

1 **Q. Please state your name, business address, and present position with PacifiCorp**
2 **dba Rocky Mountain Power (the “Company”).**

3 A. My name is Dana M. Ralston. My business address is 1407 West North Temple,
4 Suite 320, Salt Lake City, Utah 84116. My present position is Vice President of
5 Thermal Generation. I am responsible for the coal, gas and geothermal resources
6 owned by the Company.

7 **Qualifications**

8 **Q. Please describe your education and business experience.**

9 A. I have a Bachelor of Science Degree in Electrical Engineering from South Dakota
10 State University. I have been the Vice President of Thermal Generation for
11 PacifiCorp Energy since January 2010. Prior to that, I held a number of positions
12 of increasing responsibility with MidAmerican Energy Company for 28 years
13 within the generation organization including the plant manager position at the Neal
14 Energy Center, a 1,600 megawatt generating complex. In my current role, I am
15 responsible for operation and maintenance of the thermal generation fleet.

16 **Purpose and Overview of Testimony**

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

18 A. The purpose of my response testimony is to respond to proposed generation plant
19 outage adjustments recommended by La Capra Associates in the Technical Report
20 on the Energy Balancing Account Audit for Rocky Mountain Power for Calendar
21 Year 2013 filed on behalf of the Utah Division of Public Utilities (“DPU”). In doing
22 so, I explain and support the actions taken by the Company that demonstrate our
23 prudence with respect to the outages identified in the audit report.

24 The outages at the two plants identified are at the Chehalis and the Craig
25 generation stations. In the case of the Chehalis outages, La Capra is suggesting that
26 the Company did not fully investigate the cause of previous transformer failures so
27 the costs for this outage should be removed from the Energy Balance Account
28 (“EBA”). As I will explain in more detail below, in-depth root cause investigations
29 were conducted on the previous failures and they included outside experts and the
30 Original Equipment Manufacturers (“OEMs”) of the equipment in question.
31 Additional measures were taken to monitor and detect issues on the remaining
32 equipment when no root causes of the previous failures were found. In the case of
33 the Craig outage, an oversight of an operational procedure caused the outage. When
34 these outages are viewed in conjunction with the entire generating fleet’s equivalent
35 availability (“EA”) performance, the Company prudently operates its generation
36 fleet and our customers benefit as a result.

37 **Q. Have you reviewed the La Capra technical report on the EBA audit for 2013?**

38 A. Yes.

39 **Q. Do you agree with the audit report?**

40 A. No.

41 **Q. Why do you disagree with the report?**

42 A. La Capra states in the report the Company should have investigated the cause of
43 two generator step-up transformer bushing failures (one in 2006 and one in 2011)
44 at the Chehalis Plant more fully to prevent future outages.

45 A root cause analysis of the 2006 failure was completed by NGK and
46 Transformer Services, Inc. The 2006 reports did not list a specific root cause for the

47 failure. This failure occurred prior to PacifiCorp's ownership of the plant and, based
48 on information available, PacifiCorp had no reason in 2011 to believe further action
49 was required as a result of the 2006 analysis and associated transformer and bushing
50 replacement. In a subsequent report issued by NGK after the 2011 failure, NGK
51 identified the most likely root cause of the 2006 event as damage to the bushing
52 assembly during initial installation.

53 The investigation by PacifiCorp following the 2011 GSU failure was
54 comprehensive and included review by third party experts, ABB Inc., PacifiCorp
55 experts, the transformer manufacturer (FUJI) and the bushing manufacturer (NGK).
56 The investigation included industry standard electrical testing on sister transformer
57 Units 2 and 3, including the bushings, internal transformer tank inspections of the
58 failed unit, inspections of all three bushings from the failed transformer and oil
59 quality analysis. Despite this thorough investigation, a definitive root cause for the
60 bushing failure in 2011 was never determined. The bushing manufacturer believed
61 it was a transformer assembly issue and the transformer manufacturer suspected it
62 was a bushing issue. ABB Inc. believed the failure was due to an internal bushing
63 failure, but whether that was a manufacturing or installation related defect was not
64 determined. Testing performed after the 2011 failure showed that Units 2 and 3
65 were suitable for service. Because a definitive root cause was never determined, a
66 resolution and the costs of the resolution of the issue would have been based on
67 speculation, not fact-driven.

68 **Q. What were the Company's options in 2011 without a definitive root cause of**
69 **the failure?**

70 A. Because there was no root cause identified and the transformer and bushing
71 manufacturers each asserted their design was sound, PacifiCorp had two options:
72 install additional monitoring equipment to see if a failure mode and imminent
73 failure could be identified, or replace both remaining transformers at a cost of over
74 eight million dollars, not including the associated outage time required to procure
75 and install the transformers.

76 **Q. What did the Company do in 2011 to prevent future forced outages and what**
77 **were the results?**

78 A. Due to the uncertainty of whether this was an anomaly or a widespread issue with
79 the transformer or bushings, PacifiCorp proactively installed online dissolved gas
80 analyzers and bushing monitoring equipment on the remaining transformers in 2011
81 and 2012, respectively. Prior to the Unit 3 failure in 2013, there were no indications
82 failure was imminent.

83 **Q. What did the Company do after the 2013 failure to prevent future failures?**

84 A. PacifiCorp, in conjunction with bushing suppliers and insulation experts, installed
85 higher rated bushings on Unit 2 (the only remaining FUJI transformer) from a
86 different supplier and custom modified the bushing shields. The bushing shield
87 modification addresses internal transformer clearance issues. Based on the
88 engineering review by the insulation experts, we believe this will provide a superior
89 design compared to the original design.

90 **Q. Do you believe the Company was prudent in its actions related to the**
91 **transformer failures?**

92 A. Yes. Based on the full battery of tests, the involvement in the root cause analysis of
93 the transformer and bushing OEMs, outside experts, and the PacifiCorp subject
94 matter experts, the Company was diligent in attempting to find the root cause. When
95 the root cause was not definitively determined and because the failure modes were
96 identified as being different in 2006 and 2011, the Company took prudent and
97 proactive actions to monitor the issue and did not just replace the equipment in
98 question at a cost of over eight million dollars. The Commission should disregard
99 the La Capra recommendation for removal of the outage costs for this event.

100 **Q. Do you agree with La Capra's identification of the Unit 1 Chehalis outage as a**
101 **cost that should be removed from the EBA?**

102 A. No. The Unit 1 outage was needed to safely reconnect the modified Unit 2
103 transformer after installing upgraded bushing and bushing shields to prevent a
104 future failure while getting the unit back in service as quickly as practical. This
105 permitted the plant to achieve full output.

106 **Q. Do you agree with La Capra's claim regarding the Chehalis Unit 2 outage?**

107 A. No. When reviewing the NERC GADS data, no such outage could be found during
108 the EBA period. Chehalis had no outage related to "2B transformer overheating" in
109 2013. The "2B transformer overheating" issue was a Craig 2 outage in the 2012
110 EBA audit and has no relevance in the 2013 EBA.

111 **Q. Did you review the La Capra report on the Craig outage?**

112 A. Yes.

113 **Q. Do you agree with the La Capra review and recommendation?**

114 A. No.

115 **Q. Please explain.**

116 A. La Capra is technically correct on the root cause but has over simplified the mistake
117 and PacifiCorp's control or responsibility. First of all, PacifiCorp does not operate
118 the Craig plant. Tri-State Generation and Transmission Association, Inc. is the
119 operator of the plant. Consistent with good utility practice, Tri-State's management
120 has developed operating procedures that employees are expected to follow and
121 trains its employees to follow these procedures. It is nonetheless possible for human
122 error to occur, such as overlooking an operating procedure when managing the large
123 amount of information and alarms that occur during a unit trip event. In this specific
124 case, Tri-State's operating procedures, if they had been followed, would have
125 prevented the extended outage at Craig. It is unreasonable to penalize PacifiCorp
126 for a third party's performance, when PacifiCorp has no contractual ability to seek
127 recourse from the third party.

128 **Q. Do you agree with the La Capra position that outages should be evaluated at**
129 **a detailed, individual level when determining if they should be included in the**
130 **EBA?**

131 A. Not exactly.

132 **Q. Please explain.**

133 A. The Company believes that reviewing outages is a good practice. However, the
134 Company believes that in evaluating the outages, total generating fleet performance
135 should be taken into account when determining EBA impacts. Prudence is not the
136 same as perfection. It is inevitable that some outages may occur and that in some

137 cases human error may have contributed to them. However, if, even taking them
138 into account, the Company is performing at a better than average level, this
139 indicates that the Company is operating its generation assets prudently. By
140 penalizing the Company for a specific problem, but not giving it credit for above
141 standard performance, La Capra is imposing higher than a prudence standard.

142 In 2013 the average EA for the PacifiCorp thermal fleet on an ownership
143 basis was 90.65 percent while the 2012 NERC average for a comparable fleet was
144 82.60 percent. This is over eight percent better than the industry average and a
145 significant benefit to our customers even with the outages La Capra identifies
146 included. The 2012 industry average is used because the 2013 data has not been
147 released at this time. The amount of possible MWHs available in the eight percent
148 improvement over the industry average using the same methodology LaCapra uses
149 for calculating losses shows our customers are receiving a significant benefit and
150 LaCapra's recommended adjustments should be rejected.

151 **Q. Does this conclude your response testimony?**

152 A. Yes.