

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

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In the Matter of the Application of Rocky Mountain Power For Authority to Increase its Retail Electric Utility Service rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations.	)	DOCKET NO. 09-035-23
	)	DPU EXHIBIT 6.0SR

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PRE-FILED SURREBUTTAL TESTIMONY

GEORGE W. EVANS

ON BEHALF OF THE

UTAH DIVISION OF PUBLIC UTILITIES

November 30, 2009

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4

5 **INTRODUCTION**

6

7 **Q. Please state your name, business address, employer, and current position or**  
8 **title for the record.**

9 A. My name is George W. Evans, and my business address is 358 Cross Creek Trail,  
10 Robbinsville, North Carolina 28771. I am a Vice President with Slater  
11 Consulting.

12 **Q. For whom are you providing testimony in this case?**

13 A. I am providing testimony on behalf of the Utah Division of Public Utilities (DPU  
14 or Division).

15 **Q. Are you the same George W. Evans that presented direct testimony in this**  
16 **docket?**

17 A. Yes, I am.

18 **PURPOSE OF TESTIMONY**

19 **Q. What is the purpose of your surrebuttal testimony in this proceeding?**

20 A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimonies  
21 of Company witnesses Mr. Gregory N. Duvall and Mr. David J. Godfrey

22 concerning the Company net power costs (NPC) adjustments I recommended in  
23 my direct testimony, and to respond to other issues raised by Mr. Duvall.

24 **Q. What adjustments to NPC did you recommend in your direct testimony?**

25 A. As described on page 5 of my direct testimony, I made five recommendations for  
26 adjustments to NPC:

- 27 • Coal Forced Outage Rates: -\$16,800,867 (-\$6,895,251 for Utah)
- 28 • Planned Outages on Coal Units: -\$338,957 (-\$139,112 for Utah)
- 29 • Wyodak Heat Rate Correction: -\$1,006,149 (-\$412,934 for Utah)
- 30 • Wind Integration Costs: -\$19,776,992 (-\$8,116,683 for Utah)
- 31 • Startup Energy: -\$2,065,518 (-\$847,710 for Utah)

32 **Q. What has been the Company's response to these recommended adjustments?**

33 A. The Company has accepted, and included in the revised NPC in Mr. Duvall's  
34 rebuttal testimony, the Wyodak heat rate correction. The four remaining  
35 adjustments have been disputed by the Company in rebuttal. I will respond to the  
36 Company's rebuttal for each adjustment in the following sections of my  
37 testimony, and conclude with a discussion of additional adjustments that Mr.  
38 Duvall has included in his revised NPC.

39

40 **Coal Forced Outage Rates**

41 **Q. What is your response to Mr. Godfrey’s rebuttal testimony concerning your**  
42 **proposed adjustment for the forced outage rates on the Company’s coal**  
43 **generating units?**

44 A. Mr. Godfrey’s assessment is generally correct, and I agree with his  
45 recommendations concerning this proposed adjustment.

46 **Planned Outages on Coal Plants**

47 **Q. What is the Company’s response to your recommended NPC adjustment for**  
48 **planned outages on coal plants?**

49 A. On page 27 of his rebuttal testimony, in lines 587-591, Mr. Duvall describes my  
50 change to the Company’s planned outage schedule used in GRID:

51 ...The Division argues that the planned outage schedule in GRID differs  
52 from the actual planned outage schedules. The Division witness Mr. Evans  
53 manually adjusted the planned outage schedule in GRID in an effort to align more  
54 closely with actual historic outages. The Division’s changes result in a \$0.3  
55 million decrease in system NPC.

56 **Q. Is this an accurate description?**

57 A. Yes, it is. Mr. Duvall correctly describes the process used to develop the  
58 adjustment to NPC. However, with no basis whatsoever, on the very next page of  
59 his testimony (lines 593-597 on page 28), he claims that the proposed adjustment  
60 is “arbitrary”, and implies that the process is subject to “gaming”.

61 **Q. Is your proposed process arbitrary in any way?**

62 A. No, it is not. As described by Mr. Duvall, the process simply aligns the GRID  
63 outages more closely to the actual historical outage schedules.

64 **Q. Is your proposed process subject to gaming?**

65 A. No, it is not. Gaming would imply that my methodology has a purpose of  
66 somehow reducing NPC as much as possible. The process I used simply moved  
67 several outages so that the overall capacity on maintenance better matched  
68 historical capacity on maintenance. I performed exactly one such move and made  
69 exactly one GRID run to develop the proposed NPC adjustment.

70 **Q. Why does your process reduce NPC when compared to the outage schedule**  
71 **the Company developed using its “tree structure” approach?**

72 A. The Company’s “tree structure” used to develop the GRID outage schedule, as  
73 described by Mr. Duvall in lines 593-595 on page 28 of his rebuttal testimony,  
74 suffers from at least one basic flaw.

75 **Q. What is this flaw?**

76 A. The Company’s “tree structure” requires that the outages at a particular coal plant  
77 follow one another with no overlap. This is a perfectly reasonable requirement  
78 when developing an actual annual planned outage schedule, but when the  
79 Company develops its normalized schedule for GRID, the number of outages (one  
80 for each coal unit) makes it impossible to both avoid overlap of outages at a plant,  
81 and keep outages in the periods in which they historically occurred. This problem

82 causes the GRID outages to be spread over a longer time period, going into  
83 periods in which historically, planned outages did not occur.

84 **Q. What do you recommend?**

85 A. I recommend that system NPC be reduced by \$338,957 to reflect a planned outage  
86 schedule that properly follows historical planned outage scheduling.

87 **Wind Integration Costs**

88 **Q. What is DPU's recommendation on wind integration costs?**

89 A. The Company claims that total wind integration charges for Company wind  
90 generators is \$6.91 per megawatt hour, which results in a total charge of over \$28  
91 million. The hourly rate of \$6.91 was developed from two analyses performed by  
92 the Company – an inter-hour (or hour-to-hour) analysis and an intra-hour (or  
93 within the hour) analysis. The inter-hour rate claimed by the Company is \$2.08  
94 per megawatt-hour and the intra-hour rate is \$4.83 per megawatt hour. Due to a  
95 large number of flaws found in the intra-hour analysis, the DPU recommended in  
96 direct testimony that the Company's proposed intra-hour costs not be allowed. If  
97 these proposed costs were to be disallowed, this would equate to a reduction in  
98 system NPC of \$19,776,992. We are not claiming that there are no intra-hour  
99 costs, as Mr. Duvall states in lines 777-781 on page 36 of his rebuttal; only that  
100 the Company's analysis is fatally flawed and must be rejected.

101 **Q. What flaws did DPU find in the Company's intra-hour wind integration cost**  
102 **analysis?**

103 A. My direct testimony identified the following flaws:

- 104 • The Company cannot produce any historical evidence of these claimed  
105 costs
- 106 • The Company incorrectly assumes that wind generation will always  
107 require additional regulating reserves
- 108 • The Company fails to consider the level of regulating reserves that  
109 would be carried without wind generation
- 110 • The Company failed to produce any historical evidence of the claimed  
111 required additional regulating reserves
- 112 • The Company incorrectly assumes that a change in wind generation  
113 must be covered by other generating units
- 114 • The data used is historical data for only 8 months, excluding any  
115 summer period
- 116 • The Company incorrectly assumes that new wind facilities will  
117 operate identically to existing wind facilities

118 These flaws are discussed on pages 13-20 of my direct testimony. DPU witness

119 Dr. Artie Powell identified additional flaws in his direct testimony:

- 120 • The Company incorrectly assumed that the sample data used were  
121 normally distributed

- 122                   • The Company failed to employ loads as an offsetting element to the  
123                   other intra-hour sources of variation

124 **Q. Has Mr. Duvall responded to each of these flaws identified by DPU?**

125 A. No. In fact, Mr. Duvall’s rebuttal testimony fails to address any of the flaws  
126 identified by DPU. Instead, on page 41, lines 882-897, he validates my claim that  
127 the Company failed to evaluate the level of reserves that would be carried without  
128 the wind resources.

129 **Q. How then does Mr. Duvall continue to argue for the intra-hour wind  
130 integration charges?**

131 A. Mr. Duvall bases his argument on DPU’s position in previous cases and a  
132 comparison of the Company’s wind integration charges to the wind integration  
133 charges of other utilities. Neither of these arguments hold water.

134 **Q. Please explain.**

135 A. Mr. Duvall argues that DPU cannot now recommend that intra-hour wind  
136 integration charges be disallowed because, in previous cases, the DPU has not  
137 contested similar charges. This argument should be rejected – the analyses  
138 performed by the Company to estimate intra-hour wind integration charges in  
139 previous cases were not similar to the analysis performed in this case. Mr. Duvall  
140 points this out at lines 893-894 on page 41, when he states “I would note that the  
141 prior wind integration study did evaluate the level of reserves that would be  
142 required without the wind resource.” The current analysis does not evaluate the



143 level of reserves that would be required without the wind resource. This is one of  
144 the basic flaws in the current analysis. The fact that DPU did not contest intra-  
145 hour wind integration charges in previous cases has absolutely no bearing on the  
146 wind integration charges in this case.

147 **Q. How else does Mr. Duvall attempt to justify the Company's claimed wind**  
148 **integration charges?**

149 A. In lines 918-927 on pages 42 and 43, Mr. Duvall attempts to justify the claimed  
150 total wind integration charges by comparing them to wind integration charges  
151 developed by other utilities in the region.

152 **Q. Does this comparison lend weight to the Company's claimed charges?**

153 A. According to the Company, it does not. The Company has argued that one cannot  
154 compare PacifiCorp wind integration costs with other utilities' costs. Slide 4 from  
155 the Company's August 31, 2009 Wind Integration Cost Study Presentation is  
156 attached as DPU Exhibit 6.1SR. It cautions against the very comparisons  
157 presented by Mr. Duvall. Mr. Duvall's attempt to justify the Company's wind  
158 integration charges by comparing to other utilities' wind integration charges  
159 should be rejected.

160 **Q. Please summarize DPU's position regarding intra-hour wind integration**  
161 **costs.**

162 A. The Company's intra-hour wind integration costs are based on a claimed need to  
163 carry additional regulating reserves because of the intra-hour variability of wind

164 generation. However, even though wind facilities have been added to the  
165 Company's system in recent years, the Company is unable to produce any  
166 historical evidence that regulating reserves have in fact increased in response to  
167 the added wind generation. In addition, the DPU has identified eight serious flaws  
168 in the Company's intra-hour wind integration cost analysis, none of which have  
169 been refuted by the Company. Clearly, the Company's intra-hour wind integration  
170 cost analysis is fatally flawed. Dr. Powell will discuss potential alternatives in his  
171 surrebuttal testimony.

172 **Startup Energy**

173 **Q. How did the Company respond to your recommendation concerning startup**  
174 **energy?**

175 A. Mr. Duvall states his objections to this proposed adjustment on pages 14-17 of his  
176 rebuttal testimony. He summarizes his reasoning in lines 349-352 on page 17,  
177 where he argues that the Commission should reject the adjustment "... because  
178 the GRID model already overstates the generation when the gas units start up and  
179 understates the system costs during the start-up process."

180 **Q. Has Mr. Duvall's testimony been consistent on this issue?**

181 A. No, it has not. In his direct testimony in this case, Mr. Duvall claimed that "While  
182 it is correct that the units do generate power when starting up, the value of such  
183 generation is expected to be small." (lines 263-265 on page 12 of Mr. Duvall's

184 direct testimony). Nowhere in his direct testimony does he claim, as he does in his  
185 rebuttal testimony, that the GRID model overstates the generation when the gas  
186 units start up. His argument in his direct testimony against an adjustment for  
187 startup energy is solely that the startup energy has no net value.

188 **Q. Does the GRID model overstate the generation when the gas units start up?**

189 A. No, it does not. The GRID model does not explicitly model unit startups and the  
190 associated startup energy. GRID only considers unit generation that occurs after  
191 the generating unit reaches minimum load. There is an input data field (Startup  
192 MMBtu) which is used to include the cost of startup energy in the GRID results,  
193 since GRID does not capture that cost through any other process.

194 **Q. Does the Company utilize this special input data field?**

195 A. Yes – the Company includes the fuel required to bring the generating unit from  
196 start to minimum load in this input data field for all gas-fired generating units. So,  
197 the cost of startup fuel is included in the GRID results and in NPC. However, the  
198 corresponding startup energy is ignored.

199 **Q. How do you propose to credit NPC for this startup energy?**

200 A. My proposal is based on Mr. Duvall’s response to OCS Data Request 3.21c,  
201 which is included as DPU Exhibit 6.2SR. In that response, Mr. Duvall states that  
202 “As the gas unit ramps up and other units (coal units in this example) back down  
203 they reduce their fuel input and there are resulting fuel cost savings. To the extent

204 that *another* gas unit can provide the ‘regulate down’ service, the fuel cost saving  
205 would apply to the gas generation.” In addition to lowering coal fuel costs or gas  
206 fuel costs, the startup energy may also lower hydro generation, as described by  
207 Mr. Duvall in his rebuttal testimony. So, the startup energy results in a reduction  
208 in coal fuel costs, gas fuel costs, and/or hydro energy. My proposed credit is  
209 based on the average fuel cost of coal, and represents a reasonable middle of the  
210 road approach for estimating the fuel cost savings from startup energy.

211 **Q. What do you recommend?**

212 A. I recommend that the system NPC be reduced by \$2,065,518 to account for the  
213 fuel cost savings from startup energy.

214 **Other Adjustments**

215 **Q. What other adjustments has Mr. Duvall made in his current NPC?**

216 A. The revised NPC presented by Mr. Duvall in his rebuttal testimony (\$1.018  
217 billion) is the original NPC presented in his direct testimony with 12 adjustments  
218 included, as shown in DPU Exhibit 6.3SR. Most of the adjustments were  
219 recommended by the DPU, OCS, or UAE, and I do not disagree with those  
220 adjustments. The SMUD adjustment, which increases system NPC by  
221 approximately \$5.0 million, comes from a Commission-approved stipulation, and  
222 I do not disagree with that adjustment. However, Mr. Duvall has included two  
223 other adjustments that raise issues.

224 **Q. What are these adjustments?**

225 A. On page 7, lines 138-144, Mr. Duvall describes his adjustment to “reflect the new  
226 prices of the BPA peaking contract and the Grant County purchase contract,”  
227 which would increase system NPC by some \$8.0 million. Then, in lines 150-154  
228 on pages 7-8, he describes an adjustment due to “changes to the Company’s  
229 wheeling contracts with Idaho Power Company and BPA,” which would increase  
230 system NPC by some \$11.1 million.

231 **Q. Is Mr. Duvall justified in including these adjustments in his rebuttal NPC?**

232 A. No, he is not. These claimed adjustments have been included at a point in the case  
233 at which parties will not have sufficient time to analyze and evaluate the proposed  
234 adjustments prior to the start of hearings.

235 **Q. Is the Company claiming that the information on these two adjustments has  
236 only become available recently?**

237 A. No – Mr. Duvall is claiming that the information for the BPA - Grant County  
238 adjustment was available to the Company at least by September 21<sup>st</sup>, 2009 (see  
239 the date on Mr. Duvall’s Exhibit RMP\_(GND-2R)) and that the information on  
240 the wheeling contracts was available to the Company as of early September (see  
241 lines 151-152 on pages 7-8 of his rebuttal testimony).

242 **Q. Why then did the Company wait until filing rebuttal on November 12<sup>th</sup> to  
243 include these adjustments?**

244 A. Mr. Duvall does not address this question in his rebuttal. But in any case, the  
245 other parties to this case are clearly placed at a disadvantage because of the  
246 Company's unwarranted delay.

247 **Q. Did the Company make it clear to other parties that such an adjustment was**  
248 **needed before it filed Mr. Duvall's rebuttal?**

249 A. No, they did not. Mr. Duvall points to the Company's response to DPU Data  
250 Request 34.11 (Exhibit RMP\_\_(GND-2R)), but this response gives no indication  
251 that the Company intends to develop an adjustment to the original NPC, nor that  
252 such an adjustment is needed. Mr. Duvall then goes on to claim that the changes  
253 to the Idaho Power Company and BPA wheeling contracts were "described in my  
254 direct testimony".

255 **Q. Does Mr. Duvall discuss these wheeling contracts in his direct testimony?**

256 A. Yes, he does. In lines 89-99 on pages 4 and 5 of his direct testimony, Mr. Duvall  
257 discusses these wheeling contracts. But his discussion only mentions changes that  
258 he included in his original system NPC (an increase of some \$12 million), not  
259 these additional changes which he is now claiming.

260 **Q. What do you recommend?**

261 A. I recommend that the Commission reject these two adjustments to NPC. The  
262 Company has chosen to present these adjustments at a time when other parties  
263 will not have a sufficient opportunity to analyze the appropriateness of the  
264 claimed adjustments.

265 **Q. Does this complete your testimony?**

266 A. Yes it does.