

**CASE NOS. PU-06-481 & PU-06-482**

**BEFORE THE NORTH DAKOTA PUBLIC SERVICE COMMISSION**

**IN THE MATTER OF THE APPLICATION BY OTTER TAIL POWER CORPORATION D/B/A**

**OTTER TAIL POWER COMPANY**

**AND**

**MONTANA-DAKOTA UTILITIES CO., A DIVISION OF MDU RESOURCES GROUP, INC.**

**FOR AN ADVANCED DETERMINATION OF PRUDENCE**

**FOR THE BIG STONE II GENERATING PLANT**

**PREFILED REBUTTAL TESTIMONY**

**OF**

**ANDREA L. STOMBERG**

**VICE PRESIDENT OF ELECTRIC SUPPLY**

**MONTANA-DAKOTA UTILITIES CO.**

**APRIL 23, 2008**



**PREFILED REBUTTAL TESTIMONY OF ANDREA L. STOMBERG**

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3   **I.       INTRODUCTION**

4   **Q:       Please state your name and business address.**

5   A:       My name is Andrea L. Stomberg. My business address is 400 North Fourth Street,  
6   Bismarck, ND 58501.

7   **Q:       By whom are you employed, and in what capacity?**

8   A:       I am the Vice President of Electric Supply for Montana-Dakota Utilities Co. (Montana-  
9   Dakota), a Division of Montana-Dakota Resources Group, Inc. My responsibilities include  
10 power production and planning, transmission and system operations, and electric sales and  
11 dispatch.

12 **Q:       Did you previously submit testimony in this matter?**

13 A:       Yes. I provided prefiled testimony that was admitted as Exhibit MDU-203. More  
14 recently, I submitted supplemental prefiled testimony that was marked and filed as Exhibit  
15 MDU-213.

16 **II.      PURPOSE AND SUMMARY OF TESTIMONY**

17 **Q:       What is the purpose of your rebuttal testimony?**

18 A:       I will summarize Montana-Dakota's responses to the testimony of Advocacy Staff  
19 witness Terry Deason, and respond to a question raised by Mr. Deason regarding whether  
20 Montana-Dakota's forecasted escalation of natural gas prices used in this proceeding was  
21 influenced by potential CO<sub>2</sub> regulation. I will also respond to testimony offered by intervener  
22 Dakota Resource Council witness David Schlissel that Montana-Dakota has not considered the

1 risk of capital cost increases and carbon regulation by its participation in the Big Stone II  
2 generation project.

3 **III. SUMMARY OF NDPSC ADVOCACY STAFF ISSUES**

4 **Q: On pages 26 to 27 of his supplemental direct testimony, Advocacy Staff witness**  
5 **Terry Deason provided a summary of areas that needed additional clarification by the**  
6 **Applicants. Please provide a summary of Montana-Dakota's responses to those areas.**

7 A: I provide a response in this testimony to Mr. Deason's question regarding potential  
8 natural gas price impacts as a result of carbon dioxide regulation. Applicants' witness James  
9 Heidell in his rebuttal testimony provides responses to Mr. Deason's other questions.

10 **Q: Did Montana-Dakota adjust its forecasted price of natural gas as used in the**  
11 **modeling conducted by PA Consulting to reflect price impacts as a result of possible carbon**  
12 **dioxide emission regulation?**

13 A: As stated in my supplemental prefiled direct testimony, I believe that enactment of  
14 carbon dioxide or greenhouse gas emission regulation will increase the use of and demand for  
15 natural gas, and accordingly will increase the price of natural gas. The magnitude of that price  
16 impact is difficult to assess, particularly as no regulations have been promulgated and there is no  
17 precedent for the impact such regulations will have on the market for natural gas and other fuels.  
18 Rather than speculate as to the magnitude of the impact, Montana-Dakota did not reflect such an  
19 impact in its natural gas price forecasts.

20 **Q: On page 27 of his supplemental direct testimony, Mr. Deason reiterates that the five**  
21 **conditions he previously recommended the Commission adopt before granting an advance**  
22 **determination for Big Stone II still apply. Do you have any comments on that?**

1 A: As we indicated last summer, we agree with and are committed to addressing each of  
2 these five conditions.

3 **Q: On page 28 of his supplemental direct testimony, Mr. Deason further recommends**  
4 **an additional condition that the Applicants provide to the Commission an updated**  
5 **confirmation of Big Stone II's cost-effectiveness prior to the commencement of**  
6 **construction. How do you respond?**

7 A: Montana-Dakota can agree to that.

#### 8 **IV. RESPONSES TO TESTIMONY OF DRC WITNESS SCHLISSEL**

9 **Q: In his testimony, Mr. Schlissel offers a general conclusion that the Applicants in**  
10 **these proceedings have failed to adequately consider the risks associated with evaluating**  
11 **the economics of participating in the Big Stone II project. Do you agree?**

12 A: Speaking on behalf of Montana-Dakota, I certainly do not agree. Our request for the  
13 Commission to delay a decision and reopen the hearing in this proceeding was specifically to  
14 allow Montana-Dakota and the other participants to reevaluate their participation in the project in  
15 light of the proposed smaller plant following the withdrawal last fall by two of the original  
16 participants. Montana-Dakota also used this opportunity to update and refine its resource  
17 modeling in light of more recent information regarding risks and opportunities associated not  
18 only with the Big Stone II project but also other generation alternatives. As a result, Montana-  
19 Dakota remains confident that its participation in the Big Stone II project is a prudent decision  
20 and in the best interests of its customers.

1 **Q: Can you explain in more detail why Montana-Dakota requested PA Consulting**  
2 **Group to re-run the Strategist® capacity expansion model with additional sets of resource**  
3 **planning inputs?**

4 A: Because of the downsizing of the Big Stone II plant, it was necessary to evaluate if Big  
5 Stone II remained part of a least-cost generation mix based on the best information currently  
6 available. As a result, we asked PA Consulting (PA) to rerun the Strategist model using the  
7 revised plant costs, as derived by Mr. Rolfes and the project team and explained elsewhere in this  
8 proceeding. We also asked PA to update other model inputs to reflect the most current  
9 information Montana-Dakota had available.

10 As stated on page three of my March 10 testimony, Montana-Dakota asked PA to update  
11 alternative generation costs and natural gas pricing, and also take into account the scheduled  
12 expiration of the federal Production Tax Credit at the end of 2008 for qualifying wind projects,  
13 full implementation of Montana-Dakota's demand-side management programs, possible  
14 reductions in existing plant generating capacity, as well as the impact of surplus energy sales into  
15 the MISO energy market. The goal was to try to model the Montana-Dakota system over the  
16 planning period as we best believe it would look and be operated, both with and without Big  
17 Stone II, using the most updated pricing and information we have available.

18 **Q: On page 11 of Mr. Schlissel's April 9, 2008 testimony, he states that "MDU has not**  
19 **given any consideration in its economic modeling analysis to the potential that the cost of**  
20 **building Big Stone II will increase further. ... (nor) any consideration...to the risks**  
21 **associated with future CO<sub>2</sub> emissions." Do you agree with these statements?**

1 A: Montana-Dakota did not ask PA to model construction cost changes beyond the updated  
2 project cost estimates provided by Mr. Rolfes and the project team. Nor did Montana-Dakota  
3 ask PA to run sensitivity scenarios on CO<sub>2</sub> emission cost impacts as part of the Strategist®  
4 optimization analysis. That does not mean, however, that Montana-Dakota has not considered  
5 the risks of construction cost increases or CO<sub>2</sub> emission regulation.

6 **Q: Please explain.**

7 A: Within Scenario IV of the PA model, the lowest-cost model outcome that did not select  
8 Big Stone II had a net present value (NPV) approximately \$260,000,000 higher than the least-  
9 cost alternative that included Big Stone II (over the study period 2008-2035). The difference  
10 between the NPV of the model result that includes Big Stone II, and the next-closest cost  
11 alternative that does not include Big Stone II, provides Montana-Dakota a sense of the  
12 magnitude of any type of cost impact that would drive the model to select the next generation  
13 alternative that did not include Big Stone II. This cost impact could be plant price increases,  
14 CO<sub>2</sub> compliance costs, additional criteria pollutant controls, or any other factor that could impact  
15 the ultimate cost of the resource.

16 **Q: How will Montana-Dakota react if final plant cost estimates are much higher than**  
17 **were used in its model?**

18 A: Montana-Dakota and the entire project is watching plant commodity and construction  
19 costs very closely. The final decision on plant construction will come at the time of financial  
20 close, expected to be first quarter, 2009. Up to financial close, the participants will review all  
21 information available to them on the risk factors affecting the project. In addition, many  
22 significant factors may change after financial close in ways that may not have been anticipated.

1           As Montana-Dakota has previously committed, it will keep the Commission advised on a  
2 regular basis of project status and progress. Not only will Montana-Dakota reevaluate the project  
3 if construction costs increase significantly prior to financial close it will keep the Commission  
4 advised of those cost impacts and Montana-Dakota's evaluation of the project in light of the  
5 impacts.

6 **Q:     How will Montana-Dakota address CO<sub>2</sub> regulation?**

7 A:     Each utility subject to carbon dioxide emission regulation will need to evaluate its  
8 generation mix with regard to these regulations. Depending on the mix for each utility, choices  
9 will be made to purchase allowances for, retire, retrofit or reduce utilization of, its generating  
10 units.

11           Big Stone II will be very important to Montana-Dakota in the event that Congress  
12 imposes significant costs related to CO<sub>2</sub> control or mitigation. In Montana-Dakota's case,  
13 having a new efficient unit such as Big Stone II affords us more options and flexibility for  
14 reducing carbon emission from our less- efficient baseload generation units than if we did not  
15 participate in the project. Big Stone II will emit roughly one-third less CO<sub>2</sub> per MWh of electric  
16 output compared to the oldest coal plant in our fleet. If Congress regulates GHG emissions,  
17 Montana-Dakota will have to give very careful consideration to the most efficient way to reduce  
18 our carbon impact. Future modification of Big Stone II for carbon capture when such  
19 technologies become commercially available would allow us to capture economies of scale in  
20 control devices, and have other participants with which to share costs. Because of its high  
21 efficiencies and potential for CCS, Big Stone II is very much acting as an important step in the  
22 bridge to a carbon constrained future.

1           Our estimates are that Big Stone II, along with our existing Diamond Willow wind plant,  
2 will allow Montana-Dakota to displace generation from its least efficient coal plants, resulting in  
3 an overall reduction in company carbon emissions of approximately eight percent.

4 **Q:    Mr. Schlissel criticizes the updated inputs used for wind generation which increased**  
5 **the capital costs of such generation and assumed expiration of production tax credits for**  
6 **wind generation after 2008. Can you explain why these inputs were used?**

7 A:    Yes. The increase in capital costs reflects Montana-Dakota's recent experience in the  
8 construction of the Diamond Willow wind farm and which are consistent with the experience of  
9 other similar wind projects. We assumed for modeling purposes expiration of the production tax  
10 credit for wind generation after 2008 because that is the current status. While there have been  
11 efforts to extend the credit beyond 2008, the current proposal is only for one year and that  
12 proposal has not yet passed. As Applicants' witness Tom Hewson explains in his April 23, 2008  
13 testimony, there also seems to be a general consensus that further extensions of the credit will be  
14 increasingly difficult and any extension that might be enacted is likely to be short term.

15 **Q:    Why is Montana-Dakota confident that Big Stone II is a prudent generation**  
16 **resource?**

17 A:    As I stated in my supplemental prefiled direct testimony, the selection of a generating  
18 resource boils down to an assessment of risk. And making such a significant decision in a time  
19 of regulatory and economic uncertainty adds an extra degree of difficulty. However, it is  
20 possible to identify the greatest risk factors associated with the modeled generation alternatives:

- 21           • *plant capital and construction costs- commodity and labor*
- 22           • *fuel costs- coal and rail; natural gas*

- 1 • *regulatory uncertainty- carbon and other emissions control*
- 2 • *production tax credit expiration*
- 3 • *aging existing resources*

4 Each of the generation alternatives offers various levels of risk, as well as advantages and  
5 disadvantages, related to these factors. It is Montana-Dakota's assessment, as outlined in my  
6 supplemental prefiled direct testimony, and reaffirmed by the other relevant testimony in the  
7 case, that the least risky option for our customers is participation in Big Stone II, rather than  
8 replacing this resource with wind generation and natural gas,

9 **Q: Mr. Schlissel raises a question of whether the project participants will be able to**  
10 **secure financing for a coal generation project. Has Montana-Dakota arranged financing**  
11 **for the project?**

12 A: Not at this time. It is premature at this time to secure permanent financing.

13 **Q: Does Montana-Dakota have concern regarding its ability to secure financing for its**  
14 **participation in the Big Stone II project?**

15 A: No. Montana-Dakota has access to and a relationship with a number of financial  
16 institutions capable of providing financing for Montana-Dakota's participation in the project and  
17 is confident it will be able to secure financing on competitive terms.

18 **V. CONCLUSION**

19 **Q: Does this conclude your testimony?**

20 A: Yes.

21

22