

1 **Introduction and Purpose of Testimony**

2 **Q. Are you the same Samuel C. Hadaway who submitted direct testimony in this**
3 **proceeding?**

4 A. Yes.

5 **Q. What is the purpose of your rebuttal testimony?**

6 A. The purpose of my rebuttal testimony is to respond to the rate of return on equity
7 (ROE) recommendations offered by Washington Utilities and Transportation
8 Commission Staff (Staff) witness Mr. Kenneth L. Elgin and Industrial Customers
9 of Northwest Utilities (ICNU) witness Mr. Michael P. Gorman. In my analysis, I
10 will demonstrate that their rate of return recommendations are not consistent with
11 the ongoing equity market volatility or the continuing financial distress that the
12 U.S. economy is undergoing. I will also respond to the other witnesses'
13 comments on the methodology I used in my direct testimony to estimate
14 PacifiCorp's cost of equity and I will update my ROE analysis for current market
15 costs and conditions.

16 **Review of Other Parties' Recommendations**

17 **Q. What are the parties' ROE recommendations?**

18 A. Messrs. Elgin and Gorman both recommend an ROE of only 9.5 percent. As I
19 will explain in my updated ROE analysis, the Company's initially requested 10.6
20 percent ROE request remains well supported by my updated DCF analysis.
21 Although my risk premium results are lower, I discount those results due to the
22 ongoing equity market turmoil and the artificially low interest rates that are the

1 result of the government's expansionary monetary policy, which I will discuss
2 later in this testimony.

3 **Q. What is your general assessment of the other parties' ROE**
4 **recommendations?**

5 A. Their recommendations are well below PacifiCorp's market cost of equity capital.
6 Their recommendations are much lower than recent allowed ROEs for other
7 electric utilities in the State of Washington and around the country. I will show
8 that their analyses and recommendations are faulty because they are based on
9 negatively biased model inputs and they fail to reasonably consider the ongoing
10 effects of the recent financial crisis. Additionally, I will provide updated data and
11 analysis, which show that PacifiCorp's current cost of equity is in the range of
12 10.3 percent to 10.8 percent. These factors demonstrate that the other parties'
13 ROE recommendations are unreasonably low.

14 **Q. Why are the other parties' ROE recommendations not consistent with**
15 **current capital market conditions and below the reasonable range?**

16 A. Contrary to the other parties' apparent beliefs, the cost of equity cannot be
17 measured by simply extrapolating artificially low, government policy induced
18 interest rates to ROE. When current market conditions are more realistically
19 considered and when more plausible input assumptions are used, the other parties'
20 ROE recommendations are shown to be well below the reasonable range. Thus,
21 relative to currently low rates on U.S. Treasury securities and low yields on high
22 grade utility bonds, the cost of equity as found for other utilities has not declined
23 as much.

1 Mr. Elgin and Mr. Gorman appear to believe that the cost of equity has
2 dropped in lockstep with declining interest rates. This contention is simply
3 wrong. The most recently reported data from Regulatory Research Associates
4 shows that for the first nine months of 2010, the average allowed ROE for electric
5 utilities was 10.36 percent and the most recent contested case in Washington was
6 10.1 percent.¹

7 **Economic and Market Conditions**

8 **Q. In your direct testimony, you provided data to illustrate interest rate trends**
9 **and the spreads between U.S. Treasury bonds and single-A rated utility**
10 **bonds. Have you updated that information?**

11 A. Yes. I provide that data in Exhibit No.____(SCH-9), page 1. Table 1 below
12 summarizes the results.

¹ Regulatory Focus, Regulatory Research Associates, October 4, 2010.

Table 1
Long-Term Interest Rate Trends

Month	Single-A Utility Rate	30-Year Treasury Rate	Single-A Utility Spread
Jan-08	6.02	4.33	1.69
Feb-08	6.21	4.52	1.69
Mar-08	6.21	4.39	1.82
Apr-08	6.29	4.44	1.85
May-08	6.28	4.60	1.68
Jun-08	6.38	4.69	1.69
Jul-08	6.40	4.57	1.83
Aug-08	6.37	4.50	1.87
Sep-08	6.49	4.27	2.22
Oct-08	7.56	4.17	3.39
Nov-08	7.60	4.00	3.60
Dec-08	6.52	2.87	3.65
Jan-09	6.39	3.13	3.26
Feb-09	6.30	3.59	2.71
Mar-09	6.42	3.64	2.78
Apr-09	6.48	3.76	2.72
May-09	6.49	4.23	2.26
Jun-09	6.20	4.52	1.68
Jul-09	5.97	4.41	1.56
Aug-09	5.71	4.37	1.34
Sep-09	5.53	4.19	1.34
Oct-09	5.55	4.19	1.36
Nov-09	5.64	4.31	1.33
Dec-09	5.79	4.49	1.30
Jan-10	5.77	4.60	1.17
Feb-10	5.87	4.62	1.25
Mar-10	5.84	4.64	1.20
Apr-10	5.81	4.69	1.12
May-10	5.50	4.29	1.21
Jun-10	5.46	4.13	1.33
Jul-10	5.26	3.99	1.27
Aug-10	5.01	3.80	1.21
Sep-10	5.01	3.77	1.24
3-Mo Avg	5.09	3.85	1.24
12-Mo Avg	5.54	4.29	1.25

Sources: Mergent Bond Record (Utility Rates); www.federalreserve.gov (Treasury Rates).

Three month average is for Jul 2010 - Sep 2010.

Twelve month average is for Oct 2009 - Sep 2010.

1 The data in Table 1 vividly illustrate the market turmoil that has occurred. Over
2 the past two years, interest rates have fluctuated widely. The Federal Reserve's
3 efforts to reduce borrowing costs for banks (the Fed Funds rate) and lower rates
4 on U.S. Treasury bonds have now extended to high quality corporate borrowers as
5 well. While the effects of market turbulence may not be easily captured in
6 financial models for estimating the rate of return, equity market turbulence and
7 continuing elevated risk aversion should be considered explicitly in estimates of
8 the cost of equity capital.

9 **Q. Do the smaller spreads between yields on single-A utility bonds and U.S.**
10 **Treasury bonds mean that the markets have fully recovered from the**
11 **economic turmoil that resulted from the financial crisis?**

12 A. No. While markets have stabilized from the near-chaotic conditions that existed
13 in late 2008, investors remain concerned about high unemployment, large federal
14 deficits, and the potential for further fallout from foreclosures and other effects of
15 the financial crisis. Although it is difficult to measure these factors directly, they
16 should not be ignored as Mr. Elgin and Mr. Gorman have done.

17 **Q. What do economic and interest rate forecasts show for the coming year?**

18 A. In Exhibit No. ___(SCH-9), page 2, I provide Standard and Poor's (S&P) most
19 recent economic forecast from its *Trends & Projections* publication for September
20 2010. The S&P forecast reflects the significant economic contraction that
21 occurred in 2009, with a drop in real GDP of 2.6 percent. For all of 2010 and
22 2011, S&P forecasts that real GDP will increase by 2.6 percent and 2.4 percent,
23 respectively. While this forecast does not reflect a full "double-dip" recession for

1 the remainder of 2010 and into 2011, the lack of further expansion in 2011 is a
 2 more pessimistic outlook than S&P had previously provided. The S&P forecast
 3 now delays the resumption of more robust growth until the 3rd and 4th Quarters of
 4 2011.

5 Consistent with S&P's pessimistic outlook for the economy, its long-term
 6 interest rate forecasts have also declined. Table 2 below summarizes the interest
 7 rate forecasts:

8 **Table 2**
 9 **Standard & Poor's Interest Rate Forecast**

	Sep. 2010 Average	Average 2010 Est.	Average 2011 Est.
Treasury Bills	0.2%	0.1%	0.3%
10-Yr. T-Bonds	2.7%	3.1%	2.6%
30-Yr. T-Bonds	3.8%	4.1%	3.5%
Aaa Corporate Bonds	4.5%	4.8%	4.3%

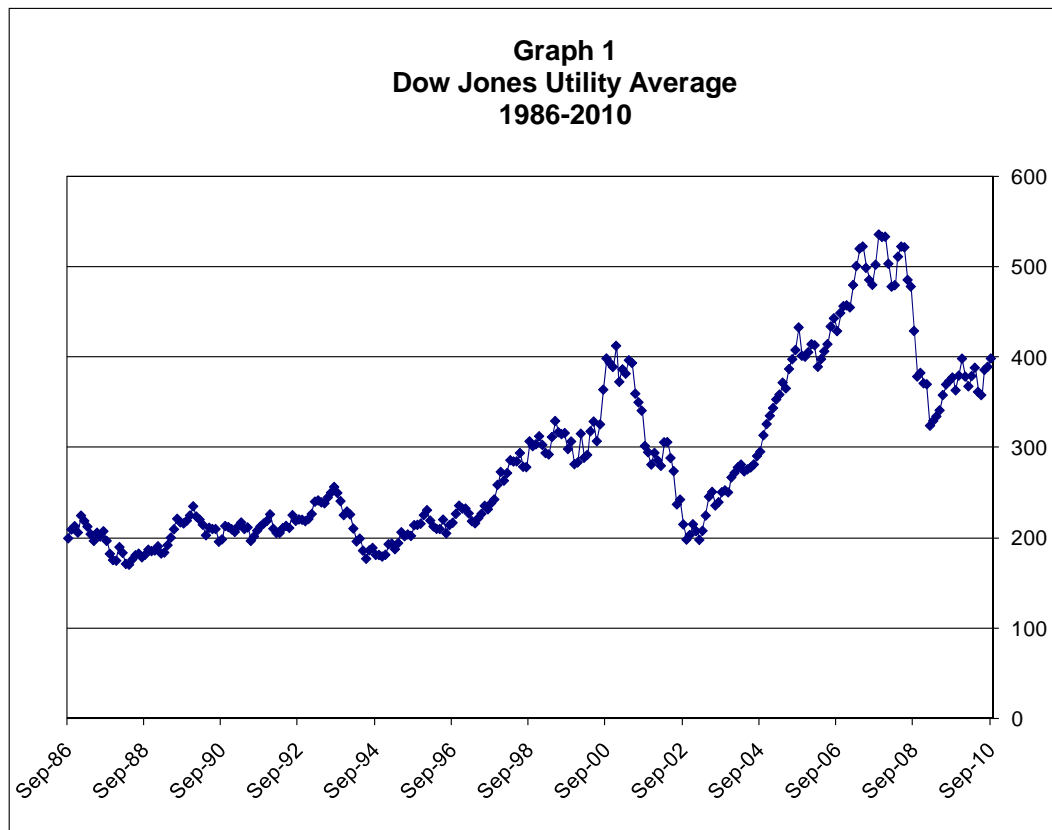
16 Sources: www.federalreserve.gov, (Current Rates). Standard & Poor's
 17 *Trends & Projections*, September 2010, page 8 (Projected Rates).

18 The data in Table 2 show that S&P expects, during 2011, that long-term Treasury
 19 interest rates will drop an additional 30 basis points from their current (September
 20 2010) low levels. Although in the turbulent market environment it is difficult to
 21 project interest rates, a much slower economic recovery and continuing
 22 government "easy money" policies are reflected in S&P's projections.

23 **Q. Have you updated the graph from your direct testimony that shows how**
 24 **utility stocks have performed during the past several years?**

25 A. Yes. Utility stock prices have continued to remain well below their pre-financial
 26 crisis levels. While prices have recovered somewhat, the Dow Jones Utility
 27 Average (DJUA) remains almost 26 percent (25.6%) below the level it attained in

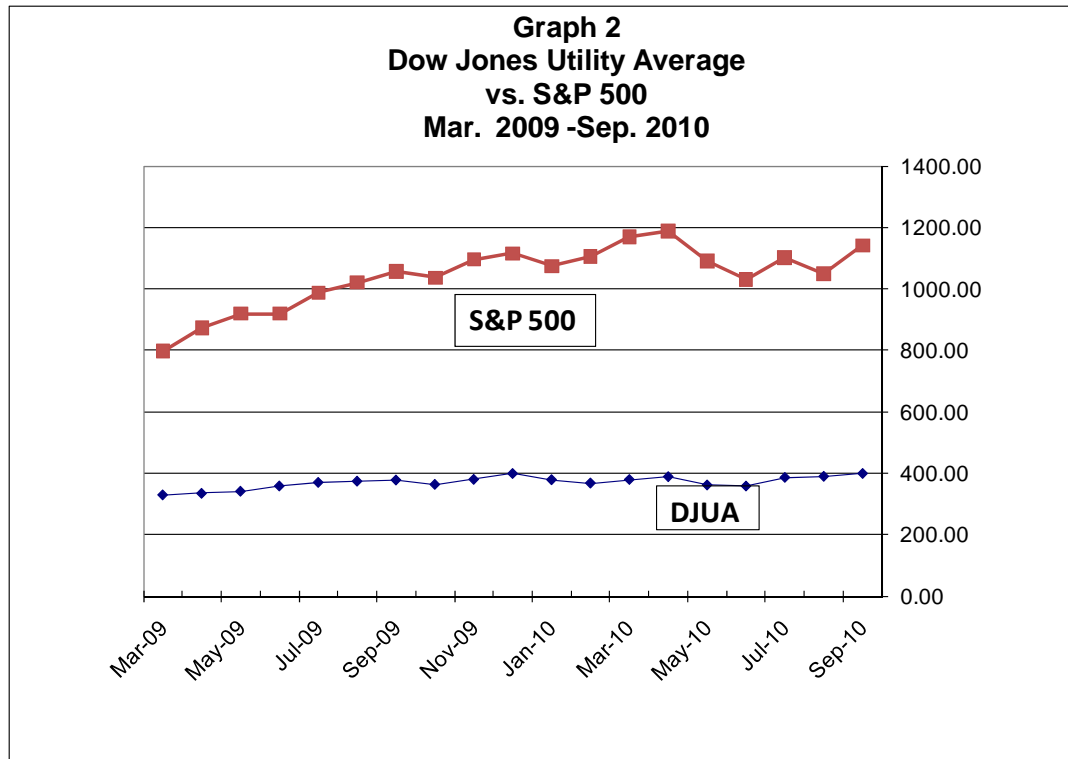
1 2007. The wider fluctuations in more recent years are vividly illustrated in the
 2 following Graph 1, which depicts DJUA prices over the past 25 years.



3 In this environment, investors' return expectations and requirements for providing
 4 capital to the utility industry remain high relative to the longer-term, traditional
 5 view of the utility industry. Increased market volatility for utility shares causes
 6 investors to require a higher rate of return.

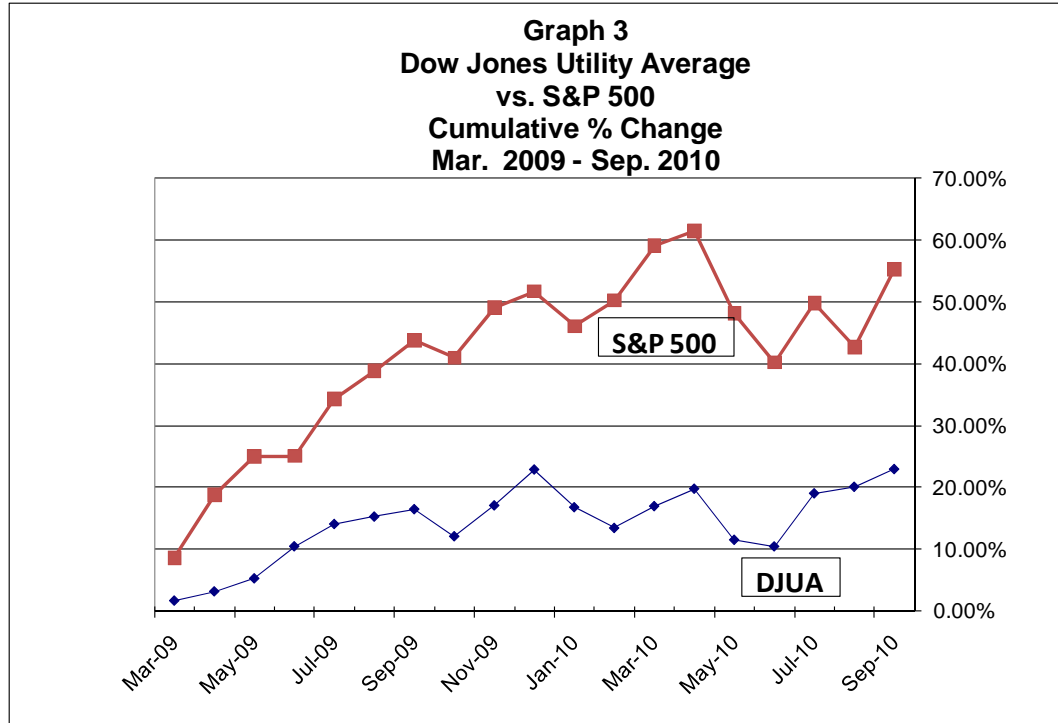
7 **Q. How have utility stocks performed relative to the overall market recovery**
 8 **since March 2009?**

9 A. Utility stock prices have lagged behind the overall market as well. Graph 2 shows
 10 the monthly levels for the DJUA versus the broader market S&P 500 index since
 11 the market lows that occurred in February and March of 2009.



1 While the S&P 500 has increased significantly since its lowest level in March
 2 2009, utility prices have remained relatively flat. This result is a further
 3 indication that the cost of equity for utility companies has not declined to the
 4 same extent that interest rates have fallen or to the same extent that the cost of
 5 equity may have come down for the broader equity market. The relatively lower
 6 prices for utility shares indicate that the cost of capital for utilities is higher.

7 Graph 3 further illustrates this result by showing the cumulative
 8 percentage change in the two equity indexes since the March 2009 lows.



1 While the S&P 500 has recovered over 55 percent (55.25%) from its March 2009
 2 lows, utility stock prices have increased by only about 23 percent (22.92%). This
 3 result again points out the market difficulties that utilities face and the continuing
 4 relatively higher cost of equity for utility companies.

5 **Q. How do the other parties' ROE recommendations in this case compare to the**
 6 **rates of return authorized by other state utility commissions around the**
 7 **country?**

8 A. They are substantially lower. Over the past five years, quarterly average allowed
 9 ROEs have generally been in the 10.4 percent to 10.5 percent range. Recently
 10 allowed average rates for integrated electric utilities have been approximately

1 10.4 percent.² Table 3 below summarizes the ROE data, including both delivery
2 and fully integrated companies:

3 Table 3
4 Authorized Electric Utility Equity Returns

5	2006	2007	2008	2009	2010
6 1 st Quarter	10.38%	10.27%	10.45%	10.29%	10.66%
7 2 nd Quarter	10.68%	10.27%	10.57%	10.55%	10.08%
8 3 rd Quarter	10.06%	10.02%	10.47%	10.46%	10.27%
9 4 th Quarter	10.39%	10.56%	10.33%	10.54%	
10 Full Year Average	10.36%	10.36%	10.46%	10.48%	10.36%
11 Average Utility					
12 Debt Cost	6.08%	6.11%	6.65%	6.28%	5.59%
13 Indicated Average					
14 Risk Premium	4.28%	4.25%	3.81%	4.20%	4.77%

15
16 Source: Regulatory Focus, Regulatory Research Associates, Inc., Major Rate
17 Case Decisions, October 4, 2010. Utility debt costs are the “average” public
18 utility bond yields as reported by Moody’s.

19 The 9.5 percent ROE recommended by Mr. Elgin and Mr. Gorman is in stark
20 contrast to the cost of equity capital deemed appropriate by state regulators
21 around the country.

22 **Current Deficiencies of the CAPM and Other Equity Risk Premium Model**

23 **Q. The other witnesses use the CAPM to estimate ROE. Can you explain why**
24 **the CAPM currently understates ROE and why CAPM estimates should not**
25 **currently be included?**

26 A. Yes. The CAPM requires three inputs to estimate ROE:

- 27 1) the risk-free interest rate (R_f);
- 28 2) the market risk premium for stocks relative to the risk-free rate ($R_m - R_f$); and
- 29 3) a measure of market-related, or nondiversifiable, risk (β or beta).

² See Exhibit No. ____ (SCH-9), page 3.

1 The CAPM estimate of ROE is calculated from the following equation:

$$2 \quad \text{ROE} = R_f + \beta(R_m - R_f)$$

3 Under present market conditions, and as applied by the other parties in their
4 CAPM analyses, all three of the CAPM inputs tend to understate ROE. The risk-
5 free rate, R_f , is understated because, due to the government's easy money policies
6 and investors' flight to safety, the U.S. Treasury rates used for R_f are artificially
7 low. The second input, the market risk premium ($R_m - R_f$) is also understated.

8 This is the case because the other parties base their market risk premium estimates
9 on historical data and prior academic studies that cannot possibly reflect the
10 recent market turmoil. While there is no objective source for measuring the
11 widening equity risk premium phenomenon, the volatility of utility stock prices
12 demonstrated in the graphs above are indicative of the effect. Finally, the
13 CAPM's market risk factor, β , is depressed by the relatively poor market
14 performance that utilities have provided. In this environment, CAPM and other
15 equity risk premium estimates of ROE understate the cost of equity.

16 **Q. Has the Commission acknowledged the diminished usefulness of CAPM in**
17 **current economic conditions?**

18 A. Yes. In the Commission's order in the most recent Puget Sound Energy case, the
19 Commission noted that it would accord CAPM results diminished weight in these
20 unusual financial circumstances.³

³ WUTC v. Puget Sound Energy Order No. 11 in Docket UE 090704, UG-090795 n. 369 (April 2, 2010).

1 **Q. Do many of these same issues affect traditional bond-yield plus equity-risk**
2 **premium estimates of ROE?**

3 A. Yes. Government and utility bond interest rates are typically the foundation for
4 traditional equity risk premium models. To the extent that such rates are
5 artificially reduced by the government's expansive monetary policy, risk premium
6 estimates of ROE will be understated. The wide divergence between DCF model
7 results and equity risk premium results is a reflection of this condition. While
8 there is no model to measure the wider equity risk premiums that would be
9 required to balance this anomaly, it is clear that both the CAPM and traditional
10 equity risk premium models currently understate the cost of equity capital.

11 **Rebuttal of Staff Witness Elgin**

12 **Q. What is the basis for Mr. Elgin's 9.50 percent ROE?**

13 A Mr. Elgin relies primarily on the traditional constant growth DCF model. As a
14 check on his DCF results, he also performs CAPM and risk premium analyses.
15 (Elgin Direct at 6, lines 10-20.) From his DCF analysis, he finds a range of 9.0
16 percent to 9.75 percent. (Elgin Direct at 38, line 15.) His CAPM produces a range
17 of 8.3 percent to 9.7 percent, with an average of 9.0 percent, (Elgin Direct at 43,
18 lines 13-16.) but Mr. Elgin recommends against high reliance on the CAPM.
19 (Elgin Direct at 44, lines 3-5.) While he does not provide an independent risk
20 premium estimate of ROE, he concludes that his DCF range produces an
21 appropriate risk premium, relative to PacifiCorp's cost of debt, in the range of 300
22 to 375 basis points. (Elgin Direct at 46, lines 12-16.)

1 **Q. What is your general impression of Mr. Elgin’s testimony?**

2 A. I disagree with Mr. Elgin’s methods, and I especially disagree with his subjective
3 data selections. His proxy group, made up of only seven companies, is too small
4 to be statistically reliable, and, as is obvious from his own discussion, is such a
5 small group one or two companies can entirely skew the results. In fact, there is
6 no reason at all for him to claim that he has provided a carefully selected proxy
7 group, since he excluded significant portions of the data and replaced it with his
8 own subjective inputs. With such an approach, Mr. Elgin could easily have found
9 any ROE range he wanted.

10 **Q. You stated previously that the other parties’ ROE recommendations do not**
11 **adequately consider current economic conditions. What does Mr. Elgin say**
12 **about the economy?**

13 A. Mr. Elgin discusses economic conditions on pages 7-10 and advises the
14 Commission to conclude “...that recent economic and financial circumstances
15 will continue to keep capital costs low.” (Elgin Direct at 10, lines 4-5.)

16 **Q. Why do you disagree with Mr. Elgin’s conclusion?**

17 A. Mr. Elgin is essentially telling the Commission that the cost of equity has dropped
18 directly with declining interest rates. Although he notes investors’ “flight to
19 safety” into government securities and states that capital will seek higher returns
20 when investors’ “appetite for risk returns” (Elgin Direct at 9, lines 18-20), his
21 interpretation of the these effects is somewhat backwards. Part of the reason that
22 interest rates are low is because investors have withdrawn funds from the stock
23 market and invested in safer fixed income securities. Equity risk aversion

1 remains high. The tremendous stock market losses that people experienced in
2 their retirement accounts and the volatility of the equity markets in general point
3 to higher, not lower, equity costs. While continuing expansionary government
4 monetary policy has virtually eliminated interest on savings accounts, many
5 investors remain unwilling to risk further stock market losses. In this
6 environment, the equity risk premium is larger, which offsets a portion of the drop
7 in interest rates. Mr. Elgin's interpretation of economic conditions fails to include
8 this fundamental relationship, which causes him to recommend an unreasonably
9 low ROE.

10 **Q. How did Mr. Elgin select his a seven-company proxy group?**

11 A. He apparently began with my 22-company group and eliminated all but six
12 companies. He then added Avista, which is not part of my group because its
13 senior bond ratings are below single-A.

14 **Q. Do you agree with Mr. Elgin's rational for selecting a smaller group?**

15 A. No. As noted above, a small proxy group can lead to statistical concerns and, at
16 times, to criticism for selectivity bias. While I obviously do not disagree with the
17 six companies he selected from my group, I do believe that his selection criteria
18 are unnecessarily restrictive and that his inclusion of Avista is questionable.
19 PacifiCorp is a large, diverse electric utility. If its shares were publicly traded,
20 they would likely be held by the same large institutions and long-term individual
21 investors that hold most utility stocks. For this reason, most regulatory
22 economists use broadly based proxy groups with similar risks and no
23 extraordinary operating characteristics relative to the subject company. (See my

1 direct testimony at page 3 for my proxy group selection criteria.) While it is not
2 possible to pick a perfect comparable company group, Mr. Elgin ends up with too
3 small a group and offers criticisms of my group that are not major concerns to
4 investors.

5 **Q. Does ICNU witness Mr. Gorman agree with your proxy group selection?**

6 A. Yes. While Mr. Gorman and I disagree in several areas, we use the same 22-
7 company proxy group to estimate PacifiCorp's cost of capital.

8 **Q. How does Mr. Elgin determine the growth rate in his DCF model?**

9 A. Mr. Elgin provides a summary of four "adjusted" growth rates in a table on page
10 38 of his testimony. From that summary he concludes that investors can
11 reasonably expect a long-term growth in dividends in the range of 4.50 percent to
12 5.00 percent. Although Mr. Elgin discusses numerous alternatives for growth rate
13 data and claims to cite the Commission's preference for a broadly based
14 approach,⁴ his use of the data is dominated by his own subjective adjustments.

15 He begins by discussing Value Line's 6.63 percent forecasted average
16 dividend growth rate for his proxy group. He then adjusts the data for two of the
17 seven companies—first by eliminating the two highest companies altogether,
18 which reduces the group average to 4.4 percent, and in a second approach by
19 substituting lower growth rates for those companies. From these subjectively

⁴ At page 29, lines 1-2, Mr. Elgin cites the Commission's April 2, 2010 Orders in the Puget Sound Energy Dockets UE-090704 and UG-090795, ¶ 292. In that paragraph, the Commission mentions variations in growth rate estimates, but its focus is on consideration for alternative estimation methods and models. The last sentence in the paragraph says: "It is particularly important to take multiple methods and models into account in the present circumstances of financial turmoil that may affect the input values and assumptions used in each method." Later, in ¶ 301, the Commission determined Puget Sound Energy's cost of equity to be 10.1 percent.

1 adjusted results, he concludes that “a reasonable expectation” for dividend growth
2 for his group is 4.75 percent (Elgin at 31, lines 3-4.), versus the 6.63 percent
3 average from Value Line’s reported data.

4 Next he reviews Value Line’s forecast for book value growth and obtains
5 a group average of 4.14 percent. He notes that the estimate for Portland General
6 is “extremely low” (2.5%) and determines that without Portland General the
7 average would be 4.41 percent. From this result, he concludes that growth in
8 book value should be no more than 4.50 percent. While this upward adjustment
9 might seem reasonable or even generous on Mr. Elgin’s part, it is not. In fact, had
10 he simply averaged Value Line’s unadjusted dividend growth with Value Line’s
11 unadjusted book value growth, the result would have been 5.39 percent ($6.63\% +$
12 $4.14\% / 2 = 5.39\%$), which is well above his adjusted estimates for either dividend
13 growth or book value growth.

14 For his third growth rate, Mr. Elgin uses Value Line’s “b times r”
15 (earnings retention rate “b” times earned rate of return on equity “r”) data. For
16 IdaCorp and Portland General, he determines that the projected “r” values, at 7.5
17 percent and 8.5 percent, respectively, are too low. He then replaces those values
18 with a “floor” of 10.0 percent. He also determines that DPL, Inc.’s forecasted “r”
19 value at 28 percent is too high and also adjusts that value down to 10.0 percent.
20 From these adjusted data, and further adjustment of Avista’s results, he
21 determines that a “b times r” growth rate of 5.0 percent is reasonable.

1 **Q. Did you examine the effect of Mr. Elgin’s adjustments to the “b times r”**
2 **data?**

3 A. Yes. Mr. Elgin provided workpapers which contain PDF copies of his data
4 sources and hand-written calculations that apparently are the only calculations he
5 provided to support his conclusions.⁵ On page 17 of those workpapers (see
6 Exhibit No. ___(SCH-10), page 1), he shows the “b times r” results. In those
7 calculations, he appears to have adjusted the “r” values for four of the seven
8 companies to reach the conclusion that “b times r” growth should be 4.75
9 percent.⁶ In addition to these adjusted “b times r” values, he also included a
10 further adjustment for Avista based on an assumed dividend payout ratio of 60
11 percent instead of the payout forecasted by Value Line. With this further
12 adjustment, or with the exclusion of Avista altogether, he concludes that a “b
13 times r” rate of 5.0 percent is appropriate for the group.

14 **Q. What would Mr. Elgin’s average “b times r” growth rate have been if he had**
15 **not adjusted the data?**

16 A. In Table 4 below, I have recalculated the average “b times r” growth rate from the
17 unadjusted Value Line data for each of Mr. Elgin’s proxy companies.

⁵ Mr. Elgin did not provide any schedules or any of the typical spreadsheet calculations that generally support a rate of return analysis.

⁶ In his workpapers (see Exhibit No. ___(SCH-10), page 1), he appears to have marked with asterisks three companies for adjustment. In addition to those three, however, it appears that he also replaced the 8.5 percent earned rate of return reported by Value Line reported for Avista with a value of 10.5 percent. Without this replacement, Avista’s “b times r” growth rate would have been below 3 percent.

Table 4	
Elgin Unadjusted “b times r” Growth Rate	
<u>Company</u>	<u>“b times r”</u>
Alliant	5.37%
Avista	2.67%
DPL, Inc.	13.52%
IDACORP	3.68%
Portland General	3.40%
Wisconsin Energy	5.94%
Xcel	4.73%
Average	<u>5.61%</u>

12 The unadjusted “b times r” average growth rate for his group is 5.61 percent
13 versus his adjusted calculation of 4.75 percent he reports.

14 **Q. Do you believe that the “b times r” growth rate methodology is an
15 appropriate means to estimate future dividend growth in a DCF model?**

16 A. No. Because of the volatile nature of the “b times r” approach, most regulatory
17 economists do not use it. In combination with Mr. Elgin’s small proxy group, the
18 issue is especially pronounced. A fair evaluation of the results shown in Table 4
19 would most likely eliminate four of Mr. Elgin’s seven companies, leaving a
20 “proxy” group of only three utilities. This approach is not proper; it is not
21 generally used by regulatory economists; and it should not have been used by Mr.
22 Elgin. The subjectivity employed in his analysis is extreme, and because of this,
23 his quantitative results provide no meaningful evidence with respect to
24 PacifiCorp’s cost of equity.

25 **Q. What is Mr. Elgin’s fourth growth rate approach?**

26 A. His fourth set of growth estimates is from projected growth rates for earnings per
27 share (EPS). As an introduction to that portion of his discussion, Mr. Elgin
28 provides a portion of a quote from an academic article that I used in my Direct

1 Testimony. He says that I have acknowledged "...the inherent upward bias of
2 earnings estimates." (Elgin Direct at 35, lines 14-15.)

3 **Q. Did you acknowledge an inherent bias in earnings estimates?**

4 A. No. While I would agree that some analysts' estimates for high tech companies
5 were overstated during the tech market bubble of the late 1990's, and that those
6 analysts were severely criticized, I have not seen evidence that analysts have been
7 optimistic about *utility growth rates*. Mr. Elgin's quotation is taken out of context
8 from an academic article that supports using GDP growth rates in the DCF model.
9 It does not support his contention that analysts' estimates should not be used to
10 assess investors' long-term growth rate expectations.

11 **Q. On page 36, at lines 8-9, Mr. Elgin says that for his proxy group the Value
12 Line earnings growth estimate is in the 7.0 percent to 8.0 percent range. Is
13 this statement correct?**

14 A. No. It is not clear why Mr. Elgin would make this statement. The average Value
15 Line earnings growth estimate for Mr. Elgin's group is approximately 6 percent
16 (6.0% for the six companies from my group and 6.5% for Avista, which results in
17 an overall group average of 6.07%).

18 **Q. What other earnings growth estimates does Mr. Elgin use?**

19 A. He also creates an additional "adjusted" growth estimate from the Zacks and
20 Thomson analysts surveys (see Exhibit No.____(SCH-10), page 2). He notes that
21 the unadjusted averages for his group are 5.6 percent from Zacks and 6.0 percent
22 from Thomson. However, he declares the 8.0 percent forecasts for Wisconsin
23 Energy to be too high and states that without that company, his group averages

1 drop to 5.10 percent from Zacks and 5.40 percent from Thomson. From these
2 calculations, he concludes that "...investors see the possibility of near-term
3 earnings growth for the proxy group to not exceed 5.50 percent." (Elgin Direct at
4 37, lines 18-19.)

5 **Q. What is your evaluation of Mr. Elgin's earnings growth rate discussion?**

6 A. It is far off-base. Analysts' EPS growth estimates are by far the most widely
7 followed stock market information. At earnings reporting time, stock price
8 movements are consistently explained by comparing actual EPS results to the
9 analysts' consensus forecast. For Mr. Elgin to argue that such information does
10 not affect investors' growth rate expectations is unrealistic. While it is true that
11 analysts' estimates are for only five years and should be tempered by other long-
12 term economic data, such as GDP growth, they cannot be ignored or subjectively
13 adjusted as Mr. Elgin has done.

14 **Q. On pages 55 and 56, Mr. Elgin critiques your 6.0 percent GDP growth rate
15 forecast and says that the Commission found in PacifiCorp's prior litigated
16 case (Docket No. UE-05684) that if growth in GDP is to be used, it should be
17 forward-looking, not a historical average. How do you respond?**

18 A. While the Commission did find that arguments about historical versus forward-
19 looking data were persuasive in Docket No. UE-05684, Mr. Elgin's use of this
20 finding is misplaced. As I explained in my direct testimony (Hadaway Direct at
21 37-38), there are three reasons why my GDP growth estimate is appropriate as
22 one estimate of investors' long-term growth rate expectations in the DCF model.
23 As in essentially all econometric forecasts, I used historical data, as reported by

1 the St. Louis Federal Reserve Bank, to develop my GDP growth estimate.
2 However, my GDP forecast is not a historical average. The average historical
3 growth rate for the 60 years in my study is 6.9 percent; whereas my forecast for
4 the future is 6.0 percent. My forecast is lower because I give more weight to the
5 more recent years. For gauging investors' long-term expectations, this is an
6 appropriate approach. Finally, Mr. Elgin's Congressional Budget Office estimate
7 of GDP growth for the next 10 years at 4.25 percent and his "long-term" Federal
8 Open Market Committee estimate at 5 percent are unreasonably low estimates of
9 the long-run future because they are dominated by recent economic turmoil and
10 the low growth and low inflation rates that have resulted (see Exhibit
11 No. ___(SCH-10), pages 3-4). Such permanently low estimates of real growth and
12 inflation would mean that the future U.S. economy will grow at rates that are
13 almost 2 to 3 percentage points lower than the historical average ($6.9\% - 5.0\% =$
14 1.9% and $6.9\% - 4.25\% = 2.65\%$). While future prospects for the country may
15 have been dampened by recent economic performance, permanent gloom and
16 doom prospects are not reasonable assessments of investors' long-term
17 expectations to be used in the DCF model. My 6.0 percent growth forecast is
18 consistent with a more balanced view of long-term future prospects. My 6.0
19 percent estimate is, in fact, lower than the average growth rates from financial
20 analysts, which Mr. Elgin also rejects in his subjective evaluation.

21 **Q. Please summarize your rebuttal of Mr. Elgin's ROE recommendation.**

22 A. Mr. Elgin's ROE recommendation is far below PacifiCorp's cost of equity. He
23 appears to mistakenly believe that the cost of equity has declined in lockstep with

1 the government policy induced drop in interest rates. His analysis is limited and
2 appears to be results oriented. The subjective adjustments he makes to his proxy
3 group data entirely determine his results. For this reason, his analysis and the
4 conclusions he draws from that analysis provide little meaningful evidence about
5 PacifiCorp's cost of equity capital.

6 **Rebuttal of ICNU Witness Gorman**

7 **Q. What is the basis for Mr. Gorman's 9.5 percent ROE recommendation?**

8 A. Mr. Gorman's results are summarized on page 37 of his testimony. Based on two
9 constant growth and one multi-stage growth DCF models, a risk premium
10 analysis, and the CAPM, he concludes that the reasonable ROE range is 9.1
11 percent to 9.9 percent with a midpoint of 9.5 percent.

12 **Q. What is your general assessment of Mr. Gorman's ROE testimony and**
13 **recommendation?**

14 A. Mr. Gorman's recommendation is far below PacifiCorp's cost of equity. His
15 recommendation is understated because he employs negatively biased model
16 inputs and he includes the results from one model, the CAPM, that are currently
17 unreliable. In addition, his equity risk premium analysis is flawed because he
18 rejects the well-documented fact that equity risk premiums increase when interest
19 rates are low (as they are now) and decrease when interest rates are higher. I will
20 show that, but for these deficiencies, Mr. Gorman's analysis should have
21 supported an ROE of 10.23 percent.

22 **Q. What are your specific areas of disagreement with Mr. Gorman's analysis?**

23 A. Mr. Gorman and I disagree strongly on the principal inputs to two of his three

1 models and we disagree on the current reliability of the CAPM. In his analysis,
2 he consistently applies inputs that are negatively biased and produce the lowest
3 ROE results. In one of his constant growth DCF models, he summarizes the data
4 in a way that skews the results downward. In his multi-stage DCF model, which
5 is similar to mine, he agrees with me that GDP growth is an appropriate input, but
6 he uses short-term GDP growth rate forecasts that are significantly dominated by
7 recently low inflation rates. The inflation rates in his GDP forecast are almost a
8 full percentage point lower than the longer-term historical averages. This
9 approach is inconsistent with the long-term growth rate requirement of the DCF
10 model.

11 In his equity risk premium analysis, he selects data that are not consistent
12 with the recent risk premiums allowed by regulators and he fails to include the
13 well documented inverse relationship that exists between equity risk premiums
14 and interest rates, i.e., equity risk premiums tend to increase when interest rates
15 are low and decrease when interest rates are high. With this omission, in the
16 currently low interest rate environment, his equity risk premiums are significantly
17 understated and, therefore, his equity risk premium estimates of ROE are too low.

18 His CAPM estimates are even lower. From that analysis, his ROE
19 estimate is only 8.80 percent. This result is far below the next lowest number in
20 the summary shown in his Table 4 on page 37. This low result is simply a
21 confirmation of the CAPM's current artificially low input problems that I
22 discussed earlier. The CAPM estimate is clearly an outlier that should have been
23 discarded.

1 **Q. Can you demonstrate what Mr. Gorman's results would have been if he had**
2 **used more reasonable input assumptions?**

3 A. Yes. I have redone one of Mr. Gorman's constant growth DCF models with one
4 correction and I have redone his multi-stage model with a more reasonable long-
5 term GDP growth rate input. In Mr. Gorman's "sustainable growth" DCF
6 analysis, the result for DPL Inc. is 19.14 percent, which he correctly considers to
7 be an outlier. Rather than simply eliminating DPL, Inc. from his group, however,
8 Mr. Gorman uses the group median, rather than average and median, to
9 summarize all of his results. A more logical approach would have been simply to
10 remove DPL, Inc. from the analysis. When that is done, as I show in Exhibit
11 No. ___(SCH-11), page 2, the group average is 9.48 percent, as compared to Mr.
12 Gorman's group median (including DPL, Inc.) of 9.14 percent. Although not a
13 large effect when applied to all three of Mr. Gorman's models, his reporting only
14 the median results in his summary table produces a slightly lower overall DCF
15 estimate.

16 **Q. What is your specific disagreement with Mr. Gorman's multi-stage DCF**
17 **analysis?**

18 A. In that analysis, Mr. Gorman uses analysts' growth rate forecasts in the first five
19 years and a GDP growth rate forecast for years eleven and later. In the
20 intermediate years, years six through ten, he interpolates growth in a linear
21 fashion between the first and third stages. I disagree with his final result because
22 it is dominated by an estimate of future GDP growth that is far too low. He uses
23 the GDP growth forecast from the Blue Chip Financial Forecast service, which

1 are for five and ten-year periods. The current Blue Chip GDP consensus forecasts
2 are low because they are dominated by low expected real growth in the economy
3 and the assumed long-term inflation rate is only about 2.0 percent. As shown in
4 the GDP forecast in my direct testimony, Exhibit No.__(SCH-5), these inflation
5 rates are lower than for any ten-year period in the last 60 years. The nominal 4.9
6 percent growth rate that Mr. Gorman uses is itself lower than nominal GDP
7 growth in any 10-year period, other than the most recent 10-years, which is
8 obviously dominated by the low growth rates experienced in 2008 and 2009 and
9 that are currently expected through 2011. For Mr. Gorman to base his long-term
10 DCF growth estimate on currently depressed near-term GDP expectations is
11 unrealistic and it creates an unrealistically low estimate of ROE.

12 **Q. If Mr. Gorman had used your updated GDP growth rate, what would the**
13 **results of his multi-stage DCF analysis have been?**

14 A. In Exhibit No.__(SCH-11), page 3, I have reproduced Mr. Gorman's multi-stage
15 analysis (from his Exhibit No.__(MPG-11)) with my 6.0 percent GDP growth
16 forecast substituted for his growth rates in years eleven and later. From that
17 analysis, the average ROE is 10.70 percent.

18 **Q. Please comment on Mr. Gorman's equity risk premium analysis.**

19 A. In his equity risk premium analysis, Mr. Gorman fails to include the well-
20 documented tendency for equity risk premiums to increase when interest rates are
21 low and decrease when interest rates are higher. In my risk premium analysis, I
22 provide a detailed regression of the past 30 years of data to document this fact.
23 Mr. Gorman ignores that relationship altogether. When his analysis is modified to

1 properly reflect wider equity risk premiums that are appropriate in the current low
2 interest rate environment, his equity risk premium is much higher.

3 **Q. Please elaborate.**

4 A. Mr. Gorman presents his equity risk premium data in Exhibit Nos.__(MPG-13
5 through MPG-14). He discusses that analysis on pages 28-32 of his testimony.
6 The analysis consists of two parts. In one approach, he adds equity risk premiums
7 based on government bond interest rates of 4.40 percent to 6.08 percent to a
8 projected Treasury bond yield of 4.70 percent. This analysis produces an ROE
9 range of 9.10 percent to 10.78. In his second approach he adds equity risk
10 premiums of 3.03 percent to 4.59 percent over utility bond yields to the recent
11 “A” utility bond yield of 5.17 percent. This analysis produces an ROE range of
12 8.20 percent to 9.76 percent, with a midpoint estimate of 8.98 percent. From
13 these two results, he concludes that an ROE of 9.46 percent is appropriate.

14 **Q. What does Mr. Gorman’s equity risk premium data indicate when your
15 regression analysis approach is included?**

16 A. In Exhibit No.__(SCH-11), pages 4-7, I have applied the standard regression
17 analysis to calculate “interest rate adjustment” factors for his two equity risk
18 premium studies. This approach properly takes into account the inverse
19 relationship between equity risk premiums and interest rates. With this
20 adjustment, Mr. Gorman’s Treasury bond equity risk premium analysis indicates
21 an ROE of 10.57 percent, as shown in pages 4-5 of Exhibit No.__(SCH-11). His
22 utility bond equity risk premium analysis indicates an ROE of 9.91 percent (pages
23 6-7). The midpoint of these revised risk premium results is 10.23 percent.

1 **Q. Please summarize the results of your adjustments to Mr. Gorman's ROE**
 2 **analysis.**

3 A. My adjustments are summarized in Table 5 below:

Table 5
 Summary of Updated Gorman ROE Results

	Summary of Results	
	Gorman Initial ROE	Updated ROE
DCF Models		
Constant Growth DCF (Analysts' Growth)	10.50%	10.50%
Constant Growth DCF (Sustainable Growth)	9.14%	9.11%
Multi-Stage DCF	9.90%	10.94%
DCF	9.85%	10.18%
Risk Premium Average	9.46%	10.24%
CAPM	8.80%	NA
Recommended ROE	9.50%	10.21%

4 His constant growth DCF result at 10.50 percent is within the reasonable range.
 5 As discussed above, removing DPL, Inc. from the analysis altogether (rather than
 6 just relying on the median), changes his sustainable growth constant growth result
 7 to 9.11 percent, relative to a group average of 9.48 percent. The inclusion of a
 8 more realistic long-term GDP growth rate of 6.0 percent in his multi-stage DCF
 9 analysis increases that result to 10.94 percent. Factoring in the observed inverse
 10 relationship between interest rates and equity risk premiums, increases the equity
 11 risk premium average to 10.24 percent. I also excluded his unreasonably low
 12 CAPM result altogether. As shown above, the average of the adjusted DCF and
 13 risk premium results is an ROE of 10.21 percent. Had Mr. Gorman considered
 14 these more reasonable inputs, his ROE estimates would have been well above the
 15 9.5 percent ROE he recommends.

1 **Q. On pages 44-54, Mr. Gorman criticizes various aspects of your ROE analysis.**

2 **What is your general response to his criticisms?**

3 A. His criticisms are not accurate. They are principally focused on my use of the
4 GDP growth rate in my DCF model and his mistaken view that the cost of equity
5 for utilities has declined as much as interest rates. His characterization of my
6 GDP growth forecast is misplaced and his contention that equity costs have
7 declined significantly is simply wrong.

8 **Q. On pages 44-45, Mr. Gorman criticizes your GDP growth forecast by saying**
9 **that it is based on historical GDP data. Is it accurate to say that your**
10 **forecast is a “historical input”?**

11 A. No. The GDP growth rate that I use is a forecast based on general economic
12 conditions that investors may expect for utilities in the very long run, as is
13 required in the DCF model. While I develop my forecast from the St. Louis
14 Federal Reserve Bank data base that covers the past 60 years, my forecast is not a
15 simple average or an extrapolation of the historical data. As is done in most
16 econometric forecasts, I use the long-run historical relationships to project what
17 investors may reasonably expect for the long-term future. I also give more weight
18 to more recent observations by applying weighted averages that give about five
19 times as much weight to the most recent 10 years as compared to the earliest 10
20 years. Giving more weight to the more recent data lowers the overall growth rate
21 forecast. For example, my current forecast is 6.0 percent whereas the annual
22 average of the growth rate data is 6.9 percent. In this context, Mr. Gorman’s

1 criticism of my growth forecast is unwarranted and his comparison of my
2 approach to forecasted earnings growth rates is misplaced.

3 **Q. How do you respond to Mr. Gorman's criticisms of your equity risk
4 premium analysis?**

5 A. I find Mr. Gorman's comments about my equity risk premium analysis surprising
6 since he has relied on the same data in his equity risk premium analysis. He
7 adopts my commission-authorized ROEs as the basis to estimate risk premiums
8 and then he applies those risk premiums, as I do, to both projected and current
9 interest rates. The primary differences between our approaches is that my
10 historical timeframe is longer (my data goes back to 1980, Mr. Gorman's to 1986)
11 and I take into account the inverse relationship between interest rates and equity
12 risk premiums. As I demonstrated previously, had Mr. Gorman included this
13 fundamental relationship in his analysis, his equity risk premium analysis would
14 have produced an ROE above 10 percent.

15 **Update of ROE Estimates**

16 **Q. Have you updated your ROE analysis to take into account recent data and
17 the current conditions in the capital markets?**

18 A. Yes. Consistent with my customary practice, I have updated my ROE analysis for
19 current conditions using the same methodologies that I employed in my direct
20 testimony.

21 **Q. What are the results of your updated DCF analyses?**

22 A. My updated DCF results are shown in Exhibit No.____(SCH-12). The indicated
23 DCF range is 10.3 percent to 10.8 percent, with a midpoint of 10.55 percent.

1 **Q. What are the results of your updated bond yield plus equity risk premium**
2 **analysis?**

3 A. My equity risk premium studies are shown in Exhibit No.____(SCH-13). These
4 studies indicate an ROE range of 9.74 percent to 9.94 percent. Under current
5 market conditions, I discount these results because current utility bond yields are
6 artificially depressed by government monetary policy and investors' continuing
7 flight to safety away from the ongoing turbulence in the equity capital market.

8 **Q. What do you conclude from your updated ROE analyses?**

9 A. My updated DCF analysis shows that PacifiCorp's current cost of equity capital is
10 in the range of 10.3 percent to 10.8 percent. These results show that the
11 Company's requested ROE of 10.6 percent is reasonable and that the
12 recommendations of Mr. Elgin and Mr. Gorman, as discussed herein, are
13 unreasonably low.

14 **Q. Are you providing a CAPM analysis in your ROE update?**

15 A. No. As I explained previously, government monetary policies and recent flight to
16 safety issues have pushed Treasury bond interest rates to artificially low levels. In
17 this environment, CAPM estimates understate the market cost of equity capital.
18 For this reason, I do not include CAPM estimates in my ROE analysis.

19 **Q. Does this conclude your rebuttal testimony?**

20 A. Yes.