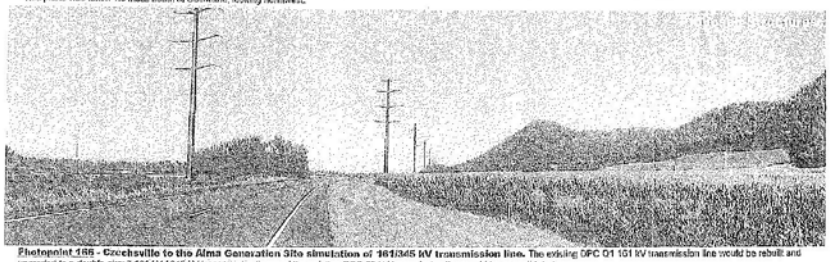
Photopoint 65 - The existing DPC C1 161 kV transmission line parallels the Great River Road (WI-35) from Czechsville to the Alma Generation Site. This photo was taken 0.5 mile south of Cochrane, looking northwest.



Photopoint 65 - Czechsville to the Alma Generation Site simulation of 345 kV transmission line. The existing DPC C1 161 kV transmission line would be rebuilt and upgraded to a double-circuit 161 / 345 kV transmission line. The centerline may be moved closer to WI-35.



Photopoint 166 - The existing DPC G1 161 kV transmission line parallels the Great River Road (WI-35) from Czechsville to the Alma Generation Site. This photo was taken 1.5 miles south of Cochrane, looking northwest.



Photopoint 166 - Czechsville to the Alma Generation Site simulation of 161/345 kV transmission line. The existing DPC G1 161 kV transmission line would be rebuilt and upgraded to a double-circuit 161 kV / 345 kV transmission line, and the existing DPC 69 kV transmission line would be consolidated.

Attachment #3

WISCONSIN
MISSISSIPPI RIVER
PARKWAY COMMISSION

AMERICA'S BYWAYS

December 15, 2011

William Fannucchi
Docket Coordinator
Wisconsin Public Service Commission
P.O. Box 7854
Madison, WI 53707 – 7854

Dear Mr. Fannucchi:

Subject: PSCW Docket 5 – CE- 136

N-016-001

Please find attached Wisconsin Mississippi River Parkway Commission (WIMRPC) review comments pertaining to the Wisconsin CAPX 2020 Draft Environmental Impact Statement (DEIS). The WIMRPC review comments (highlighted in red) are referenced to the Page number of the DEIS and the title of the paragraph along with brief excerpts from the paragraph that the review comment(s) refers to. Attachments are included that compliment the review comments.

The review comments reflect that the WIMRPC found the DEIS seriously lacking in presenting the virtues (and long history) of the Wisconsin Great River (and as a designated National Scenic Byway) as it meanders the majestic Mississippi River corridor. A spectacular corridor providing Wisconsin a precious resource that offers visitors outstanding memorable experiences and opportunities regarding the Byways' intrinsic qualities i.e. scenic views, recreation, history, archeology, varied culture, natural areas, and more and has become a destination even world- wide. The consequence of the DEIS not adequately presenting the aforementioned virtues and intrinsic qualities – suggests that the DEIS readers will lack conscious awareness of the of overall negative impacts of the CAPX proposal of routing a High Tower 345kV transmission line adjacent to and the imposing several crossing of the Great River Road National Scenic Byway.

Excerpts from the DEIS (page 45 and page 46 5.1.2) in essence describe the negative impacts that would be imposed on the GRRNSB - Exhibits 7 and 7a illustrate.

Thanks for the opportunity to comment.

Sincerely;

Al Lorenz mcs

Al Lorenz, Chairman
Mississippi River Parkway Commission
W 4927 Hoeth Street
LaCrosse, Wisconsin 54601

Attachment #4

Comments on the USDA Rural Utility Service's "Draft Environmental Statement for the Hampton-La Crosse CAPX 2020 Transmission Line Project"

By Alan Lorenz, Chairman, Mississippi River Parkway Commission- January 13, 2012

N-016-001

My name is Alan Lorenz and I am Chairman of the WIMRPC which is by State Statute, the designated agency for the Great River Road National Scenic Byway.

We appreciate this opportunity to comment on the Draft Environment Impact Statement (DEIS).

Our WIMRPC has been deeply involved in meetings and discussions with Xcel Energy, Dairyland Power Corporation, the Rural Utility Service, the Wisconsin Public Service Commission, the Wisconsin Department of Transportation plus other agencies concerning the CAPX2020 Project since it was initially proposed in 2009.

Our official position, as we have clearly stated at meetings and in formal correspondence, is that we oppose the Alternate Q1 alignment due to the significant detrimental aesthetic impacts of the proposed project to the GRRNSB. We have carefully reviewed the DEIS and have found nothing to change our position.

The 250 mile GRR in Wisconsin, along with the GRR in the 9 other States along the Mississippi River, was approved by Congress in 1938 as a National Parkway and as a cherished Wisconsin treasure.

Our WIMRPC was created by Wisconsin Statute in 1961 and codified as amended at Wis. Stat. 14.85. Among our statutory duties are to "assist in coordinating the development and preservation of the GRR in Wisconsin, and its embellishments such as scenic easements, roadside parks, and scenic overlooks".

In the year 2000 the GRR was officially designated by Congress as a National Scenic Byway and at the same time in Wisconsin as a State Scenic Byway to stress its significance as a National cultural resource as well as being a State cultural resource.

National Scenic Byway designation acknowledges this route as a precious resource to be preserved for future generations that will continue to offer visitors outstanding memorable experiences and opportunities regarding the Byway's intrinsic qualities such as scenic views, recreation, history, archeology and natural areas and more. In effect it has become a travel destination even worldwide.

In 1961 the Wisconsin legislature created Stat. 15.60 to protect scenic resources along special highways and appropriated funds for the acquisition of scenic easements. During the 1960's the Wisconsin Department of Transportation (WisDOT) acquired at least 557 scenic easements (300 feet in width) to protect the values for which this National Parkway, the GRRNSB was designated.

Constructing Alternate Q1 with its 150-170 foot high towers and 150 clear cut easements, would impact these scenic easements held by WisDOT as well as impacting those areas outside the scenic easements between the Mississippi River and eastern high bluffs that are well within the view shed of the Corridor's travelers.

Of significant note, it is our understanding that Wis Statute 182.017(2) provides that no high voltage line may at any time obstruct or incommode (causing inconvenience or distress) the public user of the GRRNSB.

In addition it is also our understanding that WisDOT Policy as approved by the Federal Highway Administration prohibits new utility installations on Highway R/W in areas where scenic easements have been acquired on or adjacent to highway R/W.

In summary, our WIMRPC strongly opposes Alternate Q1 and it is our judgment that the DEIS does not adequately address the significant importance of the GRRNSB designation, does not clearly define the potential negative aesthetic impacts of Alternate Q1 on the scenic beauty and other intrinsic qualities of the Byway, does not adequately address the impacts to WISDOT's long held scenic easements with their protective State policies and additionally fails to address the long term local and State economic impacts that may well occur if this section of Wisconsin's GRRNSB is negatively impacted by the construction of a major high voltage transmission line.

The WIMRPC will provide addition written comments about this Draft EIS prior to the close of the comment period on January 30th, 2012.

Attachment #5

Summary Written Comments on CAPX2020 USDA Environmental Impact Statement

By Robert Miller, Buffalo County Commissioner, WIMRPC
RUS Public Hearing January2012 @ Alma Wisconsin

N-016-001 The WIMRPC has been involved in meetings and discussions related to CAPX2020 since 2009. Our Commission , through Chairperson, Alan Lorenz has submitted letters, review comments, and oral critiques to numerous planning groups, agencies and organizations stating our opposition to proposed Route Q1 which runs parallel to the WI Great River Road / National Scenic Byway for considerable distance from where CAPX2020 crosses into Wisconsin at Alma. A copy of one such correspondence is attached .

Many possible environmental intrusions and risks associated with the CAPX 2020 lines have been presented in responses and correspondence from the US Fish & Wildlife Service. We certainly agree with their assessments and will not add to them. Our frustration with the current planning activities is that almost no attention has been given to the negative aesthetic affects of the of the 175 ft.poles of the transmission lines and expanded clearing for an enlarged right-of way along the WI Great River Rd. and National Scenic Byway. Tourism travel and expenditures remain a large and growing part of the region's economy and aesthetic concerns are important to a touring public as well as local citizens. Neither has proper consideration been given to the intrusion and violation of WIDOT"s scenic easements along the WI Great River Road by using the Q1 routing. If not respected, the challenge and purposeful violation of the scenic easements could bring about further challenges by other groups elsewhere along the 210 miles of the WI great River Road / National Scenic Byway ie. a facility for processing fracking sand in Buffalo County.

N-017-001

* * * *

ROBERT MILLER: Okay. The Wisconsin Mississippi River Parkway Commission has been involved in meetings and discussions relating to CapX2020 since 2009. Our commission, through chairperson Alan Lorenz, has submitted letters, reviewed comments and oral critiques to numerous planning groups, agencies, and organizations stating our opposition to proposed route Q1, which runs parallel to the Wisconsin Great River Road National Scenic Byway for a considerable distance for where CapX2020 crosses into Wisconsin in Alma. A copy of one such correspondence is attached. This is from our chairman, Alan Lorenz.

Many possible environmental intrusions and risks associated with the CapX2020 lines have been presented in responses and correspondence from the US Fish & Wildlife Service. We certainly agree with their assessments and will not add to them. Our frustration with the current planning activities is that almost no attention has been given to the negative esthetic effects of the 175-foot poles of the transmission lines and expanded clearing for enlarged right-of-way along the Wisconsin Great River Road and National Scenic Byway.

N-017-001

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K02-Great River Road, Wisconsin.

N-017-001

Tourism, travel, and expenditures remain a large and growing part of the region's economy, and esthetic concerns are important to a touring public as well as local citizens. Neither has proper consideration been given to the intrusion and violation of Wisconsin Department of Transportation scenic easements along the Wisconsin Great River Road by using the Q1 routing. If not respected, the challenge and purposeful violation of the scenic easements could bring about further challenges by other groups elsewhere along the 210 miles of the Wisconsin Great River Road National Scenic Byway.

As one example, a facility for processing fracking sand in Buffalo County. Although I don't see anything on my particular written comments that have been distributed, one of the important things also in the scenic easements is that a considerable amount of money was spent to provide these back in the 1960s, and the DOT has spent this money with the understanding that there would be a 350 foot or larger setback from the center of the highway. And so this becomes a very important factor.

If you have time, I would actually

N-017-001

give one reference here that might be of some value. The Great River Road scenic easements were acquired by the Wisconsin Department of Transportation as a statutory area first priority in 1961. The legislature enacted Chapter 427 laws, 1961, creating Wisconsin statute 15.60 to protect scenic resources along highways.

Wisconsin Statute 15.60(6)(i) established the first priority for scenic easements along the Great River Road as follows: "Scenic easements, first priority will be given to completing scenic easements along the Great River Road." Over the years Wisconsin Department of Transportation, WDOT, in consultation with the Wisconsin Mississippi River Parkway Commission, conscientiously administered the scenic easements. There was a study done in the spring of 2000 called "Purchase of Scenic Easements in Wisconsin's Great River Road" written by Brian W. Ohm, O-H-M, that appeared in the American Planning Association Volume 66 No. 2, Spring 2000. That contains an expression that reflects Wisconsin's original purposes and goals for purchasing these easements.

I think I will stop there because for the people that are very interested, and I hope

N-017-001

they are, those documents and as well as the statute, are important to us, and should be to everyone.

* * * *

DAVID W. FETTING: My name is David W. Fetting, State Highway 88, Cochrane, Wisconsin. And this is a reply to the USDA on 88A or 88B corridor. Should I refer to page numbers and all that stuff? Page 8, HRL 345kV draft EIS, executive summary 12.8.11. Q1 line needs to be updated anyway. If this 345 line does need to be built, do it on the existing right-of-ways, not disturbing the agriculture, the conservancies, and the air strips that are currently in practice in Waumandee Valley.

Page 47, 1.1.2. Purpose of and the need. From the information of the public service docket 5-CE-136, volume one, pages 16 and 18, it is questionable if the electric demand would be large enough to justify this line. The current generation resources to meet the needs of the area appear adequate.

Page 298, 3.83. Airports and airplanes conflicts. My neighbor Fred Gleitor has an airport. This line will not give him the proper clearances for takeoff and landings.

Page 313, 3.10.1.1. EMF.

Summary Written Comments on CAPX2020 USDA Environmental Impact Statement
By Robert Miller, Buffalo County Commissioner, WIMRPC

N-018-001

The WIMRPC has been involved in meetings and discussions related to CAPX2020 since 2009. Our Commission , through Chairperson, Alan Lorenz has submitted letters, review comments, and oral critiques to numerous planning groups, agencies and organizations stating our opposition to proposed Route Q1 which runs parallel to the WI Great River Road / National Scenic Byway for considerable distance from where CAPX2020 crosses into Wisconsin at Alma. A copy of one such correspondence is attached .

Many possible environmental intrusions and risks associated with the CAPX 2020 lines have been presented in responses and correspondence from the US Fish & Wildlife Service. We certainly agree with their assessments and will not add to them. Our frustration with the current planning activities is that almost no attention has been given to the negative aesthetic affects of the of the 175 ft.poles of the transmission lines and expanded clearing for an enlarged right-of way along the WI Great River Rd. and National Scenic Byway. Tourism travel and expenditures remain a large and growing part of the region's economy and aesthetic concerns are important to a touring public as well as local citizens. Neither has proper consideration been given to the intrusion and violation of WIDOT"s scenic easements along the WI Great River Road by using the Q1 routing. If not respected, the challenge and purposeful violation of the scenic easements could bring about further challenges by other groups elsewhere along the 210 miles of the WI great River Road / National Scenic Byway ie. a facility for processing fracking sand in Buffalo County.

N-018-001

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K02-Great River Road, Wisconsin.

WISCONSIN
MISSISSIPPI RIVER
PARKWAY COMMISSION

AMERICA'S BYWAYS

N-018-002

December 15, 2011

William Fannucchi
Docket Coordinator
Wisconsin Public Service Commission
P.O. Box 7854
Madison, WI 53707 – 7854

Dear Mr. Fannucchi:

Subject: PSCW Docket 5 – CE- 136

Please find attached Wisconsin Mississippi River Parkway Commission (WIMRPC) review comments pertaining to the Wisconsin CAPX 2020 Draft Environmental Impact Statement (DEIS). The WIMRPC review comments (highlighted in red) are referenced to the Page number of the DEIS and the title of the paragraph along with brief excerpts from the paragraph that the review comment(s) refers to. Attachments are included that compliment the review comments.

The review comments reflect that the WIMRPC found the DEIS seriously lacking in presenting the virtues (and long history) of the Wisconsin Great River (and as a designated National Scenic Byway) as it meanders the majestic Mississippi River corridor. A spectacular corridor providing Wisconsin a precious resource that offers visitors outstanding memorable experiences and opportunities regarding the Byways' intrinsic qualities i.e. scenic views, recreation, history, archeology, varied culture, natural areas, and more and has become a destination even world-wide. The consequence of the DEIS not adequately presenting the aforementioned virtues and intrinsic qualities – suggests that the DEIS readers will lack conscious awareness of the of overall negative impacts of the CAPX proposal of routing a High Tower 345kV transmission line adjacent to and the imposing several crossing of the Great River Road National Scenic Byway.

Excerpts from the DEIS (page 45 and page 46 5.1.2) in essence describe the negative impacts that would be imposed on the GRRNSB - Exhibits 7 and 7a illustrate.

Thanks for the opportunity to comment.

Sincerely;

Al Lorenz, Chairman
Mississippi River Parkway Commission
W 4927 Hoeth Street
LaCrosse, Wisconsin 54601

N-018-002

Please refer to Appendix C, Table C-4, Comment Category K: Visual Resources, K02-Great River Road, Wisconsin.

From: Carol A. Overland [mailto:overland@legalectric.org]
Sent: Friday, August
12, 2011 2:18 PM
To: Strength,
Stephanie - Durango
CO Subject:
Scoping Comments

Stephanie -

N-019-001

Attached are additional Scoping Comments on behalf of NoCapX 2020 and United Citizens Action
Network.

I note that the North Route Group had sent **Scoping** Comments in a couple weeks ago, and they've received word that their **Scoping** Comments would apparently not be treated as such. The North Route is NOT among the original Macro Corridors evaluated. North Route Group members live along the "North Route" that was added to the RUS EIS Macro Corridors, and they did NOT receive notice that this had occurred and did NOT receive notice that the Scoping Comment period had been extended at the end of 2010. Therefore, I request that their comments be appropriately be regarded as "**Scoping**" comments.

Thanks, Carol

Carol A. Overland
Attorney at Law
Legalectric - Overland Law Office
1110 West Avenue
Red Wing, MN 55066

612.227.8638

overland@legalectric.org

www.legalectric.org www.nocapx2020.info

N-019-001

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A01-Miscellaneous.

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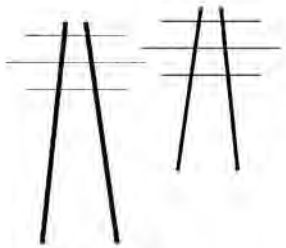


August 11, 2011

Stephanie Strength
Environmental Protection Specialist
USDA, Rural Utilities Service
1400 Independence Avenue, SW., Stop 1571
Washington, DC 20250-1571

via email: stephanie.strength@usda.gov

RE: Comments – NoCapX 2020, U-CAN and North Route Group
CapX 2020 – Hampton-LaCrosse - Macro Corridor Modification

Dear Ms. Strength:

N-019-002

This Comment is in response to the reopened Comment Period. Please note new address!

First, I am heartened to hear that the RUS site[1] is up and that the AEC and MCS are now there on the site for people to review. The only thing I cannot find are Affidavits of Publication and Mailing for the notices.

Second, the routes for this project that are under consideration have changed significantly, and notice of the RUS process, the new routes under consideration, and participation options has not been provided to affected landowners and the general public. This notice is required by RUS rules for EIS comment notice. This is not consistent with the "diligent efforts" required under 7 CFR §1794.13(a). If I am incorrect about this, please provide proof of publication and mailing lists for the October, 2010 and June 2011 reopenings for comments and post these on the RUS site.

At this time we request that the comment periods "announced" in November, 2010 and June 2011, be redone, with proper published notice to the general public, and mailed notice to formal parties in Minnesota and Wisconsin state administrative process, directly affected parties, and interested parties known to RUS (i.e., those who have filed comments previously) with notices and Affidavits of Publication and Mail Service Lists filed online. That Comment Periods are open and parties in both Minnesota and Wisconsin proceedings

Going down the list of rules, there has also been no coordination of efforts between the RUS and the two states as directed by §1794.14. Instead, there's been a confusing duplication of efforts, and also information that appears in the scope of one is sometimes absent in the other, and there have been no jointly prepared environmental documents. Minnesota and Wisconsin scope should be incorporated to the extent that it is not presently in the RUS Scoping Report. Further, state environmental review documents should be incorporated into the RUS DEIS, as an appendix at the very least.

[1] http://www.rurdev.usda.gov/UWP-CapX2020-HamptonRochesterLaCrosse.html

N-019-002

Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A15-General Regulatory Compliance.

N-019-003 I also note that Part 1794 rules place limitations on actions taken by applicants before environmental review is completed, specifically, that:

> *Until RUS concludes its environmental review process, the applicant shall take no action concerning the proposed action which would have an adverse environmental impact or* ***limit the choice of reasonable alternatives being considered*** *in the environmental review process (40 CFR 1506.1).*

7 CFR §1794.15.

The Applicants have, in applications in Minnesota and Wisconsin, submitted proposals that limit the Mississippi River Crossing to ONE choice rather than the initially four and now three that are offered and being evaluated by RUS. In Minnesota, the Public Utilities Commission will have no option to choose other than the Alma crossing, because it is the only crossing proposed by the applicants. The choice of Applicants to apply for just one Mississippi River crossing with no alternate crossings

N-019-004 As to scoping comments on specific areas to be addressed in the DEIS, we have the following comments:

3.4.2 Agriculture
Must include forestry as agriculture, impacts are permanent loss of production, not temporary, and there is no ability to plant trees in RoW, unlike beans, corn, and other annual crops.

N-019-005 **3.4.3 Biological Resources**
Impacts on Richard J. Dorer Memorial Hardwood State Forest must be considered for entire statutory boundary, not only the state or privately owned forests within that boundary.

N-019-006 USFWS recently conducted field study of bald eagles and golden eagles within CapX proposed footprint for Hampton-LaCrosse route. This new information should be considered (contact USFWS' Mags Rhude and Richard Davis for more information).

N-019-007 The Zumbro River is a DNR Water Trail.

N-019-008 **3.4.4 Connected Action**
The revised interconnection announced for Badger Coulee should be taken into consideration.

N-019-003
Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C10-Mississippi River Crossing.

N-019-004
Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C04-Use of New Generation.

N-019-005
Please refer to Appendix C, Table C-4, Comment Category J: Land Resources, J05-Other Public Lands.

N-019-006
Please refer to Appendix C, Table C-4, Comment Category I: Biological Resources, I03-Birds.

N-019-007
Please refer to Appendix C, Table C-4, Comment Category J: Land Resources, J01-General/Other.

N-019-008
Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A03-Connected Actions.

N-019-008 This should be considered as a phased and connected action also because it fits within the larger CapX 2020 plan:

N-019-009 **3.4.5 Conservation Easements**
The EIS must also include full disclosure of conservation easements and scenic easements held by any and all parties on both sides of the Mississippi.

N-019-010 **3.4.6 Cumulative Impacts**
EIS should address cumulative impacts relative to new impacts, considering Minnesota's non-proliferation policy, as outlined in PEER (attached as Exhibit 1) and state law, based on deliberate preference for route with pre-existing infrastructure corridor and compensable nature of impacts.
Non-compensable impacts, such as those to migratory birds and waterfowl should be avoided, or mitigated using undergrounding as recommended by the MN DNR.(attached as Exhibit 2)

N-019-011 **3.4.7 Electrical Characteristics**
EIS should specifically address electrical field and magnetic field levels, should disclose potential levels, for the full range of capacity of this project, 345kV 954 kcmil bundled single circuit (2050 MVA) and double circuit (4,100 MVA), taking into account phase cancellation for double circuited lines, and calculated for various distances from the line, including 0 (on centerline), 50, 75, 100, 125, 150, 200, 300 and 500 feet and whatever distance from the line that a level of 2 mG or less is calculated. Also electrical field and magnetic field levels should be disclosed and addressed for potential combinations of 345kV circuit and 161kV circuit. See Affidavit of Bruce McKay (attached as Exhibit 3).

N-019-012 **3.4.8 Environmental Justice**
Arguments in testimony filed by Oronoco Township in the Minnesota routing proceeding have raised the issue of Environmental Justice. Oronoco Township has suggested that because the land valuation is higher for land affected by the route going through Oronoco Township, that route should be avoided and the route should

N-019-009
Please refer to Appendix C, Table C-4, Comment Category A: General/Other, A01-Miscellaneous.

N-019-010
Please refer to Appendix C, Table C-4, Comment Category P: Cumulative Impacts, P01-General/Other.

N-019-011
Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N02-Health Effects of EMF.

N-019-012
Please refer to Appendix C, Table C-4, Comment Category O: Socioeconomics and Environmental Justice, 012-Environmental Justice.

N-019-012 traverse land with a lower per acre market value. Applicants' Tom Hillstrom noted that market value of land is not a valid routing criteria and that criteria had never been interpreted as Oronoco Township suggests, noting that targeting-lower priced land for routing in preference to higher-priced land would raise Environmental Justice concerns.

N-019-013 **3.4.9 Geology and Soils**
The Scoping Report thus far doesn't mention bluffs and other sensitive areas surrounding the Zumbro River. Bluffs are issues of concern in Minnesota and Wisconsin, where slopes are commonly greater than a 10% grade and frequently twice that. See Slope Map (attached as Exhibit 4).
http://www.gunbonverona.com/zumbro%20river%20map.pdf

N-019-014 **3.4.10 Health and Safety**
No mention of electrical fields and impacts on pacemakers, insulin pumps, etc.

N-019-015 **3.4.11 Historic and Cultural**
New burial mounds, reported to agencies and authorities, and investigation in the works.
Stagecoach route through area.

N-019-016 Century Farms present and not addressed.

Thank you for your consideration.

Very truly yours,

Carol A. Overland
Attorney for NoCapX 2020 and United Citizens Action Network

N-019-013

Please refer to Appendix C, Table C-4, Comment Category E: Geology and Soils, E05-Erosion and Slopes.

N-019-014

Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N03-EMF Effects on Medical Devices.

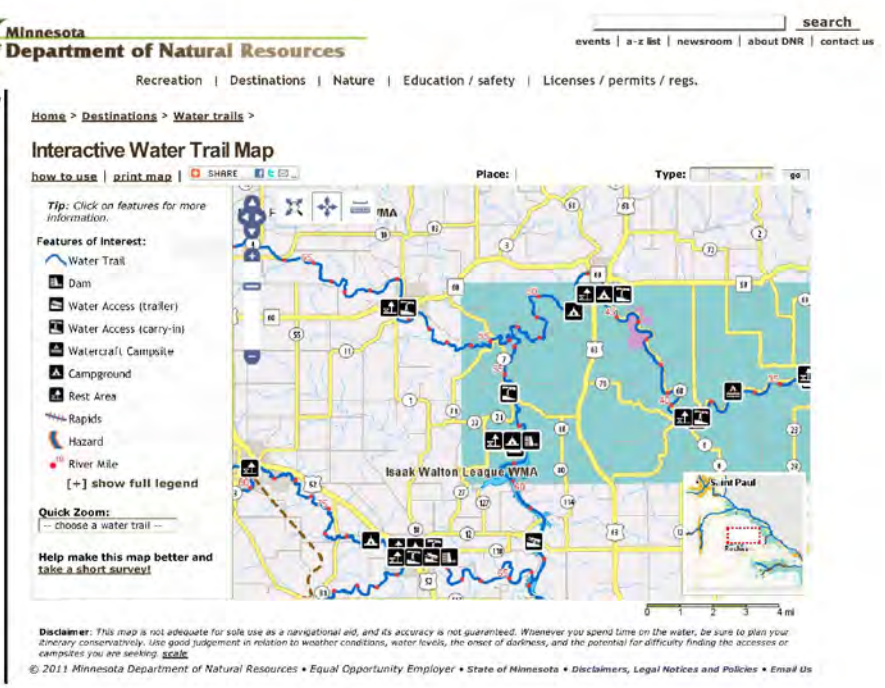
N-019-015

Please refer to Appendix C, Table C-4, Comment Category M: Historic and Cultural Resources, M01-General/Other.

N-019-016

Please refer to Appendix C, Table C-4, Comment Category M: Historic and Cultural Resources, M03-Historic.

N-019-017



N-019-017

Please refer to Appendix C, Table C-4, Comment Category J: Land Resources, J01-General/Other.

Exhibit 3

N-019-018

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Route Permit Application by Xcel Energy, Dairyland Power Cooperative, Souther Minnesota Municpal Power Agency, Rochester Public Utilities , and WPPI Energy for a 345 kV Transmission Line from Hampton, Minnesota, to Rochester, Minnesota, to La Crosse, Wisconsin

OAH DOCKET NO. 3-2500-21181-2
PUC DOCKET NO. E002/TL-09-1448

AFFIDAVIT OF BRUCE McKAY, P.E.

Bruce McKay, P.E., after affirming or being duly sworn on oath, states and deposes as follows:

1. My name is Bruce McKay. I am an electrical engineer, and licensed Professional Engineer, in the state of Minnesota.

2. My experience is primarily in the areas of industrial power distribution and industrial automation and control. I have 16 years experience in these areas as a licensed Master Electrician, followed by 14 years as a licensed Professional Engineer to date.

3. I am a landowner near Henderson, MN, and therefore am not directly affected by the proposed Hampton-Rochester-La Crosse 345 kV Transmission Project.

4. I have participated in CapX2020 Task Force meetings held in Henderson, attended one day of PUC hearings in St. Paul, and attended, including making comments and submitting statements, all but one of the Public Hearings held in the Le Sueur-Henderson area over the last few years.

5. Attached as Exhibit A is a true and correct copy of the CapX2020 Engineering, Design, Construction, and Operational Characteristics, Section 3.1.1 Hampton-Rochester-La Crosse 345 kV Transmission Line, found on page 3-3 of the January 15, 2010, Route Permit Application for the Hampton-Rochester-La Crosse 345 kV Transmission Project, wherein it states that "Two 954 Aluminum Conductor Steel Supported (ACSS) conductors will be used per phase."

6. Attached as Exhibit B is a true and correct copy of Direct Testimony of Larry L. Schedin, Attachment J, showing various conductor specifications, including:

   a. In the chart on page 3, Summer Thermal Ratings for a Twin bundled 954 kcm 54/19 ACSS, 345 KV, of 3700 amps and 2211 MVA.
   b. In the chart on page 5, Winter Thermal Ratings for a Twin bundled 954 kcm 54/7 ACSS, 345 KV, of 4064 amps and 2428 MVA.

N-019-018

Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N02-Health Effects of EMF.

N-019-018

c. For the purposes of this Affidavit, I am using the Summer Ratings, but it should be noted that Winter Ratings are approximately an additional 9.8% higher than the Summer Ratings.

7. The first purpose of this statement is to point out the fact that the CapX2020 Magnetic Field tables and charts that I've been able to find in Hampton-Rochester-La Crosse 345 kV Transmission Project documents all fail to address the full potential Magnetic Field along the transmission lines. Each table and chart that I've seen displays Magnetic Field data calculated from estimated Peak and estimated Average System Conditions (Current (Amps)) rather than from transmission line design capacities. An example of such a table is presented in the attached Exhibit C, a true and correct copy of the CapX2020 Engineering, Design, Construction, and Operational Characteristics, Table 3.6-2: Calculated Magnetic Fields (mG) for Proposed 345 kV Transmission Line Designs (3.28 Feet Aboveground), found on pages 3-28 and 3-29 of the January 15, 2010, Route Permit Application for the Hampton-Rochester-La Crosse 345 kV Transmission Project.

8. The second purpose of this statement is to point out the fact that a table such as Exhibit C underestimates the Magnetic Field that would be created if the transmission line was utilized to its full potential capacity, or to 80% of its full potential capacity. The attached Exhibit D is a true and correct copy of "McKay Magnetic Field Calculations" which presents an example of Magnetic Field calculations based on estimated transmission line currents as compared to Magnetic Field calculations based on future potential (design) transmission line currents.

a. By following through STEPS 1, 2, 3-Single Circuit, and 4-Single Circuit in Exhibit D, you can see that with one Circuit in Service, for 2015 PEAK, the Calculated PEAK MAGNETIC FIELDS increase by 1323% and for 2015 AVERAGE, the Calculated AVERAGE MAGNETIC FIELDS increase by 1323% when design capacities are used for the calculations rather than using estimated load currents.
b. By following through STEPS 1, 2, 3-Double Circuit, and 4-Double Circuit in Exhibit D, you can see that with two Circuits in Service, for 2015 PEAK, the Calculated PEAK MAGNETIC FIELDS increase by 2646% and for 2015 AVERAGE, the Calculated AVERAGE MAGNETIC FIELDS increase by 2646% when design capacities are used for the calculations rather than using estimated load currents.
c. Please Note: Exhibit D is presented as a conceptual example. Actual design capacities and associated Magnetic Field calculations would need to be and should be provided by the Applicants.

9. The third purpose of this statement is to stress that right-of-way widths to protect the health and safety of those along the proposed transmission line need to be based on Calculated Magnetic Field's derived from design capacities, NOT on Calculated Magnetic Field's derived from estimated transmission line currents. A right-of-way based on the Applicant's low transmission line current estimates does not sufficiently protect people near the transmission lines.

10. Please feel free to contact me with any comments or questions you have.

Further your affiant sayeth naught.

Dated: April 20, 2011

Bruce McKay

Bruce McKay, PE
e-mail: bmckay.aces@gmail.com
cell: 612-386-5983

Signed and sworn to before me this
20 day of April, 2011.

Notary Public

WERNER H. GIESEN
Notary Public
State of Minnesota
My Commission Expires
January 31, 2015

EXHIBIT A

Line Configurations and Specifications

Hampton-LaCrosse Application

Section 3 Project Description

p. 3-3

N-019-019

3.1.1 Hampton–Rochester–La Crosse 345 kV Transmission Line

For the Project's proposed 345 kV line, the Applicant proposes primarily to use single-pole, self-weathering steel, double-circuit capable structures. Self-weathering steel alloys were developed to eliminate the need for painting and are commonly used by the Applicant and throughout the industry. The steel alloy develops a stable, rust-like appearance (dark reddish-brown color) when exposed to the weather for several years. The wetting and drying cycles cause rust to form a protective layer on its surface, preventing further rusting. The layer develops and regenerates continuously when subjected to the influence of the weather.

These single-pole steel structures would range from 130 to 175 feet in height. Spans could range from 600 to 1,000 feet, but would typically be 700 to 1,000 feet. In some areas, only one circuit would be strung and the other side of the pole would be available for adding a second circuit in the future, when conditions warrant. In other areas, the unused side of the 345/345 kV structure would be used to carry a lower voltage line on the second set of arms until a second 345 kV circuit is needed. Tubular steel pole structures are typically placed on large pier foundations of cast-in-place, reinforced concrete.

Two 954 Aluminum Conductor Steel Supported (ACSS) conductors will be used per phase. One or two shield wires will be used to protect the conductors from lightning strikes. One of these shield wires will incorporate fiber optic to facilitate relay control communications between substations and between substations, utility offices such as control centers. Fiber optics will be used only for utility purposes.

Figure 3.1-1 depicts a representative double-circuit 345 kV single pole structure.

The Mississippi River presents unique considerations that will require the use of multiple-circuit, specialty structures. A portion of this crossing is on Upper Mississippi River Wildlife Refuge lands managed by the USFWS. A Special Use Permit will be required to cross the Refuge and the Applicant will work closely with the USFWS to identify the most appropriate structure design.

An existing double-circuit transmission line crosses the Mississippi River and Refuge at the Project's proposed crossing location. The existing line crosses approximately 0.5 mile of Refuge lands and includes two structures on Refuge property. The line is constructed on a 180-foot-wide permitted ROW. An area approximately 125 feet wide and 1,900 feet long is maintained cleared of trees. The two main river crossing structures are 180 feet tall.

N-019-019

Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N02-Health Effects of EMF.

EXHIBIT B

Amps and MVA for Line Configurations and Specifications

Direct Testimony of Larry L. Schedin, Attachment J
CapX 2020 Certificate of Need
PUC Docket E002, ET2/CN-06-1115

N-019-020

☐ **Non Public Document – Contains Trade Secret Data**
☐ **Public Document – Trade Secret Data Excised**
☒ **Public Document**

Xcel Energy
Docket No.: E002, ET2/CN-06-1115
Response To: Elizabeth Goodpaster and Mary Marrow MCEA/Wind on the Wires
Information Request No. 3
Date Received: March 27, 2008

Question:

With reference to the Application Volume I, Sec. 2.4 (pages 2.9) entitled "Transmission Line Characteristics" and Applicants' response to DOC/OES Information Rquest No. 2, please provide thermal MVA ratings, surge impedance loadings (SIL), MVA and thermal ampere capacity ratings (amplacities) under summer normal, summer emergency, winter normal and winter emergency conditions for the following conductors and voltages:

(a) Single 795ACSR, 115 KV
(b) Single 795 ACSS, 115 KV
(c) Twin bundled 795 ACSR, 115 KV
(d) Twin bundled 795 ACSS, 115 KV
(e) Single 954 ACSS, 115 KV
(f) Single 795 ACSS, 161 KV
(g) Single 954 ACSS, 161 KV
(h) Single 795 ACSR, 230 KV
(i) Single 795 ACSS, 230 KV
(j) Single 954 ACSS, 230 KV
(k) Twin bundled 795 ACSR, 345 KV
(l) Twin bundled 954 ACSS, 345 KV
(m) Triple bundled 954 ACSS, 500 KV
(n) Triple bundled conductor as used on the Forbes – Chisago 500 KV line

In your response, please define the conditions for summer normal, summer emergency, winter normal and winter emergency conditions (ambient temp, wind speed, degree rise, allowable sag, etc.), and specify the regulatory authority setting the foregoing standards and the reference to applicable rules.

N-019-020

Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N02-Health Effects of EMF.

N-019-020

Response:

The thermal ratings of the requested conductors and voltages are noted in the table below. Conductor ratings are based on the "IEEE Standard for calculation of Bare Overhead Conductor Temperature and Ampacity Under Steady-State Conditions," ANSI/IEEE Standard 738. Alcoa SAG10 Ratekit was used to calculate conductor ratings.

A regulatory authority does not set the conductor steady state thermal rating variables. The CapX2020 Member Utilities Transmission Line Standards Committee ("Committee") developed the conductor steady state thermal rating variables for summer ratings based upon member utilities' standard of practice..

The summer steady state thermal rating variables are as follows:

- Conductor orientation relative to north: 90 degrees
- Atmosphere: Clear
- Air Temperature: 40 degrees C for Summer
- Wind Speed: 2 ft/sec
- Wind angle relative to conductor: 90 degrees
- Elevation above sea level: 1000 ft
- Latitude: 45 degrees N
- Date: July 8
- Solar time: 12 hours
- Coefficient of emissivity: 0.7
- Coefficient of absorption: 0.9
- 200 degrees C maximum operating temperature for ACSS
- 100 degrees C maximum operating temperature for ACSR

The Committee defined the Emergency Line Rating as equal to the steady state thermal rating.

The Committee specified that conductors meet minimum clearances to ground based upon voltage and nature of surface under the conductor (*i.e.*, roads, interstate highway, railroads, etc.). The minimum specified clearances were chosen to assure that the final constructed lines meet or exceed the National Electrical Safety Code ("NESC") minimum clearances. Conductor sags are to be calculated based upon conductor size, conductor temperature, span length, design tension, structure heights and loading conditions. Vertical clearances shall be applied to the greatest sag resulting from either the maximum operating temperature of 200°C (for the ACSS

N-019-020

conductor) and 100°C (for the ACSR conductor) or the maximum loaded condition (ice plus wind).

Conductor	Summer Thermal Ampacity Rating	Summer Thermal MVA Rating
Single 795 kcm 26/7 ACSR, 115 KV	965 amps	192 MVA
Single 795 kcm 26/7 ACSS, 115 KV	1655 amps	330 MVA
Twin bundled 795 kcm 26/7 ACSR, 115 KV	1930 amps	384 MVA
Twin bundled 795 kcm 26/7 ACSS, 115 KV	3310 amps	659 MVA
Single 954 kcm 54/19 ACSS, 115 KV	1850 amps	368 MVA
Single 795 kcm 26/7 ACSS, 161 KV	1655 amps	462 MVA
Single 954 kcm 54/19 ACSS, 161 KV	1850 amps	516 MVA
Single 795 kcm 26/7 ACSR, 230 KV	965 amps	384 MVA
Single 795 kcm 26/7 ACSS, 230 KV	1655 amps	659 MVA
Single 954 kcm 54/19 ACSS, 230 KV	1850 amps	737 MVA
Twin bundled 795 kcm 26/7 ACSR, 345 KV	1930 amps	1153 MVA
Twin bundled 954 kcm 54/19 ACSS, 345 KV	3700 amps	2211 MVA
Triple bundled 954 kcm 54/19 ACSS, 500 KV	5550 amps	4806 MVA
Triple bundled conductor as used on the Forbes – Chisago 500 KV line (Triple bundled 1192.5 kcm 45/7 ACSR)	3648 amps	3159 MVA

The Committee did not develop steady state thermal rating variables for winter ratings. Xcel Energy – NSP Operating Territory uses 0°C for the winter rating air temperature for calculating the rating during the winter operating season of November 1 to April 30. The April 30 date produces the lowest allowable line rating of the winter rating period, so it is used in the following table. The April 30 date and 0°C air temperature were used in conjunction with the other steady state thermal

N-019-020

rating variables developed by the Committee to develop the following winter rating table.

The winter steady state thermal rating variables used for the following Xcel Energy – NSP Operating Territory/ CAPX2020 Member Utilities Transmission Line Standards Committee rating table are as follows:

- Conductor orientation relative to north: 90 degrees
- Atmosphere: Clear
- Air Temperature: 0 degrees C for Winter
- Wind Speed: 2 ft/sec
- Wind angle relative to conductor: 90 degrees
- Elevation above sea level: 1000 ft
- Latitude: 45 degrees N
- Date: April 30
- Solar time: 12 hours
- Coefficient of emissivity: 0.7
- Coefficient of absorption: 0.9
- 200 degrees C maximum operating temperature for ACSS
- 100 degrees C maximum operating temperature for ACSR

Conductor	Winter (April 30) Thermal Ampacity Rating	Winter (April 30) Thermal MVA Rating
Single 795 kcm 26/7 ACSR, 115 KV	1286 amps	256 MVA
Single 795 kcm 26/7 ACSS, 115 KV	1819 amps	362 MVA
Twin bundled 795 kcm 26/7 ACSR, 115 KV	2572 amps	512 MVA
Twin bundled 795 kcm 26/7 ACSS, 115 KV	3638 amps	725 MVA
Single 954 kcm 54/7 ACSS, 115 KV	2032 amps	405 MVA
Single 795 kcm 26/7 ACSS, 161 KV	1819 amps	507 MVA
Single 954 kcm 54/7 ACSS, 161 KV	2032 amps	567 MVA
Single 795 kcm 26/7 ACSR, 230 KV	1286 amps	512 MVA

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Conductor	Winter (April 30) Thermal Ampacity Rating	Winter (April 30) Thermal MVA Rating
Single 795 kcm 26/7 ACSS, 230 KV	1819 amps	725 MVA
Single 954 kcm 54/7 ACSS, 230 KV	2032 amps	809 MVA
Twin bundled 795 kcm 26/7 ACSR, 345 KV	2572 amps	1537 MVA
Twin bundled 954 kcm 54/7 ACSS, 345 KV	4064 amps	2428 MVA
Triple bundled 954 kcm 54/7 ACSS, 500 KV	6096 amps	5279 MVA
Triple bundled conductor as used on the Forbes – Chisago 500 KV line (Triple bundled 1192.5 kcm 45/7 ACSR)	4875 amps	4222 MVA

Surge Impedance

The following table shows typical ranges of surge impedances found on the CapX2020 member systems. Designs for the proposed CapX2020 transmission lines are not far enough along to provide more accurate surge impedances for these lines.

Conductor Configuration	Surge Impedance
Single Bundled Conductor – 115, 161 & 230 KV Configurations a, b, f & h	350 – 375 Ohms
Twin bundled Conductor - 115 KV Configurations c & d	250 - 300 Ohms
Twin bundled Conductor - 345 KV Configurations k & l	270 –285 Ohms
Triple bundled Conductor - 500 kV Configuration n	250 – 300 Ohms
Configurations e, g, i, j and m	Not Used

N-019-020

Response By: Brad Hill/David K. Olson
Title: Principal Specialty Engineer
Department: Transmission Engineering/Substation Engineering
Company: Xcel Energy
Telephone: 612-330-6826/612-330-5909
Date: April 21, 2008

2157846v1

EXHIBIT C

Applicant Magnetic Field Calculations

Table 3.6-2: Calculated Magnetic Fields for Proposed 345kV Transmission Line Designs
Hampton-LaCrosse Project RoutingApplication p. 3-28 - 3-29

N-019-021

Table 3.6-2:
Calculated Magnetic Fields (mG) for Proposed 345 kV Transmission Line Designs (3.28 Feet Aboveground)

Structure Type	Geographical Segment	System Condition	Current (amps)	-300	-200	-100	-75	-50	0	50	75	100	200	300
Single- Pole Davit Arm 345/345 kV Double-Circuit with one Circuit in Service	Preferred Route: Hampton to Cannon Falls; Non-US-52 segments Zumbrota area to North Rochester	2015 Peak	140 A	0.38	0.79	2.35	3.41	5.24	13.58	9.64	5.88	3.77	1.04	0.46
		2015 Average	112 A	0.30	0.63	1.88	2.73	4.19	10.87	7.71	4.71	3.01	0.83	0.37
	Alternate Route: Hampton to North Rochester	2025 Peak	132 A	0.36	0.74	2.22	3.22	4.94	12.81	9.09	5.55	3.55	0.98	0.43
		2025 Average	106 A	0.29	0.60	1.78	2.58	3.97	10.29	7.30	4.45	2.85	0.79	0.35
Single-Pole Davit Arm 345/345 kV with 69 kV Underbuild with 1 Active 345 kV Circuit	Preferred Route: US-52 segments Cannon Falls to Zumbrota area	2015 Peak	140/325	0.74	1.65	6.20	10.42	20.73	70.89	8.50	3.77	2.51	1.01	0.52
		2015 Average	112/260	0.59	1.32	4.96	8.33	16.58	56.71	6.80	3.02	2.01	0.81	0.41
		2025 Peak	132/328	0.73	1.62	6.14	10.36	20.71	71.85	8.89	3.92	2.54	0.99	0.50
		2025 Average	106/262	0.58	1.30	4.91	8.28	16.55	57.37	7.09	3.12	2.03	0.79	0.40
Single-Pole Davit Arm 345/345 kV Double-Circuit with one Circuit in Service	N. Rochester to Alma	2015 Peak	403 A	1.12	2.33	6.97	10.11	15.54	40.27	28.58	17.44	11.17	3.09	1.35
		2015 Average	322 A	0.87	1.81	5.41	7.85	12.06	31.24	22.17	13.53	8.67	2.40	1.05
		2025 Peak	415 A	1.12	2.33	6.97	10.11	15.54	40.27	28.58	17.44	11.17	3.09	1.35
		2025 Average	332 A	0.90	1.87	5.57	8.09	12.43	32.21	22.86	13.95	8.94	2.47	1.08

N-019-021

Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N02-Health Effects of EMF.

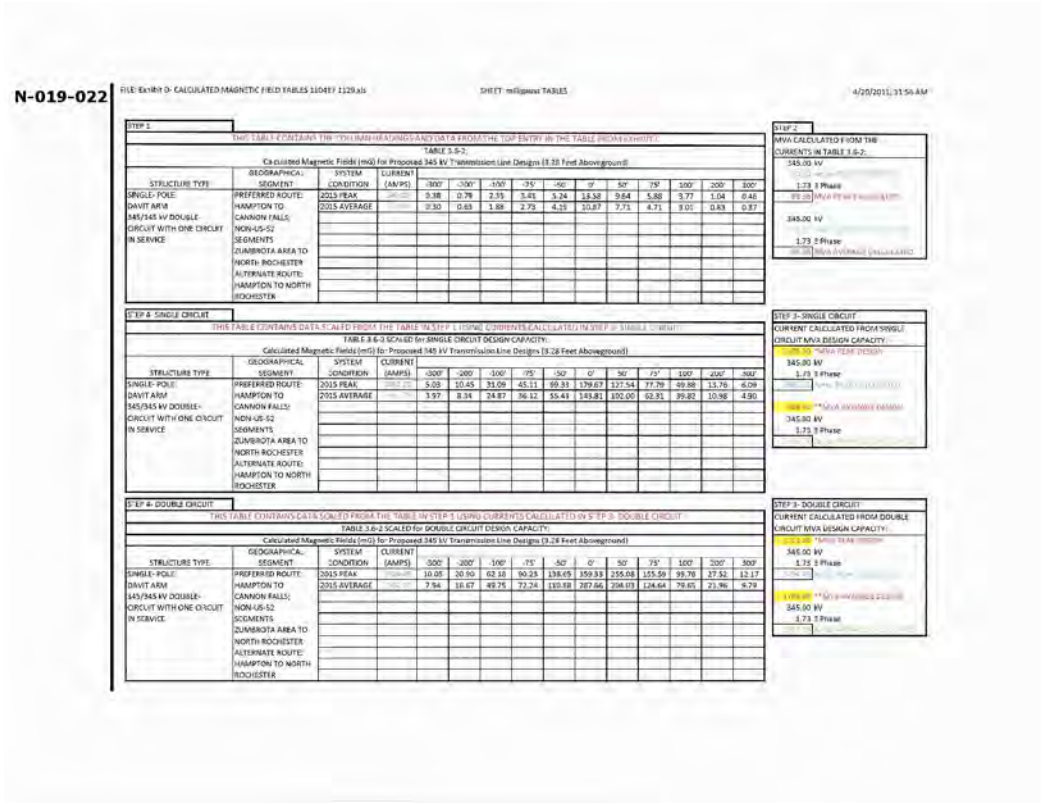
Table 3.6-2:
Calculated Magnetic Fields (mG) for Proposed 345 kV Transmission Line Designs (3.28 Feet Aboveground)

Structure Type	Geographical Segment	System Condition	Current (amps)	-300	-200	-100	-75	-50	0	50	75	100	200	300
Single-Pole Davit Arm 161 kV Single-Circuit	N. Rochester to Northern Hills	2015 Peak	95 A	0.20	0.43	1.50	2.42	4.39	14.29	5.41	2.79	1.65	0.42	0.18
		2015 Average	76 A	0.16	0.34	1.20	1.94	3.51	11.43	4.33	2.23	1.32	0.33	0.14
		2015 Peak	96 A	0.20	0.43	1.52	2.45	4.43	14.44	5.47	2.82	1.66	0.42	0.18
		2015 Average	77 A	0.16	0.34	1.22	1.96	3.56	11.58	4.38	2.26	1.33	0.34	0.15

EXHIBIT D

McKay Magnetic Field Calculations

Calculated Magnetic Field Tables for Proposed 345 kV Transmission Line Designs



N-019-022

Please refer to Appendix C, Table C-4, Comment Category N: Public Health and Safety, N02-Health Effects of EMF.

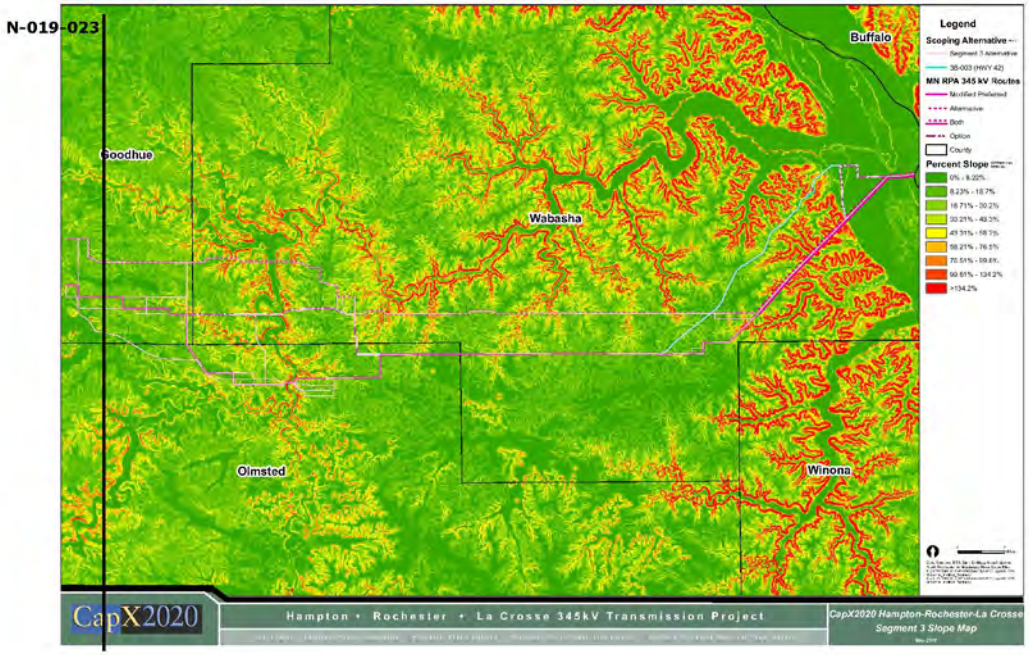
N-019-022

NOTES: 1. MVA = (kV * Amps * 1.73) /1000
2. Amps = (MVA * 1000) / (kV * 1.73)
3. For a given physical and electrical configuration, milligauss at one location is proportional to current (Amps) (for example, double the current and the milligauss level also doubles).
4. For a given physical and electrical configuration and constant current, the milligauss level changes as the inverse square of the distance from away from the source (for example, move 2 times as far away and the milligauss level decreases to 1/4 of what it was).

*. MVA PEAK DESIGN CAPACITY IS FROM A COMBINATION OF THE DATA PRESENTED IN EXHIBITS A, B, AND C.

**. MVA AVERAGE DESIGN CAPACITY WAS CHOSEN TO BE ABOUT 80% OF PEAK DESIGN CAPACITY

Exhibit 4



N-019-023

Please refer to Appendix C, Table C-4, Comment Category E: Geology and Soils, E05-Erosion and Slopes.

From: Caraway57@aol.com [mailto:Caraway57@aol.com]
Sent: Thursday, July 21, 2011 1:35 PM
To: Strength, Stephanie - Durango CO
Cc: matthew.langan@state.mn.us; jamie.schrenzel@state.mn.us; melissa.doperalski@state.mn.us; thomas.g.hillstrom@xcelenergy.com; grant.stevenson@xcelenergy.com; overland@legalectric.org; djohnson@co.wabasha.mn.us; LAgrimonti@briggs.com; sen.john.howe@senate.mn; rep.steve.drazkowski@house.mn
Subject: CAPX Project-RUS Public Comment

July 21, 2011

Stephanie Strength
Protection
Specialist
Service
Environmental
Staff
SW
2242

Environmental

Rural Utilities
Engineering and

1400 Independent Avenue
Mail Stop 1571, Room
Washington, DC 20250

RE: Capx2020 Hampton-Rochester-LaCrosse HVTL Project

MN

PUC Docket #: E002/TL-09-1448 MN

Dear Ms. Strength,

I hope this finds you well.

N-020-001 In reviewing the new RUS site with regard to the CAPX2020 project there appears to be some confusion in routing and study. Routes have frequently changed, and our route addition is not mentioned in the Dairyland Macro corridor Study –May 2009. I also noted that the Public Comment period is reopened. We were not notified of the 2010 Public Comment period which, as far as I can tell, is the first incorporation of the "North Route" into the RUS environmental review. I am enclosing comment on our route.

N-020-002 The North Route is the Applicant's **North Route Alternative** in the Minnesota routing application, and also known as the former MN MOES (now Energy Facility Permitting Unit-EFP) route 3A. We are a group of citizens that have come together with concern about this route and its crossing of the Zumbro River. We are the
North Route Group. We have intervened in the Minnesota process and provided testimony to the MN Office of Administrative Hearings. I refer you to our participation and testimony in the above listed dockets linked here:

NRG Direct Testimony, and Exhibits A, B and C

http://nocapx2020.info/wp-content/uploads/2011/06/covertestimonyabc.pdf

NRG Exhibits D-G

http://nocapx2020.info/wp-content/uploads/2011/06/exhibits-d-g.pdf

NRG Surrebuttal Testimony and Exhibits

http://nocapx2020.info/wp-content/uploads/2011/06/covertestimonyexhibits1.pdf

In summary, we ask that you please consider the following concerns and include in your Scoping Report and
DEIS.

1) There is no existing infrastructure at the North Alternative crossing of the Zumbro River. (Enclosure-map)

2

N-020-001

Please refer to Appendix C, Table C-4, Comment Category D: Consultation, Coordination, and Public Involvement, D01-General/Other.

N-020-002

Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C07-Opposition to or Preference for a Specific Alternative.

N-020-002

2) This route is primarily cross country, and has minimal existing ROW.

3) The North Route Alternative is not the Applicant's Preferred/Modified Preferred route choice.

4) The biological significance and heritage has been noted by the State of Minnesota DNR. MN DNR Evidentiary Hearing testimony and letters to the MN Energy Facility Permitting Unit noted this and recommends crossing the Zumbro River at the Applicant's Preferred White Bridge Road crossing. (Enclosure- letter)

5) There will be aesthetic and recreational impacts to one of two most popular canoe routes of the Zumbro
River Water Trail. (Enclosure)

6) The Alternate North Route has the greatest percentage of forest and impacts five tree farms, three registered with the American Tree Farm System.

7) This route is almost exclusively in the legislated boundaries of the Minnesota Richard J. Dorer Memorial
Hardwood State Forest. This forest celebrates its 50th year.

8) The North Route Alternative is more expensive.

9) The North Route Alternative is the least compatible option for expansion and support of the two 161 kV lines that will be co located with the 345 kV line. Both lines will extend south to the Northern Hills and Chester substations in Rochester, MN. The City of Pine Island has submitted their route preference which combines the 345 kV and 161 kV that routes east from this Preferred substation.

10) Several local and regional government entities have declared the White Bridge Road as their preferred Zumbro River crossing. These include Mazeppa Township, the City of Mazeppa, Zumbro Township and Wabasha County. The White Bridge Road crossing is also the Applicant's Preferred Route. This route utilizes the Applicant's Preferred North Rochester Substation. (Enclosure-letter)

11) The North Route Alternative is in least compliance with Minnesota's Non-Proliferation Policy.

We appreciate the opportunity to comment. Thank you for your consideration of the above mentioned. I will be sending hard copies of this letter and enclosures.

Respectfully submitted,

Suzanne
Rohlfing

for the ***North Route Group***

2310 15th Avenue NW Rochester, MN
55901 caraway57@aol.com

Cc:

Matthew Langan, MN Dept. of Commerce

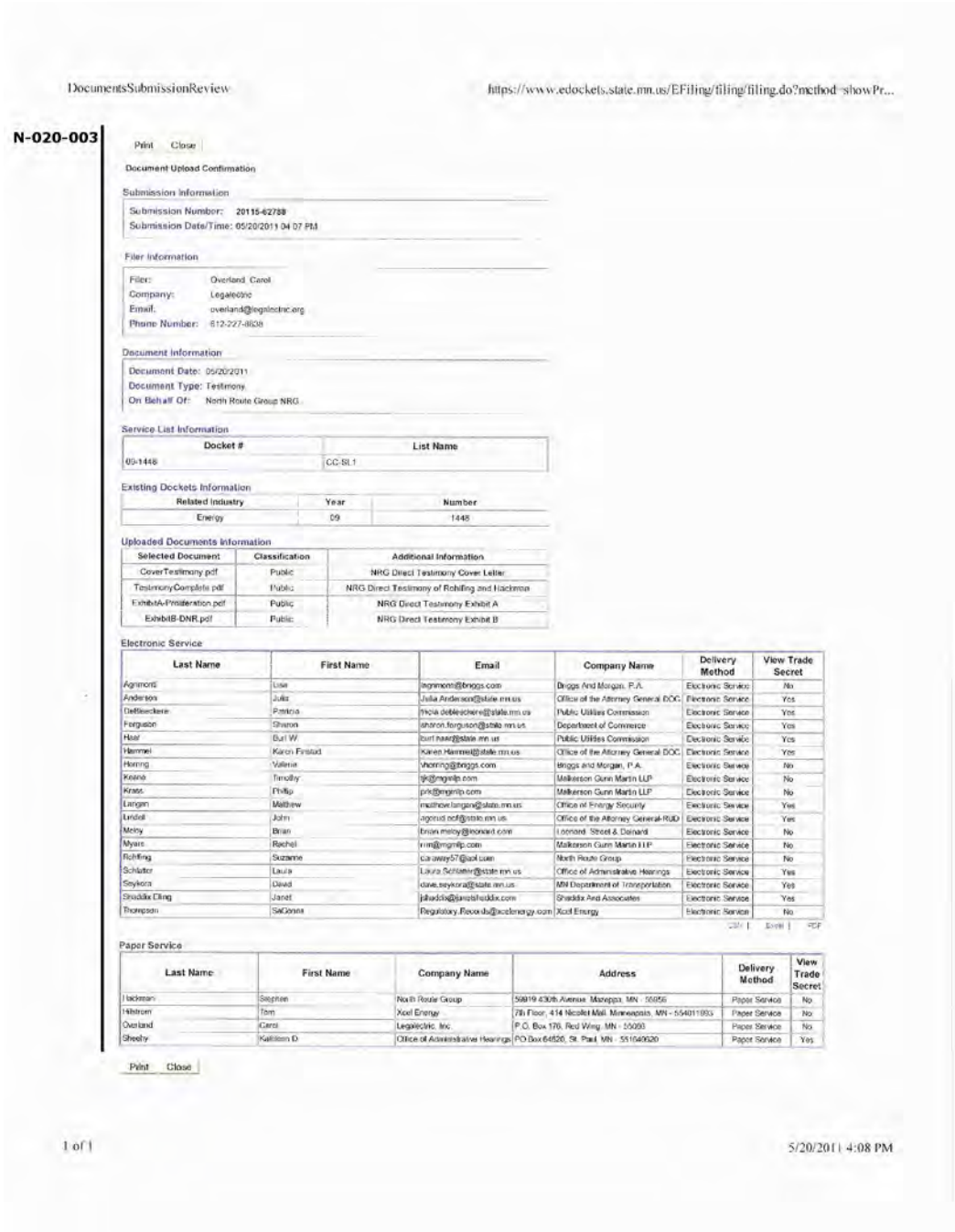
Bob Cupit, MN PUC

Jamie Schrenzel, MN DNR

Melissa Doperalski, MN DNR

Thomas Hillstrom, XCEL Energy

Grant Stevenson, XCEL Energy



DocumentsSubmissionReview https://www.edockets.state.mn.us/EFiling/filing/filing.do?method=showPr...

N-020-003

Print Close

Document Upload Confirmation

Submission Information

Submission Number: 20115-62738
Submission Date/Time: 05/20/2011 04:07 PM

Filer Information

Filer: Overland, Carol
Company: Legalectric
Email: overland@legalectric.org
Phone Number: 612-227-8638

Document Information

Document Date: 05/20/2011
Document Type: Testimony
On Behalf Of: North Route Group NRG

Service List Information

Docket #	List Name
09-1448	CC-SL1

Existing Dockets Information

Related Industry	Year	Number
Energy	09	1448

Uploaded Documents Information

Selected Document	Classification	Additional Information
CoverTestimony.pdf	Public	NRG Direct Testimony Cover Letter
TestimonyComplete.pdf	Public	NRG Direct Testimony of Rohlfing and Hackman
ExhibitA-Proliferation.pdf	Public	NRG Direct Testimony Exhibit A
ExhibitB-DNR.pdf	Public	NRG Direct Testimony Exhibit B

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Haar	Burl W	burl.haar@state.mn.us	Public Utilities Commission	Electronic Service	Yes
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Rohlfing	Suzanne	caraway57@aol.com	North Route Group	Electronic Service	No
Schlatter	Laura	Laura.Schlatter@state.mn.us	Office of Administrative Hearings	Electronic Service	Yes
Seykora	David	dave.seykora@state.mn.us	MN Department of Transportation	Electronic Service	Yes
Sheddix Elling	Janet	jsheddix@jamesheddix.com	Sheddix And Associates	Electronic Service	Yes
Thompson	SaGonna	Regulatory.Records@xcelenergy.com	Xcel Energy	Electronic Service	No

CSV | Excel | PDF

Paper Service

Last Name	First Name	Company Name	Address	Delivery Method	View Trade Secret
Hackman	Stephen	North Route Group	59919 430th Avenue, Mazeppa, MN - 55956	Paper Service	No
Hilstrom	Tom	Xcel Energy	7th Floor, 414 Nicollet Mall, Minneapolis, MN - 554011993	Paper Service	No
Overland	Carol	Legalectric, Inc.	P.O. Box 176, Red Wing, MN - 55066	Paper Service	No
Sheehy	Kathleen D	Office of Administrative Hearings	PO Box 64620, St. Paul, MN - 551640620	Paper Service	Yes

Print Close

1 of 1 5/20/2011 4:08 PM

N-020-003

Please refer to Appendix C, Table C-4, Comment Category C: Alternatives, C07-Opposition to or Preference for a Specific Alternative.

N-020-003

Exhibit D

American Tree Farm System

"About Us" and "Certification"

www.treefarmsystem.org

American Tree Farm System

Sustaining forests, watersheds and healthy habitats through the power of private stewardship

About Us

N-020-003

Contact Us - Site Map

Site Search: GO

About Us

Our mission - *To promote the growing of renewable forest resources on private lands while protecting environmental benefits and increasing public understanding of all benefits of productive forestry.*

The American Tree Farm System® (ATFS), a program of the American Forest Foundation's Center for Family Forests, is committed to sustaining forests, watershed and healthy habitats through the power of private stewardship.

Since 1941, ATFS has educated and recognized the commitment of private family forest landowners in the United States. Currently, ATFS has certified 24 million acres of privately owned forestland and over 90,000 family forest owners who are committed to excellence in forest stewardship, in 46 states. Tree Farmers share a unique commitment to protect wildlife habitat and watersheds, to conserve soil and to provide recreation for their communities while producing wood for America. These individuals hold the key to the kinds of forests, forest activities and forest resources future generations of Americans will enjoy.

ATFS has established standards and guidelines for property owners to meet to become a Certified Tree Farm. Under these standards and guidelines, private forest owners must develop a management plan based on strict environmental standards and pass an inspection by an ATFS volunteer forester every five years.

Water. Wildlife. Recreation. Wood. The four sides of the Tree Farm sign tell the story of sustainable forestry ... a thriving forestland that has clean water, a healthy wildlife habitat and recreational opportunities. Our green and white diamond shaped Tree Farm signs are widely recognized across the country.

ATFS, dedicated to putting more good forestry on more acres.

The American Forest Foundation (AFF) is a nonprofit 501(C)(3) conservation and education organization that strives to ensure the sustainability of America's family forests for present and future generations. The organization's vision is to create a future where North American forests are sustained by the public which understands and values the social, economic, and environmental benefits they provide to our communities, our nation, and our world.

Center for Family Forests

American Forest Foundation

History

Tree Farm Today

Tree Farm in the 21st Century

American Tree Farm System
1111 19th St., N.W. Suite 780, Washington, D.C. 20036
P. 202 463 2462 - E-mail: info@treefarmsystem.org

N-020-003

American Tree Farm System

Sustaining forests, watersheds and healthy habitats through the power of private stewardship

Certification

About Us
About Tree Farming
Certification
IMG Certification
2010 Standards
Conservation
Join Us
News & Action
Family Activities
Tree Farm in Your State
Tree Farmer Magazine
Woodland Resources
USDA Farm Bill

Contact Us | Site Map

Site Search: GO

The American Tree Farm System works to sustain forests, watershed and healthy wildlife habitats through the power of private stewardship by offering affordable forest certification for family forest landowners in the United States.

ATFS has undergone many changes since its beginnings in 1941 and is now recognized internationally as a credible forest certification system. ATFS certifies landowners to the American Forest Foundation's Standards of Sustainability for Forest Certification to ensure markets remain open to Tree Farmer's wood, by undergoing third-party certification audits by independent, ANSI-ASQ National Accreditation Board (ANAB) accredited certification bodies.

American Tree Farm System Certification

ATFS offers third party certification to lands meeting the ATFS Eligibility Requirements. Landowners have three options to ATFS certification. Also see below for additional information on ATFS certification.

- Group Certification through State Tree Farm Committee programs
- Group Certification through Independently Managed Group (IMG) Organizations
- Individual Third Party Certification
- ATFS State Program Regional Certificates
  - Northeastern Region
  - North Central Region
  - South Region
  - West Region
- 2009 Regional Public Summaries
  - Public Summary for the Northeastern Region (2009)
  - Public Summary for the North Central, South and West Region (2009)
- 2010 Regional Public Summaries
  - Public Summary for North Central, South and West Regions (2010)

AFF Standards of Sustainability and Guidelines

Certification in the American Tree Farm System is voluntary. The certification process incorporates established standards and guidelines. All properties certified under the three certification options must conform to the AFF Standards of Sustainability for Forest Certification (AFF Standards). The American Forest Foundation, a 501c.3, not-for-profit, organization located in Washington, D.C. has sole responsibility for setting the AFF Standards.

- 2008 Internal Monitoring Report
- 2009 Internal Monitoring Report
- AFF 2010 - 2015 Standards of Sustainability for Forest Certification
- AFF 2004 - 2008 Standards of Sustainability and Glossary of Terms
- Standards Setting Procedures
- Disputes and Appeals Procedure
- Eligibility Requirements for ATFS Certification
- Eligibility Guidance
- Logo and Sign Use Rules
- American Tree Farm System Online Verification Database
- 2010 Management Plan Addendum

Third Party Certification (PEFC)

N-020-003

The American Tree Farm System is now endorsed by the Programme for the Endorsement of Forest Certification schemes (PEFC). PEFC requires the American Tree Farm System follow internationally accepted third-party certification auditing procedures. Maintaining these procedures and our endorsement by PEFC, helps ensure that new and existing markets will be open to Tree Farmers.

- What is third party certification?
- Programme for the Endorsement of Forest Certification schemes (PEFC) Certificate of Endorsement
- What is PEFC?
- American Tree Farm System Auditing Procedures
- Resources

American Tree Farm System and the Sustainable Forestry Initiative: Working Together

The American Tree Farm System and the Sustainable Forestry Initiative (SFI, Inc.) partner to bring new sources of certified fiber to the paper and wood products marketplace.

Manufacturers holding SFI or PEFC chain of custody certificates are able to include wood harvested from American Tree Farm System certified lands in their certified wood basket. This adds over 24 million acres to the certified total in the U.S.

What does this mean for Tree Farmers? As everyday consumers and large corporations become more concerned with their environmental footprint, paper and wood products manufacturing companies are increasingly interested in selling certified products. As wood from American Tree Farm System certified lands can now be counted in SFI and PEFC chain-of-custody system, manufactures are viewing Tree Farmers as a more attractive source of wood.

Chain of Custody

Chain of custody systems track certified wood fiber from the forest to the store shelf. Manufactures, printers, distributors, and other entities may wish to obtain a chain-of-custody certificate from either SFI or PEFC (or both) to document the amount of certified fiber in their products. A chain of custody certificate is required to allow on-product labeling for certified content.

- Chain of Custody Slide
- Chain of Custody Handout

Please visit the Sustainable Forestry Initiative's website, and PEFC's website to learn more about their chain of custody and fiber sourcing certificates.

Carbon & Other Ecosystem Services

Ecosystem service markets have become hot new topic and many landowners are excited to get involved with new markets, such as the Chicago Climate Exchange. Here you will find information on the different categories of ecosystem service market opportunities and links to educational resources on this important topic. The American Forest Foundation is working hard to increase the awareness of the benefits of active forest management and ensure that family forest landowners are able to participate in and benefit from these increasingly expanding markets. For more information, please visit the American Forest Foundation's Website. Ecosystem markets are not a silver bullet for Tree Farmers, but they do represent a powerful tool that, if used appropriately with other available options, can go a long way toward ensuring that forests remain forests.

- Carbon
- Water
- Biodiversity
- Resources

Landowner Tools

American Tree Farm System
1111 19th St., N.W. Suite 780, Washington, D.C. 20036
P. 202.463.2463 E-mail: info@treefarmsystem.org

N-020-003

Exhibit G

Applicant response to NoCapX & U-CAN IR No. 7

Slope Table and Slope Map

N-020-003

NOCAPX 2020 & U-CAN INFORMATION REQUEST

☐ **Non Public Document – Contains Trade Secret Data**
☐ **Public Document – Trade Secret Data Excised**
☒ **Public Document**

To:	Xcel Energy		
Docket No.:	OAH Docket No.: 3-2500-21181-2 MPUC Docket No.: E002/TL-09-1448		
Response To:	NoCapX 2020 & U-CAN	Information Request No.	7
Date Received:	April 26, 2011		

Request No. 7: Hillstrom Direct Testimony

Direct, p. 10, l. 8, regarding "Segment 3" and the "rugged, wooded terrain of blufflands west of the Mississippi River" in the North Rochester to Mississippi River 345kV section:

a. Identify on map those sections of the Modified Preferred route and Alternate routes are in bluffland with a 12% slope or greater.

b. What percentages of the Modified Preferred route and Alternate routes are in bluffland with a 12% slope or greater?

Response:

a. A map showing route alternatives overlain with various slope ranges is enclosed.
b. A table showing percentages of routes in lands steeper than 12% slopes is shown on the attached table. The table was produced using data shown on the slope map and is indicative of a high level characterization of land forms and should not be used to characterize any specific pole location.

Response by: Tom Hillstrom
Title: Supervisor
Department: Siting and Land Rights
Date: May 10, 2011

3819086v1

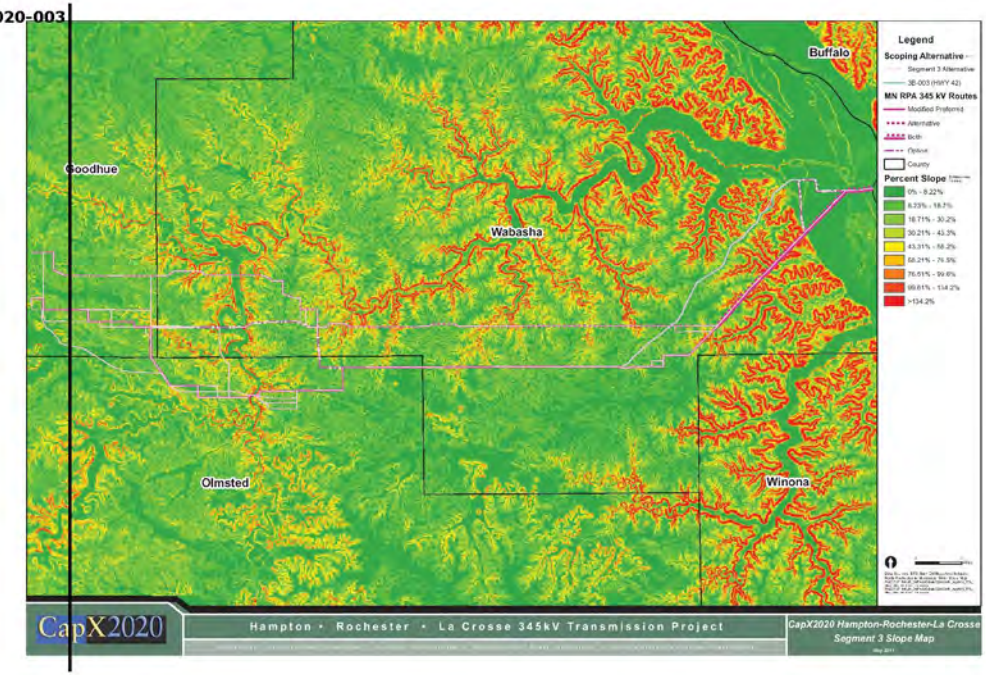
N-020-003

Table: Slope[1] Comparison for Modified Preferred 345 kV Route and Alternative 345 kV Route from North Rochester to the Mississippi River

Resource Category	Modified Preferred 345 kV Route	Modified Preferred 345 kV Route with Highway 42 Segment	Alternative 345 kV Route	Alternative 345 kV Route with Highway 42 Segment
Length of route (miles) crossing areas with >12% slope	28.3	24.7	30.0	27.2
Percent of route crossing areas with >12% slope	63.1%	53.9%	71.5%	62.7%
Total length of route (miles)	**44.8**	**45.8**	**41.9**	**43.4**

[1] Slope data was provided by the Driftless Area Initiative.

N-020-003


Buffalo
Goodhue
Wabasha
Olmsted
Winona
Legend
Scoping Alternative
Segment 3 Alternative
38-003 (HWY 42)
MN RPA 345 kV Routes
Modified Preferred
Alternative
Both
Option
County
Percent Slope
0% - 8.22%
8.23% - 18.7%
18.71% - 30.2%
30.21% - 43.3%
43.31% - 58.2%
58.21% - 76.5%
76.51% - 99.6%
99.61% - 134.2%
>134.2%
CapX2020
Hampton • Rochester • La Crosse 345kV Transmission Project
CapX2020 Hampton-Rochester-La Crosse
Segment 3 Slope Map

N-020-003

Exhibit H

Minnesota Geological Survey

Bedrock Map S-21

N-020-003

Legalectric, Inc.

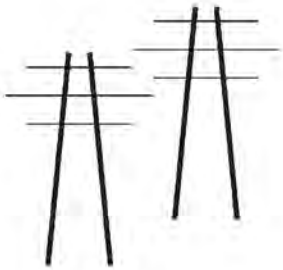
Carol Overland **Attorney at Law, MN #254617**

Energy Consultant—Transmission, Power Plants, Nuclear Waste

overland@legalectric.org

P. O. Box 176
Red Wing, Minnesota 55066
612.227.8638

P.O. Box 69
Port Penn, Delaware 19731
302.834.3466



June 3, 2011

Kathleen Sheehy, ALJ
Office of Administrative Hearings
P.O. Box 64620
St. Paul, MN 55164-0620

RE: Surrebuttal Testimony and Exhibits of North Route Group
CapX 2020 Hampton-LaCrosse Transmission Project
PUC Docket TL-09-1448; OAH Docket# 3-2500-21181-2

Dear Judge Sheehy:

Enclosed for filing please find Surrebuttal Testimony and Exhibits I and J of North Route Group.

Very truly yours,

Carol A. Overland
for
North Route Group

Print Close

Service List Member Information

N-020-003

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Knisel	Philip	prk@mgmlp.com	Matkerson Gunn Martin LLP	Electronic Service	No
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Paper Service Member(s)

Last Name	First Name	Company Name	Address	Delivery Method	View Trade Secret
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Hillstrom	Tom	Xcel Energy	7th Floor, 414 Nicollet Mall, Minneapolis, MN-554011993	Paper Service	No
Overland	Carol	Legalectric, Inc.	P.O. Box 176, Red Wing, MN-55066	Paper Service	No
Sheehy	Kathleen D.	Office of Administrative Hearings	PO Box 64620, St. Paul, MN-551640620	Paper Service	Yes

Print Close