

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

3 A. Yes.

4 **PURPOSE OF TESTIMONY**

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

6 A. I will be providing testimony on two subjects. The first is the line loss  
7 methodology that would be an adjustment to avoided cost prices from the Partial  
8 Displacement Differential Revenue Requirement (DRR) avoided cost  
9 methodology. The second subject is internet access to the GRID model.

10 **LINE LOSSES**

11 **Q. What is your understanding of the PURPA regulations related to line losses?**

12 A. PURPA regulations identify line losses as a PURPA factor that can be an  
13 adjustment to avoided cost prices. The adjustment, either plus or minus, is based  
14 on the premise that line loss costs or savings result from the QF delivering power  
15 to a load area in lieu of power that PacifiCorp would have supplied to that same  
16 load area (either generated or purchased).

17 **Q. What impacts do QFs have on electrical system losses that the DRR Avoided**  
18 **Cost Methodology cannot capture?**

19 A. The DRR model does not have the granularity to adequately capture the  
20 incremental losses associated with moving QF power from point “A” to a  
21 specified load area. For example, power from a generator located in a remote area  
22 and/or interconnected to a less robust transmission system may incur greater  
23 losses when being transmitted to a load area than the loss rate contained in

24 PacifiCorp's Open Access Transmission Tariff (OATT). This is particularly true  
25 of wind turbines because they typically are located at a windy site and  
26 interconnected to remote parts of the transmission system. Other generators,  
27 such as natural gas turbines, may provide a benefit if the generator is located close  
28 to a load area and/or interconnected to a robust transmission system. Under  
29 PURPA, the Company is obligated to purchase the net output of the generator  
30 metered at the point of interconnection. As a result, the Company bears the losses  
31 associated with delivering the energy from the point of interconnection to the load  
32 area. Therefore any loss credit or debit associated with the QF should be based on  
33 the difference between where the QF and the avoided resource are located in  
34 respect to the load center.

35 **Q. Why do you conclude that a proximity-based approach be used in calculating**  
36 **the costs and benefits associated with losses?**

37 A. PacifiCorp's OATT utilizes a single loss rate that is applied when transmission  
38 service is rendered. This type of approach is standard in the industry and is  
39 utilized due to the difficulties in calculating incremental/decremented losses on a  
40 case by case basis. The FERC filed loss rate serves as a reasonable proxy in lieu  
41 of performing individual calculations that are not expected to yield materially  
42 more precise results. Conducting a line loss study would add significant time to  
43 the complexity and the completion of each System Impact Study. It would be a  
44 snapshot at system peak conditions and to be accurate we would need to run a  
45 wide combination of studies, at minimum peak and off-peak for each of the four  
46 seasons of the year. To be even more accurate, the Company would need to run

47 separate studies for every hour over the term of five years. As can be seen, this  
48 quickly gets unmanageable. It is for this reason that the Company is proposing to  
49 use the loss rate in the OATT and the proximity of the individual QF to a load  
50 center and the proxy resource as a way to approximate the  
51 incremental/decremental losses associated with that resource relative to the  
52 avoided proxy resource.

53 **Q. What is the basis for how QF projects should be credited or debited for**  
54 **transmission losses?**

55 A. As previously stated, line losses are allowed adjustments under PURPA.  
56 However, it is the Company's position that transmission (and distribution if  
57 applicable) losses would be applied to predictable (such as thermal) QF projects  
58 based on the proximity of each individual QF relative to the Utah load area as  
59 compared to the proxy resource relative to the Utah load area. Unpredictable QF  
60 projects (such as wind) would receive no avoided cost adjustment for losses.  
61 Wind resources evaluated in PacifiCorp's renewable Request for Proposal (RFP)  
62 included no adjustment for losses to move the energy to load and are added as a  
63 system resource at the location where the developer has determined the wind  
64 characteristics (a forecast of the expected wind profile) are anticipated by the  
65 developer to be sufficient to operate a wind farm successfully. Output from  
66 unpredictable QFs requires that other resources can be quickly adjusted when the  
67 motive force (wind for example) is suddenly not available or suddenly becomes  
68 available. As a result, it is not possible to accurately predict, as in the case of a  
69 predictable QF, when other system resources will or will not be needed and,

70 therefore, it is not appropriate to deem that losses are higher or lower relative to  
71 the proxy resource.

72 **Q. What is the Company's proposed methodology for line loss adjustment?**

73 A. The Company proposes to make a line loss adjustment to the final DRR avoided  
74 cost price using the same fundamental methodology it has used with other  
75 Commission approved large QF projects under the May 2004 Stipulation in this  
76 Docket. The methodology is as follows:

- 77 1. The evaluation will be conducted for an individual QF on a project-by-  
78 project basis.
- 79 2. A proximity assessment would be completed as part of Schedule 38 when  
80 PacifiCorp prepares indicative prices for the QF. This preliminary  
81 assessment would be based on the physical proximity of the QF to both  
82 the proxy plant and the nearest load center, the type of power being  
83 delivered to PacifiCorp (i.e. firm dispatchable, non-firm, intermittent, etc.)  
84 and the voltage level at which the QF would be interconnected to  
85 PacifiCorp's system.
- 86 3. Under the assessment, a line loss adjustment is not applicable for the  
87 following resources:
  - 88 a. Non-firm resources (QF resources that have the right but no  
89 obligation to deliver to the Company). This includes non-  
90 scheduled or non-dispatched power that a firm thermal QF delivers  
91 to PacifiCorp.
  - 92 b. Intermittent resources (i.e. wind, run-of-the river hydro, etc. where

93 the QF has little or no control over the motive force)

94 4. Line loss adjustments (both as an increase (cost) or reduction (benefit)) are

95 calculated for a firm thermal QF's scheduled and/or dispatched power and

96 any replacement power the Company must acquire to replace the QF's

97 scheduled but non-delivered power. Losses are not applicable to any non-

98 scheduled or non-dispatched power that the firm thermal QF delivers to

99 PacifiCorp because the non-scheduled / non-dispatched power is deemed

100 to be non-firm. For example, if the Company dispatched the QF to run for

101 the on-peak period of sixteen hours on a Tuesday then the off-peak hours

102 would be considered non-firm and any power delivered by the QF to

103 PacifiCorp in those off-peak hours would have no line loss adjustment.

104 5. For QF projects interconnected at the transmission level, the loss

105 percentage factor would be applied per the then-current published

106 PacifiCorp OATT rate at the QF interconnection transmission level. For

107 those rare interconnections at the distribution level, the Company would

108 use the distribution loss percentage factor from the OATT.

109 6. If the QF, or a portion of the QF output, has met the line loss applicability

110 criteria described in number 3 above, then the Company would make a

111 determination on whether the QF receives a credit or debit on its avoided

112 costs for losses. The Company would evaluate if the proxy resource is

113 geographically closer to the Wasatch front load center than the QF. If the

114 proxy resource is closer to the load area then the QF delivery volume, net

115 of any station service and load self-served, is reduced by the loss factor

116 because the Company incurs additional losses bringing the QF power to  
117 the load center in relationship to the proxy resource. If the QF is closer to  
118 the Wasatch load center in relationship to the proxy resource, the delivery  
119 volume by the QF that meets the applicability criteria described above, net  
120 of station service, is grossed up by the appropriate loss percentage factor.

121 **Q Can the QF request an individual line loss study as part of its SIS?**

122 A. Yes. If the QF prefers to have the Company prepare an individual line loss study  
123 as part of the QF's System Impact Study process, instead of using the proposed  
124 proximity method, the Company will include the loss study in the SIS. However,  
125 as already mentioned, including the line loss study will take significant  
126 incremental time to complete the SIS and the QF will incur additional cost to  
127 complete the SIS.

## 128 **GRID INTERNET ACCESS PROJECT**

129 **Q. What is the status of the Company developing internet access to GRID?**

130 A. The GRID internet access project is in the early stages of the Company's standard  
131 project lifecycle. The Company has completed initial sizing estimates and the  
132 project has been granted interim project funding. A design team has been  
133 assembled by the Company and the team, with past input from the DPU and other  
134 parties, is documenting project requirements and developing high-level design  
135 solutions. Once the high-level solutions have been determined, the team will  
136 move forward with technical design and construction of the solution. Exhibit  
137 UP&L\_\_\_(BWG-1) shows the Company's Standard Project Lifecycle.

138 **Q. What are some the project requirements being considered by the design**  
139 **team?**

140 A. The team is considering such things as:

- 141 • Minimum intervener computer requirements (hardware and software)
- 142 • Company software that will need to be placed on the QF's computer
- 143 • Minimum internet access speeds (DSL versus dial-up)
- 144 • The requirement to transfer of local files to/from GRID
- 145 • Disk space requirements for storage of GRID runs
- 146 • Intervener project data retention requirements
- 147 • Company security issues (granting access but limiting access)
- 148 • Intervener security access (intervener GRID scenario confidentiality
- 149 issues)
- 150 • Resource sharing (how will multiple QFs share limited computer
- 151 resources)
- 152 • The amount and cost associated with supporting this state-specific
- 153 regulatory requirement.

154 **Q. Does the Company have a firm delivery date?**

155 A. Yes. While the Company is still in the process of finalizing the solution to the  
156 providing internet access, we believe we will be able to deliver internet access to  
157 the GRID model by the end of July 2006 subject to certain conditions such as  
158 vendor delivery schedule. We are confident of the estimated schedule and will  
159 keep all parties informed on a regular basis as the project progresses.

160 **Q. What is the Company doing in the interim period until GRID internet access**  
161 **is achieved?**

162 A. The Company will continue to provide a stand-alone GRID computer to make  
163 independent studies. Because of the size of storage required for GRID runs to  
164 determine avoided costs, the Company designed and assembled a more powerful  
165 computer with hard drive storage space capable of doing 24 twenty year runs.

166 **Q. Until the internet version is available, will the Company make available a**  
167 **stand-alone higher class computer when requested?**

168 A. Yes. The Company currently has two stand-alone computers that are capable of  
169 doing avoided cost studies. One has already been delivered to the DPU and a  
170 second computer is being used for internal testing and support. If additional  
171 computers are required by interveners in this Docket based on a request for  
172 access, the Company can buy, assemble and deliver a DRR computer in about 30-  
173 days (depending upon hardware availability). Each computer currently costs  
174 between \$8,000 and \$10,000 for hardware and assembly.

175 **Q. How much training will the Company make available?**

176 A. The Company will provide training on an as needed basis so that the training  
177 coincides with the need to be able to run the model

178 **Q. Will the Company provide additional support?**

179 A. Yes. The Company will provide a contact name and phone number for hardware  
180 and software support that will be generally available during normal business  
181 hours.



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

183 **A. Yes, it does.**