

Rocky Mountain Power  
Docket No. 14-035-114  
Witness: Joelle R. Steward

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

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Surrebuttal Testimony of Joelle R. Steward

August 2017

1 **Q. Are you the same Joelle R. Steward who presented direct and rebuttal testimony**  
2 **in this proceeding?**

3 A. Yes I am.

4 **Purpose of Rebuttal Testimony**

5 **Q. What is the purpose of your surrebuttal testimony?**

6 A. My surrebuttal testimony responds to the rebuttal testimony of Utah Clean Energy  
7 (“UCE”) witness Tim Woolf; Vote Solar witness Dr. David DeRamus; Vivint Solar  
8 witness Richard Collins; and Western Resource Advocates (“WRA”) witness Steven  
9 Michel filed July 25, 2017. I also respond to certain aspects of the Joint Proposal  
10 submitted by Dr. Artie Powell for the Division of Public Utilities (“DPU”) and Michele  
11 Beck for the Office of Consumer Services (“OCS”). A lack of response to particular  
12 statements made in rebuttal by parties should not be interpreted to mean the Company  
13 agrees with that statement; rather, many statements in rebuttal testimony were  
14 reiterations of arguments the Company addressed in its rebuttal testimony and, thus,  
15 the Company will not repeat those arguments here.

16 **Response to Joint Proposal by DPU and OCS**

17 **Q. Do you have comments on the Joint Proposal by the DPU and OCS regarding the**  
18 **proposed structure for the transition away from net metering (“NEM”)?**<sup>1</sup>

19 A. Yes. My comments supplement the general comments of Company witness Gary W.  
20 Hoogeveen and economic analysis of Company witness Robert M. Meredith in their  
21 surrebuttal testimonies regarding the Joint Proposal. Specifically, I will address the  
22 Joint Proposal’s specific recommendations regarding (1) fixed rates for compensating

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<sup>1</sup> DPU witness Dr. Artie Powell DPU, rebuttal testimony, Exhibit 1.1R, and OCS witness Michele Beck, rebuttal testimony, Attachment 1 (“Joint Proposal”).

23 exports during the transition period, (2) allowing transition customers to remain in  
24 “their then-existing appropriate rate class” through the transition period, and (3) the  
25 first phase of the compensation proceeding.

26 **Q. Do you have concerns with the specific recommended fixed rates to compensate**  
27 **for exports during the Joint Proposal’s transition period?**

28 A. Yes. Page 3 of the Joint Proposal contains the proposed rates for each customer class  
29 for exported energy for transition customers. Under the Joint Proposal, these rates  
30 would be fixed for the transition period customers for 10 to 15 years. Footnote 2 on  
31 page 3 explains that these rates were calculated at 95 percent of the current average  
32 retail rate for each rate schedule, based on my workpapers in this filing for the  
33 residential rate and from a data response to the OCS from the Company for the non-  
34 residential customers.

35 To clarify, however, the residential workpapers used for the calculation were  
36 based on calendar year 2015 results, which was used for the NEM analysis, not the last  
37 general rate case. Accordingly, the starting point for the 95 percent reflects actual  
38 results in 2015, not the rates last approved by the Commission. While the Company  
39 used calendar year 2015 for the cost of service analysis in this filing to use the load  
40 research data that was collected in 2015, the proposed rates were developed based on a  
41 reconciliation to the rates approved by the Commission in the last general rate case.<sup>2</sup> A  
42 calculation of 95 percent from the average residential energy rate (excluding customer  
43 charge revenue) as approved by the Commission in the last general rate case would

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<sup>2</sup> See Direct Testimony of Joelle Steward, ll. 293-303.

44 result in an export rate of 9.67 cents/kWh rather than 9.79 cents/kWh shown in the Joint  
45 Proposal.

46 The proposed non-residential export rates in the Joint Proposal reflect an  
47 apparent misunderstanding as they would result in a value that far exceeds the current  
48 value received by non-residential customers on NEM. I doubt that was the intention by  
49 the DPU and OCS in the Joint Proposal. The OCS data request that was relied on  
50 requested the average retail rate for each rate schedule, which, without context, the  
51 Company interpreted as all rate schedule revenue divided by kilowatt-hours. However,  
52 under NEM, the netting within the billing month for exported power is based on only  
53 kilowatt-hours, so the monthly value is just the average *energy* rates. In other words,  
54 the monthly netting does not include value from monthly customer and demand charges  
55 that were reflected in the average retail rate provided in response to the OCS data  
56 request. Currently for large non-residential customers, only exported energy that  
57 exceeds the monthly netted kWh is priced at compensation rates in Schedule 135,  
58 which includes three options of excess compensation rates: two options based on  
59 avoided costs and one option for the average retail rate.<sup>3</sup> If the average retail rate were  
60 to be provided for all exported energy from non-residential customers, not just the  
61 exported energy that exceeds the monthly netted kWh, it would produce a windfall to  
62 these customers. Table 1 below shows the average *energy* rates (*i.e.*, revenue from  
63 kilowatt-hour charges divided by kilowatt-hours) from the last general rate case for  
64 each rate schedule, and what it would be at 95 percent, as contemplated in the Joint  
65 Proposal.

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<sup>3</sup> The Company's request in this proceeding is to eliminate the option for average retail rate for large non-residential customers on NEM. *See* Steward Direct Testimony, ll. 606-647.

**Table 1.**

Schedule	Avg. Energy Rate (cents/kWh)	
	100%	95%
Res 1,2,3	10.18	9.67
6	3.65	3.46
6A	7.19	6.83
6B	3.64	3.46
8	3.75	3.57
10	6.04	5.74
23	8.83	8.39

67 **Q. Do you have other recommendations related to the export credit?**

68 A. Yes. I continue to recommend that the transition rate be consistent with what the  
69 Commission has already determined for avoided cost purchases as well as the  
70 ratemaking treatment of the export credit discussed in my rebuttal testimony.<sup>4</sup> The  
71 proposed treatment continues to be applicable under the Joint Proposal. In short, the  
72 Company recommends that, if the Commission approves a post-NEM transition  
73 program and export rate, the Company be allowed to defer and recover the annual costs  
74 of paying the export rates to customers through the Energy Balancing Account, or other  
75 similar deferral mechanism or approach. In addition, the Company recommends that  
76 the bill credit for the export power be applied against only the volumetric-based charges  
77 on the customer's bill, not the fixed customer charge or minimum bills. Lastly, I support  
78 the Joint Proposal provision to carryover any excess bill credits into subsequent billing  
79 periods until an annual expiration period, such as March, with expiring credits to be  
80 donated to the low income program. This provision provides an economic incentive to  
81 customers to right-size their facilities.

<sup>4</sup> Steward Rebuttal Testimony, ll. 661-671, 672-691.

82 **Q. What is your comment in response to the Joint Proposal provision that transition**  
83 **customers “remain in their then-existing appropriate rate class?”<sup>5</sup>**

84 A. While the Joint Proposal recognizes that different rate designs could be adopted by the  
85 Commission in any future rate case,<sup>6</sup> it seemingly prohibits the ability of the  
86 Commission to consider changes in rate classes that could impact these customers in  
87 the future. Different rate classes could be developed for a number of reasons in the  
88 future. Constraining the ability of the Company or any stakeholder to present evidence  
89 that could support modifications in rate classes in the future is a constraint on the ability  
90 of the Commission to fulfill its duties in ensuring rates are in the public interest. No  
91 other customer type currently has this pre-determined certainty, therefore we encourage  
92 the Commission to not pre-determine in this proceeding as to what future evidence  
93 could support.

94 **Q. What are your comments on the Joint Proposal’s recommendations on pages 4**  
95 **and 5 on the compensation proceeding parameters?**

96 A. While the Company generally supports the parameters in the Joint Proposal, I am  
97 concerned that the first phase is proposed to be comprised of just data collection and  
98 take approximately one year. For one, it is not clear what data collection is necessary.  
99 While I would not oppose a workshop or technical conference to discuss data, the  
100 proceeding should not be delayed pending data collection. Two, the proceeding should  
101 be initiated with discussions on methodologies for the calculation of the elements for  
102 consideration in setting the export rate. The methodologies will determine what data  
103 needs to be collected.

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<sup>5</sup> Joint Proposal, p. 3.

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

104 **Response to Rebuttal of Utah Clean Energy witness Tim Woolf**

105 **Q. For the most part, Mr. Woolf reiterates many of the same arguments made by**  
106 **UCE in direct testimony. For instance, Mr. Woolf states that demand charges are**  
107 **“especially difficult for residential and small commercial and industrial customers**  
108 **to manage and understand.”<sup>7</sup> How do you respond?**

109 A. UCE fails to provide any evidence to support Mr. Woolf’s conclusion. While demand  
110 charges for residential customers are not yet widespread, it is premature to argue these  
111 customers cannot manage or understand them. As I noted in my rebuttal, there is  
112 evidence to the contrary from a study done by the Arizona Public Service Company.<sup>8</sup>  
113 Furthermore, UCE’s argument fails to acknowledge that customers installing private  
114 generation are making a sophisticated choice to support their own electricity needs.  
115 Accordingly, these customers should be able to take the next step in understanding price  
116 signals that will encourage them to minimize costs to the utility system.

117 **Q. Next, Mr. Woolf reiterates UCE’s argument that there should not be a separate**  
118 **class for distributed generation customers.<sup>9</sup> What is your observation on his**  
119 **arguments?**

120 A. He states that it “would be premature for the Commission to create a separate rate class  
121 for distributed solar customers without first addressing these important policy  
122 questions.”<sup>10</sup> The important policy question he identifies is whether it is “practical or  
123 sustainable to create a new class for each new type of technology that customers install  
124 behind the meter,” such as deep energy efficiency retrofits, electric vehicles, or

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<sup>7</sup> UCE witness Tim Woolf, Rebuttal Testimony, ll. 127-9.

<sup>8</sup> Steward Rebuttal Testimony, ll. 326-32.

<sup>9</sup> Woolf Rebuttal Testimony, ll. 131-181.

<sup>10</sup> *Id.* at ll. 178-9.

125 storage.<sup>11</sup> While I believe it is important and necessary to consider current rate  
126 structures and potentially rate classes for evolving technology, the facts of the matter  
127 are that (1) the Commission decision in this proceeding is narrowly related to only  
128 NEM and the evidence in this proceeding; it is not a pre-judgment on other changes in  
129 technology, and (2) NEM is not just a change in behind the meter technology but is a  
130 compensation method for exporting energy. Accordingly, implications from other  
131 changes in technology should not be a reason to delay addressing NEM now.

132 **Q. Mr. Woolf disagrees with the OCS that netting should be done on an hourly or**  
133 **more frequent basis than monthly.<sup>12</sup> Do you agree with his arguments?**

134 A. No. Mr. Woolf cites the ability of vendors to market distributed generation as the main  
135 problem. But this ignores that continuing as is under NEM will not develop a  
136 sustainable path forward. The new model for distributed generation to separate export  
137 compensation from retail rates is the appropriate path forward to properly evaluate the  
138 service and provide more up-to-date and transparent signals on the value of exported  
139 energy. It is better to send correct signals now that will allow for innovation and  
140 education rather than perpetuate the current structure at an on-going cost to other  
141 customers.

142 **Q. UCE agrees a new proceeding should be opened to investigate new credits for**  
143 **excess generation, but proposes an alternative transition plan.<sup>13</sup> Do you agree with**  
144 **UCE's transition plan?**

145 A. No. UCE's proposal ties any changes in the export credit to general rate cases and sets

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<sup>11</sup> *Id.* at ll. 174-7.

<sup>12</sup> *Id.* at ll. 213-23.

<sup>13</sup> *Id.* at ll. 245-8, 313-53.



146 new tranches of distributed generation customers to periods between general rate cases.  
147 Energy purchase costs such as an export credit, however, do not need and should not  
148 be tied to general rate cases. There is a viable market for energy and this rate should be  
149 set and adjusted consistent with that market to ensure other customers are not harmed.  
150 The Commission does not currently tie other must-purchase obligation rates to general  
151 rate cases. Nonetheless, the subject of how frequently the export rate should be set and  
152 for how long should be a subject in the next proceeding.

153 **Response to Rebuttal of Vivint Solar witness Richard Collins**

154 **Q. Mr. Collins argues that a rate design that has demand charges in “(j)ust one brief**  
155 **period when several appliances are being used along with air conditioning will**  
156 **lead to an unreasonably high electric bill” and that it “does not encourage**  
157 **conservation due to the fact that the energy charge of the three part tariff is**  
158 **significantly lower.”<sup>14</sup> Do you agree?**

159 A. No. For one, the Company’s proposed Schedule 5 on-peak kilowatt charge is based  
160 upon an hour interval. As shown in Exhibit RMP\_\_\_(JRS-5) to my direct testimony,  
161 even several minutes of very high appliance usage gets averaged out over the hourly  
162 period for a lower kilowatt reading. Certainly, it will be important for proper customer  
163 education to accompany any inclusion of demand charges into residential customer  
164 rates, but Mr. Collins’ exaggerations about customer bill impacts are unfounded.  
165 Moreover, this contradicts Mr. Collins’ own concern about encouraging energy  
166 efficiency. A demand signal encourages customers to reduce, or at least stagger their  
167 appliance use during the peak period, which is precisely the signal that reduces costs

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<sup>14</sup> Vivint Solar witness Richard Collins Rebuttal Testimony, ll. 158-60 and 179-80.

168 on the system. It is incorrect to merely look at the energy charge as the only  
169 encouragement for conservation signals. Rates that include demand charges still  
170 encourage energy efficiency because many conservation measures reduce both kilowatt  
171 hour and peak kilowatt consumption. This is evidenced by the presence of substantial  
172 demand-side management savings that are achieved by non-residential customers  
173 despite those customers being subject to rate designs that include demand charges.<sup>15</sup>

174 **Q. Mr. Collins states that “there are inequities in the current structure of residential**  
175 **rates” and that the “NEM program actually provides a remedy for this subsidy.”<sup>16</sup>**  
176 **Do you agree?**

177 A. As I noted in my rebuttal testimony, I agree that there are problems with the current  
178 residential rate structure.<sup>17</sup> This present structure for residential rates in concert with  
179 the NEM program is largely what has created the need for the Company’s filing in this  
180 proceeding to protect non-participating customers from cost shifting. The average  
181 monthly full requirements energy usage for a residential NEM customer is 977 kilowatt  
182 hours per month and the average private generation produced is 534 kilowatt hours per  
183 month or about 55 percent of full requirements usage. Residential NEM customers on  
184 average are therefore able to exploit and exacerbate the inequities that exist in the  
185 residential rate structure by substantially reducing their contribution towards fixed cost  
186 recovery while still relying upon the grid to serve them.

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<sup>15</sup> See Rocky Mountain Power's Utah Energy Efficiency and Peak Reduction Annual Report, Issued May 15, 2017 at p. 7.

<sup>16</sup> Collins Rebuttal Testimony, ll. 348-55.

<sup>17</sup> Steward Rebuttal Testimony, ll. 170-183.

187 **Q. Mr. Collins states that “as an economist, I believe that when evaluating a program**  
188 **one must look at efficiency first and equity second.”<sup>18</sup> With its statutorily obligated**  
189 **evaluation of the costs and benefits of the NEM program and consequent charge,**  
190 **credit, or ratemaking structure, is the Commission faced with a dilemma of**  
191 **choosing between the two conflicting goals of efficiency and equity?**

192 A. No. Mr. Collins seems to imply these two goals are mutually exclusive and that an  
193 outcome that favors equity will harm efficiency and conversely one that promotes  
194 efficiency will be inequitable. I disagree. Rates that equitably reflect costs will  
195 encourage efficient customer behavior. It is neither efficient nor equitable to provide  
196 bill savings to residential NEM customers at a price that artificially inflates the value  
197 of private generation.

198 **Response to Rebuttal of Western Resource Advocate witness Steve Michel**

199 **Q. WRA proposes modification to the proposals of the DPU and OCS in their direct**  
200 **testimonies.<sup>19</sup> Do you agree with the proposed modifications?**

201 A. Not entirely. I appreciate the creative approach and recognition by WRA that it is  
202 appropriate and timely to move to an alternative to NEM. However, the Company has  
203 the same concerns over the transition time periods Mr. Michel proposes as with the  
204 Joint Proposal, as discussed by Mr. Hoogeveen and Mr. Meredith. In addition, I’m  
205 concerned that the banded rate credit and annual cap proposed for the transition period<sup>20</sup>  
206 would be confusing to customers, challenging to implement, and lacking in evidence  
207 for the adjustments in the credits. The proposal to wait until 2020 to initiate the docket

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<sup>18</sup> *Id.* at ll. 355-65.

<sup>19</sup> WRA witness Steve Michel, Rebuttal Testimony, ll. 48-120.

<sup>20</sup> *Id.* at 104-9.

208 to set an export credit going forward<sup>21</sup> also unnecessarily delays moving forward and  
209 providing certainty to both the industry and customers.

210 **Q. WRA recommends that the Commission should indicate now that a separate rate**  
211 **class or a demand charge for residential customers is not in the public interest to**  
212 **provide some certainty to the solar market.<sup>22</sup> How do you respond?**

213 A. While I believe the record supports a finding that a separate class and rate design,  
214 including a demand charge option, for residential NEM customers is in the public  
215 interest, as I noted above in the response to the Joint Proposal, the Commission should  
216 not pre-judge or preclude potential future evidence on rate design or the creation of  
217 new rate classes. No other customer has this certainty.

218 **Response to Rebuttal of Vote Solar witness Dr. David DeRamus**

219 **Q. Dr. DeRamus argues that the Company’s “lost revenue attributable to other**  
220 **residential load reduction programs, such as energy efficiency programs, far**  
221 **exceeds the amount of lost revenue attributable to behind-the-meter generation**  
222 **by residential NEM customers.”<sup>23</sup> Even if there were a greater reduction in**  
223 **revenue from demand-side management than there is for private generation, does**  
224 **that mean that it would be unreasonable to charge different prices to customers**  
225 **with private generation or to otherwise modify the net metering program?**

226 A. No. While the overall magnitude of reduced revenue from energy efficiency may be  
227 greater than reduced revenue from private generation, there are key differences between  
228 the two that cause the need for changes to the NEM program in its current form,

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<sup>21</sup> *Id.* at 111-2.

<sup>22</sup> *Id.* at 118-20, 504-21.

<sup>23</sup> Vote Solar witness David DeRamus Rebuttal Testimony, ll. 72-75.

229 particularly for residential customers. For one, NEM is not necessarily akin to energy  
230 efficiency or conveys the same benefits. The difference with energy efficiency  
231 programs was discussed in my direct testimony in the last phase of this proceeding,  
232 dated July 30, 2015. In short, energy savings from efficiency measures occur at the time  
233 that the customer would otherwise use that energy. In contrast, private generation may  
234 or may not produce energy at the time a customer requires energy. NEM is also a  
235 different service than demand-side management programs since NEM requires the  
236 utility to back-up the customer generation facility and provides a vehicle for the  
237 customer to export power to the system, which does not diminish the customer's  
238 reliance on the utility system. It is not the overall magnitude of reduced revenue, but  
239 rather the incremental potential for cost shifting with each additional interconnection  
240 that drives the need for changes in how customers with private generation are  
241 compensated.

242 **Q. Dr. DeRamus discusses how he believes that the OCS's proposal to compensate**  
243 **private generation customers with a credit for exported energy that is lower than**  
244 **retail rates could "encourage customers to install home battery storage systems**  
245 **simply in order to effectively 'disconnect' from the grid." He then describes this**  
246 **as "relatively inefficient and expensive" and claims it "would only exacerbate**  
247 **RMP's challenges associated with fixed cost recovery."**<sup>24</sup> **Please comment.**

248 A. Dr. DeRamus' concerns with the potential for changes to the NEM program driving  
249 customers to install battery systems to consume more of their private generation onsite

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<sup>24</sup> *Id.* at ll. 178-99.

250 ignore a couple of things. For one, while he concedes that “the further development  
251 and deployment of residential battery storage systems to be beneficial,” he also  
252 expresses a concern that batteries could further erode the Company’s fixed cost  
253 recovery. However, with the current NEM paradigm that provides for netting and  
254 banking to offset future usage, residential customers already have the ability to size  
255 their solar installations to eliminate all usage charges during a year (*i.e.*, be net-zero),  
256 except for the customer charge. So customers already have the ability to provide  
257 minimal cost recovery; batteries wouldn’t necessarily exacerbate that situation. Second,  
258 with netting and banking, the utility is effectively acting a battery for NEM customers,  
259 yet Dr. DeRamus fails to consider that this is a cost of the program. Batteries are  
260 expensive, as is providing that virtual service to NEM customers, as shown in the  
261 compliance analyses.

262 **Q. Dr. DeRamus argues that having an export credit that is less than retail rates**  
263 **would send a perverse incentive for customers to shift their usage from off-peak**  
264 **hours to the middle of the day and would encourage customers to effectively**  
265 **disconnect from the grid by installing battery storage.<sup>25</sup> Do you agree with these**  
266 **claims?**

267 A. No. A central premise of the Company’s position is that customers should pay for the  
268 service they require from the grid.<sup>26</sup> If a customer with a solar system and a battery is  
269 able to *reliably* dispatch that battery to serve household consumption, the customer  
270 would likely impose less costs on the Company’s system than a customer with only  
271 solar panels and no battery, therefore the rates should and do reflect this under the

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<sup>25</sup> *Id.* at ll. 184-204.

<sup>26</sup> *See* Company witness Gary Hoogeveen, Rebuttal Testimony, ll. 16-18.

272 Company's proposal and would be a correct incentive. Under the Company's proposed  
273 rates, if a customer uses a battery to reduce all on-peak usage, those system cost savings  
274 will accrue to the customer by avoiding all on-peak demand or energy charges.

275 In addition, encouraging customers to shift their consumption to when their  
276 systems can serve is not a perverse incentive and instead, is the primary purpose of  
277 private generation. In contrast to Dr. DeRamus's implication, the middle of the day is  
278 not a more costly time for the Company to serve as it is not when the peak occurs.  
279 Exhibit RMP\_\_\_(JRS-4) from my direct testimony shows that the Company's peaks  
280 occur in the late afternoon/early evening during the summer and the late afternoon/early  
281 evening and morning during the winter. Consequently, the off-peak period for the  
282 Company's proposed Schedule 5 rates does not include the period from 10 am until 3  
283 pm, when rooftop solar typically operates. Proposals that encourage private generators  
284 to use the output from their facilities during the middle of the day is an appropriate  
285 price signal.

286 **Q. Does this conclude your surrebuttal testimony?**

287 A. Yes.