

**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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<b>In the Matter of the Review of</b>	)	<b>DOCKET NO. 14-035-140</b>
<b>Electric Service Schedule No. 38,</b>	)	<b>Exhibit No. DPU 1.0 R</b>
<b>Qualifying Facilities Procedures,</b>	)	
<b>and Other Related Procedural</b>	)	<b>Rebuttal Testimony of</b>
<b>Issues</b>	)	<b>Charles E. Peterson</b>
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**FOR THE DIVISION OF PUBLIC UTILITIES  
DEPARTMENT OF COMMERCE  
STATE OF UTAH**

**Rebuttal Testimony of  
Charles E. Peterson**

**May 28, 2015**

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**Rebuttal Testimony of Charles E. Peterson**

3

4 **I. INTRODUCTION**

5

6 **Q. Please state your name, business address and title.**

7 A. My name is Charles E. Peterson; my business address is 160 East 300 South, Salt Lake City,  
8 Utah 84114; I am a Technical Consultant in the Utah Division of Public Utilities (Division,  
9 or DPU).

10

11 **Q. Did you previously file testimony in this docket?**

12 A. Yes. I filed direct testimony in behalf of the Division.

13

14 **Q. What is the purpose of your rebuttal testimony in this matter?**

15 A. I will provide comments to the direct testimony of Ken Dragoon that was file in behalf of  
16 Utah Clean Energy.

17

18 **II. COMMENTS ON KEN DRAGOON'S DIRECT TESTIMONY.**

19

20 **Q. Please summarize the issues you address in your rebuttal testimony.**

21 A. Mr. Dragoon raises essentially two issues with PacifiCorp's wind and solar capacity  
22 contribution study. First, Mr. Dragoon believes that PacifiCorp should have spread the

23 thermal planned outages into additional months besides April. March appears to be his  
24 preferred month.

25

26 Second, Mr. Dragoon believes that it is inappropriate to include loss of load probabilities  
27 from the Company's west balancing area in the study. In particular, he believes that most of  
28 the loss of load probability during the winter months are, or should be, attributable to the  
29 west control area and he proposes to eliminate all loss of load probabilities during the months  
30 of December, January, and February in order to arrive at what in his view are the correct  
31 capacity contribution values.

32

33 If adopted by the Commission, both of the adjustments he proposes to make have potential  
34 ramifications beyond this docket, especially in future PacifiCorp general rate case dockets.  
35 Furthermore, the elimination of all loss of load probabilities in December, January, and  
36 February right now appears to the Division to be dubious at best and leads to an over  
37 statement of the capacity contributions of wind and solar resources.

38

39 The Division anticipates making further comments on these issues after it has reviewed any  
40 rebuttal testimony provided by PacifiCorp or other interested parties.

41

42 **Q. Does Mr. Dragoon generally support the use of the CF method used in the PacifiCorp**  
43 **study?**

44 A. Yes. Mr. Dragoon appears to generally support the use of the method; however, he believes  
45 that it has been applied incorrectly by the Company in at least the two areas mentioned in my  
46 summary above.

47

48 Planned Outages

49

50 **Q. Please briefly describe the planned outage issue Mr. Dragoon raises.**

51 A. Mr. Dragoon complains that the Company study assumed that all of its planned thermal plant  
52 maintenance outages were assumed to concentrate in April, with additional outages  
53 scheduled primarily in May and October.<sup>1</sup> Mr. Dragoon calls concentration of outages in  
54 April “overly-aggressive.”<sup>2</sup> He notes that there are no maintenance outages assumed for  
55 March and proposes that some maintenance outage be scheduled for March, which he  
56 believes would reduce energy not served (ENS) events and consequently lower the loss of  
57 load probabilities and increase the capacity contribution values for wind and solar projects.<sup>3</sup>

58

59 **Q. How does Mr. Dragoon estimate the effects of moving some scheduled maintenance to**  
60 **March?**

61 Q. He removes all of the loss of load probabilities in April as his estimate of the effect of  
62 moving some scheduled maintenance to March.<sup>4</sup> In other words, changing around some  
63 maintenance schedules will effectively eliminate all ENS events in April. This move results  
64 in an increase in Utah for fixed axis solar from 34.1 percent to 37.0 percent, and single axis

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<sup>1</sup> Direct Testimony of Ken Dragoon for UCE, lines 315-324.

<sup>2</sup> Ibid., line 311.

<sup>3</sup> Ibid., lines 336-345; 380-390.

<sup>4</sup> Ibid., lines 392-393.

65 tracking solar from 39.1 percent to 40.2 percent; wind actually declines from 14.5 to 13.1  
66 percent.<sup>5</sup>

67

68 **Q. What are the problems with Mr. Dragoon's proposed solution to the planned outage**  
69 **issue?**

70 A. First, there is no reason to believe that some movement of planned outage scheduling would  
71 completely eliminate ENS events in April. Thus, Mr. Dragoon likely overstates the effect of  
72 such a move. The differences he obtains over the Company's results are small anyway, and  
73 may not be judged to be material.

74

75 Second, but more significant to the Division is that what he is proposing may effect  
76 procedures in other dockets, especially PacifiCorp general rate cases, if the Commission  
77 adopts Mr. Dragoon's proposal. The Division is concerned that this could open the way for  
78 special interest parties to promote a maintenance schedule that benefits their particular  
79 interest, likely at the expense of ratepayers generally. For example, moving some planned  
80 outages to March would likely increase net power cost forecasts since March is likely to be  
81 forecast to be a higher cost month. This would ultimately mean that ratepayers would pay  
82 more to renewable resource developers through a higher capacity contribution value and pay  
83 more in net power costs just because of an assumed move in planned outages to March. The  
84 Division does not believe this result would be in the public interest and recommends that the  
85 Commission reject any changes—even hypothetical ones—to the Company's planned outage

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<sup>5</sup> Ibid., see tables at lines 395 and 398.

86 schedule in this docket. The Division believes that a rate where net power costs are reviewed  
87 and established for base rates is the appropriate venue to debate the planned outage  
88 schedules.

89

90

91 Transmission and Winter Month Issues

92

93 **Q. Please briefly describe the winter month issue raised by Mr. Dragoon.**

94 A. From approximately page 9 through page 14 of his direct testimony, Mr. Dragoon argues that  
95 it is inappropriate to include the west side of PacifiCorp's system in the capacity contribution  
96 calculations because of transmission constraints between the west side and the east side.  
97 (Note, Utah is on the east side). His argument is that energy not served events on the west  
98 side during times of transmission constraints cannot be aided by any east side resource  
99 regardless of the type. Therefore, it is inappropriate to test the capacity contribution of a  
100 renewable resource located in the east against the west side since, effectively, there is no  
101 transmission connection between the two—at least during certain times. Mr. Dragoon  
102 hypothesizes that west side ENS events will most likely occur during the winter months and  
103 that these events will mostly occur during periods of constrained transmission capacity.<sup>6</sup>

104

105 In order to correct this apparent failing in the PacifiCorp calculations, Mr. Dragoon proposes  
106 to eliminate all of the ENS events occurring in the winter months (December, January, and  
107 February), as this “represents a rough approximation of the effects of running an East-side

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<sup>6</sup> Ibid., lines 161-210.

108 only study under the assumptions that winter-time loss of load events occurred on the West  
109 side at times of transmission congestion,”<sup>7</sup> “The result [of simply setting all loss of load  
110 events to zero] is an increase in solar capacity credit to 44.4% for fixed tilt and 52% for  
111 single axis tracking solar”<sup>8</sup> versus the Company’s calculations of 34.1 and 39.1 percent,  
112 respectively. Mr. Dragoon concludes by stating “In my opinion, it is the inclusion of the  
113 West side loss of load events that accounts primarily for the Company’s method arriving at  
114 numbers far lower than other calculations of this nature.”<sup>9</sup>

115

116 **Q. What is the policy question raised by Mr. Dragoon with this issue and his proposed**  
117 **solution?**

118 A. The policy question revolves around whether PacifiCorp operates as an integrated system, or  
119 whether its operations should be Balkanized into, for example, east-side/west-side  
120 operations. This issue is fundamental to the Multi-state Process (MSP) that has been under  
121 way for years. This issue consequently has ramifications for PacifiCorp general rate cases  
122 and ultimately costs imposed on Utah ratepayers through interstate allocations of costs. This  
123 issue has been raised in the Company’s current 2015 Integrated Resource Plan where the  
124 Washington State Commission asked the Company to evaluate the costs of planning its  
125 system as if it were two systems, a west side and an east side. The Company’s results  
126 published in its IRP suggest that considering itself two systems would result in a system-wide  
127 additional costs of \$1.15-\$1.33 billion just in resource cost additions.<sup>10</sup> There are potentially

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<sup>7</sup> Ibid., lines 248-251.

<sup>8</sup> Ibid., lines 270-272.

<sup>9</sup> Ibid., lines 287-289.

<sup>10</sup> PacifiCorp 2015 Integrated Resource Plan, Vol. I, page 202, Table 8.14.



128 other costs, such as operating costs and financial costs that could be higher as a result of a  
129 division of the Company. The Division is concerned that if the Commission were to split the  
130 system in the way envisioned by Mr. Dragoon for this purpose, that that would make for  
131 inconsistent policy within Utah (i.e. that we view the Company as operating as an integrated  
132 whole), and have precedent-setting ramifications later in the MSP.

133

134 **Q. Do the data provided by PacifiCorp at this point and available to Mr. Dragoon support**  
135 **his contentions regarding the east/west split that he proposes?**

136 A. No. The data in Table 1 below comes from Mr. Dragoon's work papers that were developed  
137 from the Company's confidential response to the Office of Consumer Services data request  
138 3.10-3:

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[REDACTED]

[REDACTED]

151

152 **Q. What does this summary table indicate?**

153 A. While Mr. Dragoon appears to believe that these data are uncertain, perhaps erroneous, or  
154 subject to different interpretation, they indicate that the large majority of loss of load  
155 probabilities during December to February are derived from east side energy not served  
156 events in the PacifiCorp's system, contrary to his hypothesis. Indeed, over 95 percent of all  
157 energy not served events are on the east side of the system according to these data. This  
158 implies that, any policy questions aside, it is entirely inappropriate to eliminate the December

159 through February winter months from the calculations.<sup>11</sup> Mr. Dragoon in fact recognizes that  
160 these data do not support his hypothesis,<sup>12</sup> nevertheless he goes ahead and estimates the  
161 capacity values anyway as if his hypothesis were correct. The remainder of his presentation,  
162 analysis, and capacity contribution calculations assume his hypothesis contrary to the data he  
163 was provided.

164

165 Other Issue

166

167 **Q. Does Mr. Dragoon raise any other issues?**

168 A. Yes. He raises the issue that the Company's study is based upon a "typical meteorological  
169 year" that "are not time correlated to the meteorological data underlying the Company's load  
170 forecasts. Ultimately this produces incorrect results."<sup>13</sup> However he admits that there is no  
171 easy fix for this issue, but that "it should be monitored and remedied going forward."<sup>14</sup>

172

173 **Q. Do you have any comments on this/these additional issue/issues?**

174 A. The Division agrees that this should be tracked and that when, in this evolving field, practical  
175 solutions can be implemented, those solutions should be considered.

176

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<sup>11</sup> Assuming the hypothesis is correct about eliminating periods of transmission constraints, then based on these data, at most 3.0 percent of the ENS (representing the west side) should be eliminated from December to February [REDACTED] for December through February).

<sup>12</sup> Dragoon Direct Testimony, lines 224-226.

<sup>13</sup> Ibid., lines 450-454.

<sup>14</sup> Ibid., line 468.

179 **III. CONCLUSIONS AND RECOMMENDATIONS.**  
180

181 **Q. What are your conclusions?**

182 A. While the changes that Mr. Dragoon proposes would be beneficial to renewable energy  
183 development, there are other public policy issues that the Division believes that in this  
184 instance overrides supporting renewable energy development for its own sake. At this  
185 juncture, furthermore, the claim that there should be little or no loss of load probabilities  
186 occurring in the December to February period included in the analysis appears dubious at  
187 best. The Division continues to believe that the Company's estimates of the capacity  
188 contribution factors are reasonable and comply with the Commission's order in Docket No.  
189 12-035-100.

190

191 **Q. What is the Division's recommendation?**

192 A. The Division recommends that the Commission reject Mr. Dragoon's proposed adjustments  
193 to the Company's capacity contribution study.

194

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

196 A. Yes.