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

IN THE MATTER OF THE FILING BY	)	
SUPERIOR RENEWABLE ENERGY LLC ET AL.	)	
AGAINST MONTANA-DAKOTA UTILITIES CO.	)	
REGARDING THE JAVA WIND PROJECT	)	**DOCKET NO. EL04-016**

TESTIMONY OF JEFF FERGUSON ON BEHALF OF
SUPERIOR RENEWABLE ENERGY LLC

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Jeff Ferguson and my business address is 1600 Smith Street, Suite 4240, Houston TX, 77002.

Q. PLEASE DESCRIBE YOUR EMPLOYMENT HISTORY.

A. I presently serve as Chief Operating Officer of Superior Renewable Energy ("SRE") since July 2002. From August 2000 to July 2002, I served as Managing Director, Renewable Development, for Reliant Resources, Inc. in Houston, Texas ("Reliant"). In that capacity I directed all of Reliant's activities in renewable energy procurement, project development and marketing, including its national renewable strategy, national renewable policy oversight (State & Government), 200 MW King Mountain Wind Ranch (2nd largest wind project in the world), 45 MW Texas Landfill Gas Project (Largest single landfill gas transaction in the US) and renewable technologies economic database.

From June 1999 until I was appointed Managing Director, I served as Reliant's Director, Special Projects, where I performed generating asset commercialization, QF/PURPA ERCOT working group and strategy development support including the 600 MW

Indian River power plant (Florida), gross margin and capital/operational budget analysis, and operational procedure development (Orlando Utility Commission).

From March 1997 to June 1999, I served as Manager of Generation Planning/Structuring for Entergy Services, Inc. in Woodlands, Texas. In that capacity I was responsible for generation optimization for the Entergy system and providing structuring and middle office risk management for wholesale power, gas, oil and coal, including commodity risk management and strategic hedge program development, fossil fleet asset valuation (24,000 MW capacity portfolio), forward curve and derivative pricing development and 1,500 MW alternative fuels repowering business proposal.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I hold a Bachelors of Science in Industrial Engineering from Texas A&M University and a Master of Science in Engineering Management from Southern Methodist University.

Q. PLEASE DESCRIBE THE JAVA WIND PROJECT.

A. The Java Wind Project ("Project") is located in Walworth County, South Dakota. Java will have an initial installed nameplate electrical generating capacity of 30.6 megawatts. A plat showing the location of the Java Wind Project is attached as Exhibit 2 to the Testimony of John E. Calaway.

Q. WHEN COULD THE JAVA PROJECT BE BUILT AND COMMISSIONED TO PRODUCE WIND POWER?

A. At the earliest, the Java Wind Project could begin to produce test energy on or about October 15, 2005.

Q. HAS SUPERIOR SECURED THE PROPERTY RIGHTS TO DEVELOP JAVA?

A. Superior has secured the contract and real property rights needed to build and operate Java from the landowners at the site. These rights typically run for a period of fifty years. These property rights also include one section of land owned by the State of South Dakota for the benefit of local schools.

Q. IN WHAT ELECTRICAL SERVICE TERRITORY IS JAVA LOCATED?

A. The Java Wind Project is located within the service territory of Montana Dakota Utilities ("MDU").

Q. WHAT IS THE STATUS OF INTERCONNECTION WITH MDU'S TRANSMISSION SYSTEM?

A. On behalf of Java, Superior initiated the large generator interconnection procedures with the Midwest Independent Transmission System Operator, Inc. ("MISO"), in accordance with their applicable tariff in February 2003, to interconnect 50 MW of wind power to the transmission grid. The system impact study and facility study were completed in August 2003. The results were extraordinarily positive, the total cost for the Transmission Owner Interconnection Facilities and Interconnection System Upgrades is estimated to be $292,000 to interconnect the proposed 50 MW of wind power generation that was studied.

Q. HAS AN INTERCONNECTION AGREEMENT BEEN EXECUTED?

A. The interconnection agreement was executed on October 8, 2004 between Java, MDU and MISO. The agreement was filed with the Federal Energy Regulatory Agency ("FERC")

on October 27, 2004. However, in an order issued on December 21, 2004, FERC required MISO to re-submit the agreement in a form that was consistent with MISO's Large Generator Interconnection Agreement (LGIA), Attachment X of MISO's Open Access Transmission Tariff ("OATT") that was made effective on July 8, 2004. FERC noted that the re-filing of a revised agreement in this instance will not affect the Interconnection Customer's position in the queue nor will additional studies be required if the Interconnection Customer requests the same interconnection and operating service. As a result, the agreement will simply be replaced with the MISO's Attachment X standard for LGIA, executed by the parties, and re-submitted to FERC for acceptance. This is expected to occur over the next couple of weeks from the time of this testimony.

Q. WHAT IS THE ESTIMATED ANNUAL OUTPUT (KWH) OF THE JAVA WIND PROJECT?

A. The estimated annual output of the Java Wind project will be 139,000,000 kWh per year. Presently, the Vestas V80 1.8 MW is the incumbent Wind Turbine Generator (WTG) for the Java Wind Project. The Vestas V80 1.8 MW is the Wind Turbine Generator (WTG) that Superior is evaluating for use in the Java Wind Project. The estimated output calculations were made based on using the Vestas V80 1.8 MW WTG.

Q. IS THERE ANYTHING UNIQUE ABOUT THE V80 WTG?

A. WTGs are placed in primarily two wind profile performance classes, I and II. Generally speaking, there is an average wind speed cut off for each class in which the WTG can acquire an engineering certification to operate. The average wind speed cut off is 8.5 m/s

and 10.0 m/s for a Class I and Class II WTG respectively. Java is a class I site because of the tremendously energetic wind profile and as a result the V80 would be a complimentary fit.

Q. WOULD JAVA, BEING A CLASS I WIND RESOURCE SITE, PRODUCE A MEANINGFUL CONTRIBUTION OF CAPACITY IN ADDITION TO ENERGY AND THE POSITIVE RENEWABLE ATTRIBUTES ASSOCIATED WITH WIND POWER PRODUCTION?

A. The wind resource fueling the Java Wind Project exhibits consistent production over time and as a result yields high capacity factors that do coincide with MDU's peak load. Following the MAPP capacity accreditation procedure, Table-1 summarizes the expected monthly accreditation values once the Java Wind Project is in operation. The amount of capacity that is accredited can be considered firm for long-term capacity planning purposes. For example, MDU in its 2003 Integrated Resource Plan (IRP), section 4.3.8, includes the anticipated capacity accreditation for the Dakota I Power Partners wind power project, under MAPP requirements for accrediting variable generation capacity in their 20-year supply side analysis. See attached Exhibit 1. Note, however, that the Dakota I Power Partners wind power project was never subsequently constructed.

Java Wind Facility Summary
2003-2004

Month	Monthly Gross Mean CF (%)	Monthly Gross Median CF (%)	Montly Recovery Rate (%)	MDU Peak Period	Peak Recovery Rate (%)	Peak Gross Mean CF (%)	Peak Gross Median CF (%)	MAPP Capacity Accreditation: Peak Gross Median Farm Output (MW)*	MAPP Capacity Accreditation: Percentage of Installed Capacity
Jan	51	48	96	0800 - 1159	93	45	37	11.3	36.8%
Feb	54	58	95	0900 - 1259	94	49	47	14.4	46.7%
Mar	67	90	82	1000 - 1359	83	59	78	23.9	77.5%
Apr	54	56	100	2000 - 2359	100	64	75	23.0	74.5%
May	56	58	99	1700 - 2059	100	52	49	15.0	48.7%
Jun	42	34	99	1400 - 1759	100	39	31	9.5	30.8%
Jul	39	32	100	1600 - 1959	100	33	23	7.0	22.9%
Aug	49	46	100	1700 - 2059	100	42	37	11.3	36.8%
Sep	54	55	99	1200 - 1559	100	51	48	14.7	47.7%
Oct	47	44	97	1500 - 1859	98	50	43	13.2	42.7%
Nov	62	70	90	1800 - 2159	93	72	89	27.2	88.4%
Dec	52	51	92	1800 - 2159	93	67	77	23.6	76.5%

The proposed Java Wind Project consists of 17 x Vestas V80 - 1.8 MW turbines at a hub height of 78m

Table-1

In addition, there is clear support for the acknowledgement and compensation for the capacity contribution made by a wind power facility in FERC's PURPA implementation orders. Small Power Production and Cogeneration Facilities; Regulations Implementing Section 210 of the Public Utility Regulatory Policies Act of 1978, Order No. 69, Regulations Preamble, 1977-1981 ¶ 30,128, at 30,879 (Feb. 25, 1980). Order No. 69 states:

> Several commenters observed that the patterns of availability of particular energy sources can and should be reflected in standard rates. An example of this phenomenon is the availability of wind and photovoltaic energy on a summer peaking system. If it can be shown that system peak occurs when there is bright sun and no wind, rates for purchase could provide higher capacity payment for photovoltaic cells than for wind energy conversion systems. For systems peaking on dark windy days, the reverse might be true. Subparagraph (3) (ii) thus provides that standard rates for purchases may differentiate among qualifying facilities on the basis of the supply characteristics of the particular technology.

Q. WHAT IS MAPP CAPACITY ACCREDITATION AND WHAT IS THE EXPECTED TIME FRAME FOR REQUESTING AND RECEIVING THE MAPP CAPACITY ACCREDITATION?

A. MAPP capacity accreditation is the process by which a generating unit demonstrates the capability to serve system load and provide the required amount of reserves necessary to

assure the maximum degree of service reliability. This generating capability is accounted for in a uniform manner, which assures the use of consistently attainable values for planning and operating the system.

The Java Wind Project will not receive an official MAPP capacity accreditation value until: (a) the facility is in operation, (b) an annual Uniform Rating of Generator Equipment (URGE) report is submitted and (c) accreditation is acknowledged by MAPP. As stated in MAPP's capacity accreditation procedure, Section 3.4.7.2.7.7:

> During the first three years, Monthly Net Capability will be determined after-the-fact by applying all historical data for the same month including the month just completed. The annual URGE filings to be made following the first three years of operation shall report Monthly Net Capability on a before-the-fact basis pursuant to Section 3.4.7.2 for the following MAPP years by applying historical data per Section 3.4.7.2.7.2. Once before-the-fact accreditation is established, revision reports between annual reports shall not be filed except to report changes in installed nameplate capability.

Q. DESCRIBE YOUR ROLE IN THE AVOIDED COST NEGOTIATIONS WITH MDU LEADING UP TO THE COMPLAINT FILING.

A. I requested capacity and energy compensation from MDU for Java over a twenty-year period, coinciding with the project's design life and with the terms and conditions of Order F-3365. Superior's position was that the nature of the compensation should be commensurate with all state and federal regulatory policy for determining a utility's long-term avoided cost. MDU and Superior never discussed a specific purchase price, per kilowatt, for capacity and price, per kilowatt-hour, for energy because contract negotiations reached an impasse at a very early stage in the negotiations. This impasse occurred because, prior to discussing an applicable purchase price for capacity and energy, MDU rejected Superior's assertion that a capacity payment would be applicable in the first place.

In April 2004, after fourteen months of ongoing discussion with MDU, I was informed that MDU was unwilling to give any additional consideration to purchasing the power from Superior under a power purchase agreement. In addition, MDU informed me that it was not short capacity. I was also given conflicting information regarding the status of the Dakota I wind project. First, I was informed that the Dakota I project agreement had expired due to owner delay in construction. Later, I was told that the project was still being pursued. I was also informed that MDU was not going to consider any wind power this year due to the resource drain being caused by the activities surrounding the Northwestern potential acquisition. At that point, Superior was left with no option but to exercise the right to sell power to MDU as a QF pursuant to PURPA at MDU's avoided cost.

Q. DO YOU BELIEVE MDU NEGOTIATED WITH SUPERIOR IN GOOD FAITH.

A. No. As discussed in more detail in Mr. Calaway's testimony, I believe MDU consistently delayed the negotiations and provided inconsistent or inaccurate information. Superior finally concluded that MDU was not willing to compensate Java for the capacity contribution it would provide to MDU, creating an impasse in the avoided cost negotiations. Thus, Superior filed the complaint in this proceeding requesting the Commission's assistance.

Q. DOES THIS CONCLUDE YOUR TESTIMONY

A. Yes

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 Harris
State of Texas

Jeff Ferguson, Chief Operating Officer, Superior Renewable Energy LLC (Superior), being first duly sworn, deposes and says that the Direct Testimony of Jeff Ferguson on Behalf of Superior and Java 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.

Jeff Ferguson

Subscribed and sworn before me

this 5th day of January 2005.

NATALIE G. McCUE
NOTARY PUBLIC
STATE OF TEXAS
My Commission Expires 03/12/2008

Notary Public

My Commission Expires: 03/12/2008

4.3.7 CAPACITY RECEIVED FROM WESTERN AREA POWER ADMINISTRATION

In January 2001, Montana-Dakota entered into an agreement with WAPA by which the company would be receiving from 2.2 to 2.8 MW of capacity and associated energy under Bill Crediting Program Arrangements.[4] This agreement is the result of a federal mandate that Native American tribes be allocated preference power from WAPA. Montana-Dakota is involved because it has Native American customers located in its Montana service territory on the Ft. Peck Indian Reservation. These customers have been and continue to be Montana-Dakota customers, but prior to the federal mandate, the company was 100% responsible for their power supply needs.

The WAPA agreement provides Montana-Dakota with capacity (2.8 MW in the summer and 2.2 MW in the winter) as part of the company's existing resources.

4.3.8 COMMITTED RESOURCES

As part of Montana-Dakota's committed resources modeled in EGEAS, there are two new generation resources that will be on-line in 2003. One new generation facility is the second single-cycle combustion turbine that Montana-Dakota has constructed at the existing Glendive Combustion Turbine site in Glendive, Montana. The unit, Glendive Combustion Turbine No. 2, rated at 40 MW, commenced commercial operation on May 31, 2003. It is anticipated the capacity from Glendive CT #2 would be accredited by MAPP at 39 MW for the summer and 42 MW for the winter season.

The other resource is a 20 MW wind farm located in Dickey County, North Dakota. Montana-Dakota contracted with Dakota I Power Partners (Dakota I) to purchase the entire energy output of the wind farm at a fixed price. Dakota I will construct 13 wind turbines, each rated 1.5 MW, with all turbines scheduled to be in commercial operation no later than April 30, 2004. This wind farm was modeled to be on-line in 2004. Based on the wind profiles in the area and the MAPP requirements for accrediting variable generation capacity, it is anticipated the capacity from the Dakota I wind farm would be accredited by MAPP at 3 MW for the summer and 4 MW for the winter season.

REFERENCES

1/ Review of the Reserve Capacity Obligation. Minneapolis, Minnesota: Reserve Requirements Task Force, Mid-Continent Area Power Pool, May 1994.

2/ Generating Availability Report, 1985-1989. Princeton, New Jersey: Generating Availability Data System, North American Reliability Council, August 1990.

3/ Antelope Valley Station Participation Power Purchase/Sale Agreement between Basin Electric Power Cooperative and Montana-Dakota Utilities Co. Dated January 23, 1990.

4/ United States Department of Energy Western Area Power Administration. Contract with Fort Peck Tribes and Montana-Dakota Utilities Co. for Bill Crediting Program Arrangements. Dated January 4, 2001.

4.4 LOAD-AND-CAPABILITY COMPARISON

For an understanding of Montana-Dakota's capability to serve the projected loads, a comparison of its summer accredited capability and peak load obligation is shown in Figures 4-2, 4-3, and 4-4 for the base forecast, the high-growth scenario forecast, and the low-growth scenario forecast. The accredited capability, defined as the capacity available to serve Montana-Dakota's own load, is equal to its net generating capability (including the AVS II capacity purchase and the capacity received from WAPA), plus the anticipated capacity from the committed resources. As a member of MAPP, Montana-Dakota is required to maintain an accredited capability equal to or greater than its maximum system demand plus a reserve capacity obligation. The reserve capacity obligation is equal to 15% of the annual system peak demand. Therefore, the peak load obligation used on the graphs is the projected summer peak demand plus a 15% reserve capacity obligation as required by MAPP.

Figure 4-2 shows that, with the base forecast, Montana-Dakota would have adequate capacity to meet its peak load obligation until 2007 at which time the AVS II capacity purchase will expire and a capacity deficit of 66.9 MW would occur. Therefore, if a 15% reserve capacity obligation is to be maintained, additional capacity will be needed in 2007. With the high-growth scenario forecast, as shown in Figure 4-3, a capacity deficit would occur even in 2004 (28.0 MW). Like the base forecast, the low-growth scenario forecast shown in Figure 4-4 would not result in a capacity deficit until 2007 (38.5 MW).