

1 **Q. Please state your name, business address, and present position with PacifiCorp**
2 **dba Rocky Mountain Power (“RMP” or the “Company”).**

3 A. My name is Paul H. Clements. My business address is 201 S. Main, Suite 2300,
4 Salt Lake City, Utah 84111. My present position is Senior Originator/Power
5 Marketer for Rocky Mountain Power.

6 **Q. How long have you been in your present position?**

7 A. I have been in my present position since December 2004.

8 **Q. Please describe your education and business experience.**

9 A. I have a B.S. in Business Management from Brigham Young University. I have
10 been employed with PacifiCorp since 2004 as an originator/power marketer
11 responsible for negotiating qualifying facility contracts, negotiating interruptible
12 retail special contracts, and managing wholesale or market-based energy and
13 capacity contracts with other utilities and power marketers. I also worked in the
14 merchant energy sector for approximately six years in pricing and structuring,
15 origination, and trading roles for Duke Energy and Illinova.

16 **PURPOSE AND SUMMARY**

17 **Q. What is the purpose of your testimony?**

18 A. The purpose of my testimony is to introduce a renewable energy customer option
19 in the form of a pilot program called the Subscriber Solar Program (the “Program”),
20 which the Company is seeking approval to offer to its Utah customers. My
21 testimony explains why the proposed Program is in the public interest and provides
22 a detailed description of the proposed Program. My testimony is accompanied by
23 the direct testimony of Mr. Loren P. Morse, who explains the marketing,

24 administration, and billing for the Program.

25 **Q. Please summarize the proposed the Program.**

26 A. The Program will offer RMP customers in Utah the opportunity to buy electricity
27 from a solar photovoltaic (“PV”) resource (or resources) to be acquired by the
28 Company. Specifically, customers will be able to purchase blocks of electricity
29 from the solar resource at a fixed price, called the Solar Block Generation Charge.
30 A block of electricity is expected to be equal to 200 kilowatt-hours (“kWh”).¹ The
31 kWh block purchases will be used to offset the customer’s actual billed electricity
32 usage at their home or business. Customers will subscribe to a specific solar project
33 or group of solar projects owned or contracted by RMP. Customers may buy blocks
34 of solar energy at a fixed (locked-in) cost of generation for two, five, seven or 10
35 year terms. Customers will continue to pay all delivery-related costs (i.e., non-
36 generation related costs for transmission, distribution and customer services)
37 through a Solar Block Delivery Charge in addition to the Solar Block Generation
38 Charge. While the Solar Block Generation Charge will be locked in for the duration
39 of the subscription period, the Solar Block Delivery Charge will be subject to
40 change in future rate proceedings. Additionally, participating customers will be
41 subject to all other charges on their otherwise applicable rate schedule except for
42 the energy balancing account (“EBA”) tariff rider following the first year of
43 enrollment.² The Company will calculate the final costs for the Solar Block

¹ The size of the block will be validated after the solar resource is selected and the capacity factor (expected output) of the resource is finalized.

² Since the EBA is for recovery of the prior year’s power costs, the Company proposes to apply the EBA adjustment to the subscribed energy during the first year of enrollment (or period applicable to the recovery of the EBA) so those costs will not be shifted to other customers. Thereafter, the EBA will not apply to the subscribed energy.

44 Generation Charge following selection of the solar resource.

45 The Program will be available to residential, small non-residential and large
46 non-residential customers. The Program is optional and is designed such that those
47 who participate in the Program will pay all costs associated with the Program. There
48 will be no subsidization of this Program by non-participating customers if the
49 Program is fully subscribed. This Program was developed in response to customer
50 requests and interest in a “green tariff” or a way for customers to meet their
51 electricity needs with specific renewable resources.

52 **Q. How is your testimony organized?**

53 A. My testimony is organized as follows:

- 54 • First, I provide a general overview of the proposed Program and a
55 comparison of the Program to the existing Blue Sky program; and I discuss
56 why this new Program is in the public interest and should be implemented
57 as a pilot program.
- 58 • Next, I provide an overview of the market research performed by the
59 Company when developing the Program.
- 60 • Last, I provide a detailed description of the proposed Program, including:
61 1) Program eligibility and basic design, 2) the solar resource selection
62 process, 3) the pricing of the solar blocks, and 4) regulatory accounting.

63 **SUBSCRIBER SOLAR PROGRAM OVERVIEW**

64 **Q. Does the Company intend to offer the Program as a pilot program?**

65 A. Yes. Given the unique nature of the Program, the Company intends for this initial

66 offering to be treated as a pilot program. The Company is seeking approval to make
67 a one-time acquisition of a solar resource³ and then to implement the Program to
68 allow subscriptions to that resource. On or around 18 months after the approval of
69 the Program, the Company will file a report with the Commission assessing the
70 implementation of the Program and will make a recommendation whether the
71 Program should expand to include additional solar resource acquisitions (and
72 subsequent subscriptions) or whether the Program should be limited to the initial
73 solar resource with no additional solar resources.

74 The Company has attempted to design the Program in a manner that will be
75 easy for customers to understand and easy for the Company to implement without
76 impacting rates for other customers. However, the Company recognizes that the
77 Program will require monitoring during implementation and that changes may be
78 required as the Company gains experience. The Company does not intend for the
79 Program and its design to set precedent in any other proceeding or program.

80 **Q. What are the primary objectives of the Program?**

81 A. The key objective, assuming 100 percent subscription, is to provide additional
82 choices to customers through a program that is self-funding, self-sustaining and
83 ratepayer neutral, meaning non-subscribers will not be burdened with any of the
84 costs of the program.⁴ Another objective is to give interested Utah customers the
85 option to support solar development in Utah.

³ The solar resource may consist of multiple projects to achieve the targeted size.

⁴ The Company has built into the Program costs a forecasted ramp rate for subscriptions and the assumption that the Program will be fully subscribed following the initial ramp-up period. If the ramp rate occurs as expected and the program is fully subscribed when expected, there will be no material impact to non-subscribing customers.

86 **Q. Is the Program replacing the Blue Sky Program?**

87 A. No. The Program is an additional renewable energy program that provides another
88 option for customers who desire to support renewable energy. The Company
89 launched Blue Sky as a block purchase program based on Renewable Energy
90 Credits (“RECs”) that allows customers the choice, for a nominal fee, to support
91 the expansion of renewable energy. Today, nearly 40,000 Utah customers have
92 voluntarily signed up for the Blue Sky Program. The Blue Sky Program provides
93 customers an easy and cost-effective way to assist in the development of renewable
94 energy. The Program will take advantage of the significant brand value of the Blue
95 Sky Program for marketing and communication purposes but will be a new and
96 distinct program.

97 **Q. How is the Program different than the Blue Sky Program?**

98 A. The Blue Sky customer is supporting the expansion of renewable energy through
99 REC purchases. Under the Blue Sky Program, the Company purchases RECs on
100 behalf of customers who participate. A customer who participates in the current
101 Blue Sky block purchase program does not receive an electricity usage offset from
102 their block purchases. The Program is designed for customers who desire to make
103 a longer term commitment (at least two years) to a specific resource, with the
104 energy from that resource reflected on their monthly bill.

105 **Q. Why is the Company launching the Program at this time?**

106 A. The federal solar investment tax credit (“ITC”) is a 30 percent federal tax credit for
107 solar systems that is currently in effect through December 31, 2016. After that date,
108 under current law, the credit will drop to 10 percent. To be eligible for the credit,

109 the project must be placed in service by the end of 2016. Given the timing
110 requirements for financing and construction of the solar facility and completion of
111 the necessary interconnection facilities, projects must, in practicality, receive a
112 notice to proceed by the fourth quarter of 2015 in order to be placed in service by
113 the December 31, 2016 tax sunset date.

114 For this reason, the Company is seeking to implement the Program by the
115 fourth quarter of 2015 in order to issue a notice to proceed to the bidder(s) selected
116 in response to the request for proposal (“RFP”) for the Program resource, which the
117 Company issued in May 2015.

118 **OVERVIEW OF MARKET RESEARCH ON SUBSCRIBER SOLAR**

119 **Q. What led the Company to explore subscriber solar?**

120 A. The Company received numerous informal inquiries from large industrial
121 customers and from several municipalities regarding options for customers to
122 purchase a portion of their electricity needs from renewable resources, even if such
123 purchases were made at a premium to regular tariff rates. This led the Company to
124 perform more detailed market research to better understand the level of customer
125 interest and how the Company could best meet the needs and desires of its
126 customers.

127 **Q. What type of information did the Company compile to demonstrate that**
128 **customers want the ability to choose renewables as a supply choice and that a**
129 **subscriber or community solar program would be desirable to certain**
130 **customers?**

131 A. The Company conducted two market research studies in Utah. The first was a

132 qualitative set of one-on-one interviews of opinion leaders in Utah showing that
133 RMP:

- 134 • Has an excellent brand reputation.
- 135 • Has high overall satisfaction.
- 136 • Is trusted by its customers.

137 A summary of the findings of the opinion leader research is attached as Exhibit
138 RMP____(PHC-1). The interviews also showed that: (1) customers prefer the
139 subscriber solar option for obtaining renewable energy over other options; and (2)
140 community leaders support an optional program and are willing to solicit support
141 for a subscriber solar program in their community.

142 The Company conducted a separate customer research survey in July 2014
143 with Market Strategies International (“MSI”), which sought to determine
144 similarities and differences in demographic characteristics and attitudes of
145 distributed generation (“DG”) customers compared to the general residential
146 customer base, and to PacifiCorp Blue Sky participants. A summary of the key
147 findings from that survey is attached to my testimony as Exhibit RMP____(PHC-2).
148 The survey also evaluated the likelihood of the general residential customer class
149 and current Blue Sky participants to adopt a subscriber solar option or a rooftop
150 referral program. 2,200 RMP residential customers, DG customers and Blue Sky
151 customers participated in the survey. The following were key findings of the
152 survey:

- 153 • Interest in solar is high among all residential customer groups surveyed;
154 customers respond favorably to the prospect of their utility as a solar power

155 provider offering home/rooftop and subscriber-based community shared
156 solar solutions.

157 • A majority of the current non-DG customers indicated they would consider
158 subscribing to a community shared solar offering from their utility.

159 • Among the majority of customers, the expectation is that any investment
160 they make in solar will ultimately result in bill savings.

161 • Though most recognize and value the environmental benefits of solar
162 power, the appeal of home/rooftop and community shared solar offerings
163 drops considerably if costs are projected to be equal to or higher than the
164 customer's current (pre-solar) total monthly energy costs.

165 These two studies demonstrate that there is sufficient interest in a subscriber solar
166 program to initiate a pilot program.

167 **Q. What types of customers would be interested in the Program?**

168 A. The market research studies show that customers who would be most interested in
169 a subscriber solar program include:

170 • Existing Blue Sky Program participants who desire a more direct tie to their
171 home energy use.

172 • Homeowners who are not in a position to install panels on their roof due to:

173 ○ Physical limitations such as roof orientation or obstructions.

174 ○ Inability to secure financing to install roof top solar.

175 ○ Preference not to take responsibility for maintenance.

176 ○ Being renters and thus not in a position to install roof top solar.

177 ○ Residents of condominiums who cannot install panels.

178 The Company recognizes that some customers want choice in the type of electricity
179 they consume. The Program allows customers who are either not in a position to
180 obtain renewable energy on their own or who cannot afford the high up-front cost
181 to install solar panels on their home to obtain a higher percentage of renewable
182 energy than what is available through the Company's existing resource portfolio.

183 **Q. How will the Program benefit Utah customers?**

184 A. The Program will provide Utah customers with a choice to purchase solar
185 electricity. Subscriber customers are able to offset a portion of the energy charges
186 on their bill with energy produced by a specific solar resource. The Program is an
187 affordable and convenient option for customers who desire to receive the attributes
188 associated with solar without incurring the significant capital outlay, maintenance
189 obligation, and other issues related to a rooftop solar installation. At 100 percent
190 subscription, all program costs will be borne by subscribers with no costs shifted to
191 non-participating customers.

192 **Q. Are there other benefits to the Program compared to a typical rooftop
193 installation?**

194 A. Yes. A significant benefit is the increased capacity factor, or level of output, from
195 the underlying utility-scale solar PV resources that will be used to support the
196 Program in comparison to a typical residential rooftop installation. Utility-scale
197 solar PV resources are typically located in areas with higher insolation (more sun)
198 levels. Furthermore, utility-scale solar PV resources typically incorporate designs
199 that maximize the amount of energy generated per level of investment in
200 comparison to the typical rooftop design. The Company expects that the utility-

201 scale solar PV resource(s) that will be used to support the Program will have annual
202 capacity factors ranging from 26 percent to 31 percent depending on location and
203 technology. Typical rooftop installations along the Wasatch Front have capacity
204 factors in the range of 16 to 19 percent.

205 Subscriber solar customers would receive a significant benefit, in the form
206 of more output for the same amount of money, when the solar resources are located
207 in areas with higher insolation levels. Utility-scale resources also provide a benefit
208 from economies of scale and utilization of designs that increase the amount of
209 energy compared to rooftop designs.

210 **SUBSCRIBER SOLAR PROGRAM DETAILS**

211 **Program Eligibility and Basic Design**

212 **Q. How will the Program be reflected in the Company's current tariffs?**

213 A. Similar to Blue Sky, the Program will be available through a separate tariff schedule
214 or rider that will be added to the customer's otherwise applicable tariff schedule.
215 The proposed tariff schedule, Electric Service Schedule No. 73, Subscriber Solar
216 Program Rider - Optional, is attached to my testimony as Exhibit RMP___(PHC-
217 3). Schedule 73 sets forth the costs for each Subscriber Solar Energy Block, billing
218 provisions, and the terms and conditions for participating in the Program.
219 Residential customers, small non-residential customers on Schedule 23, and
220 customers on Schedule 6 who do not have interval meters will continue to take
221 service under their current or otherwise applicable rate schedule and be subject to
222 all applicable charges, except for the EBA tariff rider following the first year of
223 enrollment, in addition to charges on Schedule 73. Large non-residential customers

224 currently on Schedules 6, 6A, and 6B who have internal meters and customers on
225 Schedules 8, 9, and 9A will move from those schedules to instead take service on
226 Schedule 32⁵, Service from Renewable Facilities, in addition to Schedule 73.

227 **Q. You indicated the Program is available to residential, small non-residential**
228 **and large non-residential customers. How is the program split among these**
229 **customers?**

230 A. The initial offering is split as follows, assuming a 15 MW resource:

- 231 • Residential (Schedules 1, 2, 3): 30 percent (4,500 kW)
- 232 • Small non-residential (Schedule 23): 30 percent (4,500 kW)
- 233 • Large non-residential (Schedules 6, 6A, 6B, 8, 9, 9A): 40 percent (6,000
234 kW)

235 The Company intends to begin marketing the Program immediately after its
236 approval. After an initial marketing period of 180 days from the date of Program
237 approval, and at periodic intervals thereafter, the Company will assess whether
238 available unsubscribed capacity should be shifted between classes to meet customer
239 interest and will make adjustments accordingly.

240 **Q. What are the basic program design components?**

241 A. The key program mechanics are summarized as follows:

- 242 1. Subscriber Solar Energy Block purchases can be locked in for two, five,
243 seven or 10 year terms.
- 244 2. Residential and small non-residential customers can subscribe to as many

⁵ If the Program is approved, the Company will file a revised Schedule 32 to reflect its applicability to Program customers.

245 blocks as they want, but their subscription cannot exceed 100 percent of
246 their usage for the prior 12 months (on a kWh basis).

247 3. Industrial customers can subscribe to as many blocks as they want, but
248 their subscription cannot exceed the lower of 100 percent of their usage
249 for the prior 12 months or 500 kW.

250 4. Subscriptions will be awarded on a first-come, first-served basis until
251 Program capacity is reached.

252 5. If a customer cancels a subscription, the subscribed amount will be added
253 to the available Program capacity. Cancellation shall be effective at the
254 end of the billing period in which the request is made.

255 6. Customers may transfer their subscriptions to other points of electric
256 service delivery within the Company's Utah service territory if they move
257 (provided they stay on the same rate schedule).

258 7. Customers can cancel their subscriber solar contract within 30 days of
259 signing up with no penalty/termination fee.

260 8. Subscribers will pay a termination fee if they cancel before the term of
261 their subscriber solar agreement. The cancellation fee will equal six
262 months of the Solar Block Generation Charge times the number of blocks
263 subscribed times 200 kWh.⁶

264 9. PacifiCorp will retain ownership of the RECs and all other environmental
265 attributes including but not limited to carbon emission reduction credits,

⁶ The cancellation fee is intended to equal approximately six months of Program costs, with the assumption that it may take up to six months to complete the acquisition and setup of another subscriber to replace the one who canceled.

266 and the credits will be retired by PacifiCorp on behalf of subscribers.

267 10. Residential and small non-residential customers can bank excess kWh
268 from month to month, and the bank will be cleared annually with any
269 excess kWh being donated to the Low Income Program.

270 11. The Program will not require new metering installations at a subscribing
271 customer's point of delivery.

272 12. Customers participating in the Subscriber Solar Program cannot
273 participate in the Company's net metering program.

274 **Subscriber Solar Resource Selection Process.**

275 **Q. Please describe the solar resource that will be used for the Program.**

276 A. The underlying solar resource used for the Program will be acquired through a
277 Request for Proposal ("RFP") process. The solar resource must be located in Utah
278 and must either interconnect directly with PacifiCorp's transmission or distribution
279 system or be delivered into PacifiCorp's service territory. Although the Company
280 would prefer the underlying solar resource(s) be highly visible to the public to
281 showcase the program, the cost and benefits will be the overarching consideration
282 in the resource selection process.

283 Three different types of structures are proposed: 1) Power Purchase
284 Agreements ("PPA") with various terms (15, 20 and 25 years), 2) Asset Purchase
285 and Sale Agreements ("APSA"), also known as Build-Own-Transfer ("BOT")
286 arrangements, and 3) Engineer-Procure-Construct ("EPC") arrangements. In each
287 case, the Company will take ownership of the environmental attributes associated
288 with the underlying resource. The final mix of resources may be a combination of

289 any or all of these types of structures depending on cost and benefits. Additional
290 details related to the RFP process and the types of structures solicited are included
291 in Exhibit RMP___(PHC-4).

292 **Q. What is the timing and schedule for the RFP?**

293 A. The Company issued the 2015 Solar Request for Proposals May 27, 2015. The RFP
294 documents can be found at the following web address:
295 <http://www.pacificorp.com/sup/rfps/RFP2015s.html>. The RFP schedule is set forth
296 as follows:

Event	Estimated Timeline
RFP issued	May 27, 2015
Bidder meeting	June 3, 2015
Responses due	July 20, 2015
Shortlist selection	August 14, 2015
Shortlist submitted to Utah DPU	September 4, 2015
Best and final pricing update of Shortlist	September 11, 2015
Bidder negotiations completed	October 2, 2015
Final selection	October 16, 2015
Notice to Proceed (Pending approval of Program)	November 2, 2015
Project Commercial Operation Date	December 1, 2016

297 **Q. Why did the Company issue the RFP prior to approval of the Program?**

298 A. Given the looming federal investment tax credit expiration date of December 31,
299 2016, it was necessary for the Company to begin the RFP process in advance of,
300 and to have the process run parallel to, the Commission approval process for the

301 Program. The Company plans to select the RFP winners in October 2015. The RFP
302 participants are aware that the final notice to proceed will not be issued until the
303 Program receives Commission approval. For this reason, the Company is seeking
304 approval of the Program by the fourth quarter of 2015. It is critical to issue the
305 notice to proceed in the fourth quarter of 2015 to take advantage of the expiring
306 investment tax credit.

307 Furthermore, the cost to subscribing customers of the Program is heavily
308 dependent on the cost of the solar resource. The Company believes it will be helpful
309 to interveners in this docket and to other stakeholders to be able to understand those
310 anticipated resource costs during the Program approval process. The Company has
311 made its initial filing based on an estimated solar resource cost, and the Company
312 will update its estimated solar resource cost during the course of this docket as the
313 shortlist is finalized in the RFP and the solar resource cost is discernible.

314 **Q. What size of project is the Company seeking through the RFP?**

315 A. The initial target size is 15 megawatts (“MW”). This size will allow for adequate
316 initial participation for the various customer classes at the allocations described
317 earlier in my testimony, while being small enough to meet the objective of being a
318 pilot program.

319 The Company intends to review the RFP responses and customer interest as
320 this docket progresses to determine if the solar resource size should be adjusted to
321 meet the needs of the program. For example, if a larger project results in a
322 materially lower solar resource cost, or if there is higher than expected customer
323 interest, the Company may select a larger solar resource. The Company intends to

324 work closely with interveners and other stakeholders when selecting the final size
325 of the solar resource for this initial Program offering, but the current targeted size
326 is 15 MW. The shortlist from the Company's RFP is scheduled to be completed on
327 August 14, 2015. The Company recommends, as part of the schedule in this docket,
328 that the Company provide on or around August 21, 2015 a supplemental filing
329 updating relevant Program information as needed to reflect the attributes (size,
330 price, capacity factor, etc.) of the expected solar resource.

331 **Pricing of the Subscriber Solar Energy Blocks**

332 **Q. What is a Subscriber Solar Program Solar Energy Block?**

333 A. Each Solar Energy Block will represent one kW of capacity of the subscriber solar
334 resource. The corresponding kWh associated with each one kW capacity block will
335 be finalized once the solar resource has been selected and the expected production
336 profile of the solar resource is known. Based on a Company estimation of a solar
337 production output for a southern or central Utah solar resource, the Solar Energy
338 Block energy amount is expected to be approximately 200 kWh per one kW block
339 of capacity.

340 For residential and small non-residential customers, the Solar Energy Block
341 will be the same for each month and will be fixed for the duration of their
342 subscription length. Customers will have the option to select two, five, seven or 10
343 year contract options. While the output of the solar resource is expected to vary by
344 month, the Company has designed the Program to provide a levelized amount each
345 month to residential and small non-residential customers, such that the levelized
346 amount equals the expected total output of the solar resource on an annual basis.

347 This structure simplifies Program design and the customer's bill. When a customer
348 subscribes to the Program, the customer will select how many blocks of solar
349 energy to purchase.

350 At the expiration of the customer's initial contract term, the customer must
351 enter into a new subscriber solar contract with a new contract term in order to
352 continue on the Program (if capacity is available). Capacity is not reserved for a
353 customer beyond their current contract term.

354 **Q. What is the cost of each Solar Energy Block?**

355 A. A Solar Energy Block includes two cost components: 1) A Solar Block Generation
356 Charge to cover the cost of the solar generation resource and the costs associated
357 with the Program and 2) A Solar Block Delivery Charge to cover the delivery
358 related, or non-generation, costs (e.g., transmission, distribution, and customer
359 services).

360 **Q. How will the Solar Block Generation Charge be calculated?**

361 A. The Solar Block Generation Charge is made up of the following three components:

362 1. Solar resource cost: the cost per kWh of the Program resource.

363 *plus*

364 2. Utility generation cost: the cost per kWh of utility generation required (in
365 addition to the solar resource blocks) to provide service to the customer.⁷

366 *plus*

367 3. Program administration costs:

⁷ The "utility generation cost" is based on a set of data points including: 1) the difference between the expected solar resource cost and the embedded cost of generation and 2) the difference between the expected solar resource cost and the market value of the solar energy.

368 o Administration

369 o Marketing

370 o Billing

371 Assuming a solar resource cost of \$55 per MWh⁸ (or 5.5 cents per kWh), the current
372 anticipated Solar Block Generation Charge for each customer class is as follows:

373 • Schedules 1, 2, 3: 8.8 cents per kWh subscribed

374 • Schedule 23: 8.5 cents per kWh subscribed

375 • Schedules 6, 6A, 6B (no interval meter): 8.2 cents per kWh subscribed

376 • Schedules 6, 6A, 6B (with interval meter): 8.2 cents per kWh subscribed

377 • Schedules 8, 9, 9A: 8.2 cents per kWh subscribed

378 The proposed Solar Block Generation Charge will be validated once the solar
379 resource cost is known, as described earlier in my testimony.

380 **Q. Will the Solar Block Generation Charge change over the term of the**
381 **customer's subscription?**

382 A. No. The Solar Block Generation Charge will remain fixed for whatever length of
383 subscription term chosen by the customer—two, five, seven or 10 years.

384 **Q. How will the Solar Block Delivery Charge be calculated?**

385 A. The Solar Block Delivery Charge is in addition to the Solar Block Generation
386 Charge and applies to residential customers and Schedule 23 customers. The Solar
387 Block Delivery Charge covers delivery-related costs for transmission, distribution,
388 and customer services. It will be based the costs for these elements included in the

⁸ The final solar resource cost will be determined once the Company completes the RFP process. Program costs will be updated to reflect the final resource cost.

389 energy rates for the customer's applicable service rate schedule.

390 The Solar Block Delivery Charge will be subject to changes in these cost
391 elements, and such changes will be consistent with approved changes in the
392 customer's energy rate in their applicable service rate schedule.

393 The current Solar Block Delivery Charge would be 3.9783 cents per kWh
394 for residential schedules 1, 2, and 3, and 2.9294 cents per kWh for Schedule 23,
395 based on the Step 2 increase approved in the Company's most recent Utah general
396 rate case that will become effective September 2015.

397 For Schedules 6, 6A and 6B customers who do not have interval meters,
398 delivery-related costs for transmission, distribution, and customer services are
399 included in the Customer, measured Facilities, and measured Power charges for
400 those rate schedules (which those customers will continue to pay), so no Solar
401 Block Delivery Charge will be applied.

402 Large non-residential customers who participate in the Program will be
403 placed on the existing Utah Schedule 32, which contains a three-part partial
404 requirements rate and was designed for this type of delivery structure where a solar
405 resource is located in a different location than the customer's load. Therefore, large
406 non-residential customers will not have a separate Solar Block Delivery Charge
407 since those charges are captured in Schedule 32 rates. Large non-residential
408 customers who participate in the Program will only pay the Solar Block Generation
409 Charge on Schedule 73, in addition to the charges on Schedule 32.

410 **Q. What is the anticipated total cost for each Solar Energy Block?**

411 A. The anticipated cost in cents per kWh, by customer class, for each Solar Energy

412 Block is as follows:

- 413 • Schedules 1, 2, 3: 8.8 cents Solar Block Generation Charge + 4.0 cents Solar
414 Block Delivery Charge = 12.8 cents per kWh total charge.
- 415 • Schedule 23: 8.5 cents Solar Block Generation Charge + 2.9 cents Solar
416 Block Delivery Charge = 11.4 cents per kWh total charge.
- 417 • Schedules 6, 6A, 6B (no interval meter): 8.2 cents Solar Block Generation
418 Charge + No Solar Block Delivery Charge⁹ = 8.2 cents per kWh total
419 charge.
- 420 • Schedules 6, 6A, 6B (with interval meter): 8.2 cents Solar Block Generation
421 Charge + No Solar Block Delivery Charge = 8.2 cents per kWh total charge
422 (delivery-related costs are included in Schedule 32 rates).
- 423 • Schedules 8, 9, 9A: 8.2 cents Solar Block Generation Charge + No Solar
424 Block Delivery Charge = 8.2 cents per kWh total charge (delivery-related
425 costs are included in Schedule 32 rates).

426 The actual Solar Energy Block charges to be included in the proposed Schedule 73
427 tariff will be established once the solar resource has been selected and the solar
428 resource cost is validated through the RFP process. Program administration costs
429 may also change slightly depending on the final size of the program.

430 **REVENUE REQUIREMENT IMPACT OF THE PROGRAM**

431 **Q. What will be the accounting treatment of the Program funds received from**
432 **Program participants?**

⁹ Delivery-related costs for transmission, distribution, and customer services are included in the Customer, measured Facilities, and measured Power charges for these rate schedules (which these customers will continue to pay), so no Solar Block Delivery Charge will be applied.

433 A. The portion of the Program funds attributed to Program administration, marketing
434 and billing costs will be treated similar to the current Blue Sky Program. The
435 portion of Program funds attributed to generation costs will be revenue credits
436 allocated to the applicable class cost of service for residential and small non-
437 residential classes. For Program participants billed under Schedule 32, Program
438 funds attributed to generation costs will be credited to general Utah revenue, similar
439 to the current treatment of Schedule 31 revenues.

440 **Q. Please briefly describe the accounting treatment for the Blue Sky Program.**

441 A. Blue Sky program funds received from participating customers are booked to
442 liability accounts for each state, and the costs are charged against the liability
443 accounts.

444 **Q. How are the Blue Sky liability accounts and program charges against those
445 accounts treated for rate-making purposes?**

446 A. Blue Sky liability accounts and program charges are excluded from revenue
447 requirement in rate case proceedings and, as such, have no impact on requested
448 revenue requirements in rate case proceedings.

449 **Q. Will the portion of the Program subscription funding that is attributed
450 to administration costs be included in revenue requirement in rate case
451 proceedings?**

452 A. No. Program funding attributed to administration, marketing and billing and the
453 Program costs associated with these categories will be excluded from revenue
454 requirement, just as Blue Sky funding and program costs are not included in

455 revenue requirement in rate case proceedings.

456 **Q. How will the Program solar resource costs and the portion of the Program**
457 **subscription funding that is attributed to generation costs be treated in rate**
458 **case and net power cost proceedings?**

459 A. If the solar resource is a PPA, the PPA costs and benefits will be included in net
460 power costs for Utah, and the impact will be situs assigned to Utah. The PPA will
461 not impact net power costs for the other PacifiCorp jurisdictions. Utah loads and
462 resulting allocation factors will not be adjusted to account for the Program. Since
463 embedded costs will continue to be allocated to the subscription solar customer's
464 regular class cost of service (since loads are not adjusted), the portion of the
465 Program subscription funding that is related to generation costs will be assigned to
466 the applicable rate class as a revenue credit to that class. In the case of Schedule 32
467 customers, who are not a separate class cost of service, the Program subscription
468 funding that is attributed to generation costs will be a revenue credit to Utah, similar
469 to the treatment of Schedule 31 customer revenue. The Program Solar Block
470 Generation Charges and Solar Block Delivery Charges have been calculated such
471 that the resulting revenue credit to the class cost of service (or to Utah general
472 revenues in the case of Schedule 32 customers) covers the forecasted cost impact
473 of the Program, assuming 100 percent subscription rate.

474 If the solar resource is a Company-owned resource, the costs associated
475 with the resource will be assigned to the standard asset accounting categories but
476 will be situs assigned to Utah (instead of system assigned). The energy benefits of
477 the resource will flow through net power costs and will also be situs assigned to

478 Utah. The rest of the Program accounting will be the same as what I described for
479 the PPA scenario.

480 The Company intends to request as part of the procedural schedule in this
481 docket a technical conference to present to interested parties the accounting
482 mechanics for the Program costs.

483 **Q. Do the Program costs include any costs associated with the ramp up period for**
484 **subscriptions?**

485 A. Yes. During the period prior to 100 percent subscription when subscriptions are
486 ramping up, short term Program funding may not fully cover the short term cost of
487 the Program if the solar resource cost does not equal the energy benefit. This issue
488 would only apply to the portion that is not subscribed. For example, if the solar
489 resource PPA price is higher than the net power cost benefit of the energy, and 10
490 percent of the Program is not yet subscribed, there would be no Program funding
491 to cover that difference for the unsubscribed 10 percent (because there would be no
492 subscribers for that 10 percent). This impact of the ramp up period has been
493 forecasted by the Company based on the forecasted subscription ramp rate and the
494 forecasted net power costs impact, and the costs have been built into the long term
495 Program costs paid by subscribers. So any near term shortfall in Program funding
496 due to the ramp up period in the early years will be made up by slightly over-
497 funding the Program in later years such that the over the life of the Program the
498 impact to non-subscribers is zero, assuming the ramp up to 100 percent subscription
499 occurs as forecasted.

500 **Q. Is there a potential impact to non-participating customers if the Program is**

501 **not 100 percent subscribed?**

502 A. Potentially. If the Program is not 100 percent subscribed, solar resource costs will
503 continue to be situs assigned to Utah, and the solar resource benefits will continue
504 to be situs assigned to Utah. The Program rates have been designed to cover the
505 forecasted difference between those costs and benefits assuming a 100 percent
506 subscription rate (after the expected ramp period). If a lower subscription rate
507 occurs, the difference for the unsubscribed portion of the solar resource will be
508 attributed to all Utah customers. This difference may be positive or negative
509 depending on the actual impact to net power costs during the times the Program is
510 not 100 percent subscribed.

511 **Q. Please summarize your testimony.**

512 A. The Subscriber Solar Program offers Rocky Mountain Power customers the
513 opportunity to buy fixed kilowatt-hour blocks of electricity from a Company solar
514 resource at a fixed price and then use that purchase to offset their own billed energy
515 usage at their home or business. This Program was developed in response to
516 customer requests and interest in a “green tariff” or a way for customers to meet
517 their electricity needs with specific renewable resources. Customers will not incur
518 the upfront investment costs in solar panels and the ongoing maintenance costs that
519 occur with a typical rooftop installation, and they will benefit from the higher
520 capacity factor found in utility scale solar projects. Customers may buy blocks of
521 solar energy at a fixed (locked-in) energy price for two, five, seven or 10 year terms.
522 Their non-generation related costs (transmission and distribution) will continue to
523 be subject to future rate proceedings.

524 The Program will be available to residential, small non-residential and large
525 non-residential customers. The Program is optional and is designed such that those
526 who participate in the Program will pay all costs associated with the Program. The
527 intent of the program is that there will be no subsidization of this Program by non-
528 participating customers at 100 percent subscription.

529 The Company recommends the Program be implemented as a pilot program
530 with a Company report after 18 months to assess the Program and to recommend
531 any needed modifications.

532 **Q. Does this conclude your direct testimony?**

533 **A. Yes.**