I. Introduction and Overview

Q. Please state your name.

A. My name is Samuel C. Hadaway.

Q. Did you previously file testimony in this proceeding?

A. Yes. My direct testimony on cost of capital was filed with the Company's case on August 4, 2004.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of this testimony is to rebut the rate of return of equity (ROE) recommendations of Division of Public Utilities (DPU) witness Artie Powell and Committee of Consumer Services (CCS) witness Daniel J. Lawton. I will also respond to the comments of AARP witness Ronald J. Binz on cost of capital. I will first describe deficiencies in the other parties' ROE recommendations and demonstrate that their ROE estimates are not consistent with current market data. I will then update Dr. Powell's analysis with more reasonable assumptions to show that his ROE estimates are below current market expectations. I will also respond to Dr. Powell's and Mr. Lawton's criticisms of my initial testimony and to Mr. Binz's general comments concerning ROE and his Scottish Power stock price comparisons.

Q. What are the parties' positions on rate of return?

A. The Company is requesting an overall rate of return (ROR) of 8.663%. The Company's request is based on the test year capital structure (47.80% equity, 51.00% debt, 1.20% preferred) and projected costs for long-term debt (6.40%) and preferred stock (6.75%). With Dr. Powell's December 17, 2004

Supplemental Testimony, it appears that DPU, CCS, and the Company are in agreement on capital structure and the cost for debt and preferred stock.

The parties' ROE recommendations, however, are significantly different. The Company is requesting an ROE of 11.125%, which is based on my estimate of ROE for a group of single-A rated electric utilities comparable to PacifiCorp. Dr. Powell and Mr. Lawton use the same comparable group as mine, but their ROE recommendations are lower. They both recommend reducing PacifiCorp's ROE from the 10.7 percent established in the Company's 2003 case (Docket No. 03-2035-02) to a rate of only 10.0 percent. With the Company's requested capital structure and cost rates for debt and preferred stock, a 10.0 percent ROE produces an overall ROR of 8.195%. Mr. Binz and AARP do not offer a specific ROE or ROR recommendation.

Q. What causes such a large difference between the parties' estimates of ROE?

A. There are three main differences:

1) In the DCF analysis, Dr. Powell and Mr. Lawton use much lower growth rates than I, and they criticize my efforts to conform currently low short-term growth estimates (from *Value Line* and other analysts) to the long-term requirements of the DCF model;

2) Dr. Powell and Mr. Lawton refuse to accept the implications of their own CAPM and risk premium checks of reasonableness, which clearly show that their DCF based recommendations are too low; and

3) Dr. Powell and Mr. Lawton do not reasonably consider the fact that long-term interest rates are expected to rise significantly during the coming year.

I will show that our ROE positions are much closer when a more reasonable view of long-term growth rates is taken. I will also show that had Dr. Powell reasonably considered his CAPM results, or if Mr. Lawton had not confused the

projected interest rate issue, both their checks of reasonableness would have rejected their own ROE recommendations and would have confirmed the Company's requested ROE.

The Company's requested 11.125% ROE is approximately the midpoint of my DCF range of 10.7 percent - 11.4 percent (rounded midpoint 11.1%). As Mr. Lawton points out, 11.125% is also the average result from my DCF and risk premium analyses, with the highest and lowest results excluded. I developed my results from the DCF model and risk premium data, and gave explicit weight to projections for much higher interest rates for the coming year. At the time I prepared my initial testimony, corporate interest rates had increased from record lows by about 50 basis points (0.50%) and were projected to increase by an additional three-quarters to one percent from their June 2004 levels (Hadaway Direct Exhibit UP&L___ (SCH-2), pages 2 and 3). Later in this testimony I will present more recent economic forecasts, which continue to show higher interest rates for the coming year. As I discussed in my initial testimony, it does not seem reasonable to estimate the cost of capital based on data from the bottom of a "V" in the interest rate cycle, only to have higher rates in the coming year. That approach would underestimate the cost of capital, and it would virtually assure that a new rate case would have to be filed as soon as is practical.

Although Dr. Powell (at 26-29) and Mr. Lawton (at 16-17) discuss interest rate forecasts, Dr. Powell (at 29) concludes that all such data are already included in his market based models, and Mr. Lawton (at 16) mixes rates for 10-year notes (from Mr. Williams' Direct Testimony at 6) with longer-term rates in a confusing

and entirely inappropriate manner. In reality, it is not clear that either Dr. Powell or Mr. Lawton gave any explicit consideration to the explicitly higher interest rates that are projected for the coming year. In fact, had either of them done a more complete analysis by testing their DCF results against risk premium data and the much higher interest rates expected for the coming year, they would have found that their recommendations do not meet a basic test of reasonableness.

As I explained in my initial testimony, state regulatory commissions around the country have recently granted ROEs that imply equity risk premiums of over 400 basis points relative to interest rates on utility debt. With long-term single-A rates projected to be in the 6.7 percent range during the coming year, a 400 basis point risk premium supports an ROE of at least 10.7 percent (6.7% interest rate + 4.0% risk premium = 10.7% ROE). These failures by Dr. Powell and Mr. Lawton to reasonably consider economic forecasts for higher interest rates are significant shortcomings in their analyses, which cause their ROE recommendations to fall well below the reasonable cost of equity for PacifiCorp.

Moreover, under present market and utility industry conditions, Dr. Powell's and Mr. Lawton's applications of the DCF model inherently understate investors' long-term growth expectations. This feature contributes directly to their low DCF estimates of ROE. With current relatively high utility stock prices and with continuing efforts in the utility industry to reduce dividend payout ratios, utility dividend yields are at historically low levels. Similarly, with high stock prices, and with interest rates expected to rise, utility analysts are not optimistic about future stock performance, and they have trimmed their growth forecasts

accordingly. This combination of historically low dividend yields and modest growth expectations produces extremely low DCF results. Had Dr. Powell and Mr. Lawton reasonably considered their own checks of reasonableness and explicitly considered higher expected interest rates, they would have seen that their ROE recommendations are unreasonably low.

Q. Should the Commission explicitly consider higher interest rates in its evaluation of ROE?

A. Yes. Performing an ROE analysis with data from the bottom of an interest rate cycle, which includes the lowest interest rates in 40 years, causes a substantial underestimation of the ROE expected by investors. I have included as Exhibit UP&L___ (SCH-1R), recent interest rate projections from *Standard & Poor's* and *Value Line.* Although these data, or projections like these, were available to Dr. Powell and Mr. Lawton when they prepared their testimony, they effectively ignored these important economic facts. The final result is an unrealistically low ROE – a result that can be avoided with an appropriate, more broadly based approach to estimating ROE.

II. <u>Rebuttal of Dr. Powell</u>

Q. Are there similarities between Dr. Powell's DCF analysis and yours?

A. Yes. In our analyses, we use the same group of comparable companies and our DCF models are mechanically similar. Dr. Powell summarizes his results on page 23. His Constant Growth DCF range is from 9.2 percent to 10.5 percent, as he disregards the unusually low outcome from the "25/75 weighting" approach. His Two-Stage DCF range is from 9.0 percent to 10.0 percent, as he again disregards

the “25/75 weighting” approach. He calls the outcome from his Market Model "unusually low" (Powell at 21) and also disregards it entirely.

Like Dr. Powell, I offer two versions of the Constant Growth model (based on different growth rate sources) and also a Two-Stage Non-constant Growth model based on *Value Line’s* very low near-term dividend projections and then a higher projected growth rate in later years. The results of my initial DCF models are shown on page one of my Direct Testimony Exhibits Schedules 3. My initial DCF range was 10.7 percent to 11.4 percent. As I will demonstrate below, the principal differences between our DCF results stem from the growth rates we used in our respective models.

Q. What does Dr. Powell’s DCF analysis show when other combinations of his growth rates are considered?

A. In my Exhibit UP&L___ (SCH-2R), I demonstrate the sensitivity of Dr. Powell’s DCF analysis to his selection and averaging of growth rates. My updates to Dr. Powell's analysis are based on two general premises: 1) Negative *Value Line* growth rates should be eliminated. It is not reasonable to expect that a company would sustain negative dividend or earnings growth into perpetuity; and 2) near-term dividend growth should not be included in the Constant Growth models. Current near-term dividend growth rates are abnormally low and are not indicative of long-term sustainable growth. Furthermore, in the Two-Stage model, Dr. Powell and I both already include low near-term dividend growth in the first stage of the Model with higher growth rates in later years.

A summary of my updates to Dr. Powell's DCF analysis is contained on page 1 of

Exhibit UP&L___ (SCH-2R). Line 1 of this Exhibit shows Dr. Powell's original results (10.0% to 10.5%) for the Constant Growth and Two-Stage Models, using the same 5.85 percent GDP growth rate he uses. The second line of Exhibit UP&L___ (SCH-2R) shows the ROE results (10.2% to 10.7%) with a 20-year GDP growth rate of 6.0 percent, as accepted by Mr. Lawton. The third line reflects the ROE range (10.5% to 11.1%) with Dr. Powell's update of the 40-year GDP growth rate (6.4%) that I used in my initial testimony.[1]

Lines 4-6 of Exhibit UP&L ___ (SCH-2R) show the revised results of Dr. Powell's Constant Growth DCF analysis if only earnings growth and GDP growth are considered. This approach is reasonable because current near-term dividend growth is abnormally low and including such low growth rates in the DCF analysis unreasonably biases the analysis downward. Because the Two-Stage model already considers low near-term dividend growth in the first growth stage, it was only run under scenarios that also included long-term GDP growth in the second growth stage. Line 4 of Exhibit UP&L___ (SCH-2R) reflects the Constant Growth DCF result if earnings growth rates from Zacks and Value Line and GDP growth of 5.85 percent (Dr. Powell's figure) are considered. Lines 5 and 6 show the same results when Mr. Lawton's and the updated 40 year GDP growth rate is used. The Constant Growth DCF model (lines 4-6) produces a range of 10.0 percent to 10.3 percent. Combining all the revised DCF results as shown in Exhibit UP&L___ (SCH-2R), Lines 9-11, produces a range of 10.0 percent to 11.1 percent, with a midpoint of 10.6 percent.

[1] My initial 40-year GDP average growth rate was 6.6%. The 6.4% rate is from Dr. Powell's recalculation of my average using additional data.

The foregoing shows that Dr. Powell's DCF analysis is quite sensitive to his particular selection of growth rate combinations and averages, and, more importantly, that his 10.0 percent recommendation is well below results he might have obtained using the very same data.

Q. Is there support for using a wider range of growth rates, beyond only analysts' estimates, when using the DCF model?

A. Yes. Although I don't disagree that analysts' 3-to-5 year forecasts may be part of the growth estimate, most regulatory economists typically consider a wider range of growth inputs. Also, as I explained previously, under present market and utility industry conditions, it appears that near-term analysts' forecasts are low relative to the longer run investor growth rate expectations, which are required for the DCF model.[2] In my Direct Testimony, in addition to Zacks and *Value Line's* earnings growth projections, I considered a forecast of long-term nominal growth in U.S Gross Domestic Product (GDP). My GDP growth forecast of 6.6 percent is based on various periodic historical growth rates in GDP from the past 40 years.

Q. Is there specific support for including GDP growth as a proxy for investors' long-term growth expectations?

A. Yes. As Dr. Powell acknowledges, in the well regarded Brigham and Gapenski *Financial Management* text, the authors offer the following in their discussion of the DCF model:

> Expected growth rates vary from company to company, but dividend growth on average is expected to continue in the

[2] The growth rate required for the traditional constant growth DCF model is investors' expected very long run growth rate in dividends per share, technically to infinity.

> foreseeable future at about the same rate as that of the nominal gross domestic product (real GDP plus inflation). On this basis, one might expect the dividend of an average, or "normal," company to grow at a rate of 6 to 8 percent a year. (Eugene F. Brigham and Louis C. Gapenski, *Financial Management Theory and Practice*, 9th ed., p. 335)

In this context, it is entirely appropriate to include longer-term, more general measures of growth that may affect investors' long-term growth rate expectations.

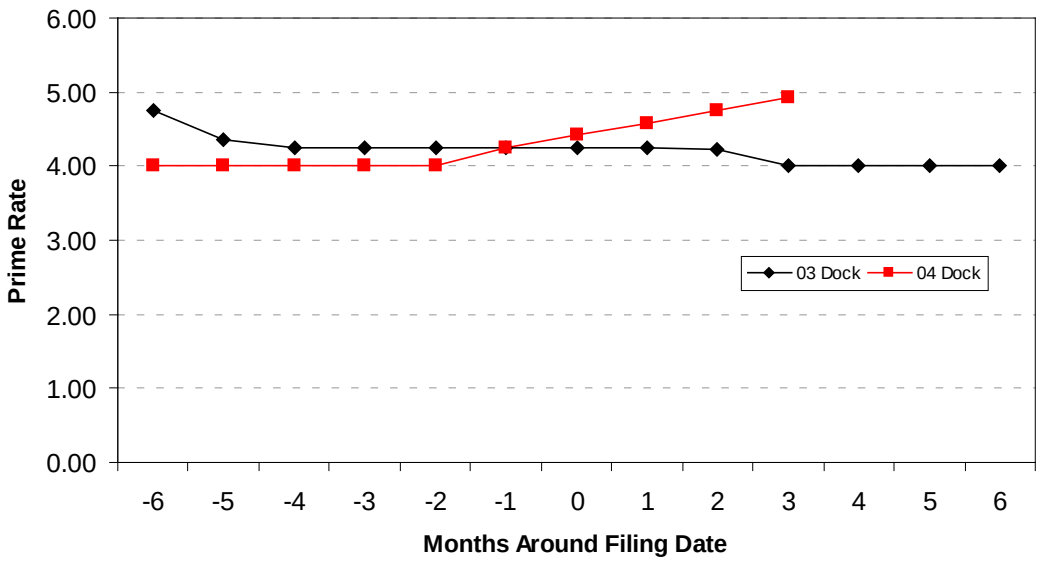
Q. Did you update Dr. Powell's CAPM analysis to include projected interest rates?

A. Yes. This result is shown on line 8 of Exhibit UP&L___ (SCH-2R). His CAPM result (shown on line 7 of Exhibit UP&L___ (SCH-2R)) is based on a 30-year Treasury bond rate of 5.05 percent. I updated his analysis using *Standard & Poor's* projected 1st quarter 2006 long-term Treasury bond rate of 5.8 percent. This adjustment increases Dr. Powell's midpoint CAPM result from 11.05 percent to 11.8 percent. As shown on lines 9-11 of Exhibit UP&L___ (SCH-2R), when the updated CAPM results are combined with the updated DCF results discussed earlier, the ROE range is 10.0 percent to 11.8 percent, with a midpoint of 10.9 percent.

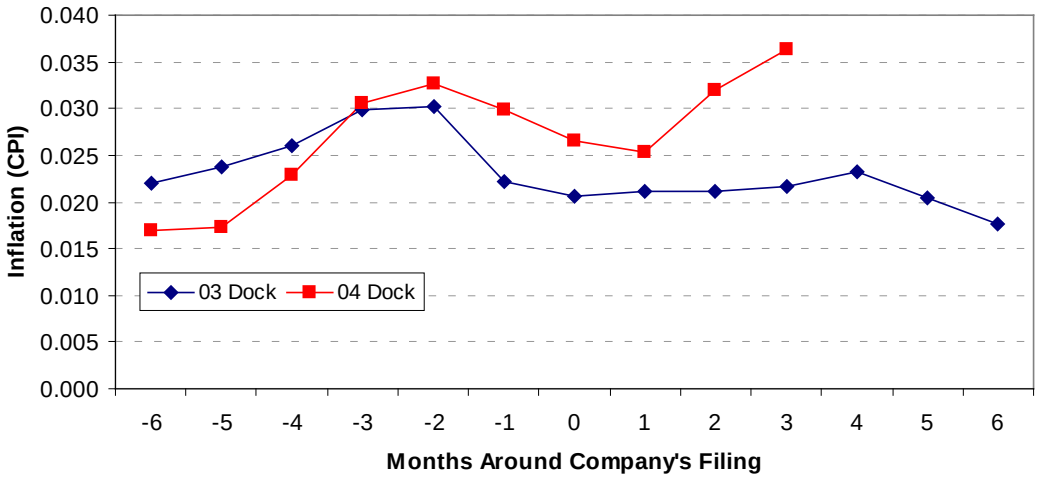
Q. Is there evidence from Dr. Powell's testimony that interest rates are increasing, especially in comparison to the mid-2003 time period when the Company's last rate case was filed?

A. Yes. Dr. Powell offers several charts that demonstrate the increasing trend in capital costs. Dr. Powell's chart data ended in October 2004, and I have added additional data available for November. The following are his updated Prime Rate and Inflation charts as originally provided on pages 28-29 of his testimony.

I have added a third chart showing the Fed Funds rate. This chart was provided by Dr. Powell in his electronic workpapers. I have included this additional chart because it emphasizes the rapid degree to which Chairman Alan Greenspan and the Federal Reserve Board are tightening short term interest rates. There have been five increases in the Fed Funds rate in 2004 alone (with the last one on December 14, 2004), and more increases are expected. All these charts clearly illustrate the higher level of short-term rates and inflation associated with the current 2004 docket as compared to the 2003 case. Economists generally expect that these increases in short-term interest and inflation rates will eventually be reflected in long-term interest rates.



Source: St. Louis Federal Reserve



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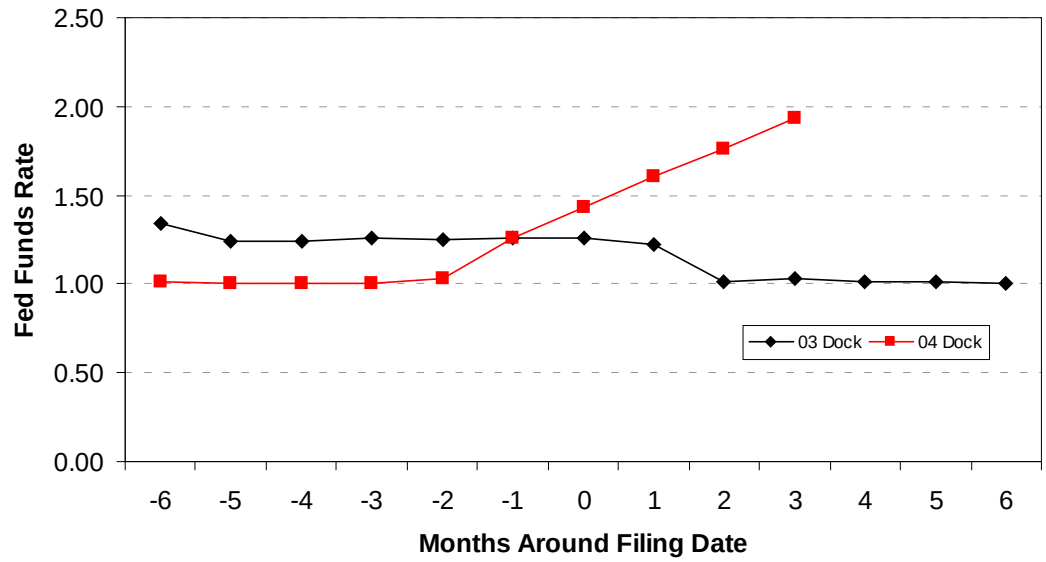

Source: St. Louis Federal Reserve

Q. Based on your analysis of Dr. Powell's DCF and CAPM estimates, what are your general conclusions and recommendations?

A. Dr. Powell's analysis appears to be mechanically correct and we have no disagreement about the comparable company group. His analysis, however, is deficient in three areas:

1) The growth rates in his DCF analysis are below reasonable estimates of long-term investor expectations;

2) He failed to reasonably consider his CAPM results as a check of reasonableness on his final DCF-based recommendation; and

3) He failed to consider explicitly the effects of higher projected interest rates in his analysis.

These deficiencies result in an unreasonably low estimate of ROE.

Q. Beginning at page 7, Dr. Powell begins a 10-page discussion criticizing your use of the GDP growth rate in portions of your DCF analysis. How do you respond to Dr. Powell's criticisms?

A. Unfortunately, a significant portion of Dr. Powell's criticism may have been caused by a mistake I made in the last page of my Exhibit UP&L___ (SCH-3) and in responding to DPU Data Request No. 4.27. In the exhibit, I stated that the 6.6 percent long term GDP growth was the "Average of GDP Growth during the last 10 year, 20 year, 30 year, and 40 year growth periods." In the response to DPU Data Request No. 4.27, I provided a spreadsheet file that contained GDP data only for the time period 1961-2001. As Dr. Powell pointedly noted in his criticism, data through 2003 were available when I prepared my testimony in this case; and, most important, I used those more recent data in my 6.6 percent estimate of GDP growth. In fact, a printed copy of the correct GPD data through 2003, showing the 6.6 percent average GDP growth rate, was included in my workpapers when the case was filed. The Company has also now provided a corrected response to DPU 4.27, and I have included the corrected response as Exhibit UP&L___ (SCH-3R).

As shown in Exhibit UP&L___ (SCH-3R), my 6.6 percent GDP growth estimate

is the simple average of six overlapping time periods for 1947-2003 (all the GDP data available from the St. Louis Federal Reserve Bank data base). I averaged the data for 10 years, 20 years, 30, years, 40 years, 50 years, and for the entire 56-year period. My 6.6 percent estimated growth rate is the average of these six averages. This weighted average approach gives more weight to the more recent years because the data for those years are repetitively included in each longer averaging period. This estimation approach is often used under the assumption that more recent data have more effect on current expectations, but that more distant time periods should not be ignored entirely.

Dr. Powell also criticizes my 6.6 percent GDP growth rate by noting that I have used only a 20-year average in some prior cases. Dr. Powell is correct in his observation about older prior cases, but he is incorrect in his refusal to include GDP data from more than 20 years ago. The period that Dr. Powell selects (1984-2003) is renowned for its declining and low inflation rates and for its relative stability. I expanded my data period to include a broader range of possible economic outcomes because the potential for more volatile outcomes clearly may affect investors long-term growth rate expectations, as required for the DCF model.

This feature is prominent in a recent *BusinessWeek* article by the Dean of Columbia Business School, Glenn Hubbard. Dean Hubbard offered the following:

> The Federal Reserve's 20-year successful effort to rid the U.S. economic system of inflation is something Americans should value. … That inflation is associated with macroeconomic instability *is clear in the memories* of those who lived through the

> Great Inflation of the 1960s, '70s, and early '80s. … High inflation acts as a tax on investment, raising rates, increasing the cost of equity-financed investment, and reducing corporate equity values. (A Gold Medal for the Fed's Inflation Fighters, *BusinessWeek*, January 10, 2005, p. 28, emphasis added.)

Dr. Powell's statistical analysis (at page 10) only serves to reinforce the fact that his 20-year time period is significantly different from other kinds of economic conditions that reasonably should be included in gauging investors' long-term expectations. When a more reasonable view of investors' long-term expectations is included, Dr. Powell's DCF results are considerably higher than the low 10 percent ROE he recommends.

III. Rebuttal of Mr. Lawton

Q. What are your general comments from your review of Mr. Lawton's testimony?

A. Mr. Lawton's testimony is deficient and it does not support an ROE as low as the 10.0 percent he recommends. In fact, Mr. Lawton's only independent ROE analysis is a brief presentation of the traditional constant growth DCF model (at pages 7-10), which produces an ROE range of only 9.2 percent - 9.3 percent. The remainder of his ROE testimony is rebuttal of my analysis based on his so called "corrections" to my methodology and input assumptions.

Even with Mr. Lawton's inappropriate changes to my models, however, the table on page 22 of his testimony is telling. In the right-hand column of that table, Mr. Lawton shows that, even with his best efforts to "correct" my analysis, the results produce an average ROE of 10.575% (10.6% rounded). But for his insistence on including the unreasonably low 9.2 percent constant growth DCF, with his own inputs, Mr. Lawton's "corrections" to my analysis produce an ROE of 10.6

percent. This result is similar to the bottom of the DCF range I presented in my initial testimony, and, along with the deficiencies in Dr. Powell's analysis I discussed previously, it shows that the CCS and DPU 10 percent ROE recommendations are unreasonably low. Given these results, the CCS and DPU should have supported, at a minimum, the 10.7 percent ROE established in the Company's 2003 case.

Q. How does Mr. Lawton develop his independent ROE estimate?

A. Mr. Lawton's sole independent ROE estimate is based on the traditional dividend yield plus constant growth DCF model. He describes his analysis on pages 7-10 of his testimony. He uses a 6-week average of prices and calculates a comparable group "base" dividend yield of 4.3 percent to 4.4 percent. He later increases the base yield by one-half the growth rate to produce a final dividend yield of 4.4 percent to 4.5 percent. For his growth rate estimate, he reviews earnings data and 3-to-5 year projections from *Value Line* and Zacks as well as a 3-to-5 year "b times r" sustainable growth projection. From this data he selects a growth rate range of 4.5 percent to 4.8 percent, which, with his final dividend yields, produces an ROE range of 8.9 percent to 9.3 percent. At page 10, line 10, he states that the resulting ROE is 9.2 percent to 9.3 percent, which apparently he calculates by adding his dividend yields (4.4%-4.5%) to the high end of his growth rate range (4.8%).

Q. Is Mr. Lawton's DCF analysis an adequate basis for estimating PacifiCorp's ROE?

A. No. It does not appear that Mr. Lawton places much weight on his own DCF

analysis. In fact, other than redoing my constant growth analysis with a slightly lower growth rate, the remainder of his ROE testimony focuses on my alternative DCF and risk premium models. As I noted above, from these models with his own input assumptions, Mr. Lawton produces a so-called "Hadaway Updated" average ROE of 10.6 percent (Lawton at 22, Table 5). Mr. Lawton creates the 10.6 percent average in his table by initially discarding the 9.2 percent low estimate (from the constant growth model) and the 11.5 percent estimate from the Harris and Marston risk premium data. I would not disagree with Mr. Lawton's methodology to this point. However, he then returns to the 9.2 percent constant growth DCF estimate (at 23, line 25), effectively giving it equal weight with the 10.6 percent average, to rationalize his 10.0 percent recommendation. In his Table 5, if Mr. Lawton had not thrown out the low (9.2%) and high (11.5%) results, his average would have been 10.5 percent. Based on his own logic, it is inappropriate for Mr. Lawton then to use the 9.2 percent anomalous result to justify a 10.0 percent final ROE recommendation. Mr. Lawton's recommendation, based on his own input assumptions, should have been at least 10.6 percent.

Q. Beginning on page 16, Mr. Lawton criticizes your risk premium analysis saying that your projected interest rates are not appropriate and that you are inconsistent in your methodologies. How do you respond?

A. Mr. Lawton is correct that in some past cases I have used current interest rates in my risk premium analysis. However, as I explained in my direct testimony and have explained again in this testimony, I do not believe it is currently reasonable

to base an ROE estimate on recent interest rate data, which represent a 40-year low in the interest rate cycle, when consensus economic forecasts are for much higher rates in the coming year.

Much more important, however, Mr. Lawton's own interest rate analysis and his statements about inconsistency among my risk premium methods are simply wrong. At page 16, lines 11-13, Mr. Lawton states that Mr. Williams' forecasted interest rates for March 2005 and March 2006 are lower than my forecasts by about 50 basis points. He references page 6 of Mr. Williams' testimony for his data. On page 6 of Mr. Williams Direct Testimony, Mr. Williams develops projected rates for 10-year notes that PacifiCorp plans to issue. The interest rates in my risk premium analysis are for long-term debt, not 10-year notes, which easily explains the 50 basis point difference upon which Mr. Lawton chooses to focus. This 50 basis point maturity/yield differential is easily seen in the 10-year Treasury Note versus 30-year Treasury Bond interest rate projections from both the S&P and *Value Line* as shown in my Exhibit SCH-1R Although Mr. Lawton ultimately reverts to a lower historical interest rate, and ignores projected rates altogether, (at 17, line 15), had he not mismatched maturities and had he reasonably considered projected rates, his own risk premium results would have been 50 basis points higher and would have produced an ROE estimate of 10.5 percent to 11.1 percent, rather than the 10.0 percent to 10.6 percent he notes on page 17.

Mr. Lawton is also incorrect in his statement (at 16, line 18) that my risk premium analysis is inconsistent. While it is true that the Ibbotson and the Harris and

Marston risk premiums are not adjusted for the inverse relationship between risk premiums and interest rate levels, Mr. Lawton's criticism in this regard is incorrect because average interest rates in the Ibbotson data are about the same as recent rates (6.2%). Also, given the very long-term nature of the Ibbotson data (1926-2003), I have never seen any analysis that proposes to adjust that data as Mr. Lawton suggests. Finally, as Mr. Lawton is aware, I did not average in the higher Harris and Marston risk premium anywhere in my analysis. In this regard, Mr. Lawton's criticism of the Harris and Marston data is a red herring.

IV. Rebuttal of Mr. Binz

Q. What is Mr. Binz's position on PacifiCorp's allowed rate of return?

A. Other than his misleading graph of Scottish Power's stock price performance (page 10), he provides no analysis to support his recommendation that PacifiCorp's rate of return should be lowered from the 10.7 percent established in the prior case. Based on his price performance graph, Mr. Binz says that there is "circumstantial evidence that the cost of equity has fallen…." (at 11, lines 11-12)

Q. Why do you believe that Mr. Binz's graph on page 10 is misleading?

A. In that graph Mr. Binz plots what he labels as "Scottish Power" versus the Dow Jones Utility Average (DJUA) and the Value Line Utilities Index (VLUI). For Scottish Power, Mr. Binz uses the price changes of the Scottish Power American Depository Receipts (ADRs), which are denominated in U.S. Dollars and trade on the New York Stock Exchange under the symbol SPI. For the period 12/1/2003 to 12/1/2004 on Mr. Binz's graph, SPI and the DJUA increased by over 20 percent. Based on this result, he concludes that the cost of capital for Scottish

Power has declined.

Mr. Binz's analysis is misleading because *at least half* of the SPI price increase he shows is due to currency fluctuations. During the period of Mr. Binz's analysis, Scottish Power's underlying shares (which trade in the UK in British Pounds under the symbol SPW) increased by only about 10 percent. This is only half the amount that Mr. Binz claims for the SPI dollar denominated ADRs. During this period, the British Pound also increased in value against the dollar by about 10 percent, from $1.72 per Pound to $1.89 per Pound. Therefore, the dollar-denominated SPI shares in Mr. Binz's analysis (whose value is determined by the exchange ratio for SPW shares) benefited from both the 10 percent increase in underlying SPW share price plus a 10 percent increase in the value of the British Pound versus the U.S. dollar.

In Exhibit UP&L___ (SCH-4R), I present the specific data required to evaluate Mr. Binz's analysis and conclusions. Column 1 of the exhibit shows that, during the period on Mr. Binz's graph, SPW shares increased from 356.23 pence to 392.34 pence (10.14%). Column 2 shows, as noted above, that the $/£ ratio increased from $1.7209 to $1.8948 (10.11%). Column 3 shows that the SPI ADR shares used in Mr. Binz's analysis increased from $25.23 to $ 30.21 (20.13%). For comparison, column 4 shows that the DJUA increased from 253.81 to 319.68 (25.95%) during the same period. Directly contrary to Mr. Binz's claims, these data show that the underlying Scottish Power shares underperformed the DJUA by more than one-half. Such a result does not indicate that Scottish Power's cost of capital has declined. Mr. Binz's analysis and comments on ROE should be

disregarded because they are entirely misleading and based on improper comparisons.

V. Conclusion

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.