

# LINDQUIST & VENNUM P.L.L.P.

4200 IDS CENTER  
80 SOUTH EIGHTH STREET  
MINNEAPOLIS, MN 55402-2274  
TELEPHONE: 612-371-3211  
FAX: 612-371-3207

IN DENVER:  
600 17TH STREET, SUITE 1800 SOUTH  
DENVER, CO 80202-5441  
TELEPHONE: 303-573-5900  
FAX: 303-573-1956

ATTORNEYS AT LAW

www.lindquist.com

TODD J. GUERRERO  
612-371-3258  
tguerrero@lindquist.com

October 31, 2006

Ms. Sharon Ferguson  
Department of Commerce  
85 7th Place East, Suite 500  
St. Paul, MN 55101-2198

**VIA MESSENGER & US MAIL**

**Re: Big Stone Transmission Line Project  
Comments on Draft Environmental Impact Statement  
PUC Docket Nos. E017, et al/TR-05-11275 and CN-05-619**

Dear Ms. Ferguson:

On July 31, 2006, the Minnesota Department of Commerce made available for public review and comment a Draft Environmental Impact Statement on the Big Stone Transmission Project. The Department advised that it would accept comments on the Draft EIS until October 31, 2006.

This letter contains the comments of the seven utilities that have applied for both a Certificate of Need and Route Permits for the two proposed high voltage transmission lines that constitute the Big Stone Transmission Project. The seven utilities are: Otter Tail Power Company, Great River Energy, Western Minnesota Municipal Power Agency (as represented by Missouri River Energy Services), Southern Minnesota Municipal Power Agency, Montana-Dakota Utilities Co., Central Minnesota Municipal Agency, and Heartland Consumers Power District (the Applicants).

Initially, it is important to recognize that the Department of Commerce has complied with all the procedural requirements established in the statutes and rules for conducting environmental review of new high voltage transmission lines of the size and type proposed here. Minnesota Statutes § 116C.57, subd. 2c, requires that an Environmental Impact Statement must be prepared before the Minnesota Public Utilities Commission can make a final decision on a route permit. Minnesota Rules part 4410.7020 requires that an Environmental Report be prepared before a Certificate of Need for a new high voltage transmission line can be issued. Minnesota Rules part 4410.7060, subp. 2, provides that the environmental review can be combined into one EIS when a Certificate of Need application and a Route Permit application are pending at the same time. In this case, the Public Utilities Commission has directed that the two proceedings be combined and that a single EIS be prepared. *MPUC Order Agreeing to Combine the Environmental Report and Environmental Impact Statement Document*, November 29, 2005.

# LINDQUIST & VENNUM P.L.L.P.

Ms. Sharon Ferguson

October 31, 2006

Page 2

The procedural requirements for preparing the Environmental Impact Statement and providing the public with an opportunity to participate in development of the document are found in Minnesota Rules parts 4400.1700 and 4410.7030. At the outset, the Department is required to hold public information meetings to solicit public input into the scope of the Environmental Impact Statement. The Department held five separate meetings over a three day period in January 2006 in western Minnesota in the area where the lines would be built. The Department issued its Scoping Decision on February 28, 2006.

Once the Draft EIS is completed, another round of public meetings is required to allow the public to ask questions and make comments about the information in the document. Minnesota Rules part 4400.1700, subps. 7 and 8. Public meetings were held in six different locations from October 9 to October 16, 2006, where the public was afforded an opportunity to enter comments on the Draft EIS. In addition, the general public was given until October 31, 2006, to submit comments in writing on the Draft EIS.

The Department's task after close of the public comment period is to "respond to the timely substantive comments on the draft environmental impact statement consistent with the scoping decision and prepare the final environmental impact statement." Minnesota Rules part 4400.1700, subp. 9. The Department intends to respond and release the Final EIS by December 1, 2006. Once that step is completed, the Department will have satisfied all the procedural requirements associated with preparation of an EIS.

On the substantive side of the issue, it is readily apparent from a review of the Scoping Decision and the Draft EIS that the Department has addressed in sufficient detail all the issues that it is required to address. The Department has evaluated several alternatives to the proposed transmission lines including a renewables/natural gas option, a distributed generation option, and a no-build option, both with and without the Big Stone Unit II facility. And the Department evaluated the potential environmental and health issues associated with the proposed transmission lines and the alternatives.

A good number of commenters at the public meetings and many of those who submitted written comments to the Department directed their comments and concerns to the Big Stone Unit II facility in South Dakota. However, the Department specifically listed in its Scoping Decision at page 6, issues that were outside the scope of this EIS, and one of those issues that is outside the scope is "[a]ny consideration of generation alternatives or substitutions at the proposed Big Stone II plant site in South Dakota." Therefore, the potential impacts of the Big Stone Unit II facility are under consideration only to the extent of its impact on transmission in Minnesota.

Therefore, it is not necessary for the Department to respond to all the comments that were received about Big Stone Unit II. The Department need only respond to substantive comments consistent with the scoping decision.

# LINDQUIST & VENNUM P.L.L.P.

Ms. Sharon Ferguson

October 31, 2006

Page 3

The Applicants have only two minor points to bring to the Department's attention that may require a brief response in the Final EIS. One point relates to two relatively minor changes in the location of certain facilities from what was proposed. One change is in the location of the Canby Substation, and the other change is in the location of the border crossing between South Dakota and Minnesota along the preferred Granite Falls route.

The Applicants are proposing to change the location of the Canby Substation. The new site for the substation is approximately one mile northeast of the existing site. The Applicants described this change in written testimony it prefiled with the Department and the Administrative Law Judges and the other parties in this matter on June 1, 2006. See testimony of Darryl Shoemaker and Myron Rader. The new site is outside the floodplain, is more readily available for maintenance, and the involved landowners have shown an interest in moving the site. A copy of a map showing the new location is attached to this letter. Importantly, there are no new or different environmental impacts that result from moving the substation to this location.

A second change in the project involves the border crossing for the Granite Falls line along the route preferred by the Applicants. This slight change in the route is described in the supplemental testimony of Myron Rader filed with the Administrative Law Judges and the parties on October 2, 2006. A map showing the change at the border is attached to this letter. This change is being made to address a concern by the U.S. Fish & Wildlife Service to avoid a certain parcel of land upon which the USFWS has an opportunity to acquire a grassland easement in the future. The change will minimize environmental impacts so there is no additional response required from the Department other than to recognize the change in the route.

The second point on which the Applicants would offer comments relates to any cost figures in the Draft EIS. The Department is aware that cost estimates for the Big Stone II facility have gone up from the time the Applicants filed their applications in late 2005. These cost increases are due in most part to inflationary pressures on the cost of materials and labor. The Applicants' analysis shows that for the same reasons, cost estimates for other alternatives the Applicants examined have correspondingly increased. It is reasonable to expect that any cost figures in the Draft EIS for the alternatives that were examined, including wind, natural gas, and various distributed generation options, would also increase. For example, the cost figures in Table 18 on page 65 of the Draft EIS are based on the costs of new projects initiated in 2005. The Applicants suggest that it is not necessary for the Department to recalculate cost estimates for any of the alternatives investigated, but to simply recognize in the Final EIS that any of the cost estimates presented are likely to have increased since they were prepared in July 2006 and that it is not appropriate to compare any of the cost figures in the Draft EIS with more recent figures presented during the upcoming evidentiary hearing.

# LINDQUIST & VENNUM P.L.L.P.

Ms. Sharon Ferguson

October 31, 2006

Page 4

In the end, the Department's task is to prepare a Final EIS that is "adequate." "Adequacy" will be determined by the Commission based on the Draft EIS, the comments received, and the responses to the substantive comments included by the Department in the Final EIS. Minnesota Rules part 4400.1700, subp. 10 provides:

The final environmental impact statement is adequate if it:

- A. addresses the issues and alternatives raised in scoping to a reasonable extent considering the availability of information and the time limitations for considering the permit application;
- B. provides responses to the timely substantive comments received during the draft environmental impact statement review process; and
- C. was prepared in compliance with the procedures in this chapter.

The Department has surely complied with items A and C in the above rule – the Department has adequately addressed the issues and alternatives raised in scoping and has followed all the applicable procedures. Upon response to any timely substantive comments on any issues or alternatives raised in scoping, the Department will have complied with item B.

The Applicants look forward to receiving the Department's Final EIS on or about December 1 of this year. Thank you for your comprehensive evaluation in the Draft EIS.

Very truly yours,

LINDQUIST & VENNUM P.L.L.P.



Todd J. Guerrero

TJG/kas

c: Attached Service List



**Department of Energy**  
Western Area Power Administration  
P.O. Box 281213  
Lakewood, CO 80228-8213

**OCT 31 2006**

Ms. Sharon Ferguson  
Minnesota Department of Commerce  
85 7<sup>th</sup> Place East  
Suite 500  
St. Paul, MN 55101-2198

Subject: Draft Environmental Impact Statement, Big Stone Transmission Line Project  
PUC Docket Nos. E017, et al./TR-05-1275 and E017, et al./CN-05-619  
Energy Facility Permitting  
Prepared by Minnesota Department of Commerce, July 31, 2006

Dear Ms. Ferguson:

Western Area Power Administration provides the following comments and/or questions on the subject Draft Environmental Impact Statement.

Pages 1 and 2, Project Description: The description is very specific to the "Morris" line and the "Granite Falls" line. Should this be identified as the Proposed Project? In this document, are the terms Project Description and Proposed Project used synonymously? Route alternatives are not mentioned until page 3. System alternatives are not introduced until page 7. Adding to the confusion is the Project Description on page 5 which notes in paragraph two that a transmission line from Big Stone to Willmar is an alternative to the Morris line. The Project Description on pages 1 and 2 read as though a decision has been made to construct the Morris line and the Granite Falls line, whereas the Project Description on page 5 indicates an alternative is also under consideration.

Page 2, Project Description, Line Two (the "Granite Falls" line), second bullet: The line would terminate at Western's Granite Falls substation. The Minnesota Valley substation is not under consideration.

Page 3, Route Alternatives, paragraph two is confusing as written:

- The Proposed Action and all of the alternatives included in Western's DEIS begin at the existing Big Stone plant. The current paragraph reads as though the Federal EIS includes four alternative routes. Western used a corridor approach and identified two alternatives. Alternative A consists of a corridor from Big Stone to Morris and a corridor from Big Stone to Granite Falls. There are two variations for the corridor from Big Stone to Granite Falls. Alternative B consists of a corridor from Big Stone to Willmar and a corridor from Big Stone to Granite Falls. There are two variations for each of these corridors.

- Second sentence: change Western Area Power Association to Western Area Power Administration.
- The first part of sentence three is misleading. The variation along the Willmar corridor is one of the two alternatives for the Big Stone to Willmar corridor.

Page 5, Project Description: The first paragraph mentions a 345-kV substation in South Dakota but there has been no mention or discussion of construction of this as a new substation. Due to the uncertainty of the timing of the construction of this new substation, Western's DEIS addresses it in the cumulative impacts section as a reasonably foreseeable future action.

Page 7, System Alternatives 1 and 2: same comment as above regarding the 345-kV substation in South Dakota.

Page 7, System Alternative 1 includes the following in Western's DEIS: new substations constructed at the Johnson Junction Switch Station and substation modifications at Canby, Morris and Granite Falls. These changes are not identified in Minnesota's EIS until page 21. An option under consideration is to bypass the interconnection to Ortonville Substation (see page ES-14, 2-49 and 2-52 in Western's DEIS). (We note at the time Western's DEIS was prepared, only modifications were proposed for the existing Canby Substation. Subsequently, the Project Co-owners decided to construct the Canby Substation at a new location, identified as location C; Western will address this change in its final EIS.)

Page 7, System Alternative 2 includes the following in Western's DEIS:

- Substation modifications at Canby, Granite Falls and Willmar.
- Rebuild the Ortonville-to-Johnson Junction-to-Morris 115-kV lines with new structures and conductors in the existing right-of-way to remedy line overload.
- Installation of a capacitor bank in Willmar Substation.
- Removal of an existing 115/69-kV transformer, possible upgrade of an existing 230/69-kV transformer, and the addition of a new 230/69-kV transformer at Willmar Substation.
- Removal of the existing Willmar-to-Kerkhoven Tap 115-kV transmission line and the Granite Falls-to-Willmar 69-kV transmission line. The lines would be de-energized and left in place.

Page 22, Morris Substation Modifications and Page 26, Granite Falls Substation Modifications: Western has not completed its system studies yet and, therefore, has not determined what modifications may be required or whether they will require substation expansion. As noted in Western's DEIS (see page 2-28), depending on the results of these studies, modifications may include transformer replacement, additions of new bays, rearrangement of existing equipment and upgrading other electrical and communication equipment. Western would design, own, construct and operate any

additions and modifications at these substations. Please modify paragraphs 5.5 and 5.6.2 accordingly.

Page 22, Willmar Substation Modifications: The Federal DEIS identified Xcel Energy as one of the owners.

Please contact me if you have questions or would like to discuss any of the comments. I can be reached at 720-962-7251 or by email at [werdel@wapa.gov](mailto:werdel@wapa.gov).

Sincerely,



Nancy Werdel  
NEPA Document Manager



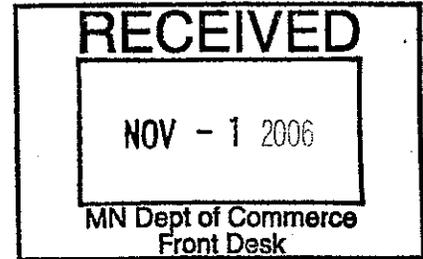
# Minnesota Department of Natural Resources

*Birchholz*

500 Lafayette Road  
St. Paul, Minnesota 55155-40<sup>25</sup>

October 31, 2006

Ms. Sharon Ferguson  
Minnesota Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198



RE: Big Stone Transmission Project  
Draft Environmental Impact Statement  
Docket #E017/TR-05-1275

Dear Ms. Ferguson:

The Department of Natural Resources (DNR) has reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Big Stone Transmission project in southwest Minnesota. With respect to the accuracy and completeness of the DEIS, the potential impacts to natural resources, and in accordance with Minnesota Statutes §116C.57 subd.2c, the DNR offers the following comments.

### Ortonville to Morris

DNR supports the proposed Morris 1 High Voltage Transmission Line (HVTL) route as the preferred option available. The DNR recommends using a short section of the Morris 2 route near the Prairie Wildlife Management Area (WMA). The sections we are requesting run parallel to Township Road 130 and are described on Appendix B3 - Morris as route M-4. This alternative route will move the existing HVTL to the periphery of the Prairie WMA, greatly reducing potential wildlife conflicts that currently exist with the HVTL. To reduce the potential for avian mortality, Avian Flight Diverters are recommended for this entire alternative route extending up to Highway 21. This 10-mile section represents a primary migratory flight corridor extending northwest to southeast along the chain of wetlands, lakes and native grassland areas, and is proposed for possible designation as a State Important Bird Area. Avian Flight Diverters should be placed at the appropriate density and spacing to provide the best possible mitigation against incidental avian mortality associated with this project. We ask that you coordinate mitigation work on this section with Dave Soehren, DNR Area Wildlife Manager at 320-752-4394.

### Ortonville to Willmar

Willmar Routes 1 & 2 represents the potential for significant environmental impact. Both of these proposed routes would follow existing roadways, however each route will be entirely new construction creating a potential significant risk to both resident and migratory birds and areas of high biological diversity. The areas around Ortonville and along the Minnesota River corridor represent a high priority area for both DNR and the United States Fish and Wildlife Service. If a HVTL route becomes necessary between Ortonville and Willmar, the DNR asks that additional alternatives be considered.

DNR Information: 651-296-6157 • 1-888-646-6367 • TTY: 651-296-5484 • 1-800-657-3929

An Equal Opportunity Employer



Printed on Recycled Paper Containing a  
Minimum of 10% Post-Consumer Waste

### **Ortonville to Granite Falls**

DNR has reviewed the four alternative routes for Ortonville and Granite Falls. DNR supports the rebuilding of the existing Granite Falls Route 1 and Granite Falls Route 1&2 as preferred route options. Any new crossings of the Minnesota River at this location are discouraged. The Minnesota River has been designated a state Wild and Scenic River for its outstanding scenic, recreational, natural, historical, and scientific values. In order to obtain a license for a new crossing location of the Minnesota River at Granite Falls, the applicant would need to demonstrate there is no feasible alternative (MR 6105.0180, Subp. 2). Minnesota Rules 6105.0180 contain a number of standards and criteria for crossing designated rivers (subparts 3, 4, 5, 6, and 7). For each environmental consideration listed in these subparts, the applicant must indicate how the considerations are satisfied. If the preferred route is not selected as the crossing location, the criteria listed in Minnesota Rules 6105.0180 must be met.

The DNR recommends that the transmission pole(s) currently in the wetland on Lanners Wildlife Management area be removed and new poles are spaced appropriately to span this open water area.

### **Native Prairie**

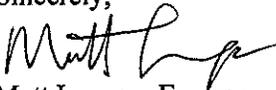
DNR asks that the following guidelines be used for HVTL replacement adjacent to or within native prairie sites: (1) As much as possible, operate within already-disturbed areas; (2) Minimize vehicular disturbance in the area (allow only vehicles necessary for upgrade activities); (3) If possible, do not park equipment or stockpile supplies in the area; (4) If possible, conduct work in autumn or winter, to avoid damaging plants during the growing season; (5) Reduce runoff by completing the work as rapidly as possible and using erosion control measures such as straw bales or silt fencing; (6) Revegetate disturbed soil with native species suitable to the local habitat immediately following construction, to decrease the opportunity for exotic species to invade the area.

### **Minnesota Statutes §116C.61**

Minnesota Statutes §116C.61, Subdivision 3 requires state agencies authorized to issue permits for construction of HVTLs to state whether the site, and other design matters, under consideration for approval by the Environmental Quality Board will be in compliance with agency standards, rules or policies. Project construction and operation will require a DNR License to Cross Public Waters and an Endangered Species consultation with the DNR, as noted in the DEIS. Project construction and operation will be in compliance with DNR's standards, rules and policies.

Thank you for the opportunity to review this document. Please contact me with any questions regarding this letter.

Sincerely,



Matt Langan, Environmental Planner  
Environmental Review Unit  
Division of Ecological Services  
(651) 259-5115

c: Lee Pfannmuller, Cheryl Heide, Steve Hirsch, Steve Colvin, Todd Kolander, Rebecca Wooden, David Birkholz - DOC



# Minnesota Center for Environmental Advocacy

The legal and scientific voice protecting and defending Minnesota's environment

26 East Exchange Street - Suite 206  
Saint Paul, MN 55101-1667

651.223.5969  
651.223.5967 fax

mcea@mncenter.org  
www.mncenter.org

**Founding Director**  
Sigurd F. Olson  
(1899-1982)

**Board of Directors**  
Vanya S. Hogen  
*Chair*

Kent White  
*Treasurer*

Mary Horak Binger

Kim Carlson

Gene Christenson

Merritt Clapp-Smith

Charles K. Dayton

Robert G. Dunn

Janet C. Green

Cecily Hines

Roger Holmes

Douglas A. Kelley

Michael Kleber-Diggs

Dee Long

Steve Piragis

Steven G. Thorne

Martha C. Brand  
*Executive Director*

October 30, 2006

## VIA ELECTRONIC MAIL AND U.S. MAIL

Sharon Ferguson  
Docket Manager  
Minnesota Department of Commerce  
85 East 7<sup>th</sup> Place, Suite 500  
St. Paul, MN 55101-2148

**RE: Comments on the Draft Environmental Impact Statement for  
Construction and Operation of the Big Stone Project  
MPUC Docket Nos. E017, et al./CN-O5-619, E017/TR-O5-1275**

Dear Ms. Ferguson:

These comments are submitted on behalf of The Izaak Walton League of America-Midwest Office (IWLA), Fresh Energy (formerly Minnesotans for an Energy-Efficient Economy), Union of Concerned Scientists (UCS), Wind on the Wires (WOW), and the Minnesota Center for Environmental Advocacy (MCEA), hereinafter "Joint Intervenors". A description of each organization is contained in the Scoping Comments of these joint intervenors, submitted on February 14, 2006, which comments are incorporated herein in their entirety by reference.

We set forth below several serious defects with the Draft Environmental Impact Statement (DEIS), but there are two defects so profound that we highlight them here. Together they wholly undermine the value of the DEIS as a means of informing the Commission and the public about the environmental impacts of the project and about how it compares to alternatives:

- 1. The DEIS fails to consider the global warming impacts of the Big Stone II coal plant.** Global warming is the most serious environmental threat humanity faces, and coal plants are the nation's largest contributor to it. This project will make a greater contribution to global warming than any project built to serve Minnesota electric customers in many years (since the last coal plant, completed in the 1980s). The DEIS fails to discuss the project's large and lasting contribution to global warming, thereby ignoring its single-most important environmental impact.

2. **In comparing the cost of this project with alternative methods of power generation, the DEIS simply ignores the financial costs of the entire Big Stone II coal plant.** The DEIS compares the Big Stone II project to feasible wind/gas generation alternatives, but rejects the wind/gas alternatives on cost grounds. However, this cost comparison excludes the generation costs of the Big Stone II coal plant while including the generation costs of the wind/gas alternatives, dramatically and irrationally skewing the cost comparison in favor of the Big Stone project.

We strongly object to this document's selective blindness regarding the Big Stone II coal plant, which violates Minnesota's central environmental review requirements requiring the DEIS to take a "hard look" at the environmental impacts of this application and to compare it to alternatives.

These flaws are so fundamental that we urge the Department of Commerce (Department) to withdraw this DEIS and re-issue it with these major defects, and additional defects identified below, corrected. The PUC is being asked to make what is probably the most environmentally significant decision it has made in decades; it must be based on a thorough environmental review with an even-handed comparison of alternatives.

**I. THE DEIS MUST LOOK AT THE ENVIRONMENTAL IMPACTS AND FINANCIAL COSTS OF THE BIG STONE II COAL PLANT AS WELL AS THE PROPOSED TRANSMISSION LINES.**

- A. **The environmental review laws require that the DEIS consider alternatives to both the proposed transmission lines *and* the proposed coal plant that the lines would be built to serve.**

The environmental review rules governing the need portion of the DEIS mandate looking at a wide range of alternatives to proposed transmission line projects, explicitly requiring the analysis of generation alternatives as well as transmission ones. They require the environmental report<sup>1</sup> to identify a broad range of alternatives to the proposed project including:

no-build alternative, demand side management, purchased power, facilities of a different size or using a different energy source than the source proposed by the applicant, upgrading of existing facilities, generation rather than transmission if a high voltage transmission line is proposed, transmission rather than generation if a large electric power generating plant is proposed, use of renewable energy sources, and those alternatives identified by the chair.

Minn. Rules 4410.7035, subp. 1(B). The rules go on to require an analysis of the human and environmental impacts of a project "of the type proposed and of the alternatives identified" and an "analysis of the feasibility and availability of each alternative considered."

---

<sup>1</sup> In this case, the requirements of the environmental report are being met within this environmental impact statement. November 29, 2005, Order Agreeing to Combining the Environmental Report and the Environmental Impact Statement Documents, Docket No. CN-05-619.

By requiring that transmission projects be compared to options like demand-side management and renewables, it is quite clear that the law does not segregate transmission projects into their own category to be compared only to other transmission choices. On the contrary, the law requires that the Responsible Governmental Unit (RGU) think broadly by comparing the transmission project to generation alternatives that would get rid of the need for the transmission project altogether (e.g., “. . . generation rather than transmission if a high voltage transmission line is proposed. . .”). In short, the law automatically requires the environmental review, for the sake of the alternatives analysis, to look well beyond just the proposed wires and to consider both the generation of power at one end of the wires and the demand for power at the other end; in no other way could the required comparisons between transmission and generation or demand-side alternatives make sense.

The wide-ranging alternatives analysis required by statute and rule is fully consistent with the sweeping goals of the Minnesota Environmental Policy Act (MEPA), Minn. Stat. ch. 116D. MEPA establishes the state’s underlying environmental review requirements and directs that “to the fullest extent practicable the policies, rules and public laws of the state shall be interpreted and administered in accordance with the policies set forth” in chapter 116D.<sup>2</sup> Minn. Stat. § 116D.03, subd. 1. Those policies include, among others, establishing a continuing state responsibility to “practice thrift in the use of energy and maximize the use of energy efficient systems . . . and minimize the environmental impact from energy production and use.” Minn. Stat. § 116D.02, subd. 2(9) Central to MEPA’s environmental review requirements are the analysis of a project’s “significant environmental impacts” and discussion of “appropriate alternatives” to it. Minn. Stat. § 116D.04, subd. 2a.

Regulations adopted by the Environmental Quality Board interpreting MEPA’s environmental review requirements prohibit the artificial segmentation of logically connected projects, requiring a broader consideration of the impacts of “connected actions,” “phased actions,” and “cumulative potential effects of related or anticipated future projects.” Minn. Rules 4410.1000, subp. 4 and 4410.1700, subp. 7(B). These rules interpreting MEPA should (at the very least) be read *in pari materia*<sup>3</sup> with the rules explicitly applicable to transmission lines.

MEPA is, of course, patterned after the National Environmental Policy Act (NEPA), and so the federal case law on the issue of “segmentation” of EIS’s is instructive. It has been recognized for over three decades that NEPA’s objectives of promoting the meaningful consideration of environmental impacts and alternatives would be undermined if agencies were allowed to segment large projects into illogical portions. The primary test under the federal precedent is whether the project has an “independent utility” apart from a larger whole; if not, it was

---

<sup>2</sup> The Minnesota Supreme Court has explicitly held that MEPA and the Minnesota Environmental Rights Act both apply to power line proceedings. *People for Environmental Enlightenment and Responsibility*, 266 N.W.2d 858, 865 (Minn. 1978).

<sup>3</sup> Laws relating to the same thing or having a common purpose are considered *in pari materia* and should be construed in light of one another. *State v. Kolla*, 672 N.W.2d 1 (Minn. App. 2003).

improperly segmented.<sup>4</sup> In 1976 the U.S. Supreme Court held that sometimes under NEPA an impact statement looking at several proposals that will have a cumulative or synergistic impact must be considered together.<sup>5</sup> After that decision, the federal Council on Environmental Quality (CEQ) and other federal agencies issued regulations to specify the circumstances under which multiple related actions must be covered by a single EIS (similar to the EQB rules cited above).

The crux of the “independent utility” test under NEPA is whether “each of two projects would have taken place with or without the other.”<sup>6</sup> In this case, the PUC has already determined that the Big Stone power line and the Big Stone power plant are “inextricably linked,” and thus the transmission proposal necessarily fails the “independent utility test.”

The federal “indirect impacts” doctrine is also instructive. A recent 8<sup>th</sup> Circuit decision interpreting NEPA emphasizes that the scope of environmental review should not be limited solely to the direct impacts of a project, but should include the indirect ones too. In *Mid States Coalition for Progress v. Surface Transportation Board*, 345 F.3d 520 (8<sup>th</sup> Cir., 2003) the court reviewed a decision by the Surface Transportation Board approving a proposal by the Dakota, Minnesota & Eastern Railroad (DM&E) to build or upgrade hundreds of miles of rail lines to improve coal deliveries from the Powder River Basin to the Midwest. The court held that the Board violated NEPA because its Environmental Impact Statement failed to consider the “reasonably foreseeable” increase in long-term demand for coal and any resulting increase in air pollution (specifically mentioning carbon dioxide, mercury, and other pollutants). *Id.* at 548-549. Similarly, this DEIS must consider the impacts of the carbon dioxide, mercury, and other emissions resulting from the added coal use at Big Stone II that will result from building these transmission lines. The impact of carbon dioxide emissions from the burning of coal to produce electricity are more closely related to the transmission line in this matter than they were to the railroad line in *Mid States*: the impacts are not just reasonably foreseeable but indeed part of the very same construction project.

The DEIS purports to conduct the legally required comparison between the Big Stone project and alternatives, but no such comparison can be rationally made without factoring in the global warming impact of the Big Stone II plant and its financial costs.

**B. The DEIS must provide the information needed to inform the comparisons the PUC is legally required to make.**

Unlike most other governmental decision-making contexts to which environmental review applies, in this case the PUC is under legal mandate to compare the proposed project to certain

---

<sup>4</sup> See, e.g., *Indian Lookout Alliance v. Volpe*, 484 F.2d 11 (8<sup>th</sup> Cir. 1973) (holding that EIS for highway project needed to cover more than 14-mile segment which did not “have an independent utility of its own” considered apart from other planned highway construction); and *Thomas v. Peterson*, 753 F.2d 754 (9<sup>th</sup> Cir. 1985) (holding that EIS for proposed road must include impacts of the timber sales the road was designed to facilitate).

<sup>5</sup> *Kleppe v. Sierra Club*, 96 S.Ct. 2718, 2730 (1976).

<sup>6</sup> *Baykeeper v. U.S. Army Corps of Engineers*, slip copy, 2006 WL 2711547 (E.D. Cal), citing *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 969 (9<sup>th</sup> Cir. 2006).

specific alternatives, including the preferred alternatives of energy efficiency and renewables. The Certificate of Need for the Big Stone transmission line cannot be granted, for example, unless the applicant can show that “the demand for electricity cannot be met more cost effectively through energy conservation and load-management measures.” Minn. Stat. §216B.243, subd. 3. Nor may a Certificate of Need be granted for a transmission line:

that transmits electric power generated by means of a nonrenewable energy source, unless the applicant for the certificate has demonstrated to the commission’s satisfaction that it has explored the possibility of generating power by means of renewable energy sources and has demonstrated that the alternative selected is less expensive (including environmental costs) than power generated by a renewable energy source.

Minn. Stat. § 216B.243, subd. 3a. And this provision, in particular, focuses upon the generation sources of the power to be transmitted by the line in question, both nonrenewable and renewable. It indicates that the certification of the transmission line must involve a close look at the cost of the power from each such generation source. Of course, the cost of the power from each source necessarily includes the cost of the generation of that power, including its environmental costs.

Other statutory provisions make it amply clear that this transmission project may not be certified unless it can be shown to be preferable to the alternatives of renewables and efficiency. The PUC has recognized the “longstanding state policies favoring conservation and renewable energy over fossil-fuel derived energy,” citing the following:

...the resource planning statute’s requirement that utilities’ resource plans include least-cost plans for meeting 50% and 75% of all new and refurbished capacity through conservation and renewable energy facilities. Minn. Stat. § 216B.2422, Subd. 2. See the statutory prohibitions against certifying nonrenewable energy facilities or including the costs of those facilities in rates, unless the utility demonstrates that a renewable facility is not in the public interest. Minn Stat § 216B.2422, Subd. 4. See also the certificate of need statute’s prohibition against granting a certificate of need for a nonrenewable facility unless the applicant demonstrates that it has explored the possibility of using renewable generation and that the nonrenewable alternative is less expensive, including environmental costs. [Minn. Stat. § 216B.243, subd. 3]<sup>7</sup>

These statutorily-required comparisons are elaborated upon in the Commission’s rules setting forth the criteria for determining need. The rule requires the Commission to consider, among other things:

(2) the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives;

---

<sup>7</sup>Initial Order, June 1, 2004, page 11, fn. 4. *In the Matter of Determining Criteria and Standards for Measuring a Utilities Good Faith Efforts in Meeting the Renewable Energy Objectives under Minn.Stat. 216B.1691*, Docket no. E999/CI-03-869 (citation added).

Minn. R. 7849.0120(B)(2). Note that the cost of the “proposed facility” is stated separately from “the cost of energy to be supplied from the proposed facility,” and both are to be compared to the cost of energy that would be supplied by reasonable alternatives. This focus on the “cost of energy” in this rule echoes the focus of Minn. Stat. § 216B, subd. 3a on the cost of “power.” In both cases, the comparison is required to look beyond just the cost of the proposed facility to the cost of power it will supply, which in the instant case means the cost of power generated at the Big Stone II plant.

The DEIS is supposed to provide the analysis necessary for the PUC to make these required comparisons. By overlooking the global warming impact and the construction costs of the Big Stone II plant, it fails to serve that function.

**C. The PUC has already determined that the environmental impacts and costs of the Big Stone II coal plant are within the scope of this certificate of need proceeding.**

Ignoring the costs associated with the Big Stone II plant is particularly inappropriate where the PUC has already explicitly recognized the inextricable link between the transmission lines and the power plant they would be built to serve in its December 19, 2005, order on the completeness of the application. Joint Intervenors had argued that the Applicants’ Certificate of Need application was not complete because it did not include enough information about generation and demand-side alternatives. Applicants argued that information about alternatives to the coal plant were extraneous to this proceeding. While the Commission held that the application was substantially complete, it stated:

At the same time, however, the Commission does not accept the Applicants’ further argument that the generation and demand-side information referred to by the Organizations is extraneous to the Commission’s consideration of the merits of the Application. **The need for the generating facility and the need for the transmission lines are inextricably linked.** As a matter of logic, the transmission lines proposed to be constructed in Minnesota will not be needed where they are proposed if the Applicants have a more reasonable and prudent alternative generation site. And the proposed transmission lines will not be needed at all if the Applicants (due to demand-side management or any combination of other alternatives) do not need the electricity projected to be generated at the Big Stone, South Dakota facility.<sup>8</sup>

(emphasis added).

The Commission went on to require each of the Applicants to provide “supplementary information regarding generation and demand-side management alternatives to the Big Stone facility.” Applicants were ordered to “compare and contrast the costs of the resulting overall generation and demand-side alternatives ... with the Big Stone projects (i.e., Big Stone Unit II plus the preferred transmission alternatives provided in the application).” Applicants were

---

<sup>8</sup> Order Accepting Application As Substantially Complete and Requiring Additional Information, MPUC, December 19, 2005, in the instant docket, at 9.

ordered to compare Big Stone II with the other generation/demand-side alternatives considering the data elements listed in Minn. R. 7849.0340, item B.<sup>9</sup> These data elements include a long list of environmental and human impacts, including “airborne emissions.”

The Commission’s focus on generation alternatives is consistent with, indeed required by, the Certificate of Need statutes and its own rules. The DEIS should have looked at the major problems associated with the Big Stone II power plant, which are inextricably linked to the transmission line.

## **II. THE DEIS INAPPROPRIATELY REJECTS FEASIBLE, ENVIRONMENTALLY PREFERABLE ALTERNATIVES, AND OVERLOOKS EVEN MORE FEASIBLE, COST-EFFECTIVE OPTIONS.**

The DEIS constructs two alternative wind-and-gas scenarios to the Big Stone project’s 600 MW coal generation and transmission. It states that these projects “provide an equal amount of energy and capacity as the proposal by the applicants.” DEIS, at 3. The two projects are:

- Construction of 747 MW of wind generation capacity and transmission line upgrades in Minnesota in locations and quantities identified by the MISO’s Group 4 Interconnection Study; and
- Construction of a 250 to 650 MW capacity, state-of-the-art natural gas combined cycle generation facility and associated pipeline and transmission infrastructure similar to two recently completed or pending construction projects in Minnesota.

DEIS, at 45. The DEIS does not state why it chose these particular ratios of wind and gas among the many combinations of wind and gas that could provide similar amounts of energy and capacity as the Big Stone proposal. In part II.C below, we explain why the alternatives chosen are by no means the best options available to the Applicants, but first we discuss the inappropriate grounds on which these sub-optimal alternatives were rejected by the DEIS.

### **A. The DEIS inappropriately assumes the existence of the Big Stone II unit in its alternatives analysis.**

The DEIS dismisses the wind/gas energy alternatives it has constructed with two paragraphs and a table, reproduced in their entirety in our comments. First, the DEIS states on page 71:

*The wind and natural gas generation alternative is feasible, it could be constructed. The wind and natural gas technologies analyzed have been constructed in similar quantities in Minnesota. Utilities and developers are able to successfully construct and operate such facilities. However, the wind and natural gas generation alternative does not provide transmission outlet capacity for the proposed Big Stone Transmission Line Project. In other words, the alternative does not provide an interconnection nor delivery path for the proposed BSP II generation facility under review by the South Dakota PUC.*

---

<sup>9</sup> *Id.*, at 9-10.

(emphasis added). This language appears to assume the construction of the proposed coal plant even though this is the very issue that this analysis of energy generation alternatives is supposedly looking at. It is particularly stunning to find such statements in the very paragraph that finds that a wind/gas alternative to the Big Stone II coal plant and transmission line project is indeed feasible. That wind/gas alternative would, obviously, render the Big Stone II coal plant, and the proposed transmission outlet, unneeded.

It appears that the DEIS does precisely what federal case law explicitly prohibits agencies from doing: “defining the objectives of their actions in terms so unreasonably narrow they can be accomplished by only one alternative (i.e., the applicant’s proposed project).”<sup>10</sup>

**B. The DEIS ignores the construction and operation costs of the Big Stone II power plant when comparing the proposed project to cleaner alternatives.**

The DEIS goes on to say this:

However, the main issue with respect to feasibility of the alternative is cost as compared to the Big Stone Transmission Line Project. The estimated capital costs of the Wind/Gas Alternative are substantially greater than the costs provided by the Applicants of the proposed Big Stone Transmission Line Project. Below are estimates of the capital costs for typical wind and gas facilities compared with the proposed Big Stone Transmission Line Project (United States Energy Information Administration, 2006). These costs do not include operations and maintenance costs.

Table 21  
Comparative Costs of Wind/Gas Alternative

Alternative	MW Capacity	Wind/Gas Alternative Estimated Capital Cost*	Big Stone Transmission Line Estimated Capital Cost
Alternative Lower Range	400 MW Gas 747 MW Wind	\$ 1,118,249,000	\$ 41,643,000
Alternative Higher Range	655 MW Gas 747 MW Wind	\$ 1,283,414,000	\$ 78,189,000

\*Source: Table 38 Cost and Performance Characteristics of New Central Station Electricity Generation Technologies Assumptions to the Annual Energy Outlook (U.S. Energy Information Administration).

As the above paragraph and table make clear, the DEIS is not doing a cost comparison of one set of generation/transmission alternatives with another. Rather, it is comparing the generation (and

<sup>10</sup> *Colorado Environmental Coalition v. Domback*, 185 F.3d 1162, 1174 (7<sup>th</sup> Cir. 1997).

possibly transmission)<sup>11</sup> costs of the wind/gas alternative with *only the transmission costs* of the Big Stone proposal.<sup>12</sup> It does not include the cost of the construction of the Big Stone II coal unit, which Applicants currently state will be \$1.366 billion.<sup>13</sup> It is hardly surprising that the wind/gas alternative fares poorly when the costs of coal generation are excluded from this comparison.

The DEIS never explains why it excludes the costs of the coal plant in the alternatives analysis. It may be because, once again, the DEIS takes the construction of Big Stone II as a given (as it does when it rejects the wind/gas alternative for failing to provide a transmission outlet for the Big Stone II coal plant), as if it would be built even if this Certificate of Need application were denied.

Whatever the reason for not including the costs of coal generation in this comparison of the costs of generation alternatives, the DEIS fails to do what the Scoping Decision said it would do, namely, review “a renewables/gas option, where the proposed *generation* and transmission plan *has been replaced* by renewable electric generation”<sup>14</sup> (emphasis supplied). This cost comparison replaces the proposed Big Stone transmission but not the proposed Big Stone II generation.

The application makes clear that the plant depends on the power lines currently under consideration by the Minnesota PUC. The DEIS shows that two-thirds of the energy that would be produced by the Big Stone II plant would go to Minnesota customers. DEIS at 61. If the Minnesota PUC denies the transmission line certificate of need application because state energy needs are better met with other alternatives, the Big Stone II coal plant will almost certainly not be built, or at least not the two-thirds of it intended to meet Minnesota power needs. The decision of the South Dakota PUC to issue a site permit to the Big Stone II unit in no way determines whether the power from the proposed plant is needed by Minnesota ratepayers under Minnesota Certificate of Need standards, which are very different from the legal standards applied in South Dakota. That decision can only be made by the Minnesota PUC, based on the required analysis of generation and other alternatives that this DEIS is supposed to inform.

The DEIS states that a wind/gas alternative is feasible, then quickly dismisses this feasible alternative based on an irrationally skewed cost analysis that ignores the vast majority of costs associated with the Big Stone project. This is an inadequate level of review, particularly given the importance of the decision before the Commission.

---

<sup>11</sup> It is not entirely clear whether the wind/gas alternative figures include transmission costs. The EIA data that the chart cites includes only generation costs, however the figures in Table 21 are somewhat larger than the EIA data alone appears to support.

<sup>12</sup> The DEIS does not state where the gets the lower and higher range Big Stone transmission line costs, which are stated in the application to be considerably higher (from \$93 to \$135 million, Application, page 74) than the numbers used in the DEIS.

<sup>13</sup> Prefiled Supplemental Direct Testimony of Mark Rolfes, p. 1.

<sup>14</sup> Environmental Impact Statement Scoping Decision, PUC Docket No. E017, et al./CN-05-619 and E017, et al./TR-05-1275, page 3.

**C. The DEIS comparison of the proposal to a wind/gas alternative should be replaced with one that makes far better use of renewables and makes an even-handed cost comparison.**

The wind/gas alternatives to which the Big Stone proposal are compared in the DEIS are far from the optimal alternatives available to the Applicants, limited as it is to only 747 MW of wind development. Given the statutory preference for renewables and our state's rich wind resource, the Big Stone project should have been compared to one that uses far more wind. Moreover, one of the two options considered in the DEIS includes 650 MW of gas – more than the size of the 600 MW Big Stone II unit itself. The DEIS does not explain why, in its renewables alternative to 600 MW of coal, it would include a 650 MW natural gas plant.

In recent hearings concerning the Big Stone II siting permit before the South Dakota PUC, the testimony of Joint Intervenors' expert witnesses David A. Schlissel and Anna Sommer, of Synapse Energy Economics, describe alternatives to Big Stone that rely on more wind (800 – 1200 MW) and less natural gas (300-480 MW) than the options looked at by the DEIS. These are feasible combinations of resources providing comparable energy and capacity to Big Stone II, and the testimony clearly shows that an alternative that maximizes wind power and minimizes natural gas will be far more economical in the carbon-regulated world ahead than would be Big Stone II. In fact, in the scenarios with the most likely future carbon regulatory costs, the Big Stone II plant is up to 71% more expensive for investor-owned utilities and 61% more expensive for public utilities than the wind-gas option using 1200 MW wind. We incorporate herein by reference the Schlissel/Sommer testimony.<sup>15</sup>

The analysis submitted by Joint Intervenors in South Dakota is not the only type of alternatives analysis that would be acceptable in a DEIS (and indeed, we plan to submit updated analysis in this proceeding), but any analysis of whether energy needs could be met by a renewables-based option rather than coal should reflect certain basic elements: it should (1) maximize the amount of renewables, (2) compare options based not on construction costs but on a cost of energy basis (which reflects both construction and operating costs), and (3) include all reasonable operating costs, such as the inevitable costs coal plants will face under future carbon dioxide regulation (discussed in part III below).

In determining the maximum amount of wind that can be incorporated into the alternatives to which the proposal is compared, the analysis should reflect recent wind integration analysis, including the 2004 Wind Integration Study – Final Report prepared for the Department of Commerce and Xcel Energy. This report and others support the conclusion that the Applicants can integrate far more wind into their systems than they currently use, without triggering reliability problems.

---

<sup>15</sup> The testimony in question, Direct Testimony of David A. Schlissel and Anna Sommer, submitted in two portions, on May 19 and May 26, 2006, is available at the SD PUC website at: <http://www.state.sd.us/puc/commission/dockets/electric/2005/EL05-022/EL05-022.htm>, via hyperlinks labeled Joint Intervenors Exhibit 1 (May 19 testimony) and 4 (May 26 testimony).

**D. The DEIS cost comparison between the proposal and alternatives fails to reflect future CO2 regulatory costs.**

No comparison of coal power to alternatives will be complete unless it recognizes that future global warming laws are coming, and they will impose new costs on coal power. The Minnesota PUC recently stated that one of the most pressing issues in resource planning is how to account for the possibility that the cost of coal-fired generation could “skyrocket” over the life of a plant built today. The Commission went on to note that “While coal is often the least expensive baseload fuel today, it is widely believed that the growing need to control carbon emissions—and the stringent emissions controls, carbon taxes, and similar measures that may well result—will make it very expensive in the future.”<sup>16</sup> The legislature has also expressed a particular concern over future regulatory costs likely to fall on nonrenewable generating plants during their working lifetimes in the certificate of need statute, requiring applicants to assess the risk of such regulatory costs. Minn. Stat. §216B.243, subd. 3(12).

Synapse Energy Economics, on behalf of Joint Intervenor, calculated the impact these widely expected future laws are likely to have on the Big Stone II plant as part of the South Dakota site permitting process. First, Synapse analyzed the likelihood of future federal climate policies affecting power plants. They concluded that “[s]cientific developments, policy initiatives at the local, state, and federal level, and actions of corporate leaders, all indicate that climate change policy will affect the electric sector—the question is not “whether” but “when” and “in what magnitude.”<sup>17</sup> Synapse’s detailed analysis of the accelerating policy response at every level of government -- and of the growth in scientific concern driving these policies -- amply supports this conclusion.

In June of 2005, the U.S. Senate passed a Sense of the Senate resolution calling for mandatory, market-based limits on emissions of greenhouse gases, and the House Appropriations Committee adopted similar language in 2006. Several proposals that would impose such mandatory, market-based limits on CO<sub>2</sub> emissions have been proposed in Congress. These proposals would employ a cap-and-trade regulatory technique that would require power plant operators to own an allowance for each ton of CO<sub>2</sub> emitted. Allowances would be tradable among emitters, and market forces would set the price of the allowances. Legislators are increasingly educating themselves on the impact of such proposals, laying the groundwork for a national regulatory program.

The federal Energy Information Administration and others have conducted computer modeling to project how much CO<sub>2</sub> allowances would cost under various federal regulatory proposals. After reviewing several such studies, and based on their larger review of climate science and policy and the risk-management practices of a growing number of utilities, Synapse prepared

---

<sup>16</sup> Order Approving Resource Plan as Modified, July 28, 2006, pages 9-10. *In the Matter of Northern States Power Company d/b/a/ Xcel Energy’s Application for Approval of its 2005-2019 Resource Plan*, Docket No. E-002/RP-04-1752.

<sup>17</sup> See, Testimony of Schlissel and Sommer, SDPUC EL05-022, p. 1 (May 19, 2006), available at <http://www.state.sd.us/puc/commission/dockets/electric/2005/el05-022/hearing/exhibitj1.pdf>.

low-, mid-, and high-case forecasts of likely future CO<sub>2</sub> costs.<sup>18</sup> Synapse's forecasts not only reflect studies of existing federal proposals, but are in line with CO<sub>2</sub> cost projections used in planning by other utilities.<sup>19</sup>

Clearly, the costs of future CO<sub>2</sub> allowances is subject to considerable regulatory uncertainty, but that uncertainty does not justify the now reckless assumption that such costs will remain at zero for the operating lifetime of a new coal plant. As Synapse notes, "the challenge, as with any unknown future cost, is to forecast a reasonable range of costs based on analysis of the information available."<sup>20</sup>

Synapse's forecasts show that future CO<sub>2</sub> costs would add significantly to the cost of Big Stone II on a megawatt/hour (MWh) basis. The lowest cost trajectory would add \$7.60 to the cost of energy from the plant, the mid-case costs (considered most likely) would add \$18.61 per MWh, and the high-case costs would add \$29.72 per MWh.<sup>21</sup> In percentage terms, the mid-range allowance prices would increase Big Stone II costs of energy by 37% for investor-owned utilities, and by 46% for publicly owned utilities.<sup>22</sup> The lower cost allowances would increase Big Stone II's cost of energy from 15-19%, and the high cost allowances would increase the cost of energy from 59-73%.

As we note above, the inclusion of future CO<sub>2</sub> costs can have a dramatic impact on the relative costs of coal versus wind-based alternatives. Indeed, the Synapse testimony showed that under some scenarios, Big Stone II could end up costing roughly twice as much as a wind-based alternative.<sup>23</sup> Costs as significant as these must be included in any reasonable comparison between coal and less carbon-intensive options, and should have been reflected in the DEIS.

### **III. THE DEIS FAILS TO CONSIDER THE GLOBAL WARMING IMPACT OF THE BIG STONE II COAL PLANT.**

The DEIS purports to look at the environmental impacts of the Big Stone II plant, including an approximately two-page discussion of the plant's air emissions (pages 33-35). The DEIS discusses the global warming emissions of the plant in part of a single paragraph on page 33,

---

<sup>18</sup> *Id.* at 39-42.

<sup>19</sup> *See Id.* at 30.

<sup>20</sup> *Id.* at 44.

<sup>21</sup> *Id.* at 23.

<sup>22</sup> *Id.* These figures are based on the originally estimated costs of the Big Stone II project; since these figures were developed, the estimated costs of the Big Stone II project have increased.

<sup>23</sup> *See*, Testimony of Schlissel and Sommer, p. 1 (May 26, 2006), at 17. The scenarios in which energy from Big Stone II cost roughly twice as much as energy from the wind/gas alternatives assumed high allowance prices, and the continued existence of the production tax credit. However, the scenarios with the highest reliance on wind (1200 MW) ranged from roughly the same cost as Big Stone II to substantially cheaper than Big Stone II across a range of allowance price assumptions and even without the production tax credit.

which notes only that carbon dioxide emissions will go up by 4.7 million tons per year, and that the plant's boiler emits slightly less CO<sub>2</sub> per megawatt hour than another, less-efficient type of boiler would have emitted.

The DEIS fails to put that 4.7 million tons of CO<sub>2</sub> into any sort of useful context. It does not in any way assess the significance of these emissions or the scale and nature of the threat posed by global warming (or even, for that matter, mention global warming). It does not compare these emissions to other kinds of generating technology, or even to the wind/gas alternatives selected by the DEIS.<sup>24</sup> The DEIS even overlooks the issue in the summary of scoping comments, mentioning only the comment that the plant should achieve the best possible standards for greenhouse gas emissions. (Our scoping comments asked for a detailed analysis of global warming impacts and regulatory costs). In short, the DEIS fails to say anything to help the PUC and the public understand the most important environmental impact that the Big Stone II project would have.<sup>25</sup>

As such, the document falls far short of the requirements of MEPA and implementing regulations. The DEIS is required to contain "an analysis of the human and environmental impacts of a project of the type proposed and of the alternatives identified." Minn. R. 4410.7035, subp. 1 (C). The type of project proposed is a power line to transmit coal-generated power, causing the emission of huge quantities of CO<sub>2</sub>. The project's impact on global warming surely falls within this definition. Minnesota courts interpreting MEPA have held that an agency decision is arbitrary and capricious "if it entirely failed to consider an important aspect of the problem"<sup>26</sup> Global warming is unquestionably an important aspect of this proposal, and the DEIS entirely fails to consider it.

**A. Global warming is a grave environmental threat that must be discussed in the DEIS.**

Joint Intervenors submitted in the South Dakota PUC proceeding the testimony of Dr. Ezra D. Hausman on the causes and effects of global warming and the contribution made by coal fired power plants and the Big Stone project in particular. Though we describe his analysis further below, we incorporate his testimony in the SDPUC proceeding herein by reference.<sup>27</sup>

Dr. Hausman, who holds a Ph.D. in Atmospheric Science from Harvard University, summarized his testimony as follows:

---

<sup>24</sup> The DEIS notes the air emissions of two recently permitted natural gas plants on page 53 but does not provide their CO<sub>2</sub> emissions.

<sup>25</sup> The DEIS appears to depend upon the WAPA Federal Draft EIS determination of no adverse air emissions impacts. The WAPA Draft EIS, however, did absolutely no analysis of impacts of global warming pollution from the project.

<sup>26</sup> *Pope County Mothers v. MPCA*, 594 NW2d 233 (Minn. App. 1999).

<sup>27</sup> Direct Testimony of Ezra Hausman, PhD., SDPUC EL05-022, (May 19, 2006) available online at <http://www.state.sd.us/puc/commission/dockets/electric/2005/EL05-022/EL05-022.htm>. Dr. Hausman's testimony can be accessed through the hyperlinks to Joint Intervenors' Exhibit 2 and Joint Intervenors' Exhibit 7.

Human induced climate change is a grave and increasing threat to the environment and to human societies around the globe. Its early effects, which are already observable and documented in the scientific literature, are consistent with those predicted by computer models of the global climate, and these same models predict much more severe effects to come. Indeed, we are on a path that, if unchanged, is likely to bring about a climate well outside the range of anything ever experienced by our species, with the potential for severe and irreversible changes that will forever alter our environment, our economies and our way of life.

While some level of climate change is already a fact, computer models tell us that we can still avoid the most dangerous impacts by limiting the further buildup of CO<sub>2</sub> in the atmosphere. Perhaps the most important way to achieve this is by limiting the burning of fossil fuels in the decades ahead. In contrast, if the Big Stone Unit II is built, it would inject enormous amounts of CO<sub>2</sub> into the atmosphere for decades to come and would contribute to the dangerous atmospheric buildup of this gas. Thus, the proposed unit would exacerbate a problem that is likely to cause dramatic environmental and economic harm to societies around the globe, including to the communities in South Dakota.<sup>28</sup>

Dr. Hausman's conclusion reflects the consensus among the world's preeminent scientists, who have concluded that global warming is a very serious threat meriting the immediate attention of the world's policymakers.<sup>29</sup> For example, the scientific academies of 11 nations, including the National Academy of Sciences in the U.S., recently issued a joint statement urging all nations "to acknowledge that the threat of climate change is clear and increasing" and to "take prompt action to reduce the causes of climate change."<sup>30</sup>

His testimony summarizes the conclusions of the Intergovernmental Panel on Climate Change (IPCC), a group made up of the world's leading researchers in the field of climate science, brought together to assess the science and advise the world's policymakers.<sup>31</sup> The IPCC finds that the planet is currently experiencing unnatural warming, predicts much more serious warming ahead if current energy trends continue, and identifies a range of likely harmful consequences.<sup>32</sup>

---

<sup>28</sup> See *id.*, Exhibit 2 at 3.

<sup>29</sup> See *id.*, at 6-11.

<sup>30</sup> Joint Science Academies Statement, SD PUC EL05-022, available at <http://www.state.sd.us/puc/commission/dockets/electric/2005/el05-022/hausmanexhibitd.pdf>.

<sup>31</sup> See Testimony of Dr. Hausman, *supra* note 27, Exhibit 2 at 6-9.

<sup>32</sup> *Id.* at 15-19.

The cause of global warming is the buildup in the atmosphere of heat trapping gases, known as “greenhouse gases,” due to human activity.<sup>33</sup> Carbon dioxide (CO<sub>2</sub>), a heat-trapping gas of particular concern, is emitted when we burn fossil fuels, and particularly coal because it has such a high carbon content.<sup>34</sup> Already, humans have increased background levels of CO<sub>2</sub> by roughly one-third above pre-industrial levels, which is considerably higher than it has been in 400,000 years (over four ice-age cycles), and probably higher than it has been in tens of millions of years.<sup>35</sup> With the continued “business as usual” path of fossil fuel use, CO<sub>2</sub> levels will continue rising steeply, increasing the likelihood that the earth will experience dangerous or even catastrophic warming.<sup>36</sup>

The global average surface temperature of the earth rose by 0.6°C over the twentieth century, with additional record-breaking warming in the first few years of the twenty-first century; four of the five hottest years on record have occurred since 2000, with the ten hottest years since 1990.<sup>37</sup> This warming is consistent with predictions by computer models of the climate response to today’s elevated CO<sub>2</sub> concentrations.<sup>38</sup> The IPCC predicts that warming in the twenty-first century will be from 1.5 to 5.8° C – or 2.5 to 9.7 times greater than in the past century.<sup>39</sup> To put this in geo-historical context, the average surface temperature differential between the last ice age and today was only about 5°C.<sup>40</sup>

Among the serious negative impacts associated with this predicted warming are rising sea levels, damaged or lost ecosystems, greater species extinction, expansion of disease and pest vectors, greater heat waves, more intense precipitation causing more flooding, landslides and erosion, and in continental interiors like South Dakota and Minnesota, increased summer drying causing more droughts, reduced crop yields, and reduced water availability and quality.<sup>41</sup> The more CO<sub>2</sub> emitted, the more severe the impacts are likely to be.<sup>42</sup> There is reason to worry that the warming ahead will not be gradual, given evidence that in the past the earth has often made

---

<sup>33</sup> *Id.* at 4.

<sup>34</sup> *Id.* at 5, l. 4-9.

<sup>35</sup> *Id.* at 13-14.

<sup>36</sup> *Id.* at 14, l. 10-17.

<sup>37</sup> *Id.* at 15-17.

<sup>38</sup> *Id.* at 17.

<sup>39</sup> *Id.* at 17.

<sup>40</sup> *Id.* at 18.

<sup>41</sup> *Id.* at 18.

<sup>42</sup> *Id.* at 18.

climate changes in “abrupt, lurching fashion,” which would be even more disruptive than linear warming.<sup>43</sup>

**B. Big Stone II would be a major source of global warming pollution.**

Coal plants are the nation’s top source of CO<sub>2</sub>, emitting more of it than all our cars, trucks, planes, and trains combined.<sup>44</sup> To put Big Stone II’s 4.7 million tons of CO<sub>2</sub> emissions in context, that is the CO<sub>2</sub> equivalent of over 660,000 cars, or roughly two-thirds more than the CO<sub>2</sub> emissions of all the cars registered in South Dakota combined,<sup>45</sup> and the equivalent of about one-quarter of the cars registered in Minnesota.<sup>46</sup> It is difficult to imagine a single decision that the PUC could make that would worsen global warming more than approving the proposed project, apart from authorizing an even larger coal project.

And the emissions from this coal plant will have a long-lasting impact. Large baseload coal plants are designed to operate for decades.<sup>47</sup> Some of today’s coal plants have been operating for as long as 70 years. Assuming an operating lifetime for Big Stone II of 50 years, the plant will emit over 225 million tons of CO<sub>2</sub> before it closes.<sup>48</sup> Moreover, the CO<sub>2</sub> emitted from Big Stone II would continue warming the planet for centuries after the plant itself closes its doors. The IPCC states that “several centuries after CO<sub>2</sub> emissions occur, about a quarter of the increased CO<sub>2</sub> concentration caused by these emissions is still present in the atmosphere.”<sup>49</sup> The decision the PUC makes in this docket will therefore still have implications for the warming the Earth experiences centuries from now.

While global warming is very much a long-term problem, it is also one that calls for immediate action. The recent statement from the U.S. National Academy of Sciences and its counterpart academies from 10 other nations calls it “vital” to take immediate steps to reduce CO<sub>2</sub> emissions now because “[f]ailure to implement significant reductions in net greenhouse gas emissions now, will make the job much harder in the future.”<sup>50</sup> Action taken now to reduce greenhouse emissions will lessen the rate and magnitude of climate change ahead; the academies note that a lack of full scientific certainty about some aspects of climate change is “not a reason for delaying

---

<sup>43</sup> *Id.* at 19.

<sup>44</sup> U.S. EPA, Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2004 (April, 2006), Tables 3-3 and 3-7.

<sup>45</sup> Testimony of Dr. Hausman, *supra* note 28, at 27.

<sup>46</sup> State Motor-Vehicle Registrations, 2004, Federal Highway Administration.

<sup>47</sup> Testimony of Dr. Hausman, *supra* note 28, at 26.

<sup>48</sup> *Id.*

<sup>49</sup> IPCC Working Group I Summary for Policymakers, at 17.

<sup>50</sup> Joint Science Academies Statement, *supra* note 29.

an immediate response that will, at a reasonable cost, prevent dangerous anthropogenic interference with the climate system.”<sup>51</sup>

The Department of Commerce and the PUC are required to the fullest extent practicable to interpret their laws and policies consistent with the policies of MEPA. Minn. Stat. § 116D.03, subd. 1. Among these policies is the requirement of all agencies and departments to:

recognize the worldwide and long range character of environmental problems and, where consistent with the policy of the state, lend appropriate support to initiatives, resolutions, and programs designed to maximize interstate, national and international cooperation in anticipating and preventing a decline in the quality of the world environment.

Minn. Stat. § 116D.03, subd. 2(5). The PUC has before it a choice with worldwide and long range implications, but the DEIS intended to inform that choice does not discuss those implications.

**C. Big Stone II’s global warming emissions would cause enormous damage to the environment.**

While Big Stone II would represent only a fractional share of a global problem, the problem is so enormous that even a fractional share of it can be extremely large. South Dakota PUC Staff attempted to quantify the level of environmental damage caused by Big Stone II’s CO<sub>2</sub> emissions. Its analysis shows that *Big Stone II will cause from tens of millions to billions of dollars worth of environmental damage.*<sup>52</sup>

SDPUC Staff began its analysis with a survey of existing environmental externality estimates per unit of air emissions.<sup>53</sup> It relied mainly on an EPA survey of externality studies that shows costs per ton of CO<sub>2</sub> ranging from \$1.50 to \$51.00 dollars per ton of CO<sub>2</sub> emitted.<sup>54</sup> SDPUC Staff also calculated externalities costs using the average of EPA’s high and low values, and using an example state “midrange value” of \$8 per ton of CO<sub>2</sub>.<sup>55</sup>

---

<sup>51</sup> *Id.*

<sup>52</sup> Testimony of Dr. Olesya Denney, SD PUC EL05-022, at 38, 1. 4-8 and Table 6A (May 19, 2006), available at <http://www.state.sd.us/puc/commission/dockets/electric/2005/e105-022/hearing/exhibitstaff2.pdf>.

<sup>53</sup> *Id.* at 22-23. Environmental externalities represent environmental impacts that are not reflected in the costs to the party that causes the impact. *Id.* at 23. They are completely different from the future CO<sub>2</sub> regulatory costs projected and discussed by Joint Intervenors; the latter, by definition, are costs that coal plants are expected to pay in the future. The Project proponents’ persistent efforts to suggest that environmental costs (borne by the world at large) and future regulatory costs (to be borne by the Project) are the same suggest a failure to take seriously either environmental damages or financial risk.

<sup>54</sup> *Id.* at 25.

<sup>55</sup> *Id.* at 25, 29 and 33.

In addition, SDPUC Staff calculated the CO<sub>2</sub> damages using a 3% discount rate rather than the 10% discount rate used in SDPUC Staff's base case analyses.<sup>56</sup> Joint Intervenors strongly agree with the position described by SD PUC Staff that it is inappropriate to discount the health and well-being of future generations as deeply as the 10% discount rate does. The 3% "social discount rate" which SDPUC Staff notes is used by EPA in its cost-benefit analyses, is far more appropriate when discussing long-term global damages.

Although there is a wide range of quantified CO<sub>2</sub> environmental damages SDPUC Staff reviewed and applied to Big Stone II, the analysis shows that the environmental damages of Big Stone II are enormous even at the lower end of SDPUC Staff's range of values.<sup>57</sup> For example, the low EPA value for annual CO<sub>2</sub> damages (\$1.50 per ton) associated with Big Stone II (underestimated at 4.36 million tons CO<sub>2</sub> per year<sup>58</sup>), yields \$50,098,876 in CO<sub>2</sub> damages over 40 years of plant operation at a 10% discount rate.<sup>59</sup> Applying a 3% discount rate, these minimum EPA-quantified damages increase to \$154,043,273.<sup>60</sup>

Using the Minnesota PUC externality value of \$3.64 per ton of CO<sub>2</sub> would obviously more than double the low-end EPA damages, putting climate damages from this plant in the range of hundreds of millions of dollars. Using an average of high and low EPA values (\$26.00 per ton) would easily put Big Stone II damages into the billions of dollars. The highest level of damages SD PUC Staff reviewed (EPA's \$51 value) represents five billion dollars worth of cumulative harm caused by the CO<sub>2</sub> emissions of this one plant.<sup>61</sup>

The SDPUC Staff analysis illustrates that the Minnesota PUC externality values represent the low end of the range of estimated externalities values in the literature, and a 2005 Minnesota Legislative Auditor's report also found that the Minnesota externality values were in the lower half of the estimates in the scientific literature.<sup>62</sup> A major new international study – the most comprehensive analysis to date on the subject of the economic costs of climate change – indicates that the Minnesota values assume far lower costs than are now considered likely. The report, commissioned by the British government and conducted by Sir Nicholas Stern, a former

---

<sup>56</sup> *Id.* at 40-41.

<sup>57</sup> We note that in calculating Big Stone II's environmental damages, Staff underestimates Big Stone II's CO<sub>2</sub> emissions, counting them as only 4,363,868 tons per year, *id.*, at 25 (Table 3), rather than at the approximately 4.7 million tons per year that Co-owners state it will emit. We also note that Staff's cumulative damages assume only forty years of operation, which would be a short lifetime judging by coal plants in operation today.

<sup>58</sup> The SDPUC used an emission level lower than the 4.7 million tons identified in this DEIS.

<sup>59</sup> Testimony of Dr. Denney, at Table 6A (calculation derived from subtracting "Lower Boundary" Total Externalities Excluding CO<sub>2</sub> from Total Externalities Including CO<sub>2</sub>).

<sup>60</sup> *Id.*, at Table 7A (calculation derived from subtracting "Lower Boundary" Total Externalities Excluding CO<sub>2</sub> from Total Externalities Including CO<sub>2</sub>).

<sup>61</sup> *Id.* (calculation derived from "Upper Boundary" totals for CO<sub>2</sub> externalities).

<sup>62</sup> "Energy Conservation Improvement Program: Evaluation Report," Office of the Legislative Auditor, Report No. 05-04, Jan. 2005, p. 32.

chief economist of the World Bank, found that future costs of climate change would be between 5-20% of global per capita consumption, with the more likely estimate at the upper part of this range.<sup>63</sup> By contrast, the Minnesota PUC externality values used a damage function of 1% of global GDP<sup>64</sup>—many times lower than the global damage assumptions of the Stern Review.

SDPUC Staff's calculations demonstrate that Big Stone II poses a threat of enormous long-term environmental damage even under the most optimistic of assumptions. This environmental impact should have been reflected in the DEIS.

#### **IV. THE DEIS OVERLOOKS OTHER ENVIRONMENTAL IMPACTS OF THE BIG STONE II COAL PLANT.**

##### **A. The DEIS fails to look at the impact of mercury emissions from Big Stone II.**

The DEIS also fails to look at the environmental impacts of the mercury to be emitted from Big Stone II. It mentions the level of current mercury emissions from the Big Stone I unit (189.6 lb/year) on page 33, and notes on page 35 that emissions will be brought back down to that level three years after operations begin. However, the DEIS does not discuss the environmental impacts of these emission levels. Moreover, it does not reveal that annual mercury emissions in the first three years of operations could reach about 500 pounds.<sup>65</sup>

The costs of Big Stone II's annual mercury emissions are nontrivial. According to a SDPUC Staff witness, the average cost of the annual environmental damage associated with Big Stone II's mercury emissions is equal to \$3,953,015, meaning that the proposed project's mercury emissions will cost \$11,859,045 over its first three years of operation.<sup>66</sup> Based on the SDPUC Staff's higher cost scenario of mercury emissions damages, costs could run as high as \$22,203,525 over these first three years.<sup>67</sup>

---

<sup>63</sup> Stern Review: The Economics of Climate Change, Executive Summary, at x. October, 2006. Available online at [http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/stern\\_review\\_report.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm)

<sup>64</sup> ALJ Findings of Fact, Conclusions, Recommendation and Memorandum, March 22, 1996, at p. 36, *In the Matter of the Quantification of Environmental Costs Pursuant to Laws of Minnesota 1993, Chapter 356, section 3*, PUC Docket No. E-999/CI-93-583.

<sup>65</sup> This calculation is based on Big Stone II being subject to the applicable new source performance standard of 330 lbs/yr during that three years, added to Big Stone I's historical annual mercury emissions.

<sup>66</sup> Testimony of Dr. Denney, Table 4 (based on pre-June 2006 CAMR New Source Performance Standard, which was relaxed in June 2006 to allow higher mercury emissions from new sources).

<sup>67</sup> *Id.*

Even after three years, Big Stone II's mercury emissions are estimated to be approximately the *same level* they are today.<sup>68</sup> The purpose of new federal regulations of mercury emissions at power plants is quite obviously to *reduce* mercury emitted from the electricity sector across the nation, not to maintain the status quo. And, because the federal regulations are not sufficiently protective, Minnesota just passed legislation requiring its largest coal plants to reduce mercury emissions by 90%.<sup>69</sup> Some of the benefit Minnesota expects to gain from its reductions will be offset by the increase in emissions from the Big Stone II plant. The DEIS should have examined the extent to which these benefits are offset.

The DEIS also failed to adequately examine the fate of mercury emissions from this plant, and in particular, where and to what extent will it come to rest in Minnesota's or other wetlands, lakes or other water bodies. In the final EIS, the Department should include a more detailed analysis of mercury fallout.

**B. The DEIS failed to look at the concerns raised by the Minnesota Department of Natural Resources regarding the project's impact on water supply and quality.**

On June 30, 2006, the Minnesota Department of Natural Resources (MDNR), sent formal correspondence to the South Dakota Water Management Board regarding its concerns with the amount and water quality impact of the Project's proposed increased water withdrawals from Big Stone Lake. The MDNR requested that the South Dakota – Minnesota boundary waters commission be convened to discuss its concerns.

To summarize some of the MDNR's points, the agency stated to South Dakota regulators that Big Stone Lake is a shallow lake that provides a premier fishery and is one of the largest recreational lakes in Minnesota. The proposed Project appropriation represents approximately 20-35% of the total lake volume based on historic water levels. Consequently the withdrawal of this volume of water has the potential to significantly affect the ecology and recreational suitability of Big Stone Lake. For instance, the water drawdown model developed by Barr Engineering indicates water levels on Big Stone Lake will be lowered 6-12 inches several times per decade due to the Big Stone Plant withdrawals. According to MDNR, this increases the potential for winterkill, elevates water temperatures; increases internal loading from nutrient enriched lake sediments, and increases algal production. Further, it reduces access to open water in shallow areas of the lake and increases the potential for navigational hazards caused by near surface rocks.

The MDNR voiced its concerns that steady demand of water for a base load power plant will increase during hotter and dryer climatic periods and concerns about emergency needs for cooling water for essential power production during these periods.

---

<sup>68</sup> The Project's consolation that "at least mercury emissions aren't going to get worse" after the first three years of commercial operation of Big Stone II is not persuasive; it would have been far easier to substantially reduce existing mercury emissions of Big Stone Unit I, without more than doubling the size of the coal-fired source next door.

<sup>69</sup> 2006 Minn. Laws Ch. 201.

Further, the MDNR observed that under the Project proposal, there will also be impacts to the Minnesota River which depends on outflows from its upstream watersheds to maintain exceptional aquatic ecosystems for which countless federal, state and local dollars have been invested (Big Stone National Wildlife Refuge and Lac Qui Parle State Wildlife Management Area). This new volume of appropriation, in combination with previous alterations to the Big Stone Lake dam elevation have significantly changed the hydrologic implications for flows from Big Stone Lake to the downstream river system in both quantity and quality. The reduction in the volume and frequency of cleaner water from the Big Stone Lake watershed coupled with hyper-eutrophic waters of the Whetstone River creates conditions that are significantly more deleterious to the downstream aquatic ecosystems. The raising of the May – September water level control elevation from 967 to 968 substantially reduced the amount of outflow that can occur from the lake to feed downstream flow needs. The additional reduction of up to 10,000 acre-feet of water for consumptive use for the power plant will further impact frequency and duration of outflows from the lake and is well documented as part of the Barr Engineering analyses.

The MDNR also alerted the South Dakota Water Management Board to the fact that the water quality of the discharge from the Whetstone River is very poor compared to water quality in Big Stone Lake. Winter kill, summer kill and spawning success concerns for the fishery will increase with a greater percentage of the Whetstone River flows making up the available waters for the Minnesota River.

In a re-issued DEIS, the Department should examine the impacts that MDNR raised regarding the project in its June 30, 2006, correspondence to the South Dakota regulators, and analyze available mitigation measures.

## **CONCLUSION**

In summary, Joint Intervenors have identified significant deficiencies in the DEIS, most prominently, the failure to consider global warming impacts of the Big Stone II coal plant, and reliance on a skewed comparison of the costs of feasible alternatives to the Big Stone II project. Moreover, the Department departed from its Scoping Document commitment to evaluate a renewables/gas option “where the proposed generation *and* transmission plan has been replaced by renewable electric generation . . . coupled with a natural gas component”, by rejecting it because it would not provide transmission outlet for the Big Stone II plant. (emphasis added.) For the environmental review document to serve as an adequate source to inform the decisions pending before the Minnesota PUC, the corrections we have described in these comments need to be made. We respectfully request that the new analysis be incorporated into a new draft environmental review document that is subject to further public comment.

Date: October 31, 2006

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Elizabeth Goodpaster', written over a horizontal line.

Elizabeth Goodpaster  
Minnesota Center for Environmental Advocacy  
26 E. Exchange Street, Ste. 206  
St. Paul, MN 55101

and

Charles Dayton  
Barbara Freese

*Of Counsel to MCEA*

October 31, 2006

Ms. Sharon Ferguson  
Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198

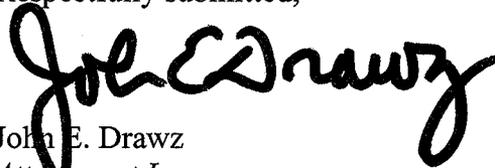
VIA E-MAIL

**Re: *In the Matter of Otter Tail Power Company and Others for Certification of Transmission Facilities in Western Minnesota; and***  
***In the Matter of the Application to the Minnesota Public Utilities Commission for a Route Permit for the Big Stone Transmission Project in Western Minnesota***  
***OAH Docket Nos. 12-2500-17037-2 and 12-2500-17038-2***  
***MPUC Docket Nos. E-017/CN-05-619 and TR-05-1275***  
***GOED's Comments Regarding the Draft Environmental Impact Statement***

Dear Ms. Ferguson:

The South Dakota Governor's Office of Economic Development ("GOED") respectfully offers the following comments regarding the Draft Environmental Impact Statement ("DEIS") prepared for the referenced matter. The Department of Commerce ("DOC") correctly defines the project to be evaluated as those portions of two interstate high voltage transmission lines to be constructed in western Minnesota. As the Scoping Decision states, only those alternatives that affect the implementation of the Minnesota portion of the proposed transmission lines are to be examined in the DEIS. At no point does the DOC state that it is evaluating an electric generating plant to be built in South Dakota. As such, the DEIS accurately reflects the extent of the Minnesota Public Utilities Commission's jurisdiction in this matter, which is limited to the Minnesota portion of the proposed transmission lines.

Respectfully submitted,



John E. Drawz  
*Attorney at Law*

**Direct Dial:** 612.492.7074

**Email:** [jdrawz@fredlaw.com](mailto:jdrawz@fredlaw.com)

JED;jlb:4104108

Attorneys & Advisors  
main 612.492.7000  
fax 612.492.7077  
[www.fredlaw.com](http://www.fredlaw.com)

Fredrikson & Byron, P.A.  
200 South Sixth Street, Suite 4000  
Minneapolis, Minnesota  
55402-1425

Ms. Sharon Ferguson  
October 31, 2006  
Page 2

cc: The Honorable Larry Long, Attorney General  
of the state of South Dakota  
Jeff Hallem, Assistant Attorney General  
of the state of South Dakota  
Bill Even, Economic Development Director,  
the Governor's Office of Economic Development  
Service List



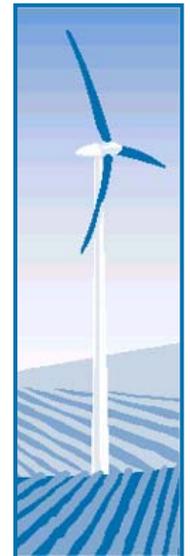
October 31, 2006

Ms. Sharon Ferguson  
Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198

Cc: Dr. Burl Haar  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, MN 55101-2147

Re: In the Matter of a Draft  
Environmental Impact  
Statement and Petition for a  
Certificate of Need and Route  
Permit for the Big Stone II  
Transmission Project:  
Windustry Comments

Docket No. E017/TR-05-1275;  
E017/CN-05-619



Windustry  
2105 First Avenue S  
Minneapolis, MN 55404  
612.870.3461 *phone*  
612.813.5612 *fax*  
[www.windustry.org](http://www.windustry.org)

Dear Ms. Ferguson:

On September 30, 2005, Otter Tail Power Company and its affiliates applied to the Minnesota Public Utilities Commission (PUC) for a Certificate of Need for two high-voltage transmission lines in Southwestern Minnesota. The companies also applied to the PUC for a Route Permit for these transmission lines on January 9, 2006. The PUC held hearings on these applications during the months of September and October, 2006. Attendees raised numerous objections with the proposed projects. Most of these objections concerned the Big Stone II coal-burning plant itself, as opposed to the transmission lines. We contend that the Big Stone Transmission Project should not be constructed and enumerate several of the key points pertaining to the project's impact in Minnesota, focusing on the larger issue of the Big Stone II plant.

### **Environmental Impacts**

Despite the fact that the proposed plant is in South Dakota, installing a new coal-burning plant will have serious impacts on Minnesota's environment. The plant is located only a few miles from the Minnesota border. Prevailing westerly winds will carry the majority of airborne pollutants into the state. Water pollutants will similarly impact Minnesotan ecosystems. The Federal Draft Environmental



Impact Statement (EIS) determined the air and water quality impacts of the plant:

- CO<sub>2</sub>: 4.7 million tons per year from the proposed plant, in addition to 4.23 from the current plant
- Mercury: 189.6 lbs. per year from both plants
- NO<sub>x</sub>: 16,448 tons per year from both plants
- SO<sub>2</sub>: 13,278 tons per year from both plants

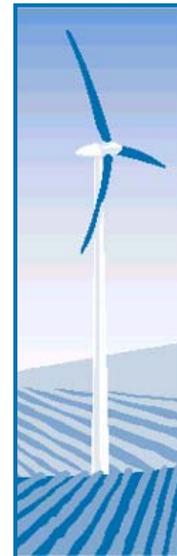
These Mercury, NO<sub>x</sub>, and SO<sub>2</sub> levels are equal to the 2004 emissions levels from Big Stone I alone. The applicants claim that the proposed plant will not increase emissions due to improved efficiency and waste processing. However, Big Stone I already emits more than the mercury allowance promulgated in the 2005 Clean Air Mercury Rule by the Environmental Protection Agency for the entire state of South Dakota (144 lbs/year). Currently, the DNR has issued advisory cautioning Big Stone City residents to limit the amount of fish they consume from Big Stone Lake, which is adjacent to both the current and proposed power plants, because of elevated mercury levels. In order to comply with federal regulations and ensure the safety of local ecosystems, the applicants need to prove they can control their current mercury emissions before being granted permission to construct the proposed new plant. It should be noted that the Minnesota Draft EIS does not address the mitigation measures that the Big Stone I and II facilities plan to implement to prevent additional mercury emissions above those allowed by the 2005 Clean Air Mercury Act. Nor does it address how emissions would be reduced at Big Stone I under the No Build option. Windustry requests that these issues be addressed in section 7.6 and 7.7 of the EIS.

Minnesota recently committed to reducing mercury levels in its own lakes and streams. In August, 2006, the Mercury Reduction Bill (HF 3712) was passed. While Big Stone I and II are technically in South Dakota, nearly half of their impact area is in Minnesota. The Minnesota Statute regarding granting of Certificates of Need (216B.243 Subdivision 3) stipulates that the commission evaluate the benefits of the facility, “including its uses to **protect or enhance environmental quality.**” The applicants have not sufficiently demonstrated that the proposed project will sustain local ecosystems.

### **MN Preference for Renewable Generation**

Minnesota has clearly established its preference for renewable energy generation and environmental protection. MN Stat. 216B.243 Subdivision 3a states the preference for renewable energy in the state of Minnesota:

The commission may not issue a Certificate of Need... for a large energy facility that generates electric power by means of a nonrenewable energy source, or that transmits electric



Windustry  
2105 First Avenue S  
Minneapolis, MN 55404  
612.870.3461 phone  
612.813.5612 fax  
[www.windustry.org](http://www.windustry.org)



power generated by means of a nonrenewable energy source, unless the applicant for the certificate has demonstrated to the commission's satisfaction that it has explored the possibility of generating power by means of renewable energy sources and has demonstrated that the alternative selected **is less expensive (including environmental costs)** than power generated by a renewable energy source.

While the MN Draft EIS, sections 11.3 and 11.4, states that a combined wind/natural gas alternative would be twice as expensive in terms of project costs, these figures do not take into account environmental costs addressed in the previous section such as potentially increased respiratory problems among local residents, increased mercury levels, and impacts on wildlife.

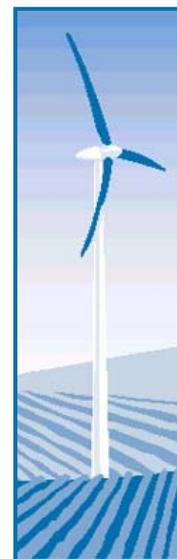
### **Economic Impacts**

The installation of the proposed 600 megawatt (MW) plant will effectively eliminate demand for electricity in the area, undercutting any financial incentives for Minnesotan-developed and owned wind power there. Southwestern Minnesota is the windiest part of the state and constitutes a renewable natural resource. Big Stone II therefore represents approximately 1800 MW of lost wind development, over \$2.5 billion in lost investment in Southwest and Western Minnesota.

Furthermore, because of current Federal Energy Regulatory Commission (FERC) rules, it is impossible to reserve space for wind-generated electricity on the proposed transmission lines. At the Information Meeting and Public Hearing pertaining to this case held on October 16<sup>th</sup>, 2006, at 6:00pm at the Minnesota PUC in St. Paul, a representative from the Midwest Independent Operator pointed out that without significant changes to FERC policy, committing transmission capacity to wind-generated power is not feasible. The lack of guarantee of transmission for wind energy on the proposed lines suggests that any potential wind energy development in the region may not find a ready transmission network to bring the electricity to market, further undermining incentives for renewable energy development. Given the potential for wind development in the region, opting for a non-renewable energy source runs contrary to Minnesota's established priority of supporting environmentally sound policies that promote locally-owned renewable energy facilities.

Sincerely,

Lisa Daniels  
Executive Director



Windustry  
2105 First Avenue S  
Minneapolis, MN 55404  
612.870.3461 *phone*  
612.813.5612 *fax*  
[www.windustry.org](http://www.windustry.org)

We need clean energy for our health and our economy.txt

SAMPLE LETTER

From: gschmitz@ssndmankato.org  
Sent: Saturday, October 28, 2006 7:12 PM  
To: Sharon.Ferguson@state.mn.us  
Subject: We need clean energy, for our health and our economy.

Dear Ms. Ferguson,

I am concerned about the proposal to build a new coal plant in South Dakota, rather than investing in clean energy that supports local communities and is better for our health.

Here are my concerns with the draft Environmental Impact Statement (EIS) that was prepared for the Big Stone II coal plant proposal:

- The draft EIS did not fully consider renewable energy alternatives to meet the alleged needs of the Big Stone partners.
- The determination that a new coal plant is the only alternative that would result in reasonable long-term operating costs seems incomplete, since the draft EIS did not consider the potential for future costs related to the emission of greenhouse gases. Carbon dioxide is not currently regulated under the Clean Air Act, but it will most likely be a regulated pollutant in the near future.
- The draft EIS did not adequately outline the likely effects that Big Stone II's air pollution will have on human health and the environment.
- The social and environmental justice issues relating to mercury were ignored in the draft EIS. The draft EIS did not address the contribution that the proposed coal plant's mercury pollution will have on the health of women, children, and anyone who fishes for food.

Thank you for your time and I hope you consider these issues in the final Environmental Impact Statement.

Gladys Schmitz  
170 Good Counsel Drive  
Mankato, MN 56001-3138

The Big Stone II Coal Plant and Transmission Expansion is not in the public's best interest.txt

SAMPLE LETTER

From: tjhi erlm@yahoo.com  
Sent: Saturday, October 28, 2006 4:56 PM  
To: Sharon.Ferguson@state.mn.us  
Subject: The Big Stone II Coal Plant and Transmission Expansion is not in the public's best interest

Dear Ms. Ferguson

I am writing to comment on the Draft Environmental Impact Statement for the proposed construction of the Big Stone II Coal Plant Transmission Project.

Very simply, this project would increase pollution levels in Minnesota's air and water from toxins like mercury, and the projected 4.7 million tons of CO2 it would emit each year is the last thing we need as we try to solve the challenge of global warming. I am deeply concerned about the proposed construction of both the Big Stone II Coal Plant, and the transmission lines that would bring toxic coal fired power into Minnesota.

I do not feel that this coal plant expansion is needed in Minnesota (in fact it would do great harm), and therefore the transmission lines are not needed.

I ask that you explore clean, renewable energy as an alternative to the expansion of the Big Stone coal plant and the transmission lines that would be proposed to carry the dirty power into Minnesota. Alternatives to the coal plant and new transmission lines like wind power and biomass generation are good for local economies, good for our public health, and good for our natural resources.

INVEST IN A CLEAN FUTURE

By combining renewable sources of wind energy, solar, and responsible biomass, the states of South Dakota and Minnesota could build our local economies around clean and safe energy sources. According to a recent report by the U.S. Energy Information Administration, Minnesota is the top importer of energy in the country. I feel that these transmission lines are unnecessary when we could work to keep dollars in Minnesota by generating renewable energy and making more room on existing lines for wind power, biomass, and solar energy, not dirty coal.

This is not only an environmental imperative. Renewable energy production also means economic investment and new jobs. According to the Job Jolt Study conducted by the Environmental Law and Policy Center, an aggressive clean energy development plan that advances renewable energy production and maximizes energy efficiency efforts would have the potential to create more than 200,000 new jobs across a 10 state Midwest region by 2020. In fact, wind power alone would create 22 direct and indirect construction and manufacturing jobs for each MW of installed capacity. Governor Pawlenty recently acknowledged declared that "Wind energy projects with strong local ownership are good energy policy, good environmental policy and good for local economic development."

For greater Minnesota economies, wind development is an economic imperative. Since small wind developers in Western Minnesota would not gain equal access to serve as providers on these transmission lines, and therefore construction of these transmission lines would rob these communities of serious economic potential. In addition, since the construction of the lines correspond directly to the expansion of the Big Stone II Coal plant, the importing of South Dakota coal power on the proposed transmission lines would be reserving decades of commitment to coal power - not wind or biomass power generation, leaving rural economies without opportunity. Consider also the impact on Minnesota's economy regarding outdoor recreation, which is a \$9 billion industry. Damage to the environment with the construction of new lines, as well as the effect on the air, rivers, and wildlife in Minnesota from the burning of toxic coal, would seriously damage one of Minnesota's most lucrative industries.

STOP THE DIRTY UNHEALTHY COAL RUSH

Our states are increasingly relying on unhealthy energy sources, and we urge you to consider the long term environmental and health costs of dirty coal that the transmission lines would be contributing to. It is no secret that we already depend

The Big Stone II Coal Plant and Transmission Expansion is not in the public's best interest. It is inefficient, dirty coal, which provides 75% of Minnesota's energy and nearly half of South Dakota's energy. Every time a new coal plant is built or expanded, we decide to use dirty energy for generations to come. Coal plants are long-living, massive polluters.

They produce global warming gases, ozone precursors that contribute to regional haze, and particulate matter that increases the risk of respiratory and cardiovascular illnesses. I urge you to consider in the EIS how these transmission lines would be serving energy sources that contribute to global warming gases, mercury pollution, and other toxic emissions.

Building new, unnecessary transmission lines would further damage environmentally sensitive areas, disrupt wildlife, damage agricultural land and disturb farmers, and be a health hazard for local residents. I urge you to consider how renewable energy sources can be transmitted on existing power lines, without construction of these new, proposed lines.

#### PROTECT PUBLIC HEALTH

Consequently, the proposed Big Stone II expansion would be bad for public health, and the transmission lines would be carrying this dirty, unnecessary power into Minnesota at a serious cost to Minnesotans. Coal plants release an enormous amount of mercury, which is extremely toxic to both people and wildlife. Many area lakes – including Big Stone Lake – are already under fish consumption advisories for mercury. More fish consumption advisories and more public health threats are not in our best interest.

Additionally, fine particle pollution from U.S. power plants cuts short the lives of nearly 24,000 people each year, including 2800 from lung cancer. Minnesota – long recognized as the land of clean air has issued an unprecedented number – of air quality alerts for ozone and particulate pollution. The recommendations have gone so far as to urge certain populations to protect their health by avoiding outdoor exposure.

When we commit to building new transmission lines, rather than energy conservation or upgrading existing ones to support transmission of wind power, we increase the health risk to residents near these new lines. The possibility of stray voltage, the collapse of power lines, and possible risks of living near large electro PROTECT MINNESOTA'S ENVIRONMENT Big Stone II's proposed transmission lines would also contribute to the growing threat of climate change. Coal burning is one of the largest sources of greenhouse gas emissions. Every day the future threats of global warming to our environment, agricultural economy, and lifestyle become more apparent. To cite one example, a recent study by Carter Johnson of South Dakota State University estimated that waterfowl populations could decline by more than 50 percent by 2050 when the prairie pothole region dries up – an inevitable outcome of global warming. The prospect of future carbon regulations actually makes a current investment in coal an expensive risk for the future.

The issue of more coal at Big Stone transcends even these arguments, and becomes a matter of common sense. There are better alternatives to a massive expansion of the Big Stone power plant miles away from the metropolitan centers it would ultimately power with these transmission lines in Minnesota. Transmission problems, environmental and public health issues, economic arguments, and the more sensible prospect of renewable energy, conservation, and at the very least clean coal technology all point to the folly of this project.

The public does not want it, and neither does the Department of Commerce – as indicated in the Minnesota Department of Commerce's comments on the Otter Tail Power Resource Management Plan.

I strongly urge you include all of these matters in the scoping of the EIS, and deny the certificate of need to Otter Tail Power.

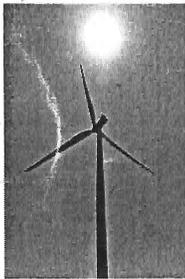
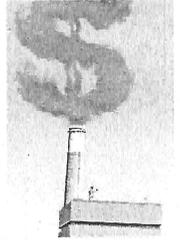
Todd Hi erl mai er  
5017 Oxford Ave  
Edi na, MN 55436

## MINNESOTANS WANT CLEAN ENERGY

### *Wind Works, Coal Costs— Comments on the MN Dept. of Commerce Draft Environmental Impact Statement for the Big Stone II Transmission Project*

**Alternatives**— The DEIS should include a full analysis of clean, renewable alternatives to Big Stone II such as wind and solar development, energy efficiency, and demand side conservation. Currently, Minnesota gets less than 2% of its power from our vast wind source, and 75% from coal.

**Cost**—The DEIS should consider the full range of costs related to new coal plants, especially how the rising cost of the proposed plant compares to alternatives. In addition, the rising cost of coal and its transport, the likely future regulation of carbon dioxide, and the significant social costs such as a recently estimated \$303 million on neurobehavioral disorders, and \$30.6 million on asthma in Minnesotan children. Coal plants contribute significantly to such diseases.



**Mercury and Environmental Justice**—The DEIS does not adequately address the Environmental Justice implications of Big Stone II and the impact on human health, particularly for women, children, and subsistence fishers—such as the disproportionate impact on Native American families that live in proximity to the plant, and consume a large amount of fish. Mercury from coal plant emissions contaminate fish tissue and cause neurobehavioral disorders. Minnesota recently passed one of the strongest mercury reduction laws in the country. Transmission lines for a new dirty coal plant just over our border destroys the progress of bi-partisan leadership in setting new standards for mercury reduction in Minnesota.

**Global Warming**—As the consequences of global warming become more real, the DEIS should acknowledge the high level global warming pollutants Big Stone II will emit.

Sincerely, *Carlson Lehner-Lane*