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August 10, 2007

## VIA FEDERAL EXPRESS & EMAIL

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Bismarck, ND 58505

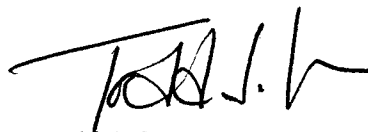
**Re: Montana Dakota Utilities Co., and Otter Tail Corporation; Advance Determination of Prudence, Big Stone II Generating Station  
Case Nos. PU-06-481 and PU-06-482**

Dear Ms. Jeffcoat-Sacco:

Enclosed for filing please find the Reply Brief of Applicants Montana-Dakota Utilities Co. and Otter Tail Corporation dated August 10, 2007.

Thank you for your consideration.

Very truly yours,



Todd J. Guerrero

TJG/dal  
cc: Attached Service List (w/encl.)

**STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION**

Montana-Dakota Utilities Co., and  
Otter Tail Corporation;  
Advance Determination of Prudence  
Big Stone II Generating Station

Case No. PU-06-481  
Case No. PU-06-482

**REPLY BRIEF OF APPLICANTS  
MONTANA-DAKOTA UTILITIES CO. AND  
OTTER TAIL CORPORATION**

**August 10, 2007**

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## **I. INTRODUCTION**

The Applicants' need for more generating capacity and energy in the coming years is undisputed. The record shows that the Applicants will begin experiencing significant generating capacity shortages by 2011 unless new resources are added. The Applicants, along with five other regional utilities, have determined that construction of a 630 MW supercritical pulverized coal plant, along with construction of two high voltage transmission lines to connect the plant to the grid and expand the capacity of the transmission system, is a reasonable, prudent and least cost option for meeting a portion of this undeniable need.

The Commission's Advocacy Staff set forth in its brief a comprehensive review of the testimony and evidence introduced into this record, provided its analysis of that evidence, concluded that the Big Stone II project is reasonable and prudent, and therefore recommends approval of the Applicants' request for an advance determination of prudence.

Intervenor Dakota Resource Council ("DRC"), on the other hand, criticizes the Applicants' modeling, but offers no viable resource alternative to meet Applicants' needs. Instead, DRC suggests that the Applicants should conduct more studies, run more models, make different assumptions, hopeful that the results will select something other than a coal project. None of DRC's criticisms, however, warrants rejection, or even further delay, of an advance decision of prudence for the Big Stone II project.

## II. DISCUSSION

### A. The Prudence Standard.

In its initial brief, Advocacy Staff set forth the correct standard under which the Applicants' proposal should be judged, and is consistent with the standard put forward by the Applicants: whether Otter Tail and Montana-Dakota have exercised the judgment, discretion, and care that a reasonable person would have exercised under the circumstances prevailing at the time the decision was made. The Commission is not determining whether it might have made a different decision, but rather whether the one the Applicants made is reasonable.

### B. Wind Is Not A Baseload Source That Can Replace The Energy To Be Generated By Big Stone Unit II.

While the DRC admits that it isn't proposing wind (or any other) resources as an alternative to Big Stone Unit II<sup>1</sup>, it nonetheless argues that Applicants failed to "more seriously consider this low-cost, widely available option as an alternative to Big Stone II . . . ." <sup>2</sup> As we state in our initial brief, once a need has been demonstrated, like it has here, those opposing critical utility infrastructure proposals have a burden to offer more than just criticism. Moreover, Applicants absolutely did consider wind as a viable resource.

Indeed, wind plays a significant role in both Applicants' future energy mix. As described in Applicants' proposed Findings 61 and 62, both Otter Tail and Montana-Dakota have future additions of wind power in their resource plans, including Otter Tail's recent announcement that it intends to have a 25-year power purchase agreement for 19.5 MW and own another 40.5 MW of the 159 MW Langdon (North Dakota) Wind Energy Center. Otter Tail's resource plan has

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<sup>1</sup> See, e.g., TR. Vol. II, p. 467, lines 21-23; p. 468, lines 2-3; Applicants' Post Hearing Brief at p. 12.

<sup>2</sup> DRC Initial Brief at p. 19.

identified approximately 160 MW of wind development over the next several years. Montana-Dakota's resource plan includes approximately 60 MW of wind for implementation. Despite what the DRC asserts, this case is not about coal versus wind. The Applicants' resource plans call for coal *and* wind (along with other resources).

The single largest bottleneck to further regional wind-development is the lack of transmission. Wind generation will require new transmission lines. As was pointed out in the hearing, the transmission cost per unit of energy output (MWh) from a wind facility, all else being equal, can be expected to be significantly higher than for a baseload facility, potentially 2.4 times greater.<sup>3</sup> The new transmission lines proposed as part of the project will provide additional capacity to transmit wind energy to consumers to the east, and will enhance future development of wind and coal resources in North Dakota.

DRC relies on witness David Schlissel to argue that the Applicants did not make sufficiently favorable assumptions regarding wind when they conducted their capacity expansion resource modeling, including assumptions regarding the prospect of federal Production Tax Credit extension, or the effects of modeling various ownership structures of wind turbines. But Mr. Schlissel does not dispute that wind is not a baseload resource that alone can substitute for Big Stone Unit II.<sup>4</sup>

Wind might be combined with a natural gas-fired plant to provide a baseload resource. Of course, that would mean that a natural gas plant would have to be built. But as the Commission fully realizes, natural gas plants have their own set of issues, not the least of which is the extreme price volatility of natural gas.

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<sup>3</sup> TR. Vol. II, p. 433, lines 4-19 (Schlissel).

<sup>4</sup> TR. Vol. II, p. 459, lines 14-23 (Schlissel).

The record establishes that the Applicants have made realistic, reasonable assumptions that demonstrate that wind cannot economically or practically satisfy the amount of additional energy and capacity to be supplied by Big Stone Unit II. Advocacy Staff agrees. Staff recognized the validity of the assumptions made by Applicants<sup>5</sup> and found, for instance, that “PA’s analysis did not disadvantage wind by limiting the number of units available in the base case.”<sup>6</sup> That is why Advocacy Staff concluded that “[n]o reasonable alternatives for meeting additional generation needs exist.”<sup>7</sup>

DRC asks the Commission to take judicial notice of the Minnesota Wind Integration Study.<sup>8</sup> Judicial notice is not appropriate here. Judicial notice is governed by North Dakota Rules of Evidence, Rule 201. The explanatory note to Rule 201(b) provides that adjudicative facts can be judicially noticed if they are either (1) generally known or (2) capable of accurate and ready determination. *See Gronneberg v. Hoffart*, 466 N.W.2d 809, 810 (N.D. 1991). It is unclear exactly what DRC wants the Commission to take judicial notice of – whether it is the existence of the report or certain statements in the report – but in either case the report is not generally known and not capable of accurate and ready determination. The Supreme Court has rejected a request to take judicial notice of certain facts in proceedings involving the Public Service Commission. *See Tri-County Electric Cooperative, Inc. v. Elkin*, 224 N.W.2d 785, 793 rehearing denied (N.D. 1974) (“We are limited, of course, to the record made before the Public Service Commission at the time of the hearing several years ago.”), *see also Application of Montana-Dakota Utilities Co.*, 111 N.W.2d 705, 712 (N.D. 1961). DRC fails to explain why

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<sup>5</sup> Staff proposed Findings 57-63.

<sup>6</sup> Staff proposed Finding 63.

<sup>7</sup> Staff proposed Conclusion of Law 5.

<sup>8</sup> See page 20 of DRC’s Post-Hearing Brief.

it did not introduce the report into the record at the time of the hearing. It was certainly available, since it was issued at the end of November last year. Taking judicial notice of the Wind Integration Study after the hearing has closed is unwarranted.

The fact that the Wind Integration Study is not capable of accurate and ready determination and appropriate for judicial review is readily apparent from an analysis of DRC's contention that the December 2006 Wind Integration Study supports a conclusion that more wind can be added to the Applicants' systems, or that wind can replace Big Stone Unit II. This contention is simply a misrepresentation of the study. The Wind Integration Study authors add the important qualification that wind penetration up to 25 percent of retail sales cannot be accomplished *without fundamental changes in the . . . electrical system*. The study examined whether "the addition of wind generation to supply 20% of Minnesota retail electric energy sales can be reliably accommodated by the electric power system" by 2020.<sup>9</sup> It concluded that this goal could *only* be met if sufficient transmission investments are made to support it - *including the transmission interconnection facilities that Applicants are proposing as a part of this project*.<sup>10</sup> Thus, there are number of assumptions in the study that need to be clarified, including:

- The wind integration study assumed construction of an enormous amount of new transmission, including the transmission additions associated with the Big Stone Unit II;<sup>11</sup>
- The study assumed that 4,000 MW of coal was added to the system.<sup>12</sup>
- The study utilized capacity values of 5-20 percent for wind.<sup>13</sup> Consequently, replacing Big Stone Unit II's 630 MW of dispatchable capacity with wind would require

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<sup>9</sup> Wind Integration Study, first paragraph summarizing the study's conclusions at p. xxi.

<sup>10</sup> *Id.*, pp. 82-83.

<sup>11</sup> *Id.*

<sup>12</sup> See Appendix B of the Minnesota Wind Integration Study, Volume I.

<sup>13</sup> *Id.* at Tables 2, 3, and 4 at p. xviii.

installation of significant amounts of wind generation (e.g., 3,000-12,000 MW) to achieve similar capacity values. Minnesota does not have a transmission plan for accommodating this magnitude of additional wind.

Thus, there is nothing in the Wind Integration Study to support DRC's assertions that Applicants can add more wind resources than they are planning. In reality, the Wind Integration Study outlines a long-term energy future that is fully consistent with construction of Big Stone Unit II.

**C. It Is Not Possible To Eliminate The Need For Big Stone Unit II By Increasing Conservation And Demand Side Management Programs.**

As supported in the Applicants' proposed Findings 28 – 34, both Otter Tail and Montana-Dakota have taken conservation into account in conducting their modeling and resource planning and have significant conservation programs and measures underway throughout their service territories. As the Advocacy staff concluded in its Post Hearing Brief:<sup>14</sup>

Advocacy staff encourages cost effective DSM programs, and believes there may be a place for new and expanded DSM programs to alleviate some of the need for new generation resources going forward. However, Advocacy staff believes that the present need is for a baseload generation resource that will address the capacity and energy needs of OTP and MDU in 2012, and those needs cannot be adequately addressed by DSM or conservation.

Applicants agree. The DRC's assertion that increased conservation efforts could replace the need for Big Stone Unit II is wishful thinking and has no basis in this record. It also represents a risk that the Applicants, with a responsibility to reliably and economically serve their customers, cannot in good faith take.

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<sup>14</sup> See also, Advocacy Staff proposed Finding 60, "The results of the PA analysis selected Big Stone Unit II as part of the overall plan that includes demand side management and renewable and other resources."

**D. The Applicants Have Implemented Reasonable Measures To Mitigate The Risks Associated With Coal Delivery.**

DRC asserts that Applicants have underestimated the risks associated with certain future events, such as construction cost increases, carbon regulation, and coal supply disruptions. The Applicants addressed each these concerns in their initial brief, as did Advocacy Staff. The only issue that requires some further response concerns fuel supply.

DRC would have the Commission believe that “Applicants fail to even consider the potential for coal shortages as a risk associated with developing the Big Stone II Project.”<sup>15</sup> Given (1) the attention paid to this issue at the hearing, (2) the fact that the Applicants have already implemented a number of measures to improve their coal supply methods and have agreed to a few more, (3) the steps that the BNSF has taken to increase its rail delivery infrastructure,<sup>16</sup> and (4) the historical leadership that both Otter Tail and Montana-Dakota have taken to keep rail delivery rates and fuel costs low for their customers, it borders on absurd for DRC to suggest that Applicants have ignored these risks. Coal is this country’s largest domestic source of energy. Delivering that source of energy by rail to power plants throughout the country will continue to be an integral component to the region’s electric supply for many years to come. The record clearly demonstrates that Applicants have taken all reasonable steps to minimize the potential for any future problems with regard to fuel delivery and supply.

Advocacy Staff suggests (in its post hearing brief), that the Commission might want to consider conditioning approval of an advance prudence decision on a satisfactory long-term coal delivery contract that provides performance guarantees with satisfactory penalties for nonperformance. The Applicants urge the Commission not to include such a condition in its

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<sup>15</sup> DRC’s Post-Hearing Brief at 26.

<sup>16</sup> OTP/MDU Ex. 320.

decision. As Mr. Uggerud testified, the Applicants are in the process of determining whether to negotiate a long-term contract with the BNSF or to continue to take service under its tariff.<sup>17</sup> As Advocacy Staff recognized, there are advantages and disadvantages to entering into a contract at this time. The BNSF is certainly aware of the Commission's concerns and goals and the Applicants will undoubtedly rely on those when it comes time to decide on a rail option. This, along with the measures the Applicants have already implemented and agree to implement to improve coal delivery<sup>18</sup> is sufficient to minimize the risks of encountering future fuel supply problems.

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<sup>17</sup> TR. Vol. I, p. 98, lines 6-18 (Uggerud).

<sup>18</sup> *See, e.g.*, Applicants' Post Hearing Brief at p. 17.

**III. CONCLUSION**

There is no better solution to meet the growing need for more energy than the Big Stone II project. Big Stone Unit II is only one part of the Applicants' efforts to ensure an adequate, reliable, reasonably priced electrical energy system for their customers across several states. The future holds not only the Big Stone Unit II, but more wind and more conservation. The Applicants respectfully request that the Commission find that construction of Big Stone Unit II and its related transmission interconnection facilities to be reasonable and prudent.

Date: August 10, 2007

Respectfully submitted,

Montana-Dakota Utilities Co.,  
a Division of Montana-Dakota Resources  
Group, Inc.

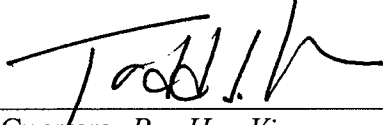
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**PUBLIC SERVICE COMMISSION**

Otter Tail Corporation, Advance  
Determination of Prudence  
Application

**AFFIDAVIT OF SERVICE**

Montana-Dakota Utilities Co.,  
a Division of MDU Resources Group,  
Inc., Advance Determination of Prudence  
Application


Case Nos. PU-06-481, PU 06-482

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Donna LeClair, of Minneapolis Minnesota, Hennepin County being sworn, says that on August 10, 2007, a copy of the following document:

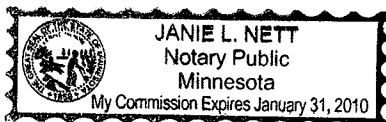
1. Reply Brief of Applicants Montana-Dakota Utilities Co. and Otter Tail Corporation dated August 10, 2007 (original and seven copies); and
2. Affidavit of Service.

have been served upon the North Dakota Public Service Commission and the attached service list via United States mail and by email.

  
\_\_\_\_\_  
Donna A. LeClair

Subscribed and sworn to before me  
this 10<sup>th</sup> day of August, 2007.

  
\_\_\_\_\_  
Notary Public



**STATE OF NORTH DAKOTA**  
**PUBLIC SERVICE COMMISSION**

Otter Tail Corporation, Advance  
Determination of Prudence  
Application

**SERVICE LIST**

Montana-Dakota Utilities Co.,  
a Division of MDU Resources Group,  
Inc., Advance Determination of Prudence  
Application

Case Nos. PU-06-481, PU 06-482

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