

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

3 A. My name is Mark R. Tallman. My business address is 825 NE Multnomah, Suite
4 2000, Portland, Oregon 97232. My present position is Vice President of
5 Renewable Resources. I am responsible for hydro-powered and wind-powered
6 generation resources 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 Oregon State
10 University and a Masters of Business Administration from City University of
11 Seattle. I am also a Registered Professional Engineer in the states of Oregon and
12 Washington. I have been the Vice President of Renewable Resources since
13 January 2011. Prior to that, I was Vice President of Renewable Resource
14 Acquisition from December 2007 to January 2011 and Managing Director of
15 Renewable Resource Acquisition from April 2006 to December 2007. I have
16 worked at the Company for more than 26 years in a variety of positions of
17 increasing responsibility including: the commercial and trading organization; the
18 engineering organization; and the retail organization (as a District Manager).

19 **Purpose and Overview of Testimony**

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

21 A. The purpose of my testimony is to describe increases in costs related to non labor
22 related operations and maintenance (“O&M”) activities for the Company’s wind
23 and hydro generation resources; describe two additions to hydro generation plant;

24 and demonstrate why these O&M costs and plant additions are reasonable and
25 prudent and should be accepted by the Commission in determining the
26 Company's revenue requirement in this case.

27 **Q. Please summarize your testimony.**

28 A. The Company's non labor related wind generation O&M costs during the test
29 period from June 1, 2012 through May 31, 2013 are projected to increase
30 approximately \$4.2 million over the historical base year ending June 30, 2011. In
31 addition, the Company's non labor related hydro generation O&M expenses are
32 projected to increase approximately \$4.5 million over such base year. A more
33 granular breakdown of hydro and wind O&M is shown in Mr. Steven R.
34 McDougal's Exhibit RMP____(SRM-2), pages 4.9.2 and 8.11.1.

35 My testimony also describes fish passage projects required by the Federal
36 Energy Regulatory Commission ("FERC") license issued to the Company for the
37 Lewis River hydro project. These two hydro plant additions consist of fish
38 passage construction for the Lewis River hydroelectric project (the "Swift Fish
39 Collector" and the "Merwin Upstream Collect & Transport" plant additions).

40 My testimony describes how the wind and hydro O&M cost projections
41 were developed and identifies the key cost drivers for these increases in O&M
42 cost. While there is an overall net increase in hydro and wind O&M, I will
43 address both increases and decreases. My testimony also describes the need for
44 the Merwin Upstream Collect & Transport and Swift Fish Collector plant
45 additions.

46 **O&M: Wind-Powered Generation Resources**

47 **Q. Please describe the primary areas of changing costs related to wind-powered**
48 **generation resources.**

49 A. The primary areas of cost increases and decreases related to O&M of wind-
50 powered generation resources are: (1) materials; (2) third party contracts; and (3)
51 oil changes.

52 **Q. What is the net impact of these changing O&M costs?**

53 A. The net change in test period O&M costs compared to the base year is shown in
54 the table below.

O&M Category	Test Period – Base Year (\$ millions)
Materials	\$4.8
Third Party Contracts	(\$3.4)
Oil Changes	\$3.0
Other	(\$0.2)
Net Total	\$4.2

55 **Q. What is the increase in materials cost associated with?**

56 A. The increase in materials cost for wind generation from the base year to the test
57 period is primarily driven by several wind projects which will no longer have
58 warranty agreements in effect during the test period. As part of a wind turbine
59 warranty, the manufacturer supplies replacement parts. Post-warranty, the
60 Company must purchase replacement parts.

61 **Q. Which wind projects will no longer have warranties in effect during the test**
62 **period?**

63 A. Ten of the Company's 13 wind projects have warranties that will have expired
64 going into the test period or will expire during the test period. The Seven Mile
65 Hill, Seven Mile Hill II, High Plains, McFadden Ridge I, Glenrock, Rolling Hills
66 and Glenrock III wind projects will be off warranty for the entire test period. The
67 Dunlap I, Marengo and Marengo II wind projects have warranties that expire
68 during the first half of the test period. Leaning Juniper I and Goodnoe Hills are
69 the only wind projects that had warranties expire prior to the base period whereas
70 Foote Creek I is the only wind project that will have a warranty agreement in
71 effect following the test period.

72 **Q. How did the Company determine the level of costs during the test period for**
73 **replacement parts and materials?**

74 A. The Company used historical parts and materials costs to arrive at a cost estimate
75 for materials on a per turbine basis. This estimate was then utilized for the
76 projects with turbines out of warranty during the test period. Because the Dunlap
77 I, Marengo, and Marengo II warranties expire during the test period, the
78 annualized number of turbines out of warranty is higher during the test period as
79 compared to the annualized number of turbines in warranty during the base year.

80 **Q. Please explain the cost decreases related to third party contracts.**

81 A. The net decrease in expense related to third party contracts is driven by new
82 O&M contracts at many of the Company's wind plants and the expectation that
83 road maintenance will be lower during the test period than in the base year. The

84 net decrease also includes an assumption that an O&M contract for Marengo and
85 Marengo II can be replaced at a cost lower than experienced during the base year.
86 Conversely, the net decrease includes an increase in annual O&M costs during the
87 test period for the Dunlap I wind project. Dunlap I began operations during the
88 base year so only a partial year's expense was incurred. A full year's contract
89 expense for Dunlap I is included in the test period.

90 **Q. How did the Company determine the level of expense during the test period**
91 **associated with third party contracts?**

92 A. The Company utilized the combination of historical actual costs by project and
93 contract category combined with costs related to committed contracts applicable
94 during the test period.

95 **Q. Please explain the expense increases related to wind turbine oil changes.**

96 A. Consistent with the manufacturer's recommended maintenance schedules, routine
97 oil changes will be performed at nine of the Company's 13 wind projects during
98 the test period.

99 **Q. How did the Company determine the level of costs during the test period**
100 **associated with oil changes?**

101 A. The cost per turbine of the most recent oil change activity performed by
102 contractors was used as the source of information to estimate the cost of oil
103 changes during the test period.

104 **O&M: Hydro-Powered Generation Resources**

105 **Q. Please describe the changes in hydro-powered generation O&M costs that**
106 **impact the test period.**

107 A. The primary areas of cost level increases related to O&M of hydro-powered
108 generation resources are: (1) FERC fees; (2) costs to implement and comply with
109 the FERC license issued for the Lewis River hydroelectric project; (3) costs to
110 implement and comply with the FERC license issued for the Umpqua River
111 hydroelectric project; and (4) costs to implement and comply with the Klamath
112 River Hydroelectric Settlement Agreement (“KHSA”).

113 **Q. What is the net impact of these items on O&M costs?**

114 A. The net change in test period O&M costs compared to the base year is shown in
115 the table below.

O&M Category	Test Period – Base Year (\$ millions)
FERC fees	\$1.3
Lewis River FERC license compliance	\$1.0
Umpqua River FERC license compliance	\$0.8
KHSA	\$0.5
Other	\$0.9
Net Total	\$4.5

116 **Q. What is driving the increase in FERC fees?**

117 A. The increased FERC fees from the base year to the test period are associated with

118 higher FERC land use fees and higher FERC administration fees. In the case of
119 the land use fees, PacifiCorp participated in a successful industry challenge of
120 FERC's process to revise the fee determination methodology during the base year.
121 Because of this successful challenge, which was based on a procedural flaw, the
122 then new land use fee structure did not become effective during the base year.
123 During the FERC challenge, the Company accrued expenses for increased land
124 use fees. The accrued expense reversal due to the successful challenge took place
125 in early 2011 resulting in an abnormally low level of annualized expense
126 appearing in the base year. The cost associated with FERC land use fees in the
127 test period is based on the same methodology FERC is again seeking via a notice
128 of proposed rulemaking ("NOPR") process. FERC is basing its proposed land use
129 fees on a U.S. Bureau of Land Management methodology.

130 **Q. What is driving the increase in FERC administration fees?**

131 A. FERC administration fees are determined by FERC and are intended to recover
132 FERC's funding requirement by allocating costs to entities that hold FERC
133 hydroelectric licenses. FERC allocates its costs by invoicing the Company
134 annually.

135 **Q. How did the Company determine the level of costs for FERC fees during the**
136 **test period?**

137 A. For the FERC land use fees, the Company used the invoice amount proposed by
138 FERC in its 2009 revised fee schedule which was vacated in early 2011 due to a
139 successful appeal by PacifiCorp and other licensees. In a NOPR issued November
140 22, 2011, FERC proposes to again revise its fee schedule applicable to Federal

141 lands within the boundaries of FERC licensed projects. For the FERC
142 administration fees, the Company used historical actual costs as the basis for
143 predicting FERC's invoice applicable during the test year.

144 **Q. What is the status of the NOPR for the new FERC land use fees?**

145 A. FERC recently issued an order that is under legal review by the Company. The
146 order identifies that FERC has not finalized a rulemaking to revise the land fee
147 methodology and that the prior methodology will be the basis for at least the next
148 invoice cycle.

149 **Q. When will the Company receive a land use fee invoice from FERC?**

150 A. The Company anticipates receiving a land use fee invoice from FERC during the
151 spring of 2012. Once the invoice is received the Company will make any
152 necessary adjustments to these projected costs.

153 **Q. What is the increased cost associated with the Lewis River hydroelectric
154 license?**

155 A. To implement and comply with the Lewis River license issued by FERC, the
156 Company has acquired wildlife mitigation lands and is investing in a fish passage
157 system designed to collect, trap and haul juvenile and adult anadromous fish
158 around the three Lewis River dams. An anadromous fish is born in fresh water,
159 spends most of its life in the sea and returns to fresh water to spawn. These
160 compliance measures result in higher O&M costs to manage the newly acquired
161 forest lands, operate the fish passage system and operate fish transport vehicles
162 which haul juvenile fish downstream and adult fish upstream. In addition, this
163 category also includes increased costs to provide Lewis River recreation services

164 to the public in compliance with FERC license requirements and to maintain
165 aging recreational facilities.

166 **Q. How did the Company determine the level of cost associated with the Lewis**
167 **River hydroelectric license during the test period?**

168 A. Costs for wildlife lands are based on costs to manage like lands as applied to the
169 newly acquired lands. For fish passage operations beginning during the test
170 period, costs were estimated using similar operational systems found at
171 PacifiCorp's currently operating fish hatcheries. Fish transportation costs are
172 based on the estimated number of daily truck trips correlated with the expected
173 timing of migrating fish. Costs for recreation pertain to an enhanced campsite
174 reservation system to account for increasing user demand. The estimated costs for
175 the reservation system are based on a comparison with similar state and utility
176 systems that use outside contracted systems. The costs to maintain the aging
177 infrastructure are based on previously completed like work.

178 **Q. What is the increased cost associated with the Umpqua River hydroelectric**
179 **license?**

180 A. The Company is investing in a number of improvements to its North Umpqua
181 River hydroelectric project to implement and comply with the license issued by
182 FERC. Key amongst these improvements is installation of fish passage facilities
183 at the Company's Soda Springs dam and installation of a structure so fish can
184 bypass the Slide Creek plant. The increase in O&M costs is to evaluate the
185 environmental performance of these new facilities as well as to address National
186 Historic Preservation Act requirements related to a cultural site.

187 **Q. How did the Company determine the level of costs associated with the**
188 **Umpqua River hydroelectric license during the test period?**

189 A. The costs associated with these O&M activities required in the test period are
190 based on prior evaluation efforts at other similar facilities. With respect to the
191 cultural site, the Company developed a curation plan in consultation with the
192 Oregon State Historic Preservation Office to survey applicable areas and curate
193 artifacts. The plan will be implemented in the test period. The cost of the plan was
194 based on past experience for like activities.

195 **Q. What are the incremental costs in the test period associated with the KHSA?**

196 A. The incremental costs are predominantly associated with required hatchery
197 funding. Under the terms of the KHSA, the Company is obligated to increase its
198 funding of the Iron Gate Hatchery from 80 percent to 100 percent. Similarly, a
199 Hatchery and Genetics Management plan for Iron Gate Hatchery is under
200 regulatory review by the National Marine Fisheries Service. The hatchery plan is
201 expected to further increase costs during the test period as new programs and
202 practices at the hatchery are required to be implemented. Finally, under the
203 KHSA, PacifiCorp is obligated to undertake a study of options for continuing to
204 meet hatchery production goals in the Klamath basin for an eight-year period
205 following the time when the Iron Gate dam is envisioned to be removed under the
206 terms of the KHSA. This hatchery study also drives an increase in costs during
207 the test period.

208 **Q. How did the Company determine the level of costs associated with the KHSA**
209 **during the test period?**

210 A. The costs in the test period were determined using the Company's hatchery
211 funding obligation in the KHSA as well as estimates of the costs to implement the
212 Iron Gate Hatchery and Genetics Management plan. The plan includes measures
213 for genetic broodstock management testing, spawning surveys, and fish testing
214 procedures. Committed contract amounts for the hatchery production study were
215 used to determine costs that will be incurred during the test period.

216 **Plant Additions: Hydro-Powered Generation Resources**

217 **Q. Please describe the need for the Merwin Upstream Collect & Transport plant**
218 **addition.**

219 A. As indicated above, the Company is investing in a fish passage system designed
220 to collect, trap and haul juvenile and adult anadromous fish around the three
221 Lewis River dams. The three Lewis River dams consist of the Merwin, Yale and
222 Swift dams. The purpose of these collect, trap and haul investments is to
223 implement and comply with the Lewis River license issued by FERC.

224 **Q. Please describe the Merwin Upstream Collect & Transport facilities.**

225 A. The trap and haul system requires that a fish collection, sorting and transportation
226 facility be constructed at Merwin dam. Once collected and sorted, the fish will be
227 transported for release above Swift dam. Of the three Lewis River dams, Swift is
228 the dam farthest upstream.

229 **Q. Was the design of the Merwin Upstream Collect & Transport facilities**
230 **necessary to comply with requirements of resource agencies?**

231 A. Yes. The resource agencies consisted of the National Marine Fisheries Service,
232 the United States Fish and Wildlife Service and the Washington Department of
233 Fish and Wildlife. The design necessary to satisfy the requirements of these
234 agencies resulted in plant included in the Company's filing equal to
235 approximately \$47.3 million.

236 **Q. When are the Merwin Upstream Collect & Transport facilities scheduled to**
237 **be placed in service?**

238 A. The Company plans to place the addition into service during the test period.

239 **Q. Please describe the need for the Swift Fish Collector plant addition.**

240 A. The Swift Fish Collector is another investment necessary to implement the fish
241 passage system designed to collect, trap and haul juvenile and adult anadromous
242 fish around the three Lewis River dams. Like the Swift Upstream Collect &
243 Transport facilities, the purpose of the Swift Fish Collector is to implement and
244 comply with the Lewis River license issued by FERC.

245 **Q. Please describe the Swift Fish Collector facilities.**

246 A. The facility is designed to attract and collect juvenile and adult fish so that they
247 can be hauled downstream past the dams on the Lewis River and released back
248 into the river to continue their out-migration to the ocean. The moored fish
249 collection facility floats on the surface of the reservoir. Guide nets lead fish to a
250 collection entrance designed to simulate the hydraulic conditions of a natural lake
251 outlet. A series of pumps will draw water through a screen such that the fish are

252 slowly accelerated to a speed where they are unable to escape. After the fish are
253 captured, they are sorted by size to minimize injury and predation. The fish are
254 then transferred into a truck for transport and release downstream of Merwin dam.

255 **Q. Was the design of the Swift Fish Collector necessary to comply with**
256 **requirements of resource agencies?**

257 A. Yes. The resource agencies consisted of the same entities that reviewed and
258 approved the Merwin Upstream Collect & Transport design. The design necessary
259 to satisfy the requirements of these agencies resulted in plant included in the
260 Company's filing equal to approximately \$63.0 million.

261 **Q. When is the Swift Fish Collector scheduled to be placed in service?**

262 A. The Company plans to place the addition into service during the test period.

263 **Q. Does this conclude your direct testimony?**

264 A. Yes.