	BEFORE THE PUBLIC UTILITI	ES COMMISS	ION
	OF THE STATE OF SOUT	H DAKOTA	RECEIVED
			MAR 1 5 2005
BY ET UTI	THE MATTER OF THE COMPLAINT FILED SUPERIOR RENEWABLE ENERGY LLC AL. AGAINST MONTANA DAKOTA LITIES CO. REGARDING THE JAVAND PROJECT	) ) ) ) Docket No ) )	SOUTH DAKOTA PUBLI UTILITIES COMMISSIO . EL04-016
	REBUTTAL TESTIMONY OF KENNETH SUPERIOR RENEWABLE F		N BEHALF OF
	I. <u>INTRODUC</u>	<u>TION</u>	
Q.	PLEASE STATE YOUR NAME AND BUS	SINESS ADDR	ESS.
A.	My name is Kenneth J. Slater. My busines	s address is 33	70 Habersham Road,
	Atlanta, Georgia 30305.		
	ARE YOU THE SAME KENNETH J. SLA RECT AND SUPPLEMENTAL TESTIMONY HALF OF SUPERIOR RENEWABLE ENERGY Yes.	IN THIS PRO	CEEDING ON
	II. PURPOSE OF TE	STIMONY	
Q.	WHAT IS THE PURPOSE OF THIS REB		IMONY?
A.	The purpose of this testimony is to rebut po	ortions of the te	estimony provided by
Ms	. Stomberg and Mr. Kee on behalf of Montan	ıa-Dakota Utilit	ies (MDU), and Mr.
Wo	olf on behalf of the Staff of the South Dakota Pul	blic Utilities Co	mmission.
Q. WI	IS THERE ANYTHING IN PARTICULA TNESSES HAVE ASSERTED IN COMMON		SE THREE

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1	A. No, but there is something that all three of them appear to ignore. That is, the
2	reason that MDU has decided to ignore the results of its Integrated Resource Planning
3	exercise and opt for base load coal-fired capacity as its next increment of capacity.
4	Q. AND WHAT IS THAT REASON?
5 6	A. The reason is that MDU appears to not want the uncertainty of fuel costs
7	associated with gas-fired combined cycle generation. Once constructed, with long-term
8	fuel supply arrangements in place, base load coal generation provides a great amount o
9	energy at low and predictable cost. Fuel cost risk is minimal.
10	MDU has deliberately bypassed the lowest expected cost system addition
11	(gas/light oil fired combined cycle plant), in favor of the predictable, low cost low risk
12	alternative of coal-fired capacity. In addition, their choice of the 175 MW "Lignite
13	Vision 21" (LV21) unit provides them with greater control over both the plant itself and
14	the fuel supply.
15	All of these attributes appear to be worth the cost to MDU, and any other source
16	which can provide similar cost predictability should be worth the same to MDU.
17	III. THE TESTIMONY OF MS. ANDREA STOMBERG
18 19	Q. WITH WHAT IN PARTICULAR DO YOU DISAGREE IN MS. STOMBERG'S TESTIMONY?
20 21	A. There are two matters. First, Ms. Stomberg asserts that MDU had no need for
22	additional firm capacity in 2005 and 2006, when it was recently seeking to arrange
23	purchases from various members of MAPP and, in fact made such an arrangement with
24	Saskatchewan.
25	The apparent reason was that MDU wished to improve the reliability of it
26	overall resources and avoid MAPP deficiency payments. This was a capacity need seen

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- 2 capacity. The Java Wind Facility could satisfy such a need as soon as it comes in service.
- 3 Q. WHAT IS YOUR SECOND PROBLEM WITH MS. STOMBERG'S
- 4 TESTIMONY?

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- 6 A. My second problem is the way Ms. Stomberg has introduced, for the first time,
- 7 two additional base load coal options, as if they were at a similar stage of development to
- 8 that of the LV21 unit. Both MDU and the LV 21 unit's coal supplier have spent
- 9 considerable sums of money on the development and design of the project, even to the
- 10 point of applying for an air emissions permit. MDU has had no such participation
- 11 concerning either of the other two supposed projects.
- 12 Q. WHY WOULD MS. STOMBERG BE APPEARING TO CHANGE
- 13 HORSES IN MID-STREAM?
- 15 A. All I can think of is that she wished to give Mr. Kee a lower \$/kW capital cost for
- 16 a base load coal unit.
- 17 Q. SHOULDN'T MDU BE OPTING FOR THE LOWEST \$/KW COAL UNIT?
- 19 A. Not necessarily. Other factors, such as the higher level of operational control,
- 20 closeness to MDU's system, transmission matters, shortness of construction time and the
- 21 lack of fuel transportation needs could all have value to MDU in excess of the difference
- in nominal \$/kW capital cost.
- 23 IV. MR. EDWARD KEE'S TESTIMONY
- 24 Q. WHAT PROBLEMS HAVE YOU FOUND IN MR. KEE'S TESTIMONY?
- 26 A. Mr. Kee starts out telling us that QFs and the associated PURPA rules are no
- longer needed, and then proceeds to define a set of avoided costs and power purchase

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2	and no	o need t	to apply PURPA rules.	
			AT DO YOU FIND SO WRONG ABOUT MR. KEE'S PROPOSALS?	
4 5	A.	The elements that I find to be the most troubling are as follows.		
6		(a)	The ignoring of all capacity value of the Java Wind Facility prior to 2007.	
7		(b)	The equating of Java's annual capacity value to three month's rental of	
8			some portable CTs during the period from January 2007 to mid-June of	
9			2010.	
10		(c)	The adoption of base load coal capacity costs that are simply generic	
11			costs, bearing no relationship to any real coal-fired project, just because	
12			those costs are lower than real project costs.	
13		(d)	The rush to market based avoided costs, when no real market exists.	
14		(e)	Completely ignoring this Commission's instructions concerning the	
15			capacity value to be used for base-load avoided capacity costs, and	
16			concerning the length of PPA.	
17		(f)	The attempt to "pile on" firm transmission costs and unrealistic integration	
18			costs.	
19 20	Q. THA		HAVE ALREADY DISCUSSED ITEMS (A) AND (C). WHAT IS IT IFIND SO OBJECTIONABLE ABOUT (B)?	
21 22	A.	Equa	ting the annual capacity value of the Java Project to three months rental of	
23	portal	ble CTs	s is once again searching for the lowest possible capacity cost to avoid. I do	
24	not b	elieve	that it is an option that MDU would actually pursue. But, worse, it	
25	comp	letely i	gnores the capacity value of the Java Wind Facility during the other nine	
26	mont	hs of th	e year.	

agreement (PPA) rules which would ensure that in South Dakota there would be no QFs

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4 A. In theory, there is nothing wrong with market based avoided cost rates. Once a competitive wholesale generation market achieves the state where it has true competition 5 and established workable rules regarding both energy prices and capacity prices, these 6 7 prices could be used to determine avoided costs.

But, there is only one such market in the U.S. that has reached this point, (the New York ISO), and one other that is close to achieving the same situation, (ISO New England). To get to this stage, there has been the divestiture of generation assets by the vertically integrated utilities, (so that generators have no other source of income except the markets.) There has been the progressive development and implementation of market rules through collaboration among the various market participants and the gaining of the approval of State and Federal regulators. This progression has taken many years, even in

The Midwest ISO still has vertically integrated utilities whose ratepayers support the fixed costs associated with generating plant. A "day ahead" energy market has yet to come into being. A true competitive market in both capacity and energy is a long way off.

#### IN WHAT WAYS HAS MR. KEE IGNORED THIS COMMISSION'S 20 O.

- INSTRUCTIONS CONCERNING AVOIDED CAPACITY AND CONCERNING 21
- THE LENGTH OF POWER PURCHASE AGREEMENTS? 22

the former "tight" pools in the U.S. Northeast.

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This Commission's 1982 Order clearly states that the avoided capacity payments A. should be made on the average capacity during the peak months. Mr. Kee has chosen to use the lowest monthly value of MAPP accredited capacity rather than the average. In 26 addition, he has failed to recognize any value for capacity in addition to this amount in all

1	other eleven months of the year, which would then provide the customers of MDU with
2	more value than they were paying for, thus violating the customer indifference concept of
3	the PURPA rules.
4	Regarding the term of the PPA, this Commission in 1982 explained that long-term
5	(greater than ten years) PPAs were needed in order that the project could obtain the
6	necessary financing for construction. This is at least as true today as it was in 1982.
7 8	Q. WHAT IS THE AMOUNT OF CAPACITY FOR WHICH SUPERIOR SHOULD BE PAID RELATIVE TO THE JAVA WIND FACILITY?
9 10	A. Based on the wind data provided by Mr. Ferguson and on the demand curve for
11	MDU's system that shows that MDU is currently a summer peaking system, I would
12	follow the SDPUC Decision and Order by averaging the amount of capacity available
13	from the Java Wind Facility for the four months of June, July, August and September.
14	The average amount of capacity available during that time is equal to 10.6 megawatts. I
15	would then require MDU to pay Superior for that amount of avoided base load capacity
16	on a year-round basis.
17	Since in all non-summer months, the Java Wind Project will provide capacity in
18	addition to the average summer value of 10.6 MW, I would also require MDU to pay
19	Superior for the seasonal value of this additional capacity.
20 21	Q. WHY DO YOU SAY THAT MR. KEE IS "PILING ON" REGARDING FIRM TRANSMISSION COSTS AND INTEGATION COSTS?
22 23	A. Mr. Kee's raising of the issue of the QF obtaining firm transmission rights is quite
24	out of context. Supplies that are contracted to serve the native load of the utility to which
25	they are connected are, in any jurisdiction of which I am aware, only responsible for their
26	interconnection with that system. The transport of its power around the system to the

- 1 customers of that system is the subject of a native load transmission reservation for
- 2 network service, which is the responsibility of the load serving utility, just as it is for that
- 3 utility's own generating units. Regarding the suggested level of system integration costs,
- 4 Mr. Kee has used an example which is completely different from that of the Java Wind
- 5 Facility and MDU, apparently the most costly example available.

#### V. TESTIMONY OF MR. TIMOTHY WOOLF

- 7 Q. MR. WOOLF, TESTIFYING ON BEHALF OF THE SCPUC STAFF, WAS
- 8 CRITICAL OF THE FACT THAT YOU DID NOT PRESENT A COMPLETE
- 9 CALCULATION OF AVOIDED COSTS FOR THE JAVA WIND FACILITY. DO
- 10 YOU WISH TO COMMENT ON THAT?
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- 12 A. Yes. First, one cannot provide a complete calculation without possessing the
- appropriate amount of data and information. I believe that it is really the responsibility of
- 14 the utility, under the supervision of the PUC, to provide a complete calculation of
- 15 avoided costs.
- 16 Second, I note that Mr. Woolf provided no such calculation himself, although I
- understand that he has given MDU some direction so that MDU can perform certain of
- the calculations recommended by Mr. Woolf. I have not had the opportunity to provide
- 19 comments on whether or not they are correct or even whether or not they are consistent
- with Mr. Woolf's testimony.
- Third, I am concerned that Superior will have gone through considerable time and
- 22 expense in this proceeding only to have a decision from the Commission that does not
- 23 determine a specific avoided cost price that MDU must pay Superior for the Java Wind
- 24 Facility. Such an outcome leaves the door open to further disputes with MDU about
- 25 price and other terms.

### 26 Q. HOW WOULD YOU ADDRESS THIS LAST CONCERN?

If I were unable from the record evidence to determine an avoided cost payable to 2 A. the Java Wind Facility, I would include in my decision clear guidance about how avoided 3 costs are to be determined. In addition, I would provide a fast track timetable for the 4 parties to complete the avoided cost calculations and to incorporate the resulting avoided 5 cost price into a power purchase agreement. I would keep the docket open pending 6 notification by all parties that the power purchase agreement was completed and I would 7 provide for some way for the parties to come back before the Commission quickly to 8 resolve any differences that arise during that time period. 9

## 10 Q. APART FROM MR. WOOLF'S CRITICISM ABOUT THE LACK OF AN AVOIDED COST CALCULATION, DO YOU HAVE ANY PARTICULAR

12 PROBLEMS WITH MR. WOOLF'S TESTIMONY?

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A. There is much in Mr. Woolf's testimony which coincides with my own view that I expressed in my testimony. As I do, he recognized the importance of PPA terms which are considerably longer than ten years, the importance of calculating avoided capacity as the average of the summer months rather than the lowest, the importance of recognizing the value of additional capacity provided by the Java Wind Facility during off-peak months, and the importance of capturing avoided environmental emission costs.

However, there is one area where I have some disagreement with Mr. Woolf, and that is his insistence on using the avoided cost of a CT peaking unit as the avoided capacity cost under all circumstances, and recognizing what he calls "capitalized energy" costs when the actual avoided unit is not a CT, but is a base load unit. To determine avoided costs for MDU, when the avoided unit is a base load unit, Mr. Woolf wants the Commission to first use the avoided cost of the CT peaking unit as the avoided capacity cost. He then wants the Commission to recognize the additional capacity cost of the base

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- load unit as "capitalized energy costs" and add these to the actual energy cost of the base
- 2 load unit to obtain an energy avoided cost for the base load unit. Altogether, these
- 3 amounts equal a sum that is equivalent to the actual avoided capacity and energy costs of
- 4 the base load unit. This approach has some theoretical support and has been used in other
- 5 avoided cost type proceedings. It aims to produce the same total avoided cost as does the
- 6 use of the base load unit's actual capacity and energy costs as avoided capacity and
- 7 energy costs. Nevertheless, I believe that Mr. Woolf's methodology introduces
- 8 unnecessary complications and a potential for error when the energy output of the
- 9 avoided unit varies according to load levels and the relative price of certain system fuels.
- 10 It is also inconsistent with the SDPUC's Decision and Order.

### 11 Q. DO THE FEDERAL PURPA RULES PROVIDE ANY GUIDANCE ON

12 THIS POINT?

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- 14 A. My reading of the FERC rules and preamble is that there are three valid
- approaches. The "avoided unit" concept, the "peaker" method and the total system cost
- 16 "with and without" method.
- The avoided unit method adopts the capacity and energy costs of the avoided, (or
- avoidable), unit as the avoided capacity and energy costs. The peaker method uses the
- 19 capacity costs of a peaking unit as the avoided capacity cost and the system incremental
- 20 energy cost as the avoided energy cost. The total system cost with and without method
- 21 requires the determination of an optimal system plan with the QF as part of the system
- resources and an optimal system plan without the QF as part of the system resources.
- 23 The present value of revenue requirement difference between the plans is the total
- 24 avoided cost of the QF.

### 25 Q. WHICH OF THESE METHODS IS IN COMMON USE?

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2	A. I feel sure that all have been used. The most common is the peaker method,
3	because of its ease of application and lack of controversy over what unit was avoided
4	The avoided unit method is the easiest to implement once the avoided unit is agreed
5	upon. I believe it is the better of these two methods because it replicates in the avoided
6	capacity costs the costs of acquiring various attributes of the avoided unit that prompted
7	its choice as the next system addition, whereas the peaker methodology recognizes

8 nothing of the actual avoided unit, and can therefore understate avoided costs. The

peaker method is particularly inappropriate here given MDU's intention for the LV 21

unit to be the avoided unit. The with and without method sounds good in theory, but is

very difficult to implement in practice, gives "lumpy" results because unit additions have

substantial size, and can result in the comparison of two cases, neither of which

represents what the utility is actually doing.

### Q. DOES THE SDPUC 1982 ORDER PROVIDE ANY GUIDANCE ON THIS POINT?

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A. My reading of the SDPUC rules finds only one methodology. This method uses the system incremental cost as the avoided energy cost in all cases, and then chooses the capacity cost of a peaker as the avoided capacity cost if the PPA has a term of less than ten years, or the capacity costs of baseload resources as the avoided capacity cost if the PPA has a term greater than ten years. This means that the SDPUC's method of determining base load (long term) avoided costs is not one of the FERC recognized procedures, since it provides for the payment of base load avoided capacity costs along with peaker avoided energy cost. Mr. Woolf, in his testimony points out this same problem, but endeavors to pursue it through his proposed avoided cost methodology.

## Q. TO THE EXTENT THAT THE SDPUC 1982 ORDER ADOPTS A METHODOLOGY FOR DETERMINING AVOIDED COSTS NOT IDENTIFIED

2 METHODOLOGY FOR DETERMINING AVOIDED COSTS NOT IDE 3 BY THE FERC, DOES THE ORDER NEED TO BE MODIFIED?

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- 5 A. While the FERC gave the individual state regulatory authorities considerable
- 6 discretion to implement PURPA within their jurisdictions, I believe that it would be
- 7 better to use a method which did not pair the avoided capacity cost of a base load unit
- 8 with the avoided energy cost of a peaker.

### VI. <u>RECOMMENDATIONS</u>

### 10 Q. WHAT SHOULD BE DONE ABOUT THIS SEEMING MISMATCH OF

### CAPACITY AND ENERGY AVOIDED COSTS?

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- 13 A. I have great difficulty in recommending "a rule change in the middle of a game."
- 14 However, if the Commission believes that the SDPUC Order needs to be modified, I
- think that there is a rule change that could help clarify matters and help both the QF and
- the MDU customers to achieve a closer match of avoided cost payments to the value of
- 17 the power and energy provided.

### 18 Q. HOW WOULD YOU CHANGE THE RULES?

- 19 A. I would provide for the year-round baseload portion of a QF resource such as the
- Java Wind Facility, (based on its average summer capability), under a long-term PPA, to
- 21 receive the capacity cost and energy cost of the next baseload addition to MDU's system
- 22 as its avoided capacity cost and avoided energy cost payments, to be paid right from the
- 23 time the QF comes into service, (not the time the avoided unit was due to enter service).
- 24 This could be achieved by using my method or Mr. Woolf's method. If during the time
- between the in-service date of the QF and the in-service date of the avoided unit, the
- 26 presence of the QF resulted in some surplus capacity which could not be contracted to
- 27 another party, the avoided capacity cost of this surplus capacity would be deducted from

- 1 the base load avoided cost which would otherwise be paid to the QF. The seasonal
- 2 capacity of the QF over and above the year-round portion would be treated as a non-
- 3 baseload resource and paid seasonal capacity value and system incremental energy cost
- 4 as its avoided capacity and energy costs

### 5 Q. WHAT IS YOUR RATIONALE FOR THIS AVOIDED COST

6 TREATMENT?

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- 8 A. Actually, it is fairly simple. Because the baseload portion of the QF is providing
- 9 the full value of the next base load resource, including capacity, cost stability and the
- 10 lowering of fuel price risks it should receive the full avoided costs, except where there is
- some capacity which cannot be avoided, in which case the value of that capacity should
- 12 be deducted from the QF's baseload capacity payment. In this way, the QF would
- receive and the MDU customers would pay the value that the QF provided to the system
- 14 Q. BASED ON WHAT YOU KNOW ABOUT MDU'S CAPACITY NEEDS, IS
- 15 THERE ANY LIKELIHOOD THAT MDU WOULD IN FACT FIND ITSELF
- 16 WITH SURPLUS CAPACITY FROM THE JAVA WIND FACILITY?

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- 18 A. No. MDU is short of capacity now, in amounts that are considerably greater than
- 19 the amounts of capacity for which the Java Wind Facility should receive credit under
- 20 MAPP accreditation procedures and the SDPUC Decision and Order. This capacity
- 21 shortfall is expected to grow more acute with the expiration of the Basin Electric
- 22 contract. Once the Java Wind Facility is on line, MDU should be able to contract for any
- 23 additional needed capacity in the same manner that it has contracted or attempted to
- 24 contract this past year.
- 25 O. WHICH BASE LOAD COAL UNIT COSTS SHOULD BE USED IN THE
- 26 DETERMINATION OF AVOIDED COSTS FOR THE JAVA WIND PROJECT?

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- 1 A. Avoided costs for the Java Wind Project should be based on the full capacity and
- 2 energy costs of the LV21 Unit, the MDU base load coal unit option for which actual cost
- 3 estimates have been prepared, and for which permitting has begun.
- 4 In my Supplemental Testimony, I provided estimates of the capacity costs for this
- 5 unit.
- 6 It is important that these capacity costs be complemented by good estimates of
- full energy costs for the LV21 unit, including fuel costs (including start-up fuel), disposal
- 8 costs of solid combustion products, all variable Operation and Maintenance costs and
- 9 emission allowance costs.

### 10 Q. DOES THAT CONCLUDE YOUR REBUTTAL TESTIMONY?

11 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
AFFIDAVIT
County of State of
Kenneth J. Slater, being first duly sworn, deposes and says that the Rebuttal Testimony of Kenneth J. Slater 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.  Kenneth J. Slater
Subscribed and sworn before me
this day of March 2005.
Notary Public

My Commission Expires:

### 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

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) Docket No. EL04-016
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#### CERTIFICATE OF SERVICE

This is to certify that on March 11, 2005, a copy Superior Renewable Energy LLC's Rebuttal Testimony of Kenneth J. Slater was forwarded to the following electronically and United States mail, in accordance with South Dakota Codified Law:

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