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Representing Southwest Energy Efficiency
Project (SWEEP)

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the 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	Docket No. 09-035-23

REBUTTAL TESTIMONY OF RICHARD COLLINS

ON BEHALF OF SOUTHWEST ENERGY EFFICIENCY PROJECT (SWEEP) and UTAH CLEAN ENERGY (UCE)

SWEEP and UCE submit the Rebuttal Testimony of Richard Collins in this docket.

DATED this 23th day of March, 2010.

/s/ Howard Geller
Representing SWEEP

/s/ Sarah Wright
Representing UCE

Q. Please state your name and occupation.

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

Q. Are you the same Dr. Richard Collins who submitted direct testimony in this proceeding on behave of Southwest Energy Efficiency Project, (SWEEP) and Utah Clean Energy, (UCE)?

A: Yes, I am.

Q: What is the purpose of your rebuttal testimony?

A: I provide comments and rebuttal of the testimony of the Division of Public Utilities, (DPU or Division), the Office of Consumer Services, (OCS or Office), and the Western Resource Advocates, (WRA). SWEEP and UCE supports the recommendation of the DPU to implement a decoupling mechanism that will recover the fixed costs associated with the residential distribution costs identified by the Company in its direct testimony. The adoption of the decoupling mechanism should be combined with SWEEP/UCE rate design for residential customers.

SUMMARY OF TESTIMONY

Q: Can you provide a summary of your rebuttal testimony?

A: SWEEP and UCE support the Division's recommendation to implement a pilot decoupling program aimed at recovering the residential fixed distribution costs identified by the Company in its direct testimony of William Griffith. We do not support the recommendations of the OCS because they do not promote the goal of achieving energy efficiency to the extent warranted. We support the general goals of the WRA but we

prefer our approach to their proposal which adds fixed surcharges for usage above certain levels. We support the Division's general recommendation for residential rate design under decoupling, but feel that their recommendation would be improved if the rate design includes a fourth tier for the residential ratepayer and if the rate differential between tiers is accentuated. We recommend that the Commission approve the Division's proposal for decoupling, but adopt SWEEP/UCE's rate design proposal. Our rate proposal will send a more appropriate price signal to those customers that are placing inordinate burdens on the system.

Q: Could you describe the rate design proposal for the residential rate schedule 1 as put forth by the Office of Consumer Services, (OCS)?

A: The OCS appears to be taking a status quo approach to rate design for the residential rate class. It is recommending that half of the $12.18 million revenue increase assigned to residential ratepayers be allocated to the customer charge while the other half is allocated to certain blocks or tiers in the summer and winter rates. The OCS's "balanced" approach "spreads the other half of the increase in class revenues evenly (on a total dollar amount) into the second summer energy block, the third summer energy block, and the winter energy rate"[1]. This results in a 2.2% increase for the second summer block, a 2.82% increase for the third summer block and a 0.75% increase for the single winter block.

Q: Would you care to comment on and critique the OCS's proposal.

A: Yes, I would. The OCS has taken a narrow view of the function of rate design. As stated

1 See OCS Witness Gimble's Direct Testimony in this docket: line 108 to 110 on page 4.

in Mr. Gimble's testimony, "The overall goal of rate design is to develop a rate structure that is cost based, fair, relatively stable and generates sufficient revenues to cover a class's estimated cost of service."[2] The Office did not focus on an important goal of rate design which is to promote efficient use of resources. SWEEP and UCE, the Division, and Western Resource Advocates (WRA) all strongly support a design of rates that encourages customers to utilize their electricity consumption more efficiently. The Commission should disregard the OCS's recommendation because it fails to send strong price signals to encourage energy efficiency.

Q: OSC witness Gimble states that the first block of summer rates and the smaller increase in the winter rate are designed to mitigate the adverse impact on low usage customers. However, these low use customers i.e., less than 300 kWh, will experience a larger increase in their bills than other customers as a direct result of the OCS's recommendation to increase the customer charge. To compensate for this impact, OCS is recommending no increase in the first summer block and a minimal impact in the single winter rate. Would you care to comment on the effectiveness of their proposed rates to accomplish this goal?

A: The Office's recommendation results in rate increases for different usage levels as indicated in Table 1 below. This table shows that the Office's recommendation produces larger rate increases in percentage terms for low use customers relative to other customers. This produces an inequitable result for two reasons. First, there is a high correlation between low income residential customers and low usage customers. So the

2. See Gimble's Direct Testimony in this docket , line 55-58 page 2.

OCS recommended rate design will put a larger burden on low income customers in relative terms. Secondly, it is the high use customers not the low use customers that are putting a burden on the electric system. The OCS rate design recommendation places larger percentage increases on low usage customers and then treats other levels of usage basically the same. Customers using 100 kWh will experience a 6.74% increase in their bills. From 400 kWh to 1000 kWh, the rate increase is approximately 2.17 %, at 1500 kWh the bill impact is a mere 2.61%, at 2000 kWh it is 2.78%, and at 5000 kWh the bill increase is only at 3.08%. This sends inappropriate price signals to low and high use customers. In relative terms low use customers see a larger percentage increase in their bills than most high use customers. This appears to be contrary to relative usage levels indicated in SWEEP's Direct testimony in Table 5 that shows the approximately 25% of the customer who use 400 kWh or less use only 7% of the summertime energy, while the top 5% (greater than 2000 kWh) use over 16% of the summertime energy. To increase the low usage customer bill by larger percentage increase than a high usage customers does not appear to be equitable. In the winter rate design, the OCS rate design leads to even more inequitable results. Here low use customers have higher rate increase in relative terms and the rate increase in percentage terms constantly decrease with usage. As seen in Table 1, the SWEEP/UCE rate proposal treats low income and low usage customers differently. Aside from the increase to low use customers due to the $0.25 increase in the customer charge, high use customers, i.e., greater than 1000 kWh, see higher bill increases in percentage terms as usage increases. This is more equitable and sends more appropriate price signals to the customers who are placing more demands and

therefore costs on the electric system.

Table 1

Rocky Mountain Power
Monthly Billing Comparison
Schedule 1 - State of Utah
Residential Service

	Summer		Winter	
kWh	OCS % Change	SWEEP % Change	OCS % Change	SWEEP % Change
100	6.74%	2.25%	7.10%	0.35%
200	3.95%	1.32%	4.49%	-0.87%
300	2.79%	0.93%	3.35%	-1.37%
400	2.16%	0.72%	2.75%	-1.64%
500	2.17%	0.57%	2.40%	-1.81%
600	2.19%	0.47%	2.14%	-1.93%
700	2.16%	0.40%	1.95%	-2.03%
720 a			1.92%	-1.77%
774 b	2.17%	0.36%	1.83%	-1.14%
800	2.17%	0.35%	1.81%	-0.87%
841 c	2.19%	0.33%		
900	2.18%	0.31%	1.69%	0.04%
1,000	2.19%	0.27%	1.60%	0.78%
1,100	2.31%	1.57%	1.52%	1.37%
1,200	2.40%	2.60%	1.47%	1.89%
1,300	2.48%	3.44%	1.42%	2.32%
1,400	2.55%	4.14%	1.37%	2.69%
1,500	2.61%	4.73%	1.33%	3.02%
2,000	2.78%	6.69%	1.18%	4.16%
3,000	2.96%	16.52%	1.04%	5.32%
4,000	3.04%	21.15%	0.97%	5.90%
5,000	3.08%	23.84%	0.92%	6.25%

[1] Including HELP, DSM and applicable adjustment.
a: Winter average usage;
b: Annual average usage;
c: Summer average usage.

Q: Are there any observations made by the Office that you agree with or approve?

A: Outside the increase in the customer charge, the Office's general treatment of rate design is moving in the right direction, they just appear to be rather timid in their

recommendations. SWEEP/UCE agrees with the general principle that the first block should receive either a rate reduction or no rate increase and that the higher blocks should get proportionally greater rate increases. We also agree with their observation that the Company's recommended rate design which places the entire revenue increase in the customer charge is motivated by their drive for revenue stability. However, this can be more effectively achieved through a decoupling mechanism as proposed by the Division. SWEEP/UCE also agrees with the Office's observation that it might be time to consider a two block rate for the winter. We believe that now is the appropriate time to implement a two tiered winter rate structure.

Q. Would you summarize the recommendations made by WRA for residential rates?

A: The WRA attempts to develop a rate structure that will encourage the ratepayers to utilize their use of electricity more efficiently. WRA is proposing a residential rate structure with a surcharge for use above certain levels. The surcharge is a fixed amount for each month and increases as the usage level increases. There is no surcharge for consumers using less than 1,000 kWh per month. The High Usage Surcharge starts at $2.50 per month for usage above the 1000 kWh demarcation and increases to $10.00 for consumers using 1501 to 2500 kWh per month. The surcharge then increases by $10 for each 1000 kWh increment up to 10,000 kWh, after which it continues in larger increments up to $250 for usage beyond 22,500 kWh per month. WRA recommends that the charge be a separate line item and that the bill include an explicit explanation for the charge. It is hoped that the explicit nature of the surcharge will encourage customers to conserve electricity or use it more efficiently in order to avoid the surcharge.

Q. What is your professional opinion about the WRA proposal?

A. I support the WRA's intention to create incentives for residential ratepayers to utilize electricity more efficiently. This important goal should be pursued by the Company and supported by the Commission. That said, I believe that WRA's rate design proposal is complex– in that it would add a new layer of varying surcharges onto the current set of tiered variable rates. The strongest element of the rate design is the possibility that explicit charge for high usage that will get customers' attention the first time they see it. However, due to the nature and size of the charge, there may be limited impact on consumer behavior. Economists believe that people make decisions on the margin; they compare marginal benefits with marginal costs before they make decisions such as whether or not one consumes an additional kWh or not. With the WRA's proposal the fixed costs imposed occur at discrete intervals. Customers will quickly recognize that unless they are near the demarcation line, changes in consumption will not impact their bill. While customers below 1000 kWh receive no surcharge, customers who consume slightly above 1000 kWh will receive a small surcharge of $2.50. For the customer the additional cost of the 1001st kWh is $2.50, but this price signal weakens as customers increase their usage up to 1500 kWh. For the customers consuming 1001 kWh, their bills increase by 2.7% but the percentage increase in the bill falls as the customer consumes more kWh up until the 1500 kWh mark. At 1501 kWh the surcharge increases to $10.00 and the percentage increase rises to 6.7%. However, this surcharge does not change again until 2500 kWh level while the percentage increases falls to a 3.8% increase in one's bill. This creates a somewhat perverse incentive. Once a customer has hit the surcharge level,

they will experience a decline in the rate increase as measured in percentage terms until they hit the next 1000 kWh surcharge level.

This rate structure creates little or no incentive for a customer in the middle or upper end of a tier to reduce their usage. For example a customer using 2000 kWh will have little incentive to reduce their usage. In order to gain financially and receive a $7.50 reduction in the usage charge, that family or residence would have to lower its usage by 500 kWh. A 25% decrease in consumption will yield an approximately 12.9% decrease in the customer's bill. This assumes that the customer has an implicit elasticity coefficient of approximately -2. Thus the WRA rate proposal implicitly assumes that for customers in the middle of a tier, electricity must be an extremely elastic good in order for that customer to respond and realize a utility bill reduction. This contradicts the results found in most all empirical studies measuring elasticity responses of residential electric ratepayers. Most all empirical studies performed on elasticity have found that the demand for electricity is highly inelastic with the average estimate in the -.35 range.[3] The only time this rate structure will affect consumers' behavior is if their usage level is close to the surcharge trigger point. Otherwise, empirical evidence strongly suggests that the surcharge will not affect behavior.

A steeply tiered rate structure as proposed by SWEEP/UCE will send a more appropriate price signal that increases the incentive to reduce kWh usage with every kWh, with the per kWh incentive increasing at higher levels of consumption. We agree

3 See Espey, James and Espey, Molly " Turning on the Lights: A Meta-Analysis of Residential Electricity Demand Elasticities", Journal of Agricultural and Applied Economics, 36,1 April 2004 p. 65-81 for elasticity estimates. Short run price elasticity estimates range from -.2.01 to -0.004 with a mean of -.35 and a median of -.28. Long run estimates of elasticity have a mean of -.85 and a median of.81.

with WRA, however, that consumers should be educated about the rate structure and informed about how higher usage leads to higher rates, thus both rates and bills can be decreased by cutting usage.

Q: Could you briefly describe the DPU's residential rate design proposal?

A: DPU witness Dr. Artie Powell, on page 9, lines 171-172 of his direct testimony in Phase II states that "In this case, the Division's primary objective is to promote a rate design that will send price signals promoting conservation." In order to accomplish this goal, the Division is recommending that the Commission adopt a decoupling mechanism that will mitigate the Company's risk of recovery of its fixed distribution costs. As Dr. Powell succinctly stated in his direct testimony:

> "For the Residential classes, the Division is proposing a decoupling mechanism designed to collect the Company's fixed distribution costs. The Division believes that decoupling will allow flexibility in designing rates that promote energy efficiency while mitigating the risk of cost recovery." [4]

The Division recommends that the Customer Charge be kept at its current level of $3.00 and that most of the revenue increase for residential customers be placed on the third summertime tier. SWEEP/UCE strongly supports this proposal and commends the Division for its ingenuity in developing a cogent proposal that addresses the Company's concern about recovering its fixed distribution costs while promoting the important rate design goal of encouraging the efficient use of electricity. The Division correctly notes that there is an inherent conflict between a rate design that encourages conservation and energy efficiency by recovering fixed costs through a volumetric charge and the

4 See Dr. Powel's Direct Testimony in Phase II of this docket DPU exhibit 11.0, page 2 lines 29-32.

assurance of cost recovery. Raising rates in the higher blocks will send the correct price signal to high use customers to conserve on energy use; however, it is the use in these higher blocks that is most often driven by air conditioning load which is heavily dependent on weather. During a hot summer, there is higher usage of electricity and the Company will over-recover its fixed costs, in a cool summer the Company is at risk for under-collecting its fixed costs. The decoupling mechanism proposed by the Division mitigates the risk of under or over-collection of these costs by the Company and allows the Commission to adopt a rate design that will encourage maximum energy efficiency and conservation. In turn, greater energy efficiency and conservation by customers will decrease the need for future capacity expansion and future rate increases.

Another concern about collecting fixed costs centers on the elasticity of demand of residential ratepayers to the higher tiered rates. This has been a major concern of SWEEP/UCE who advocate for greater price difference between the tiers. Higher rates in the upper tiers will lead to lower consumption. Unless this demand response is included in the calculation of rates, the lower consumption means that the Company may not collect all of its distribution fixed costs. The decoupling mechanism substantially reduces these risks. SWEEP/UCE believes that this decoupling mechanism does a better job of reducing such risks than use of an explicit elasticity adjustment in setting rates.

Q: Why should the Commission adopt a decoupling mechanism at this time, shouldn't this issue have its own docket?

A: I do not believe that this issue requires its own docket. Now is the perfect time to implement this limited decoupling mechanism. It should be noted that the Division's

proposal only applies to the residential class and it only decouples the collection of the Company's fixed distribution costs assigned to residential customers. It does not include transmission or generation fixed costs, a large component of fixed costs. In addition, Utah's regulatory bodies have experience with a decoupling mechanism, Questar's decoupling or Conservation Enabling Tariff ("CET"). It has proved to be successful and has not resulted in volatile rates. It has also been accompanied by strong support for effective DSM programs on the part of Questar, which in turn are providing very significant economic benefits for utility customers. Furthermore, the Division's proposal for RMP is a three year pilot program which will be reviewed in one year. It requires monthly submission of data for regulatory review. It has also put limits on the adjustment process which will prevent high rate volatility. The Division should be commended for crafting such a careful decoupling proposal that protects ratepayers' interests.

Q: What are the benefits associated with the proposed decoupling mechanism?

A: One of the major benefits of the proposed decoupling mechanism is that it eliminates or mitigates the Company's incentive to increase profits with increased sales, and likewise be hurt financially when electricity sales drop. Thus it aligns the company's financial interest with that of consumers with respect to implementation of energy conservation and DSM measures; i.e., the company's recovery of distribution costs is not affected by the success of its DSM programs.

Another benefit of decoupling is that it facilitates the adoption of stronger tiered rates, such as the tiered rates advocated by SWEEP/UCE, and it eliminates the pressure to

raise fixed charges and thus reduce variable charges. The uncertainty regarding revenue recovery as the differential across tiers is increased is no longer an issue at least with respect to recovery of fixed distribution costs. The company is assured of its authorized cost recovery, whether or not there is a weak or strong customer response to the new rates, and whether or not fixed charges are maintained at a relatively low level.

A third benefit of decoupling is that it protects customers as well as the company. If sales exceed projections due to factors such as a hotter than normal summer or strong economic growth, the company will refund its over-collection of fixed distribution costs to customers. The mechanism works in both directions, ensuring that the company obtains no more and no less than its approved fixed distribution costs per customer.

Q: Does Federal energy policy support the adoption of decoupling at the state level?

A: Yes it does. Section 410 of the American Recovery and Reinvestment Act (ARRA) states:

"The applicable State regulatory authority will seek to implement, in appropriate proceedings for each electric and gas utility, with respect to which the State regulatory authority has ratemaking authority, a general policy that ensures that utility financial incentives are aligned with helping their customers use energy more efficiently and that provide timely cost recovery and timely earnings opportunity for utilities associated with cost-effective, measurable and verifiable efficiency savings, in a way that sustains or enhances utility customers' incentives to use energy more efficiently."

Adoption of at least partial decoupling is a step towards complying with this provision of federal law.

Q: In your observation, has Rocky Mountain Power been opposed to implementing DSM measures and programs?

A: Quite the contrary, RMP's management has been very supportive of implementing

demand-side measures, and its DSM programs have grown substantially over the past eight years in terms of budget and level of energy savings achieved. However, as the programs have become more effective, there have been growing concerns expressed by the Company of its ability to collect its fixed costs and the impact that DSM has on the company's financial well-being. These are reasonable concerns that are addressed at least in part by the decoupling mechanism proposed by the Division. With the mitigation of these concerns, I expect that the Company will continue to enthusiastically acquire even larger quantities of cost-effective DSM resources in the future. This in turn will reduce revenue requirements and provide substantial net economic benefits for customers.

Q: Are there any other comments, you wish to make regarding the Division's proposal?

A: Yes, as I stated before, I laud the Division's initiative of promoting a regulatory regime that reduces the risk to the Company for the recovery of its residential distribution fixed costs and promotes energy efficiency and conservation. However, I believe the Division is too timid in it rate design recommendation. The Commission should pursue a much more ambitious rate design that will create greater incentive for customers to reduce their use of electricity through conservation and adoption of more energy efficient appliances. The Commission should adopt the Division's decoupling mechanism and implement SWEEP/UCE rate design which includes a tiered structure for both winter and summer with a fourth tier in summer and greater price differentials between the summertime tiers.

Q: Does that complete your rebuttal testimony?

A: Yes, it does.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was sent by United States mail, postage prepaid, or by email this 23 day of, March 2010, to the following:

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