

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of)	
Rocky Mountain Power for Authority)	Docket No. 10-035-124
to Increase its Retail Electric Utility)	
Service Rates in Utah and for)	
Approval of Its Proposed Electric)	
Service Schedules and Electric)	
Service Regulations)	

DIRECT TESTIMONY ON RATE DESIGN

OF

DR. CHARLES E. JOHNSON

ON BEHALF OF

AARP AND SALT LAKE COMMUNITY ACTION PROGRAM

JUNE 2, 2011

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INTRODUCTION

Q. Please state your name and business address.

A. My name is Charles E. Johnson. My business address is 1086 - 7B Pleasant Blvd,
Toronto, Ontario M4T 1K2.

Q. By whom are you employed?

A. I am an independent consultant.

Q. For whom are you submitting testimony?

A. I am testifying on behalf of AARP and Salt Lake Community Action Program (SLCAP).

Q. What are your qualifications for testifying in this proceeding?

A. I have received extensive training in various aspects of utility accounting, utility planning
and utility practices over the years and have a Master's Degree and Ph.D. in
Mathematics. I have met the requirements to be a Certified Depreciation Professional by
the Society of Depreciation Professionals. I have taught short courses on utility matters
to the Staff of several State Utility Commissions and National Commissions of Caribbean
Island Nations and to staff of various U.S. Department of Energy facilities and National
Laboratories. I have been involved in utility proceedings as a consultant for more than 30
years and have testified as an expert in proceedings before utility commissions and courts
throughout the country. I have testified in several cases before the Utah Public Service
Commission, including cases involving Rocky Mountain Power Company (as Utah
Power and Light Company and Pacificorp), Questar and Qwest.

Q. What is the purpose of your testimony?

22 A. I have been asked to review the Rocky Mountain Power Company (RMP or the
23 Company) filing and provide recommendations to the Utah Public Service Commission
24 (PSC or the Commission) about the rate design proposed by the Company, with particular
25 attention to the proposed residential rates, including the proposed customer charge.

26 **Q. What issues will you address?**

27 A. I will discuss the billing impact of the RMP proposal to increase the residential customer
28 charge from \$3.75 to \$10.00, the RMP proposal to eliminate the residential minimum bill
29 charge, and the RMP proposed “housekeeping” language change to Rate Schedules 1 and
30 3. In addition, I will develop a proposed residential rate that I recommend be adopted if
31 the PSC accepts the RMP-proposed revenue request and revenue spread. If the revenue
32 target for the residential class is set at a level different from requested by RMP, I
33 recommend that my proposed methodology be used to set the residential rate charges.

34 **RESIDENTIAL BILLING IMPACTS OF RMP’S PROPOSAL**

35 **Q. What is RMP’s proposal for increasing residential charges?**

36 A. RMP’s proposal is to increase the residential customer charge from \$3.75 to \$10.00
37 (167%) and to increase energy charges by approximately 10.4% over current base rates
38 and about 6.0% above rates including the current adjustments referenced in Mr. Griffith’s
39 testimony.

40 **Q. What is the impact of the RMP proposal on residential customers?**

41 A. RMP Witness Griffith states that his Exhibit RMP__(WRG-6) “shows the change in
42 monthly bills for various load and usage levels” up to customers using 5,000 kWh per

43 month, but it does not show the changes in the total bills for residential customers at
44 various usage levels. It simply shows the proposed change in the customer charge from
45 \$3.75 to \$10.00 and the 6.0% change in only the energy charges for various usage levels.
46 The exhibit does not calculate the change in the total bill nor does it calculate the
47 percentage change in the bill.

48 One gets a better picture of the billing impact of RMP's proposal on different levels of
49 consumption if the change in total bill is calculated. I have added the customer charges
50 to the energy charges from Exhibit RMP__(WRG-6) to demonstrate the percentage
51 increases for residential customers at different load levels. Calculations showing the
52 change in total bills for customers of various usage levels appear in Exhibit
53 AARP/SLCAP__(CEJ-1). This exhibit shows that an average residential customer will
54 see an increase of 15.0% in their winter bill and 13.6% in their summer bill. The
55 percentage increases for average customers are twice the 7.5% increase in winter and
56 nearly twice the 7.1% increase in summer for the larger 5000 kWh per month customer.

57 The extreme nature of the RMP proposal is not just its effect on average customers. Any
58 customer using less than 1300 kWh per month will pay more than 50% higher increases
59 than the largest RMP customers. Based on the bill frequency data from 2009-2010, only
60 about 10% of the winter customer bills and 15% of the summer customer bills are for
61 more than 1300 kWh per month. This means that 85-90% of the customers are getting
62 increases greater than 50% higher than the largest customers who consume more than
63 5,000 kWh per month.

64 **Q. Does the RMP-proposed residential rate have a worse impact on low-income**
65 **customers than on other residential customers?**

66 A. Yes. The overall increase in revenue for Schedule 1 customers is 14.5%, while the
67 overall increase for Schedule 3 customers is 17.1%.

68 **Q. Why is the percentage increase for Schedule 3 customers so much larger than the**
69 **increase for Schedule 1 customers?**

70 A. The average use for low-income customers on Schedule 3 is smaller than the average use
71 for Schedule 1 customers. Mr. Griffith reports in his bill comparisons in
72 Exhibit__(WRG-5) that the average residential customer consumes 841 kWh in summer
73 and 757 kWh in winter. I calculate somewhat higher numbers for Schedule 1 customers
74 (897 kWh and 800 kWh) from the billing units in Exhibit__(WRG-4). Energy is shown
75 by season in that exhibit. To obtain the seasonal bills, I split the total customer bills into
76 seasonal bills in the same percentages as in the bill frequency data provided by RMP in
77 response to AARP Data Request 1.4. The same calculation was performed for Schedule
78 3, resulting in an average summer monthly consumption of 732 kWh and winter monthly
79 consumption of 730 kWh.

80 Calculating the percentage increases under the RMP proposal for these average Schedule
81 1 and 3 usage levels produces the results in the following table.

	Schedule 1	Schedule 3
Summer	13.3 %	15.1%
Winter	14.9%	15.6%

82 Table 1. Percentage Increase for Average Residential Customer

83 This is because the customer charge is a larger portion of the Schedule 3 customer's bill
84 than it is for the Schedule 1 customer. Consequently, a large percentage increase in the
85 customer charge results in a larger percentage increase in a typical Schedule 3 customer's
86 total bill.

87 It should be noted from these average usage levels that the Schedule 3 customers do not
88 use more energy in the summer than they do in the winter. Thus, they do not contribute
89 more to the summer peak demand than they do to the winter peak demand and do not
90 contribute to the need for additional generating capacity to meet the growing summer
91 peak demand. For this reason, their costs of service are lower than those of Schedule 1.
92 Based on their relatively smaller summer demand, not only should Schedule 3 customers
93 not have their rates increased by a larger percentage than Schedule 1, but their rates
94 should be lower than Schedule 1.

95 Schedule 1 includes many low-income customers who could qualify for Schedule 3, but
96 have not done so, and also includes many customers who have income levels just above
97 the cut-off point for qualifying. Many fixed-income senior Utahns, whose incomes may
98 be just above the limit, don't qualify for Schedule 3 service and are among the Schedule

99 1 customers. These Schedule 1 customers likely have usage similar to the customers on
100 Schedule 3 and also face larger percentage increases in their bills than average.

101 **CUSTOMER CHARGE**

102 **Q. What justification is given for increasing the customer charge in Utah?**

103 A. Mr. Griffith claims “The current Customer Charge fails to recover the related fixed costs
104 of serving residential customers ...” [Direct Testimony of William R. Griffith line 85].

105 **Q. Why does Mr. Griffith say that is a problem?**

106 A. Mr. Griffith says that it is not appropriate to recover fixed costs through the variable
107 energy components of rates because it “gives the utility the incentive to sell more kWh in
108 order to recover its fixed costs.” [Direct Testimony line 108]. It is not entirely clear
109 what RMP might do to sell more residential kWh. One of the largest factors influencing
110 the level of sales is the weather. It is doubtful that RMP could take any action that would
111 have a greater effect on sales than the variability in the weather.

112 **Q. Would increasing the customer charge create other problems?**

113 A. It should be observed that increasing the customer charge as proposed by RMP does
114 create another problem. That problem is that the current customer charge recovers about
115 \$30 million from Schedule 1 customers and the proposed customer charge would recover
116 about \$82 million. This additional \$52 million is nearly 60% of the increase requested
117 for the residential customers. For Schedule 3 customers, it is an even greater percentage.
118 The revenue increase from the customer charge is nearly two-thirds of the increase for the
119 Schedule 3 customers. Were the Commission to award the Company less revenue than

120 requested, but still increase the customer charge to \$10.00, the percentage of the increase
121 recovered through the customer charge would be even higher. The reason this is a
122 problem is that the energy charges will be lower if the revenue is recovered through the
123 customer charge. If the award were to be only 60% of the requested amount for the
124 residential class, that would require reducing the energy charges from the current levels.
125 Faced with higher costs from major plant additions, this is not a rational pricing
126 approach.

127 **Q. Should the fixed cost associated with serving a customer be the sole criterion for**
128 **determining the customer charge?**

129 A. No. There are many other criteria that should be taken into account when setting a
130 customer charge. In general, setting the customer charge should be done in considering
131 the total environment surrounding the customer's usage of electricity. Considerations of
132 customer impacts are important, as are the pricing objectives, revenue requirement,
133 marginal costs, and such factors as whether encouraging conservation is a goal. In
134 particular, just separating costs into fixed and variable costs and assigning the customer
135 component of fixed costs to the customer charge is not a rational basis for pricing
136 decisions. Much of a modern utility's costs are fixed in the short run.

137 **Q. What do you mean that much of a modern utility's costs are fixed?**

138 A. Many utilities have structured their costs to reduce uncertainty and volatility in all of their
139 costs. Even utility fuel and purchased power costs are increasingly fixed costs or have
140 volatility tempered by long-term contracts, hedging, or other financial or contractual

141 methods. Any attempt to specifically isolate fixed costs or truly variable costs will run up
142 against the difficulty in determining which costs are which. In RMP's testimony on net
143 power costs for example, a number of long-term contracts for power are ending or being
144 initiated and references are made to long-term contracts for fuel. These contracts reduce
145 the amount of variability in the so-called "variable costs." If the Commission were to
146 base the customer charge on all "fixed" costs, the residential energy charge would be near
147 zero. While this is extreme and not what RMP is proposing, the definition of fixed cost
148 has great flexibility and is not a rational theoretical basis on which to set energy prices.

149 **Q. Is Rocky Mountain Power's proposed customer charge based on cost?**

150 A. The problem with answering that question is that, in spite of what might seem to be
151 something specific, cost is not a well-defined concept and the cost of something differs,
152 depending on who is calculating, or more properly said, who is estimating the cost.

153 Consider something as simple as a toothbrush. If its price differs from one store to the
154 next, what is its cost? If its cost of manufacture is meant, do we mean the cost of
155 manufacturing that one toothbrush that was purchased (i.e., its marginal cost), or do we
156 mean the average cost of manufacturing all toothbrushes the company has manufactured
157 during the past year, or the past month, or since it first started manufacturing
158 toothbrushes?

159 Determining any of these costs requires estimates and allocation of certain kinds of costs
160 and these estimates and allocations are open to different interpretations and allocations,
161 as the Commission is well aware. In its filing in this case as Exhibit___(WRG-2), Rocky

162 Mountain Power has filed two different estimates of the fixed customer costs – one
163 claiming the customer cost is \$10.90 and another claiming the customer cost is \$23.56.

164 **Q. Does Mr. Griffith assert that one of these is the customer cost?**

165 A. No. Mr. Griffith does not claim that either of these estimates is the correct estimate of
166 customer costs. He refers to them as “customer charge analyses.” [Direct Testimony line
167 88.] Moreover, he adds two items [Direct Testimony line 92] to “the Commission’s
168 methodology of determining a customer charge” that have the effect of raising the
169 amount substantially. Absent these two added items, the analysis would produce a
170 customer charge amount of \$3.32. If this analysis indeed is the Commission’s
171 methodology with two added items, the Commission’s methodology produces a lower
172 amount than the current residential customer charge.

173 **Q. If the Utah Commission were to determine a specific fixed cost in this case, is that**
174 **the only factor that should be used in determining the residential customer charge?**

175 A. No, as I explained earlier, there are a great many factors that should go into determining
176 the proper level for a residential customer charge. In particular, keeping an affordable
177 first block of energy for essential usage of residential customers is one such factor.

178 **Q. Does Mr. Griffith give other reasons he believes fixed costs should not be collected**
179 **in the energy charges and that the fixed costs should be recovered through a**
180 **customer charge?**

181 A. Mr. Griffith also says that "...it does not give customers clear price signals about the cost
182 of serving them and it creates subsidies within the customer class." [Direct Testimony
183 line 106-107.] He does not elaborate on these assertions.

184 **Q. Do you agree that his assertions justify not collecting fixed costs in the energy**
185 **charges?**

186 A. No. These assertions of Mr. Griffith do not justify collecting only variable costs in the
187 energy charge.

188 Let me first address the issue of price signals. The point of a price signal conceptually is
189 to provide the customer with information on which she or he can act, otherwise it is
190 noise, not a signal. For example, the signal provided by the price of a luxury car versus
191 the price of an economy car gives the potential customer information as to whether the
192 luxury car or the economy car should be bought by that person. It also offers the
193 potential customer information about buying the lower-priced car or no car at all.

194 Viewed in this light, the customer charge "price signal" described by Mr. Griffith is
195 irrelevant. The only action an existing or a potential customer could take with respect to
196 the higher customer charge is to discontinue service or to decline to take service.
197 Moreover, as I said earlier, increasing the customer charge as RMP has proposed also
198 means increasing energy prices by less and this reduced price signal does have
199 consequences. Lower energy prices could induce customers to consume more energy
200 than otherwise, adversely effecting conservation efforts.

201 Addressing the second issue, that of intra-class subsidies, requires that a cost basis be
202 agreed upon to determine which customers are paying above “cost” (and providing
203 subsidies) and which are paying below “cost” (and receiving subsidies). The only basis
204 Mr. Griffiths has referenced is his claim that fixed costs should not be recovered in the
205 energy charge. I have disputed this claim and while I believe extremely low-use
206 customers should pay higher charges than currently, I propose to accomplish this through
207 an increase in the minimum bill charge. It does not mean I accept his claim of intra-class
208 subsidies being “created” if any of his “fixed costs” are collected in the energy charge.

209 **MINIMUM BILL**

210 **Q. Has Rocky Mountain Power proposed to eliminate the minimum bill in its**
211 **residential Schedules 1 and 3?**

212 A. Yes, once again RMP has proposed elimination of the residential minimum bill. The
213 current residential minimum bill is \$3.78 for single-phase customers and \$11.34 for
214 three-phase customers.

215 **Q. What justification is given for elimination of the minimum bill?**

216 A. Mr. Griffith testifies that the only reasons for eliminating the minimum bill for single-
217 phase residential customers are because the minimum bill is only slightly higher than the
218 customer charge and that a minimum bill adds complexity to the rate structure. [Direct
219 Testimony lines 122-124.] The current minimum bill is only three cents higher than the
220 customer charge, which means a customer using even one kWh would be charged more
221 than the minimum bill.

222 Mr. Griffith testifies that the reason for elimination of the minimum bill for 3-phase
223 customers is the same. [Direct Testimony lines 130-131.] However, the difference
224 between the customer charge and minimum bill for three-phase customers is currently
225 \$7.58. That \$7.58 difference buys more than 100 kWh in the summer and 97 kWh in the
226 winter at current rates.

227 **Q. Do you find Mr. Griffith’s justification reasonable?**

228 A. No. The fact that the difference between the current customer charge and the minimum
229 bill is small justifies change, but that change does not necessitate the elimination of the
230 minimum bill. Another possibility for change is an increase in the minimum bill. Mr.
231 Griffith’s justification for elimination of the 3-phase minimum bill is invalid – the
232 difference between the customer charge and the minimum bill is not small – it is \$7.58,
233 enough to cover nearly 100 kWh.

234 **Q. Did Rocky Mountain Power propose eliminating the residential minimum bill**
235 **previously?**

236 A. Yes. In Utah PSC Docket No. 09-035-23, RMP proposed eliminating the residential
237 minimum bill provision. SLCAP proposed an increase in the minimum bill for
238 residential customers to \$6.00. The Commission found that “Insufficient evidence is
239 provided to support changing minimum bills, so we decline to do so.” [Report and Order
240 on Rate Design in Docket No. 09-035-23, June 2, 2010, page 32.] The Order continued:

241 The record is deficient with respect to parties’ positions for altering or
242 eliminating the minimum bills. In order to address this issue in the next

243 general rate case, we direct the Company and Division to provide an
244 examination of changes to the minimum bill including: the costs used to
245 calculate the minimum bill for single-phase service; the basis for, and
246 revenue impacts of, increasing the minimum bill; use of the minimum bill
247 instead of a customer charge to recover customer and/or distribution fixed
248 costs; the relationship of the three-phase and seasonal service to single-
249 phase service; and whether elimination of the minimum bill for single-
250 phase service also requires the elimination of the minimum bill for three-
251 phase and seasonal service.

252 **Q. What has the Division of Public Utilities found in its examination?**

253 A. The Division of Public Utilities (Division or DPU) has not completed its examination. In
254 response to data request AARP 1.2, the Division stated that it has no information to share
255 at this time. The DPU response to AARP 1.2 is provided as Page 1 of AARP/SLCAP
256 Exhibit____(CEJ-2).

257 **Q. What has Rocky Mountain Power found in its examination?**

258 A. So far as I can tell, RMP has made no specific examination of the issues identified in the
259 Commission Order. In response to a question (AARP Data Request No. 1.2) specifically
260 directed to what had been done by RMP in response to the Order in Utah PSC Docket
261 No. 09-035-23, RMP referred to Mr. Griffith's testimony and RMP's response to AARP
262 Data Request No. 1.1. Pages 2 and 3 of AARP/SLCAP Exhibit____(CEJ-2) presents the
263 Company's response to these two data requests. As is evident in RMP's response to

264 AARP Data Request No. 1.1, RMP has made no thorough study of any of the issues
265 surrounding the use of a minimum bill for residential customers.

266 I have already described Mr. Griffith's invalid justification for elimination of the
267 minimum bill. The inescapable conclusion one must draw, is that no consideration has
268 been given by RMP to any action other than eliminating the minimum bill and simply
269 raising the customer charge.

270 **Q. Are many minimum bills rendered for residential customers?**

271 A. There are a surprising number of single-phase customers who receive a minimum bill,
272 given that the current \$0.03 difference between the customer charge and the minimum
273 bill is less than the cost of a single kWh. Exhibit___(WRG-5) shows nearly 78,000
274 single-phase minimum bills under current rates at forecasted usage levels. There are also
275 slightly more than 13,000 3-phase residential customer bills, of which nearly 400 were
276 minimum bills.

277 **Q. Do you support elimination of the residential minimum bill?**

278 A. No, I do not support elimination of the minimum bill. In fact, I propose an increase in the
279 level of the minimum bill. A minimum bill provision adds only a slight amount of
280 complexity to the residential rate schedule and there is reason to include a residential
281 minimum bill provision in the Rocky Mountain Power residential rate.

282 **Q. What are the reasons for maintaining a minimum bill for residential customers?**

283 A. The answer to this question is a complex one and is related to the entire residential rate
284 structure, including the customer charge and the energy charges; to the cost structure of

285 the utility; and to other aspects of customer usage. For example, I have already
286 mentioned that a large number of residential bills are for zero usage. Consequently, I will
287 discuss the reasons at length in describing the interplay of the components of the
288 residential rates.

289 Because collecting data and billing for complex rate structures involves expense and
290 residential bills are for smaller amounts than bills for large industrial customers,
291 residential rate structures tend to be less complex than rates for large industrial
292 customers. Residential rate schedules commonly comprise only a customer charge and
293 energy charges, as has been proposed by Rocky Mountain Power. However, residential
294 rates that include a minimum bill are hardly unknown, and RMP has had minimum bill
295 provisions in other jurisdictions.

296 The main reason for instituting a minimum bill is for recovery of costs if the usage level
297 of the customer is uncertain and may be sporadic. For example, the residential rate
298 schedule has a provision for Seasonal Service with a minimum seasonal charge of
299 \$47.36, slightly more than the current monthly minimum bill would produce during the
300 year. Also, Rate Schedule 23 for General Service – Distribution Voltage Small Customer
301 has a Seasonal Service provision with a minimum bill of \$96.00 plus monthly power and
302 energy charges. The minimum bill for seasonal service is 12 times the \$8.00 monthly
303 customer charge for annual customers.

304 **Q. Are there other provisions in RMP's tariffs that include minimum bills?**

305 A. Yes. There are several other tariff provisions that include minimum bills for customers.

306 Electric Service Regulation No. 12 is RMP's line extension provision. Section 2(c)
307 requires a written contract for providing line extension for Remote, Seasonal and
308 Recreational Residential Service. For providing the line extension, RMP requires the
309 customer to pay the Contract Minimum Billing amount.

310 Section 3(b) of the line extension regulation grants non-residential customers an
311 extension allowance of 16 times the estimated monthly revenue and may require the
312 customer to pay a contract minimum billing amount. This extension allowance and
313 presumably the minimum billing amount are a function of the likely monthly revenue
314 produced by the customer. If the revenue isn't sufficiently large to warrant the cost of the
315 line extension, the minimum bill amount is imposed.

316 Consider a customer who wants to be connected to the electric system, but only for
317 emergency or back-up use. This customer plans to rely on the electric utility infrequently
318 and will use little electricity. The Company has to have the facilities in place to serve
319 these customers whenever they demand electricity. Even if they never require any
320 electricity, these facilities must be available and their costs recovered. One would expect
321 the utility to charge for this service in some way.

322 In fact, RMP has a rate schedule for such customers who have their own generation,
323 Schedule No. 31. This schedule requires customers to contract for an amount of demand
324 for which they pay a monthly facilities charge (\$3.81 per kW for secondary customers)
325 whether or not any electricity is used. When the customer does use electricity, the
326 customer pays the energy charge for the electricity actually used. If the customer uses

327 more capacity than the contract demand in any month, excess demand is billed at \$49.40
328 per kW for secondary customers.

329 A secondary system customer who contracted for 500 kW of demand would pay a
330 minimum of \$2009.00 (\$104.00 customer charge and 500 kW times \$3.81/kW) each
331 month plus the cost of each kWh of energy and each kW of excess demand used. The
332 minimum bill I propose functions in a similar way. The residential customer would not
333 contract for demand, but would pay an amount equal to the minimum bill plus the charge
334 for each kWh of energy in excess of those in the minimum bill.

335 The situation is similar for residential customers who use electricity only in the summer.
336 They are imposing their use on Rocky Mountain Power when the costs are highest and
337 the Company must have enough capacity to meet their demand, but RMP collects little
338 revenue from them during the remainder of the year. A similar circumstance applies to
339 those customers who use little electricity some months. The rate structure needs to
340 accommodate these kinds of customers without unduly affecting other customers. Rocky
341 Mountain Power has proposed a higher customer charge that will recover revenue from
342 these customers and that has severe consequences for low-income and other customers
343 who use lower than average amounts of energy.

344 **Q. Doesn't increasing the customer charge solve the problem of recovering revenue**
345 **from the customers you describe?**

346 A. In some sense, it may, but as I pointed out earlier, the Company's proposed rate results in
347 customers with average usage or smaller getting larger-than-average increases and the
348 largest users getting the smallest increases.

349 **Q. What are the differences between a rate with a higher minimum charge and a**
350 **higher customer charge?**

351 A. The difference between a rate schedule with a large customer charge and one with a large
352 minimum bill are in the different way that the charge recovers revenue and in the
353 different response from the customers. These two are interrelated and I will discuss them
354 in that fashion.

355 In the distant past, cost allocations to rate classes were commonly based on the
356 identification of fixed costs with demand charges and variable costs with energy charges
357 and rates were set following these patterns. For rate schedules with energy-only rates, the
358 fixed costs were recovered through customer charges, minimum bills and energy charges.
359 This procedure was also the basis for declining block rates, used to encourage customers
360 to increase their consumption of electricity. Such rates were common 40 or 50 years ago
361 when electricity was thought to be a declining cost industry and increased consumption
362 would reduce the average cost of electricity to customers.

363 In the current environment, rates need to serve purposes other than to guarantee that the
364 utility has a stable revenue flow. Conserving scarce resources has taken on a prominent
365 role and declining block rates are no longer appropriate. This Commission has even
366 deemed residential flat rates to be improper for summer usage and has instituted inverted

367 rates for the residential class during the summer. The higher tail-block kWh charge is an
368 incentive for large-usage customers to consume less electricity than they otherwise
369 would.

370 Raising the customer charge has the opposite effect on the energy charge and on usage.
371 Because the total revenue to be recovered is set by the Commission, a higher customer
372 charge forces the kWh charge to be lower than it would otherwise be. This reduced
373 energy charge is an incentive for customers to consume more electricity than they
374 otherwise would.

375 An increase in the minimum charge has a different effect partly because it doesn't affect
376 all customers. It only affects those customers whose usage is extremely low in some
377 months. These customers are the ones all of the minimum bill provisions in other RMP
378 rate schedules are designed to affect.

379 **PROPOSED RESIDENTIAL RATE "HOUSEKEEPING" CHANGE**

380 **Q. Have you reviewed Exhibit RMP___(WRG-4)?**

381 A. Yes. I have reviewed Exhibit RMP___(WRG-4), titled "Schedule 1 and Schedule 3
382 Housekeeping Billing Change."

383 **Q. What is the purpose of Exhibit RMP___(WRG-4)?**

384 A. Mr. Griffith says that the purpose of Exhibit RMP___(WRG-4) is to clarify the billing
385 language. The provision described in this exhibit addresses billing for multiple dwellings
386 that are served through a single meter.

387 In Exhibit RMP____(WRG-4), Mr. Griffith refers to the tariff implemented January 1,
388 1945 at the time that multiple blocks and a minimum bill were implemented in the
389 residential rate and states that the proposed language is similar to the language introduced
390 then.

391 The proposed language has two additions to the 1945 language, one inconsequential and
392 one that has an adverse impact on multiple-dwelling customers. The first is just the
393 insertion of the words “applicable usage” in the phrase “each block” to read “each
394 applicable usage block.” I don’t oppose this change.

395 The second proposed change inserts the words “the Customer Charge” into the charges
396 that are multiplied by the number of dwellings served, so that the proposed language
397 reads “the charge for such service will be computed by multiplying the number of kWh in
398 each applicable usage block, *the Customer Charge* and the minimum charges by the
399 maximum number of dwelling or apartment units that may be served.” [Emphasis
400 added.] The change to include a multiple of the customer charge has a significant impact
401 on dwellings that are served through a single meter, especially so with RMP’s proposed
402 \$10.00 monthly customer charge.

403 Mr. Griffith asserts that it was “clearly” the intent to bill such dwellings as though each
404 was metered separately. I disagree. There was no customer charge in 1945 when the
405 language was first implemented and when a customer charge was adopted in 1985, the
406 language was not changed to include a multiple of the customer charge in the bill. In
407 fact, a single meter and service are used to provide electricity to such residences and all

408 of the meter reading and billing activities are for one meter. Many of the costs of serving
409 these multiple dwellings are just the cost of serving a single customer. For these reasons,
410 it would be inappropriate to include a multiple of the customer charge in bills for multiple
411 dwellings served through a single meter. I recommend that the Commission reject the
412 inclusion of “the Customer Charge” in the proposed language.

413 For the same reasons that it is inappropriate to include a multiple of the customer charge
414 in the bill for such customers, it is also inappropriate to include a multiple of the
415 minimum bill. I recommend that the Commission delete the words “and the minimum
416 charges” from the language. I have provided AARP/SLCAP Exhibit___(CEJ-3) that
417 contains the language I recommend be used in the Schedule 1 and Schedule 3 tariff
418 pages.

419 **PROPOSED RESIDENTIAL RATE**

420 **Q. Have you prepared a residential rate that you propose be adopted?**

421 A. Yes.

422 **Q. Please describe the residential rate you have developed.**

423 A. I have proposed a residential rate that has a \$3.75 customer charge, a \$13.00 minimum
424 bill and energy charges that recover the balance of the residential class revenue. For 3-
425 phase customers, I followed the Company’s approach and propose a customer charge
426 equal to twice the single-phase customer charge. I also propose to set the 3-phase
427 minimum bill equal to twice the single-phase minimum bill. The proposed AARP
428 Residential Schedule 1 rate charges appear in Exhibit___(CEJ-4).

429 **Q. Are other changes to the Schedule 1 and Schedule 3 tariff pages necessary?**

430 A. Yes. The Seasonal Service provision of these two schedules is currently a \$47.36 charge.
431 This is a little more than 12 times the current minimum bill. Mr. Griffith has not
432 discussed this in his testimony, but shows the increase to \$120.00 in his
433 Exhibit___(WRG-5) His proposed charge for seasonal services is 12 times the proposed
434 monthly customer charge. If these customers did not take seasonal service, the minimum
435 bill for 12 months' service under my proposal would be \$156.00. This is a larger
436 increase than seems appropriate as is Mr. Griffith's proposed increase, so in the interests
437 of gradualism in changing rates, I propose increasing the seasonal charge by 50% to
438 \$72.00. I also recommend that consideration be given in future rate cases to revisiting
439 this seasonal charge.

440 **Q. Please describe the process used to develop these rate charges.**

441 A. Bill frequency data were provided by Rocky Mountain Power for the period July 2009
442 through June 2010 in response to AARP Data Request 1.4. These data appear consistent
443 with the bill distributions provided previously for the period July 2006 through June
444 2007. Therefore, I conclude that the distribution of energy usage and billing is
445 reasonably consistent over time.

446 For reasons that will be clear when the calculations are shown, I determined that a
447 reasonable amount of energy to be included in a minimum bill at this time was 100 kWh.
448 During the period for which data were provided, bills with fewer than 100 kWh
449 accounted for less than 4% of both summer and winter bills. I used the recent bill

450 frequency data to determine the percentages of residential customer bills and the total
451 amount of kWh that would be included in minimum bills in the billing units from
452 Exhibit____(WRG-4).

453 At the proposed rate level, 100 kWh would cost a little more than \$9.00. With the current
454 customer charge at \$3.75, I decided to retain the customer charge at \$3.75 and to set the
455 minimum bill at \$13.00. I calculated the revenue this minimum bill would produce and
456 adjusted the billing units in Exhibit____(WRG-4) so as to not double count these bills or
457 kWh. After setting the customer charge and the minimum bill charges, I then calculated
458 the increase in energy charges that would be necessary to produce the revenue target
459 requested by Rocky Mountain power. All energy charges were increased by the same
460 percentage.

461 The result of these calculations produces kWh prices so that 95 kWh is included in the
462 minimum bill in winter and 99 kWh is included in summer. This means that the winter
463 calculations have removed slightly more kWh from billing than are in minimum bills.
464 The difference in kWh is included in the unbilled kWh so that the revenue calculated in
465 determining the proposed rates is slightly less than it should be. For summer usage, there
466 may be some small number of customers in the data who have usage exactly equal to 100
467 kWh. These customers would receive bills of \$13.07 during the period these rates are in
468 effect, but their revenue in these calculations was based on the proposed minimum bill of
469 \$13.00. In other words, the revenue in the rate calculations would have been slightly

470 greater had the revenue for these customers not been billed at the minimum charge. This
471 difference is immaterial in the determination of rates.

472 **Q. How did you develop the 3-phase billing determinants?**

473 A. I used the same split between single-phase and 3-phase customers and the seasonal split
474 between kWh as in Exhibit__(WRG-4). For determining the seasonal split for bills of
475 3-phase customers, I used the same bill frequency data as for single-phase customers.

476 **Q. The Commission rejected SLCAP's proposal in Docket 09-035-23 partly because the**
477 **billing units used in the calculation were found to be the same for the proposed**
478 **minimum charge as they were for the then-current minimum charge. The Order**
479 **states "This is unlikely to be the case and therefore we do not have the necessary**
480 **information to fully evaluate this proposal." Is that the case for your calculations in**
481 **this docket?**

482 A. No. As I just showed, the billing determinants provided in RMP Exhibit__(WRG-4)
483 have appropriately been adjusted for the \$13.00 minimum bill.

484 **Q. How do your proposed rates affect customers at various usage levels in the**
485 **residential class?**

486 A. I have prepared billing comparisons between these rates and the current and proposed
487 RMP rates, which are shown in Exhibit__(CEJ-5). As you can see in this exhibit, the
488 percentage increase for customers increases slightly with increased usage under my
489 proposed rates, except for the customers with less usage than the amount covered by the
490 minimum bill. Customers using less than 100 kWh per month would have higher

491 percentage increases than average; the extreme being those customers with zero usage
492 that currently pay the minimum bill of \$3.78 who would pay \$13.00 under the rate I have
493 proposed. Customers with zero usage would pay \$10.00 under the rate RMP has
494 proposed. Customers with usage between zero and 100 kWh would also pay the
495 minimum bill of \$13.00 under my proposed rate, which would be a larger percentage
496 increase than average. Less than 4% of the residential customers would pay the
497 minimum bill under my proposed minimum bill provision. In comparison, under the
498 proposed RMP rate, customers using more than about 35 kWh (about half of the 4%)
499 would pay more than the \$13.00 minimum bill in my proposed rate.

500 Under the RMP-proposed rate, the increases for customers using less than average energy
501 would be higher and customers using far more energy than average would have less-than-
502 average increases. For average residential customers, a comparison of the increases
503 under the two proposals is shown in the following table. Note that Summer bills for the
504 average residential customer would be nearly 50% higher under the RMP proposal.

	AARP-Proposed Rate	RMP-Proposed Rate
Winter	14.5%	15.3%
Summer	13.3%	20.9%

505 Table 2 Percentage Increase for Average Residential Customer

506 **Q. If the Commission were to award Rocky Mountain Power less than the requested**
507 **amount, how would you adjust your proposed calculations?**

508 A. I would perform the exact same calculations. The only difference would be in the
509 percentage that energy charges would be increased. If RMP were to provide finer levels
510 of bill frequency data, the calculations could be refined to better estimate the amount of
511 unbilled kWh and more accurately calculate the rates. However, as was the case with the
512 4 kWh difference in summer minimum bills that would be implemented from the
513 minimum bill calculations, this would not change rates.

514 **Q. If the Commission rejects your proposal to increase the minimum bill, should the**
515 **RMP proposal to increase the customer charge to \$10.00 be accepted?**

516 A. No. For all the reasons I have described, the RMP proposal to increase the customer
517 charge to \$10.00 should be rejected. If the Commission does not accept my proposed
518 increase in the minimum bill charge, a modest increase in the customer charge may be
519 acceptable. I propose the Commission raise the residential customer charge to \$4.00 if
520 my proposal for the minimum bill is not accepted.

521 **Q. Does this conclude your prepared direct testimony?**

522 A. Yes.

CERTIFICATE OF SERVICE

I hereby certify that on this 2nd day of June, 2011, copies of the foregoing **DIRECT TESTIMONY ON RATE DESIGN OF DR. CHARLES E. JOHNSON ON BEHALF OF AARP AND SALT LAKE COMMUNITY ACTION PROGRAM, AND EXHIBITS**, were sent by email to each of the following:

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Comparison of Revenue at Current and Proposed RMP Rates										
	Summer			Winter						
kWh	Revenue at Present Rates	Revenue at Proposed Rates	% Δ		Revenue at Present Rates	Revenue at Proposed Rates	% Δ			
100	\$12.06	\$18.80	55.9%		\$12.35	\$19.11	54.7%			
200	\$20.14	\$27.37	35.9%		\$20.72	\$27.99	35.1%			
300	\$28.22	\$35.94	27.4%		\$29.09	\$36.86	26.7%			
400	\$36.30	\$44.50	22.6%		\$37.46	\$45.74	22.1%			
500	\$46.25	\$55.06	19.0%		\$45.83	\$54.62	19.2%			
600	\$56.20	\$65.61	16.7%		\$54.21	\$63.50	17.1%			
700	\$66.16	\$76.17	15.1%		\$62.58	\$72.37	15.6%			
757					\$67.35	\$77.44	15.0%	Winter Average Customer Usage		
792	\$75.32	\$85.89	14.0%		\$70.29	\$80.55	14.6%			
800	\$76.11	\$86.72	13.9%		\$70.95	\$81.25	14.5%			
841	\$80.21	\$91.08	13.6%					Summer Average Customer Usage		
900	\$86.06	\$97.28	13.0%		\$79.32	\$90.13	13.6%			
1,000	\$96.01	\$107.83	12.3%		\$87.69	\$99.01	12.9%			
1,100	\$108.39	\$120.96	11.6%		\$96.06	\$107.88	12.3%			
1,200	\$120.77	\$134.09	11.0%		\$104.43	\$116.76	11.8%			
1,300	\$133.15	\$147.22	10.6%		\$112.80	\$125.64	11.4%			
1,400	\$145.53	\$160.35	10.2%		\$121.17	\$134.52	11.0%			
1,500	\$157.91	\$173.48	9.9%		\$129.54	\$143.40	10.7%			
2,000	\$219.81	\$239.12	8.8%		\$171.40	\$187.78	9.6%			
3,000	\$343.60	\$370.41	7.8%		\$255.11	\$276.56	8.4%			
4,000	\$467.39	\$501.69	7.3%		\$338.82	\$365.34	7.8%			
5,000	\$591.18	\$632.98	7.1%		\$422.53	\$454.12	7.5%			

Source: Sum of Customer and Energy Charges from Exhibit__(WRG-6)

AARP Data Request to the Division of Public Utilities 1.2

In the Utah PSC Order in Docket No. 09-035-23, the PSC directed the Company and the Division of Public Utilities to provide “an examination of changes to the minimum bill.” Please provide all analyses, studies, reports, communications with the Utah PSC, communications between the Company and the DPU, internal communications, and any other documents related to your compliance with this directive of the Commission

Response of the Division of Public Utilities to AARP Data Request 1.2

The Division recognizes this Commission directive. Though the Division is currently working on performing the necessary analysis to comply with this Commission directive, the Division does not have any information to share at this point in time. The Division will provide the requested information as soon as it becomes available.

AARP Data Request 1.1

Please provide an examination of changes to the minimum bill including:

- a. the costs used to calculate the minimum bill for single-phase service;
- b. the basis for, and revenue impacts of, increasing the minimum bill;
- c. use of the minimum bill instead of a customer charge to recover customer and/or distribution fixed costs;
- d. the relationship of the three-phase and seasonal service to single-phase service;
- e. and whether elimination of the minimum bill for single-phase service also requires the elimination of the minimum bill for three-phase and seasonal service.

Response to AARP Data Request 1.1

- a. The Company believes that the appropriate minimum bill is the Customer Charge. As discussed on page 6 of Mr. Griffith's testimony, at present, the Customer Charge and the minimum bill differ by only three cents per month. They are essentially the same. The Company provided cost-based support for the residential Customer Charge in Exhibit RMP__(WRG-2).
- b. Please refer to the response 1.1a above. The basis for increasing the Customer Charge is provided in Mr. Griffith's direct testimony. The revenue impact for increasing the Customer Charge and eliminating the minimum bill are shown in the Company's witness Mr. Griffith's Exhibit RMP__(WRG-5).
- c. Please see response 1.1a above. In addition, as indicated on page 6 of Mr. Griffith's testimony, given the three cent difference between the minimum bill and the customer charge, retention of the minimum bill only adds complexity to the present residential rate structure and is unnecessary.
- d. As indicated in Mr. Griffith's testimony, the Company proposed to increase the Customer Charge to \$10.00 per month for single-phase service, to \$20.00 per month for three-phase service and a \$120 annual charge for seasonal service based on a multiple of the single phase Customer Charge. In addition, please see pages 6 and 7 of Mr. Griffith's direct testimony for a discussion of the three-phase service customer charge.
- e. The elimination of the minimum bill for single-phase service was based on the proposed Customer Charge; it does not necessarily require the elimination of the minimum bill for three-phase and seasonal service.

AARP Data Request 1.2

In the Utah PSC Order in Docket No. 09-035-23, the PSC directed the Company and the Division of Public Utilities to provide “an examination of changes to the minimum bill.” Please provide all analyses, studies, reports, communications with the Utah PSC, communications between the Company and the DPU, internal communications, and any other documents related to having complied with this directive of the Commission.

Response to AARP Data Request 1.2

The Company is not aware of any examination performed by the DPU. Please see Mr. Griffith’s direct testimony in this docket and the Response to AARP Data Request 1.1 for the Company’s examination of changes to the minimum bill.

SCHEDULE 1 AND SCHEDULE 3 HOUSEKEEPING BILLING CHANGE

RMP's Proposed Paragraph:

When conditions are such that service is supplied through one meter to more than one dwelling or apartment unit, the charge for such service will be computed by multiplying the number of kWh in each applicable usage block, the Customer Charge and the minimum charges by the maximum number of dwelling or apartment units that may be served.

AARP's Proposed Paragraph:

When conditions are such that service is supplied through one meter to more than one dwelling or apartment unit, the charge for such service will be computed by multiplying the number of kWh in each applicable usage blocks, ~~the Customer Charge and the minimum charges~~ by the maximum number of dwelling or apartment units that may be served.

AARP/SLCAP PROPOSED RESIDENTIAL RATE CHARGES
(Schedules 1 and 3)

Customer Charge	
1-Phase	\$ 3.75 per month
3-Phase	\$ 7.50 per month
Minimum Bill	
1-Phase	\$13.00 per month
3-Phase	\$26.00 per month
Energy Charges	
Summer	
First 400 kWh	\$0.09426
Next 600 kWh	\$0.11139
All Additional kWh	\$0.13855
Winter	
All kWh	\$0.09369

BILL IMPACT OF PROPOSED AARP/SLCAP RESIDENTIAL RATE

Winter Usage	RMP Current Rates	AARP Proposed Rates	AARP % Increase	RMP Proposed Rates	RMP % Increase
100	\$12.35	\$13.64	10.4%	\$19.11	54.7%
200	\$20.72	\$23.30	12.4%	\$27.99	35.1%
300	\$29.09	\$32.95	13.3%	\$36.86	26.7%
400	\$37.46	\$42.61	13.7%	\$45.74	22.1%
500	\$45.83	\$52.27	14.0%	\$54.62	19.2%
600	\$54.21	\$61.93	14.2%	\$63.50	17.1%
700	\$62.58	\$71.59	14.4%	\$72.37	15.7%
800	\$70.95	\$81.25	14.5%	\$81.25	14.5%
900	\$79.32	\$90.90	14.6%	\$90.13	13.6%
1000	\$87.69	\$100.56	14.7%	\$99.01	12.9%
1500	\$129.54	\$148.85	14.9%	\$143.40	10.7%
2000	\$171.40	\$197.15	15.0%	\$187.78	9.6%
3000	\$255.11	\$293.73	15.1%	\$276.56	8.4%
4000	\$338.82	\$390.31	15.2%	\$365.34	7.8%
5000	\$422.53	\$486.89	15.2%	\$454.12	7.5%

BILL IMPACT OF PROPOSED AARP/SLCAP RESIDENTIAL RATE

Summer Usage	RMP Current Rates	AARP Proposed Rates	AARP % Increase	RMP Proposed Rates	RMP % Increase
100	\$12.06	\$13.30	10.3%	\$18.80	55.9%
200	\$20.14	\$22.62	12.3%	\$27.37	35.9%
300	\$28.22	\$31.95	13.2%	\$35.94	27.3%
400	\$36.30	\$41.27	13.7%	\$44.50	22.6%
500	\$46.25	\$52.75	14.1%	\$55.06	19.0%
600	\$56.20	\$67.98	21.0%	\$65.61	16.7%
700	\$66.16	\$79.47	20.1%	\$76.17	15.1%
800	\$76.11	\$90.95	19.5%	\$86.72	13.9%
900	\$86.06	\$102.43	19.0%	\$97.28	13.0%
1000	\$96.01	\$113.92	18.6%	\$107.83	12.3%
1500	\$157.91	\$185.33	17.4%	\$173.48	9.9%
2000	\$219.81	\$256.75	16.8%	\$239.12	8.8%
3000	\$343.60	\$399.57	16.3%	\$370.41	7.8%
4000	\$467.39	\$542.40	16.0%	\$501.69	7.3%
5000	\$591.18	\$685.23	15.9%	\$632.98	7.1%