

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Investigation of the Costs and Benefits of PacifiCorp's Net Metering Program)))))))	Docket No. 14-035-114 DPU Exhibit 1.0 SUR
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SURREBUTTAL TESTIMONY

OF

ROBERT A. DAVIS

ON BEHALF OF THE

UTAH DIVISION OF PUBLIC UTILITIES

September 29, 2015

1 **Q: WOULD YOU STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS FOR THE**
2 **RECORD, AND EXPLAIN FOR WHOM YOU ARE TESTIFYING?**

3 **A:** My name is Robert A. Davis. I am employed by the Division of Public Utilities
4 (Division) of the Utah Department of Commerce as a Utility Analyst in the Energy
5 Section. My business address is 160 East 300 South, Salt Lake City, Utah. My testimony is
6 on behalf of the Division.

7 **Q: DID YOU PREVIOUSLY FILE TESTIMONY IN THIS CASE?**

8 **A:** Yes. I filed direct and rebuttal testimony addressing several issues on July 30,
9 2015 and September 8, 2015, respectively.

10 **Q: WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?**

11 **A:** I will address statements made by Utah Clean Energy's, the Alliance for Solar
12 Choice, and the Sierra Club's (Joint Parties) witnesses Morgan, Norris and Woolf. First, I
13 will address rebuttal statements made by Ms. Morgan. Second, I will address Mr.
14 Norris's rebuttal statements. Finally, I will address Mr. Woolf's rebuttal statements.

15 **Q: WHAT ARE YOUR CONCERNS WITH MS. MORGAN'S STATEMENTS IN HER REBUTTAL**
16 **TESTIMONY?**

17 **A:** First, I will address Ms. Morgan's objection to the Division's supposed collapsing
18 of the two sections of Utah Code Ann. § 54-15-105.1 into one. Second, I will comment
19 on Ms. Morgan's revenue requirement statements. Finally, I will discuss Ms. Morgan's
20 statements summarizing avoided costs.

21 **Q: DO YOU BELIEVE MS. MORGAN IS MISCHARACTERIZING WHAT THE DIVISION IS**
22 **TRYING TO ACCOMPLISH IN ITS PROPOSAL?**

23 **A:** Yes. Ms. Morgan states in lines 80-84 of her rebuttal testimony that “The statute
24 contemplates a two-step process, which is consistent with the Commission’s discussion
25 in its most recent July 1, 2015 Order at page 10-11. If the Legislature did not intend for
26 the Commission to engage in a two-step process, there would have been no reason for
27 the first section requiring a determination of the costs and benefits. The Commission
28 could simply have engaged in ratemaking.”

29 The Division interprets the statute and Commission’s order similarly to how Ms.
30 Morgan interprets it. However, the Division believes that if determining the costs and
31 benefits for step one is going to have utility beyond simply choosing to either have or
32 not have a net metering program, some knowledge of how that outcome will be used to
33 satisfy step two needs to be understood. The Division is not implying that rate design
34 alone should determine how to proceed with exploring costs and benefits in step one;
35 just that they work together. The current cost of service process is effective at
36 identifying costs and revenues of various customers, technologies, and the like. The
37 Division’s proposal honors the Commission’s Order and follows the statute. The
38 Division’s proposal would use actual numbers from the cost of service study that
39 support the net costs and benefits associated with net metering customers. That these
40 are adaptable to designing rates in no way makes them ineffective at discovering costs
41 and benefits.

42 **Q: DO YOU HAVE QUESTIONS ABOUT HOW MS. MORGAN PERCEIVES THE FINANCIAL**
43 **HEALTH OF A UTILITY WITH GROWING VOLUMES OF CUSTOMER-SIDED DISTRIBUTED**
44 **GENERATION?**

45 **A:** Yes. Ms. Morgan states in lines 230-232 of her rebuttal testimony that “Avoiding
46 costs and obtaining benefits may require changes in how RMP plans, builds, and
47 maintains its distribution system and may involve new or different equipment in the
48 interconnection of the DG with the distribution system.”

49 Then in lines 290-293, she states “This happens notwithstanding that system
50 assets are depreciating and the growing customer-sided generation should be allowing
51 the utility to decrease system investment, particularly if it is working to maximize the
52 amount of benefit these ratepayer investments can bring to the system.”

53 Finally in lines 294-299, she states “Utility financial health will not suffer from
54 increasing amounts of customer-sided generation if the Commission acts to ensure that
55 approved rates provide the utility a reasonable opportunity to cover its revenue
56 requirement. Other ratepayers will not suffer if both the utility and Commission
57 recognize that fixed costs change over time and offer the greatest potential for change if
58 there is an expectation that measures will be taken to realize those benefits.”

59 I understand the meaning of her statements to suggest that the Company may
60 have to make investments so it can provide reliable power to meet load as DG
61 penetration increases. Then she suggests that the Company should be able to reduce its
62 system investment and lower its expenses based on the benefit gained from customer-

63 sided investments such as efficiency and generation. Finally she suggests that as long as
64 the Commission and the utility recognize that fixed costs change over time, utility
65 financial health will not suffer from customer-sided generation if the utility is allowed to
66 recover its revenue requirement.

67 As part of docket 13-035-184, the Company argued that it was not recovering its
68 costs through the revenue requirement process associated with customer-sided
69 generation and sought relief. It seems Ms. Morgan is suggesting that the Company may
70 need to invest in equipment to support customer-sided generation. And that the
71 Commission and utility should recognize that fixed costs change over time and should
72 act accordingly due to this investment or narrowing of investment as a result of DG. The
73 Division is confused by Ms. Morgan's statements and it is the Division's understanding
74 that the reason for this docket is that the Company believes it has unrecovered costs,
75 fixed or otherwise, related to investment required to service customer-sided generation
76 and is the reason for this matter.

77 **Q: DO YOU BELIEVE THE DIVISION CONSIDERS THE BENEFITS OF AVOIDING COSTS WITH**
78 **CUSTOMER-SIDED GENERATION?**

79 **A:** Yes. The Division does not entirely disagree with the statements made by Ms.
80 Morgan.¹ However, the Division believes that it is not necessary to evaluate the costs
81 and benefits in the manner Ms. Morgan and Mr. Norris suggest. The Company's avoided

¹ Morgan's rebuttal, Joint Parties Exhibit 4.0, at lines 184-193.

82 costs are already determined through the Company's IRP process and Schedules 37 and
83 38, which considers all sources of generation and other means to supply its load.

84 The IRP process defines the least-cost/least-risk option that the Company should
85 follow. As a result, the costs and benefits associated with these avoided costs are
86 eventually contained in the revenue requirement process and cost of service study. This
87 process is ultimately more closely aligned to the time horizon associated with cost
88 recovery than a twenty-year horizon that relates to the life cycle of a single generation
89 resource at a present value of costs that haven't happened yet.² The Company is not
90 allowed to recover its costs based on some future planning horizon outside of a future
91 test year as determined by statute.³

92 **Q: DO YOU AGREE WITH MR. NORRIS'S CLAIMS ABOUT UNCAPTURED AVOIDED COSTS IN**
93 **THE DIVISION'S PROPOSAL?**

94 **A:** The Division has stated in previous testimony that its proposal may not fully
95 identify some avoided costs, for example, distribution level line losses. However, the
96 Division believes its proposal captures the costs and benefits, on a net basis, that the
97 Company sees on its system to serve net metering loads. If some costs and benefits are
98 not captured, they would be identified and treated separately.

99 **Q: DO YOU BELIEVE MR. NORRIS'S APPROACH CAPTURES ALL AVOIDED COSTS AND**

²The Company's IRP cycle is every two years and updated in-between based on levelized present value revenue requirement (PVRR).

³ Utah Code Ann. § 54-4-4 (3a) and (3bi) through (3biii).

100 **BENEFITS?**

101 **A:** No. The Division finds Mr. Norris’s direct and rebuttal comments lacking in full
102 acknowledgement associated with the costs to the Company and its customers when
103 studying avoided costs at the granular level he suggests. Additionally, his avoided costs
104 and benefits do not address those net costs and benefits on the customer-side of the
105 meter, for example virtual storage of power during the day to be used later, reliability,
106 and startup power to name a few. In other words, net metering customers receive
107 services from the utility for which they may not be compensating the utility.
108 Additionally, Mr. Norris, and the Joint Parties in general, fail to consider in their
109 approach the overall life-cycle costs of DG systems, specifically, the disposal and
110 environmental impact costs of degraded solar panels. As previously stated, adequately
111 determining the avoided costs, as he suggests, would come at great expense to the
112 Company by way of new metering assets and labor needed to compile and study data,
113 determine the outcome and apply it to relevant scenarios. These benefits are real
114 economic benefits to the DG customer that are not captured by Mr. Norris’s methods.
115 The Division’s proposal, on the other hand, could value these services commensurate
116 with DG users’ shares of the infrastructure and services.

117 The argument has been made by Mr. Norris’s colleague Mr. Tim Woolf, that
118 these types of costs should not be included in the costs and benefits analysis. I disagree.
119 These are discrete identifiable and quantifiable costs directly resulting from a net
120 metering program. They should be included in the costs and benefits analysis, especially

121 if the outcome of the analysis is to determine net costs and benefits. Even if a non-
122 Company stakeholder were to perform a study as suggested by Mr. Norris and present it
123 to the Commission at their own expense,⁴ the Company and other stakeholders would
124 likely be forced to dedicate additional resources to analyze the study and pass those
125 costs on to the customers as in the case of the Company.

126 The process Mr. Norris is suggesting, although intuitive and perhaps useful in
127 other contexts, would be overly burdensome to the Company and other stakeholders.
128 This level of study is not necessary in this matter and does not offer any additional
129 benefit to those net metering customers providing excess generation to the grid or
130 ratepayers at large. As mentioned in my rebuttal testimony, avoided costs are already
131 determined for Schedules 37 and 38 and should be used for this purpose as proposed by
132 other parties in this docket.⁵

133 **Q: DO YOU AGREE WITH MR. NORRIS’S ARGUMENTS REGARDING THE DIVISION’S**
134 **OVERALL STATEMENTS ABOUT DG’S IMPACT ON THE COMPANY’S SYSTEM IN THIS**
135 **MATTER?**

136 **A:** Mr. Norris makes valid points about my previous testimony regarding solar PV
137 distributed generation’s impact on the Company’s Utah system based on his study.⁶ The
138 Division referenced the Company’s NE Solar Study because it is the only other

⁴ Commission’s “Order RE: Conclusions of Law on Statutory Interpretation and Order Denying Motion to Strike” at p. 17.

⁵ Davis, DPU Exhibit 1.0 REB, at lines 118-119. Hayet rebuttal, OCS-2R, at lines 77-78. Clements rebuttal at lines 23-25.

⁶ Value of Solar in Utah prepared for Utah Clean Energy, Clean Power Research (January 2014).

139 comprehensive study recently completed in Utah for solar PV.⁷ The Division is not
140 convinced that either study is widely applicable and useful but agrees it does offer
141 insight into the complexities of solar DG from the Company's perspective on an actual
142 circuit.

143 The Division's review of numerous studies and white papers compiled regarding
144 DG across the country for this exact issue, suggests that solar PV reaches its peak
145 production at times not directly associated with system peak demand.⁸

146 Customer-sided generation does impact a utility's system that was designed to
147 flow power in one direction. When an intermittent customer-sided generation resource
148 of any capacity is introduced to that system, it changes the dynamics of that system and
149 there are costs and benefits associated with that. The Division wants to understand
150 those costs and benefits while not creating an unnecessary burden to the Company, its
151 customers or other stakeholders. The Division believes that all the items of concern that
152 Mr. Norris is claiming the Division is ignoring are already covered through the
153 Company's IRP process and avoided cost analyses for Schedules 37 and 38, as
154 mentioned throughout this testimony. Instead of creating another complex avoided cost
155 study, the Division believes the parties to this matter should look at Schedules 37 and 38
156 and identify over-looked avoided costs, if any, and use those schedules to maintain
157 some consistency through all of the Company's operations.

⁷ Company's Salt Lake NE Solar Study (2010).

⁸ For example the California "Duck" curve.

158 Distributed generation is a complex, dynamic issue. The parties will have a better
159 understanding of how Utah load, with and without net metering customers, compares
160 to peak demand once the Company completes its load research study ordered by the
161 Commission in step one of this docket. In the meantime, the Division sees no evidence
162 that residential roof-top solar and small non-residential solar PV significantly contributes
163 to peak system capacity. The Division believes there are benefits associated with DG but
164 is not convinced at this time that those benefits outweigh the costs to the utility and
165 other customers under existing rate structures.

166 **Q: DO YOU AGREE WITH MR. WOOLF’S REBUTTAL TESTIMONY CLAIMING THE DIVISION**
167 **DOES NOT UNDERSTAND THE DIFFERENCE BETWEEN COST-EFFECTIVENESS AND RATE**
168 **DESIGN?**

169 **A:** Absolutely not. Though Division witness Dr. Powell will address this issue in his
170 testimony, I will briefly discuss it here. The Division is not trying to justify the Net
171 Metering Program in the State of Utah, which seems to be the outcome of a costs and
172 benefits analysis as a standalone process as suggested by Mr. Norris and Mr. Woolf. The
173 Division is trying to find a framework that efficiently and ultimately determines costs
174 and benefits associated with the Net Metering Program in the context of what it
175 provides to the Company and its customers, determines and compensates net metering
176 customers for their contributions, and at the same time ensures that the Company and
177 non-net metering customers are not inequitably bearing costs associated with the Net
178 Metering Program.

179 The Division understands that the purpose of this docket was to address the net
180 metering statute while laying the groundwork for addressing the Company's contention
181 that costs are going unrecovered. The familiar cost of service study or framework
182 proposal offered by the Division, which is based on known and Commission approved
183 methods, determines the net outcome to the Company of customer-side generation.
184 This would include most costs or benefits the Company incurs or receives as a result of
185 net metering. As previously stated, additional costs or benefits the Commission
186 determines relevant but not captured in the study could be treated separately similar to
187 the way certain avoided costs are calculated outside the Company's avoided costs
188 models.

189 The Division is not ignoring the provisions of Utah Code Ann. § 54-15-105.1 (1),⁹
190 nor the Commission's Order in this matter. Rather, the Division is simply saying that the
191 normal cost of service process will illuminate these costs or benefits and it's the most
192 logical way to do so. Additionally, the second part of Utah Code Ann. § 54-15-105.1
193 directs the governing authority to determine a just and reasonable charge, credit, or
194 ratemaking structure, including new or existing tariffs, in light of the costs and
195 benefits.¹⁰ A framework, such as that proposed by the Joint Parties, that does not
196 readily lead to the construction of just and reasonable rates will be of little use in the

⁹ ...determine, after appropriate notice and opportunity for public comment, whether costs that the electric corporation or other customers will incur from a net metering program will exceed the benefits of the net metering program, or whether the benefits of the net metering program will exceed the costs; and ...

¹⁰ Utah Code Ann. § 54-15-105.1 (2).

197 second phase of this proceeding, which requires the establishment of such rates. The
198 statute does not require the Commission to ignore existing conceptions of costs and
199 benefits in determining some hypothetical net positive or negative resulting from DG
200 customers' use of the net metering process. Following the Joint Parties' suggestion
201 would demand the Commission to either adopt a new method of determining costs and
202 benefits only to discard it upon setting rates or to use that new method for determining
203 only some customers' rates while adhering to the existing method for other customers.

204 The Division proposes that its method harmonizes both parts of the statute by
205 determining costs and benefits in a way that uses realistic and proven methods, which
206 may then be employed in setting the contemplated rates. Coupled with valuing excess
207 energy in the manner the Company suggests-using Schedules 37 and 38-the Division's
208 method satisfies the statute without creating new complications or inequities. This
209 approach allows treating the issues of cost recovery and benefit compensation
210 separately, as they should be. On one hand is the issue of cost recovery and on the
211 other compensation for excess generation. The Office's, Company's and Division's cost
212 of service proposals capture the benefits and costs related to cost recovery and rate
213 design consistent with the Commission's November 21, 2014 Notice in this docket. The
214 Company's proposal, which the Division supports, to use current avoided cost modeling
215 captures the costs and benefits of excess generation arising from DG.

216 **Q: DO YOU HAVE ANY CONCERNS WITH MR. WOOLF'S COST ANALYSIS IN HIS REBUTTAL**
217 **TESTIMONY?**

218 **A:** Yes. Even with the addition of Mr. Woolf's changes in rebuttal testimony, his
219 analysis can still have no meaningful application to the setting of rates, which is the
220 second part of the statute. Although the Division agrees that rate impacts are of
221 concern, and the cost analysis is useful, it still fails to see the value of Mr. Woolf's
222 analysis in the actual setting of rates using his hypothetical assumptions. Thus, even
223 ignoring his questionable assumptions and results, his proposal will require a whole new
224 method for setting rates. Disconnecting these two functions is likely to result in
225 distortions in one or both of the processes.

226 While perhaps helpful in some contexts, Mr. Woolf's high-level assumptions in
227 his cost analysis would likely lead to completely different results from actual inputs used
228 under more realistic conditions.¹¹ Significantly, the Office's witness, Mr. Hayet,
229 illustrates this very point.¹² The question is, how do you apply the results from the
230 analysis?

231 **Q: DOES MR. WOOLF'S PROPOSAL ALLOW THE COMPANY A REASONABLE OPPORTUNITY**
232 **TO RECOVER ITS COSTS TO SERVE PEAK LOAD AND OFFER SYSTEM RELIABILITY FOR**
233 **EXAMPLE?**

234 **A:** It is not clear from Mr. Woolf's presentation how this would be accomplished.
235 The Company has many classes of customers where net metering is an option. Which
236 customer classes will see changes? Which of the multi-part rates within some of these

¹¹ Davis rebuttal, DPU Exhibit 1.0 REB, at lines 151-152.

¹² Hayet direct testimony, OCS-2, at lines 290-431.

237 classes will change? The point is that studying costs and benefits in a method ill-suited
238 to designing rates leads to a resulting hypothetical positive or negative figure that is
239 virtually useless in doing what the statute ultimately contemplates: assigning rates and
240 charges in a manner designed to benefit those providing the benefits or to explain why
241 rates should do otherwise.

242 **Q: DO YOU HAVE ANY FINAL THOUGHTS IN YOUR SURREBUTTAL?**

243 **A:** Yes. The analysis performed by the Company for its 2015 IRP study examined
244 avoided costs in great detail using present value revenue requirement (PVR) modeling
245 to arrive at a preferred portfolio. Whatever type of generation is used to meet its peak
246 load, the utility has to design and operate its entire system at least-cost/least-risk to
247 meet that load. The costs associated with providing clean, reliable power under those
248 guidelines should be assigned to the users that cause those costs based on their needs.
249 In the event that those cost causers find a way to lower or raise their share of the costs,
250 their allocated obligation to the Company would follow suit. The cost of service study is
251 designed to do just that. There is no need to reinvent the “wheel.”

252 The Division agrees that certain avoided cost aspects at the DG level, such as
253 distribution line losses, may need to be addressed. The Division believes this could be
254 accomplished without the need of a new complex avoided cost study. Rather,
255 adjustments to existing tools are more likely to result in accurate conclusions applicable
256 in rate setting contexts.

257 The Division’s, Company’s, and OCS’s framework proposals as stated in their

258 direct and rebuttal testimony are closely aligned and would ultimately achieve the goals
259 of this docket as ordered by the Commission without burdening the Company with
260 additional expenses and studies.

261 **Q: DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

262 **A:** Yes it does.