

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

3 A. My name is Brian S. Dickman. My business address is 825 NE Multnomah Street, Suite
4 600, Portland, Oregon 97232. My title is Director, Net Power Costs and Load
5 Forecasting.

6 **Qualifications**

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

8 A. I received a Master of Business Administration from the University of Utah with an
9 emphasis in finance and a Bachelor of Science degree in accounting from Utah State
10 University. Prior to joining the Company, I was employed as an analyst for Duke Energy
11 Trading and Marketing. I have been employed by the Company since 2003 including
12 positions in revenue requirement and regulatory affairs, and I assumed my current role
13 managing the Company’s net power cost group in March 2012.

14 **Q. Have you testified in previous regulatory proceedings?**

15 A. Yes. I have filed testimony in proceedings before the public utility commissions in
16 California, Idaho, Oregon, Utah, and Wyoming.

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

18 A. My testimony supports the Company’s April 30, 2015 filing to update Schedule 37,
19 Avoided Cost Purchases from Qualifying Facilities. The Company is required to update
20 Schedule 37 rates annually, with filings made by April 30 of each year or within 30 days
21 of filing an Integrated Resource Plan (“IRP”) or IRP Update, whichever is sooner. This
22 year the Company filed its 2015 IRP on March 31, 2015, making the annual Schedule 37
23 update due April 30, 2015. In its filing, the Company has updated the inputs to the

24 calculation of Schedule 37 rates and proposed one change to the way avoided costs are
25 calculated for Schedule 37. My testimony supports the change proposed by the Company.

26 **Q. Please describe the change to the calculation of Schedule 37 rates proposed by the**
27 **Company in this filing.**

28 A. The Company proposes that avoided cost rates during the sufficiency period no longer
29 include capacity costs related to the deferral of a simple cycle combustion turbine
30 (“SCCT”). During the sufficiency period the Company has no plans to procure additional
31 thermal capacity resources. The 2015 IRP calls for the Company to utilize front office
32 transactions (“FOTs”), which represent short-term firm wholesale market purchases, to
33 meet its capacity needs. Rather than imputing capacity costs based on a fictitious SCCT,
34 avoided costs during the sufficiency period should be calculated using the GRID model
35 including the value of short-term firm market purchases that can be displaced by a
36 qualifying facility (“QF”). The sufficiency period prices calculated in GRID should also
37 be differentiated into on- and off-peak periods based on the relationship of Palo Verde on-
38 and off-peak market prices. The Company’s proposed change results in avoided cost
39 prices that best represent the costs that will actually be avoided during the sufficiency
40 period. As described later, the Company’s proposal eliminates an unnecessary difference
41 that remains between the calculation of avoided costs for small QFs under Schedule 37
42 and large QFs under Schedule 38. Details supporting the Company’s proposed avoided
43 costs were provided as appendices to its filing; specifically Appendix 1, Appendix 2, and
44 Confidential Appendix 3. Confidential Appendix 4 was also provided which includes the
45 calculation of avoided costs consistent with the Commission’s orders issued January 16,
46 2015, and February 13, 2015 in Docket Nos. 14-035-55 and 14-035-T04.

47 **Q. Has the Company proposed this change before? If so, how is this proposal different?**

48 A. Yes. In its May 7, 2014, filing to update Schedule 37 the Company also proposed to
49 eliminate the SCCT fixed costs during the sufficiency period. However, in that filing,
50 when the costs of the SCCT were removed from the sufficiency period, the resulting
51 Schedule 37 prices were simply equal to the average avoided costs from the GRID
52 model, with no recognition of the value of QF energy during on- and off-peak periods.
53 The Commission cited this as the deciding factor leading to its conclusion to not adopt
54 the Company's proposal:

55 "In PacifiCorp's Schedule 37 proposed method, without any value for the
56 SCCT, the rates for on-peak and off-peak energy are the same. Thus, the rates
57 paid to a QF delivering all its energy on-peak will understate costs avoided
58 and the rates paid to a QF delivering all its energy off-peak will overstate the
59 costs avoided by the QF...[The] deciding factor for this issue is the fact that
60 in the proposal in front of us, with the SCCT cost removed, the peak and off-
61 peak prices are identical during the period of resource sufficiency."¹

62 In its Order issued October 21, 2014, the Commission directed the Company "to
63 file a potential adjustment to the Schedule 37 method that produces distinct peak and off-
64 peak prices in the resource sufficiency period."² To remedy the issue identified by the
65 Commission, in this filing, the proposed Schedule 37 prices during the sufficiency period
66 have differentiated on- and off-peak prices based on the relationship of Palo Verde on- and
67 off-peak market prices relative to flat Palo Verde market prices. Later in my testimony I
68 show that the prior method of adding SCCT fixed costs to the GRID modeled avoided
69 costs overstates the prices that should be paid for energy and capacity during the
70 sufficiency period.

¹ Docket Nos. 14-035-55 and 14-035-T04, Order Partially Addressing Rocky Mountain Power's Petition for Reconsideration, Review or Rehearing of the Commission's December 30, 2014 Order on Review and Motion for Stay, January 29, 2015, page 7.

² Docket Nos. 14-035-55 and 14-035-T04, Report and Order Issued October, 21, 2014 page 19.

71 **Q. What is the impact on avoided cost rates if the SCCT fixed costs are eliminated from**
 72 **the sufficiency period?**

73 A. Table 1 compares the current Schedule 37 rates to updated rates using the currently-
 74 approved method (i.e., including the SCCT costs during the sufficiency period)³ and
 75 updated rates based on GRID modeled results excluding the SCCT costs but with
 76 differentiated on- and off-peak prices.

Table 1

20 Year (2016 to 2035) Levelized Prices (Nominal) @ 6.66% Discount Rate (\$/MWH)				
	BASE LOAD	WIND	SOLAR FIXED	SOLAR TRACKING
Current Rates (Includes SCCT costs during sufficiency period)	\$54.33	\$37.71	\$54.27	\$58.52
Updated Rates (Includes SCCT costs during sufficiency period)	\$45.01	\$32.75	\$42.67	\$45.94
Proposed Rates (No SCCT costs, differentiated on/off-peak prices)	\$39.34	\$32.08	\$38.53	\$40.26
Impact of Removing SCCT Costs	(\$5.67)	(\$0.68)	(\$4.14)	(\$5.68)

77 As shown in Table 1, if the fixed costs of a SCCT continue to be imputed in
 78 Schedule 37 avoided costs during the sufficiency period, the Company’s retail customers
 79 will pay prices for QFs that are higher than the avoided cost of energy and capacity from
 80 other sources, contrary to the customer indifference standard in the Public Utility
 81 Regulatory Policies Act of 1978 (“PURPA”).

82 **Q. As background information, please describe the currently-approved method for**
 83 **calculating avoided costs for small QFs qualifying for published rates under**
 84 **Schedule 37.**

85 A. The framework for the calculation of rates under Schedule 37 was first approved by the
 86 Commission in Docket No. 94-2035-03. In its July 1995 order, the Commission approved
 87 a combined differential revenue requirement and proxy method for determining avoided

³ Capacity contribution of intermittent resources is based on the values originally approved by the Commission in Docket No. 12-035-100, and included in Docket No. 14-035-T04.

88 costs. Since that time various adjustments have been made to the calculation details, with
89 the most recent changes effective February 20, 2015. Published rates under Schedule 37
90 are available to cogeneration facilities up to 1 MW and other small power production
91 facilities, including wind and solar resources, up to 3 MW.

92 The determination of avoided costs is divided into two periods: resource
93 sufficiency and resource deficiency. During the sufficiency period, avoided costs are
94 calculated using GRID, the Company's production cost model. Net power costs ("NPC")
95 are calculated using two system dispatch simulations, one without any new QF resources
96 and one with an additional 10 MW QF resource included as a system resource at zero
97 cost. The period of resource deficiency begins coincident with the next deferrable
98 resource identified in the Company's most recent IRP or IRP Update. During the
99 deficiency period avoided costs are equal to the fixed and variable costs of a proxy
100 resource, currently a combined cycle combustion turbine ("CCCT").

101 The current method also calls for additional capacity costs, based on the fixed
102 costs of a SCCT, to be added to the avoided costs produced by the GRID model during
103 the sufficiency period. As described above, the issue of whether it is appropriate to
104 include SCCT costs during the sufficiency period was raised in Docket Nos. 14-035-55
105 and 14-035-T04. In those dockets, the Commission declined to change the current
106 method but directed the Company to propose an alternative in its next Schedule 37
107 update.

108 **Q. Is the currently approved method for Schedule 37 used to calculate avoided costs for**
109 **large QFs under Schedule 38?**

110 **A.** No. Avoided costs for large QFs are calculated using the Proxy/Partial Displacement

111 Differential Revenue Requirement (“PDDRR”) method. The methods are similar in that
112 both utilize the GRID model to determine avoided costs during the sufficiency period and
113 both include capacity costs of a CCCT beginning with the next deferrable resource in the
114 Company’s IRP. The Proxy/PDDRR method, however, continues to use a combination of
115 the GRID model and partial displacement of a CCCT during the deficiency period rather
116 than basing avoided costs solely on the proxy CCCT. Furthermore, during the sufficiency
117 period the Proxy/PDDRR avoided costs include displacement of FOTs and do not include
118 additional capacity costs from a SCCT. The Commission recently affirmed this treatment
119 is appropriate in Docket No. 12-035-100 when it found:

120 “We are persuaded the Proxy/PDDRR method properly reflects avoided
121 capacity costs associated with FOTs during the period of resource
122 sufficiency. The evidence proffered by PacifiCorp and the Office shows a
123 QF’s displacement of FOTs, as determined within the GRID model,
124 results in what PacifiCorp would have otherwise paid for capacity
125 purchases. Thus, the inclusion of additional capacity value when a FOT is
126 displaced would over-compensate the QF and violate the ratepayer
127 neutrality objective.”⁴

128 When the Commission approved new Schedule 37 rates in Docket Nos. 14-035-
129 55 and 14-035-T04 several changes were adopted that were designed to enhance
130 consistency with the Schedule 38 calculation, including: reflecting the integration costs
131 and capacity contribution of intermittent resources, excluding future CO2 taxes from the
132 official forward price curve, and eliminating separate payments to the QF for capacity
133 and energy.

134 **Q. Has the Commission previously addressed avoided capacity costs during the**
135 **sufficiency period for Schedule 37?**

136 **A.** Yes. In Docket Nos. 14-035-55 and 14-035-T04, the Commission initially approved the

⁴ Docket No. 12-035-100, August 16, 2103 Order at 35.

137 Company's request to remove the SCCT costs from the sufficiency period, but later
138 reversed its decision until additional evidence could be presented. In its October 21, 2014
139 order the Commission stated:

140 "Among other things, this order approves PacifiCorp's proposal to eliminate
141 the annual fixed costs of a SCCT during the period of resource sufficiency.
142 This action is based, at least in part, on our Schedule 38 Order that finds
143 wholesale power purchased to meet capacity constraints already contains
144 capacity value; therefore, adding the SCCT value to the wholesale market
145 price is excessive. We note, however, the peak and off-peak rates PacifiCorp
146 proposes for Schedule 37 are equal during the resource sufficiency period
147 (with the SCCT costs removed). In other words, the capacity value contained
148 in the wholesale power purchase to meet peak hour constraints is averaged
149 across all hours in the proposed rates...To examine the effects of this
150 particular difference in the Schedule 37 and 38 methods, we direct PacifiCorp
151 to file a potential adjustment to the Schedule 37 method that produces distinct
152 peak and off-peak prices in the resource sufficiency period."⁵

153 In its December 30, 2014, Order on Review the Commission stated:

154 "While it remains our goal to produce logically consistent avoided cost
155 pricing in Schedule 37 and Schedule 38, we recognize the record in this
156 case presents no alternative means, aside from the fractional SCCT value,
157 for calculating the full Schedule 37 avoided capacity cost during resource
158 constrained months in the period of resource sufficiency. Thus, pending
159 receipt of additional evidence in a future proceeding, we will maintain the
160 SCCT cost component in Schedule 37 to account for the value of capacity
161 avoided in the constrained months during years in which PacifiCorp is
162 otherwise resource sufficient. We await the presentation of evidence in
163 future Schedule 37 proceedings describing any alternative approach for
164 valuing avoided capacity costs and peak and off-peak avoided costs during
165 the period of resource sufficiency."⁶

166 The Company's proposal in this case to eliminate the fixed costs of an SCCT from the
167 sufficiency period and to differentiate on-and off-peak prices paid to the QF is consistent
168 with the Commission's past orders and is also consistent with the approach used for
169 Schedule 38.

⁵ Docket Nos. 14-035-55 and 14-035-T04, Report and Order Issued October, 21, 2014 page 18.

⁶ Docket Nos. 14-035-55 and 14-035-T04, Order on Review, December 30, 2014, page 14.

170 **Q. Is it appropriate to rely on the Company's IRP in determination of Schedule 37**
171 **rates?**

172 A. Yes. The current method for calculating Schedule 37 rates is directly dependent upon the
173 Company's IRP, including the demarcation of the resource deficiency period and the type
174 and cost of the deferrable resource. During the resource sufficiency period the IRP
175 identifies that the Company is avoiding FOTs, or short-term firm market purchases, and
176 therefore reflect avoided capacity costs. It makes no logical sense for the Company to pay
177 avoided costs based on an SCCT that it is not actually avoiding, or for it to build SCCTs
178 during the resource sufficiency period for QFs to avoid.

179 The Commission has consistently referred back to the Company's IRP when
180 determining whether proposed avoided cost rates are appropriate. When the Commission
181 found in Docket No. 12-035-100 that additional capacity costs should not be added in the
182 sufficiency period for the Proxy/PDDRR method it concluded, "The evidence proffered
183 by the Company and the Office shows a QF's displacement of FOTs, as determined
184 within the GRID model, results in what PacifiCorp would have otherwise paid for
185 capacity purchases."

186 **Q. How did the Company calculate Schedule 37 avoided capacity costs during the**
187 **sufficiency period in this filing?**

188 A. In this filing the Company calculated the sufficiency period avoided costs using the
189 GRID model, including the displacement of FOTs identified in the IRP. The avoidance of
190 short-term firm market purchases is readily identifiable in the GRID study results
191 provided as Confidential Appendix 3 to the workpapers supporting the Company's filing.
192 In support of its proposal to eliminate imputation of SCCT fixed costs during the

193 sufficiency period, the Company included in the GRID model calculation the FOTs
194 identified in the 2015 IRP, and reflected partial displacement of these FOTs when
195 calculating avoided costs. This partial displacement of FOTs in the GRID model is the
196 same as done for large QFs under the Proxy/PDDRR method. To reflect the value of
197 energy generated by a QF during on- and off-peak periods, the Company shaped the
198 avoided costs produced by the GRID model into distinct on- and off-peak prices based on
199 the relationship of Palo Verde on- and off-peak market prices to flat market prices at Palo
200 Verde each month.

201 **Q. Why is it appropriate to shape avoided costs by applying the Palo Verde market**
202 **shape to the average avoided costs from the GRID model?**

203 A. Calculating the avoided costs using the GRID model, with on- and off peak prices
204 differentiated based on the shape of Palo Verde market prices, best aligns the avoided cost
205 prices with the costs that are actually avoided during the sufficiency period and
206 recognizes the difference in value of energy generated by a QF during on- and off-peak
207 periods. Table 2 illustrates the price differential resulting from the Company's proposal
208 by comparing the flat avoided costs from GRID to the on- and off-peak prices proposed
209 in this filing for a base load QF.

Table 2

	GRID Model Avoided Cost	PV Shaped Avoided Costs		Differential	
	(a)	(b)	(c)	(b) - (a)	(c) - (a)
Year	Average	On-Peak	Off-Peak	On-Peak	Off-Peak
2015	\$23.92	\$27.73	\$22.01	\$3.81	(\$1.91)
2016	\$23.97	\$27.50	\$22.12	\$3.53	(\$1.85)
2017	\$25.24	\$28.14	\$23.22	\$2.90	(\$2.02)
2018	\$27.47	\$30.92	\$24.82	\$3.45	(\$2.65)
2019	\$28.73	\$32.46	\$26.06	\$3.73	(\$2.67)
2020	\$29.34	\$32.92	\$26.33	\$3.58	(\$3.01)
2021	\$32.33	\$36.69	\$28.86	\$4.36	(\$3.47)
2022	\$34.95	\$39.96	\$31.31	\$5.01	(\$3.64)
2023	\$38.02	\$42.55	\$34.33	\$4.53	(\$3.69)
2024	\$39.02	\$44.57	\$34.67	\$5.55	(\$4.35)
2025	\$41.39	\$46.55	\$37.02	\$5.16	(\$4.37)
2026	\$42.80	\$47.94	\$38.70	\$5.14	(\$4.10)
2027	\$44.67	\$48.79	\$39.54	\$4.12	(\$5.13)

210 **Q. Why is the Company’s proposed approach more accurate than including the fixed**
 211 **costs of a SCCT?**

212 A. Avoided cost prices during the sufficiency period must be consistent with the Company’s
 213 resource procurement plans to avoid burdening retail customers with QF costs that are
 214 higher than the costs actually avoided by the Company. Consistent with the customer
 215 indifference standard under PURPA, the avoided costs modeled in GRID accurately
 216 represent the energy and capacity costs that can be avoided during the sufficiency period,
 217 including displacement of short-term firm market transactions. Imputing the fixed costs
 218 of a fictitious SCCT the Company has no plans to build on top of the avoided costs from
 219 GRID double counts avoided capacity costs because the average costs from GRID
 220 already include avoided firm market transactions. Table 3 compares the average avoided
 221 costs from GRID to the Company’s proposal and to the avoided costs that would result if
 222 the Company’s proposed changes are rejected (i.e. SCCT costs are included in the

223 sufficiency period).⁷ Note that the off-peak prices under the SCCT method are equal to
 224 the average avoided costs from the GRID model.

Table 3

	GRID Model Avoided Cost	PV Shaped Avoided Costs		Avoided Costs Including SCCT Costs		Difference	Difference
	(a)	(b)	(c)	(d)	(e)	(d)-(b)	(e)-(c)
Year	Average	On-Peak	Off-Peak	On-Peak	Off-Peak	On-Peak	Off-Peak
2015	\$23.92	\$27.73	\$22.01	\$34.77	\$23.92	\$7.04	\$1.91
2016	\$23.97	\$27.50	\$22.12	\$35.08	\$23.97	\$7.58	\$1.85
2017	\$25.24	\$28.14	\$23.22	\$38.46	\$25.24	\$10.32	\$2.02
2018	\$27.47	\$30.92	\$24.82	\$39.05	\$27.47	\$8.13	\$2.65
2019	\$28.73	\$32.46	\$26.06	\$40.55	\$28.73	\$8.09	\$2.67
2020	\$29.34	\$32.92	\$26.33	\$43.42	\$29.34	\$10.50	\$3.01
2021	\$32.33	\$36.69	\$28.86	\$46.71	\$32.33	\$10.02	\$3.47
2022	\$34.95	\$39.96	\$31.31	\$51.73	\$34.95	\$11.77	\$3.64
2023	\$38.02	\$42.55	\$34.33	\$55.17	\$38.02	\$12.62	\$3.69
2024	\$39.02	\$44.57	\$34.67	\$56.53	\$39.02	\$11.96	\$4.35
2025	\$41.39	\$46.55	\$37.02	\$63.76	\$41.39	\$17.21	\$4.37
2026	\$42.80	\$47.94	\$38.70	\$63.35	\$42.80	\$15.41	\$4.10
2027	\$44.67	\$48.79	\$39.54	\$65.66	\$44.67	\$16.87	\$5.13

225 The results in Table 3 demonstrate that adding the fixed costs of a SCCT over-states the
 226 avoided capacity costs because it includes the avoided firm market transactions and costs
 227 of a resource the Company can't actually avoid.

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

229 A. Yes.

⁷ Work papers used for the calculation of avoided costs rates which includes SCCT costs are provided as Confidential Appendix 4 to the Company's filing.