

1 **Q. Are you the same Gregory N. Duvall who submitted direct and rebuttal**  
2 **testimony in the revenue requirement portion of this proceeding on behalf of**  
3 **PacifiCorp dba Rocky Mountain Power (“the Company”)?**

4 A. Yes.

5 **Purpose and Summary of Rebuttal Testimony**

6 **Q. What is the purpose of your rebuttal testimony?**

7 A. My rebuttal testimony responds to the direct testimonies on the issue of solar  
8 valuation as it applies to net metering. Specifically, I respond to testimony on this  
9 issue submitted by Mr. Nathanael Miksis for The Alliance for Solar Choice  
10 ("TASC"), Mr. Rick Gilliam and Ms. Sarah Wright for Utah Clean Energy  
11 ("UCE"), and Mr. Dustin Mulvaney for the Sierra Club. In my rebuttal testimony,  
12 I will focus on the value of solar as it relates to capacity and energy.  
13 Mr. Douglas L. Marx will address the value of solar as it relates to avoidance of  
14 transmission and distribution costs. I also respond to the public notice issued by the  
15 Public Service Commission of Utah ("Commission") on April 16, 2014 in response  
16 to Senate Bill ("S. B.") 208.

17 **Response to the Commission Determinations Required by S.B 208 (now codified as**  
18 **Utah Code Ann. § 54-15-105.1)**

19 **Q. What does S. B. 208 require of the Commission?**

20 A. S. B. 208 requires the following of the Commission who is referred to in S. B. 208  
21 as the "governing authority":

22 *The governing authority shall:*

23 *(1) determine, after appropriate notice and opportunity for public comment,*  
24 *whether costs that the electrical corporation or other customers will incur from a*

25 net metering program will exceed the benefits of the net metering program, or  
26 whether the benefits of the net metering program will exceed the costs; and

27 (2) determine a just and reasonable charge, credit, or ratemaking structure,  
28 including new or existing tariffs, in light of the costs and benefits.

29 **Q. With regard to part (1), do the costs that the Company or other customers will**  
30 **incur from a net metering program exceed the benefits of the net metering**  
31 **program?**

32 A. Yes. Net energy metered ("NEM") customers are compensated for the power they  
33 produce at their retail price, which ranges from 8.8 cents per kilowatt-hour ("kWh")  
34 to 14.4 cents per kWh depending on which pricing block is being displaced at the  
35 time the NEM customer production is being applied to avoid paying for energy  
36 from the grid. In another docket, the Commission addressed the value of solar as it  
37 applies to Qualifying Facilities ("QFs"). The benefit of the freed-up power in 2015  
38 is about \$30/MWh<sup>1</sup>. This value reflects an energy only value, since the Company  
39 does not need new capacity until 2027 based on the 2013 Integrated Resource Plan  
40 ("IRP") Update.

41 **Q. Does the Company's proposal for a NEM charge of \$4.65 per month satisfy**  
42 **part (2) of S. B. 208?**

43 A. Yes. Given the 5.8 to 11.4 cents/kWh difference between the costs and benefits of  
44 net metering, the \$4.65 per month charge is reasonable and probably on the low  
45 end of the costs.

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<sup>1</sup> See Docket No. 14-035-T04, In the Matter of Rocky Mountain Power's Proposed Revisions to Electric Service Schedule No. 37, Avoided Cost Purchases from Qualifying Facilities.

46 **Response to Opposing Parties**

47 **Q. What does Mr. Mulvaney of the Sierra Club recommend?**

48 A. Mr. Mulvaney recommends that the Commission reject the Company's proposed  
49 net metering facilities charge "because the benefits provided by residential net  
50 metering customers far outweigh any revenues that the new charge would take in."<sup>2</sup>  
51 In support of this assertion, Mr. Mulvaney concludes that the avoided cost per NEM  
52 customer bill is \$56.27, while the NEM charge per customer bill is \$4.25<sup>3</sup>.

53 **Q. Do you agree with this conclusion?**

54 A. No. Mr. Mulvaney's recommendation is based on a flawed analysis because he does  
55 not consider the value received by the NEM customer related to the fixed costs of  
56 the facilities the customer avoids paying for and he overstates avoided costs.

57 **Q. Please describe the approach Mr. Mulvaney has taken to determine avoided  
58 costs.**

59 A. Mr. Mulvaney used what he claims is a method used in California which results in  
60 avoided costs for the test period of \$61/MWh<sup>4</sup> as compared to the Utah method that  
61 shows a result of about \$30/MWh as previously noted. Mr. Mulvaney's method  
62 assigns a capacity value to a NEM facility based on the avoidance of a Simple Cycle  
63 Combustion Turbine ("SCCT") during the period of resource sufficiency which  
64 runs through 2026 based on the Company's recently filed 2013 IRP Update. This  
65 approach was recently litigated and rejected by the Commission in its order issued

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<sup>2</sup> Mulvaney, COS/RD Direct, p. 5.

<sup>3</sup> *Id.* p. 2.

<sup>4</sup> *Id.* p. 22.

66 August 16, 2013 in Docket No. 12-035-100 where the price to pay solar QFs was  
67 determined.

68 **Q. Do you have any other observations regarding Mr. Mulvaney's avoided cost**  
69 **calculation?**

70 A. Yes. On page 21 of Mr. Mulvaney's testimony, he shows that the highest value of  
71 energy occurs in May. This is not intuitive since May is typically in the middle of  
72 the hydro run-off period when energy costs are normally at their lowest. This  
73 counterintuitive result raises suspicion about the validity of the remainder of Mr.  
74 Mulvaney's analysis.

75 **Q. What does Mr. Miksis representing TASC recommend regarding the value of**  
76 **solar?**

77 A. Mr. Miksis recommends "that the Commission defer approving any new charge or  
78 credit for net metering customers until it can first develop a proper methodological  
79 framework."<sup>5</sup>

80 **Q. Is the record in this case sufficient enough for the Commission to adopt the**  
81 **Company's proposed \$4.65 per month NEM charge?**

82 A. Yes. As previously described, the Commission has already addressed the value of  
83 solar to Utah customers as it relates to QF power in another docket and the  
84 Company has identified the costs shifted to non-NEM customers when an existing  
85 residential customer becomes a NEM customer. Given the large difference between  
86 the costs and benefits, there should be no question that a charge to NEM customers  
87 is warranted.

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<sup>5</sup> Miksis, COS/RD Direct, p. 9.

88 **Q. Did Mr. Miksis present a specific proposal for quantifying the cost and benefits**  
89 **of net metering?**

90 A. No.

91 **Q. What advice did Mr. Miksis provide to assist the Commission in quantifying**  
92 **the cost and benefits of net metering?**

93 A. Mr. Miksis indicated that “There is no need for the Commission to reinvent the  
94 wheel to make a cost-benefit determination for the purposes of this proceeding.”<sup>6</sup>

95 **Q. Do you agree with this advice?**

96 A. Yes. The Commission addressed the value of solar recently in Docket  
97 No. 12-035-100 where it determined the avoided cost applicable to solar QFs and  
98 does not need to reinvent the wheel now. There is no reason to apply different  
99 standards to rooftop solar versus a QF with regard to energy value, capacity value,  
100 integration costs or the imputation of environmental costs or other adders. These  
101 were all decided in Docket No. 12-035-100.

102 **Q. Does Mr. Miksis present any potential methodologies for the Commission’s**  
103 **consideration?**

104 A. Yes. Mr. Miksis presents his Exhibits B and C indicating they represent best  
105 practices for methodological approaches to quantify the costs and benefits of net  
106 metering for distributed solar, but fails to include the method recently adopted by  
107 the Commission in Utah for valuation for solar QFs.

108 **Q. What do Ms. Wright and Mr. Gilliam for UCE recommend with regard to**  
109 **solar valuation?**

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<sup>6</sup> *Id.* p. 9.

110 A. They recommend that “no net metering charge should be implemented without  
111 consideration of a full cost/benefit analysis across all customer classes.”<sup>7</sup> In other  
112 words, they recommend, similar to Mr. Miksis, that the Commission put off  
113 approval of the \$4.65 NEM charge until another day.

114 **Q. Does UCE provide an estimate of the value of solar in this docket?**

115 A. Yes. Ms. Wright presents her view of the value of solar in Utah in UCE Exhibit 2.1  
116 where she concludes that the 25-year value of solar is \$116/MWh. This study was  
117 prepared for UCE by Clean Power Research and is not consistent with the  
118 Commission’s valuation of solar QF projects. For example, it appears to include a  
119 capacity value in the resource sufficiency period for deferring a CCCT, as well as  
120 including adders for environmental and other costs that were specifically rejected  
121 by the Commission in Docket No. 12-035-100.

122 **Q. Ms. Wright notes that the 2013 IRP selected all of the available distributed**  
123 **solar in every scenario and therefore brings value and benefit to customers.**  
124 **How do you respond?**

125 A. The Company’s 2013 IRP sought to find the lowest cost/risk portfolio for customers  
126 on a wholesale basis over a 20-year planning horizon. The cost of distributed solar  
127 generation in the 2013 IRP was based on the costs the Company would incur to  
128 acquire it and did not consider the costs incurred by the customer to install the  
129 distributed solar generation. The implicit assumption in the 2013 IRP is that each  
130 individual customer pays for its cost of service. That is what the NEM charge is  
131 intended to do. Ms. Wright essentially argues that as long as distributed solar

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<sup>7</sup> Wright, COS/RD Direct, p. 5.

132 generation is selected by the IRP models, then NEM customers should not have to  
133 pay their share of system costs. This is not a reasonable conclusion.

134 **Q. Does Ms. Wright offer any advice to the Commission?**

135 A. Yes. Just like Mr. Miksis, Ms. Wright states the “Commission would not need to  
136 reinvent the wheel” with regard to the valuation of solar. Again, I agree with this  
137 advice as the Commission has already decided many of the issues associated with  
138 solar valuation in Docket No. 12-035-100.

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

140 A. Yes.