

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

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

Reconsideration Rebuttal Testimony of Bruce W. Griswold

February 17, 2006

1 **Q. Are you the same Bruce W. Griswold that filed direct, rebuttal and**
2 **surrebuttal testimony in this proceeding?**

3 A. Yes.

4

5 **PURPOSE OF TESTIMONY**

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

7 A. I will be responding to the direct testimony of Messrs. Swenson, Probst and
8 Collins on transmission costs and line loss adjustments.

9 **TRANSMISSION COSTS**

10 **Q. Mr. Probst asserts that there may be particular transmission costs that will**
11 **not be identified in the RFP Proxy price and therefore are not captured in**
12 **the costs that a QF can avoid. Do you agree?**

13 A. No, the RFP Proxy price incorporates both the interconnection costs, in the bid
14 price, and integration costs, if any, in the evaluation of the winning bid.

15 **Q. How are the costs associated with the interconnection or integration of a**
16 **resource determined?**

17 A. Interconnection and integration costs are determined through a Network (NT)
18 study. The NT study will establish the cost to both interconnect and integrate the
19 resource into the system. Both the interconnection costs and the integration costs
20 are included in evaluating and determining the winning bid. A QF

21 interconnection study is by default an NT interconnection study since a QF are
22 always deemed to be network resource.

23 **Q Is it appropriate to make adjustments to the winning bid Proxy price to**
24 **incorporate an adjustment for the cost to integrate the QF resource if the**
25 **result of the system impact study is different than the result of the system**
26 **impact study from the winning bid?**

27 A. No. The wind proxy price is the result of a competitive process. The RFP process
28 evaluates the wind resources including the interconnection cost as a component of
29 the bid price and integration costs, if any. The RFP is a system-wide process, and
30 each bid is evaluated on project-by-project basis. The proxy price for wind is set
31 based on the results of the competitive process and should not be adjusted based
32 on the integration of the QF compared to the integration of the winning bid. As I
33 said, the RFP is done on a system-wide basis and a proposed resource can be
34 located in any of our six states as a system resource not specific to any given state
35 or load pocket. The resources in the competitive process may or may not have a
36 cost associated with integrating the resource however, based on all inputs the
37 most cost effective bid will always be the resource that results in the most
38 competitive price.

39

40 **LINE LOSSES**

41 **Q. Do you agree with Mr. Swenson's statement that intermittent or non-firm**
42 **resources should be eligible for line loss adjustment?**

43 A. No. Mr. Swenson, and Mr. Collins for that matter, point to the laws of physics as
44 support for their argument that intermittent or non-firm resources should be
45 compensated for line losses. While the Company agrees that electrons obey the
46 laws of physics rather than contractual provisions, the issue here is a contract
47 issue. Like other avoided cost pricing adjustments which are designed to satisfy
48 the ratepayer indifference standard, any line loss adjustment, either plus or minus,
49 is based on the premise that line loss costs or savings result from the QF
50 delivering power to a load area in lieu of power that PacifiCorp would have
51 scheduled to be supplied to that same load area (either generated with its own
52 resources or purchased). In order to be entitled to any such adjustment, the QF
53 should actually permit the Company to avoid fully or at least partially line losses.
54 While my direct testimony discussed both thermal and wind resources, the most
55 important distinction is the firmness of the power being delivered. Beginning
56 with thermal resources, Mr. Swenson points to US Magnesium and Desert
57 Power's power purchase agreements as the examples of how line loss adjustments
58 should be calculated. While the Company agrees that the proximity method is an
59 appropriate method for the evaluation of line losses, it does not agree that the
60 variation of that method in those contracts should be adopted for future QF
61 contracts. An entitlement to line losses should be, in the Company's view,
62 dependent on a contractual commitment by the QF to deliver energy. In the case
63 of a dispatched QF, which has the contractual obligation to provide energy on
64 demand, the Company can make plans regarding its load and resource balance
65 that include the QF and, therefore, avoid line losses. In contrast, a non-firm QF

66 has the right, but not the obligation, to deliver power to the Company at any time
67 and, as a result, the Company can actually incur additional line losses associated
68 with that QF. For example, if the Company relied on a non-firm QF to serve its
69 load requirements and the QF did not deliver, then PacifiCorp would have to
70 replace that QF power in real-time from wherever it was available inclusive of
71 line losses. Conversely, if the Company has scheduled a firm resource to meet
72 load and the non-firm QF delivers power randomly to PacifiCorp then PacifiCorp
73 has to manage this excess in real-time, by redispatching other resources or making
74 sales off-system, once again incurring line losses. The same considerations apply
75 to QF wind projects which are non-firm resources which cannot be scheduled or
76 dispatched and, therefore, should not be entitled to line loss adjustments. In
77 addition, despite testimony from some of the parties, there is no discrepancy
78 between the treatment of wind resources under the RFP and QF wind resources.
79 In neither case was the wind resource assigned a line loss benefit. The RFP
80 considers a wind project to be delivering non-firm power to the nearest load
81 interconnected to the system based on the location of the wind farm and not
82 specific to Utah.

83

84 **Q. Mr. Probst indicates in his testimony that new emerging technologies would**
85 **eliminate the need for system average loss studies and this new technology**
86 **could potentially measure losses on a real-time basis. Are you aware of any**
87 **emerging technology that will solve the line loss issue?**

88 A. No.. However, when and if such a technology becomes available, we would
89 analyze its applicability to line loss studies for individual QFs. Currently,
90 however, as Mr. Houston testified in his direct testimony, line loss studies are
91 very complicated, very specific to the loads and resource locations, very
92 expensive and time consuming, and very dynamic. If a QF is willing to incur the
93 expense and delay associated with such a study, the Company would of course be
94 willing to look at that option.

95

96 **Q. Mr. Probst states that a smaller QF project like Wasatch Wind or a small**
97 **community project would more likely serve local load versus a big project**
98 **like the proxy contract which would be moved to a large load center. Does**
99 **the MW size of the QF project determine where the power is used by**
100 **Company?**

101 A. No. Regardless of the size of the project, the QF resource would be a system
102 resource and power delivered from the QF to PacifiCorp would be used to serve
103 system load at the closest point to the QF. In addition, the smaller community
104 projects that Mr. Probst mentioned (i.e. the reference to Milford High School) are
105 really more interested in developing renewable energy projects for community
106 benefit and seek the standard Schedule 37 pricing. Since Schedule 37 does not
107 provide for line loss adjustments, these projects would not be eligible for line loss
108 adjustment.

109

110 **Q. Mr. Collins states that the Company's RFP process is flawed if it does not**
111 **include line losses. Do you agree?**

112 A. No. The renewable RFP, like any RFP, is a competitive bid process designed to
113 compare a large number of renewable resource bids on an equal basis. The end
114 goal, obviously, is to receive the lowest bid price while meeting all of the bid
115 requirements. These requirements are all spelled out up front in the bid
116 documents supplied to potential bidders. The bidder delivers a bid package with a
117 price. If they are the successful bidder they are awarded the bid and a contract is
118 negotiated. The bidder does not submit a price and ask for a premium for
119 avoiding line losses. They submit a price and deliver intermittent energy to
120 PacifiCorp's system at that price. The project is built at its location and the
121 project is interconnected to the Company's system where it is deemed appropriate
122 and power flows into the system to serve the Company's system load. To the
123 extent the wind project must build a transmission line or purchase third-party
124 transmission to interconnect to PacifiCorp's system, then the wind project absorbs
125 any interconnection costs and line losses to get it to our system at the point of
126 delivery and the Company integrates it as a system resource to serve system load.
127 If the RFP wind project values line losses as part of its price then it is in the price
128 already but the Company does not adjust the bid price for line losses.

129

130 **Q. Mr. Collins suggests that line loss adjustments should be allowed for wind**
131 **QF projects when the QF project is located in a transmission constrained**

132 **area. Should transmission constraints be considered in a line loss**
133 **adjustment?**

134 A. No. Transmission constraints are a consideration taken into account when the
135 Company studies the transfer capabilities and integration of the QF resource into
136 its system. If there are significant constraints in the transmission system that
137 affect the receipt and transfer of power from the QF then those constraints and
138 potential options for corrections or managing the constraints will be identified in
139 the System Impact Study performed by PacifiCorp Transmission for the project.
140 Line losses are not a consideration when assessing the impact of transmission
141 constraints. Additionally, a wind project would not necessarily relieve any
142 transmission constraints or avoid any line losses even if it is located within the
143 load area that has transmission constraints. With an intermittent and non-firm
144 resource, the Company would still schedule to meet its firm load requirements as I
145 have previously discussed. Mr. Collins also proposes that the QF have an option
146 to ask for a line loss study if it was outside a transmission constrained area and far
147 from a load center. As I have already mentioned, line loss studies can be
148 expensive and time consuming. However, if a QF is willing to bear the expense
149 and delay, that is certainly something the Company would consider.

150 **Q. Does this conclude your testimony?**

151 A. Yes, it does.