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August 2, 2007

Executive Secretary
North Dakota Public Service Commission
State Capitol Building
Bismarck, ND 58505-0480

Re Advanced Determination of Prudence
PU 06-482, PU 06- 481
Big Stone II

Dear Madam Secretary,

Intervenors, Mark Trechock and Dakota Resource Council submits an original and seven copies of Post Hearing Brief Dated August 1, 2007 in the above referenced hearing concerning the Advance Determination of Prudence Application filed by MDU and Otter Tail Power Corp.

Please acknowledge receipt of the timely filing of these documents, by signing and returning this letter to me at the above address.

Very truly yours,

John W. Breen Jr.

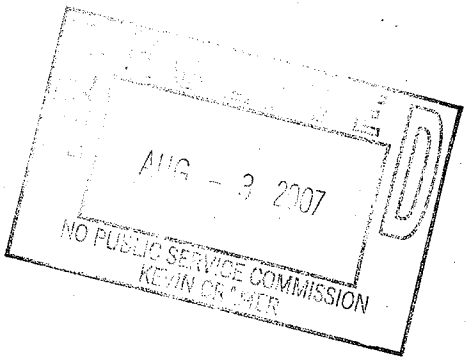
Executive Secretary
North Dakota Public Service Commission

223 PU-06-481 Filed 08/03/2007
Pages: 40
Post Hearing Brief
John William Breen Jr., Attorney and Counselor at Law

STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

Otter Tail Corporation, Advance Determination of Prudence Application	**Intervenors' Post Hearing Brief**
Montana-Dakota Utilities Co., a Division of MDU Resources Inc., Advance Determination of Prudence Application	**Case Nos. PU-06-481, PU-06-4**



INTERVENORS' POST-HEARING BRIEF

August 1, 2007

FOR

Dakota Resource Council
Mark Trechock

PUBLIC VERSION
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I. APPLICANTS MUST SHOW THAT THE BIG STONE II PROJECT IS REASONABLE AND PRUDENT

This docket presents what may be one of the most important decisions the Commission has made or will make in years, but also one of the easiest. This application offers very little that benefits North Dakota and much that puts our consumers and home-grown energy industries at risk. Before the Commission is the question of whether North Dakota should deepen its dependence on Wyoming coal with an expensive, long-term investment in an out-of-state power plant. As a major contributor to the threat of global warming, coal-fired plants are also a prime target of climate protection policies emerging at an accelerating pace at the federal level. The state of North Dakota has significant clean energy resources of its own that may suffer if the state increases its reliance on coal. North Dakota has only begun to tap its potential for energy efficiency gains, which on average cost consumers far less than new generation. Further, Big Stone II puts North Dakota ratepayers at the mercy of a single coal supply line that has proven unreliable and costly in the past, shifts demand away from North Dakota energy resources, and offers zero jobs or economic development to the state.

The threat of global warming is now so firmly established that Applicants did not even attempt to rebut the climate change science Intervenors presented in this docket. Nevertheless, Applicants seek the Commission's approval to commit huge sums of money to a major new source of global warming pollution at a time when our state (and society generally) is struggling to find ways to reduce that pollution. North Dakota law appropriately places upon Applicants the burden of proving the reasonability and prudence of such a high-risk option, and this brief shows how thoroughly Applicants have failed to carry that burden.

A. Applicants must prove by a preponderance of evidence that their project is reasonable and prudent.

North Dakota's advance determination of prudence statute places the burden upon the Applicants to prove the reasonability and prudence of the out-of-state energy investment they propose to make. "There is a rebuttable presumption that an energy conversion facility, renewable energy facility, transmission facility, or facility generating the energy to be purchased which is located in the state is prudent." N.D.C.C. § 49-05-16. This application does not benefit from that presumption and must bear the burden of proving reasonableness and prudence.

The Legislature did not provide detailed standards or a standard of proof for the initial pre-determination of prudence. However, North Dakota law indicates that a "preponderance of evidence" standard of review should be applied in administrative proceedings. N.D.C.C. § 28-32-46. *See also Hanson v. Industrial Commission*, 466 N.W.2d 587, 590 (N.D. 1991) (holding that the standard of review for administrative proceedings is proof by a preponderance of the evidence). Because N.D.C.C. § 49-05-16 "does not specify an evidentiary burden of proof, it does not provide a specific standard differing from the general standard of a preponderance of the evidence specified for judicial review of an administrative agency's findings of fact in N.D.C.C. § 28-32." *Sjostrand v. N.D. Workers Compensation Bureau*, 649 N.W.2d 537 (N.D. 2002). A reviewing court will therefore not make independent findings of fact or substitute its judgment for that of the agency, but ask whether a reasoning mind could have reached the same conclusion. *Howes v. Workers Compensation Bureau*, 429 N.W.2d 730 (N.D. 1988). The preponderance, or weight, of evidence brought by Applicants must then show

that the Big Stone II project is reasonable and prudent for North Dakota ratepayers. The inverse is also true: if the greater weight of all evidence presented to the Commission does not support the conclusion that the Big Stone II project is reasonable and prudent for North Dakota ratepayers, the Commission must deny the application.

The Big Stone II project represents a massive new commitment to Wyoming coal, an unreliable out-of-state fuel source whose price Applicants themselves expect to rise 53% in the first 15 years of the plant's operation.[1] This application comes to the Commission at a time when global warming and the easily-foreseen policy response make that resource even more environmentally and economically dangerous. Applicants bear a heavy burden of proving the reasonability and prudence of an investment that runs so directly counter to the state's business and consumer interests and developing climate concerns and policy trends.

B. In a proceeding before the North Dakota Public Service Commission, a showing that Big Stone II is reasonable and prudent requires a showing that Big Stone II is reasonable and prudent for North Dakota ratepayers.

From the first day of the hearing in this matter, the Commission understood that the Pre-Prudence Application for the Big Stone II plant is inextricably linked to a demonstration of the reasonability and prudence of this decision for North Dakota ratepayers and under North Dakota law specifically. Commissioner Cramer inquired about the Applicants' failure to model North Dakota incentives for wind development.[2] Commissioner Clark expressed serious concerns about the impact on North Dakota consumers of increased dependence on Burlington Northern, given the state's past

[1] Uggerud testimony, Tr. 6/28,/07 at 674.
[2] Tr. 6/26/07 at 225.

experience with BNSF.[3] A project that was prudent as a multi-state strategy but disadvantageous for North Dakota ratepayers could not be approved as prudent by the Commission, whose jurisdiction is coterminous with the interests of North Dakota ratepayers.

C. Applicants' computer models fail to show that the Big Stone II project is more cost effective than DSM and renewable energy, because Applicants have used wholly unreasonable cost assumptions and constraints.

1. Applicants' case that the Big Stone II project and costs less than efficiency and renewable energy depends on flawed assumptions in their capacity expansion models.

Applicants base virtually their entire case that the Big Stone II project costs less than efficiency and renewables on the selection of Big Stone II by Applicants' various capacity expansion models as part of the least-cost package of resources.[4] With the exception of a single, deeply-flawed comparison between the Big Stone II project and one partially-renewable alternative,[5] the only place in the record where the Big Stone II project actually competes for least cost status with clean energy or energy efficiency alternatives is behind the scenes, within the workings of Applicants' capacity expansion models. Understanding how these models work -- and how they can be misused -- is thus critical to determining whether the statutory showing has been made.

Capacity expansion models are a widely-used tool in resource planning. They allow the modeler to input the essential features of various resource options, including demand side programs as well as a variety of supply side options. Assumptions about the capital and operating costs of each option are put into the model, along with the

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[3] *Id.* at 199.

[4] For example, when asked by the Commission how much of the 67MW of DSM in OTP's integrated resource plan come from North Dakota, OTP witness Morlock testified that all 67MW come from Minnesota, a detail omitted from pre-filed testimony. Tr. 6/26/07 at 266.

[5] See our discussion of the Greig analysis in Part II.

availability of that option to meet the utility's (or rather, its ratepayers') energy and capacity needs from one year to the next. Then the model is run through several simulated years comparing the multitude of resource combinations available to it and, if properly operated,[6] selects the least-cost combination of resources for a given set of input assumptions.

Applicants both used capacity expansion models in this docket. While capacity expansion models represent a potentially great advance in resource selection by allowing the comparison of a far greater combination of resource options, they also pose new challenges when it comes to maintaining the transparency and regulatory oversight critical to this Commission's proper function. With capacity expansion models, a huge number of resource options are rejected by the model itself, without ever being identified or assigned a cost for the consideration of regulators and the public.

2. *Applicants use their models in a way that prevents the Commission and public from comparing Big Stone II to preferred options and assessing the risks of the project.*

Although Applicants could have used their models to show the Commission and the public just how the cost of Big Stone II compares to other options, they chose not to. Under examination, witness after witness for Applicants was unable to give a detailed (or any) comparative analysis between North Dakota energy production or conservation options and Big Stone II. As Intervenors' witness David Schlissel testified:

> The *Generation Alternatives Study* did not examine, with the exception of gas and wind, any combinations of resources, such as a portfolio of wind, demand-side measures, and hydro, to meet the projected needs of the Co-owners.

[6] Though as we discuss below, if not properly operated CEMs can actually fail to save the least-cost option, as happened in the case of MDU's Strategist modeling.

Int. Ex. 1 at 75. Mr. Schlissel testifies that the lack of evidence comparing the cost of Big Stone II with alternatives renders the two economic studies presented by Mr. Rolfes "not credible." Int. Ex. 1 at 70.

Applicants also chose not to use their models to determine the costs of the Big Stone II project under different assumptions about future market and regulatory conditions. Financial risk is part of all resource choices, especially large, long-term investments like the Big Stone II project. Int. Ex. 1 at 5. Therefore, the goal is to select a plan that not only minimizes risks but also provides flexibility down the road, something a baseload coal plant cannot provide. Analyzing these financial risks is an essential part of the cost projections required by the Advance Determination of Prudence statute. Conducting "sensitivity analyses" that could expose the financial risks associated with a project are particularly critical in times like these, when energy policies and market conditions are changing quickly.

In some of their earlier analyses, Applicants do indeed look at the effect of varying a few assumptions related to demand growth, natural gas prices, and other factors. Int. Ex. 1 at 6-7. However, in their supplemental modeling reflecting the 27% increase in the capital costs of the Big Stone II project announced in August 2006 – the cost-comparison on which their case now rests - they include virtually no sensitivity analyses. Int. Ex. 1 at 11. Since August of 2006, Applicants have acknowledged an additional cost increase of 6%, reflecting a later anticipated commercial operation date. Instead, Applicants ask the Commission to accept modeling analyses that neither include the additional $199 million cost increase announced in August 2006 nor acknowledge

that a 2012 commercial operation date is now considered "optimistic" by the Applicants themselves. Int. Ex. 1 at 15; Rolfes testimony, Tr. 6/26/07 at 124, 144.

In short, Applicants' models do not show the Commission and the public the cost of the Big Stone II project compared to DSM and renewable energy, and they do not show how Big Stone II's costs would change under different assumptions about the future. These are critical failings, when Applicants' optimistic assumptions about future energy policies and fuel costs are increasingly out of touch with the emerging reality on both the federal and state level.

3. *Expert analysis of Applicants' models reveals fundamental flaws and biases that invalidate the models' cost comparisons between the Big Stone II project and DSM and renewable energy.*

Intervenors have worked to overcome the lack of transparency inherent in the way Applicants used their capacity expansion models by bringing to the proceeding a team of experts from Synapse Energy Economics (Synapse) capable of analyzing the Applicants' modeling. Synapse brings tremendous expertise to this analysis. Intervenors' witness David Schlissel has over thirty years experience preparing expert testimony and analysis on engineering and economic issues related to electric utilities. Int. Ex. 1 at 2. He has been retained by governmental bodies, publicly-owned utilities, and private organizations in 28 states, and has testified before regulatory commissions around the nation. *Id.* See also, Int. Ex. 3. The Synapse team of experts not only analyzed the information Applicants put into the record, but expert witness David Schlissel traveled from Boston to present live testimony to the Commission for over three hours, after which Applicants raised an untimely but strenuous objection to Mr. Schlissel's designation as an expert.

Tr. 6/27/07 at 526-531. Applicants also unsuccessfully attempted to bar Mr. Schlissel's expert testimony entirely via pre-hearing motions. *See* Applicants' Motion in Limine.

The analysis conducted by Synapse, along with that conducted by the advocacy staff's expert, shows just how profoundly flawed the modeling at the heart of Applicants' case is. Obviously, for the output of models to be sound, inputs need to be realistic. In particular, (1) the assumed costs for the Big Stone II project and alternatives need to be realistic, (2) the model must not include unreasonable constraints that prevent it from considering options that are available in reality, and (3) the modeling must provide relevant information specific to the jurisdiction in which the modeling is submitted as evidence (here, North Dakota). Applicants observed none of these standards in the modeling submitted to the Commission.

Instead, analysis of Applicants' modeling reveals a distinct and widespread pattern of assumptions that violated all three tenets. Namely:

- The models seriously underestimate the cost of the Big Stone II project by incorporating the reckless assumption that Big Stone II will be allowed to emit carbon dioxide (CO2) without any regulatory restraint for its operating lifetime (see Part II).
- Severe constraints prevent the models from even considering DSM savings that are routinely achieved by other utilities, and in some cases assume DSM costs far above the state average (see Part III).
- The models impose unnecessary constraints on the consideration of wind resources and often overstate the costs of those resources (see Part IV).
- While the models rely upon a wide variety of assumptions related to the construction costs of the plant, none of them reflect the true risk of rising capital costs, particularly given delays in the project's timeline that were revealed in Applicants' testimony (see Part V and VI).
- The models include other modeling flaws that bias their results toward the selection of the Big Stone II project (see the utility-by-utility analysis in Part VI).

With all the faulty inputs biasing these models toward the selection of Big Stone II, the models do not represent credible evidence that Big Stone II costs less than DSM and renewable energy.

II. APPLICANTS HAVE UNREASONABLY AND IMPRUDENTLY IGNORED THE SUBSTANTIAL RISK THAT FUTURE CO2 REGULATIONS WILL HARM THE ECONOMICS OF THE BIG STONE II PROJECT.

Applicants' modeling comparing the costs of the Big Stone II project with DSM and renewables is not valid because Applicants have given no weight at all to the very real risk of future regulation of carbon dioxide emissions.

A. Unrebutted science establishes that global warming is a severe threat.

As Intervenors' witness David Schlissel testified in this proceeding:

- Significant global warming is occurring;
- It is likely that most of the warming in recent decades can be attributed to human activities;
- The scientific understanding of climate change is now sufficiently clear to justify nations taking prompt action;
- Action taken now to reduce significantly the build-up of greenhouse gases in the atmosphere will lessen the magnitude and rate of climate change;
- The Joint Academies urge all nations to take prompt action to reduce the causes of climate change, adapt to its impacts and ensure that the issue is included in all relevant national and international strategies.

Int. Ex. 1-DAS-4 at 15.[7]

A primary driver of global warming is the carbon dioxide (CO2) emitted from the burning of fossil fuels, particularly coal because of its high carbon content. *Id.* at 17-18. Among the many serious negative consequences associated with predicted warming are

[7] Citing *Joint Science Academies' Statement: Global Response to Climate Change*, National Academies of Brazil, Canada, China, France, Germany, India, Italy, Japan, Russia, United Kingdom, and United States (June 7, 2005).

rising sea levels, stronger hurricanes, damaged or lost ecosystems, greater species extinction, expansion of disease and pest vectors, greater heat waves, and in continental interiors like North Dakota, increased summer drying causing more droughts, reduced crop yields, and reduced water availability. *Id.* at 16. Delaying action will result in the need for increasingly severe and expensive measures to reach the same result. *Id.*

The Big Stone II unit represents an enormous new source of CO2 emissions; indeed, it would emit 4.7 million tons of CO2 annually for decades – an amount roughly equivalent to the global warming impact of 700,000 average cars. In aggregate, coal-fired power plants in the US already emit almost one-third of US CO2 emissions. *Id.* at 16-18. Power plants are unquestionably a major and growing source of greenhouse gases, and thus represent a significant cause of global climate change. They are also the most likely targets for the first carbon regulation, because large point sources can be regulated directly, with easily measurable results.

The scientific testimony that Intervenors submitted into this record was not rebutted by Applicants or any other party. In this docket, now that the climate science can no longer be credibly disputed, Applicants have argued that the science of global warming is not relevant to this proceeding. Tr. 6/26/07 at 27, 51.

The fact that Applicants consider the science of global warming to be irrelevant to the question of whether they should make a long-term investment in a major new source of greenhouse gas emissions is further evidence of their disturbing failure to take this issue seriously. Applicants' discovery responses have shown a remarkable lack of

awareness about the climate science.[8] Moreover, Applicants generally claimed to have formed no opinion regarding the likelihood of greenhouse gas regulation. *Id.*

Failure to track the science and understand the full scale and urgency of the global warming problem may be what is preventing Applicants from truly appreciating that global warming legislation will have to lead to dramatic reductions in CO2 emissions, and thereby will result in substantial costs for new pollution sources like Big Stone II.

B. Regulations imposing a financial cost on carbon dioxide emissions are very likely to be adopted within the next few years.

The evidence presented in this proceeding shows that a federal policy response to global warming is now inevitable, and all the bills currently under consideration by the U.S. Congress would place new costs on carbon dioxide emissions from coal plants. As Intervenor witness David Schlissel testified, "the question is not whether the United States will develop a national policy addressing climate change, but when and how." Int. Ex. 1 at 23.

Mr. Schlissel's June 27, 2007 testimony and the attached Synapse report ("Climate Change and Power: Carbon Dioxide Emissions Costs and Electricity Resource Planning") describe substantial momentum toward federal legislation under the previous, Republican-controlled Congress. Int. Ex. 1 at 30-34. Mr. Schlissel and the Synapse report analyze policy trends at other levels of government, the underlying climate science, and the growing recognition within the private sector that regulations are necessary and coming. Int. Ex. 1 at 25-29. Their prediction that federal climate

[8] *See* Applicants' Response to First Data Requests of Mark Trechock and Dakota Resource Council, declaring that the likelihood of implementation of greenhouse gas regulation is "not relevant" to this proceeding.

regulation is coming is therefore based on long-term trends, not on the results of any single election.

However, the recent shift in Congressional control to Democrats does improve the chances for near-term passage of significant climate change legislation. *Id.* at 34. Democratic leaders have indicated their desire to pass climate legislation in 2007. *Id.* at 33-34. Senator McCain, Republican author of one of the climate bills under consideration, said after the election that the chances of approving meaningful legislation before 2008 were "pretty good," and that he believed "we've reached a tipping point in this debate, and its long overdue." *Id.* at 33-34. Even before the recent election, federal standards for greenhouse gas emissions were widely-expected to occur within the next few years by most within the power sector and many in the private sector generally. *Id.* at 25-30. Public opinion polls show public concern over global warming is rising quickly, and that there is widespread support for government action. *Id.* at 34-35.

In June of 2005, the US Senate passed a Sense of the Senate resolution calling for mandatory, market-based limits on emissions of greenhouse gases. Int. Ex. 1-DAS-4 at 22. Multiple bills that would impose such mandatory, market-based limits on CO2 emissions have since been proposed in Congress. *Id.* at 23-25. These proposals would employ a cap-and-trade regulatory approach that would require power plant operators to own an allowance for each ton of CO2 emitted. Allowances would be tradeable 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. *Id.* at 23. Some within the power sector vocally support such federal regulation of CO2, and others who oppose it still

acknowledge it is likely. *Id.* at 34-36. Increasingly, utilities conducting resource planning are factoring in estimates of the likely allowance costs they would face under federal carbon constraints, in many cases because state utility regulators require it. *Id.* at 35-37. Clearly, we have long passed the point when utilities contemplating a new coal plant can reasonably assume that their plant would be allowed to emit millions of tons of CO2 annually for free for decades.

C. The Commission can consider the general risk of future CO2 regulation even if the Commission is barred by statute from considering numeric costs and quantified values projected for future regulation.

The language of the externalities statute at N.D.C.C. § 43-02-23 does not bar all consideration of the risks of future environmental regulation, only "numeric costs and quantified values." So long as the Commission observes that restriction, it has latitude to consider the general level of risk to ratepayers posed by looming carbon regulation. In previous filings, Intervenors have also raised a number of constitutional concerns with regard to the externalities statute.[9] We hereby incorporate those arguments by reference. The Commission must be wary of any interpretation of the law that advantages in-state utilities over those headquartered out-of-state, a violation of the Commerce Clause of the U.S. Constitution. Excluding all consideration of the risk of carbon regulation in North Dakota, contrary to expert evidence, while other states require such analysis in their siting processes, creates a business advantage for North Dakota utilities that has no legitimate policy justification. The practical effect of the North Dakota externality statue is artificially to constrain the costs of investing in a coal-fired plant like BS2 by prohibiting the consideration of impending CO2 regulations. Therefore, the statute

[9] *See* Intervenors' Opposition to Motion in Limine, April 12, 2007, and Intervenors' Supplemental Brief in Opposition to Motion in Limine, April 16, 2007.

benefits in-state economic interests by permitting North Dakota utilities to invest in such a plant because the prices they quote to the Public Service Commissions are cheaper than those of out-of-state utilities, which must integrate CO2 costs into their resource plans. This in-state benefit amounts to simple economic protectionism of local interests, which the U.S. Supreme Court has held does not constitute a valid justification for the impediment of interstate commerce, thereby violating the Commerce Clause.[10] Additionally, this law exposes North Dakota ratepayers to increased carbon regulation costs that Applicants admit they plan to pass on to ratepayers. Tr. 7/26/07 at 58. Finally, the so-called "externalities" statute reaches far beyond its stated purpose by re-defining internalized, reasonably predictable future regulatory costs as "externalities." In reality, carbon regulation is a likely internalized cost of business that is highly relevant to this prudence determination.

The NDPSC was barred from hearing quantified testimony offered by Mr. Schlissel in other proceedings. Intervenors claim (and incorporate arguments in their Memorandum in Opposition to Applicant's Motion to Strike Testimony of David Schlissel, dated June 18, 2007), that the externalities statute usurps the constitutional powers of the Judiciary to adopt the Rules of Evidence and the constitutionally created Public Service Commission's power to adopt and apply the North Dakota Rules of evidence, as adopted by the North Dakota Courts. The North Dakota Rules of Evidence do not include the use of an externalities statute to bar expert witness testimony to favor a single industry. NDCC 49-05-16-2, requiring a decision within seven months of filing, also usurps the NDPSC's rule making authority to control their own docket.

[10] *See Philadelphia v. New Jersey*, 437 U.S. 617 (1978) and *New Energy Co. of Indiana v. Limbach*, 486 U.S. 269 (1988).

D. The record shows that future CO2 restrictions are likely to add substantially to the cost of energy from the Big Stone II project.

The cost of future CO2 allowances is subject to considerable regulatory uncertainty, but that uncertainty makes it more important to factor them into planning, and certainly 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, "parties seeking to build new generating facilities and the associated transmission face a host of major uncertainties, including, for example, the expected costs of the facility, future restrictions on emissions of carbon dioxide, and future fuel prices." Int. Ex. 1 at 5. Even if the Commission is barred from considering the most precise forecasts available because of the externalities statute, the Commission may consider the serious risk that ratepayers will have to assume costs associated with the CO2 emitted from Big Stone II at some point in the relatively near future. This is little different from assuming that railroad service issues will cause increased but unknown costs at some unknown but relatively near date in the future. Applicants have brought no evidence whatsoever to suggest that future carbon regulation is not a significant financial risk for Big Stone II.

1. The wind alternative considered in the Greig analysis unnecessarily includes a new 500 MW natural gas-fired plant.

In contrast to the kind of systematic comparison that could have taken place within each Applicant's capacity expansion model, the Greig analysis compares the Big Stone II project as a whole to just two other alternatives: (1) a 500 MW natural gas fueled Combined-Cycle Gas Turbine (CCGT), and (2) a 500 MW CCGT with an unspecified amount of wind energy added. App. Ex. OTP/MDU-311 at 2-3. The

approach in the Greig analysis of combining low-cost wind power with a large amount of high-cost natural gas power not surprisingly leads to the finding that the Big Stone II project is more economical. *Id.* at 7.

As the Commission points out, other resources already existing on the electric system can to a large degree compensate for the non-firm nature of wind. Tr. 6/27-07 at 478. However, the Greig analysis ignores that potential for integration into the existing electrical system and requires that the wind power essentially come with its own dedicated, high-cost back-up resource attached. It is an approach that ignores everything we have learned in recent years about making the maximum use of clean, low-cost wind energy without threatening system reliability.

2. *The Greig analysis assumes that publicly owned utilities would buy wind power rather than build their own wind resources, denying the wind alternatives the financing and tax advantages that the publicly owned utilities bring to the Big Stone II project.*

The Greig analysis assumes in its cost estimates of the CCGT-plus-wind alternative that the Applicants would purchase wind power rather than building any of their own, thereby depriving the alternative wind resources of the substantial financing and tax advantages that the publicly owned utilities bring to the Big Stone II project. . Ex. OTP/MDU-311at 3. This single assumption greatly disadvantages wind as compared to Big Stone II, and goes unexplained, except for this statement: "Wind is not a baseload resource because it does not produce dependable generation year-round at high capacity factors. Hence the analysis does not assume construction of a wind resource, but market purchases of non-firm wind energy." *Id.* However, utilities are by no means limited to constructing only baseload resources, and Applicants have acknowledged that wind has a basic capacity factor. Tr. 6/26/07 at 181.

3. The Greig analysis unrealistically assumes that the Production Tax Credit will not be renewed.

The Greig analysis, submitted in October 2006, assumed in its base case that the Production Tax Credit for wind would not be extended beyond its expiration date (as of October 2006) at the end of 2007.[11] App. Ex. OTP/MDU-311 at 11. The continuation of the PTC has a significant impact on the cost of wind power. The Greig analysis estimates that without the PTC, the 2012 purchase price of wind power will be $60/MWh. *Id.* With the PTC in place, the purchase cost of wind is $46.39/MWh. *Id.*

In his prefiled testimony, Synapse witness Mr. Schlissel criticized the Grieg analysis assumption that the PTC would expire after 2007, arguing that given mounting concern over global warming and other factors it was more reasonable to assume that the PTC would be extended beyond 2007. Int. Ex. 1 at 75.

III. APPLICANTS HAVE FAILED TO SHOW THAT THE BIG STONE II PROJECT COSTS LESS THAN DEMAND-SIDE MANAGEMENT (DSM).

Applicants cannot possibly show that Big Stone II costs less than DSM in North Dakota, because OTP witness Morlock admits that OTP has no North Dakota DSM projects in its Integrated Resource Plan, even though 43% of their sales are in North Dakota. Tr. 6/26/07 at 266-267. MDU's Generation Expansion Plan Analysis projects the addition of an unspecified amount of DSM in 2014 and 2015. App. Ex. MDU-211 at 1-3. Neither OTP nor MDU therefore has offered any data about the cost or effectiveness of any DSM project for North Dakota. Nor has either Applicant provided realistic projections about what demand reduction could be achieved by comprehensive DSM programs implemented in North Dakota before 2012.

[11] Intervenors request that the Commission take judicial notice of the fact that in December 2006, the federal production tax credit was extended for yet another year (through December 31, 2008) by Section 207 of the Tax Relief and Health Care Act of 2006 (H.R. 6111).

Applicants' reliance on their capacity expansion models to show that the Big Stone II project costs less than DSM is also severely undermined by their failure to include CO2 regulatory costs in that modeling. However, even if the Big Stone II project had been priced correctly, the modeling would be rendered invalid by the severe constraints Applicants put on their models' ability to consider DSM as an available option.

A. Applicants did not allow their models to even consider DSM investments that have been demonstrated to be cost-effective and achievable by other utilities.

In modeling DSM, Applicants failed even to let their models *consider* DSM achievements that other utilities are currently making. Applicants offered no comparative evidence or estimates as to DSM potential in North Dakota. Applicants cannot validly claim that they have run out of cost-effective DSM (particularly given the high and rising costs of the Big Stone II project) when they have not even considered DSM investments that other utilities have shown to be achievable and cost effective.

B. The record shows that Applicants could achieve far higher rates of DSM savings at less than the cost of the Big Stone II project.

The Synapse modeling analysis of generation alternatives to Big Stone II only chose Big Stone II in one scenario. Int. Ex. 1 at 68. Increased DSM was one viable alternative for meeting the projected demand, but the record plainly shows that this alternative received scant attention in North Dakota. Witnesses were unable even to cite programs when questioned. Tr. 6/26/07 at 65. In spite of proven low-cost efficiency gains in Minnesota, Applicants have chosen new coal generation before making even proportional efficiency gains in North Dakota.

IV. APPLICANTS HAVE FAILED TO SHOW THAT THE BIG STONE II PROJECT COSTS LESS THAN WIND.

The cost comparison between wind and Big Stone II conducted by Applicants' models is fundamentally biased by Applicants' failure to factor in future CO2 regulations (see part II) and the costs associated with delays, rising construction costs, and coal supply interruptions (see part V). Their modeling is also undermined by constraints that prevent Applicants' models from selecting all the wind they otherwise would, as we discuss in the utility-by-utility analysis presented in Part VII. For example OTP limits wind additions to 20% of peak capacity, or 160 MW. Int. Exh. 1 at 260 These modeling flaws prevent Applicants from pursuing a supply resource that experience shows is very cost effective.

A. Applicants can cost-effectively integrate far more wind into their systems than their models plan to.

It is undisputed that there is terrific natural potential for expanding our use of wind in the region.[12] Petition to Intervene at 3(Romm). Applicants justify their failure to more seriously consider this low-cost, widely-available option as an alternative to Big Stone II on the grounds that wind is not a baseload resource. However, nothing in the law allows Applicants to limit their cost comparison of the Big Stone II project to only those other energy alternatives that can, standing alone, also be defined as baseload. This sort of rigid interpretation of the law would seriously and unnecessarily thwart the state's ability to pursue its vital interest in renewable energy.

The most recent and authoritative analysis of the costs associated with integrating increasing amounts of wind onto the grid is the recently released Minnesota Wind

[12] In fact, North Dakota has been identified for some time as the state with the highest wind energy potential in the nation. Shane Thin Elk, "Blowing in the Wind: Why North Dakota Should Do More to Promote Wind Energy", 6 *Great Plains Natural Resources Journal* (Fall 2001) at 120.

Integration Study.[13] This study looked at the costs associated with reliably integrating into the electric grid wind amounting to 15%, 20% and 25% of retail electricity sales. It found that utilities can incorporate wind power amounting to 25% of their delivered energy into their resource portfolios without sacrificing reliability. It also found that the costs of doing so are relatively minor. The additional cost to achieve an integration level of 15% would be only $2.11/MWh, and even at the integration level of 25% the additional cost would only be only $4.41/MWh.[14]

By way of comparison, the Big Stone II levelized busbar cost of energy as set forth in Applicants' Greig analysis is $69.62/MWh for investor owned utilities. App. Ex. OTP/MDU-311 at 310. This is far above the cost of wind energy as assumed by Applicants in the Greig analysis; it assumes that wind can be purchased at $46.39/MWh if the PTC is extended and at $60.00/MWh if it is not. *Id.* at 164 (Burns & McDonnell report at 4). If we add to these wind costs the 25% integration cost of $4.41/MWh, then wind costs rise to $50.80 if the PTC is renewed, and $64.41/MWh if it is not – still well below the $69.62 cost of Big Stone II to investor-owned utilities. (The analysis would tip even further in wind's direction if we used the more immediately-relevant $2.11/MWh cost for integrating 15% of wind onto a utility's system.)

As for publicly-owned utilities, Applicants assume in the Greig analysis that Big Stone II will cost $56.38/MWh (App. Ex. OTP/MDU-311 at 167, 169, 170 (Burns & McDonnell at 7, 9, 10), significantly higher than the $50.80/MWh cost of integrated wind

[13] "Final Report – 2006 Minnesota Wind Integration Study," Nov. 30, 2006 (attached). We ask that judicial notice be taken of this major study, which was prepared at legislative direction, Minn. Laws 2005, ch. 97, art 2, §6, and pursuant to Minnesota Public Utilities Commission order. "Order Directing Participation in and Implementation of a Wind Integration Study", July 22, 2005, Docket No. E-999/CI-05-973.

[14] Wind Integration Study, Executive Summary, page xxi.

assuming the PTC is renewed. The cost of integrated wind under a no PTC scenario ($64.41/MWh) would be higher than the price of Big Stone II under Applicants' assumptions, but that is largely because (as we explain above) the Greig analysis deprives wind projects of any of the financing and tax advantages that publicly owned utilities bring to the Big Stone II project by assuming all wind is purchased on the market. If, instead, the publicly owned utilities built their own wind resources, they could very well find that integrated wind would cost less than Big Stone II even without the PTC, just as it does for investor-owned utilities.

The Greig analysis does not include the costs of building new transmission lines in either the Big Stone II busbar cost or the purchased wind energy costs. (The capital costs assumed for the Big Stone II project are $1.442 billion, reflecting only the construction of the plant, not the transmission lines. Tr. 6/26/07 at 107. We know that adding transmission for the Big Stone II unit will cost at least $238 million, but Applicants have in no way established that the cost of building additional transmission for wind would cost as much or more. App. Ex. OTP/MDU-301 at 9. That question has not been studied, because all the transmission planning studies assume both the Big Stone II power lines and the Big Stone II unit.

We stress that the above cost comparison still incorporates all of Applicants' optimistic assumptions underestimating the costs of Big Stone II, discussed herein. Correcting for those underestimates would certainly raise the costs of the Big Stone II project substantially.

Applicants' modeling shows them getting far less than 25% of their energy from wind for the foreseeable future. Applicants' constrained approach to adding wind to their

systems contrasts with the evidence in the record showing that far more wind could be used cost-effectively by North Dakota utilities, to the benefit of North Dakota ratepayers and industry.

B. Applicants have modeled neither the economic benefits of North Dakota incentives for wind development nor the advantages of wind ownership.

In his direct testimony, MDU witness Greig indicates that the trend is for utilities to want ownership of wind farms and to have those assets in the rate base, because under a PPA the rating agencies see the wind farm as a debt to the utilities. Tr. 6-26-07 at 195. Intervenors' witness Schlissel agrees, noting that the advantages of ownership are project-specific and depend on the financing. Tr. 6-27-07 at 423. However, in spite of these facts, Applicants have failed to include in their modeling the potential benefits to consumers of utility-owned wind. Applicants' models also fail to consider North Dakota incentives for wind ownership.

V. APPLICANTS GREATLY UNDERESTIMATE THE RISK OF FURTHER DELAYS, CONSTRUCTION COST INCREASES, AND COAL SUPPLY DISRUPTIONS.

Applicants' modeling and other analyses[15] are all biased in favor of Big Stone II because they fail to reflect project delays that have *already* occurred, and recklessly ignore the risk of additional delays, construction cost increases, and coal supply disruptions. The Big Stone II Project's consulting engineer admits that future changes in the estimated cost for the Big Stone II Project are becoming more dependent on outside forces. Tr. 6/26/07 at 124, 161. The Applicants, however, have failed to conduct any sensitivity analyses reflecting the risk of additional increases due to those outside forces.

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[15] Namely, the Greig analysis discussed in part II.

A. Applicants' modeling fails to reflect construction costs associated with realistic in-service dates, or even with the in-service date that Applicants themselves now consider most likely.

Even the May, 2012 in-service date – Applicants' current best estimate -- is still not reflected in Applicants' latest cost estimates. Timing is an essential factor that determines the ultimate construction cost of the Big Stone II Project. According to Rolfes' rebuttal testimony, each month of change in the project schedule adds $7 million to the generation costs and roughly $1 million to the transmission side. App. Ex. OTP/MDU-302 at 5. For purposes of this proceeding, however, Applicants based their analyses on their 2006 estimate of the proposed Big Stone II plant cost of $1.361 billion (2011$), representing an in-service date in 2011. Tr. 6/26/07 at 107Although Applicants' acknowledge that costs have increased and the in-service date has been pushed back at least one year, they have not performed new modeling analyses. *Id.* Applicants therefore cannot claim with any certainty that Big Stone II remains the least-cost option.

In this proceeding, neither Applicant modeled a $1.443 billion capital cost (associated with Applicants' current May 2012 in-service) for the Big Stone II plant. If Applicants had uniformly modeled the most likely scenarios for the Big Stone II in-service date, that is, late 2012, 2013 or even later, the Project's assumed capital costs would have been significantly higher, and whether Big Stone II would be part of a least-cost plan for meeting Applicants' resource needs would be even more in question than it already is.

Any realistic project analysis must acknowledge that November 2012 is not an achievable in-service date either. First, the premise of a November 2012 date is that the boiler bid is awarded upon receipt of a federal Prevention of Significant Deterioration

(PSD) air permit for the project in October 2007, with no appeal, hardly a certainty considering the controversy that has surrounded every step of the permitting process thus far. Because the Big Stone II air permit would be a federal PSD permit, any appeal would be to the U.S. EPA Environmental Appeals Board, and operates as an automatic stay on construction of the project. So Applicants' optimistic construction schedule depends upon, among other things, the many organizations that oppose construction of this plant failing to appeal the PSD permits.

Moreover, a successful appeal of the PSD permit would require new analysis of the emissions from, and the proposed pollution control equipment for, the proposed Big Stone II plant and could easily translate into not just additional delays but additional capital costs for pollution control equipment.

B. Applicant's ignore the substantial risk of additional capital cost increases.

Applicants assume no further increases in the capital cost of the Big Stone II Project beyond current estimates, not even in sensitivity analyses. This is unreasonable and imprudent, especially given the unpredicted 50% increase in Big Stone II Project costs announced last summer and attributed to market forces. Tr. 6/26/07 at 157.

There is no evidence that the global market forces that drove project prices up by 50% have stopped. Mr. Trout's testimony attaches printouts from the Bureau of Labor Statistics to illustrate the increase in prices for various critical commodities over the last several years, prices that only continue to rise. App. Ex. OTP/MDU-303.]

Mr. Trout admitted that there is at present a strong demand for the various commodities and equipment critical to the Big Stone II Project. Tr. 6/26/07 at 157. **[cite]** He testified that prices are driven up by, in addition to global demand, the multiple large

projects announced by the US power sector. Tr. 6/26/07 at 161. Upon cross examination, Mr. Trout acknowledged an earlier error in assuming only about "18 to 24" possible power plants planned for construction in the country. *Id.* This is a substantial underestimate of the number of announced coal plants in the US; as Mr. Trout acknowledged, over 150 coal plants that have been announced in the US. *Id.* at 161. Applicants' witness from Black and Veatch, who is responsible for estimating the impact of market forces on the cost of this project, underestimated by a factor of at least six the number of other US coal plants competing with Big Stone II for commodities, equipment, and labor.

The Big Stone II project is very vulnerable to the impact of these competing projects because the bids it earlier obtained for the five major procurement items (the boiler, turbine, fabric filter, wet scrubber, and chimney) have now expired. Tr. 6/26/07 at 164. These expensive items will have to re-bid, and the prices of those bids will be influenced by the market forces. However, Applicants' current price estimate does not build in *any* escalation factor for these bids; it is based on the unrealistic assumption that the bid prices will not rise at all from those obtained months ago. This price stability is assumed even though rising demand has doubled the price of this equipment over the last two years , and despite all the other coal plants projects in the US competing for the same equipment.

There are two other reasons to question the reliability of the cost estimates (and schedule) put forth by Black and Veatch. First, Black and Veatch has not actually built a supercritical pulverized coal plant in the United States in over a quarter of a century. App. Ex. OTP/MDU-310 at 4-2. Second, the Big Stone II project is, according to

testimony by Mr. Rolfes, not an ordinary supercritical coal plant but one that will be operated at such high temperatures that it could be considered an ultra supercritical plant. Tr. 6/26/07 at 139. There are no plants operating at temperatures this high in North America, and only limited operating experience with these plants in other countries. Tr. 6/26/07 at 148-149. This is, in effect, largely untested technology, and the more untested the technology, the harder it is to predict its performance, the construction schedule, and its ultimate price.

C. Applicants ignore the financial impact of possible rail delivery disruptions such as those already experienced by Big Stone unit I.

Finally, Applicants did not assume any coal supply disruptions or higher fuel costs in spite of recent problems with the delivery of coal from the Powder River Basin, both generally and at the existing Big Stone I unit. Applicants made this assumption in spite of the fact that the delivered fuel price to Big Stone I increased by 14% from 2002 to 2006 (Tr. 6/28/07 at 747) and the contractual performance guarantee with BNSF does not indemnify the utility for market fuel purchases or use of other sources of fuel. Tr. 6/26/07 at 227. Commissioner Clark read a statement into the record and Applicants' witness Uggerud concurred that for several weeks in 2006 the Big Stone I unit had to scale back operations to 45% of its capacity because of coal delivery failures. Tr. 6/28/07 at 793. Mr. Schlissel testified – and Mr. Uggerud concurred - that it has been estimated that delivery problems out of the Powder River Basin since early 2005 have caused billions of dollars worth of additional costs passed on to consumers around the country. Tr. 6/27/07 at 550 and 6/28/07 at 787. Yet, Applicants fail to even consider the potential for coal shortages as a risk associated with developing the Big Stone II Project. This negligence is especially pronounced given that no legislative or regulatory changes have

been made in the interim to ensure more reliable rail service or protections for consumers. Tr. 6/28/07 at 799.

V. EACH UTILITY'S MODELING INCLUDES FLAWS AND DEFICIENCIES THAT PREVENT A CREDIBLE SHOWING THAT THE BIG STONE II PROJECT WOULD COST LESS THAN DSM AND RENEWABLE ENERGY.

A. OTP

1. Modeling

OTP's modeling assumes that the Big Stone II unit will come online in January of 2011, but OTP witness Rolfes acknowledges that even if all permits are unexpectedly secured in 2007, a 48 month construction period is "a little bit optimistic." Tr. 6/26/07 at 124. Mr. Rolfes goes on to characterize a commercial operation date of mid-2012 as "a little optimistic" as well Tr. 6/26/07 at 144. As we discuss in Part V, there is no longer any possibility that the Big Stone II project will be delivering power by 2011. Even Applicants identify mid-2012 as their best, "optimistic" estimate of the in-service date.

2. DSM

OTP offers its model only a very limited amount of DSM for comparison with the Big Stone II project. OTP actually limited its model to considering DSM savings that are *less than* savings levels that OTP itself has already achieved. The modeling assumes that OTP can save approximately 8,000 MWh per year in the next few years, rising to nearly 11,000 MWh per year in 2015. App. Ex. OTP-103 at 11. However, OTP's Minnesota conservation and DSM measures already account for over 13% of the capacity needs identified in OTP's current resource plan filed with the Minnesota PUC, a level well

above OTP's projected energy savings per capita in North Dakota in the year 2015. *Id.* at 10.

The Dakotas (where roughly half of OTP's sales are) have no requirement to invest in conservation. OTP does not offer programs in the Dakotas that have already proven successful in Minnesota. Tr. 6/27/07 at 499. Clearly, OTP has hardly scratched the surface of the full DSM savings available to the half of its load located in North Dakota.

3. Wind

OTP limits wind additions to 20% of its current peak capacity, or 160 MW, less than the Minnesota wind study projects as a reliable proportion of wind on OTP's North Dakota transmission grid. App. Ex. OTP-103 at 11-12. OTP also fails to provide a direct comparison between new, utility-owned wind capacity, benefiting from North Dakota incentives, and Big Stone II. Int. Ex. 1 at 70-71.

There are also significant flaws with the IRP-Manager software that have translated into flaws in OTP's resource planning. OTP has acknowledged that IRP-Manager is not well equipped to handle all the federal and state incentives for wind. Int. Ex. 1 at 58. OTP is scheduled to file its next IRP, using the Strategist modeling software, with the Commission in September 2007. App. Ex. OTP-103 at 3. Intervenors urge the Commission to require a much more detailed analysis of conservation and renewable energy options in this upcoming IRP.

4. Hydro

The Manitoba Hydro option is not necessarily Otter Tail's least cost alternative to the Big Stone II project. Otter Tail has acknowledged that its IRP-Manager model has

significant flaws and that OTP is in the process of upgrading to a different model. Int. Ex. 1 at 56.

> The IRP-Manager model optimizes for lowest cost based on a defined predictable future without assessment of uncertainty or risks. Otter Tail Power did not conduct any sensitivity analyses based on variations in such critical input assumptions as the cost of Big Stone II, fuel costs, plant performance due to fuel supply disruptions, etc.

Id. There may therefore be an even lower cost alternative, improperly excluded by OTP's IRP-Manager model that includes more DSM and wind, potentially backed up by hydro. Hydro power and wind can be a very cost-effective pairing of energy options. Even Mr. Steen testified that "hydro is the best backup for wind." Tr. 6/28/07 at 649.

B. MDU

1. Modeling

Synapse not only reviewed the input and output of MDU's capacity expansion model, Strategist, but actually re-ran the model, varying certain specified inputs to test how sensitive the outcome was to particular assumptions. This analysis demonstrated that MDU's model is *highly* sensitive to the assumptions MDU makes about CO2, DSM, and construction costs. Indeed, Strategist did not select *any* of the Big Stone II project when any of the following changes were made:

- when Synapse assumed future carbon regulation;
- when Synapse allowed the selection of more DSM at reasonable costs (as established by Synapse witness Tim Woolf's testimony); or
- when Synapse increased the capital cost of the Big Stone II project by just 10%.

Id. at 68. Synapse's analysis also revealed that MDU forced Strategist to choose between all 116 MW of the Big Stone II project or none of it. Tr. 6/27/07 at 457. When Synapse removed that constraint, Strategist only selected 23.2 MW of the Big Stone II project. *Id.* Since MDU's modeling does not actually identify the least cost option, there may be other options with more DSM and renewable energy that would cost less than the Big Stone II project.

Another irregularity in MDU's modeling is the extremely low capacity factor MDU's model assumes for the Big Stone II unit. Rather than assuming the unit is running at the projected 88% capacity factor, it assumed it was running at only 38-56% capacity factor. Int. Ex. 1 at 65. The difference between the modeled capacity factor and the real one would, Mr. Schlissel testified, be used to make off-system sales. *Id.* Indeed, MDU has an incentive to make off-system, off-peak sales under North Dakota law, because it is allowed to keep 15% of the margin. *Id.* at 66. By acquiring so much more energy than it actually needs, though, MDU runs the risk of having to sell that extra power during times when the locational marginal price is actually negative, meaning that its model is ignoring a potential future cost.

2. DSM

MDU severely limits the amount of DSM it offers to its model, in part because it takes a very different approach to determining cost effectiveness. It does not compare the cost of DSM with the cost of the Big Stone II project. *Id.* at 70. Indeed, MDU's test tends to screen out the kind of projects that yield energy savings year round and that would be the most likely to displace baseload resources like Big Stone II. Of the three DSM programs that MDU included in its IRP, two were load shaving programs rather

than energy saving programs. Tr. 6/27/07 at 474. Thus, MDU cannot even claim to have shown that Big Stone II costs less than DSM projects, because MDU's planning process does not ask that question.

VI. GRANTING THE PRE-PRUDENCE DETERMINATION WOULD HARM NORTH DAKOTA RATEPAYERS AND IN-STATE CLEAN ENERGY INDUSTRIES.

The Commission took a step to remedy the lack of information about alternatives to the Big Stone II project in its requests for additional information. Despite repeated references to demand-side alternatives in the Commission's request, the Applicants alternatives do not reflect *any* additional DSM programs in their non-Big Stone II plans.

A. Applicants have not sufficiently explored alternatives for power production, transmission, sequestration and conservation within the borders of North Dakota.

See sections II and III.

B. The Big Stone II project will cause pollution and higher energy costs, and there are feasible, prudent, and less costly alternatives.

The record firmly establishes that the Big Stone II unit would cause pollution, global warming, and higher energy costs for North Dakota ratepayers. The unit would emit 4.7 million tons per year of CO2, and over a working lifetime of fifty years, would emit 235 million tons of CO2. Tr. 6/27/07 at 413. Those CO2 emissions will affect the climate for hundreds of years.

As this brief demonstrates, none of these harmful outcomes are necessary, because there are clearly feasibly and prudent alternatives to building this plant that have not been fully considered. Applicants could greatly improve the amount of energy savings they get from DSM (see part III) and greatly increase the amount of wind power

they integrate into their systems (see part IV), thereby eliminating much or all of the need for the Big Stone II project. Moreover, most of this brief deals just with Applicants' failure to pursue DSM and renewables that would *cost less* than Big Stone II. However, an alternative does not have to cost less than the proposed project to be considered feasible and prudent. Long-term prudency must take into account the impact on ratepayers and North Dakota's economy in general over the life of the proposed project.

CONCLUSION

Dakota Resource Council and Mark Trechock ("Intervenors") respectfully request that the Application for an Advance Determination of Prudence be denied. Failing that, Intervenors request that any order made by the Commission include a requirement for significant increases in DSM, energy efficiency, and renewable energy development as hedges for ratepayers against the uncontrollable risks inherent in Big Stone 2. The record in this proceeding amply demonstrates that Applicants have failed to carry their evidentiary burden, and that the Big Stone II Project is contrary to the public interest.

Dated: August 1, 2007

Respectfully submitted,

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STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

Otter Tail Corporation **Case No PU-06-481**

Advance Determination of Prudence

Application

Montana-Dakota Utilities Co., **Case No PU-06-482**

a Division Of MDU Resources Group,

Inc.

Advance Determination of Prudence

Application

AFFIDAVIT OF SERVICE BY ELECTRONIC MAIL

Notice is given that

Intervenors Mark Trechock and Dakota Resource Council

have filed a

1. Post Hearing Brief, dated August 1, 2007,
2. Affidavit of Service by Electronic Mail, dated August 3, 2007

to

To Administrative Law Judge Al Wahl State Office Building Bismarck, ND 58501

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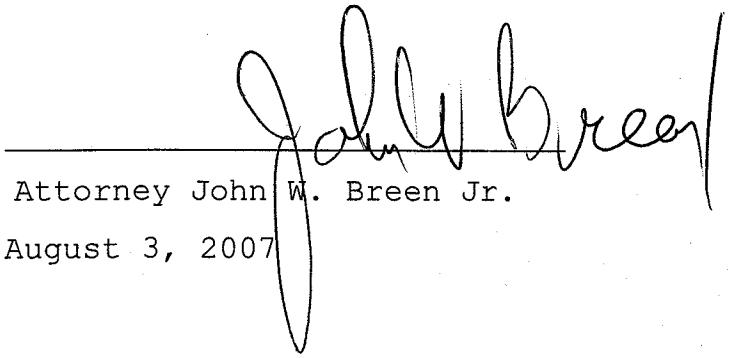
which is the last know address of the parties.

The above Post Hearing Brief of Intervenors, Mark Trechock and Dakota Resource Council was filed by electronic mail on August 3, 2007 to the above parties at the above electronic mail addresses.



Attorney John W. Breen Jr.

August 3, 2007