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**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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In the Matter of Application of Rocky  
Mountain Power to Establish Export Credits  
for Customer Generated Electricity

**Docket No. 17-035-61**

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**CORRECTED SURREBUTTAL TESTIMONY OF**

**CHRISTOPHER THOMAS**

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Salt Lake City Corporation ("SLC Corp") hereby submits this corrected Surrebuttal  
Testimony of Christopher Thomas in this docket.

DATED this 15<sup>th</sup> day of September, 2020.

Salt Lake City Corporation

By: \_\_\_\_\_  
Megan J. DePaulis  
Attorney for Salt Lake City Corporation

CERTIFICATE OF SERVICE  
**Docket No. 17-035-61**

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/s/ Christopher Thomas

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**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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In the Matter of Application of Rocky Mountain Power to Establish Export Credits for Customer Generated Electricity	<b>Docket No. 17-035-61</b>
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**Surrebuttal Testimony of Christopher Thomas**

**On Behalf of Salt Lake City Corporation**

**September 15, 2020**

1           **I.       INTRODUCTION AND SUMMARY**

2   **Q.     Please state your name and business address.**

3   A.     My name is Christopher Thomas. My business address is the Salt Lake City & County  
4           Building at 451 S. State Street, Salt Lake City, Room 404, Salt Lake City, UT 84114-  
5           5467.

6   **Q.     By whom are you employed and in what capacity?**

7   A.     I am employed by the Salt Lake City Sustainability Department. My title is Senior  
8           Energy and Climate Program Manager.

9   **Q.     On whose behalf do you offer this testimony?**

10  A.     My testimony is on behalf of Salt Lake City Corporation (“SLC Corp”).

11  **Q.     Please provide your qualifications.**

12  A.     I have a bachelor’s degree in biology and English from Grinnell College. I hold a Master  
13           of Science in Information Systems degree from the David Eccles School of Business at  
14           the University of Utah.

15  **Q.     What duties and responsibilities do you have as Senior Energy and Climate  
16           Program Manager?**

17  A.     A big part of my job is working to fulfill renewable energy goals set forth in joint  
18           Mayoral and City Council resolutions. One of these goals has to do with sourcing SLC  
19           Corp’s electricity from renewable generation resources, and the other has to do with  
20           implementing a community-wide renewable energy program for residents and businesses  
21           within Salt Lake City’s boundaries. I submit this testimony in the hope that I can provide  
22           the perspective of a local government on some of the issues raised in this docket. We

23 have appreciated collaborating with Rocky Mountain Power (“RMP”), the Utah Public  
24 Service Commission (“Commission”), the Office of Consumer Services (“Office”), the  
25 Division of Public Utilities (“Division”), Utah Clean Energy (“UCE”), and other  
26 stakeholders as we work to accomplish our renewable energy goals.

27 **Q. Have you previously testified before the Public Service Commission of Utah?**

28 A. Yes. I provided comments, later adopted as testimony, in docket 19-035-18 before the  
29 Commission.

30 **Q. Have you testified previously before any other state utility regulatory commissions?**

31 A. No.

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

33 A. My testimony addresses rebuttal testimony filed by other parties. In Section II of this  
34 surrebuttal testimony I address rebuttal testimony filed by the Division. In Section III, I  
35 address rebuttal testimony filed by RMP. In Section IV, I address surrebuttal testimony  
36 filed by UCE.

37 **Q. Please summarize your recommendation to the Commission regarding RMP’s  
38 request with respect to Schedule 32?**

39 A. I hope the Commission considers the following recommendations:

- 40
- Do not approve RMP’s proposed export credit rate and proposed effective date.
  - Allow ~~the Transition~~ transition Program-program rates to be maintained until a capacity  
42 equivalent to the remaining ~~the~~ Transition Program Cap has been reached.
  - Require further analysis on the interplay among the export credit rate, the adoption of  
43 distributed generation, the timing of incremental transmission, and coincident system  
44

45 peak prior to the adoption of a ~~new~~significantly lower export credit rate.

46 • Create placeholders that allow for the following benefits of customer generation to be  
47 quantified: ancillary services, reliability, and resilience.

48 • Should a lower export credit rate be adopted, a glide path using capped tiers—similar to  
49 NV Energy’s program—should be used.

50 **II. SURREBUTTAL OF ROBERT A. DAVIS REBUTTAL TESTIMONY**

51 **Q. Do you agree with Mr. Davis from the Division that “[i]t is plausible that roof-top  
52 solar in Utah has reached maturity” (Mr. Davis rebuttal, lines 370 – 371)?**

53 A. No. PacifiCorp commissioned a private generation assessment by Navigant as part of its  
54 2019 Integrated Resource Plan (IRP). In part, it reads: “[f]rom past work in projecting  
55 the penetration of new technologies, Navigant has found that Simple Payback Period is a  
56 key indicator of customer uptake.”<sup>1</sup> In other words, the adoption of a technology like  
57 rooftop solar is influenced by the number of years required for the cumulative cost  
58 savings to equal or surpass the incremental first cost of equipment. The export credit rate  
59 directly influences the simple payback period calculation.

60 **Q. Does the private generation assessment performed by Navigant for the 2019 IRP  
61 suggest that Utah’s rooftop solar market has reached maturity?**

62 A. No. Between 2021 and 2038, the Navigant private generation assessment for the 2019  
63 IRP projects 323 MW of additional Utah residential solar and 83 MW of additional Utah  
64 commercial solar for a total of 406 MW in the base case.<sup>2</sup>

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<sup>1</sup> See docket [19-035-02](#), [2019 Integrated Resource Plan Volume II](#), Appendix O, page 8.

<sup>2</sup> See docket [19-035-02](#), [2019 Integrated Resource Plan Volume II](#), Appendix O, page D-9.

65 **Q. Does the Navigant private generation assessment for the 2019 IRP indicate that**  
66 **smaller incentives and a reduced export credit rate reduce the adoption of private**  
67 **generation?**

68 **A. Yes. Table 1 from that study is reproduced below.<sup>3</sup>**

**Table 1 Adoption Change from Electric Rate, System Cost and Policy Changes from 2016 to 2018**

State	Estimated Adoption Change	Key Adoption Drivers
CA	2036 – Market increased from 20 MW to 40 MW	<ul style="list-style-type: none"> <li>• Rates: Increase (residential, commercial, industrial)</li> <li>• Solar PV Cost: Declines in the later years are more sustained</li> <li>• Policy: New mandatory solar for new building is included in the analysis</li> </ul>
ID	2036 – Market increased from 40 MW to 90 MW, primarily in the residential sector	<ul style="list-style-type: none"> <li>• Rates: Increase (residential, commercial, industrial)</li> <li>• Solar PV Cost: Declines in the later years are more sustained</li> <li>• Policy: No change</li> </ul>
OR	2036 – Market remained relatively consistent, with adoption shifting to later years which seems reasonable given incentive declines offset by cost declines in future years	<ul style="list-style-type: none"> <li>• Rates: Decrease (commercial, irrigation)</li> <li>• Solar PV Cost: Declines in the later years are more sustained</li> <li>• Policy: Incentive and cap reduced for residential and C&amp;I; Residential Energy Tax Credit – sunset in 2017</li> </ul>
UT	2036 – Market decreased from 800 MW to 470 MW. Decline seems reasonable given residential incentive declines, and commercial rate declines	<ul style="list-style-type: none"> <li>• Rates: Reduced net metering rates</li> <li>• Solar PV Cost: Declines in the later years are more sustained</li> <li>• Policy: Incentive for residential solar PV reduced from \$2000 to \$1600 in 2019 declining to \$400 in 2024 and \$0 beyond; NEM reduction to around 90% of full rates</li> <li>• The report reflects the regulatory modifications to the PG program in Utah, as included in Schedule 136 (Utah Docket 14-035-114)</li> </ul>
WA	2036 – Market increased from 25 MW to 50 MW	<ul style="list-style-type: none"> <li>• Rates: Small changes only</li> <li>• Solar PV Cost: Declines in the later years are more sustained</li> <li>• Policy: Solar and wind FIT reduced rate for an 8 year period</li> </ul>
WY	2036 – Market increased from 40 MW to 85 MW	<ul style="list-style-type: none"> <li>• Rate: Small changes only</li> <li>• Solar PV Cost: Declines in the later years are more sustained</li> <li>• Policy: None</li> </ul>

69  
70 Navigant indicates that between its 2016 and 2018 studies, the cumulative private  
71 generation market for Utah in 2036 decreased from 800 MW to only 470 MW—a  
72 reduction of 41%. As key drivers, Navigant lists “[i]ncentive for residential solar PV  
73 reduced...” and “NEM reduction to around 90% of full rates.” In other words, policy  
74 decisions like reducing incentives and reducing the export credit rate are expected to  
75 drive technology adoption down.

<sup>3</sup> See docket [19-035-02](#), [2019 Integrated Resource Plan Volume II](#), Appendix O, page 5.



76 **Q. Did the Division recommend that the Commission acknowledge RMP’s 2019 IRP, of**  
77 **which the Navigant’s private generation assessment is a supporting study?**

78 A. Yes. In a letter dated February 4, 2020, the Division recommended that the Commission  
79 “acknowledge that PacifiCorp’s 2019 Integrated Resource Plan (IRP) largely adheres to  
80 the Commission’s Standards and Guidelines.” If the Division objects to Navigant’s  
81 private generation assessment, I am unaware of what those objections may be. I believe  
82 the simple payback period is widely acknowledged and accepted as an important driver  
83 of technology adoption.

84 **Q. Does Mr. Davis provide evidence to substantiate the claim that rooftop solar has**  
85 **plausibly reached maturity in Utah?**

86 A. No, not that I am aware of.

87 **Q. Why does the Division’s position on this issue of solar adoption matter to you?**

88 A. I am concerned that the Commission might rely on the notion that the solar industry has  
89 already run its course in Utah as a rationale for implementing a dramatic and abrupt  
90 change to the export credit rate as requested by RMP. However, there is an established  
91 methodology embedded in Utah’s acknowledged electric system planning that shows the  
92 Utah market for distributed solar is subject to the same forces as markets elsewhere. As  
93 the installed cost of distributed solar declines and electric rates increase over time,  
94 Navigant’s private generation assessment indicates that the market for distributed solar in  
95 Utah will continue to grow. By the same token, we should expect that a precipitous drop  
96 in the export credit rate could predictably produce a dramatic drop in the market for  
97 distributed solar in Utah, with the possibility of introducing unintended consequences for

98 incremental transmission and coincident system peak. I address these possible unintended  
99 consequences in lines 135 to 168 of this surrebuttal testimony.

100 **Q. Why do you care whether there is a dramatic drop in the market for distributed**  
101 **solar in Utah, particularly now?**

102 A. We appreciate that RMP plans to build cost-effective utility-scale solar as part of its 20-  
103 year plan. While we expect that utility-scale renewable energy will play a major role in  
104 helping SLC Corp and the Salt Lake City community achieve our renewable energy goals  
105 at an affordable price, we recognize that distributed solar generation conveys a unique  
106 benefit of creating local jobs in and around our community. We fear that an abrupt and  
107 dramatic change to the export credit rate will eliminate these solar installer jobs.  
108 Particularly now, when the Salt Lake County area is experiencing increased  
109 unemployment due to effects of the global coronavirus pandemic, we hope that any  
110 change to the export credit rate should be implemented gradually.

111 **III. SURREBUTTAL OF JOELLE R. STEWARD REBUTTAL TESTIMONY**

112 **Q. Do you agree that gradualism is an important rate design principle that guides**  
113 **RMP's current export credit proposal (Ms. Steward rebuttal, lines 77 – 80)?**

114 A. No, I do not. While I concede that issues related to customer generation rates have been  
115 discussed by parties since 2014, and that RMP may well feel that a change to this  
116 program is overdue, I would not characterize the company's current proposal as  
117 "gradual." I would characterize the current proposal to reduce the residential export credit  
118 rate 84% by January 2021 as both dramatic and abrupt, having been proposed less than a  
119 year before the proposed effective date. I fear that if the Commission approves RMP's

120 proposal, the effect on solar installers will be calamitous, at a time when unemployment  
121 and economic uncertainty are already high because of the Coronavirus pandemic.

122 **Q. Are you aware of any other matters in which RMP suggests a comparatively more**  
123 **gradual approach to change?**

124 A. Yes. In its 2020 rate case, RMP proposes to phase in a general rate increase of 4.8% over  
125 a period of three years.<sup>4</sup> I believe a similarly gradual approach is warranted for the export  
126 credit rate, especially given that the agreed-upon Transition Program Cap has not yet  
127 been reached.

128 **V. SURREBUTTAL OF KATE BOWMAN REBUTTAL TESTIMONY**

129 **Q. Do you agree with Ms. Bowman that RMP’s proposal does not address the breadth**  
130 **of categories of benefit that distributed solar provides (Ms. Bowman rebuttal, lines**  
131 **189 – 190)?**

132 A. I agree. RMP’s proposal does not address two benefits conferred by customer generation:  
133 reducing the coincident system peak and reducing or deferring the need for incremental  
134 transmission.

135 **Q. What evidence is there that customer generation can reduce coincident system peak**  
136 **and reduce or defer the need to build new transmission lines?**

137 A. In the 2019 IRP there are two sensitivities that examine how the preferred portfolio  
138 would change under a low customer generation scenario or a high customer generation  
139 scenario. The low customer generation scenario results in four transmission upgrades and

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<sup>4</sup> See docket [20-035-04, Application for General Rate Increase](#), pages 2 – 8.

140 a higher coincident system peak (red line) than the base case (blue line), as reproduced  
141 below.<sup>5</sup>

**Sensitivity Fact Sheets**

**CASE ASSUMPTIONS**

Description

The low private generation sensitivity reflects reductions in technology costs, reduced technology performance levels, and lower retail electricity rates, compared to base penetration levels incorporating annual reductions in technology costs. This sensitivity is a variant of the preferred portfolio, P-45CNW.

**PORTFOLIO SUMMARY**

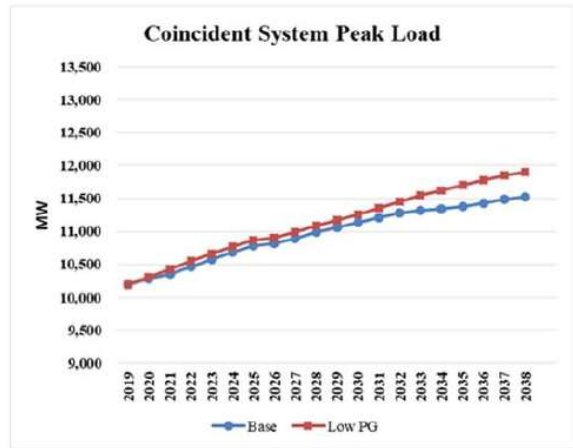
*System Optimizer PVRR (\$m)* *\$21,758*

Incremental Transmission Upgrades

<u>Description</u>	<u>Year</u>	<u>Capacity</u>
<i>Aeolus Wyoming – to – Utah S</i>	<i>2024</i>	<i>1,700</i>
<i>Goshen – to – Utah N</i>	<i>2030</i>	<i>800</i>
<i>Yakima- to – S. Oregon/California</i>	<i>2036</i>	<i>450</i>
<i>Willamette Valle - to – S. OR/CA</i>	<i>2037</i>	<i>1500</i>

Load Forecast

The figure below shows the base system coincident peak load forecast applicable to this case before accounting for any potential contribution from DSM alongside Base Case forecast. Loads include private generation resources.



142  
143 The high customer generation scenario results in only two transmission upgrades, a lower  
144 coincident system peak (red line) than the base case (blue line), and saves \$387 million  
145 relative to the low customer generation scenario, as reproduced below.<sup>6</sup>

<sup>5</sup> See docket [19-035-02](#), [2019 Integrated Resource Plan Volume II](#), page 389.

<sup>6</sup> See docket [19-035-02](#), [2019 Integrated Resource Plan Volume II](#), page 391.

**Sensitivity Fact Sheets**

**CASE ASSUMPTIONS**

Description

The high private generation sensitivity reflects more aggressive technology cost reduction assumptions, higher technology performance levels, and higher retail electricity rates, compared to base penetration levels incorporating annual reductions in technology costs. This sensitivity is a variant of the preferred portfolio, P-45CNW.

**PORTFOLIO SUMMARY**

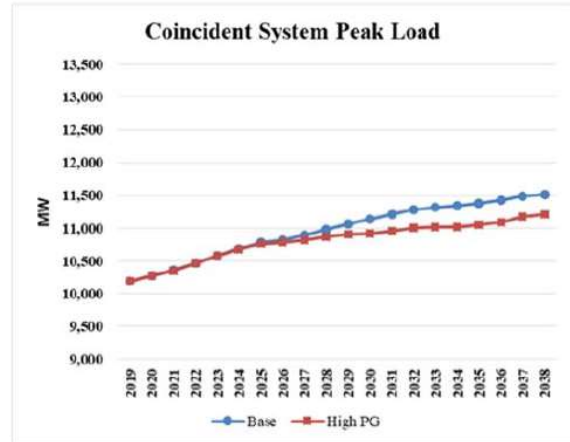
*System Optimizer PVRR (\$m)* *\$21,371*

Incremental Transmission Upgrades

<u>Description</u>	<u>Year</u>	<u>Capacity</u>
<i>Aeolus Wyoming – to - Utah S</i>	<i>2024</i>	<i>1,700</i>
<i>Goshen – to – Utah N</i>	<i>2030</i>	<i>800</i>

Load Forecast

The figure below shows the base system coincident peak load forecast applicable to this case before accounting for any potential contribution from DSM alongside Base Case forecast. Loads include private generation resources.



146

147 These sensitivities demonstrate that a larger amount of customer generation can have two  
148 predictable benefits: reducing or deferring incremental transmission, and reducing the  
149 coincident system peak.

150 **Q. Does RMP’s methodology for valuing the avoided cost of distributed solar in this**  
151 **docket account for reduced or deferred transmission, or the benefit of a reduced**  
152 **coincident system peak?**

153 **A.** To my knowledge, no. To the extent that RMP’s PVRR and GRID methodology was  
154 designed to model utility-scale Qualifying Facility (QF) resources, it would not be able to  
155 capture the ability for customer generation to avoid or defer incremental transmission. To  
156 my knowledge, it also does not calculate a benefit associated with a reduced coincident  
157 system peak. For this reason, I do not believe that RMP’s proposal adequately values the  
158 benefits of customer generation.

159 **Q. What is your recommendation regarding customer generation and its relationship**  
160 **to reduced or deferred transmission and a reduced coincident system peak?**

161 A. Before implementing a new export credit rate, RMP and stakeholders should analyze the  
162 interplay between various levels of export credit rate, customer generation, and the timing  
163 of incremental transmission and coincident system peak. For example, RMP's proposed  
164 export credit rate and the resulting drop in distributed generation might have the effect of  
165 advancing the date of incremental transmission, causing additional system costs. If such  
166 analysis demonstrates a relationship between private generation and reduced or deferred  
167 transmission and coincident system peak, such information should be used to help  
168 determine the export credit level and the timing of any changes.

169 **Q. Do you agree with Ms. Bowman that the Commission should create placeholders for**  
170 **grid support services and for reliability and resilience, so that these benefits can be**  
171 **quantified in the future (Ms. Bowman rebuttal, lines 1149 – 1150)?**

172 A. Yes. To the extent that customer generation can be implemented with smart technologies  
173 that add value to the operation of the electric grid, those smart technologies should be  
174 appropriately incentivized by the export credit rate. In addition, the recent high wind  
175 event that resulted in outages for 170,000 Utahns<sup>7</sup> is a pointed reminder that customer  
176 generation can provide reliability and resilience benefits that should be quantified.  
177 Especially as batteries become increasingly affordable, there is an opportunity to pair  
178 distributed solar generation with grid-connected batteries in a way that increases  
179 resilience and reliability for customer generators and other customers.

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<sup>7</sup> See Rocky Mountain Power [press release](#), September 8, 2020, "[Rocky Mountain Power crews working to restore power to over 180K customers due to high winds and gusts](#)".

180 **Q. Do you agree with Ms. Bowman that the Transition Program rate be maintained**  
181 **until the Transition Program Cap has been reached (Ms. Bowman rebuttal, lines**  
182 **1158 – 1159)?**

183 A. Yes. I do not believe RMP’s proposed methodology reasonably values the avoided costs  
184 associated with customer generation. In addition, I do not believe RMP’s proposal to  
185 reduce the export credit rate by 84% by January of 2021 is gradual. Therefore, I hope the  
186 Commission will ~~allow the Transition Program to remain open to new customers at the~~  
187 ~~Transition Program rate until the cap is reached and a more reasonable and better~~  
188 ~~supported export credit rate can be determined.~~ adopt a new program that does not result  
189 in a dramatic and sudden reduction to the export credit rate.

190 **Q. Do you support Ms. Bowman’s suggestion to use a glide path, like the one used by**  
191 **NV Energy, to gradually introduce any new export credit rate that is lower than the**  
192 **Transition Program rate (Ms. Bowman rebuttal, lines 1078 – 1105)?**

193 A. Yes. If the Commission adopts an export credit rate that is lower than the current export  
194 credit rate, it should be implemented in a gradual way that allows solar installers and  
195 prospective customers to adjust accordingly. Capped tiers allow the export credit rate to  
196 be periodically and gradually adjusted while also allowing solar installers and customers  
197 to reasonably calculate a payback period. The capped tier proposal reasonably balances  
198 the goals of providing just and reasonable rates to non-customer generators while also  
199 providing predictability for customers who want to consider investing in their own  
200 generation. Otherwise, the Commission risks unnecessarily decimating the solar installer  
201 industry at a time of increased unemployment and economic uncertainty.

202 V. SUMMARY AND CONCLUSION

203 Q. Please summarize your recommendations.

204 A. I hope the Commission will consider the following recommendations:

- 205
- Do not approve RMP's proposed export credit rate and proposed effective date.
  - Allow the ~~Transition~~transition Program-program rates to be maintained until a capacity equivalent to the remaining ~~the~~ Transition Program Cap has been reached.
  - Require further analysis on the interplay among the export credit rate, the adoption of distributed generation, the timing of incremental transmission, and coincident system peak prior to the adoption of a new-significantly lower export credit rate.
  - Create placeholders that allow for the following benefits of customer generation to be quantified: ancillary services, reliability, and resilience.
  - Should a lower export credit rate be adopted, a glide path using capped tiers—similar to NV Energy's program—should be used.
- 214

215 Q. Does this conclude your direct testimony?

216 A. Yes, it does.