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BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

Matter: of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of Its Proposed Electric Service Schedules and Electric Service Regulations, Consisting of a General Rate Increase of Approximately \$161.2 Million Per Year, and for Approval of a New Large Load Surcharge	Docket No. 07-035-93
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SURREBUTTAL TESTIMONY OF RICHARD COLLINS

**ON BEHALF OF
WESTERN RESOURCE ADVOCATES
AND UTAH CLEAN ENERGY**

Western Resource Advocates and Utah Clean Energy hereby submit the Pre-filed Testimony of Richard Collins in this docket.

DATED this 24th day of September, 2008.

/s/ _____
Representing Western Resource Advocates and
Utah Clean Energy

1 **Q. Please state your name and occupation.**

2 A. My name is Richard S. Collins. I am an Associate Professor of Economics and Finance
3 at Westminster College located at 1840 South 1300 East, Salt Lake City, UT 84108.

4 **Q. On whose behalf are you filing testimony in this Docket?**

5 A. Western Resource Advocates and Utah Clean Energy.

6 **Q. Are there other organizations that are supportive of this testimony?**

7 A. Yes. The concepts expressed in this testimony are supported by the Southwest Energy
8 Efficiency Project, a public interest organization dedicated to advancing energy
9 efficiency as a means of promoting both economic prosperity and environmental
10 protection in the six states of Arizona, Colorado, New Mexico, Nevada, Utah, and
11 Wyoming.

12 **Q. Are you the same Richard S. Collins that previously submitted pre-filed direct and
13 rebuttal testimony in this case?**

14 A: Yes, I am.

15 **SUMMARY OF TESTIMONY**

16 **Q: Could you summarize your surrebuttal testimony?**

17 A: Yes, I review the testimony of witnesses who submitted rebuttal testimony on rate design
18 for residential customers. I make recommendations to the Commission on issues that will
19 determine the rate design for residential customers. I also make comments on the issue of
20 ownership of environmental attributes associated with demand-side resources and the
21 issue of bifurcation of the rate case.

22 **Q. What is the essence of the Company's rebuttal testimony regarding rate design for
23 residential customers?**

1 **A:** The Company has made significant changes to its original pre-filed testimony on
2 residential rate design. Given the Commission's decision on the revenue requirement
3 portion of the rate case, Mr. Griffith updates his recommendations for residential rate
4 design.

5 **Q: Could you briefly review the changes?**

6 **A:** Yes, the Company proposes that the present Tariff Rate Rider, equal to 2.72 percent of
7 the monthly charges of the customer's applicable schedule, continue to be applied and
8 that no further rate design changes be ordered in this case. Thus the Company has
9 dropped its original proposals for rate design in this case and addresses these issues in its
10 newly filed rate case.

11 **Q: Are you in support of the Company's recommendation?**

12 **A:** No, I am not. I believe that the Commission should address the problems of rate design
13 in this case as there is a full record on which to make these important decisions. The
14 Commission should adopt a rate design for residential customers that will provide
15 substantial benefits to ratepayers in the future. As addressed by numerous witnesses, the
16 Company is entering into a period where load is growing faster than their acquisition of
17 resources. The resources that are being acquired are more expensive than existing
18 resources and this puts pressure on the Commission to increase rates to customers. If a
19 more progressive rate design is adopted by the Commission, ratepayers will respond to
20 the price signal by cutting back on consumption. This will mitigate the Company's need
21 to acquire resources and reduce the pressure to raise future rates. Delaying consideration
22 of a modified rate structure will postpone these potential benefits, leading to higher load
23 growth and higher costs for consumers.

1 **Q: Do you agree with the Company's decision to drop its recommendations to raise the**
2 **customer charge from \$2.00 to \$4.00, to keep three tiers to the summer block rate**
3 **design and forgo the customer load charge for Schedule No. 1.**

4 **A:** I agree with two of the Company's three proposals: to drop its recommendation to raise
5 the customer charge, and to forgo the customer load charge for Schedule 1. These
6 original recommendations would have had a deleterious effect on ratepayers in the
7 immediate future and in the long run. However, along with the elimination of the third
8 tier in the summer blocked rate structure, this policy would dampen the needed price
9 signal to customers that informs them that increasing energy use will lead to high rates
10 through costly acquisitions of new generation. The new proposal is a step in the right
11 direction but doesn't go far enough in terms of motivating an appropriate customer price
12 response; adopting a four block structure will send a more targeted price signal to
13 customers than a three block structure.

14 **Q: Do you have comments on the rebuttal testimony of the Division.**

15 **A:** Yes, I disagree with the Division's decision to recommend that the customer charge be
16 increased to \$2.75. There does not appear to be a strong economic rationale for selecting
17 a \$.75 increase. The Division relies on past Commission decision that granted an
18 increase in the customer charge of \$1.02 from \$.98 to \$2.00. The \$1.02 represented 38
19 percent of the requested increase of \$3.76 that the Company made at the time. This 38
20 percent rule does not have any economic logic behind it relies solely on legal precedence.
21 The Commission should make decision based on economic criteria not some arbitrary
22 legal criterion. If 38 percent of the requested amount of an increase is the rule to base a
23 recommendation on, then the Company will simply pad their requested increase. Again,

1 my main argument against raising the customer charge is that it denies the Commission
2 the opportunity to send a stronger price signal about energy use. Almost one half of the
3 revenue requirement allocated to Schedule No.1 is subsumed by this increase; \$6,008,678
4 out of total of \$12,954,863 allocated to Schedule No. 1 will be collected by the \$.75
5 increase in the customer charge. Now is the time for the Commission to send a strong
6 price signal to residential customers, encouraging them to be efficient with their usage of
7 electricity. To wait until next rate case will lead to inefficient investment by residential
8 customers who will make decisions about air conditioning and other appliances in the
9 next nine months. Now is the time to restructure rates so a much stronger price signal is
10 sent to customers about their usage. The Division does recommend that the differentials
11 between summer blocks be increased. The Division recommends that the first block for
12 summer usage be \$0.076362 with the second block priced at \$0.08612 and the final block
13 priced at \$0.102443. Thus the Division recommends that rates increase 12.78 percent
14 between the first and second blocks and a 34.15 percent differential between the third
15 block and the first block. However, the Division does not go far enough and should be
16 more aggressive in its recommendations if it is going to have an actual impact on
17 customer usage. My recommendation of increasing the number of blocks to four and
18 substantially increasing the differentials between the blocks will provide an economic
19 incentive for customers to be more efficient with their of electricity.

20 **Q: The Division discusses the relationship between marginal cost and the optimal level**
21 **of output and states “According to economic theory firms base their production**
22 **level and price on the marginal cost. The firm attempts to determine the output**
23 **level that maximizes its profit and charges the price that corresponds to that output**

1 **level. The output that maximizes the firm's profit is the one that corresponds to**
2 **where the marginal cost equals price.”¹ Do you care to comment?**

3 **A:** The first part of the Division's statement is correct; firms should base their output and
4 pricing decisions based on marginal cost. Firms also attempt to determine the output that
5 maximizes profit and charge a price that corresponds to that output. However, the
6 Division is incorrect in its assertion that “the output that maximizes profit is the one that
7 corresponds to where marginal cost equals price.” The correct statement is that allocative
8 or economic efficiency occurs when price is equal to marginal cost. Allocative efficiency
9 is what society is striving to achieve, it occurs when society produces the goods and
10 services that society wants at the cheapest cost possible. With regards to profits, Division
11 should have stated that profits are maximized where marginal cost is equal to marginal
12 revenue. Marginal revenue is only equal to price when the market structure is perfectly
13 competitive. In that instance, the firm's demand curve is horizontal and the firm can sell
14 all that they wish at the going market price. This obviously is not true for an electric
15 utility. In the case of Rocky Mountain Power they hold a monopoly within their
16 jurisdiction and thus their demand curve is downward sloping, thus their marginal
17 revenue is less than their prices that they charge.

18 **Q:** **The Division goes on to assert that a price above or below marginal costs will**
19 **determine whether a firm is earning normal profits or not. Do you agree with this**
20 **statement?**

21 **A:** No, this again is an inaccurate statement. Profits are the difference between total
22 revenues and total costs. Marginal cost can be above or below average total costs, if

1 . See Rebuttal Testimony of Abdinasir M. Abdulle, page 12 lines 241-245.

1 average cost is declining then marginal cost is below average cost, if average costs are
2 increasing, then marginal costs is above average costs.

3 **Q: Ok, so you have corrected some inaccuracies in the Division's testimony, is there**
4 **any relevance to these issues? Are they germane to this proceeding or is this just an**
5 **academic exercise to correctly state economic theory?**

6 **A:** This issue is extremely relevant to the issue of rate design. The Division uses its
7 misstated theory to rebut Committee witness Chernick's testimony that residential rates
8 should be based on marginal costs. The Division implies that the Commission does not
9 set overall prices based on marginal cost and thus might not be the optimal level of
10 output. If the Commission has not based its overall pricing decision on marginal cost
11 then it would be incorrect to set one price i.e., residential rates, based on marginal costs.
12 The Division cites the issue of second best. However, the Division is missing the big
13 picture. Cost-of-Service regulation attempts to price the provision of electric service in a
14 manner that will allow the utility to recover its prudently incurred costs and will give the
15 utility the opportunity to earn a fair rate of return based on its cost of capital. The
16 Commission has done that in the revenue phase of this case. The cost of service and rate
17 design phase of the case first allocates costs to the different customer classes on a fair and
18 equitable basis. Next the Commission designs rates to collect the required revenue from
19 each customer class. Their goal should be the implementation of efficient rate designs
20 that will help overall ratepayers in the future.

21 **Q: So how do marginal costs relate to rate design?**

22 **A:** As stated earlier, allocative or economic efficiency occurs when the price charged for a
23 product is equal to the marginal cost of producing that product. In regulation, the

1 Commission does not have the luxury of achieving overall economic efficiency in setting
2 the general level of rates; in fact, it subordinates the goal of economic efficiency in
3 general pricing to achieve the goal of allowing the utility the opportunity to recover its
4 prudently incurred costs. The only way that the Commission could achieve both goals at
5 the same time is the rare instance where marginal cost and average total cost were equal.
6 However, when the Commission *designs* rates it should try to adhere to the principle that
7 the rate charged a customer for a kWh should reflect the marginal costs of providing that
8 kWh. Now obviously, this cannot be done with 100 percent accuracy particularly in the
9 short-run because marginal costs are changing moment to moment. However, the
10 Commission can design rates based on long-run marginal costs. There is robust
11 testimony on this record from the Company and other witnesses that the long-run
12 marginal cost of providing electricity are far above the average costs and that long-run
13 marginal costs of providing electricity are rising. This is the fundamental basis on which
14 I make my recommendation for highly differentiated tiered blocks for the summer rates.
15 It is the peak demand for energy in the summer time that is driving the need for more
16 costly generation resources. Thus the Commission should send an appropriate price
17 signal to customers about their use of electricity and tie that price signal to the long-run
18 marginal costs associated with that use. To state it plainly, the Commission should
19 design rates that reflect the long-run marginal costs of providing electricity. Again, I
20 remind the Commission that the top 5 percent of residential energy users, the ones above
21 2000 kWh per month, are consuming over 18 percent of the total residential summer-time
22 use of electricity. This fact is the reason I advocate for a fourth block and a much higher
23 rate on usage above the 2000 kWh level.

1 **Q: How does the Division address the issue of high rates for the tail block users?**

2 **A:** The Division states that “The proposed high tail block rate may have a stifling effect on
3 high use customers who are already making efforts to reduce peak load.”² They go on to
4 say that participants in Cool Keeper would be adversely affected by this rate design
5 proposal. Let’s address the first issue that the high tail block will have a stifling effect on
6 high use customers. I am not sure exactly what is meant by “stifling effect”, but if it
7 means that customers will reduce their usage then that is precisely the intent of the rate
8 design. If it is meant that the rate will place an economic hardship on high use customers
9 then that is another matter. For customers using such large amounts of energy I would
10 surmise that the culprit is air conditioning. Raising the temperature of a residence is
11 achievable with admittedly some discomfort, but a cold house in summer is not essential
12 service. These customers can either cut back their usage or enroll in a demand-side
13 management program. I believe that the Commission should order an investigation into
14 the benefits of peak-load shaving programs like Cool Keeper and whether participation in
15 such programs should waive participants from the highest tail block rate. At any rate,
16 long run marginal costs should be explicitly taken into account when the Commission
17 designs rates for the residential customer. This should necessitate continued study into
18 the appropriate definition and measurement of marginal costs.

19 **Q: Would you care to address any other issues on residential rate design brought up by**
20 **the Division.**

21 **A:** The Division discusses the issue of revenue stability when a portion of residential
22 revenue requirement is collected in the tail block. This is a legitimate concern and should

2 See Rebuttal Testimony of Abdinasir M. Abdulle, page 13 lines 266-268.

1 be addressed in the next rate case. However, it is not essential that we address the issue
2 now. Given the proximity of the next rate case, this is the perfect opportunity for the
3 Commission to adopt a greater differential between blocks and observe the response. If
4 the response is great then adjustments can be made in the next rate case. I do not think it
5 would be wise to postpone the implementation of a progressive rate design on the slight
6 chance that the Company may over or under collect on this small part of their revenue
7 requirement.

8 **Q: Could you comment on the Committee's rebuttal testimony.**

9 **A:** The Committee recommends that the customer charge be kept the same, a position I
10 strongly agree with. This allows the Committee to increase the energy charge for the
11 winter months and the first block of the summer rates. They recommend a slightly larger
12 differential for the second and third blocks. From a \$0.077048 for the first block, the
13 Committee recommends a 14.42 percent increase for the second block to \$0.088386 and
14 a 37.76 percent increase for the third block to \$0.106143. The slightly higher rates for
15 the initial block will in all likelihood not have a measurable impact on consumption of
16 electricity compared to the Division's recommendation. The Commission, if it is to
17 provide a real incentive to reduce residential consumption of electricity, must send a
18 much stronger price signal. By adopting my recommendation to lower the rate for the
19 first block by approximately 4 percent and then adopting a four block tier structure with
20 differentials of 25, 50 and 100 percent for the second, third and fourth blocks, the
21 Commission can send a much more powerful signal to ratepayers about the economic
22 benefits of efficient use of electricity. In addition, by lowering the energy charge in the
23 first block not only will lower use customers will be rewarded for their efficient use of

1 electricity, but higher use customers will not see their bills increase quite as dramatically
2 as they would without the lower rate of the initial block. But the price signal will be sent
3 that higher usage leads to higher prices and higher bills.

4 **Q: Do you care to comment about the issue regarding the allocation of environmental**
5 **attributes or renewable energy credits associated with demand side resources or**
6 **renewable resources?**

7 **A:** This topic was discussed by Company witness Hunter and Wal-Mart witness Chriss and
8 UAE witness in rebuttal testimony. Ms. Hunter argues that the current rate case is not the
9 appropriate venue for deciding this issue. I would agree. This important matter has not
10 been fully vetted at this time. I recommend that the Commission open a docket on the
11 issue or handle the matter in a rulemaking procedure that allows full public input. The
12 Company's argument that it should receive all of the environmental attributes of a
13 demand side resource that was financed and paid for by both the customer and the utility
14 should be rejected prima facie. The issue should be decided on both equity and
15 efficiency grounds. The allocation of the environmental attributes should be fair and it
16 should be allocated in a manner that will best create incentives to invest in the optimal
17 amount of these resources. The issue is not ripe for a decision at this time.

18 **Q: Are there any other issues, you wish to address?**

19 **A:** One additional issue that has come up during this rate case that needs comment is the
20 issue of bifurcation of the rate case into two separate phases. The first phase concerns the
21 revenue requirement while the second phase addresses the cost of service and rate design.
22 Historically, most of the attention and energy is given to the revenue requirement phase
23 while the cost of service and rate design phases are left to the end when energy and

1 budgets are close to exhaustion. There is a tendency to put off decisions in these matters
2 until the next rate case when there is “better” information about cost of service. I believe
3 this approach is a mistake. In today’s environment with the need for additional resources
4 to meet the public’s demand for power, both cost of service and more importantly rate
5 design are an integral part of the ratemaking process. The Commission should establish
6 long term goals on these issues and develop policies that help utilities and consumers
7 reach these goals. Conservation and the efficient use of electricity should be a goal of
8 this Commission as it will reduce costs to ratepayers in the future. The Commission
9 should not postpone decisions on these issues under the guise that the future will yield
10 better information. Decisions should be made today in spite of imperfect information.
11 Such decisions can be altered in the future if/when better information becomes available.

12 **Q: Could you summarize your surrebuttal testimony.**

13 I strongly recommend that the Commission reprioritize the goal for the efficient use of
14 electricity and adopt rate designs that will encourage energy efficiency and conservation.
15 Rejecting an increase in the customer charge and adopting a four block summer tier rate
16 structure that includes larger differentials between blocks will support this goal and prove
17 to be beneficial to the general ratepayer in the future.

18 **Q. Does this conclude your surrebuttal testimony?**

19 A. Yes, it does.

