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BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

IN THE MATTER OF THE PETITION OF PIONEER RIDGE, LLC AND MOUNTAIN WIND, LLC FOR APPROVAL OF A CONTRACT FOR THE SALE OF CAPACITY AND ENERGY FROM THEIR PROPOSED QF FACILITIES	Docket No. 05-035-09

PREFILED TESTIMONY OF RICHARD COLLINS
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      Wasatch Wind hereby submits the Prefiled Testimony of Richard Collins in this docket.

      DATED this 19th day of April , 2006.

                  Richard S. Collins

                  /s/_____
                  Richard S. Collins
                  Representing Wasatch Wind

CERTIFICATE OF SERVICE

        I hereby certify that a true and correct copy of the foregoing was sent by United States mail, postage prepaid, or by email this 11 day of, July 2005, to the following:

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PREFILED DIRECT TESTIMONY

Of

RICHARD S. COLLINS

On behalf of Wasatch Wind LLC

IN THE MATTER OF THE PETITION OF PIONEER RIDGE, LLC AND MOUNTAIN WIND,
LLC FOR APPROVAL OF A CONTRACT FOR THE SALE OF CAPACITY AND ENERGY
FROM ITS PROPOSED WIND GENERATION FACILITIES

Docket No. 05-035-09

April 19, 2006

1   .

2   **Q.**   **Please state your name and occupation**

3   A.   My name is Richard S. Collins. I am an Associate Professor of Economics and

4   Finance at Westminster College located at 1840 South 1300 East, Salt Lake City,

5   UT 84108.

6   **Q.**   **On whose behalf are you filing testimony in this Docket?**

7   A.   Wasatch Wind, LLC

8   **Q.**   **Have you submitted testimony to this Commission before?**

9   A.   Yes. I submitted testimony in Docket 03-035-14, the QF avoided cost docket that

10   led to a methodology for pricing for QFs. I also submitted testimony in Docket

11   No. 05-035-08 and 05-035-09 for UAE.

12 **Q.**   **Do you have experience in utility regulatory matters?**

13 A.   Yes. Prior to my position at Westminster College, I worked for the Public Service

14   Commission of Utah for approximately 13 years.

15 **Q.**   **Briefly describe some of your responsibilities at the Commission.**

16 A.   I provided technical advice to the Commission on rate proceedings and a variety

17   of other issues including avoided costs and integrated resource planning.

18 **SUMMARY OF TESTIMONY**

19 **Q:**   **What is the purpose of your testimony in this docket?**

20 A: Wasatch Wind is supporting the method proposed by the Company to adjust QF

21   pricing to reflect differences in wind profiles. The Company is using its forward

22   price curve in conjunction with a market index to determine the on-peak and off-

23   peak pricing differential on a monthly basis that is used to adjust indicative

1   pricing for an individual QF. This method will recognize important seasonal

2   differences. We support this method. Pioneer Ridge is reversing its testimony in

3   this case and suggests that the pricing differential between on-peak and off-peak

4   pricing should be determined by the GRID model which estimates system on-

5   peak off-peak differentials. Wasatch Wind opposes this recommendation on a

6   number of grounds. First, the GRID method was not used by the Company when

7   it compared different RFP projects for their on-peak off-peak characteristics thus

8   it should not be used now. Secondly, the GRID model produced unreliable or

9   contradictory results when used to calculate on-peak and off-peak differential for

10   Wasatch Wind's projects.

11   The resulting indicative pricing from GRID were counter intuitive and lacked

12   credence. Lastly, if the Commission adopts Pioneer Wind's proposal for

13   determining the pricing differential it will create a counterproductive volatility in

14   QF pricing that could treat QF wind projects differently than other RFP accepted

15   projects.   Wasatch Wind recommends that the Commission select an adjustment

16   procedure that is simple and easily replicated so QF developers can know with

17   certainty the prices that they are offered. Uncertainty regarding pricing can lead

18   to costly delays and loss of potential financing. It will discourage wind

19   development in the state of Utah.

20   **Q: Can you give a brief synopsis of the background leading up to this docket**?

21   **A:**   Yes, the Commission adopted a market-based proxy in their October 29, 2005

22   order as the method for determining QF pricing for wind resources. The last

1   executed contract for a wind resource resulting from a renewable RFP will serve

2   as the estimate of the avoided cost pricing for a wind QF. There was uncertainty

3   as to how to adjust QF pricing to reflect differences in wind profiles, that is, how

4   much power is generated on-peak and off-peak.

5   The issue was formally raised by Wasatch Wind in its petition for clarification

6   and reconsideration. The Commission attempted to settle the issue in its February

7   2, 2006 Order. The Commission explicitly states "Neither did we approve use of

8   the GRID model for wind profile adjustments. Pioneer Ridge's testimony on

9   adjustments is a reasonable starting point for wind profile adjustments to produce

10   indicative pricing for QFs up to the IRP target of wind resource procurement." [1]

11   Pioneer Wind provided a method to adjust for wind profiles in its surrebuttal

12   testimony of September 19, 2005. It may be beneficial to quote Pioneer's

13   testimony on its recommendation. [2]

14   **Q: What is the manner that the price can be transferred**
15   **from the last wind contract entered into a pricing that can be**
16   **used for a QF wind project?**
17   A.   The market reference contract pricing should first be
18   converted into an off peak and on peak price if it is just based on a
19   flat price. To convert the flat price into an on peak and off peak
20   price we can use the expected MWH of production in the on peak
21   and off peak period of the market based contract site. With some
22   algebra we can create the on peak and off peak price that will
23   provide the total expected cost for the MWHs that would be
24   produced by the project. Using the on peak and off peak pricing
25   from the market contract as determine we can then use those prices
26   directly in the QF contract. If the QF contract has more generation
27   in the on peak hours than the market contract the effective value
28   will be increased for the QF contract. If the QF has more
29   generation in the off peak hours than the market contract it will

1 Page 13-14 on Commission February 2, 200t Order in Docket No. 03-035-14
2 Page 1-2 of Mr. Swenson Surrebuttal Testimony in Docket No. -03-035-14

1   receive less value than the market contract. An example of such a

2   pricing transformation is provided as Pioneer Exhibit SR2.

3

4   **Q:**   **Could you put Mr. Swenson's testimony and recommendation into your own**

5   **words.**

6   **A:**   I will try. The proxy contract that is currently being used to set QF prices has one

7   flat price, it is the same for on-peak and off-peak production. This case is about

8   how to adjust the QF's indicative price to reflect the fact that it will likely have a

9   different wind profile than the proxy. If the QF produces more on-peak than the

10   proxy resource then an adjustment to QFs pricing should be made to reflect this

11   difference. Mr. Swenson explains in his surrebuttal testimony that a QF with

12   greater on-peak power production should get a higher overall price. He presented

13   his results in his SR RJS -2 in Docket No. 03-035-14. He uses the proxy

14   resources projected on-peak off-peak production, its flat price and an on-peak off-

15   peak price differential that is represented by a ratio, off-peak price/on-peak price.

16   To get this peak price differential, Mr. Swenson relies on Mr. Griswold testimony

17   which uses Palo Verde market price data to determine this price differential. The

18   ratio Mr. Swenson used in his original testimony is .724 and now he is

19   recommending a ratio of .32. The issue the Commission must decide is how this

20   price differential between on-peak and off-peak power should be determined. The

21   Company proposes an adjustment process that uses the Company's official price

22   projections that were in effect when the proxy contract was signed. This was

23   March 31, 2005. The weights or percentages are based on projected 20 year

1   averages using the Company's forward price curve for Palo Verde for 2006-

2   2025. The Company suggests that this was the criteria that was used to evaluate

3   its RFP proposals.   In fact, Mr. Swenson in his surrebuttal testimony uses a

4   similar technique and in his surrebuttal testimony advocated that Palo Verde

5   pricing index as the basis for the differential. This is cited in his Exhibit A SR

6   RJS 2. Mr. Swenson recommends using a pricing differential that was cited in

7   Mr. Griswold's testimony of .724.

8   **Q:**   **What is Mr. Swenson's current recommendation?**

9   **A:**   Mr. Swenson is recommending that GRID be used to estimate the difference

10   between on-peak off-peak costs. He is advocating that system costs be used as

11   the metric for determining on-peak off-peak pricing.   This ratio is .324

12   **Q:**   **Does it make sense to use system costs for determining on-peak off-peak**

13   **pricing differentials?**

14   **A:**   One could construct a logical argument for using system costs. However, I would

15   caution the Commission that the selection of the method and the resulting

16   differential will have severe policy consequence and must be carefully

17   considered. In addition, use of GRID model could cause some problems.

18   **Q:**   **What method does the Company use to determine the price differential?**

19   **A:**   The Company calculates the differential via the following process.

20   The methodology is made up of four steps which are outline in Appendix A

21
22   **Q:**   **What are the relevant points of this method.**

23   **A:**   It is simple and easily replicated. It provides an adjustment process that is readily

1   obtainable and it also takes into account the time of day and seasonality of the

2   wind profile. It ties on-peak off-peak ratios specifically to the proxy contract.

3   We support this method as recommended by PacifiCorp.

4 **Q:** **What problems may arise with the use of GRID in determining on-peak off-**

5   **peak pricing differentials?**

6 **A:** Prior to the Commission issuing its February 2, 2006 Order, the Company

7   provided indicative pricing to both Wasatch Wind and Pioneer Ridge. The

8   Company used the GRID model to determine the pricing differential using some

9   version of the Differential Revenue Requirement method. For Wasatch Wind this

10   method of adjusting for differences in wind profiles produced counter intuitive

11   results that were not adequately explained by the Company. At that point in time

12   Wasatch Wind had two projects, I will call projects A and B. The two projects

13   had slightly different locations however both projects had the same wind profile.

14   In other words the proportions of energy produced for on-peak versus off-peak

15   were the same for both projects. In fact the percentage of output per hour

16   compared to total output of each project was identical for each hour. The main

17   difference between the two project was one had a higher capacity factor, which

18   resulted in more overall energy production for project A than B. The GRID

19   model produced a counter intuitive result in that Project A which produced more

20   energy was given a lower overall price. This caused Wasatch Wind to have

21   concerns about the use of the GRID model to adjust prices for QFs.

22 **Q:** **Why is the selection of a method to determine the price differential between**

1   **on-peak and off-peak so critical to the parties?**

2   **A:**   The selection of a method to determine the price differential will affect different

3   parties differently. A larger differential between on-peak and off-peak will

4   benefit a QF with a wind profile with more production of on-peak energy than the

5   proxy, the higher the differential the higher the benefit. Thus, large differentials

6   will result in high premium prices to QFs that produces more on-peak energy and

7   large penalities to QFs that produce less on-peak energy than the proxy. The

8   smaller the price differential between on peak and off-peak prices, the less the

9   impact on QF pricing adjustments.

10 **Q:**   **What are the theoretical issues surrounding the selection of a method to**

11   **determine price differentials.**

12 **A:**   The Commission should adopt the method to determine the pricing differential

13   method that the Company uses to evaluate its RFP proposals. In this case and for

14   this proxy that would be the Company's forward price curve. In the future the

15   Commission could mandate how the Company will evaluate its RFP bids for on-

16   peak versus off-peak production. If the Commission feels that system costs as

17   predicted by the GRID model is more appropriate method to adjust QF price, it

18   could order the Company to use that method to evaluate RFP bids and then adjust

19   QF indicative pricing based on the GRID determined price differential.

20 **Q:**   **What are the policy implications of selecting one method over another?**

21 **A:**   If the Commission wishes to reward an intermittent resource for providing on-

22   peak power it should select the method that gives the biggest differential between

1   on-peak and off-peak prices. However, I do not recommend this; in fact I am

2   adamantly opposed to this. The reason is that different QFs will receive vastly

3   different indicative prices depending on how its wind profile compares to the

4   projected wind profile of the proxy. The Commission should be aware that the

5   proxy will be constantly changing as new RFP projects are executed. This will

6   create an environment in which a QF could receive multiple indicative price

7   quotes that show wide variance. Experience indicates that development of wind

8   projects, particularly small ones, requires that a multitude of development stars

9   align. If indicative price offered by PacifiCorp to the QF are constantly changing

10   due to different proxy contracts which might have substantially different wind

11   profiles, this will create added uncertainty and will retard development. I

12   recommend that the Commission adopt a method that does not artificially or

13   dramatically accentuate the price differential between on-peak and off-peak

14   power. I make this recommendation based on the fact that we are not dealing

15   with firm resource such as a thermal unit in which capacity is an extremely

16   important component. Wind resources are intermittent resource and neither the

17   Company nor its ratepayers necessarily count on wind to provide capacity. There

18   is no public policy justification for establishing extreme rewards and penalties for

19   capacity for this resource. My recommendation would be different for a thermal

20   resource that is more able to produce at will and thus more capable of providing

21   capacity. For such dispatchable resources, the price differential is justified. For

22   an intermittent resource the price differential is simply serendipitous and rewards

1   the lucky wind resource that just happens to produce more on peak than the

2   current proxy resource.

3   **Q: Are there other issues concerning the contract and contract negotiations that**

4   **you would like to discuss?**

5   **A:**   Yes, there are a number of contractual issues that prevent development of

6   renewable resources. The major stumbling block is PacifiCorp's insistence that

7   the contract terms mirror the proxy contracts terms. This has led to the Company

8   forestalling substantive contract negotiations. If is Wasatch Wind's contention

9   that the Commission ordered contract negotiations on a case-by-case basis that

10   recognizes that inherent differences between the contractual needs and obligations

11   of specific QFs.

12   **Q: Do you have evidence that PacifiCorp's contractual provisions are a barrier**

13   **to development?**

14   **A:**   Yes, I know that our equity partner has issues with the currently proposed contract

15   and those specific issues are preventing it from signing a PPA. In addition, I have

16   circumstantial evidence that indicates that the barriers are substantial. During the

17   last RFP approximately 5600 MWs of renewable power was bid, of that

18   PacifiCorp accepted 2200 MWs. PacifiCorp accepted the prices of these

19   proposals but only 65 MWs, one project, saw fit to sign the contract.

20   **Q: What are some examples of contract provisions that you find objectionable?**

21   **A:**   The requirement that the wind facility achieve a certain level of availability. And

22   the liquidated damages that the developer is liable for if the project fails to meet

1   that level. Currently PacifiCorp is insisting on an 87.5% availability factor. This

2   means that the turbines must be available to produce power whenever the wind is

3   blowing 87.5% of the total minutes in the year. If the resource fails to meet this

4   requirement than it must pay liquidated damages equal to the positive difference

5   between a market index price and the contract price for every hour it is not

6   available. Additional issues concerns delay damages, excessive credit and

7   security provisions.

8   **Q:**   **Why is this so onerous?**

9   **A:**   There are a number of reasons why this is onerous to a small project. First is the

10   problem of small numbers, a small project that has say 8 turbines and lost one

11   turbine would be at the 87.5% availability level assuming that the other 7 turbines

12   were available 100% of the time over the year, an unrealistic assumption given

13   that they need maintenance. This is different than a large project that has say 50

14   turbines; in that case the facility could lose 6 turbines and still be at the 87.5%

15   availability factor, a much easier requirement.

16   **Q:**   **What do you suggest?**

17   **A:**   The Commission should adopt the Company's method for this proxy resource.

18   **Q:**   **Does that complete your testimony?**

19   **A**:   Yes

20