

SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

CASE NO. EL05-022

IN THE MATTER OF THE APPLICATION BY OTTER TAIL POWER COMPANY

ON BEHALF OF THE BIG STONE II CO-OWNERS

FOR AN ENERGY CONVERSION FACILITY SITING PERMIT FOR THE

CONSTRUCTION OF THE BIG STONE II PROJECT

DIRECT TESTIMONY

OF

ANDREA L. STOMBERG

VICE PRESIDENT, ELECTRIC SUPPLY

MONTANA-DAKOTA UTILITIES COMPANY

MARCH 15, 2006



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TESTIMONY OF ANDREA L. STOMBERG

TABLE OF CONTENTS

I. INTRODUCTION 1

II. PURPOSE AND SUMMARY OF TESTIMONY 2

III. DESCRIPTION OF COMPANY 2

IV. INTEREST IN BIG STONE UNIT II 4

V. COST OF BIG STONE UNIT II 6

VI. BIG STONE UNIT II BENEFITS / ALTERNATIVES 7

VII. ADDITIONAL INFORMATION 9

1 **BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION**

2 **DIRECT TESTIMONY OF ANDREA L. STOMBERG**

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
6 Street, 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 the Montana-Dakota Utilities Co.
9 (Montana-Dakota), a Division of MDU Resources Group, Inc. My responsibilities
10 include power production and planning, transmission and system operations and electric
11 sales and dispatch.

12 **Q: What is your educational background.**

13 A: I graduated from the University of Washington with a bachelor's degree in
14 Geology, from Oregon State University with a Master of Science degree in Soils, and
15 from the University of Mary, Bismarck, with a Masters Degree in Business Management.

16 **Q: What is your employment history?**

17 A: I worked for the North American Coal Corporation for 10 years in surface mine
18 permitting, reclamation planning and oversight. I have worked for Montana-Dakota for
19 about 15 years, in the environmental field prior to my current position, which I assumed
20 in 2003.

21 **Q: What professional organizations do you belong to that are relevant to your**
22 **testimony**

1 A: I am a member of the Board of Directors for the Midwest Reliability
2 Organization. I am also the solid fuels representative and chair of the Montana/Dakota
3 Regional Advisory Committee for the U.S. Bureau of Land Management.

4 **Q: Have you submitted testimony in other administrative or judicial**
5 **proceedings dealing with energy and related issues.**

6 A: Yes. I have provided testimony before North Dakota Legislative Committees and
7 in a Public Utility Regulatory Policy Act (PURPA) proceeding in South Dakota.

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

9 **Q: Describe the purpose of your testimony.**

10 A: The purpose of my testimony is to provide information regarding Montana-
11 Dakota, to provide information regarding Montana-Dakota's power supply planning and
12 related activities, and to explain why the company chose to participate in the
13 development of Big Stone Unit II.

14 **Q: Please summarize your testimony.**

15 A: Montana-Dakota, through its Integrated Resources Planning process, has
16 identified a need for new baseload generator capacity in 2011 and beyond. Montana-
17 Dakota believes that the Big Stone project is the best alternative, both financially and
18 operationally, to meet Montana-Dakota's need for capacity and energy to satisfy its
19 obligation to provide reasonably priced reliable electric energy to its customers.

20 **III. DESCRIPTION OF COMPANY**

21 **Q: Please describe your company.**

1 A: Montana-Dakota is a 75- year old company that operates an integrated electric
2 system in portions of Montana, North Dakota and South Dakota. We currently support
3 the electric power and energy requirements of our customers with approximately 366
4 MW of base load coal generation from five plants, and approximately 110 MW of gas or
5 gas and oil fired combustion turbines used for peaking. In addition, Montana-Dakota
6 purchases 66.4 MW of base load energy and capacity from Basin Electric Power
7 Cooperative's (Basin's) Antelope Valley Station II under a contract that will expire
8 October 31, 2006. Montana-Dakota also recently signed a contract for the output of a
9 31.5 MW wind farm to be constructed in South Dakota. Power is delivered over
10 company-owned transmission lines, as well as lines owned by the Western Area Power
11 Administration (WAPA) under long-term agreements. This has allowed Montana-Dakota
12 to efficiently serve customers, who reside and conduct business throughout Montana-
13 Dakota's sparsely populated service territory, with minimal duplication of facilities.

14 **Q: Describe the governance structure of your company.**

15 A: Montana-Dakota is a division of MDU Resources Group, Inc. MDU Resources
16 Group Inc. is a publicly traded corporation. Within Montana-Dakota there are six levels
17 of approval authority, from supervisory personnel to the Montana-Dakota President and
18 Chief Executive Officer, Bruce Imsdahl. Montana-Dakota also has a Managing
19 Committee, composed of senior management from Montana-Dakota and MDU Resources
20 Group, Inc., which oversees the operations of the company, approves budgets and capital
21 expenditures. The MDU Resources Group, Inc. Board of Directors approves issuance of
22 securities, including bonds, promissory notes or equity.

1 **IV. INTEREST IN BIG STONE UNIT II**

2 **Q: Why did the company become interested in participating in Big Stone Unit**
 3 **II?**

4 **A:** As stated earlier, Montana-Dakota has a power purchase agreement with Basin for
 5 66.4 MW of capacity and energy. This agreement accounts for nearly 20 percent of
 6 Montana-Dakota's entire base load capacity. The agreement expires in October 2006.
 7 Several years ago, Montana-Dakota began looking for a new base load resource to
 8 replace the power and energy supplied to the company under the Basin contract and to
 9 meet our customers' projected load growth. After evaluating all feasible options, we
 10 developed plans to build a 175 MW lignite coal-fired facility in North Dakota. That
 11 project progressed to the point where we applied for and received an air quality permit.
 12 At about the same time, the opportunity to participate in the Big Stone Unit II project
 13 arose. Compared with the 175 MW lignite plant, the proposed Big Stone Unit II will
 14 provide greater economies of scale and related financial and operational benefits. The
 15 Big Stone Unit II project is a substantially more attractive alternative than any other
 16 supply-side option available to the company in the near future.

17 **Q: What general factors did the company consider in determining there was a**
 18 **need for participating in the ownership of the proposed Big Stone Unit II?**

19 **A:** Montana-Dakota produces long-range (20-year) forecasts of demand for electric
 20 power and energy annually in December. The projected annual power and energy
 21 requirements are modeled for each customer class, and growth forecasts are applied.
 22 Montana-Dakota utilizes an integrated resource planning process involving load

1 modeling and forecasting. The modeling and forecasting process is based on various load
2 growth assumptions, which are followed by an analysis of various demand- and supply-
3 side alternatives in determining what should be considered the best options for meeting
4 future customer power and energy requirements. This integrated resource plan, or IRP, is
5 updated every two years and is filed with the Montana Public Service Commission and
6 the North Dakota Public Service Commission pursuant to regulatory requirements in
7 those states. The company also makes an informational filing with the South Dakota
8 Public Utilities Commission. The IRP process is fluid and dynamic. Each of Montana-
9 Dakota's biennial IRP filings is the product of a strategic planning exercise that is based
10 on a snapshot of conditions that exist at the time the plan is prepared. It is therefore
11 subject to change as critical assumptions and economic and business conditions change.
12 Montana-Dakota filed its most recent IRP with the commissions in September 2005. The
13 IRP demonstrated Montana-Dakota needed a substantial amount of new base load
14 capacity in the year 2011 and beyond.

15 **Q: Please summarize Montana-Dakota's obligations to serve its customers?**

16 A: Montana-Dakota is responsible for providing its customers with a competitively
17 priced, reliable supply of electric power and energy.

18 **Q: How has Montana-Dakota taken this obligation into account in terms of its**
19 **resource planning activities?**

20 A: As noted above, several years ago we began considering construction of another
21 base load coal plant. We did this for several reasons: the expiration of the base load
22 Basin contract; the increased volatility of gas prices and concerns about long term natural

1 gas supply stability, coupled with low, but steady, growth in the electric requirements of
 2 our customers. The company determined that a new base load coal plant would provide
 3 stable prices for a long-term period (30 to 40 years). We also determined that because of
 4 the probability of ongoing price and supply volatility, a natural gas plant was not a
 5 feasible or prudent alternative. Coal availability within that time frame is far more
 6 certain than natural gas availability. Similarly, coal prices within that time frame are far
 7 more certain than natural gas prices. The development of this new base load resource is
 8 addressed in the 2005 IRP filing.

9 Montana-Dakota spent considerable time developing a new plant concept for
 10 southwestern North Dakota. Building a new coal fired plant can take ten or more years
 11 from initiation to completion, and the earliest such a plant could be on-line is about 2013.
 12 Because of the expiration of the Basin contract, Montana-Dakota faced an interim period
 13 of deficit capacity from October 2006 until a new base load plant is on-line. To address
 14 this problem, Montana-Dakota signed contracts with neighboring utilities for temporary
 15 capacity through 2012. We will also purchase energy from the MISO market.

16 **Q: What percentage of the output of Big Stone II has your company**
 17 **contractually committed to take?**

18 **A:** The project is being planned with Montana-Dakota's use of 116 MW, or just over
 19 19% of the plant's capacity.

20 **V. COST OF BIG STONE UNIT II**

21 **Q: How is Montana-Dakota going to pay its share of the construction and**
 22 **operating costs of the proposed Big Stone Unit II?**

1 A: Montana-Dakota intends to use permanent financing consisting of approximately
2 50 percent debt and 50 percent equity. This may consist of (but will not be limited to),
3 commercial paper, public debt, private placement debt, tax-exempt bonds, equity, and
4 capital infusions from subsidiaries. The exact form and percentage mix of the particular
5 types of permanent funding will depend on market conditions at the time the requirement
6 for permanent funding is established. To meet initial construction cash requirements, the
7 company may execute a construction loan or an irrevocable standby letter of credit.

8 **VI. BIG STONE UNIT II BENEFITS / ALTERNATIVES**

9 **Q: What benefits do you see Big Stone Unit II affording Montana-Dakota's**
10 **customers?**

11 A: Big Stone will replace the 66.4 MW of base load power currently supplied
12 pursuant to the expiring Basin power purchase agreement. Until the Big Stone Unit II
13 Plant is constructed, and after the expiration of the Basin purchase contract, Montana-
14 Dakota will purchase energy from the MISO market. The cost of this energy cannot
15 accurately be predicted and can fluctuate widely. Based upon our experience over the
16 ten-month period from April 2005 through January 2006, it has not been unusual for
17 MISO market prices for energy to exceed \$100/Mwh. Once Big Stone Unit II or another
18 base load resource is available, our customers will be insulated from the uncertainty and
19 variability of the price of power from the market. Assuming Montana-Dakota
20 successfully acquires an assured supply of firm base load power, and when the
21 company's capacity periodically exceeds its projected load, inclusive of the MAPP
22 reserve requirements, Montana-Dakota will also be able to sell surplus power into the

1 MISO market, which is a benefit to customers of Montana-Dakota as well as the
 2 customers of the utilities purchasing the power. For example, we anticipate the sale of
 3 surplus power will also allow the company to decrease and defer rate increase requests in
 4 South Dakota.

5 **Q: What alternatives exist to Big Stone Unit II for Montana-Dakota's customers**
 6 **in the timeframe beginning in 2011, and beyond?**

7 A: Montana-Dakota would reconsider developing the Lignite Vision 21 plant at
 8 Gascoyne, North Dakota. Other base load resources that may be available at a later date
 9 include a possible Resource Coalition plant, or the Milton Young 3 unit at Center, North
 10 Dakota. However, Big Stone is the resource most likely to be available first, filling our
 11 immediate need to replace the Basin contract.

12 **Q: Describe the rationale for Montana-Dakota's involvement with Big Stone**
 13 **Unit II.**

14 A: There are several reasons that Big Stone appears to be the best new base load
 15 resource for Montana-Dakota's customers. First, the cost estimates for this plant indicate
 16 that power will be roughly 30 percent less expensive than the smaller Lignite Vision 21
 17 project. That in itself would be enough for this to be a favored resource. However, there
 18 are other reasons Montana-Dakota considers Big Stone II the best available and most
 19 feasible option. The proximity of Montana-Dakota's base load resources to the
 20 company's customer load is a demonstrable benefit. The fact that the company's base
 21 load resources will consist of a share of a large, highly efficient plant, in combination
 22 with several plants in geographic proximity to the loads of the company's customers, in

1 smaller increments will make forced or planned outages less of a risk for our customers,
2 as less power will be offline at any particular time, minimizing the need to go to the
3 electric market for power, or running expensive gas peaking plants. Thus, having 116
4 MW from this plant, coupled with a similar amount of base load power from other future
5 plants spreads this risk.

6 Montana-Dakota's customers will benefit from economies of scale that will arise
7 from having the second unit built adjacent to the existing plant. Montana-Dakota owns
8 approximately 23 percent of Big Stone Unit I, and the per unit costs at that plant will
9 decrease as a result of having the Big Stone Unit II unit constructed on-site through the
10 sharing of equipment and employees.

11 We take comfort in having the considerable experience and talent of the other
12 participants available to assist in the design and operation of this plant, and feel that will
13 result in the lowest possible cost to our customers.

14 Montana-Dakota also considers that this highly efficient unit will reduce our
15 overall carbon intensity, and that the dual scrubber will be an efficient way to reduce the
16 emissions of both units.

17 **VII. ADDITIONAL INFORMATION**

18 **Q: Is there any other information that you would like to provide?**

19 A: We appreciate the Commission's attention to this matter. Montana-Dakota strives
20 to provide its customers with not just low cost, but best-cost, reliable electric energy.
21 This may not always be the resource that appears to be the cheapest in the results of a
22 model, but one that we believe can provide reliable power for a predictable and

1 affordable price well into the future, to protect our customers from price swings that they
2 cannot predict or plan for. Using the most efficient technology that has been
3 commercially proven allows us to continue to reduce our net company emissions for a
4 reasonable cost. All this, plus finding a way to leverage this new resource to clean the
5 emissions of the existing plant, makes the Big Stone Unit II plant our clear first choice.

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

7 **A: Yes.**