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. 10-035-124** **Exhibit No. DPU 4.0-SR** **Cost of Capital** **Rebuttal Testimony and Exhibits** **Charles E. Peterson**

FOR THE DIVISION OF PUBLIC UTILITIES
DEPARTMENT OF COMMERCE
STATE OF UTAH

Rebuttal Testimony of

Charles E. Peterson

June 27, 2011

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Surrebuttal Testimony of Charles E. Peterson

I. INTRODUCTION

Q. Please state your name, business address and title.

A. My name is Charles E. Peterson; my business address is 160 East 300 South, Salt Lake City, Utah 84114; I am a Technical Consultant in the Utah Division of Public Utilities (Division, or DPU).

Q. On whose behalf are you testifying?

A. The Division.

Q. Did you previously file testimony regarding cost of capital in this Docket?

A. Yes.

Q. What is the purpose of your testimony in this matter?

A. My testimony updates my recommended weight average cost of capital (WACC) based upon the issuance of debt by PacifiCorp (Company)[1] as described by Company witness Mr. Bruce N. Williams in his pre-filed Rebuttal Testimony. I next provide comment to the Pre-filed

[1] Rocky Mountain Power (RMP) is an operating division of PacifiCorp primarily performing the retail distribution operations of PacifiCorp in the eastern part (i.e. Utah, Wyoming and Idaho) of PacifiCorp's system. RMP runs no electric generators, and more importantly for my purposes, it has no debt, no preferred stock and no common stock. The fact that PacifiCorp files with the Commission under the name Rocky Mountain Power, doesn't change the fact that any cost of capital calculations are necessarily of the whole company (i.e. PacifiCorp) and not its local division. Therefore, throughout this testimony I will primarily refer to PacifiCorp, rather than RMP.

Rebuttal Testimony of Dr. Samuel C. Hadaway.

I do not comment on all of the subject matter contained in the rebuttal testimonies of Messrs. Williams and Hadaway. Silence on my part regarding any of the comments and conclusions of these witnesses does not necessarily imply my agreement, or disagreement, with those comments and conclusions.

II. REVISED RECOMMENDED COST OF CAPITAL

Q. What is the basis for revising your recommended cost of capital for the Company?

A. In his June 8, 2011 Rebuttal Testimony, Mr. Williams describes the issuance of $400 million in 10-year first mortgage bonds on May 12, 2011 with a coupon rate of 3.85 percent.[2] Mr. Williams updates his exhibit showing the Company's outstanding long-term debt to include the particulars of this debt issuance.

Q. Was this debt issuance anticipated in Mr. Williams' direct testimony in this Docket?

A. Yes. This debt issuance was included as a *pro forma* entry in Mr. Williams' exhibit detailing the outstanding long-term debt of PacifiCorp. At the time Mr. Williams' prepared his direct testimony, he forecast that this debt issuance would have a coupon rate of 5.584 percent.[3]

Q. Is it significant that the actual coupon rate was 3.85 percent compared to the forecast

[2] Rebuttal Testimony of Bruce N. Williams, Docket No. 10-035-124, June 8, 2011, page 1, lines 22-23.
[3] Direct Testimony of Bruce N. Williams, Docket No. 10-035-124, Exhibit RMP_BNW-4.

coupon rate of 5.584 percent?

A. Yes. The Company's overall cost of debt is reduced from 5.81 to 5.71 percent, which results in a lower requested WACC from 8.25 percent to 8.20 percent.[4] Additionally this change could have a significant effect on the Company's cost of equity, which will be discussed below.

Q. Based upon this change in the cost of debt, what are you now recommending to the Commission that the Company's WACC should be?

A. DPU Exhibit 4.1-SR sets forth my new WACC recommendation. I am not changing my recommended cost of equity, cost of preferred stock, or capital structure recommendations from my direct testimony, but I am adopting the new cost of debt calculated by Mr. Williams of 5.71 percent. This result in a new WACC of 7.94 percent compared to 7.98 percent in my original direct testimony. This change also has the effect of reducing the Company's revenue requirement by about $2.52 million.[5]

III. COMMENTS ON DR. HADAWAYS REBUTTAL TESTIMONY

Q. Dr. Hadaway's updated DCF range is 10.1-10.5 percent vs. 10.1-10.7 percent; his updated risk premium range is 10.18-10.75 percent vs. 10.1-10.24 percent; Dr.

[4] Williams Direct Testimony, Op. Cit. page 2. Compare with Williams Rebuttal Testimony, Op. Cit. page 2.

[5] The actual amount is $2,518,293 per the jam model using the Division's filed position in direct testimony. The original reduction from the Company's filed position for cost of capital was $23,073,686; the new reduction for cost of capital amounts to $25,591,979.

Hadaway's conclusion remains 10.50 percent.[6] He argues that "Current data show that the low interest rate cycle has reversed…."[7] What initial comments do you have regarding the reversal of the interest rate cycle?

A. Dr. Hadaway ignores that PacifiCorp had a $400 million first mortgage debt issuance on May 12, 2011 with a coupon rate of 3.85 percent. This coupon rate contrasts sharply with the 5.584 percent rate forecast by the Company's treasurer, Bruce N. Williams in his direct testimony. Mr. Williams has since updated his testimony. The 3.85 percent coupon rate is less than 100 basis points over the 10-year U.S. Treasury note rate which suggests that the market does not consider PacifiCorp to be particularly risky. If interest rates trends have reversed and are heading upward, Dr. Hadaway's own exhibit gives scant evidence of such a change. While interest rates have come off of "rock-bottom" that occurred during August and September of 2010, they have been trending downward since February 2011, and are currently less than December 2010. Note that by his own calculations, the May 2011 average utility bond rate is less than both his 3-month and 12-month averages, and that the 30-year Treasury yield is below the 12 month average and only slightly above the 3-month average. This does not support the contention that interest rates are rising.[8] Overall, I would judge the current trend to be essentially flat.

Q. Dr. Hadaway insists that markets have not fully recovered from the financial turmoil of 2008. He presents no evidence other than to argue that there is high unemployment, large federal deficits, turmoil in the Middle East, and "skyrocketing" commodity prices.

A. While these items relate to the continuing sluggish economic recovery that he mentions later,

[6] Rebuttal Testimony of Dr. Samuel C. Hadaway, Docket No. 10-035-124, June 8, 2011, page 2, lines 27-34.
[7] Ibid., page 2, lines 41-42.
[8] Hadaway, Op. Cit., Table 1, page 4 and Exhibit RMP__SCH-2R, page 1 of 3.

the case of turmoil in the Middle East has little to do with the question of "market recovery." More relevant is the fact that the stock market has recovered most of the pricing lost in the 2008 crisis and, as mentioned above, the bond markets are relatively flat and stable.

Q. On page 6 Dr. Hadaway presents his core argument that my recommended ROE as well as Mr. Lawton's and Mr. Gorman's are too low because interest rates are rising and are expected to continue to increase rapidly in the near future. One argument in support of this belief is the announced end to the Federal Reserves' "quantative easing 2" (QE2) program. Dr. Hadaway also notes the "sluggishly improving U.S. economy."[9] He supports his interest rate growth argument with interest rate forecasts by Standard & Poor's.[10] Please comment.

A. Dr. Hadaway has argued that interest rates are rising in every PacifiCorp rate case since Docket No. 04-035-42. He has supported this assertion with interest rate forecasts from Standard & Poor's.

I have compiled the Standard & Poor's interest rate forecasts supplied in Dr. Hadaway's testimony on DPU Exhibit 4.2-SR comparing forecast interest rates on10-year treasury notes with their actual results. DPU Exhibit 4.3-SR sets forth the same analysis for corporate bonds. As can be seen, Standard & Poor's forecasts interest rates to rise from their current levels. As is the case with forecasts generally, Standard & Poor's forecasts have not been exactly right. However, in the instances reviewed Standard & Poor's interest rate forecasts

[9] Hadaway, Op. Cit. page 6, lines 106-107.
[10] Ibid., Table 2, page 6.

have not only not been exactly right,[11] the forecasts have not even gotten the direction of the change right. Note that even for the second quarter of 2011, the closest future period and presumably the easiest one to forecast, Standard & Poor's has forecast 10-year Treasury notes to yield 3.6 percent, rising to 3.8 percent in the third quarter; they are currently yielding about 3.0 percent, down from the first quarter average of 3.5 percent. Thus, Dr. Hadaway and Standard & Poor's have had a poor record with respect to their interest rate forecasts.

Q. Regarding CAPM, Dr. Hadaway complains that "potentially all three of CAPM's principal inputs tend to understate [cost of equity]."[12] Additionally, as part of his CAPM discussion, Dr. Hadaway asserts a "heightened investor risk aversion that has resulted from the financial crisis."[13] Dr. Hadaway refers to two lines of stock prices on a graph to claim that utility betas have declined, but presents no evidence of actual betas.[14]

A. The statement about the CAPM inputs tending to be low presumes that one knows in advance what the "correct" cost of equity is, rather than something to be discovered by using widely applied models such as CAPM. If you already "know" the correct cost of equity, then CAPM's inputs are always going to tend to be high or low, and arguments can be found to justify any position. Dr. Hadaway makes the claim about "heightened" investor risk aversion in the face of the fact that stocks have more than doubled from their spring 2009 lows—suggesting that investor risk aversion doesn't remain too "heightened." Regarding the assertion on betas, my average betas have been essentially flat since the 2008 rate case, but

[11] It would be surprising, of course, if the forecasts were exactly right. What is significant is that the forecasted direction is wrong, which makes the absolute difference in the forecasts relatively high.
[12] Ibid., page 10, line 172.
[13] Ibid., page 11, lines 177-178.
[14] Ibid., page 11, lines178-180.

they were a little higher the previous two rate cases. However, it's somewhat questionable to compare betas between rate cases, since there are changes in the mix of comparable companies.

A. <u>Dr. Hadaway's Criticisms of Mr. Peterson's Testimony</u>

Q. On pages 11-13 of his rebuttal testimony, Dr. Hadaway performs different manipulations of your discounted cash flow (DCF) calculations, apparently to show that you should have arrived at an overall cost of equity estimate above 10.0 percent, perhaps preferably 10.1 percent. Do you have any comments on what Dr. Hadaway has done?

A. Dr. Hadaway spends much time deriving what amounts to a trivial difference from my actual conclusion. In this discussion he completely ignores my "adjusted" DCF models which result in a range of 9.92 to 10.09 percent (midpoint 10.005 percent, weighted average 10.03 percent) and the weight given to non-DCF models. He correctly refers to unprinted calculations included with DPU Exhibit 4.3 that was filed with my direct testimony,[15] which along with the summary mean and median calculations that were printed provide insight into the arrival at the overall 10.0 percent conclusion.

Q. Regarding the use of dividend growth forecasts, Dr. Hadaway states that "reliance on dividend growth instead of earnings growth is problematic because, over the long-term horizon measured by the DCF model, earnings growth drives dividend growth, not the

[15] Ibid., page 5, lines 270-271.

opposite."[16] Do you have any comments on that?

A. Yes. There are at least three implicit assumptions. The first is that dividends should always move in lock-step with earnings. If this is not true for a length of time, then the DCF model will over- or under-state the cost of equity. In recent years, forecasts of dividend growth often have been less than forecast earnings growth. If dividends do not grow as fast as earnings for a long period of time, then a single-step DCF using earnings-only growth will over-estimate cost of equity. A two-step DCF model would be better if the analyst can forecast when that situation might end or reverse.

A second implication is that growth in earnings and dividends are stable. If earnings are more volatile than dividends, or become more volatile, then management will likely reduce the dividend payouts resulting in lower overall growth in dividends, in order to maintain the dividend.

Finally, Dr. Hadaway's statement assumes that the dividend payout ratio, that is the percent of dividends paid to net income earned, is constant over time; in particular that it is not in a long-term decline. If this latter situation is the case, (and it is related to the first two assumptions related above), then a single-stage DCF based upon earnings growth will also overstate the cost of equity. Again, in this situation, a multi-stage model may be more appropriate.

Q. On pages 13-14, Dr. Hadaway criticizes your two-stage DCF models claiming that the long-term growth rate used is too low, and changes them on Exhibit RMP_SCH-4R,

[16] Ibid., page 13, lines 224-226.

pages 1 and 2. Do you have any comments on his criticisms?

A. The basis for his assertion that the forecast long-term growth rate is too low is that the GDP growth rate in the past has been higher. This assumes that the past period (as selected and calculated by Dr. Hadaway) must be directly extrapolated into the future and any other estimate, apparently especially if it is lower, is wrong in principle. Of course, substituting Dr. Hadaway's nearly 120 basis point higher forecast growth rate into my models results in a proportionately higher cost of equity estimate. It is noteworthy that in more than 30 years, even by Dr. Hadaway's own calculations, the average growth rate of the United States economy has failed to achieve his 5.80 percent rate. This alone should cast doubt on Dr. Hadaway's forecast GDP growth rate.

In fact if one were to use the 20-year average change in GDP that Dr. Hadaway touted in his testimony in the Company's 2003 rate case,[17] he would have used a long-term growth rate of 4.80 percent, which compares favorably to the 4.62 percent rate forecast by the Congressional Budget office and the Energy Information Administration that I used.

Q. Dr. Hadaway critiques your inclusion of a capital asset pricing model (CAPM) result on pages 14-15 as "potentially confusing." He also seems to suggest that you should not even calculate a CAPM result given the Commission's past criticism of that model. Do you have any comments on these criticisms?

A. Yes. I perceive part of my role as giving information to the Commissioners for their evaluation. Since the CAPM is a widely taught and applied model, I would be remiss in this regard to not include it in my testimony. As I have previously testified in my direct

[17] Direct Testimony of Samuel C. Hadaway, Docket No. 03-2035-02, May 2003.

testimony[18] the CAPM has a number of difficulties that argue against its sole use. Although the CAPM results appear abnormally low, in the current environment, they may still be an indication of investor's expectations. Given that the 10-year Treasury note is yielding about 3.0 percent, an investor might be more than willing to accept a risk premium of 5.0 percent above the 3.0 percent approximately risk-free rate for a relatively safe, stable and dividend-paying utility stock.

Q. Dr. Hadaway takes exception that you said he put little or no weight on his DCF model using analyst-only forecasts, implying that he put more than "little or no weight" on that model.[19] Do you have any comments?

A. His discussion of this topic strikes me as curious. On the one hand he says that he included it in his range of DCF values, i.e. 10.1 to 10.5 percent. But the model in question yields 10.1 percent[20] which is the very bottom of his range, and his overall conclusion is 10.5 percent, the very top of his range. I leave it to others to decide whether or not Dr. Hadaway gave much weight to the 10.1 percent.

Q. The last specific criticism Dr. Hadaway makes of your cost of equity analysis relates to your exclusion of certain guideline companies that Dr. Hadaway uses from your list. Dr. Hadaway then asserts that if you had included all of his companies, you would have arrived at a higher, and in his view, more correct cost of equity conclusion.[21] What is your response to this criticism?

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[18] Direct Testimony of Charles E. Peterson, Docket No. 10-035-124, DPU Exhibit 4.0, pages 21-26.
[19] Hadaway, Op. Cit. page 16, lines 301-307.
[20] This 10.1percent figure is supported by my analyses. The higher DCF results considered by Dr. Hadaway uses include his 5.8 percent GDP growth rate, something I decline to apply.
[21] Hadaway, Op. Cit., pages 15-16, lines 278-300.

A. First, Dr. Hadaway himself eliminates four of the companies he original included, which I had originally excluded: Duke Energy, Progress Energy, DPL, and NextEra. Dr. Hadaway is upfront that those companies should no longer be included for this rate case. He then claims that I should have included Sempra Energy (parent of San Diego Gas & Electric and SoCalGas) and Vectren (parent of electric and gas utilities in Indiana and Ohio) apparently just because Value Line includes them in its electric utility group.[22] Finally there are several small utilities that he says I should have included because they "are about the same size as RMP's Utah operations."

Q. Is Value Line's inclusion of Sempra and Vectren in its list of electric utilities sufficient reason to automatically include them as comparable companies to PacifiCorp?

A. No. Value Line's list (or any other list for that matter) should be just a starting point of the evaluation for inclusion in the guideline companies. Dr. Hadaway seems to understand this in that he does not include all of the companies in Value Line's electric utilities group--just because they are there--but rather excludes some based upon some additional criteria. In the case of Vectren, its 2010 SEC Form 10-K indicates that for the last three years, Vectren's electric utility operations have average just 25.0 percent of total revenues; electric utility operations as a percent of net profit do better averaging 40.4 percent. Vectren's electric utilities account for 34.6 percent of total assets. Therefore only about one-third of Vectren is an electric utility.

Sempra is similar in that its revenues are composed of about 28.0 percent electric utility operations. Sempra's plant in service from electric operations is about 30.0 percent. Thus, at

[22] Ibid., page 15, lines 289-290.

best, one could say that about one-third of Sempra is an electric utility. Sempra's gas utility revenues amount to 47.7 percent and property plant and equipment total about 41.0 percent of the total company in 2010.

These percentages may satisfy Dr. Hadaway, but they come up a bit short in my view.

Q. What about the small companies?

A. Dr. Hadaway's argument that these small companies are similar to Rocky Mountain Power's Utah operations is a bit surprising. Rocky Mountain Power has no common stock or debt and is merely a division of PacifiCorp with no separate legal or financial existence; it does not control any generation plants or high voltage interstate transmission. To use Dr. Hadaway's logic, then all of the large companies Dr. Hadaway included in his list should be eliminated since Southern Company, for example, is hardly comparable in size to Rocky Mountain Power's Utah operations. In determining cost of equity we are necessarily considering PacifiCorp and not some subsection of a division of PacifiCorp.

Beyond that, these companies are not in the same league economically as PacifiCorp. Consider Empire Electric District (Empire). It is a major driver of the difference Dr. Hadaway wants to highlight on his rebuttal Exhibit RMP_SCH-4R, page 3 of 3. For example, Empire has $1.4 billion in net electric plant, PacifiCorp has $16.4 billion; Empire has $483 million in electric utility revenues, PacifiCorp has $4,432 million; Empire has about 168,000 customers, PacifiCorp about 1,700,000. DPU Exhibit 4.4-SR graphically displays the difference in size between Empire and PacifiCorp.

As shown on DPU Exhibit 4.5-SR, if Empire alone is excluded from Dr. Hadaway's Exhibit RMP_SCH-4R, page 3 of 3 (in addition to Entergy that Dr. Hadaway voluntarily excludes), then the overall group average amounts to 9.97 percent, which I can live with.

In conclusion, I stand by my exclusion of these companies.

B. The 3.85 Percent Debt Rate and Cost of Equity

Q. Do you have any other concerns regarding Dr. Hadaway and his cost of equity estimates?

A. As described above, Company witness Mr. Bruce Williams amended his direct testimony because he had the actual result of the May 2011 debt issuance that was anticipated in his direct testimony. I have accepted Mr. Williams' revised calculations of the cost of debt and updated my overall cost of capital recommendation accordingly.

I am concerned that Dr. Hadaway makes no mention of this debt issuance, let alone reflects consideration of this debt issuance in his rebuttal testimony.

Q. What is the significance of this apparent oversight?

A. This bond issuance gives direct information on how the market views PacifiCorp's risk. When 10-year Treasury notes were yielding around 3.22 percent on May 12, the date of issuance (compared to 2.97 on June 20, 2011)[23] then the 3.85 percent coupon rate of the PacifiCorp debt issuance is only up to about an 85 basis point premium over the relatively risk-free rate. This suggests that the buyers of those PacifiCorp first mortgage bonds believe that they made a pretty safe investment.[24] This further suggests that PacifiCorp's debt is considered much safer than the May 2011 5.32 percent Single-A Utility Rate found on Dr. Hadaway's Table 1, page 4 of his rebuttal testimony. DPU Exhibit 4.6-SR is Dr. Hadaway's Exhibit RMP_SCH-8R, page 2 of 3 except that PacifiCorp's own current bond yield is substituted for the Current Single-A Utility Bond Yield. The result becomes 9.23 percent. Alternatively, Dr. Hadaway should consider employing Aaa utility bond yields as being actually more comparable in the market to PacifiCorp than its bond rating would suggest.

Dr. Roger Morin, a recognized expert on utility cost of capital, states that "Direct capital market data are available for most companies, providing a direct and meaningful estimate of the cost of equity."[25] Dr. Morin cautions against the sole use of this data in order to avoid or minimize some pitfalls.[26] As an example, Dr. Morin shows how to adjust risk premium methods using a company's own debt rate.[27] In a case study involving ten guideline companies, Dr. Morin applies a "scattergun" approach of 11 cost of equity indicators combining company-specific cost of equity indicators with estimates from comparable companies.[28] He then averages these indicators to arrive at a final result, suggesting one way

[23] Federal Reserve Board of Governors, daily interest rates of 10-year Treasuries. http://www.federalreserve.gov/releases/h15/data.htm accessed June 21, 2011.

[24] That there are several buyers of these bonds is suggested by the fact that there were six investment banks managing or co-managing the issuance.

[25] Morin, Roger A. Ph.D., "New Regulatory Finance," Public Utility Reports, Inc., Vienna, Virginia, 2006, page 397.

[26] Ibid. pages 397-399.

[27] Ibid., pages 406-407.

[28] Ibid., pages 410-420. Also see Dr. Hadaway's rebuttal testimony, page 11, line 184.

of incorporating company-specific estimates with industry estimates.

Dr. Morin also highlights a study by Brigham, Shome, and Vinson, that shows that risk premiums narrow as the credit-worthiness of the company increases. Thus the risk premium for a company with a single-A bond rating may have as much as 170 basis point greater risk premium than a triple-A rated company.[29] This is further evidence that Dr. Hadaway's risk premium analyses may be significantly overstating PacifiCorp's cost of equity in light of the 3.85 percent bond issuance.

I am not suggesting that Dr. Hadaway, or anyone, give sole consideration to risk-premium methods based solely on PacifiCorp's 3.85 percent debt rate. It is a significant oversight that Dr. Hadaway neither mentions the debt issuance nor gives it any consideration at all.

Q. What is your conclusion and recommendation regarding the consideration of the 3.85 percent debt rate?

A. I am continuing to recommend 10.0 percent as the authorized rate of return on PacifiCorp's common stock. However, the information that the Company is able to issue debt at 3.85 percent instead of the previously forecast value of 5.584 percent is a significant difference. I therefore now recommend to the Commission that the top end of my reasonable range is reduced by 15 basis points to 10.0 percent, putting my recommended return on equity at the top end of my range. Similarly, I suggest that the bottom end of my reasonable range be reduced by 15 basis points to 9.70 percent.

[29] Ibid., page 129.

IV. RECOMMENDATIONS

Q. What is your recommendation?

A. I continue to support my original recommendation for cost of equity, cost of preferred stock and capital for PacifiCorp. Specifically I continue to recommend that the Commission adopt 10.0 percent as the authorized cost of equity. However, based upon the Company's ability to issue long-term debt at a 3.85 percent coupon rate, I now consider 10.0 percent to be the top of the reasonable range; similarly, the bottom of my reasonable range is reduced 15 basis points to 9.70 percent. As discussed above the overall weighted average cost of capital is reduced slightly to 7.94 percent.

V. ERRATA FOR MY DIRECT TESTIMONY

The following items were minor errors in my Direct Testimony in this Docket that I have discovered. The correction of these errors has no material effect on my conclusions or recommendations.

DPU Exhibit 4.0: on line 733 the range given should be "9.92 to 10.09 percent" instead of "9.92

to 10.9 percent."

DPU Exhibit 4.3: The Risk Premium estimate should be 9.96 percent instead of 10.03 percent. A corrected copy of DPU Exhibit 4.3 is included.

Q. Does this conclude your testimony?

A. Yes.