

Hunter Holman Utah Bar No. (15165)
Utah Clean Energy
1014 2nd Ave.
Salt Lake City, UT 84103
(801) 244-9227
hunter@utahcleanenergy.org
Attorney for Utah Clean Energy

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of Rocky Mountain Power for Approval of Its Electric Vehicle Infrastructure Program	DOCKET No. 20-035-34
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PRE-FILED REBUTTAL TESTIMONY OF THOMAS KESSINGER

ON BEHALF OF

UTAH CLEAN ENERGY

NOVEMBER 4, 2021

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1 **I. PURPOSE OF TESTIMONY**

2 **Q. Will you summarize the purpose of your rebuttal testimony?**

3 A. Yes, my rebuttal testimony responds to issues raised by the Division of Public Utilities
4 (“DPU”) and the Office of Consumer Services (“OCS”) regarding electric vehicle (“EV”)
5 adoption and Schedule 120 Incentives. In addition, I respond to the budget reallocation
6 offered by ChargePoint and the DPU. Finally, I summarize the general agreement on
7 continued stakeholder engagement and Utah Public Service Commission (“Commission”)
8 review over the life of the Electric Vehicle Implementation Plan (“EVIP”).

9 **II. WITH PROPOSED MODIFICATIONS, THE EVIP IS IN THE PUBLIC**
10 **INTEREST.**

11 **Q. Did you review the Direct Testimony filed by Robert Davis of the Utah Division of**
12 **Public Utilities?**

13 A. Yes.

14 **Q. Did Mr. Davis state whether the EVIP is in the public interest as defined by Utah**
15 **Code §54-4-41?**

16 A. Yes. Mr. Davis stated that more information is necessary to determine whether the EVIP is
17 in the public interest. He asserted, inter alia, that (1) more information is needed to
18 determine whether the EVIP would increase EV adoption in Utah,¹ and (2) “as additional
19 EVs are added, the energy needed to charge those EVs causes more CO2 from the
20 generation resources than is saved by the EVs.”²

21 **A. THE EVIP WILL INCREASE EV ADOPTION IN UTAH.**

¹ Robert Davis, Direct Testimony at lines 176–194.

² *Id.* at 205–207.

22 **Q. Do you agree with Mr. Davis that more information is needed to determine whether**
23 **the EVIP will increase EV adoption in Utah?**

24 A. No. In addition to the analysis provided by Utah State University, the Utah Department of
25 Transportation (“UDOT”) Statewide EV Charging Plan identified range anxiety as a key
26 barrier to EV adoption. The deployment of charging infrastructure helps overcome that
27 anxiety.³ According to UDOT’s independent analysis, “[a] major component to
28 successfully incentivizing the adoption of electric vehicles is to eliminate the perception of
29 not having enough charging infrastructure ([i.e.], “range anxiety”) by providing an
30 effective, efficient, and convenient charging infrastructure system.”⁴

31 **Q. Did the DPU concede that the EVIP will increase deployment of Electric Vehicle**
32 **Supply Equipment (“EVSE”)?**

33 A. Yes. Robert Davis stated that a “\$50 million of investment seems likely to increase
34 charging availability in the near term.”⁵

35 **Q. Will you summarize this portion of your testimony?**

36 In addition to the Utah State University (“USU”) analysis, it is likely the EVIP will result
37 in increased EV adoption over the next 10 years because it reduces range anxiety. A \$50
38 million dollar investment in transportation electrification will generate additional EV
39 demand and buoy any other growth not necessarily attributed to the EVIP.

40 **B. THE EVIP REDUCES TRANSPORTATION SECTOR EMISSIONS.**

41 **Q. The DPU took issue with the emission reductions under the EVIP, were you surprised**
42 **by the DPUs testimony?**

³ See RMP Exhibit JAC 4, at p 5.

⁴ *Id.*

⁵ Robert Davis, Direct Testimony at lines 166–167.

43 A. Yes. It is unclear how DPU determined that as EV deployment increases transportation
44 sector emissions may increase. EVs charged using the Company’s system would be
45 equivalent to driving a 93-mpg internal combustion engine (“ICE”) vehicle.⁶ There is no
46 commercially available ICE vehicle capable of achieving that range. In addition, the
47 combustion of gasoline also results in tailpipe emissions such as Nitrogen Oxide (“NOx”)
48 and Volatile Organic Compounds (“VOCs”) whereas EVs do not. Given that § 54-4-
49 41(7)(a) requires the EVIP to reduce emissions related to all “transportation sector
50 emissions,” and not just CO₂, the Commission should consider the reduction in NOx and
51 VOCs in addition to the reduction in CO₂ emissions. This is particularly important
52 considering the looming ozone nonattainment designation by the United States
53 Environmental Protection Agency.

54 **III. SCHEDULE 120 INCENTIVES SHOULD BE INCREASED TO \$500, OR**
55 **AT THE VERY LEAST MAINTAINED.**

56 **Q. Did you review the Direct Testimony of Alex Ware of the OCS?**

57 A. Yes.

58 **Q. What was OCS’s position regarding Schedule 120?**

59 A. In general, the OCS was opposed to maintaining the residential portion of the incentive
60 because the Company has not provided ratepayers with adequate EV charging education
61 resources.⁷

62 **Q. Do you agree with OCS?**

⁶ Reichmuth, D, Union of Concerned Scientists, *Plug In or Gas Up? Why Driving on Electricity is Better than Gasoline*, <https://blog.ucsusa.org/dave-reichmuth/plug-in-or-gas-up-why-driving-on-electricity-is-better-than-gasoline/>.

⁷ Alex Ware, Office of Consumer Services, Direct Testimony at lines 290–310.

63 A. Yes and no. I agree that there needs to be a concerted effort to educate consumers about EV
64 charging, its benefits, and how to maximize those benefits for all users of the distribution
65 system. However, I disagree regarding the amount of the incentive, and propose that it
66 should be increased to \$500, or in the alternative, maintained at \$200 and increased for
67 certain income qualified customers to \$500.

68 **Q. Why should the incentive be increased to \$500?**

69 A. The incentive should be increased because even the most affordable 40-amp smart charger
70 starts at \$599.⁸ Without an incentive a consumer may not adopt smart chargers which
71 reduces the potential for significant benefits to the distribution system.

72 **Q. Are there other reasons to consider increasing the incentive?**

73 A. Yes. As identified by the Company⁹, installing a level-2 charger may require a panel
74 upgrade prior to running a dedicated 40-amp circuit. This potential installation cost was
75 identified in the educational materials provided by the Company and cited by OCS in their
76 direct testimony. Accordingly, not only does this incentive help address barriers to home
77 charging, it also highlights why the Company should continue to educate its customers
78 about panel capacity and home charging.

79 **Q. Outside of a time of use rate, are there other ways that smart chargers can be used to**
80 **reduce demand?**

81 A. Yes. Utilities can use smart chargers in their demand response programs. For example,
82 Eversource, a utility serving the Northeast United States, implemented a demand response

⁸ See, <https://plugstar.com/chargers>, (last accessed Nov. 1, 2021).

⁹ See, Office of Consumer Services, Exhibit 1D (Company web page educating customers about charging at home).

83 program using smart chargers that reduces the charging demand while still allowing the car
84 to charge. This reduces strains on their system and still allows EVs to charge overnight.¹⁰

85 **Q. Did you agree with Justin Wilson of ChargePoint that the residential portion of**
86 **Schedule 120 should extend to networked chargers?**

87 A. No. Justin Wilson recommended the “Commission direct the Company to adopt a
88 requirement for all chargers funded through Schedule 120 incentives to be “smart” or
89 networked. This requirement would guarantee that all chargers funded through the program
90 have the ability to connect to the internet and manage the charging of the electric vehicle.

91 **Q. What is the difference between a smart and a networked charger?**

92 A. Both non-networked and networked chargers function the same way and require the same
93 capacity and wiring. The main difference is that networked chargers will connect to a
94 network of chargers, for example Blink Charging Co., and allows for the owner to require
95 payment for charging, as well as other data sharing features.¹¹

96 **Q. Is there any value in offering networked chargers to residential customers?**

97 A. Likely no. Networked chargers are more often seen in public and commercial settings.
98 Homeowners do not require anything beyond a smart, *e.g.*, wi-fi or Bluetooth enabled,
99 charger. Networked chargers are significantly more expensive and do not offer additional
100 value to a homeowner. Lastly, the additional cost of networked chargers does not present
101 compelling demand response opportunities.

¹⁰ See, Eversource, *EV Home Charger Demand Response*, available at <https://www.eversource.com/content/ema-c/residential/save-money-energy/explore-alternatives/electric-vehicles/ev-charger-demand-response> (last accessed Nov. 2, 2021).

¹¹ See, Blink Charging Co., *Networked vs. Non-Networked Chargers for Hosts*, available at <https://blinkcharging.com/understanding-networked-vs-non-networked-chargers-for-host-locations/?locale=en> (describing the differences between networked and non-networked chargers).

102 **Q. After reviewing the testimony provided by OCS and others do you have a**
103 **recommendation for the Commission?**

104 A. Yes. Schedule 120 should be increased to \$500, or at the very least be maintained at its
105 current level and for certain income-qualified customers, the incentive could be increased
106 to up-to \$500. The incentive could only be used for the installation of a smart charger, *e.g.*,
107 wi-fi or Bluetooth enabled capable; one that is grid interactive, controllable, demand
108 response capable.¹² The residential portion of Schedule 120 should not be extended to the
109 purchase of networked chargers.

110 **IV. EQUALIZATION OF THE MAKE-READY BUDGET.**

111 **Q. After reviewing the Direct Testimony filed by the various parties have you refined**
112 **your position on the Make-Ready portion of the budget?**

113 A. Yes. Previously I testified that a portion of the make-ready budget be cordoned specifically
114 for use of residents of multifamily housing or customers that do not have access to a
115 dedicated parking space or garage. In reviewing the Direct Testimony Justin Wilson,
116 ChargePoint,¹³ and David Williams, DPU,¹⁴ I would like to modify that recommendation.

117 **Q. In what way would you modify your recommendation?**

118 A. I recommend that 50% of the EVIP's total budget be reserved for make-ready
119 infrastructure. In addition, a specific portion of those funds should be cordoned for use at
120 multifamily housing as I previously testified.

121 I am also proposing two additional modifications to the overall budget. First, I support a
122 specific budget allocation for the EVIP's Innovative Partnerships and Projects that is taken

¹² *E.g.* the most affordable 40-amp smart charger is the Enel X Juicebox and starts at \$599.

¹³ Justin Wilson, Direct Testimony at line 710.

¹⁴ David Williams, Direct Testimony at line 235.

123 from the Company-owned budget. Second, I support a specific budget allocation for
124 outreach, marketing, and education, also to be taken out of the existing Company-owned
125 portion of the budget.

126 **A. Equalization of the make-ready budget with the Company-owned**
127 **budget is in the public interest.**

128
129 **Q. Why is equalizing the Company-owned and make ready budgets in the public**
130 **interest?**

131 A. Utah Code §54-4-41(4)(b), requires that the EVIP increase EV adoption for it to be in the
132 public interest. As previously testified, the provisioning of make-ready funds is one of the
133 few pathways to ensure that existing multifamily housing developments can site EVSE.
134 Without access to EVSE multifamily residents are not afforded the same cost-savings of
135 EV ownership as a single-family homeowner and their adoption may lag. Accordingly,
136 allocation of the make-ready budget would increase deployment of EVSE in harder to
137 reach areas and further incentive the adoption of EVs.

138 **Q. Do you agree with Sara Rafalson’s (EVgo) Testimony regarding multifamily residents**
139 **and reliance on public charging?**

140 A. Yes. Ms. Rafalson identified that residents living in multifamily housing rely heavily on
141 public charging stations to charge their vehicles—as much as 50-80% of their total
142 charging needs.¹⁵ This is because they do not have access to dedicated parking spaces or
143 garages.

144 **Q. Do you agree with David Williams, DPU, testimony that the make-ready budget**
145 **should be increased because the number of Company-owned chargers will likely be**
146 **less than the number of third-party stations?**

¹⁵ See Sara Rafalson, Direct Testimony at p. 8.

147 A. Yes.¹⁶

148 **Q. Are there other tools the Commission could use to determine what percentage of DC**
149 **Fast Charge stations would be Company-owned in 2031?**

150 A. Yes. United States Department of Energy (“DOE”) Electric Vehicle Infrastructure
151 Projection Tool (“EVI-Pro”) Lite¹⁷, I can demonstrate why the expected number of
152 Company-owned stations would represent less than 10% of the overall DC Fast Chargers
153 needed to support USU’s medium adoption case of 230,000 EVs by 2031.

154 **Q. First, can you briefly describe the purpose of the EVI-Pro?**

155 A. Yes. The tool was created by the DOE to project the amount of charging infrastructure, *e.g.*
156 the number of level 2 and DC Fast Charging stations needed to support a given number of
157 EVs.

158 **Q. Using the EVI-Pro how many DC Fast Charging stations would be needed to meet the**
159 **medium case represented in USU’s EV Adoption Analysis?**

160 A. Under the USU projected medium adoption case there would be a total of 230,000 EVs in
161 Utah. Using a total of 230,000 EVs the EVI-Pro Tool estimates that Utah would need
162 approximately 1,136 DC Fast Charging plugs. With an average of 4 plugs per station Utah
163 would need approximately 284 DCFC charging station locations.

164 **Q. Under this scenario what percentage of DC Fast Charging plugs would be Company-**
165 **Owned versus privately owned?**

¹⁶ See David Williams, Direct Testimony at lines 222–227.

¹⁷ United States DOE, *Electric Vehicle Infrastructure Projection Tool (EVI-Pro) Lite*, available at <https://afdc.energy.gov/evi-pro-lite>.

166 A. If the Company sited chargers at all 25 of the locations it included in the Transportation
167 Plan, those 100 DCFC plugs would represent approximately 9% of the 1,136 DC Fast
168 Charging plugs that will be necessary to support EV deployment in Utah in 2031.

169 **B. Specific budgets for the Innovative Partnerships and Projects and**
170 **customer education should be established and taken from the**
171 **Company-owned budget.**
172

173 **Q. As proposed, is it clear how much funding is earmarked for the Innovative**
174 **Partnerships and Projects?**

175 A. No, neither the amount nor the source of funding (*i.e.* make-ready or Company-owned) is
176 clear. Determining a specific budget for those projects now creates more certainty for the
177 stakeholders, the Company, and its partners going forward.

178 **Q. In terms of education, has the Company proposed any materials, listening sessions,**
179 **outreach or marketing?**

180 A. The Company did not identify any of those opportunities in the Transportation Plan.

181 **Q. Do you agree that a budget for education should be established?**

182 A. Yes. But that budget should come from the Company-owned budget and not Schedule 120
183 as suggested by OCS.

184 **Q. Why is it in the public interest for utilities to educate consumers about EVs?**

185 A. There are two primary reasons, one is practical and the other is more about perception.
186 From a practical perspective, EVs will increase load on the system tremendously, it is
187 important that ratepayers know how to maximize the use of the grid without unnecessarily
188 adding to system peaks. This can be done even when a time of use rate is not available to
189 all customers. For example, Xcel energy offers a Save-Plus Optimize Your Charge
190 program whereby the customer agrees to charge between certain times that are most

191 advantageous to all ratepayers.¹⁸ As we move towards a more electrified future, it is
192 imperative that the utility play a more direct role in educating consumers about how to
193 maximize distribution system efficiencies and save money for all ratepayers.

194 **Q. Moving to your second point, do customers tend to trust their utility more than other**
195 **private business?**

196 A. Yes. Especially this past year we saw increased consumer trust in their utility.¹⁹

197 **Q. Why is that trust important in terms of education and EV adoption?**

198 A. It is a matter of perception. When a utility educates a consumer about EVs and
199 electrification they perceive them as a trusted information provider. It is important for
200 utilities to take the lead on educating consumers about the many benefits of EV
201 ownership—chief among them total cost of ownership savings. Even after a consumer sees
202 they will save money driving an EV, there is still a need for the utility to educate its
203 customers on issues such as whether they will need to increase their panel capacity.

204 **V. IN THEIR DIRECT TESTIMONY ALL PARTIES AGREE TO**
205 **INCREASED STAKEHOLDER ENGAGEMENT.**

206 **Q. Did you review the Direct Testimony filed by the other Parties in this proceeding?**

207 A. Yes.

208 **Q. Is there general consensus that additional stakeholder engagement is necessary?**

209 A. Yes.²⁰

210 **Q. What was the DPU's position on the Company reporting to the Commission.**

¹⁸ See, Xcel Energy, *SAVE PLUS - Optimize Your Charge*, available at <https://ev.xcelenergy.com/optimize-your-charge>.

¹⁹ See, Escalent, *Business Customers Name Utilities as Their Most Trusted Provider*, (July 2020) available at <https://escalent.co/news/business-customers-name-utilities-as-their-most-trusted-provider/>.

²⁰ See, e.g., Alex Ware, Office of Consumer Services, Direct Testimony at line 142, see also e.g., Robert Davis, Division of Public Utilities, Direct Testimony at line 310, and see e.g., Justin Wilson, Direct Testimony at line 124.

211 A. The DPU recommended “the Commission direct RMP to meet with the stakeholders within
212 the first six-months of the program’s first year of operation, if approved, and determine a
213 format of required information to be reported annually with the Commission by March 30
214 following each program plan year (beginning March 30, 2023, for the 2022 program
215 year).”

216 **Q. Do you agree with DPU’s position on additional reporting?**

217 A. Yes. The Commission should direct the Company to meet with stakeholders as soon as
218 reasonably possible and determine a format of required information to report annually to
219 the Commission beginning on or around March 30, 2023.

220 **Q. Were parties generally supportive of continued Commission review as the program
221 evolves?**

222 A. Yes.

223 **Q. What was the DPU’s position on Commission review over time?**

224 A. It appears that the DPU supports the filing of comments by stakeholders after the annual
225 report is filed. The Commission would review the Company’s report, and the comments
226 filed by stakeholders, and determine whether to make any specific direction.

227 **Q. What was OCS’s position on continued and meaningful review by the Commission as
228 the program evolves.**

229 A. The OCS supports a modified version of the Dominion Energy Utah Infrastructure Tracker
230 Program. This would include “periodic filings in which [the Company] presents its EVIP-
231 related investment and construction plan, as well as report on the progress of general
232 program implementation. The periodic filings should be accompanied by a technical
233 conference and a comment period to facilitate input from interested stakeholders.”

234 **Q. Do you support either DPU's or OCS's recommendations?**

235 A. Yes. The length of this program alone necessitates continued review by the Commission in
236 this rapidly evolving market. I support the more robust process suggested by OCS, but
237 recommend requiring only annual, or at the very least, bi-annual filings accompanied with
238 a technical conference.

239 **Q. Did the Legislature intend for some form of continued review by stakeholders and the**
240 **Commission?**

241 Yes. Utah Code § 54-4-41(5) provides:

242 The commission may, consistent with Subsection (2), approve an
243 amendment to the charging infrastructure program if the large-scale
244 electric utility demonstrates that the amendment:
245 (a) is prudent;
246 (b) will provide net benefits to customers; and
247 (c) is otherwise consistent with the requirements of Subsection (2).

248
249 If the Legislature did not intend the program to be reviewed over time, they would not
250 have ensured that the Commission has authority to amend the program after it had been
251 approved.

252 **VI. NUMBER OF COMPANY-OWNED CHARGING STATIONS**
253 **COMPARED TO PRIVATELY OWNED STATIONS.**

254 **Q. Do you agree with David Williams Testimony that, as proposed, the Company would**
255 **own a total of 20% of the DC Fast Charging stations in Utah by 2026?**

256 A. Not entirely. I agree that the percentage of Company-owned stations is likely to be much
257 less than those owned by third parties, however it could end up being less than what Mr.
258 Williams testified.

259 **VII. SUMMARY OF REBUTTAL TESTIMONY**

260 **Q. Will you please provide a summary of your rebuttal?**

261 A. Yes. In my testimony I explained that, with the modification I have proposed, the EVIP is
262 in the public interest because it increases EV adoption and reduces transportation sector
263 emissions over time. Next, I explained that the Schedule 120 incentive should be increased
264 to \$500 and used solely for the purchase of a smart charger. Next, I explain why the make-
265 ready and Company-owned budgets should be equalized and a specific budget be set for
266 the Company's Innovative Partnerships and Projects. Finally, I highlight the Parties
267 agreement on additional stakeholder engagement and agree with the recommendations of
268 DPU and OCS regarding reporting and periodic review.

269 VIII. SUMMARY OF RECOMMENDATIONS

270 **Q. Given the changes to your recommendations made in your rebuttal testimony, would**
271 **you please summarize your recommendations to the Commission again?**

272 A. Yes. I recommend the Commission approve the EVIP with the following additions and
273 changes:

- 274 • Additional stakeholder engagement with opportunity for input as follows:
 - 275 i. Direct the Company to meet with Parties and determine the form,
276 substance, and process for annual reporting within six months of approval
277 of the EVIP;
 - 278 ii. determine an on-going review process similar to a modified version of
279 DEU's ITP; and
 - 280 iii. direct the Company to engage in transparent distribution system planning
281 that is harmonized with the Company's existing integrated resource
282 planning.
- 283 • Change the proposed rate schedules as follows:
 - 284 i. Increase the incentive offered under Schedule 120 to \$500
285 and require the purchase of a smart charger, or attentively,
286 maintain the existing incentive and increase it to \$500 for
287 income-qualified customers.
 - 288 ii. Establish an idle-fee for Schedule 60 now, or determine it at
289 a future proceeding like any other rate.
- 290 • In regards to the overall EVIP budget:
 - 291 i. Equalize the make-ready portion of the budget with the
292 Company-owned budget and cordon a portion of make-

293 ready funds specifically for multifamily housing
294 developments to ensure that multifamily residents and
295 residents without access to a garage, or dedicated parking
296 spaces have access to charging infrastructure.

297 ii. Establish an amount for education, marketing, and outreach
298 to be taken out of the Company-owned budget.

299 iii. Establish an amount for the Company's Innovative
300 Programs and Partnerships to be taken out of the Company-
301 owned budget.

302 • Require the Company to undertake a concerted effort to include
303 equity in the Plan by identifying and engaging with Traditionally
304 Under-Represented Communities.

305

306 **Q. Does that conclude your testimony?**

307 A. Yes.