Exhibit No.___(MPG-1T)
Docket Nos. UE-050684/UE-050412
Witness: Michael Gorman

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, vs. PACIFICORP d/b/a PACIFIC POWER & LIGHT COMPANY Respondent.	)	**Docket No. UE-050684** **Docket No. UE-050412** *(consolidated)*

DIRECT TESTIMONY OF

MICHAEL P. GORMAN

ON BEHALF OF

THE INDUSTRIAL CUSTOMERS OF NORTHWEST UTILITIES

November 3, 2005

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Michael Gorman and my business address is 1215 Fern Ridge Parkway, Suite 208, St. Louis, MO 63141-2000.

Q. WHAT IS YOUR OCCUPATION?

A. I am a consultant in the field of public utility regulation and a principal in the firm of Brubaker & Associates, Inc., energy, economic, and regulatory consultants.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. These are set forth in Exhibit No.___ (MPG-2).

Q. ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A. I am appearing on behalf of the Industrial Customers of Northwest Utilities ("ICNU").

Q. WHAT IS THE SUBJECT OF YOUR TESTIMONY?

A. I will recommend a fair return on common equity and overall rate of return for PacifiCorp.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. I recommend the Washington Utilities and Transportation Commission ("WUTC" or the "Commission") award PacifiCorp a return on common equity of 9.8%. My recommended return on equity for PacifiCorp is based on constant growth Discounted Cash Flow ("DCF"), Risk Premium ("RP") and Capital Asset Pricing Model ("CAPM") analyses. These analyses estimate a fair return on equity based on observable market information for a group of publicly traded electric utility companies that proxy PacifiCorp's investment risk.

My recommended return on common equity will provide PacifiCorp an opportunity to earn a fair risk-adjusted return, maintain its bond rating, and will compensate PacifiCorp for incremental utility plant investments needed to maintain a reliable utility infrastructure.

I recommend an overall cost of capital for PacifiCorp of 8.02%. This capital structure is based on PacifiCorp's projected fiscal year ("FY") 2006 capital structure, less projected equity infusions in PacifiCorp from its parent company, PacifiCorp Holding Inc. ("PHI") that have not been made. The projected equity infusions are not needed to preserve PacifiCorp's current bond rating and preserve its ability to attract capital to meet its capital expenditure program. Indeed, credit reports indicate that PacifiCorp's actual capital structure, excluding an equity infusion, is adequate to maintain its credit rating. Further, there is no assurance that the equity infusion will actually be made, nor is there any description of how the equity infusion will be funded. As discussed later in this testimony, the proposed equity infusion will accomplish nothing more than increasing PacifiCorp's cost of capital and inflating the revenue deficiency claimed in this proceeding.

My recommended rate of return is also based on PacifiCorp's embedded cost of debt and preferred equity securities of 6.427% and 6.590%, respectively, as reflected in its filing.

Finally, in my testimony I respond to Dr. Hadaway's recommended 11.125% return on equity and demonstrate why he has significantly overstated the current market required return on equity. Indeed, the primary flaw in Dr. Hadaway's return on equity models is his exclusive use of his own projected yields on A-rated utility bonds, while

completely ignoring today's current observable yield on these utility debt securities. Dr. Hadaway's A-rated yield projection is 120 basis points higher than the current observable yield. As discussed later, current observable utility bond yields are as reliable a projection of future yields as are economist forecasts. Hence, Dr. Hadaway's use of only projected yields significantly inflates his return on equity estimates, while diminishing his ability to provide an unbiased estimate of the utilities' return on equity in this proceeding.

Also, Dr. Hadaway inflates his DCF return estimates by relying on an historical Gross Domestic Product ("GDP") growth rate, rather than the current published consensus of economists' projections of future GDP growth. The primary difference between historical growth and projected growth is the expected inflation rate. The expected inflation rate going forward is much lower than in the past, thus Dr. Hadaway's use of a long-term historical GDP growth rate overstates future GDP growth expectation and substantially inflates his DCF return estimates.

Q. WHAT IS THE IMPACT ON PACIFICORP'S CLAIMED REVENUE DEFICIENCY BASED ON YOUR RECOMMENDED OVERALL RATE OF RETURN?

A. My proposed overall rate of return of 8.02% is based on a return on equity of 9.8% and the Company's FY 2006 capital structure, excluding the projected $375 million equity infusion that has not been made. These adjustments will reduce PacifiCorp's revenue requirement by $7.9 million and reduce the claimed revenue deficiency in this proceeding by the same amount.

I. PROJECTED INTEREST RATES AND CAPITAL MARKET COSTS

Q. SHOULD THE COMMISSION FOLLOW THE LEAD OF DR. HADAWAY AND PLACE HEAVY RELIANCE ON PROJECTED INTEREST RATES AND FUTURE CAPITAL MARKET COSTS RELATIVE TO TODAY'S OBSERVABLE CAPITAL MARKET COSTS?

A. No. While projected interest rates should be given some consideration, the determination of PacifiCorp's cost of capital today should be based primarily on observable and verifiable actual current market costs. This is appropriate because projected changes to interest rates are highly uncertain and the accuracy is at best problematic. Indeed, this is clearly evident by a review of projected changes to interest rates made over the last five years, in comparison to how accurate these projections turned out to be. This analysis clearly illustrates that observable interest rates today are as accurate as are economists' consensus projections of future interest rates.

An analysis supporting this conclusion is illustrated on my Exhibit No.___ (MPG-3). On this Exhibit, under Columns 1 and 2, I show the actual market yield at the time a projection is made for Treasury bond yields two years in the future. In Column 1, I show the actual Treasury yield, and in Column 2, I show the projected yield two years out.

As shown in Columns 1 and 2, over the last five years Treasury yields were projected to increase relative to the current Treasury yields at the time of the projection. The projected yield change is shown on this Exhibit under Column 5.

In Column 4, I show what the Treasury yield actually turned out to be two years after the forecast. Under Column 6, I show the actual yield change at the time of the projections relative to the projected yield change.

As shown on this Exhibit, over the last five years economists have consistently been projecting increases to interest rates. However, as demonstrated under Column 6, those yield projections have turned out to be overstated in virtually every case. Indeed, Treasury yields have actually decreased or remained flat over the last five years, rather than increased as the economists' projections indicated.

This review of the experience with projected interest rates clearly illustrates that interest rate projection accuracy is highly problematic. Indeed, current observable interest rates are just as likely a reasonable projection of future interest rates as are economists' projections. Accordingly, while I will use projected interest rates to provide some sense of the market's expectations of future capital market costs in my models, I will not use them exclusively. Rather, my analyses will be based on the combination of current observable interest rates and projected interest rates. Thus, my analyses will capture a return on equity range reflecting a broad range of potential actual capital market costs during the period rates determined in this proceeding will be in effect.

Q. ARE THERE OTHER REASONS NOT TO PROVIDE EXCLUSIVE RELIANCE ON UNCERTAIN PROJECTED INCREASES TO INTEREST RATES?

A. Yes. The ratemaking process in itself provides utility protection against the increasing cost of capital. Indeed, if PacifiCorp's utility subsidiaries' rates of return are set based on today's market cost of capital, and capital costs increase in the future, then the utilities are free to file for a rate change to reflect higher capital costs in the future when or if costs change. Hence, the regulatory mechanism itself provides utilities a hedge against increasing capital costs.

Depriving customers of today's low cost capital market environment is prejudicial and unreasonably tilts the regulatory balance in favor of investors. Consequently, Dr. Hadaway's exclusive use of projected interest rates, which reflect a dramatic increase over current observable and real interest rates today, must be rejected.

Q. DID DR. HADAWAY USE THE LATEST AND MOST RECENT ECONOMISTS' PROJECTIONS OF FUTURE INTEREST RATES IN DEVELOPING HIS RETURN ON EQUITY RECOMMENDATION FOR PACIFICORP IN THIS CASE?

A. No. While Dr. Hadaway's testimony was filed in May, his interest rate projections from Value Line were based on a February 2005 publication. This is significant because Value Line and other economists' projections of future interest rates have declined dramatically since February 2005. Specifically, in February 2005, the Blue Chip Economic Indicators were projecting long-term Treasury yields to increase from 4.87% to 5.8% by the second quarter of 2006. In October, the Blue Chip Financial Forecast consensus projections had modified their projections and reduced the expectation of second quarter 2006 long-term Treasury yields in 2006 to 5.0%. This is a dramatic decrease in projected interest rates.

II. PACIFICORP SUMMARY

Q. PLEASE DESCRIBE PACIFICORP'S CAPITAL RESOURCES AND CREDIT QUALITY.

A. In a credit report, Standard & Poor's ("S&P") summarizes PacifiCorp and its relationships with its affiliates very well.[1/] The following are statements made by S&P. First, PacifiCorp was acquired by ScottishPower in 1999. Subsequent to that, ScottishPower reorganized by creating PHI as a non-operating subsidiary of ScottishPower, and PHI now owns PacifiCorp's common stock and three other

[1/] Exhibit No.___(MPG-19).

unregulated energy companies: PPM Energy (an owner of non-regulated generation and gas storage assets), Pacific Klamath Energy (provider of operation and maintenance services to a municipal generation facility), and PacifiCorp Group Holdings ("PGHC") (a capital service company).

PacifiCorp's credit rating is reviewed and established in consolidation with its ultimate parent company, ScottishPower, and all non-regulated affiliates. PHI's capital consists of publicly traded debt of PacifiCorp and inter-company notes. There is no external debt at PHI.

Standard & Poor's states that while PHI does not have any publicly traded debt, it has assigned PHI a credit rating of A- based on ScottishPower's rating, which is needed in order for PHI to provide parent guarantee for trading activities at PPM Energy.

III. PACIFICORP'S PROPOSED CAPITAL STRUCTURE

Q. WHAT CAPITAL STRUCTURE IS THE COMPANY REQUESTING TO USE TO DEVELOP ITS OVERALL RATE OF RETURN FOR ELECTRIC OPERATIONS IN THIS PROCEEDING?

A. The Company's overall rate of return was developed using the capital structure described at page 3 of PacifiCorp witness Mr. Bruce Williams' testimony. Mr. Williams is proposing a projected capital structure for fiscal year 2006 (the 12-month period ending March 31, 2006). PacifiCorp's forecasted capital structure reflects the expectation that PHI will make four quarterly equity infusions in PacifiCorp of $125 million starting in June 2005, which increases PacifiCorp's common equity balance by $500 million at the end of FY 2006. Further, PacifiCorp's projected capital structure reflects long-term maturity and principal amortization in the addition of long-term debt Mr. Williams

determined to be needed. Mr. Williams' proposed capital structure is shown below in Table 1.

TABLE 1

PacifiCorp's Proposed Capital Structure (March 31, 2006)

Description	Percent of Total Capital
Common Equity	49.50%
Debt	49.40%
Preferred Stock	1.10%
Total Financial Capital Structure	100.00%

Source: Exhibit No. ___ (BNW-1T) at 3.

At pages 4 and 5 of his direct testimony, PacifiCorp witness Williams states that PacifiCorp's proposed capital structure was determined based on the amounts the Company believes are necessary to support the Company's capital requirements and maintain its current "A-" credit rating.[2/]

Q. IS MR. WILLIAMS' PROPOSED CAPITAL STRUCTURE REASONABLE TO SET PACIFICORP'S RATE OF RETURN?

A. No. Mr. Williams' proposed capital structure unreasonably increases PacifiCorp's rate of return and income tax expense and hence the claimed revenue deficiency. Mr. Williams' proposed capital structure should be rejected for several reasons. First, it is not known and measurable whether PHI will actually make the full $500 million equity infusions. Hence, the Company's proposed adjustment to its cost of service is not based on known and measurable changes to its costs.

2/ Exhibit No.___ (BNW-1T) at 4-5.

Second, a review of PacifiCorp's credit reports indicates that the capital structure existing at year end 2004 is adequate to support PacifiCorp's current "A-" bond rating. Consequently, Mr. Williams' proposal to increase PacifiCorp's common equity ratio is not necessary in order to preserve this bond rating.

Third, for reasons discussed below, if there is a bona fide commitment by PHI to make equity infusions, there must also be a clear demonstration from PHI that it will fund the equity infusions by common equity contributions to PHI from ScottishPower, and in turn ScottishPower will fund equity contributions to PHI with equity funding at ScottishPower. PHI is not publicly traded and cannot access equity capital on its own. If PHI funds the equity infusions in PacifiCorp by issuing more debt, PacifiCorp's credit rating will likely not be enhanced, because the increased PHI debt will offset the reduction to PacifiCorp's debt.

Stated differently, an increased equity ratio of PacifiCorp will not improve its credit rating, unless there is a comparable increase in the consolidated common equity ratio of ScottishPower and its affiliate companies. This is true because Standard & Poor's and Moody's have clearly stated that PacifiCorp's overall credit standing is based on not only PacifiCorp's credit profile, but rather the consolidated credit profile of ScottishPower and all of its affiliates.

Q. WHY DO YOU BELIEVE THE COMPANY HAS NOT SHOWN THAT ITS PROJECTED EQUITY INFUSIONS ARE KNOWN AND MEASURABLE?

A. As noted above, PacifiCorp witness Williams simply stated that he is expecting PHI to make quarterly equity infusions by the end of FY 2006. The first equity infusion of $125

million was made in June 2005. However, it is not known and measurable whether PHI will actually make the remaining three equity infusions.

Q. IS IT APPROPRIATE TO REFLECT THE EQUITY INFUSION THAT WAS MADE IN JUNE 2005 IN PACIFICORP'S CAPITAL STRUCTURE?

A. Yes. It appears that this equity infusion was indeed funded by equity capital at the parent company level. I have reached this conclusion because ScottishPower's common equity ratio in 2004 had a common equity component of 48%.[3/] Hence, making an equity infusion to increase PacifiCorp's common equity ratio to 47% appears to have been funded by equity at the parent company level.

Accordingly, I believe reflecting the June 2005 equity infusion in PacifiCorp's capital structure would be considered an equity infusion by credit analysts in a credit review of PacifiCorp. Therefore, I reflected this equity infusion that was actually made in June 2005 in my proposed capital structure for ratemaking purposes for PacifiCorp in this proceeding.

Q. WHY WILL AN INCREASED COMMON EQUITY RATIO INCREASE PACIFICORP'S REVENUE REQUIREMENT AND CLAIMED REVENUE DEFICIENCY?

A. PacifiCorp's requested revenue requirement will increase because common equity is the most expensive form of capital and is subject to income tax expense. For example, at the Company's proposed 11.125% return on equity, the revenue requirement cost of common equity is actually 17.9% on a pre-tax basis (11.125% times an income tax gross-up factor of 1.61% setting aside uncollectible expense). In comparison, the marginal cost of debt for PacifiCorp with an "A" bond rating is approximately 5.5%. Hence, common equity at

[3/] Exhibit No.___ (MPG-17) (PacifiCorp response to WUTC Staff data request ("DR") No. 87).

PacifiCorp's proposed return on equity on a pre-tax basis is approximately three times more expensive than debt capital.

PacifiCorp is proposing to increase its reliance on higher cost common equity and reduce its reliance on debt. Of course, financing with an appropriate amount of debt equity capital is necessary in order to minimize the Company's overall cost of capital, including its cost of equity. However, as noted above and described more thoroughly below, an increase in PacifiCorp's equity ratio without a comparable increase in ScottishPower's equity ratio and a corresponding reduction to the debt leverage risk of the consolidated ScottishPower Company will not likely improve PacifiCorp's credit quality and lower its cost of capital. Consequently, the Company's proposal in this proceeding will simply increase PacifiCorp's cost of capital by overweighting the capital structure with more expensive common equity capital.

Q. PLEASE EXPLAIN WHY YOU HAVE CONCLUDED THAT PACIFICORP'S CURRENT ACTUAL CAPITAL STRUCTURE WILL SUPPORT ITS CURRENT "A-" BOND RATING WITHOUT AN EQUITY INFUSION FROM PHI.

A. PacifiCorp's current capital structure and financial ratios are already adequate to support its bond rating. This is evident by review of credit rating reports on PacifiCorp and its affiliate companies.

Fitch Ratings affirmed PacifiCorp's rating stating that PacifiCorp's 2004 credit metric (or financial ratios) support its bond ratings:

> [S]tatus as a low-cost provider of electricity, service territory growth, absence of non-utility operations and credit metrics that are in-line with rating category. The ratings assume support for [PacifiCorp's] $3 billion capital spending program during fiscal 2005-2007 from its direct parent, PacifiCorp Holdings, Inc. (PHI) and reasonable

> outcomes in pending and anticipated rate cases and the multi-state process (MSP).[4/]

Standard & Poor's states in its outlook on PacifiCorp that its 2004 financial ratios support its bond rating as follows:

> The stable outlook reflects consolidated financial ratios that are adequate for the rating and steady operational and financial performance at the company's regulated subsidiaries. To maintain the rating, Standard & Poor's expects the company to produce cash flow coverage ratios commensurate with the 'A-'level-adjusted FFO interest coverage of 4.0x and adjusted FFO to debt of 20%–and to manage its U.K. generation and supply and U.S. unregulated energy management business conservatively.[5/]

Similarly, while Moody's restates concern about PacifiCorp's ability to earn its authorized return on equity, which supports the Company's financial results, Moody's notes an improving credit profile, but does not take issue with PacifiCorp's capital structure. Specifically, Moody's states as follows:

> PacifiCorp's rating outlook is negative. While the Company has been successful in garnering regulatory support throughout its six state service territory, financial results, while improving, remain somewhat weak for the current rating. Continued regulatory support should help to strengthen PacifiCorp's credit fundamentals.[6/]

In arriving at the conclusions described above, Standard & Poor's and Moody's both estimate PacifiCorp's total adjusted debt ratio (reflecting off-balance sheet debt) in the range of 55% to 60%. In the case of Standard & Poor's and Moody's, it is clear that in order to improve the balance sheet strength of PacifiCorp, there must be a consistent and comparable reduction in the overall consolidated debt leverage at ScottishPower,

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[4/] Exhibit No.___(MPG-19) at 16 (emphasis added).
[5/] Id. at 4 (emphasis added).
[6/] Id. at 19.

PHI, and PacifiCorp, in order to increase PacifiCorp's credit strength. Although this is not necessary to support its current bond rating, this type of consolidated debt reduction will be necessary in order to improve PacifiCorp's credit rating.

Q. WHY DO YOU BELIEVE THAT PACIFICORP'S CREDIT RATING IS BASED ON A CONSOLIDATED BASIS WITH SCOTTISHPOWER AND ITS AFFILIATES?

A. Credit reports clearly state that PacifiCorp and all of its affiliates, consolidated with ScottishPower, are considered in PacifiCorp's credit review. For example, Standard & Poor's states that:

> The A- corporate credit rating assigned to Scottish Power and all of its subsidiaries reflects the consolidated credit quality of the enterprise. The A- rating on PacifiCorp's senior secured debt reflects Standard & Poor's conclusion in its ultimate recovery analysis of the Company's utility operations that there is insufficient overcollateralization to notch the debt above the corporate credit rating."[7/]

Moody's also notes that PacifiCorp's credit rating is tied to ScottishPower. Moody's states that:

> The A3 senior secured rating of PacifiCorp reflects a portfolio of low-cost generating assets, an extensive transmission network, and an affiliation with parent, Scottish Power, who has implemented significant cost reductions and operational efficiencies. The rating also considers the company's ongoing efforts to raise rates in order to improve regulated returns.[8/]

As a result, because PacifiCorp's credit rating is tied to the consolidated debt leverage of ScottishPower and all its affiliates, including PHI, a proposed equity infusion from PHI to PacifiCorp to reduce debt leverage and improve credit quality must be funded by additional equity capital at the ScottishPower level. If this equity infusion is

[7/] Id. at 4 (emphasis added).
[8/] Id. at 19 (emphasis added).

funded by increasing the debt leverage at ScottishPower and PHI, it is unlikely to have a positive credit rating impact on PacifiCorp. Indeed, an increased debt leverage at ScottishPower and PHI, even with an increased common equity ratio at PacifiCorp, may negatively impact PacifiCorp's credit rating. PacifiCorp has simply not provided evidence on how PHI will fund the projected equity infusion into PacifiCorp. Consequently, there can be no clear determination whether an equity infusion, if it takes place, will positively or negatively impact PacifiCorp's credit rating.

Q. DOES PACIFICORP'S FY 2006 CAPITAL STRUCTURE, EXCLUDING THE PROJECTED EQUITY INFUSIONS THAT HAVE NOT BEEN MADE, ALREADY REFLECT A REDUCTION IN FINANCIAL LEVERAGE?

A. Yes. PacifiCorp's leverage has been decreasing, and its common equity ratio has been increasing. This is shown on Exhibit No.___ (MPG-4). As shown on this Exhibit, PacifiCorp's total common equity ratio of total capital increases from 43.0% at the end of calendar year 2002 to 43.5% by the end of calendar year 2004.

The rating agencies have noted a decrease in the adjusted debt ratio of ScottishPower and consolidated companies. Moody's estimates the consolidated capital structure of PacifiCorp and its affiliates to have decreased from over 60% in calendar year 2002 to approximately 55% by the end of 2004. Standard & Poor's also notes a decrease in the consolidated debt ratio of PacifiCorp and its affiliates between 2002 and 2004.

Hence, an increase in PacifiCorp's common equity ratio, and a decrease of its total debt ratio reflected at the end of calendar year 2004, and as reflected in its FY 2006 capital structure, appears to be consistent with the same reduction in the consolidated debt ratio for ScottishPower and its consolidated companies.

Q. PLEASE SUMMARIZE WHY PACIFICORP'S FY 2006 CAPITAL STRUCTURE, EXCLUDING PROJECTED EQUITY INFUSIONS, IS REASONABLE FOR SETTING RATES.

A. PacifiCorp's capital structure projected for FY 2006, excluding equity infusions that have not been made, is reasonable for setting rates for the following reasons:

- It has been recognized by the credit rating agencies as supportive of PacifiCorp's current bond rating.
- PacifiCorp's declining 2004 debt ratio has been mirrored by a decline to the consolidated debt ratio of ScottishPower.
- PacifiCorp's FY 2006 common equity ratio is comparable to the common equity ratio of the comparable utility groups that I would use to estimate PacifiCorp's current market required return on common equity, as discussed below.

Q. PLEASE COMPARE THE COMMON EQUITY RATIO YOU PROPOSE TO THE COMMON EQUITY RATIO OF THE COMPANIES IN YOUR COMPARABLE GROUP.

A. The utility group I will use to estimate PacifiCorp's return on equity has an average common equity ratio in the range of 49.0% to 46.0%, which is comparable to the capital structure I propose for PacifiCorp. However, it is also evident by examination of the companies in my comparable group that a much more detailed investigation is needed to assess credit quality than a simple review of the common equity ratio. Nevertheless, on this one factor alone, PacifiCorp's FY 2006 common equity ratio, excluding a projected equity infusion, is comparable to my proxy group. Hence, the common equity ratio is not only supportive of PacifiCorp's current bond rating, but is indicative of the financial risk from the proxy groups from which I will estimate a fair return on common equity.

Q. WHAT CAPITAL STRUCTURE DO YOU RECOMMEND TO BE USED TO SET PACIFICORP'S RATE OF RETURN IN THIS PROCEEDING?

A. I recommend the Company's projected FY 2006 capital structure, excluding the projected equity infusion. This capital structure is shown below in Table 2, and in Exhibit No.___ (MPG-5).

TABLE 2

PacifiCorp's Capital Structure (FY 2006)

Description	Ratio
Common Equity	47.1%
Debt	51.8%
Preferred Stock	1.2%
Total	100.0%

Source: Exhibit No.___ (MPG-5).

This capital structure was based on PacifiCorp's projected FY 2006 capital structure, excluding three of the four $125 million equity infusions projected to be made by March 31, 2006. Only the June 2005 equity infusion has been made to date, and the remainder are not known and measurable changes to PacifiCorp's costs during the period rates determined in this proceeding will be in effect. As noted above, with the equity infusion PacifiCorp's and Scottish Power's equity ratios are comparable. Thus, I believe the adjusted capital structure will be given equal weight in a PacifiCorp credit review. Hence, I have excluded those projected equity infusions, but included the June 2005 equity infusion, in my proposed ratemaking capital structure.

Q. ARE YOU TAKING ISSUE WITH THE COMPANY'S DEVELOPMENT OF THE EMBEDDED COST OF LONG-TERM DEBT AND PREFERRED STOCK?

A. No.

IV. RETURN ON COMMON EQUITY

Q. PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED COMPANY'S COST OF COMMON EQUITY.

A. In general, determining a fair cost of common equity for a regulated utility has been framed by two decisions of the U.S. Supreme Court, in Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of West Virginia, 26 U.S. 679 (1923) and Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944).

These decisions identify the general standards to be considered in establishing the cost of common equity for a public utility. Those general standards are that the authorized return should: 1) be sufficient to maintain financial integrity; 2) attract capital under reasonable terms; and 3) be commensurate with returns investors could earn by investing in other enterprises of comparable risk.

Q. PLEASE DESCRIBE WHAT IS MEANT BY "UTILITY'S COST OF COMMON EQUITY."

A. The utility's cost of common equity is the return investors expect, or require, in order to make an investment. Investors expect to achieve their return requirement from receiving dividends and stock price appreciation.

Q. PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE THE COST OF COMMON EQUITY FOR PACIFICORP.

A. I have used several models based on financial theory to estimate PacifiCorp's cost of common equity. These models are: 1) the constant growth DCF model; 2) the bond yield plus equity RP model; and 3) a CAPM. I have applied these models to a group of

publicly traded utilities that I have determined represent the investment risk of an electric utility similar to PacifiCorp. I discuss this group of comparable utilities below.

Q. HOW DID YOU DEVELOP A DCF ANALYSIS AND RISK PREMIUM ESTIMATES FOR PACIFICORP?

A. I relied on the same comparable electric utility proxy group used by PacifiCorp witness Dr. Hadaway in his analysis of estimating PacifiCorp's return on common equity. As shown on Exhibit No.___ (MPG-6), I found this group to be reasonably comparable to PacifiCorp's total investment risk. The proxy group has an average senior security credit rating of "A-" from Standard & Poor's and "A2" from Moody's. These credit ratings are very similar to PacifiCorp's "A-" Standard & Poor's senior secured credit rating and "A3" from Moody's. Also, the group has an average business profile score from Standard & Poor's of 5, which is identical to PacifiCorp's rating. PacifiCorp's common equity ratio is 47%, as discussed above, which is reasonably comparable to the group's average common equity ratio of 49%.

For all these reasons, I find the comparable group to be a reasonable risk proxy to PacifiCorp.

IV. DISCOUNTED CASH FLOW MODEL

Q. PLEASE DESCRIBE THE DCF MODEL.

A. The DCF model posits that a stock price is valued by summing the present value of expected future cash flows discounted at the investor's required rate of return ("ROR") or cost of capital. This model is expressed mathematically as follows:

$$Po = \frac{D1}{(1+K)^1} + \frac{D2}{(1+K)^2} \ldots . \frac{D8}{(1+K)8} \quad \text{where} \qquad \text{(Equation 1)}$$

Po= Current stock price
D = Dividends in periods 1 - 8
K = Investor's required return

This model can be rearranged in order to estimate the discount rate or investor required return, "K." If it is reasonable to assume that earnings and dividends will grow at a constant rate, then Equation 1 can be rearranged as follows:

$$K = D1/Po + G \qquad \text{(Equation 2)}$$

K = Investor's required return
D1 = Dividend in first year
Po = Current stock price
G = Expected constant dividend growth rate

Equation 2 is referred to as the "constant growth" annual DCF model.

Q. PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL.

A. As shown under Equation 2 above, the DCF model requires a current stock price, expected dividend, and expected growth rate in dividends.

Q. WHAT STOCK PRICE AND DIVIDEND HAVE YOU RELIED ON IN YOUR CONSTANT GROWTH DCF MODEL?

A. I relied on the average of the weekly high and low stock prices over a 13-week period ending October 21, 2005. An average stock price is less susceptible to market price variations than is a spot price. Therefore, an average stock price is less susceptible to aberrant market price movements, which may not be reflective of the stock's long-term value.

A 13-week average stock price is short enough to contain data that reasonably reflects current market expectations, but is not too short a period to be susceptible to

market price variations that may not be reflective of the security's long-term value. Therefore, a 13-week average stock price is a reasonable balance between the need to reflect current market expectations and to capture sufficient data to smooth out aberrant market movements.

I used the most recently paid quarterly dividend, as reported in the Value Line Investment Survey. This dividend was annualized (multiplied by 4) and adjusted for next year's growth to produce the D1 factor for use in Equation 2 above.

Q. WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR DCF MODEL?

A. There are several methods one can use in order to estimate the expected growth in dividends. However, for purposes of determining the market required return on common equity, one must attempt to estimate what the consensus of investors believes the dividend or earnings growth rate will be, and not what an individual investor or analyst may use to form individual investment decisions.

Security analyst growth estimates have been shown to be more accurate predictors of future returns than growth rates derived from historical data[9/] because they are more reliable estimates, and assuming the market generally makes rational investment decisions, analysts' growth projections are the most likely growth estimates that are built into stock prices.

For my constant growth DCF analysis, I have relied on a consensus, or mean, of professional security analysts' earnings growth estimates as a proxy for the investor consensus dividend growth rate expectations. I used the average of three sources of

[9/] *See, e.g.*, David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of Estimating Share Yield," The Journal of Portfolio Management, Spring 1989.

customer growth rate estimates, including Zack's Detailed Analyst Estimates, First Call, and Reuters. All consensus analyst projections used were available on October 24, 2005, as reported on-line. Each consensus growth rate projection is based on a survey of security analysts. The consensus estimate is a simple arithmetic average or mean of surveyed analysts' earnings growth forecast. A simple average of the growth forecast gives equal weight to all surveyed analysts' projections. It is problematic as to whether any particular analyst's forecast is most representative of general market expectations. Therefore, a simple average, or arithmetic mean, analyst forecast is a good proxy for market consensus expectations. The growth rates I used in my DCF analysis are shown on Exhibit No.___ (MPG-7).

Q. WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?

A. The results of my DCF analyses are 8.9%.[10/]

Q. DO YOU HAVE ANY COMMENTS CONCERNING THE RESULTS OF YOUR DCF ANALYSIS?

A. Yes. I believe the results of my constant growth DCF analysis, and a DCF analysis in general in today's marketplace, produce reasonable results. Specifically, the consensus analysts' growth rate for my comparable group is 4.58%, which is reasonable for several factors. First, these growth rates are reasonably consistent with, but lower than, the five-year projected GDP growth of 5.5%, and higher than the projected inflation rate of 2.4%.[11/]

Second, the group yield is 4.34%. This yield is higher than current five-year Treasury bonds of 4.03%, and lower than the projected five-year T-note yield of 4.8%

[10/] Exhibit No.___ (MPG-8).
[11/] Blue Chip Economic Forecast, October 2005.

two years out.[12/] Hence, the DCF yield reasonably reflects both current and projected interest rates.

Third, dividend fundamentals of companies included in my comparable groups show strong and consistent earnings strength in relation to dividends. This indicates that current and projected earnings support dividends and permit the continued predictable growth in dividends. For example, my comparable group has a dividend payout ratio of approximately 74%, and dividend to book ratios of approximately 7.6%. The dividend payout ratio represents the percentage of earnings paid out as dividends. Traditionally, utility companies have paid out approximately 70% of their earnings as dividends. Hence, payout ratios in the 74% area suggest that the companies' earnings will support dividends and retain earnings to produce earnings and dividend growth going forward. Also, a dividend to book ratio of 7.6% indicates that these dividend payments are affordable in today's low capital cost environment. In essence, companies need to earn 7.6% on their book value in order to produce earnings to pay their dividends. With authorized returns dropping in response to significant declines in capital market costs, these low cost dividends will be supported in today's lower authorized equity returns.

V. RISK PREMIUM MODEL

Q. PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.

A. This model is based on the principle that investors require a higher ROR to assume greater risk. Common equity investments have greater risk than bonds because bonds have more security of payment in bankruptcy proceedings than common equity and the coupon payments on bonds represent contractual obligations. In contrast, companies are

[12/] Id.

not required to pay dividends on common equity, or to guarantee returns on common equity investments. Therefore, common equity securities are considered to be more risky than bond securities.

This risk premium model is based on two estimates of an equity risk premium. First, I estimated the difference between the required return on utility common equity investments and Treasury bonds. The difference between the required return on common equity and the bond yield is the risk premium. I estimated the risk premium on an annual basis for each year over the period 1986 through June 2005. The common equity required returns were based on regulatory commission-authorized returns for electric utility companies. Authorized returns are typically based on expert witnesses' estimates of the contemporary investor required return.

The second equity risk premium method is based on the difference between regulatory commission authorized returns on common equity and contemporary A-rated utility bond yields. This time period was selected because over the period 1986 through June 2005, public utility bond yields have consistently traded at a premium to book value. This is illustrated on my Exhibit No.___(MPG-9), where the market to book ratio since 1986 for the electric utility industry was consistently above 1.0. Therefore, over this time period, regulatory authorized returns were sufficient to support market prices that at least exceeded book value. This is an indication that regulatory authorized returns on common equity supported a utility's ability to issue additional common stock, without diluting existing shares. This is an indication that utilities were able to access equity markets without a detrimental impact on current shareholders.

Based on this analysis, as shown on Exhibit No.___ (MPG-10), the average indicated equity risk premium of authorized electric utility common equity returns over U.S. Treasury bond yields has been 4.99%. Of the 20 observations, 12 indicated risk premiums fall in the range of 4.4% to 5.7%. Since the risk premium can vary depending upon market conditions and changing investor risk perceptions, I believe using an estimated range of risk premiums provides the best method to measure the current return on common equity using this methodology.

As shown on Exhibit No.___(MPG-11), the average indicated equity risk premium authorized electric utility common equity returns over a contemporary Moody's utility bond yields was 3.60% over the period 1986–June 2005. The equity risk premium estimates based on this analysis primarily fall in the range of 3.0% to 4.5% over this time period.

Q. HOW DID YOU ESTIMATE PACIFICORP'S COST OF COMMON EQUITY WITH THIS MODEL?

A. I added to my estimated equity risk premium over Treasury yields a projected long-term Treasury bond yield. Blue Chip Financial Forecasts projects the 20-year Treasury bond yields to be 5.2%, and a 10-year Treasury bond to be 4.9%.[13/] Using the projected 20-year bond yield of 5.2%, and an equity risk premium of 4.4% to 5.7%, produces an estimated common equity return in the range of 9.6% to 10.9%, with a mid-point estimate at 10.3%.

I next added my equity risk premium over utility bond yields to a current 13-week average yield on "A" rated utility bonds for the period ending October 21, 2005, of

[13/] Blue Chip Financial Forecast, October 1, 2005 at 2.

5.57%. This current "A" utility bond yield is developed on Exhibit No.___ (MPG-12). Adding the utility bond equity premium of 3.0% to 4.5% to a current "A" rated bond yield of 5.6% produces a cost of equity in the range of 8.6% to 10.1%, with a mid-point of 9.4%.

My risk premium analyses produce a return estimate in the range of 9.4% to 10.3%, with a mid-point estimate of 9.9%.

VI. CAPITAL ASSET PRICING MODEL

Q. PLEASE DESCRIBE THE CAPM.

A. The CAPM method of analysis is based upon the theory that the market required ROR for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. This relationship between risk and return can be expressed mathematically as follows:

Ri = Rf + Bi x (Rm - Rf) where:

Ri = Required return for stock i
Rf = Risk-free rate
Rm = Expected return for the market portfolio
Bi = Beta—Measure of the risk for stock

The stock specific risk term in the above equation is beta. Beta represents the investment risk that cannot be diversified away when the security is held in a diversified portfolio. When stocks are held in a diversified portfolio, firm-specific risks can be eliminated by balancing the portfolio with securities that react in opposite direction to firm-specific risk factors (e.g., business cycle, competition, product mix and production limitations).

The risks that cannot be eliminated when held in diversified portfolio are nondiversifiable risks. Nondiversifiable risks are related to the market in general and are

referred to as systematic risks. Risks that can be eliminated by diversification are regarded as nonsystematic risks. In a broad sense, systematic risks are market risks, and nonsystematic risks are business risks. The CAPM theory suggests that the market will not compensate investors for assuming risks that can be diversified away. Therefore, the only risk that investors will be compensated for are systematic or nondiversifiable risks. The beta is a measure of the systematic or nondiversifiable risks.

Q. PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.

A. The CAPM requires an estimate of the market risk-free rate, the company's beta, and the market risk premium.

Q. WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?

A. I used Blue Chip Financial Forecasts' projected 20-year Treasury bond yield of 5.2%. The current 20-year bond yield is 4.51%.[14/]

Q. WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE OF THE RISK-FREE RATE?

A. Treasury securities are backed by the full faith and credit of the United States government. Therefore, long-term Treasury bonds are considered to have negligible credit risk. Also, long-term Treasury bonds have an investment horizon similar to that of common stock. As a result, investor-anticipated long-run inflation expectations are reflected in both common stock required returns and long-term bond yields. Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate) included in a long-term bond yield is a reasonable estimate of the nominal risk-free rate included in common stock returns.

[14/] Blue Chip Financial Forecast, October 1, 2005 at 2.

Treasury bond yields, however, do include risk premiums related to unanticipated future inflation and interest rates. Therefore, a Treasury bond yield is not a risk-free rate. Risk premiums related to unanticipated inflation and interest rates are systematic or market risks. Consequently, for companies with betas less than one, using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis can produce an overstated estimate of the CAPM return.

Q. WHAT BETA DID YOU USE IN YOUR ANALYSIS?

A. I relied on the group average beta estimate for the comparable group. The group average beta is more reliable than a single company beta and will, therefore, produce a more reliable CAPM estimate.

A group average beta has stronger statistical parameters that better describe the systematic risk of the group than does an individual company beta. For this reason, a group average beta will produce a more reliable return estimate.

The betas for the individual companies were based on The Value Line Investment Survey published beta for each of the companies in my comparable group.

The betas for each of my comparable group companies are shown on Exhibit No.___(MPG-13). The range of betas is 0.77.

Q. HOW DID YOU DERIVE YOUR MARKET PREMIUM ESTIMATE?

A. I derived two market premium estimates, a forward-looking estimate and one based on a long-term historical average.

The forward-looking estimate was derived by estimating the expected return on the market (S&P 500) and subtracting the risk-free rate from this estimate. I estimated the expected return on the S&P 500 by adding an expected inflation rate to the long-term

historical arithmetic average real return on the market. The real return on the market represents the achieved return above the rate of inflation.

The Ibbotson and Associates' Stocks, Bonds, Bills and Inflation 2005 Year Book publication estimates the historical arithmetic average real market return over the period 1926-2004 as 9.2%. A current five-year consensus analyst inflation projection, as measured by the Consumer Price Index, is 2.4%.[15/] Using these estimates, the expected market return is 11.9%. The market premium, then, is the difference between the 11.8% expected market return and my 5.2% risk-free rate estimate, or 6.6%.

The historical estimate of the market risk premium was also estimated by Ibbotson and Associates in the Stock, Bonds, Bills and Inflation 2005 Year Book. Over the period 1926 through 2004, Ibbotson's study estimated that the arithmetic average of the achieved total return on the S&P 500 was 12.4%, and the total return on long-term Treasury bonds was 5.8%. The indicated equity risk premium is 6.6% (12.4% - 5.8% = 6.6%).

Q. WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A. As shown on Exhibit No.___ (MPG-14), based on the prospective and historical market risk premium estimate of 6.6%, the CAPM estimated return on equity is 10.3%.

VII. RETURN ON EQUITY SUMMARY

Q. BASED ON THE RESULTS OF YOUR RATE OF RETURN ON COMMON EQUITY ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY DO YOU RECOMMEND FOR PACIFICORP?

A. Based on my analyses, I estimate an appropriate return on equity for PacifiCorp to be 9.8%.

[15/] Blue Chip Financial Forecasts, October 1, 2005 at 15.

TABLE 3

Return on Common Equity Summary

Description	Percent
Constant Growth DCF	8.9%
Risk Premium	9.9%
CAPM	10.3%

My recommended return on equity of 9.8% is at the mid-point of my estimated return on equity range for PacifiCorp of 10.3% to 9.3%. The high end of my estimated range is based on my CAPM analysis, and the low end of my estimated range is based on the average of my DCF and risk premium analyses.

VIII. FINANCIAL INTEGRITY

Q. WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT PACIFICORP'S CURRENT BOND RATING FROM S&P?

A. Yes. I have reached this conclusion by comparing the key credit rating financial ratios for PacifiCorp at my proposed capital structure and return on equity to S&P's benchmark financial ratios for an "A" rated utility and "BBB" rated utility with a business profile score of 5.

Q. PLEASE DESCRIBE S&P'S USE OF THE FINANCIAL BENCHMARK RATIOS IN ITS CREDIT RATING REVIEW.

A. S&P evaluates a utility's credit rating based on an assessment of its financial and business risks. A combination of financial and business risks equates to the overall assessment of the Company's total credit risk exposure. S&P publishes a matrix of

financial ratios that defines the level of financial risk as a function of the level of business risk.

S&P rates a utility's business risk based on a business profile score of 1, lowest risk, up to 10, highest risk. Integrated electric utilities typically have a business profile score from S&P of 4, 5 or 6.

S&P publishes ranges for three primary financial ratios that it uses as guidance in its credit review for utility companies. The three primary financial ratio benchmarks it relies on in its credit rating process include: 1) funds from operations ("FFO") to debt interest expense; 2) FFO to total debt; and 3) total debt to total capital.

Q. HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE REASONABLENESS OF YOUR RATE OF RETURN RECOMMENDATIONS?

A. I calculated each of S&P's financial ratios based on PacifiCorp's cost of service for retail Washington operations. While S&P would normally look at the total of PacifiCorp's and Scottish Power's consolidated financial ratios in its credit review process, my investigation in this proceeding is to judge the reasonableness of my proposed cost of capital for rate setting in PacifiCorp's Washington utility operations. Hence, I am attempting to determine whether the rate of return and cash flow generation opportunity reflected in my proposed utility rates for PacifiCorp will support its current grade bond rating and financial integrity.

Q. PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS FOR PACIFICORP.

A. The S&P financial metric calculations for PacifiCorp are developed on my Exhibit No.___ (MPG-15) at 1.

As shown on my Exhibit No.___ (MPG-15) at 2, based on an equity return of 9.8%, PacifiCorp will be provided an opportunity to produce a Funds From Operations ("FFO") to debt interest expense of 4.3x. This FFO to interest coverage ratio is within S&P's benchmark ratio range for an A-rated utility company, with a business profile score of 5, of 4.5x to 3.8x.

PacifiCorp's total debt ratio to total capital is 56%. This is below S&P's "A" rated utility range of 42% to 50%, but within S&P's "BBB" category of 50% to 60%.

Finally, PacifiCorp's retail operations FFO to total debt coverage at a 9.8% equity return would be 22%, which is again within S&P's financial metric range of 30% to 22% for an A-rated utility company.

Q. DID YOU REFLECT PACIFICORP'S OFF-BALANCE SHEET DEBT EQUIVALENT IN YOUR CALCULATION OF S&P'S CREDIT RATING FINANCIAL METRICS?

A. Yes. Mr. Williams estimated S&P would assign an off-balance sheet debt equivalent of $520 million to PacifiCorp's financial ratio credit metrics that were based on an S&P credit report on PacifiCorp dated May 5, 2005. This $520 million was reflected in PacifiCorp's total capitalization and embedded cost of debt and preferred equity in calculating PacifiCorp's financial metrics, a portion of which was allocated to Washington retail financial ratios in my analysis. Accordingly, this off-balance sheet debt equivalence was reflected in the construction of these financial ratios.

Q. DID YOU ALSO CONSIDER FINANCING COSTS FOR PACIFICORP WASHINGTON CONSTRUCTION WORK IN PROGRESS ("CWIP") IN THE DEVELOPMENT OF THESE RATIOS?

A. Yes. I included PacifiCorp's FY 2006 balance of short-term debt in the credit ratio metric calculations as provided in response to WUTC Staff Data Request 41.[16/]

IX. RESPONSE TO PACIFICORP WITNESS SAMUEL HADAWAY

Q. WHAT RETURN ON COMMON EQUITY IS PACIFICORP PROPOSING FOR THIS PROCEEDING?

A. PacifiCorp is proposing to set rates based on a return on equity of 11.125%. PacifiCorp's proposed return on equity is supported by its witness Dr. Samuel Hadaway's return on equity analysis. Dr. Hadaway recommends a return on equity for PacifiCorp of 11.125% based on the approximate midpoint of his DCF range of 10.7% to 11.2% and the low-end of his risk premium analysis (11.0% to 11.8%).[17/]

Q. DO DR. HADAWAY'S METHODOLOGIES SUPPORT HIS 11.125% RETURN ON EQUITY RECOMMENDATION?

A. No. As discussed below, an appropriate reflection of current market data in Dr. Hadaway's own analyses would produce model results that support a return on equity of no higher than 9.8%. This is discussed in more detail below.

Q. DO YOU HAVE ANY GENERAL COMMENTS CONCERNING DR. HADAWAY'S PROPOSED RETURN ON EQUITY FOR PACIFICORP IN THIS PROCEEDING?

A. Yes. Dr. Hadaway is rejecting viable and legitimate cost of equity estimates simply because he believes them to be too low. Specifically, Dr. Hadaway places no reliance on his own constant growth DCF model results because he claims the number is too low. He suggests that this estimate is too low based on the results of his risk premium analyses.

[16/] Exhibit No.___ (MPG-18) at 2 (PacifiCorp response to WUTC Staff DR No. 41).
[17/] Exhibit No.___ (SCH-1T) at 28.

However, there is no support for this contention. An appropriate return on equity should be based on reasoned judgment, and complete analyses including DCF and risk premium studies.

It is inappropriate for Dr. Hadaway to simply reject the results of his constant growth DCF model, particularly since that model was overstated by the use of excessive projections of GDP growth. Further, reflecting appropriate growth rates would result in his multi-stage DCF model producing results similar to his constant growth DCF model. In both cases, Dr. Hadaway's own DCF analyses suggest a return on equity of 9.3% is appropriate for PacifiCorp.

It is inappropriate for Dr. Hadaway to refuse to recognize the dramatic decline in capital costs in today's marketplace in arriving at a fair risk adjusted return for PacifiCorp.

Q. PLEASE DESCRIBE DR. HADAWAY'S METHODOLOGY SUPPORTING HIS RETURN ON COMMON EQUITY.

A. Dr. Hadaway develops his return on common equity by conducting three versions of the Discounted Cash Flow analysis and a utility risk premium analysis, and evaluating risk premium analyses conducted by Ibbotson & Associates and a study published by Harris & Marston ("H&M"). The results of his ROE analysis are shown at Page 28 of Dr. Hadaway's testimony. I have summarized Dr. Hadaway's results below in Table 4 under Column 1. Under Column 2, I show the results of Dr. Hadaway's analyses adjusted for updated data and more reasonable application of the models.

As shown below in Table 4, using updated information, more reasonable estimates of gross domestic product growth, and a better proxy of estimates of a risk

adjusted equity risk premium appropriate for PacifiCorp, Dr. Hadaway's analyses would support a return on equity for PacifiCorp of less than 9.8%. Each of Dr. Hadaway's cost of equity models will be discussed below.

TABLE 4

Summary of Hadaway's ROE Estimate

Description	Hadaway Results (1)	Adjusted Hadaway Results (2)
Constant Growth DCF – (Traditional)	9.3% - 9.5%	9.0%
Constant Growth – (GDP Growth)	11.2%	10.1%
Two-Stage Growth DCF	10.7% - 10.8%	9.8%
Estimated DCF Range	10.7% - 11.2%	9.6%
Risk Premium Utility	11.0%	9.9%
Ibbotson Risk Premium	11.2%	9.0%
Harris-Marston Risk Premium	11.8%	9.5%

Source: Exhibit No.___ (SCH-2T) at 28

Q. PLEASE DESCRIBE DR. HADAWAY'S DCF ANALYSES.

A. Dr. Hadaway's DCF analyses are shown on his Exhibit No. ___ (SCH-4), at 2-5. As shown on those Exhibits, Dr. Hadaway used growth rate projections from three sources: 1) Zack's; 2) Value Line; and 3) Dr. Hadaway's estimate of GDP growth.

Q. IN WHAT WAY DID DR. HADAWAY OVERSTATE HIS DCF RESULTS?

A. Dr. Hadaway used a GDP growth rate of 6.6% as one of three growth rates. He states that the GDP growth is based on the achieved GDP growth over the last 10, 20, 30, and 40-year periods. Dr. Hadaway's projected GDP growth rate is unreasonable. Historical GDP growth over the last 20 and 40-year periods was strongly influenced by the actual

inflation rate experienced over that time period. Over the last 20 and 40-year periods, GDP inflation has averaged 5.6% and 7.5%, respectively. The average GDP for these two periods is 6.6% and is the same rate used by Dr. Hadaway. Note, the average historical GDP growth over the last 10, 20, 30, and 40 years is 6.4%, different from Dr. Hadaway's 6.6% GDP growth figure.

Projected GDP inflation is much lower than the historical inflation used by Dr. Hadaway in his GDP estimate. A comparison of Dr. Hadaway's historic and current economists' projections of GDP growth in the next five and ten years is shown below in Table 5. As evident in the table below, Dr. Hadaway's nominal GDP inflation factor of 6.6% reflects real GDP of 3.2% and an inflation GDP of 3.3%. Current economists' projections of nominal GDP include GDP inflation and real GDP expectations over the next five and ten years of 3.2% and 2.2%, respectively.

As is clearly evident in the table below, Dr. Hadaway's historical GDP reflects historical inflation, which is much higher than, and not representative of, expected forward-looking inflation.

TABLE 5

GDP Projections

	GDP Inflation	Real GDP	Nominal GDP
Hadaway	**3.3%**	3.2%	6.6%
Current 5-Year Projection	**2.2%**	3.2%	5.5%
Current 10-Year Projection	**2.3%**	3.2%	5.5%

Source: Blue Chip Economic Forecast, October 10, 2005, and review of economic analyses.

Dr. Hadaway's 6.6% nominal GDP growth is not reflective of consensus economists' future GDP growth and inflation expectations.

Q. HOW WOULD DR. HADAWAY'S DCF ANALYSES CHANGE IF AN INDEPENDENT AND MARKET-BASED GDP GROWTH RATE IS INCLUDED IN HIS ANALYSIS?

A. As shown on Exhibit No.___(MPG-16) at 1, I updated Dr. Hadaway's DCF analyses using the published consensus economists' five to ten year projected GDP growth rate of 5.5%. Using this consensus projected GDP growth rate reduces his constant growth DCF result from 9.3% to 9.0%, his long-term GDP growth rate from 11.2% to 10.1%, and his two-stage growth DCF model from 10.8% to 9.8%. The average of these three DCF models is 9.6%, very similar to my recommended return of 9.8%.

Q. PLEASE DESCRIBE DR. HADAWAY'S UTILITY RISK PREMIUM ANALYSIS.

A. Dr. Hadaway's utility bond yield versus authorized return on common equity risk premium is shown on Exhibit No.___(SCH-5) at 1. As shown on this Exhibit, Dr. Hadaway compares the contemporary Moody's average bond yield for utility companies and the authorized regulatory commission return on common equity over the period 1980 through 2004. Based on this analysis, Dr. Hadaway estimates an average indicated equity risk premium over contemporary utility bond yields of 3.01%.

Dr. Hadaway then adjusts this average equity risk premium using a regression analysis based on an expectation that there is an ongoing inverse relationship between interest rates and equity risk premiums. Based on this regression analysis, Dr. Hadaway increases his equity risk premium from 3.01%, as reflected in his analysis, up to 4.25%. He then adds this inflated equity risk premium to a projected "A" bond yield of 6.7% to produce a return on equity of 10.95% for PacifiCorp.

Q. IS DR. HADAWAY'S UTILITY BOND RISK PREMIUM ANALYSIS REASONABLE?

A. No. Dr. Hadaway has unreasonably attempted to create a forward-looking specific point risk premium estimate using this historical data. This is not reasonable because the data and model are not this precise. For example, interest rate volatility and inflation uncertainty in the 1980s and early 1990s is not reasonably representative of interest rate volatility and inflation outlooks currently and going forward. Inflation volatility or uncertainty over this historical time period had an impact on utility bond yields, valuations, and equity risk premiums. This inflation volatility, however, is not characteristic of the current economy or capital markets. The only reasonable interpretation of Dr. Hadaway's analysis is developing a general range of equity risk premiums.

Q. IS IT APPROPRIATE TO USE ONLY FORECASTED INTEREST RATES IN A RISK PREMIUM ANALYSIS AS DR. HADAWAY HAS DONE?

A. No. As indicated above, the accuracy of projecting interest rates is highly problematic. Indeed, while interest rates have been projected to increase over the last five years, those increased interest rate projections have turned out to be wrong and interest rates have either stayed flat or have declined. Accordingly, Dr. Hadaway's analysis should be performed based on current interest rates, with some consideration given to the possibility of increased interest rates.

In significant contrast, Dr. Hadaway has completely ignored current real interest rates observable today, and has relied only on his own estimate of a projected interest rate. Also importantly, Dr. Hadaway's projected interest rate is not transparently developed in his testimony, and the accuracy is highly questionable. Dr. Hadaway is

projecting interest rates on A-rated utility bonds to increase from approximately 5.5% to 6.7%. This dramatic increase in interest rates is not consistent with consensus economists' projected increases to interest rates, and likely does not reflect overall market expectations.

Q. DOES DR. HADAWAY'S RISK PREMIUM ANALYSIS SUPPORT A RETURN ON EQUITY OF 10.95% IN THIS PROCEEDING?

A. No. His equity risk premium estimate of 4.25% is overstated, and he applies this inflated premium to an inflated "A" rated utility bond yield. If Dr. Hadaway's inflated equity risk premium were applied to the current cost of an A-rated utility bond of 5.6%, it would produce an indicated return on equity for PacifiCorp of less than 9.85%. This is a similar result produced by my risk premium analysis.

Hence, Dr. Hadaway's projection indicates that "A" utility bond yields would increase between the time he filed his testimony and the time rates in this proceeding would go into effect. However, interest rates on "A" utility bonds have actually declined during this time period. Consequently, it is appropriate to give significant weight to observable current actual yields on A-rated utility bonds when developing a return on equity for PacifiCorp. Such an analysis indicates a 9.85% return on equity.

Q. DID DR. HADAWAY PERFORM ANY TESTS OF HIS RISK PREMIUM ANALYSIS RESULTS?

A. Yes. Dr. Hadaway compared his utility risk premium analysis to studies performed by Ibbotson & Associates and H&M. Dr. Hadaway states that Ibbotson & Associates studied the return on common stocks versus corporate bonds for the period 1926 through 2003. The Ibbotson study found that the arithmetic mean risk premium was 6.2%, and

the geometric mean return was 4.5%. He states that using the geometric mean return and a debt cost of 4.5% would produce an indicated equity return of 11.2%.[18/]

Dr. Hadaway discusses the H&M study stating that it looked at the equity premium over U.S. Government bonds of 6.47%, and the equity risk premium of common stocks over corporate bonds to be 5.13%. Dr. Hadaway finds that the H&M study would support an equity risk premium over an A-rated corporate debt of 11.83% (6.7% debt cost and 5.13% risk premium).[19/]

Q. DO THE INDICATED RISK PREMIUM RESULTS FROM THE IBBOTSON & ASSOCIATES AND H&M STUDIES SUPPORT A RETURN ON COMMON EQUITY FOR PACIFICORP OF 11.8% AND 11.2% AS ESTIMATED BY DR. HADAWAY?

A. No. The Ibbotson & Associates and H&M studies are based on common equity returns and equity risk premiums for the overall market. Both of these studies are based on the returns for the S&P 500. Dr. Hadaway did not, and cannot, show that the overall market risk is comparable to PacifiCorp's risk as a regulated electric utility.

In fact, it is widely recognized that electric utility risk is considerably lower than that of the overall market. This is evident by a review of the beta coefficients measured by Value Line for utility companies. As I noted above with respect to my CAPM analysis, utility company stock market risk is approximately 77% of that of the overall market. Hence, while the equity risk premiums derived from these two studies may be appropriate for the overall market, they overstate significantly a reasonable equity risk premium for a low risk regulated electric utility such as PacifiCorp. Therefore, Dr.

[18/] Exhibit No.___ (SCH-1T) at 26-27.
[19/] Id. at 27.

Hadaway's use of the Ibbotson and H&M studies' equity risk premiums to produce a return on common equity for PacifiCorp is unreasonable and should be rejected.

Q. CAN THE RISK PREMIUM STUDIES PUBLISHED BY IBBOTSON AND H&M BE USED TO DEVELOP A COMMON EQUITY ESTIMATE FOR PACIFICORP?

A. Only generally. By recognizing PacifiCorp's much lower risk than that of the overall market, the equity risk premiums developed by Ibbotson and H&M, of 4.5%, and 5.13%, should be adjusted by a factor of approximately 77%. This 77% represents the current estimate of a utility beta as published by the Value Line Investment Survey. Using a 77% adjustment factor to reflect PacifiCorp's higher than market risk, these studies' equity risk premiums adjusted for the lower risk would be reduced to 3.5% (4.5% * 77%) in the case of Ibbotson, and 4.0% (5.13% * 77%) in the case of H&M. Comparing a 3.5% and 4.0% equity risk premium to the current cost of "A" rated electric utility bond of 5.5% would indicate a return on common equity of 9.0% to 9.5%.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.