

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application)
of PacifiCorp for Approval) Docket No. 03-035-14
of an IRP Based Avoided Cost)
Methodology for QF Projects)
Larger than 1 MW)

**SUPPLEMENTAL REBUTTAL TESTIMONY OF GREGORY N. DUVALL TO
THE DIRECT TESTIMONY OF RICHARD COLLINS**

September 2005

1 **Q. Are you the same Gregory N. Duvall that filed direct and rebuttal testimony**
2 **in this case?**

3 A. Yes.

4 **Q. What is the purpose of your testimony?**

5 A. I address some of the issues raised by Dr. Richard Collins on behalf of Wasatch
6 Wind in his direct testimony.

7 **Q. Would you please summarize your rebuttal testimony?**

8 A. I will show that Dr. Collins' criticism of the DRR is unfounded. I will also show
9 that choosing between the DRR and Proxy methods on the basis of simplicity of
10 the method is not appropriate since the two methods produce significantly
11 different results. In fact, it is the simplifying assumptions contained in the Proxy
12 that lead to the inaccuracy of the Proxy method.

13 **The DRR method is superior to the proxy method**

14 **Q. Rich Collins in his testimony states the Company's proposal fails on three**
15 **counts. Do you agree with his comment?**

16 A. No. He states: first that the DRR method is not entirely consistent with the IRP
17 model; second that the Company's results do not support the conclusions drawn
18 from the IRP; and third that the DRR method does not meet the principle of
19 parsimony known as Ockham's Razor because it is overly complex and is difficult
20 to both run and interpret. All three of the statements are incorrect.

21 **Q. Is the DRR method consistent with the Company's 2004 IRP report?**

22 A. Yes, the DRR method is, unlike the proxy method, consistent with the Company's
23 IRP report. Dr. Collins tends to imply that the methodology that most closely ties

24 to the IRP study is the method that should be utilized. Although consistency with
25 the Company's IRP is important, what is more important is how well the method
26 estimates the Company's avoided costs. The proxy method assumes that the
27 proxy resource (the next deferrable IRP resource) will be the lowest cost resource
28 in all hours. This is a simplifying assumption that is not true. The proxy resource
29 will be used only during hours when it is economical to do so. During other
30 hours, the proxy resource would be backed down or would be shut off and the
31 Company's other lower cost resources would be used to supply energy. The IRP
32 and the DRR both account for these operational realities, while the Proxy method
33 does not. Thus, it is the proxy method that is not consistent with the IRP.

34 **Q. Does the DRR method make this same simplifying assumption?**

35 A. No. The DRR method is based upon two GRID production costs runs. Thus,
36 GRID determines in which hours the IRP resource should be operated and in
37 which hours the IRP resource should not be operated. Avoided costs calculated
38 using the DRR method correctly value QF power in all time periods. In addition,
39 unlike the proxy method, which assumes that all avoided energy will come from
40 the IRP resource, the DRR method's GRID run determines which resources or
41 combination of resources will be displaced by the QF resource.

42 **Q. Dr. Collins's second issue with the DRR method is that the Company's**
43 **results do not support the conclusions drawn from the IRP report. Please**
44 **comment.**

45 A. This is an overly broad conclusion that seems to be based on Dr. Collin's belief
46 that if the DRR method does not result in the acquisition of 1400 MW of wind

47 resources as described in the IRP, then it does not support the conclusions drawn
48 from the IRP. This claim could be made of any QF methodology. Acquiring
49 wind resources through the Public Utilities Regulatory Policy Act (PURPA) is
50 only one way to meet the IRP action plan and it is unknown how much wind
51 resource will be acquired by QFs using the avoided cost prices that result from
52 this proceeding. Other means, however, are available to Utah wind developers to
53 sell the output of their projects to the Company. For example, the Company
54 recently conducted a renewable Request for Proposal (RFP) as described in the
55 rebuttal testimony of Mr. Griswold.

56 **Q. The principle of parsimony known as Ockham's Razor would suggest that if**
57 **two or more models or methods yield essentially the same results, the less**
58 **complex of the methods is preferable¹. Do the DRR and Proxy method**
59 **produce the same results?**

60 A. No, not across a range of QF operating criteria as discussed above. The results
61 are equal only in the unlikely circumstance where the QF has the same operating
62 characteristics as the IRP resource. Under all other circumstances, the Proxy
63 method will tend to overstate avoided costs since it does not account for the
64 impact of how the QF will interact with the existing power system. This renders
65 the principle of parsimony inapplicable when deciding between the DRR and the
66 Proxy method.

67 **Q. Does this conclude your rebuttal testimony?**

68 A. Yes.

¹ Direct Testimony of Artie Powell, Page 5, line 79.