

1 **BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION**
2 **OF THE STATE OF SOUTH DAKOTA**

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4
5 **In the Matter of the Complaint**)
6 **Filed By Superior Renewable Energy**)
7 **LLC et al, Against Montana-Dakota**)
8 **Utilities Co. Regarding the Java Wind**)
9 **Project**)
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1 **III. NEW INFORMATION CONCERNING MDU AVOIDED COSTS**

2
3 **Q. WHAT ARE THE SOURCES OF THIS NEW INFORMATION WHICH**
4 **AFFECTS MDU'S AVOIDED COSTS?**

5 **A.** First, MDU's Integrated Resource Plan ("IRP") issued on September 15, 2005
6 summarizes much of the new information that is available. Some of this information is
7 also available from websites, (e.g., Otter Tail Power Company, Westmoreland Coal
8 Company).

9 Second, Supplemental Responses to Data Requests issued yesterday (November
10 15, 2005) by MDU contain some explicit cost data relative to possible future MDU
11 resources.

12 Third, I reviewed the publicly available statistics, as provided in the testimony of
13 Mr. Jeff Ferguson of Superior, concerning the change in prices for certain construction
14 materials of interest.

15
16 **Q. WHAT INFORMATION IN THE MDU 2005 IRP DID YOU FIND MOST**
17 **SIGNIFICANT?**

18 **A.** The most central information was the MDU Supply Side Resource Plan, which is
19 summarized in Exhibit KJS-9. The most significant element of the plan, the choice of a
20 new coal-fired resource is missing. The choice is between sole ownership of the Lignite
21 Vision 21 ("LV21") 175 MW unit with an in-service date of 2010, a 116 MW share of a
22 second unit being developed for the Big Stone site, the Big Stone II unit, with an in-

Supplemental Testimony of Kenneth J. Slater

1 service date of 2011, and an undefined share of an undefined Resource Coalition unit
2 with an in-service date of 2012. According to the 2005 IRP document;-

3 *“The decision on which baseload option is the most beneficial for*
4 *Montana-Dakota’s customers will most likely be made by the third quarter*
5 *of 2006,-----.” IRP Pages 4-14 & 4-15.*

6 However, *“for the purposes of this IRP,”* MDU has used the Big Stone II option, even
7 though, as I discuss later, the development of the unit is far from complete and costs are,
8 at this time, speculative.

9
10 **Q. PLEASE DISCUSS THE SUMMER PEAKING CAPACITY PURCHASES**
11 **INCLUDED IN THE IRP.**

12 **A.** These Summer Peaking Capacity purchases, as shown in Exhibit KJS-9, have all
13 appeared since the 2003 IRP. They are included to increase the levels of capacity
14 resources during the summer months to acceptable levels pending the acquisition of the
15 new coal-fired resource, and at the same time avoid the need to commit to the additional
16 gas-fired combustion turbines contained in the 2003 IRP. The 2006 purchase appears to
17 be a firm arrangement. The 2007 and later purchases from Northern States Power are the
18 subject of a Confirmation Agreement, signed by MDU on September 12, 2005, which
19 describes the agreement covering the purchases. The confidential confirmation includes
20 “Conditions Precedent” upon which the purchases are contingent. I have not yet heard
21 whether these conditions precedent have been met. The import of these Conditions
22 Precedent appear to be covered in the Executive Summary of the IRP;-

Supplemental Testimony of Kenneth J. Slater

1 *“—although a contract has been signed for the purchase of summer*
2 *peaking capacity for the bridge power, the final transmission*
3 *arrangements are not yet in place. Montana-Dakota and the seller will*
4 *secure the confirmed firm transmission service to deliver power from the*
5 *seller’s system to Montana-Dakota customer load.” IRP Page iv.*

6 Again, I have not heard whether these transmission arrangements have been finalized.

7
8 **Q. WERE THE 2005 IRP COAL UNIT OPTIONS INCLUDED IN MDU’S 2003 IRP?**

9 **A.** Only the LV21 unit was included as a resource option. The Big Stone II unit and the
10 Resource Coalition unit were not part of the 2003 evaluation.

11
12 **Q. HOW FAR HAS THE DEVELOPMENT OF THE LV21 PROJECT**
13 **PROGRESSED?**

14 **A.** The development of the LV21 unit and associated mine has reached the point where the
15 North Dakota Department of Health issued an air quality permit for construction of the
16 project to be started by December 31, 2006. As stated in the MDU 2005 IRP, the current
17 status of the LV21 option is;-

18 *“On May 14, 2004, Montana-Dakota and Westmoreland filed for an air*
19 *quality permit with the North Dakota Department of Health. The permit is*
20 *for the 175 MW plant and adjacent lignite mine and was issued on June 2,*
21 *2005. Under this permit, construction must begin by December 31,*
22 *2006.” IRP Page 4-10.*

23 My understanding is that the LV 21 unit is fully developed and construction could begin.

1

2 **Q. HAS THE PROJECTED COST OF THE LV21 UNIT CHANGED SINCE YOU**
3 **USED ITS COSTS, IN YOUR JANUARY, 2005 SUPPLEMENTAL TESTIMONY,**
4 **TO DEVELOP AVOIDED CAPACITY COSTS FOR THE JAVA WIND**
5 **PROJECT?**

6 **A.** There was no mention of increases in costs for the LV21 unit, either in the 2005 IRP or in
7 the Supplemental Responses to Data Requests. Capital structure, cost of capital and
8 escalation, as used in the 2005 IRP, are also unchanged from the values I used.

9 Notwithstanding this, I believe that the construction cost of the unit would be
10 affected by the same increases in basic material costs that Mr. Jeff Ferguson of Superior
11 notes in his Supplemental Testimony.

12

13 **Q. WHAT IS THE STATUS OF THE BIG STONE II UNIT?**

14 **A.** As stated in the MDU 2005 IRP, the current status of the Big Stone II option is;-

15 *“The Big Stone II partners are in the process of applying (for) a*
16 *Certificate of Need with the Minnesota Public Service Commission for the*
17 *construction of the transmission facilities associated with the unit that will*
18 *be constructed in Minnesota. The partners are also in the process of*
19 *applying for an Energy Conversion Facility Siting Permit in South*
20 *Dakota. Other studies to support permitting and construction are being*
21 *conducted.*

22 *On June 30, 2005, Montana-Dakota signed agreements with the other Big*
23 *Stone II partners that formalized the structure of the project. Studies to*

Supplemental Testimony of Kenneth J. Slater

1 *further define the cost of the plant are underway, and formal commitment*
2 *is scheduled for October 2006, pending the outcome of those studies.”*

3 IRP Page 4-11.

4 Unlike the LV21 unit, this project is far from defined, and much development activity is
5 required before the plant becomes a real option.

6
7 **Q. HAVE THE PROJECTED COSTS OF THE BIG STONE II UNIT CHANGED**
8 **FROM THOSE ASSUMED BY MDU WITNESS ED KEE IN HIS DIRECT**
9 **TESTIMONY OF JANUARY 31, 2005?**

10 **A.** Yes. In his testimony, Mr. Kee used a 2011 Big Stone II cost of \$1,666/kW plus another
11 \$150/kW for transmission. The \$1,666/kW was assumed to include Interest During
12 Construction (“IDC”) of \$197/kW. Thus Mr. Kee had assumed that Big Stone II would
13 cost \$1,816/kW including transmission and IDC.

14 In yesterday’s Supplemental Responses to Data Requests the current estimate of
15 Big Stone II’s cost is \$2,000/kW including transmission, but this figure obviously
16 excludes IDC. (See, for example, MDU Supplemental Response November 2005 to
17 SDPUC Third Data Request Q15 Attachment A page 2 of 2.)

18 If IDC is included, this latest Big Stone II cost estimate is about 25% higher than
19 assumed by Mr. Kee.

20

Supplemental Testimony of Kenneth J. Slater

1 **Q. ARE THESE LATEST BIG STONE II COSTS FINAL COST ESTIMATES?**

2 **A.** No. With studies still to be completed and permits still to be obtained, these latest costs
3 are far from final. It is my experience that cost estimates increase, rather than decrease,
4 as such additional studies are completed.

5
6 **Q. WOULD YOU ALSO EXPECT THE INCREASE IN BASIC MATERIAL COSTS,**
7 **AS NOTED BY MR. JEFF FERGUSON OF SUPERIOR IN HIS**
8 **SUPPLEMENTAL TESTIMONY, TO IMPACT THE COST OF BIG STONE II?**

9 **A.** Yes. I expect increases in basis material costs to further increase the cost of constructing
10 Big Stone II, just as I expect them to impact the cost of the LV21 unit.

11
12 **Q. WHAT IS THE STATUS OF THE RESOURCE COALITION UNIT?**

13 **A.** Five sites in North Dakota, South Dakota, and Iowa are under consideration for a unit
14 sized in the 600 – 1200MW range. As stated in the MDU 2005 IRP, the current status of
15 the Resource Coalition unit is;-

16 *“Transmission, fuel supply, and other studies are underway for all sites.”*

17 IRP Page 4-12.

18 At this time, there is no real concept for this unit, making it, by far, the least developed
19 option.

20

Supplemental Testimony of Kenneth J. Slater

1 IV. OTHER INFORMATION

2
3 **Q. DID THE MDU 2005 IRP MENTION THE JAVA WIND PROJECT?**

4 **A.** No. In fact the only mention of wind energy in MDU's 2005 IRP is in a list of other
5 factors considered;-

6 *"Total costs for wind turbines (including capital recovery) are dependent*
7 *on governmental incentives, which are not based on economic evaluations.*
8 *Governmental incentives notwithstanding, wind energy investments result*
9 *in relatively high costs for consumers."* IRP Page 4-1.

10 In view of the considerable efforts being made by the South Dakota Public Utilities
11 Commission to promote wind energy, this rather curt dismissal must be a disappointment.

12
13 **Q. HAS THE LACK OF PROGRESS WITH WIND ENERGY IN SOUTH DAKOTA,**
14 **AS WELL AS MONTANA AND NORTH DAKOTA, BEEN NOTED**
15 **ELSEWHERE?**

16 **A.** Yes. A November 2004 Federal Energy Regulatory Commission Staff Briefing Paper
17 "Assessing the State of Wind Energy in Wholesale Electric Markets," discusses the
18 penetration of wind energy, and, in particular, its relationship to difficulties associated
19 with transmission. Within this paper, there is a table which displays the top twenty states,
20 on the basis of wind energy potential, alongside the top twenty states, on the basis of
21 installed wind power capacity. This table is reproduced as Exhibit KJS-10 to this
22 testimony.

Supplemental Testimony of Kenneth J. Slater

1 On the potential side, South Dakota is ranked fourth, while on the installed capacity side,
2 it is ranked eighteenth. North Dakota is first in potential and thirteenth in installed
3 capacity. Montana is fifth in potential but does not appear in the top twenty for installed
4 capacity.

5 6 V. CONCLUSION

7
8 **Q. HAS THE NEW INFORMATION DISCUSSED ABOVE CAUSED YOU TO**
9 **CHANGE YOUR OPINION THAT AVOIDED CAPACITY COSTS FOR THE**
10 **JAVA WIND PROJECT SHOULD BE BASED ON THE LV21 UNIT COSTS?**

11 **A.** No. The Lignite Vision 21 unit is the only MDU baseload option that is sufficiently
12 developed to have a reliable cost estimate. The Big Stone II unit option, which MDU
13 witness Ed Kee has used, is not at the same stage of development as the LV21 unit and
14 current cost estimates are still speculative because of the number of unfinished studies
15 and unreceived permits, and are likely to be lower than final estimates.

16
17 **Q. DOES THAT CONCLUDE THIS SUPPLEMENTAL TESTIMONY?**

18 **A.** Yes, it does.

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

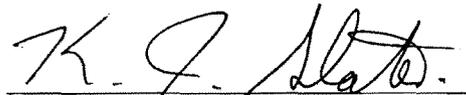
_____)
IN THE MATTER OF THE COMPLAINT FILED)
BY SUPERIOR RENEWABLE ENERGY LLC)
ET AL. AGAINST MONTANA DAKOTA)
UTILITIES CO. REGARDING THE JAVA)
WIND PROJECT)
_____)

Docket No. EL04-016

AFFIDAVIT

County of Fulton
State of Georgia

Kenneth J. Slater, President of Slater Consulting, being first duly sworn, deposes and says that the Further Supplemental Testimony of Kenneth J. Slater on Behalf of Superior Renewable Energy LLC submitted in the above-captioned proceeding was prepared by him, with the assistance of others working under his direction and supervision, that he is familiar with the contents thereof, and that the statements set forth therein are true and correct to the best of his knowledge, information and belief.



Kenneth J. Slater

Subscribed and sworn before me

this 16th day of November 2005.



Notary Public



My Commission Expires: 8/29/06

MDU 2005 IRP - Supply Side Resource Plan

	NorthPoint Energy Purchase	Northern States Power Purchase	Possible New Coal-fired Resources		
			Option 1 Lignite Vision 21 (175 MW)	Option 2 Big Stone II (116 MW share)	Option 3 Resource Coalition Unit
2006	25 MW Summer Peaking Capacity				
2007		85 MW Summer Peaking Capacity			
2008		90 MW Summer Peaking Capacity			
2009		95 MW Summer Peaking Capacity			
2010		100 MW Summer Peaking Capacity	175 MW Lignite Unit in Gascoyne ND		
2011		105 MW Summer Pkg Capacity (OPTIONAL)*		116 MW share of second unit at Big Stone SD	
2012		110 MW Summer Pkg Capacity (OPTIONAL)*			Undefined share of new unit at one of five possible sites

* NSP Capacity Purchase is optional in 2011 and 2012 dependent upon which baseload coal option is chosen

Exhibit KJS-10

Extract from:

November 2004 Federal Energy Regulatory Commission Staff Briefing Paper
 “Assessing the State of Wind Energy in Wholesale Electric Markets”

Table 1: Wind and the Lower 48 States

Source: FERC analysis, derived from data in: Platts *PowerDat*, American Wind Energy Association (AWEA) website. As of September 2004.

Top 20 States for Wind Potential			Top 20 States by Installed Wind Capacity [12/03]				
Rank	State	KWh (Billion)	Rank	State	MW	% of total	Total MW Installed
1	North Dakota	1,210	1	California	2043	4.4%	46,157
2	Texas	1,190	2	Texas	1293	1.7%	77,842
3	Kansas	1,070	3	Minnesota	563	6.4%	8,749
4	South Dakota	1,030	4	Iowa	471	5.4%	8,723
5	Montana	1,020	5	Wyoming	285	4.5%	6,277
6	Nebraska	868	6	Oregon	259	2.1%	12,096
7	Wyoming	747	7	Washington	244	0.9%	25,892
8	Oklahoma	725	8	Colorado	223	2.5%	8,833
9	Minnesota	657	9	New Mexico	207	3.8%	5,489
10	Iowa	551	10	Oklahoma	176	1.2%	14,855
11	Colorado	481	11	Pennsylvania	129	0.5%	27,055
12	New Mexico	435	12	Kansas	114	1.2%	9,204
13	Idaho	73	13	North Dakota	66	1.4%	4,753
14	Michigan	65	14	West Virginia	66	0.4%	16,017
15	New York	62	15	Wisconsin	53	0.4%	12,373
16	Illinois	61	16	Illinois	50	0.2%	28,438
17	California	59	17	New York	49	0.2%	28,671
18	Wisconsin	58	18	South Dakota	44	1.6%	2,825
19	Maine	56	19	Nebraska	14	0.3%	5,138
20	Missouri	52	20	Vermont	6	1.2%	515
				U.S. Total	6,375	0.9%	708,318