

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

3 A. My name is Mark C. Mansfield. My business address is 1407 West North Temple  
4 Street, Room 310, Salt Lake City, Utah. My position is Vice President of Thermal  
5 Operations Support for PacifiCorp Energy.

6 **Qualifications**

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

8 A. I have a Bachelor of Science degree in Mechanical Engineering and a Master of  
9 Business Administration degree. I am also a registered professional engineer in  
10 the State of Utah. I have worked in the electric industry for 24 years and in the  
11 process control industry for an additional eight years.

12 During my career with PacifiCorp, I have served as an Engineer at the  
13 Carbon Plant, Maintenance Supervisor at the Carbon Plant, Maintenance  
14 Superintendent at the Hunter Plant, and Director of Technical Support for  
15 PacifiCorp Generation in Salt Lake City. I have served as the Managing Director  
16 of the Naughton Plant, Huntington Plant, and Hunter Plant. In 2006, I became  
17 Vice President of Safety, Environmental and Operations Support for PacifiCorp  
18 Energy. In 2007, I was appointed to my current position.

19 **Purpose of Testimony**

20 **Q. Please summarize your rebuttal testimony.**

21 A. My rebuttal testimony responds to certain issues raised by CCS witness Mr.  
22 Falkenberg regarding PacifiCorp's outage rates. My testimony addresses the  
23 following issues raised by Mr. Falkenberg:

- 24           • That PacifiCorp’s outage rates have substantially increased over the past  
25           decade, and
- 26           • That the Jim Bridger plant outages be adjusted to the North American Electric  
27           Reliability Corporation (NERC) average.

28   **PacifiCorp Outage Rates**

29   **Q.    Has the outage rates for PacifiCorp increased as Mr. Falkenberg asserts?**

30    A.    Yes. However, outage rates are only one of many statistics one should evaluate  
31           when looking at fleet and plant performance and upon closer examination of the  
32           data the fleet performance for PacifiCorp has been improving over the last four  
33           years.

34   **Q.    What other statistics should be considered?**

35    A.    PacifiCorp looks at capacity factor, equivalent availability and planned outage  
36           factor. Also PacifiCorp disagrees with the way Mr. Falkenberg uses the North  
37           American Electric Reliability Corporation/Generating Availability Data System  
38           (NERC/GADS) data.

39   **Q.    Please explain why PacifiCorp disagrees with Mr. Falkenberg use of the  
40           NERC/GADS data, isn’t this data nationally recognized?**

41    A.    In Mr. Falkenberg’s exhibits Ex4.13p1 and Ex4.13p2 he cites NERC/GADS data  
42           for all sizes of coal-fueled plants. This population of plants contains plants that  
43           have very low capacity factors or are in economic standby for significant hours of  
44           the referenced timeframe. Therefore, since they do not operate for significant  
45           hours during the timeframe it is natural for them to have lower outage rates.

46                    When PacifiCorp compares its performance against the NERC/GADS data

47 it creates a peer group by simulating a fleet of similarly sized units. This is  
48 accomplished by creating an equivalently configured system from the  
49 NERC/GADS database so that the number of units and the type of units within a  
50 given fuel category and size are the same as the PacifiCorp fleet. Therefore, the  
51 makeup of our fleet from year to year is duplicated by using an equivalent system  
52 configuration, using the NERC/GADS database. For example, the PacifiCorp fleet  
53 has 1 coal-fired unit in the 1-99 MW range, 4 coal-fired units in the 100-199 MW  
54 range, 2 coal-fired units in the 200-299 MW range, 8 LM 6000 gas units, 1  
55 geothermal unit, etc. The NERC/GADS capacity range averages are then  
56 weighted to simulate the PacifiCorp fleet.

57 **Q. Why is it important to compare the PacifiCorp fleet to a NERC peer group?**

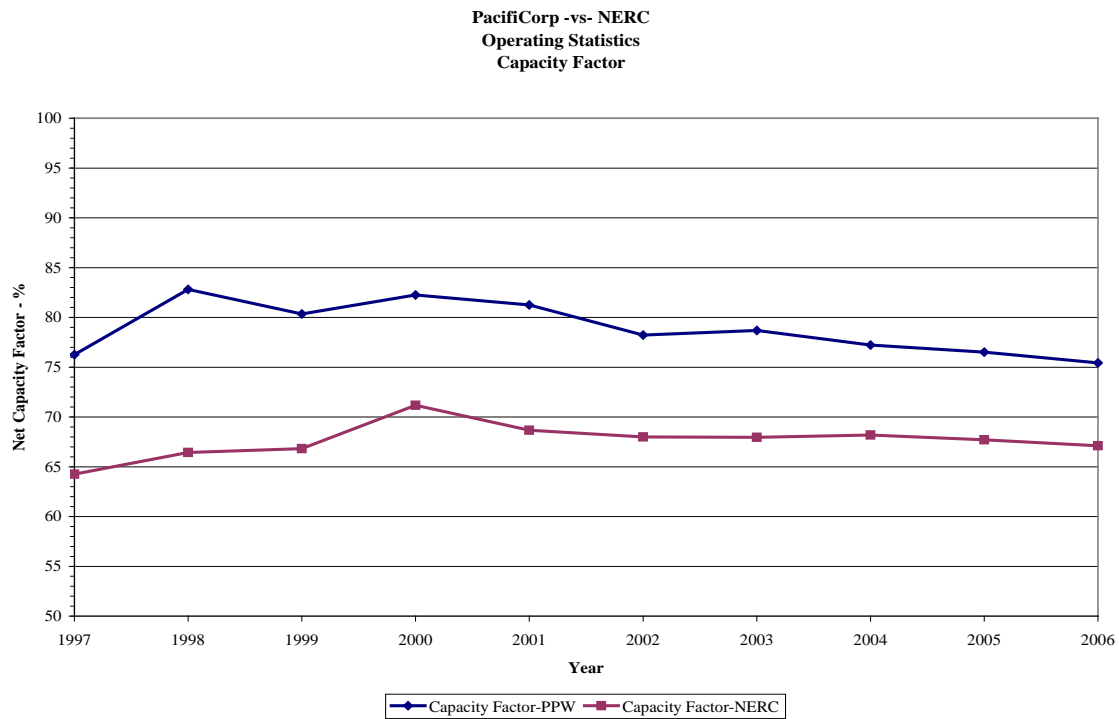
58 A. Plants with different capacities have different operating characteristics and  
59 challenges. By looking at the NERC data for all sizes of coal-fueled plants is like  
60 looking at gas mileage for all classes of motor vehicles from two-cycle motor  
61 scooters to large SUVs. If one is trying to compare the value of their vehicle, it is  
62 best to compare it to vehicles similar in size and what the vehicle is going to be  
63 used for. By looking at the data for all classes of vehicles the data could be biased  
64 if there were greater numbers of smaller vehicles compared to your vehicle.

65 **Q. Why should capacity factor be considered, isn't that a function of market  
66 conditions?**

67 A. Capacity factor is the measure of actual output compared to the possible output.  
68 Therefore, the higher the capacity factor the more the plant has operated at or near  
69 its maximum capacity. PacifiCorp fleet has a capacity factor that is greater than

70

the NERC/GADS peer group as can be seen in the graph below.



71

By operating the fleet at these high capacity factors PacifiCorp is able to provide greater benefit to its customers by supplying a low cost source of energy. Looking at the four-year average ending December 31, 2006, the PacifiCorp fleet had a capacity factor of 76.97 percent versus the NERC peer group with a capacity factor of 67.74 percent. The difference in capacity factor represents approximately 724 MW of capacity. This represents a substantial benefit to PacifiCorp's customers.

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**Q. PacifiCorp's capacity factor for the four-year period ending December 31, 2006 is 9.23 percent greater than the NERC peer group average. What is the approximate value associated with PacifiCorp's above average capacity during this period?**

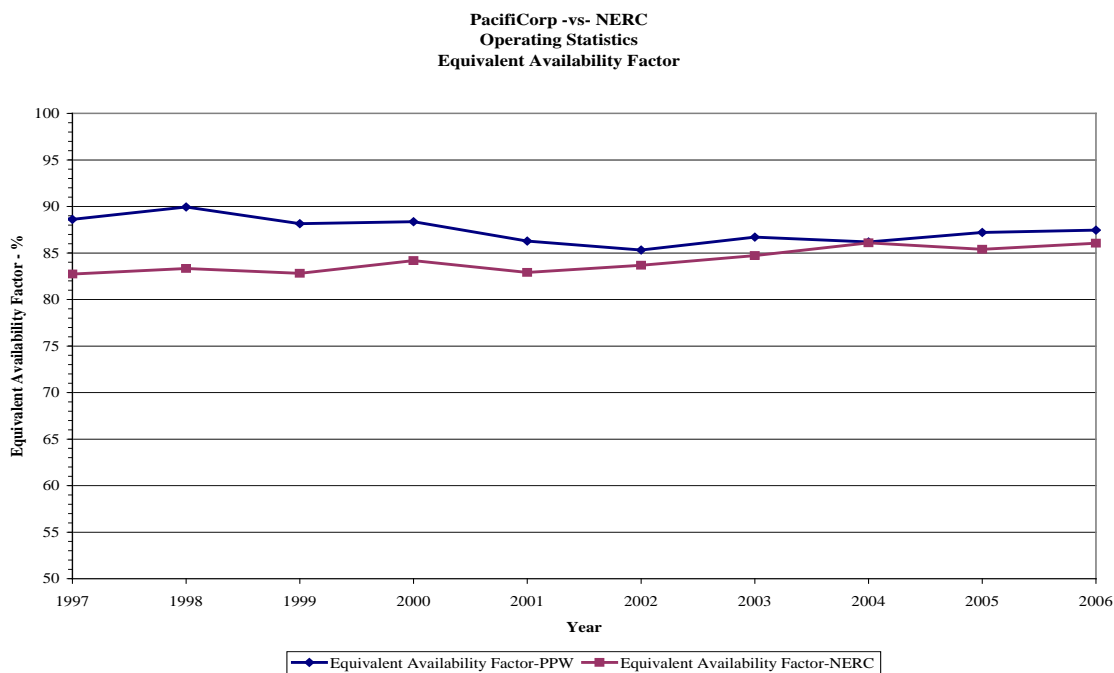
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**A.** The value of the power associated with PacifiCorp's fleet running above the

83 NERC peer group capacity factor for the four-year period ending December 31,  
84 2006 is approximately \$272 million. These savings have helped PacifiCorp  
85 maintain relatively low net power costs compared to other utilities.

86 **Q. Why is equivalent availability an important statistic when comparing plant**  
87 **performance?**

88 A. Equivalent availability is a measure of the optimal energy that could have been  
89 generated during a given report period. This eliminates the bias of market  
90 conditions. It can be seen from the graph below that the PacifiCorp fleet out  
91 performs its NERC peer group.



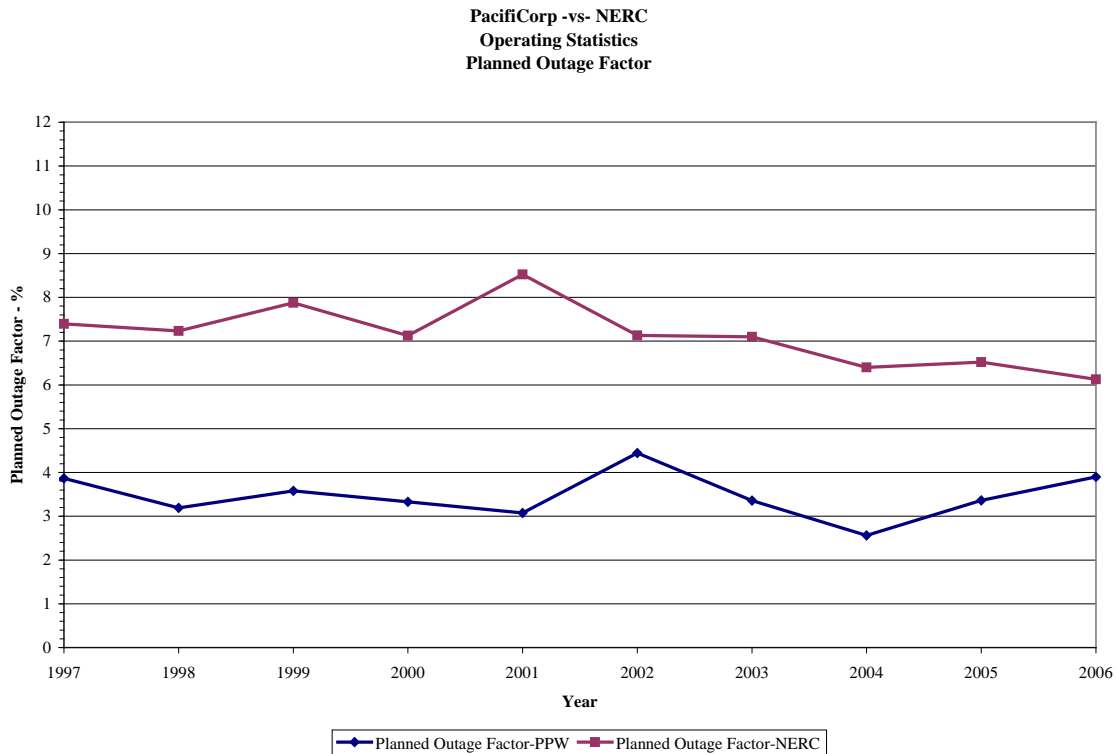
92 Equivalent availability also takes into account all the reasons a plant could  
93 be off-line, i.e. planned outages, planned de-rates, forced outages, maintenance  
94 outages, equivalent forced de-rates and equivalent maintenance de-rates. By  
95 looking at equivalent availability it removes the bias of placing an outage or

96 restriction in a different category than the peer group. For example, it does not  
97 matter if an outage is classified as maintenance or forced; they are all treated  
98 equally in equivalent availability.

99 Looking at the above graph it can be seen that the PacifiCorp fleet is  
100 improving its performance against the NERC peer group over the last four years.

101 **Q. Explain the significance of comparing planned outage factor.**

102 A. The planned outage factor simply takes the amount of planned outage hours over  
103 the period hours. This is a measure of the percentage of time the planned was off-  
104 line for a scheduled maintenance outage. The PacifiCorp fleet has less planned  
105 outage hours than its NERC peer group as can be seen by the graph below.



106 Looking at the four-year average ending December 31, 2006, the  
107 PacifiCorp fleet had a planned outage factor of 3.29 percent as compared to a

108 planned outage factor of 6.54 percent for the NERC peer group. This difference  
109 equates to a difference of 5.82 TWh of generation (using the average fleet  
110 capacity of 6,640 MW and the fleet capacity factor of 76.97 percent) over the  
111 four-year period.

112 **Jim Bridger Outage Rate**

113 **Q Please describe the performance of the Jim Bridger plant over the four-year**  
114 **period from 2003 to 2006.**

115 A. The Jim Bridger plant has improved its operating performance over the four-year  
116 period. The equivalent availability has improved from 80.83 percent to 85.37  
117 percent. The equivalent unplanned outage factor has improved from 14.86 percent  
118 to 11.09 percent. And finally the capacity factor has increased from 78.04 percent  
119 to 81.06 percent.

120 While its equivalent unplanned outage factor is approximately 2 percent  
121 higher and its equivalent availability is approximately 3 percent lower than the  
122 NERC peer group, its capacity factor is approximately 12 percent higher than the  
123 NERC peer group.

124 **Q. Please explain why PacifiCorp does not think it is fair to reduce the Jim**  
125 **Bridger plant's outage rate to the NERC/GADS average.**

126 A. PacifiCorp feels that this would be a one-sided adjustment. PacifiCorp operates its  
127 generation assets as a fleet to maximize the benefit to its customers. Mr.  
128 Falkenberg is willing to penalize PacifiCorp for one plants performance in some  
129 of the performance statistics, but does not make any allowance for the benefits  
130 mentioned above achieved by the fleet.

131 **Q. Please summarize your rebuttal testimony.**

132 A. PacifiCorp feels that it has demonstrated that it is not prudent to look at any one  
133 statistic when comparing performance of its assets. Furthermore, PacifiCorp feels  
134 it as demonstrated the fleet is being operated in a beneficial manner for its  
135 customers by utilizing its assets effectively and efficiently. Finally, PacifiCorp  
136 feels that it is not fair to normalize a single plant to the NERC/GADS average,  
137 when the fleet as a whole is performing better than its peer group.

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

139 A. Yes.