

Exhibit No. ____ T (KLE-1T)
Docket UE-130043
Witness: Kenneth L. Elgin

**BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

**PACIFICORP D/B/A PACIFIC POWER
& LIGHT COMPANY,**

Respondent.

DOCKET UE-130043

TESTIMONY OF

Kenneth L. Elgin

**STAFF OF WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION**

Fair Rate of Return

June 21, 2013

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LIST OF EXHIBITS

Exhibit No. ____ (KLE-2), Experience and Qualifications

Exhibit No. ____ (KLE-3), Cost of Debt

Exhibit No. ____ (KLE-4), PacifiCorp Consolidated Statement of Cash Flow

1 **I. INTRODUCTION**

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

A. My name is Kenneth L. Elgin. I am a senior financial analyst for the Washington Utilities and Transportation Commission. My business address is Richard Hemstad Building, 1300 S Evergreen Park Drive SW, Olympia, Washington 98504.

Q. Please summarize your educational background and professional experience.

A. I have a Bachelor of Arts degree from the University of Puget Sound and a Masters of Business Administration degree from Washington State University. I have been employed by the Commission in several capacities since 1985. My relevant experience is more fully described in my Exhibit No. ____ (KLE-2).

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

A. I present Staff’s recommendation of the fair rate of return (cost of capital) for PacifiCorp (“PacifiCorp” or “Company”). I also respond to Company witnesses Mr. Bruce Williams on cost of debt and capital structure, and Dr. Samuel Hadaway on cost of equity.

Q. Are you sponsoring any exhibits in support of your testimony?

A. Yes. Exhibit No. ____ (KLE-3) shows my calculation of a fair cost of debt for PacifiCorp in this case. Exhibit No. ____ (KLE-4) is PacifiCorp’s Consolidated Statement of Cash Flows from its SEC 10-K (December 31, 2012).

1 **II. SUMMARY**

2
3 **Q. What overall cost of capital do you recommend for the regulated operations of**
4 **PacifiCorp for ratemaking purposes?**

5 A. The overall cost of capital for PacifiCorp’s regulated operations is 7.03 percent based
6 upon the following capital structure and cost rates:

<u>Component</u>	<u>Cost (%)</u>	<u>Weight (%)</u>	<u>Weighted Cost (%)</u>
Equity	9.00	46.00	4.14
Preferred	5.43	0.28	0.02
Total Debt	5.34	53.72	<u>2.87</u>
Cost of Capital			7.03

7
8
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10
11
12 The debt component of my proposed capital structure includes 4.0 percent short-term
13 debt.

14
15 **Q. Please summarize the primary differences between your cost of capital**
16 **recommendation and PacifiCorp’s.**

17 A. There are three major differences between my proposed 7.03 percent cost of capital
18 and the Company’s proposed 7.80 percent cost of capital. First, I recommend a
19 return on equity (“ROE”) of 9.00 percent compared to the Company’s proposed ROE
20 of 10.0 percent.

21 Second, I recommend a capital structure with 46.00 percent equity compared
22 to PacifiCorp’s proposed 52.51 percent equity ratio.

1 **A. Economic and Legal Principles**

2

3 **Q. What is the primary principle underlying the determination of the fair rate of**
4 **return for a regulated utility?**

5 A. Consistent with both economic and legal theory, rates must provide a utility the
6 opportunity to recover its prudent and reasonable operating costs, plus a fair return
7 on and of the capital investors provide to fund the long-lived assets necessary to
8 provide utility services.¹

9 The Commission implements this principle through “rate base rate of return
10 regulation.” This form of regulation sets rates based upon the relationship between
11 revenues, expenses, and rate base in order to provide the utility an opportunity to
12 recover a fair return on the assets, or rate base, the utility uses to provide utility
13 services. This method presumes the utility is efficient and economically managed.

14 This principle is reflected in two significant decisions of the United States
15 Supreme Court. The first case, *Bluefield Water Works and Improvement Co. v.*
16 *Public Service Commission of West Virginia*, 262 U.S. 679, 692 (1923), established
17 the following concepts for determining a fair rate of return: comparable earnings for
18 comparable risks, maintaining financial integrity of the regulated utility, the ability
19 of the utility to raise capital on reasonable terms, and the expectation that the utility
20 is operated efficiently.

21 These concepts were affirmed in the second decision, *Federal Power*
22 *Commission v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1942). The Court also

¹ State statutes reflect these concepts. See RCW 80.28.010, RCW 80.04.250 and RCW 80.04.350.

1 recognized that regulators should balance consumer and owner interests in
2 determining a fair rate of return.

3

4 **Q. How did these principles and concepts guide your determination of a fair ROE**
5 **for PacifiCorp?**

6 A. In applying these principles and concepts, I evaluated current capital market
7 conditions and publicly available financial information for a proxy group of
8 companies of comparable risk to PacifiCorp. I explain the objective and transparent
9 criteria by which I chose this proxy group later in my testimony.

10

11 **B. Analytical Methods**

12

13 **Q. What methods for determining ROE has the Commission traditionally used?**

14 A. Based on my review of Commission orders over the last forty plus years, the
15 Commission has consistently relied upon the Discounted Cash Flow (“DCF”)
16 method to determine the ROE, although in more recent cases the Commission used
17 other methods as a check.² Dr. Hadaway agrees that the DCF method is the
18 predominant ROE estimation technique used by regulatory commissions.³

19

20 **Q. Why is the DCF a reliable model for estimating a fair return on equity?**

21 A. The DCF model relies upon the price of common stock that investors establish in
22 highly competitive capital markets. These market transactions reflect investor

² *WUTC v. PacifiCorp d/b/a Pacific Power & Light Co.*, Docket UE-100749, Order 06 at ¶91 (March 25, 2011).

³ Hadaway, Exhibit No. __ (SCH-1T) at 20:16-17.

1 expectations and their opportunity costs in current capital markets. The price of
2 common stock upon which the DCF relies, therefore, reflects all relevant information
3 and is a reliable indicator of ROE.

4 In contrast, risk premium studies and the Capital Asset Pricing Methodology
5 (“CAPM”), that rely primarily on interest rates can only, to a very limited degree,
6 accurately gauge the changing perception of risk for an equity investor. These
7 models, at best, show trends and directions of equity costs.

8

9 **Q. Should the Commission continue to rely on the DCF method in this case?**

10 A. Yes. The DCF method provides the most reliable indicator of an investor’s rate of
11 return requirements consistent with the legal principles I just discussed. Equity
12 investors are entitled to the firm’s profits. The DCF model reflects this principle by
13 stating that the price an investor will pay for a share of stock represents the expected
14 cash flows from ownership discounted to the present value. Since the DCF relies
15 upon share prices, it accurately reflects how investors evaluate the risk/return
16 relationship of a specific investment decision compared to all other investment
17 alternatives available in the capital markets.

18

19 **Q. What methods did you use to determine the cost of preferred equity and debt?**

20 A. I determined the cost of preferred equity based on the specific terms and conditions
21 in the contractual obligations of the utility to investors providing the funds.

22 Typically, the cost of debt is similarly based on the terms and conditions of
23 specific debt issuances. However, in this case I used a surrogate for the cost of debt

1 based upon a reasonable estimation of PacifiCorp's debt costs if it were a lower rated
2 credit. My recommendation is consistent with Mr. Williams's testimony that the
3 Company's cost of debt would be higher if it were a lower rated credit.⁴ I have also
4 included a cost of short-term debt since PacifiCorp should finance its operations with
5 that source of funds in order to achieve the lowest cost of capital.

6
7 **C. General Economic Conditions**

8
9 **Q. What economic and financial conditions are relevant to your analysis of**
10 **PacifiCorp's cost of capital?**

11 A. I rely upon current economic and financial conditions because they shape investor
12 expectations and are reflected in all security prices. This is important because the
13 "efficient market" hypothesis states current security prices reflect all that is known
14 about any particular security. Stock prices reflect what investors currently expect for
15 a particular company and current opportunity costs in capital markets, not what
16 necessarily transpired in prior periods.

17 In addition, my analysis is influenced by the general observation that the cost
18 of capital has declined significantly since the decade following the inflationary
19 period of the 1980s. Cost of capital declined again, although more modestly, in the
20 2000s, including a decline in the cost of capital after the fallout from the 2008
21 financial crisis. Dr. Hadaway clearly shows this trend.⁵

22

⁴ Williams, Exhibit No. ___(BNW-1T) at 15:19 through 16:2.

⁵ Hadaway, Exhibit No. ___(SCH-8), page 1, columns (1) and (2).

1 **Q. What is your general conclusion regarding the impact of current financial**
2 **conditions on investor expectations?**

3 A. My general conclusion is that the current macro-economic climate will continue.
4 The Federal Reserve has been explicit that its monetary policy is designed to
5 stimulate economic activity and will continue for the foreseeable future. As a result,
6 capital costs will remain low for an extended period of time - well beyond the 2014
7 rate year. Finally, overall opportunity costs for investors have declined, causing
8 investors to reset future expectations and expect lower returns in all investments.

9
10 **Q. What specific conclusions should the Commission draw from the current**
11 **economic and financial conditions?**

12 A. The Commission should conclude that recent economic and financial circumstances
13 will continue to keep capital costs low. Specifically, overall economic and financial
14 conditions have investors expecting lower returns for their investments.

15
16 **D. PacifiCorp's Operations and Risks**

17
18 **Q. Please summarize PacifiCorp and its operations.**

19 A. PacifiCorp is an electric utility engaged in the distribution, transmission, generation,
20 purchase and sale of electric energy to customers in central and eastern Washington,
21 and five other states. It is commonly referred to as a "fully integrated electric
22 utility". Standard & Poor's ("S&P"), as part of its credit rating process, qualifies the

1 business risk of the regulated utilities it analyzes. S&P rates PacifiCorp's business
2 risk profile as "Excellent".⁶

4 IV. CAPITAL STRUCTURE

6 **Q. Please explain the term "capital structure".**

7 A. Capital structure refers to the manner upon which management funds a business.
8 The sources of funds are: common equity, preferred equity, and debt. The actual
9 capital structure reflects decisions by managers to use each source of capital.

10 A fundamental principle of finance is that management should minimize its
11 cost of capital. By minimizing the cost of capital, financial managers maximize the
12 value of the firm. Since utilities are not subject to competition, the Commission
13 must evaluate if managers fund operations consistent with this principle.

15 **Q. Are there any other preliminary facts the Commission should consider to
16 determine an appropriate capital structure for PacifiCorp?**

17 A. Yes. PacifiCorp's capital structure is controlled by MidAmerican Energy Holdings
18 Company ("MEHC"). MEHC's incentive is to capitalize the operations of
19 PacifiCorp with as much equity as possible in order to enhance equity returns for
20 MEHC and ultimately its owners. The Commission must carefully evaluate
21 PacifiCorp's proposed capital structure in light of this incentive.

⁶ *S&P Ratings Direct*, October 23, 2012, page 2.

1 **Q. Why is capital structure important in determining a fair rate of return for a**
2 **regulated utility?**

3 A. Capital structure materially impacts the price customers pay for service. Due to the
4 relative difference between the cost of equity and the cost of debt, including the
5 effects of Federal income tax, a capital structure with relatively more debt and less
6 equity will result in lower overall costs. Likewise, a capital structure with more
7 equity and less debt will produce higher overall costs. As I explain later, this latter
8 scenario is clearly evident in the Company's proposed capital structure.

9 A firm with stable cash flows, particularly those of a regulated utility, should
10 take advantage of financial leverage (debt) to benefit its shareholders and customers.
11 In addition, financial theory dictates that a firm should use all sources of available
12 capital to achieve this objective. As a result of using financial leverage to enhance
13 shareholder value, customers benefit from both lower capital costs and the federal
14 tax benefit of interest costs.

15 The question is the degree of financial leverage, including the mix of both
16 long-term and short-term debt. The proper capital structure is paramount to the
17 interests of both shareholders and customers.

18

19 **Q. What is the Commission's policy on capital structure for ratemaking purposes?**

20 A. The Commission's policy for determining an appropriate capital structure is to
21 balance the competing interests of safety and economy. The Commission affirmed
22 this policy in PacifiCorp's last two cases where capital structure was contested:

1 The appropriate capital structure for ratemaking purposes is one that
2 balances economy with safety in view of all of the sources of capital
3 available to a company.⁷
4

5 A central tenet of ratemaking is that a Company's capital structure
6 must strike an appropriate balance between safety and economy.⁸
7

8 In the second case, PacifiCorp argued on reconsideration that use of a
9 hypothetical equity ratio applies the wrong legal standard and that past decisions
10 declare a policy of using the actual capital structure absent a clear and compelling
11 reason to do otherwise.⁹ The Commission rejected PacifiCorp's argument and
12 affirmed its long-established standard to balance safety and economy.¹⁰ This
13 standard is consistent with the fundamental principle of finance that a properly
14 leveraged capital structure ensures the Company efficiently finances its long-lived
15 assets dedicated to public service to achieve the lowest possible cost.
16

17 **A. Equity Ratio**
18

19 **Q. How did you begin your analysis of a proper capital structure for PacifiCorp?**

20 A. I first considered information published by AUS Utility Reports ("AUS") for
21 regulated electric and combination electric/gas utilities. The data for 2011 shows an
22 average equity ratio of 47.7 percent for the 16 electric companies and 47.0 percent
23 for the 37 combination companies AUS follows.¹¹ For the proxy group of
24 companies in my ROE analysis, the data show an average equity ratio of 48.5

⁷ *WUTC v. PacifiCorp*, Docket UE-050684, Order 04 at ¶224 (April 17, 2006); see also ¶230 of that Order.

⁸ *WUTC v. PacifiCorp*, Docket UE-100749, Order 06 at ¶39 (March 25, 2011).

⁹ *WUTC v. PacifiCorp*, Docket UE-100749, Order 07 at ¶8 (May 12, 2011).

¹⁰ *Id* at ¶¶10-11.

¹¹ These are unadjusted per books ratios that include short-term debt.

1 percent. This aggregate data show clearly that PacifiCorp's proposed 52.51 percent
2 equity ratio is too high.

3

4 **Q. What other factors with the AUS data do you consider important?**

5 A. It is very difficult to find any electric or combination company with only regulated
6 operations. As a result, the actual equity ratios reported by AUS include the utilities'
7 consolidated operations, and, therefore, they do not show the equity investment
8 necessary to support only regulated operations.

9 Specifically, the AUS data show equity ratios of 53.3, 51.2 and 52.6 percent,
10 respectively, for certain companies in my proxy group (ALLETE, Alliant Energy Co.
11 and IDACORP). The revenue from the regulated operations of these companies is
12 91.8, 84.9 and 81.3 percent, respectively.¹² Because it is typical for unregulated
13 operations to be funded with equity, removing their unregulated operations would
14 reduce the equity ratio actually supporting regulated utility operations.

15 On the other hand, Avista Corp, Westar Energy, Wisconsin Energy and Xcel
16 Energy, Inc. have more limited unregulated operations. The amount of revenue from
17 regulated operations for those companies is 94.9, 100.0, 97.9 and 99.3 percent,
18 respectively.¹³ The AUS data show that these four utilities have equity ratios of
19 about 46 percent.

20

¹² See Hadaway, Exhibit No.____(SCH-3), page 1, column (1), lines 1, 2 and 6.

¹³ *Id.*, lines 3, 8, 12, 13 and 14.

1 **Q. What preliminary conclusion do you reach from this aggregate data?**

2 A. It shows that a utility primarily with regulated operations and an equity ratio in the
3 mid-40 percent range can achieve a solid investment grade rating that enables them
4 to raise capital on reasonable terms.¹⁴

5
6 **Q. What other data did you consider in evaluating an appropriate equity ratio?**

7 A. I also considered data from SNL Financial Focus showing that the average equity
8 ratio for the 47 companies it follows is 43.6 percent and the median value is 44.3
9 percent.¹⁵ The data indicates that an equity ratio in the mid-40 percent range is
10 reasonable.

11
12 **Q. Did you consider any information related to bond ratings and their relationship
13 to a reasonable equity ratio?**

14 A. Yes. The predominant unsecured credit rating for utilities is BBB/Baa2. According
15 to S&P, 62 percent of utilities are rated BBB and only 35 percent are rated A-.¹⁶
16 This data show that an equity ratio in the mid-40 percent range should provide
17 sufficient safety to allow a regulated utility to achieve a solid investment grade credit
18 rating to be able to raise capital on reasonable terms.

19
20 **Q. What is your recommendation for PacifiCorp's equity ratio?**

21 A. I recommend a common equity ratio of 46.0 percent.
22

¹⁴ See Hadaway, Exhibit No.__(SCH-3), page 1, column (2), lines 3, 12, 13, and 14.

¹⁵ These are per books ratios that include short-term debt. *SNL Financial Focus* (March 15, 2013).

¹⁶ *S&P Ratings Direct*, January 25, 2013, page 5 and *Moody's Rating Methodology*, August 2009.

1 **Q. Is a 46.0 percent equity ratio for PacifiCorp consistent with Commission policy**
2 **to balance economy and safety?**

3 A. Yes. The capital structure I propose is similar to the actual equity ratios of other
4 companies with limited unregulated operations. These utilities have solid investment
5 grade ratings. Therefore, a 46.0 percent equity ratio is sufficient.

6

7 **Q. In the Company's last contested case, the Commission adopted a hypothetical**
8 **equity ratio concluding that its decision is likely to maintain the Company's**
9 **then-current credit ratings.¹⁷ Do you have any concerns regarding that**
10 **approach?**

11 A. Yes. That approach suggests the Commission's determination of equity ratio is tied
12 directly to maintaining PacifiCorp's current bond rating. I would caution the
13 Commission against using such an approach.

14

15 **Q. Please explain.**

16 A. In determining the appropriate capital structure for ratemaking, the proper question is
17 whether a company's credit rating is reasonable, not whether the company would be
18 downgraded if it were capitalized with less equity. An equity ratio of 46.0 percent is
19 sufficient for PacifiCorp to maintain an A- for its secured debt and will enable it to
20 finance on reasonable terms. My proposed equity ratio fairly balances the slight
21 increase in the cost of debt with the comparatively substantial costs of additional
22 equity and associated income taxes. No more is necessary.

23

¹⁷ *WUTC v. PacifiCorp*, Docket UE-100749, Order 06 at ¶42 (March 25, 2011).

1 **B. Short-Term Debt Ratio**

2

3 **Q. Should the Commission include short-term debt in PacifiCorp’s capital**
4 **structure for ratemaking purposes?**

5 A. Yes. My capital structure includes 4.0 percent short term debt. This is a reasonable
6 amount that is consistent with the principle adopted by the Commission that a
7 balanced capital structure should consider all available sources of capital.¹⁸

8

9 **Q. What is a reasonable amount of short-term debt to include in a utility’s capital**
10 **structure?**

11 A. Three to five percent. Furthermore, in the current market the Company should
12 consider exceeding this amount due to the extremely low cost of this source of funds.
13 Indeed, in 2011 the Company had short-term debt of \$688 million outstanding, or
14 almost 5 percent of total capital.¹⁹

15

16 **Q. Does PacifiCorp currently have short-term debt credit facilities?**

17 A. Yes. PacifiCorp’s short-term debt credit facility is \$1.5 billion.

18

19 **Q. Do you accept the preferred equity ratio proposed by PacifiCorp of 0.28**
20 **percent?**

21 A. Yes.

22

¹⁸ *WUTC v. PacifiCorp*, Docket UE-050684, Order 04 at ¶224 (April 17, 2006).

¹⁹ Response to Staff Data Request. No. 37 and FERC Form No. 1, 4th Quarter 2011.

1 **V. COST OF PREFERRED EQUITY AND COMMON EQUITY**

2

3 **Q. What are the equity components of PacifiCorp’s capital structure?**

4 A. PacifiCorp’s capital structure contains common equity and preferred equity.

5

6 **A. Cost of Preferred Equity**

7

8 **Q. What is PacifiCorp’s cost of preferred equity?**

9 A. PacifiCorp’s proposed cost of preferred equity is 5.41 percent. I reviewed the
10 Company’s calculation and find it acceptable.

11

12 **B. Cost of Common Equity**

13

14 **Q. How do you structure your approach to the cost of common equity for**
15 **PacifiCorp?**

16 A. My approach is similar to Dr. Hadaway’s. First, I developed a proxy group of
17 comparable companies. This is necessary because PacifiCorp is a not a publicly-
18 traded company, so market information is unavailable for its common stock.

19 Then, I rely upon financial information for my proxy group to estimate a fair
20 ROE for PacifiCorp’s regulated utility operations. I used a DCF approach for this
21 purpose.

22

1 **1. Selection of the Proxy Group**

2

3 **Q. Do you use the same set of proxy companies as Dr. Hadaway?**

4 A. No.

5

6 **Q. Please explain the development of your proxy group.**

7 A. I began with Dr. Hadaway's proxy group of 14 companies shown on Exhibit No. ___
8 (SCH-3) and then I eliminated several companies with characteristics that make them
9 less similar to PacifiCorp. First, I eliminated Southern Co. due to its nuclear
10 construction risk. Next, I eliminated DTE Energy Co., Integrys Energy, Sempra
11 Energy and Teco Energy because they all have excessive revenues from unregulated
12 operations. In addition, these companies have nuclear exposure and risk associated
13 with serving concentrated markets. Last, I eliminated Black Hills Corp. because it
14 serves many more gas than electric customers.

15 My approach produced a smaller proxy group of 8 utilities that are more
16 comparable to PacifiCorp than Dr. Hadaway's larger 14-company group.

17

18 **Q. What companies are included in your proxy group after this process?**

19 A. My companies are ALLETE, Alliant Energy Co., Avista Corp, IDACORP, Portland
20 General, Westar Energy, Wisconsin Energy and Xcel Energy, Inc.

21

22 **Q. Why is your approach for selecting the proxy group superior to Dr. Hadaway's**
23 **approach for determining a fair ROE for PacifiCorp?**

1 A. My approach satisfies the principle I discussed earlier that the cost of equity should
2 capture the risks of providing regulated electricity service by the utility under
3 examination. Moreover, the effort should be to select enough similar companies to
4 be able to confidently assess investor return requirements for committing equity
5 capital to those risks. My approach is consistent with these principles because I
6 eliminate companies from Dr. Hadaway's proxy group that have different risk
7 characteristics than PacifiCorp.

8

9 **Q. Your proxy group contains 8 companies. Has the Commission expressed**
10 **concern with your use of a proxy group with a similar number of companies?**

11 A. Yes. In the Company's most recent rate case where rate of return was contested, the
12 Commission rejected my DCF study because of the size of my proxy group. The
13 Commission stated:

14 However, we are more concerned with the size of Staff's proxy group,
15 which at seven companies is of questionable statistical reliability.
16 Narrowing a larger and broader proxy group to a smaller one
17 necessarily requires significant subjective analysis regarding its
18 composition and the criteria by which a given company is included or
19 excluded. In general, the smaller the proxy group, the greater
20 possibility for bias to be introduced due to subjective factors. Staff
21 observes that in the 1980s and earlier, the Commission considered
22 proxy groups in telecommunications rate cases that were as small, or
23 smaller than the one proposed here...we have more confidence in the
24 Company's and ICNU's 22 member proxy group than Staff's seven
25 member proxy group.

26 We do not have to winnow down with precision a proxy group
27 to a level of *identical* risk but instead use our best judgment to
28 consider companies with *similar* characteristics and risks.²⁰
29

²⁰ *WUTC v. PacifiCorp*, Docket UE-100749, Order 06 at ¶¶78-79 (March 26, 2011).

1 **Q. Do you agree with the Commission that the process of selecting a proxy group is**
2 **not to develop a group of utilities with risk identical to the subject utility, but**
3 **rather to develop a group of utilities with similar risk?**

4 A. Absolutely. Consistent with *Bluefield* and *Hope*, the purpose of selecting a proxy
5 group is to examine companies with similar risks of providing regulated energy
6 services. The purpose is not to find a group of identical risk companies. My goal is
7 and has always been to develop a group of similar risk companies.

8

9 **Q. How do you respond to the Commission's concern that subjective factors**
10 **introduce bias as fewer companies are included in a proxy group?**

11 A. Every cost of capital expert must apply judgment when selecting appropriate criteria
12 by which a company is included or excluded from a proxy group. However, the
13 criteria themselves should be objective and the Commission should expect the
14 witness to identify and fully explain his selection criteria. The Commission can then
15 determine what criteria are best suited to develop a list of comparable companies.

16

17 **Q. Did you apply objective selection criteria in this case?**

18 A. Yes. My decision and criteria to remove a few utilities from Dr. Hadaway's larger
19 group are rational, transparent and clearly consistent with the objective of evaluating
20 the risks associated with PacifiCorp's provision of regulated energy services in
21 Washington.

22

1 **Q. What should be the Commission’s primary focus in evaluating the proxy group**
2 **of any cost of capital witness?**

3 A. The Commission’s primary focus should be the basis for comparability of the proxy
4 group, not the number of companies in the proxy group. As a practical matter, as the
5 number of companies increase, the likelihood increases there will be companies that
6 are not comparable. I reemphasize that the goal is not to produce a proxy group with
7 identical characteristics to the utility at issue. Rather, the goal is to select companies
8 with similar business risk of providing regulated energy services. My analysis
9 produces such a set of companies.
10

11 **Q. What is your response to the Commission’s concern regarding “statistical**
12 **reliability” of the sample group?**

13 A. With all due respect, the Commission’s concern is misplaced. In fact, prior to that
14 order, no cost of capital expert witness appearing before the Commission has ever
15 attempted to select, or been required by the Commission to defend, a proxy group
16 based on evidence that a comparable group is a “statistically reliable” sample.

17 In addition, statistical analysis is commonly used only to determine whether
18 data from a sample group is representative of a larger population, and whether the
19 analyst can reliably draw inferences about a larger population from a smaller sample
20 size. There are many examples of sampling such as manufacturing, polling, and
21 sciences. But this is simply not the purpose of DCF analysis. Therefore, it is
22 unnecessary to inquire into the statistical reliability of a proxy group, as long as the
23 selection criteria are objective and rationally related to the risk profile of the utility.

1

2 **Q. In this case, did Dr. Hadaway develop his proxy group based on statistical**
3 **reliability?**

4 A. No. Dr. Hadaway applied certain criteria based on his exercise of judgment to derive
5 a group of 14 utility companies.²¹ I followed a similar methodology, but I eliminated
6 a few companies from that list that are not comparable to PacifiCorp due to
7 investments in nuclear generation and the amount of unregulated operations.

8

9 **Q. Is statistical analysis of a proxy group useful for determining a utility's cost of**
10 **equity capital?**

11 A. No. A competent DCF study involves the valuation of a firm. The value of any
12 publically-traded firm is represented by the price of its stock. The DCF analysis
13 estimates the discount rate, *i.e.*, the cost of capital, applied to cash flows of owning
14 stock, and the process estimates the ROE by directly evaluating the price (value) of
15 the utility's common stock. Statistical analysis has no bearing on that process.

16

17 **Q. Is there scholarly research on the number of comparable companies necessary**
18 **to accurately determine the value of a single company?**

19 A. Yes. I reviewed the treatise, *Valuing a Business*, by two prominent experts on
20 valuation, Shannon Pratt and Alina Niculita.

21 In the section "How Many Guideline Companies", the authors address the
22 appropriate number of companies that should comprise a proxy group for
23 determining the value of a firm. They identify three significant factors for that

²¹ Hadaway, Exhibit No. __ (SCH-1T) at 4:4-14.

1 purpose: 1) how similar are the subject companies: the more similar the
2 characteristics, the fewer firms needed in the proxy group; 2) trading activity: the
3 more active the trading of the companies, the fewer that are needed; and 3)
4 dispersion of the data: the greater the variance, the more companies that are needed.

5 The authors conclude that a range of four to seven proxy companies is
6 typical, but sometimes as few as three companies can be used:

7 We have used as few as two or three guideline companies. However,
8 in those cases we would be reluctant to rely on the guideline public
9 company method exclusively. Our confidence rises sharply when we
10 can find four to seven good guideline publicly traded companies. In
11 those rare cases where it seems that there are a dozen or more good
12 guideline companies in terms of line of business, we often narrow
13 down the criteria in terms of size, earning pattern, and other factors to
14 utilize what our analysis indicates to be the best ones.²² (Emphasis
15 added.)
16

17 **Q. Does this observation apply to DCF analysis of PacifiCorp in this case?**

18 A. Yes. This is precisely how a DCF analysis estimates the return on equity for
19 PacifiCorp or any other utility with stock that is not publicly traded: objective
20 screening criteria are applied to select companies most similar to PacifiCorp. This
21 select group is then used to estimate the cost of equity for the owners of PacifiCorp's
22 regulated utility operations.
23

24 **Q. Do you have any other comments with respect to proxy group selection?**

25 A. Yes. As I will show later, the difference between me and Dr. Hadaway regarding
26 ROE boils down to one specific factor: the data used to estimate long-term dividend

²² Shannon P. Pratt and Alina V. Niculita, *Valuing a Business* 274 (5th ed.2008).

1 growth in the DCF analysis. His data are not appropriate to use as a surrogate for
2 long-term dividend growth and overstates reasonable investor expectations.

3
4 **2. Discounted Cash Flow Analysis**

5
6 **Q. Please describe the Discounted Cash Flow model and its underlying theory for**
7 **estimating the cost of equity.**

8 A. The DCF model is based on the “dividend discount model” of financial theory. It
9 relies upon the most fundamental principle of finance: the value (price) of any asset,
10 in this case, a security, is the present value of all future cash flows.

11 If one makes some simplifying assumptions about a company’s financial
12 performance and cash flows, the following formula is the common equation used by
13 analysts and accepted by regulatory bodies to estimate cost of equity:

14
$$K = \frac{D}{P} + g$$

15
16 where: K = cost of equity
17 P = current price
18 D = expected dividend payment
19 g = constant rate of expected dividend growth
20

21 Essentially, this formula recognizes that the expected or required return of investors
22 is estimated by considering two factors: expectations of the stock’s dividend yield
23 and the long-term constant growth in dividends per share.

1 This same model is used to price any stream of cash flows. For example,
2 with a fixed income security (bond) the dividend (D) is determined by the coupon
3 rate (K) and the growth rate is zero. As expectations change for future interest rates,
4 the price (P) of the bond adjusts to reflect new expectations to provide investor's
5 their required rate of return.

6 The DCF model embraces another fundamental principle of financial theory
7 that I referred to earlier in my testimony: the "efficient market hypothesis". It
8 assumes that market prices reflect all known information regarding a security.
9 Therefore, the DCF model provides confidence to an analyst that current market
10 prices accurately reflect what investors know about the relevant cash flows and the
11 opportunity cost associated with the investment decision in a stock.

12

13 **Q. Is the DCF method, or any other cost of common equity estimation method, a**
14 **mechanical process?**

15 A. No. Cost of common equity analysis requires considerable judgment in producing
16 credible outcomes. It does not produce results that are supported exclusively by
17 precise calculations and mechanistic formulae. In this regard, my study relies upon
18 published financial information, which, tempered by informed judgment, produces a
19 range of investor expectations for the Commission to consider.

20

21 **Q. Please explain how you used the DCF model to estimate PacifiCorp's cost of**
22 **common equity.**

1 A. I first estimated the expected dividend yield for each company in my proxy group. I
2 then estimated the dividend growth rate. The sum these two figures produced an
3 estimate of investors' required rate of return on common equity.
4

5 **Q. How did you derive the dividend yield component of the DCF equation?**

6 A. I evaluated the actual dividend paid by each company in my proxy group, and I used
7 a range of expected prices to calculate the dividend yield. This process accounts for
8 the diversity of expectations investors have for future dividends over time. I then
9 compared my dividend yield calculation for my proxy group to that provided by
10 *Value Line*, *Morningstar* and Dr. Hadaway's estimate for my group.
11

12 **Q. What are the results of the data you compiled for the proxy group?**

13 A. The initial data for my proxy group show a dividend yield in a range of 3.90 to 4.0
14 percent. *Value Line* indicates the yield is 4.2 percent. *Morningstar* shows an
15 expected future dividend yield of 3.95 percent. Dr. Hadaway shows an average
16 dividend yield of 4.22 percent for my proxy group.²³
17

18 **Q. What conclusion do you reach regarding the dividend yield component of the**
19 **DCF analysis?**

20 A. I conclude that a reasonable estimate for investors' expected dividend yield for my
21 proxy group is between 4.00 and 4.25 percent. As I describe later in my testimony, I

²³ Hadaway, Exhibit No. __ (SCH-7), page 2, column (3), average of lines 1, 2, 3, 6, 8, 12, 13, and 14.

1 used a dividend yield of 4.25 percent to estimate the ROE, which compares to Dr.
2 Hadaway's average dividend yield of 4.33 percent for his entire proxy group.²⁴

3

4 **Q. Turning to dividend growth, please explain this part of the DCF formula.**

5 A. In contrast to dividend yield, an investor's expectation for future dividend growth is
6 more difficult to estimate. As a result, this part of the DCF method is more
7 controversial because analysts reach conclusions using different data.

8 It is important, however, to recognize that each investor has a unique
9 perspective on the information used to form their growth expectations, and each
10 investor individually considers and weighs the alternative indicators in deriving their
11 return expectations. This is supported by the fact that markets reflect two distinct
12 and complementary investment decisions simultaneously: a decision to buy stock
13 matched by another decision to sell that same stock. Because two investors reach
14 different decisions at the same time and market price (one decides to sell; the other
15 decides to buy), their expectations must differ.

16 As a result, no single indicator of growth is used by all investors. Therefore,
17 I considered various financial metrics available to investors. I then inferred from this
18 data expectations of investors for the long-term growth rate of dividends.

19

20 **Q. What financial information did you rely on to estimate investors' expectations
21 of long-term sustainable dividend growth in your DCF analysis?**

22 A. I considered several different estimates of growth including dividends, internal
23 growth (sometimes referred to as "growth in retained earnings"), book value and

²⁴ Hadaway, Exhibit No. __ (SCH-7), page 2, column 3.

1 earnings. Each of these prospective indicators reflects information that an investor
2 may consider in making an investment decision. Thus, this information, when
3 considered as a whole, indicates what investors can reasonably expect as a proxy for
4 long-term sustainable dividend growth.

5 While each of these financial indicators is important, no single indicator is
6 sufficient or wholly reliable by itself to estimate investor expectations of dividend
7 growth. On the other hand, some indicators are more important than others.

8

9 **Q. What financial indicators are most significant for an investor in utility stocks?**

10 A. Investors in utility stocks know that utility returns are predominantly a function of
11 historical investment, or book value. Investor expectations for future growth are in
12 large part driven by expectations for growth in book value and internal growth. This
13 data represent the long-term financial fundamentals of a utility subject to rate of
14 return regulation. Therefore, I give primary weight to growth in book value and
15 internal growth. *Value Line* publishes this important financial information, yet Dr.
16 Hadaway ignores it in his DCF analysis.

17

18 **Q. What set of financial indicators did you first consider in your DCF analysis?**

19 A. I began by examining *Value Line's* indicators for book value growth between now
20 and the 2015 to 2017 time period for each of my proxy companies.

21

22 **Q. What does *Value Line* indicate as the expected growth rate in book value for**
23 **your proxy group over this time period?**

1 A. *Value Line* indicates the expected growth in book value is 4.0 percent.

2

3 **Q. What other financial data did you evaluate in developing the long-term growth**
4 **in dividends for your proxy group?**

5 A. I next analyzed the expected internal rate of growth in retained earnings. This is the
6 traditional “*b times r*” formula used in DCF analysis, where “*b*” is the firm’s
7 retention ratio and “*r*” is the earned rate of return on book equity.

8

9 **Q. Please explain internal growth and its significance for investors in utility stocks.**

10 A. Internal growth represents earnings a firm retains and reinvests for future growth. It
11 is significant because it is directly tied to dividend yield. For example, assume a
12 utility does not need to invest in new facilities; it would not retain any earnings and
13 100 percent of its earnings would be paid in dividends. Its retention rate is zero, and
14 investors would expect no future dividend growth. The dividend yield would,
15 therefore, be an accurate indication of the cost of equity. On the other hand, if a
16 utility retains earnings (“*b*”) and reinvests those earnings at some rate (“*r*”), the
17 product of these two factors is a compelling indicator of a reasonable expectation for
18 future dividend growth.

19 Furthermore, this internal growth is directly tied to dividend yield. If an
20 investor expects returns on retained earnings to fall, the stock price will fall causing
21 the dividend yield to increase and a new relationship between dividend yield and
22 growth will prevail. Conversely, if earned returns are expected to increase, the exact
23 opposite effect on dividend yield will occur. The stock price will increase causing

1 the dividend yield to fall, establishing a new relationship between yield and growth.
2 This market mechanism and the relationship between the market price and internal
3 growth enable investors to achieve their cost of capital. This feature also explains
4 why DCF is a reliable model for estimating cost of equity.

5
6 **Q. What is the indicated internal growth rate for your proxy group between now
7 and the 2015 to 2017 time period?**

8 A. *Value Line* indicates that the expected growth from retained earnings is 3.9 percent.

9
10 **Q. What does *Value Line* indicate as the expected growth rate for dividends for the
11 proxy group between now and the 2015 to 2017 time period?**

12 A. *Value Line* indicates the average dividend growth is 4.1 to 4.6 percent.

13
14 **Q. Did you consider analysts' earnings estimates of long-term sustainable growth
15 in dividends per share?**

16 A. Yes, but only to a limited extent. Analysts' earnings targets are not a good proxy for
17 long-term dividend growth because they are short-term in nature and subject to
18 change over time for many different reasons. They should be viewed with caution.

19 Analysts' earnings estimates also tend to overstate what investors can
20 reasonably expect because analysts have a personal financial interest in selling
21 securities. In other words, analysts' earnings estimates have an element of "hype".

22 In my opinion, an earnings estimate is not a surrogate for long-term sustained
23 growth in dividends that would support an investment decision. However, it is data

1 that is published, widely followed, and considered in the investment decision, but, as
2 the scholars correctly observe, analysts' earnings estimates are biased.²⁵ I address
3 this flaw more particularly regarding Dr. Hadaway's DCF study in a later portion of
4 my testimony.

5
6 **Q. Do other problems arise with using earnings estimates as an indicator of**
7 **dividend growth?**

8 A. Yes. Earnings are volatile and any one fiscal year can be influenced by an unusual
9 event. Thus, future earnings estimates can suffer from temporary volatility.

10 In addition, growth rates are influenced by the base upon which future
11 estimates are calculated. If a firm experiences low earnings in one period, any future
12 growth estimate using that period as a base will produce a higher value for the short-
13 term estimate for future growth. Investors realize that companies recover from these
14 temporary set-backs and, therefore, these higher values are not appropriate estimates
15 of sustained growth. *Value Line* data exhibit this flaw.

16
17 **Q. Please describe how Value Line's earnings estimates exhibit this flaw and why**
18 **you do not use those earnings estimates.**

19 A. *Value Line* states earnings growth of 9.0 percent for ALLETE.²⁶ However, between
20 2008 and 2009, ALLETE's earnings ("EPS") dropped over 30 percent; from \$2.82 to
21 \$1.89. Therefore, if 2009 data is the base for the EPS growth estimates, then the
22 indicated growth rate is 9.0 percent, but *Value Line* data actually shows earnings

²⁵ Louis K. C. Chan, Jason Karceski, and Josef Lakonishok, *The Level and Persistence of Growth Rates*,
Journal of Finance 649 (April 2003).

²⁶Hadaway, Exhibit No.____(SCH-7), page 2, column (4), line 1.

1 growth between 2008 and 2015 of, at most, 4.0 percent for ALLETE. Other
2 estimates from *Value Line* are also too high for the same reason, *e.g.*, Westar at 7.50
3 percent and Alliant at 6.50 percent.²⁷

4 Investors expect EPS growth estimates to reflect recovery from an earnings
5 decline and, therefore, these estimates do not reasonably represent long-term investor
6 expectations of dividend growth. Consequently, they should not be included in DCF
7 analysis.

8

9 **Q. What other indications show that these earnings growth estimates are too high?**

10 A. If I calculate the implied return on book necessary to achieve that level of earnings
11 growth, the aggressive nature of those estimates is revealed. For example, *Value*
12 *Line* shows ALLETE's retention ratio is 40 percent. If investors expect dividends to
13 grow at a rate of 9.0 percent, it implies that investors would expect an earned return
14 on book of 22.50 percent.²⁸ No rational investor expects a utility to earn 22.50
15 percent on book value. The same calculation using an earnings growth rate of 6.50
16 percent implies an earned return on book of 15.0 percent. This also proves that a
17 6.50 percent earnings growth rate is not reasonable.

18

19 **Q. What do the earnings estimates from *Zacks* and *Thomson* show?**

20 A. The data show more reasonable estimates, albeit still high. *Zacks* and *Thomson*
21 estimate average earnings growth for my proxy group of 5.10 and 4.75 percent,

²⁷ *Id.*, line 1, column (4), lines 11 and 2, respectively.

²⁸ (b) * (r) = (g) or 0.4*22.5 percent = 9.0 percent.

1 respectively.²⁹ Using the same calculation of implied internal growth shown above,
2 the implied earned return on book is 12.75 percent in order to achieve earnings
3 growth of 5.10 percent with a retention ratio of 40 percent. While such an earned
4 return is possible, it is quite high and reflects the aggressive nature of such a high
5 estimate for long-term growth.

6
7 **Q. Based upon the different financial metrics available to investors for the utilities**
8 **in your proxy group, how did you use the data to estimate sustainable long-term**
9 **dividend growth?**

10 A. I give primary weight to growth in book value and internal growth. These two
11 metrics show growth of 4.0 percent. Dividends show slightly higher growth of 4.1 to
12 4.6 percent, or an average of 4.35 percent. Finally, if earnings are considered, a high
13 case estimate is 4.75 percent. Weighting each factor equally, the indicated
14 sustainable, long-term dividend growth rate is 4.40 percent.

15
16 **Q. What is your conclusion with respect to investors' long-term growth**
17 **expectations for PacifiCorp?**

18 A. A reasonable estimate long-term growth in dividends is in the range of 4.00 to 4.50
19 percent. If primary weight is given to earnings estimates, a growth rate of 4.75
20 percent is the most any reasonable investor could expect.

21

²⁹ Hadaway, Exhibit No. ____ (SCH-7), page 2, columns (4) and (5), average of lines 1, 2, 3, 6, 8, 12, 13, and 14.

1 **Q. Please summarize your DCF analysis for PacifiCorp.**

2 A. My estimated average dividend yield for my proxy group is 4.00 to 4.25 percent.
3 The indicated growth rate in dividends is 4.00 to 4.50 percent. This indicates a ROE
4 estimate of 8.00 to 8.75 percent. If I combine the high end of my range for dividend
5 yield of 4.25 percent with an earnings estimate of 4.75 percent, it produces an ROE
6 of at most 9.00 percent. Therefore, I conclude that a fair ROE for PacifiCorp is
7 between 8.50 and 9.00 percent.

8

9 **Q. Do you have any final comments with respect to the DCF analysis you**
10 **performed in this case?**

11 A. Yes. The basic market data I relied on was from the first quarter 2013. This is
12 reasonable because that data are contemporaneous with the data used by Dr.
13 Hadaway in his DCF analysis. However, using more recent market price data, the
14 dividend yield in the DCF analysis would be lower. For example, data from June
15 2013 show the actual and projected dividend yield has fallen to 3.75 percent. In
16 other words, market data continue to show downward pressure on capital costs.

17

18 **3. Capital Asset Pricing Model Analysis**

19

20 **Q. Did you prepare a CAPM analysis?**

1 A. No. While I do not agree with Dr. Hadaway's methodology, for purposes of this
2 case I accept the result of his CAPM calculation. It shows an ROE estimate of 7.55
3 to 8.25 percent.³⁰

4
5 **Q. What is your conclusion concerning the cost of equity for PacifiCorp based on**
6 **the CAPM?**

7 A. CAPM's heavy reliance on interest rates casts doubt on its ability to accurately gauge
8 the changing perception of risk for an equity investor. Therefore, I recommend that
9 the Commission not rely directly on CAPM results in this case.

10 However, CAPM does show two general trends: 1) capital costs have
11 declined since 2010 when the Commission determined that 9.8 percent is a fair ROE
12 for PacifiCorp; and 2) my DCF result is fair. Consistent with the principles of *Hope*
13 *and Bluefield*, ratepayers should pay rates that reflect lower equity costs to
14 PacifiCorp's owners, not higher costs as advocated by Dr. Hadaway.

15

16 **4. Risk Premium Analysis**

17

18 **Q. Did you do a Risk Premium analysis as a check on your ROE recommendation?**

19 A. No. I am not an advocate of risk premium methodologies because they rely typically
20 upon historical relationships between interest rates and decisions by regulators of a
21 fair ROE, rather than upon investor expectations.³¹ In my opinion, DCF analysis,
22 with its focus on stock prices, captures how investors evaluate the capital market line

³⁰ Hadaway, Exhibit No. __ (SCH-9), page 1 and 2.

³¹ Hadaway, Exhibit No. __ (SCH-8), pages 1 and 2.

1 and future expectations for all available investment opportunities. A risk premium
2 analysis that the Commission might consider should acknowledge that as interest
3 rates decline so should equity costs and should use that evidence in evaluating the
4 results of a DCF analysis.

5
6 **Q. In past cases you examined the equity risk premium implied by DCF results.**

7 **What is the implied equity risk premium of Dr. Hadaway's DCF result?**

8 A. PacifiCorp's estimate of the cost of long-term debt is 4.00 percent.³² Thus, Dr.
9 Hadaway's 10.0 percent ROE recommendation implies an equity risk premium of 6
10 percent (10.0 - 4.0 = 6.0 percent). It is undisputed that interest rates are lower since
11 cost of capital was last decided by the Commission for PacifiCorp. Yet, Dr.
12 Hadaway's risk premium analysis implies that equity costs are increasing, despite
13 declining interest rates.

14
15 **Q. Is an equity risk premium of 6 percent reasonable?**

16 A. No. Any risk premium estimate of ROE that produces a spread that is more than
17 double the coupon rate for long-term debt is unreasonable. It implies a tremendously
18 steep capital market line.

19
20 **Q. What is the equity risk premium implied by your DCF result?**

21 A. A 9.00 percent ROE for an investment grade utility with long-term debt costs of 4.5
22 percent implies an equity risk premium of 450 basis points, or double the coupon

³² Williams, Exhibit No. __ (BNW-9), page 2, column (a), line 26.

1 rate.³³ While that too implies a steep yield curve, I conclude that this equity risk
2 premium is more than adequate compensation for the risk of owning PacifiCorp.

3

4 **5. Summary of Return on Equity Recommendation**

5

6 **Q. Please summarize the results of your cost of common equity analysis.**

7 A. I rely on my DCF study, which indicates a return on equity range of 8.50 to 9.00
8 percent.

9 The data show low capital costs and the impact on investors. However,
10 considering the overall impact and relative balance between ratepayer and
11 shareholder interests, I recommend an ROE for PacifiCorp at the high end of my
12 range: 9.00 percent. The CAPM and risk premium analyses corroborate the
13 reasonableness of my recommendation based upon my DCF analysis, and support
14 my conclusion that capital costs have declined since the Commission last determined
15 a fair ROE for PacifiCorp.

16

17 **VI. COST OF DEBT**

18

19 **Q. What is your recommendation for the total cost of debt for PacifiCorp?**

20 A. 5.34 percent.

21

³³ Secured debt rated A- is selling below 4.5 percent.

1 **Q. How did you arrive at that figure?**

2 A. I used Avista's total cost of debt from its last general rate case, Dockets UE-120436
3 and UG-130437.³⁴ My cost of debt also includes the impact of my recommendation
4 to include 4 percent short-term debt in the capital structure. Exhibit No. ____ (KLE-
5 3) provides the calculation.

6

7 **Q. Why is it reasonable to use Avista's cost of debt as an estimate of PacifiCorp's**
8 **cost of debt?**

9 A. Avista is an investment grade utility with an equity ratio of 46 percent supporting a
10 secured bond rating of A-. There is no reason why PacifiCorp cannot finance its
11 operations with debt at the same cost Avista has been able to obtain. Using Avista's
12 cost of debt also answers the Company's claim that it is unfair to use a hypothetical
13 capital structure.³⁵

14

15 **VII. TOTAL COST OF CAPITAL**

16

17 **Q. What is the total cost of capital for PacifiCorp?**

18 A. PacifiCorp's total cost of capital is 7.03 percent. The components of the capital
19 structure and the corresponding cost rates are in the table on page 2 of my testimony.

20

21 **Q. Is a 7.03 percent cost of capital adequate to provide the Company a sufficient**
22 **level of earnings to maintain financial integrity?**

³⁴ The basis of the settlement in that case was Avista's actual cost of total debt including short-term debt.

³⁵ Williams, Exhibit No. ____ (BNW-1T) at 15:19-16:4.

1 A. Yes.

2

3 **Q. What explicit financial index supports that conclusion?**

4 A. The most fundamental financial metric is operating profit (margin). This financial
5 metric indicates the amount of profit margin available to the utility. Profit margin is
6 earnings before interest and taxes (“EBIT”). My cost of capital recommendation
7 produces an EBIT of 3.22 times and will support a solid investment grade rating of
8 A- for secured debt.

9

10 **Q. In a prior case (Docket UE-100749), the Company criticized this calculation**
11 **because the rating agencies do not use EBIT and rely instead upon cash flow**
12 **metrics. What is your response to this criticism?**

13 A. The criticism is unwarranted because the foundation of all cash flow metrics is still
14 EBIT, with the only difference being the addition of non-cash expense items,
15 depreciation and amortization. Therefore, both EBIT and cash flow metrics used by
16 rating agencies measure the same thing: the ability to service debt.

17 Second, using pre-tax interest coverage (EBIT) enables me to consider
18 prospective profitability of my cost of capital recommendation based upon the
19 jurisdictional operations of a multi-state utility. In contrast, the cash flow analysis
20 used by the rating agencies relies on historical total company results.

21 Finally, as I will show in the next section of my testimony, PacifiCorp is
22 generating sufficient cash to fund its entire construction budget. Therefore, a cash
23 flow analysis is not necessary. The important metric is the profit margin underlying

1 the capital structure recommendation, which is the pro forma EBIT for Washington
2 operations.

3
4 **VIII. RESPONSE TO COMPANY COST OF CAPITAL TESTIMONY**

5
6 **Q. Please summarize again the primary areas of disagreement between your cost of
7 capital recommendation and the Company's.**

8 A. The primary areas of disagreement are: 1) Common Equity Ratio – I recommend a
9 46.0 percent common equity ratio while the Company proposes a 52.10 percent
10 equity ratio; 2) Cost of Equity – I recommend a ROE of 9.00 percent whereas Dr.
11 Hadaway recommends a 10.00 percent ROE; 3) Short Term Debt – I include a
12 reasonable amount of short-term debt in the capital structure and cost of debt
13 calculation while the Company excludes short-term debt altogether.

14
15 **A. Equity Ratio**

16
17 **Q. What is the Company's primary argument for a 52.10 percent equity ratio?**

18 A. PacifiCorp's primary argument is the same argument the Company has used in prior
19 cases: the Commission should use the actual capital structure absent a clear and
20 compelling reason to do otherwise. Mr. Williams provides evidence that his
21 proposed equity ratio represents the actual amount of equity on PacifiCorp's books.
22 He also states that the actual equity ratio has been above 52 percent since 2011 and is

1 not a temporary phenomenon.³⁶ I have previously explained how the Commission
2 has already rejected this Company argument.

3

4 **Q. What other argument does PacifiCorp make for a 52.10 percent equity ratio?**

5 A. Mr. Williams claims his proposed capital structure is necessary during a period of
6 significant capital expenditures, and it will provide more flexibility, better access to
7 capital, a more competitive cost of debt, more stable credit ratings, and will enable
8 the Company to maintain its financial metrics. He also states that a capital structure
9 with an equity ratio above 50 percent maintains a secured “A” rating, which is
10 necessary to finance operations on reasonable terms and fulfill utility obligations
11 even during periods of financial turmoil.³⁷ He opines that an “A” rating is the best
12 balance between cost and safety.³⁸

13

14 **Q. What is your response?**

15 A. I do not contest that a capital structure with more equity provides more financial
16 flexibility, increased financial stability, higher bond ratings and lower interest rate
17 costs. However, the Company failed to show that the benefits of a 52.10 percent
18 equity ratio outweigh the costs. For this reason alone, the Commission should
19 continue to reject PacifiCorp’s proposed equity ratio.³⁹

20

³⁶ Williams, Exhibit No. __ (BNW-1T) at 14:12-15:4.

³⁷ Williams, Exhibit No. __ (BNW-1T) at 3:10-16 and 6:17-19.

³⁸ *Id.* at 7:16-18.

³⁹ *WUTC v. PacifiCorp*, Docket UE-050684, Order 04 at ¶232 (April 17, 2006).

1 **Q. Did PacifiCorp provide any analysis regarding its capital budget?**

2 A. No. Moreover, investing in new facilities is not unique to PacifiCorp. It is the norm
3 for virtually all electric companies today.

4

5 **Q. Did PacifiCorp provide any explicit evidence that would support the need for an
6 “A” rating in order to obtain capital on reasonable terms?**

7 A. No. The Company alleges that its proposed capital structure is necessary to support
8 its capital budget⁴⁰ and any inability to access funds may cause problems with
9 service reliability and other issues.⁴¹ However, it provided no specific evidence
10 supporting this testimony. Indeed, there is evidence that suggests otherwise.

11

12 **Q. Please elaborate.**

13 A. PacifiCorp is generating sufficient cash to fund its construction budget with internal
14 sources of cash. Exhibit No. ___(KLE-4) is the Company’s SEC Form 10K,
15 December 31, 2012, page 71. It shows that: 1) in 2012, the Company generated
16 \$1.627 billion of cash with capital expenditures of \$1.342 billion; 2) in 2011, it
17 generated \$1.506 billion cash with \$1.529 billion in capital expenditures; and 3) in
18 2010, it generated \$1.607 billion cash with \$1.613 billion in capital expenditures.

19

20 **Q. What do you conclude from this evidence?**

21 A. The consolidated statement of cash flows shows convincingly that there is nothing
22 significant or extraordinary about PacifiCorp’s construction budget that would

⁴⁰ Williams, Exhibit No. ___(BNW-1T) at 13:9-10.

⁴¹ *Id.* at 3:4-6 and 6:9-11.

1 indicate that a secured debt “A” rating is necessary to be able to finance on
2 reasonable terms and fulfill its service responsibilities. Furthermore, the Company
3 has provided no evidence that prospectively it will be unable to continue this pattern
4 of generating sufficient cash from its operations to fund its construction budget.
5

6 **Q. Is Mr. Williams correct that a secured “A” debt rating necessary for a utility to**
7 **obtain capital during financial turmoil?**

8 A. No. It makes little sense to plan for financial turmoil or an event that happens once
9 in a generation. Maintaining a healthy investment grade rating is sufficient for any
10 utility. It is much cheaper to pay higher debt costs once in a while when capital
11 markets experience cyclical changes, than to constantly pay equity returns and
12 associated income taxes for flexibility to finance during unusual extreme events.
13 Furthermore, in unusual events, such as the recent financial crisis, it is prudent to
14 consider other actions such as maximizing the amount of short-term debt or
15 suspending large expenditures with long-lead times.
16

17 **Q. Mr. Williams also compares PacifiCorp to other energy companies operating in**
18 **Washington, stating that its cost of debt is lower.⁴² What is your response?**

19 A. PacifiCorp’s cost of debt today is not much different than the cost of debt for other
20 utilities in Washington. For example, in January 2012, PacifiCorp issued new 30-
21 year debt with a coupon of 4.10 percent.⁴³ In November 2011 Puget Sound Energy,

⁴² Williams, Exhibit No. __ (BNW-1T) at 7:6-7.

⁴³ Williams, Exhibit No. __ (BNW-9), page 2, column (a), line 25, Interest rate.

1 Inc. issued new 30-year debt with a coupon of 4.34 percent, and Avista issued new
2 35-year debt with a coupon of 4.23 percent.

3

4 **B. Short-Term Debt Ratio**

5

6 **Q. Did PacifiCorp provide any analysis showing that its proposed capital structure**
7 **with no short-term produces the lowest overall cost of capital?**

8 A. No. As I explained earlier in my testimony that the issue is how a utility should
9 finance its operations to take advantage of this low cost source of capital that can be
10 accessed promptly. In a prior PacifiCorp case on this issue the Commission agreed,
11 stating:

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“The appropriate capital structure for ratemaking purposes is one that balances economy with safety in view of all of the sources of capital available to a company. The Commission has traditionally included a component for short-term debt, based on a company’s actual capital structure. We agree with Staff and Public Counsel that the appropriate capital structure should include a component of short-term debt”.⁴⁴

21 **Q. In PacifiCorp’s most recent litigated case, the Commission did not include**
22 **short-term debt in the capital structure. What reason did the Commission give?**

23 A. The Commission stated, “Here, we are not persuaded that the Company’s ‘actual’
24 capital structure contains such short-term debt.”⁴⁵ This suggests that the determining
25 factor should be whether the Company’s actual capital structure contains short-term
26 debt.

⁴⁴ *WUTC v. PacifiCorp*, Docket UE-050684, Order 04 at ¶224 (April 17, 2006).

⁴⁵ *WUTC v. PacifiCorp*, Docket UE-100749, Order 06 at ¶43 (March 25, 2011).

1

2 **Q. Should the Company's actual capital structure be the determining factor**
3 **regarding whether to include short-term debt in the capital structure for**
4 **ratemaking purposes?**

5 A. No. The determining factor should be whether a company uses all available sources
6 of capital in a manner that balances safety and economy. While the Commission
7 apparently believed that its decision to adopt a hypothetical equity ratio ameliorated
8 the potential adverse effect on ratepayers of the Company's actual capital structure,
9 the decision to exclude short-term debt increased rates for customers.

10 Again, PacifiCorp proposes a capital structure that does not use all available
11 sources of capital to minimize its overall cost of capital and its proposal to exclude
12 short-term debt will continue to harm ratepayers. It is, therefore, appropriate for the
13 Commission to impute short-term debt in this case. This is consistent with the
14 Commission's statement in the last case that it may impute short-term debt if it is
15 appropriate.⁴⁶

16

17 **Q. What other arguments does Mr. Williams make to exclude short-term debt in**
18 **the capital structure?**

19 A. Mr. Williams asserts that including short-term debt is inconsistent with FERC
20 treatment and how construction work in progress is treated for purposes of
21 recognizing an allowance for funds used during construction.⁴⁷ He has made this
22 argument before and it was rejected by the Commission:

⁴⁶ *Id.*

⁴⁷ Williams, Exhibit No. ____ (BNW-1T) at 16:9-21.

1 We agree with Staff and Public Counsel that the appropriate capital
2 structure should include a component of short-term debt. Using the
3 cost for short-term debt in the FERC formula for CWIP neither “ear
4 marks” all short-term debt for that sole purpose, nor precludes the use
5 of short term debt in the Company’s general capitalization. Contrary
6 to what the Company alleges, including short-term debt in the capital
7 structure does not amount to double-counting.⁴⁸

8
9 Mr. Williams also states that short-term debt balances fluctuate dramatically
10 to support his theory that short-term debt is not a source of permanent financing.⁴⁹

11 The argument is self-serving, because fluctuating balances of short-term debt is the
12 direct result of management’s decisions not to use this source of low-cost funds to
13 manage operations and keep interest costs low. A prudent strategy would regularly
14 use outstanding short-term borrowing capacity, turned over with more permanent
15 financing from time to time.

16
17 **Q. Mr. Williams states that customers have benefitted from lower interest rates**
18 **due to its capital structure.⁵⁰ Are lower interest costs tied only to PacifiCorp’s**
19 **capital structure and current bond rating?**

20 A. No. Lower interest rates are primarily a function of today’s capital markets and
21 historically low costs of debt are available for any investment grade company.⁵¹

22
23 **Q. What is the extra cost to customers of PacifiCorp’s proposed capital structure?**

24 A. I estimate the extra cost to customers of PacifiCorp’s proposed capital structure as \$7
25 million annually, based on an the approximate amount of PacifiCorp’s proposed

⁴⁸ *WUTC v. PacifiCorp*, Docket UE-050684, Order 04 at ¶224 (April 17, 2006).

⁴⁹ Williams, Exhibit No.____(BNW-1T) at 16:22-17:4.

⁵⁰ *Id.* at 6:22-7:2.

⁵¹ Hadaway, Exhibit No.____(SCH-8), page 2, column (1), Moody’s Average Public Utility Bond Yield.

1 \$825 million rate base, PacifiCorp's recommended ROE of 10.0 percent, and a 35
2 percent income tax rate, compared to the estimated marginal cost of debt for a BBB
3 utility. The annual cost is even larger, approximately \$8 million, when I calculate
4 the difference between the cost of added equity and federal income taxes compared
5 to the cost of short-term debt in today's market.

6

7 **Q. Are there any other factors the Commission should consider related to capital
8 structure and its impact on cost of capital?**

9 A. Yes. When MEHC acquired PacifiCorp, one of the commitments from the new
10 owner was that ratepayers would not be harmed by paying a higher cost of capital as
11 a result of the sale.⁵² PacifiCorp's proposed capital structure and financing decisions
12 by management are inconsistent with that commitment. As I stated earlier,
13 PacifiCorp's capital structure is controlled by MEHC. Its decision to capitalize
14 PacifiCorp with excessive equity and its decision to not use short-term debt enhances
15 returns for PacifiCorp's owners at the expense of ratepayers who pay a higher cost of
16 capital. As a result, MEHC and PacifiCorp are failing to live up to this commitment.

17

18 **Q. Please summarize your conclusion on PacifiCorp's proposed capital structure.**

19 A. The Commission should reject the Company's proposed capital structure for
20 ratemaking purposes. That capital structure does not properly balance safety and
21 economy and will harm ratepayers.

⁵² *In re Application of MidAmerican Energy Holdings & PacifiCorp dba Pacific Power & Light Co.*, Docket UE-051090, Order 07, (February 22, 2006). (Appendix A, Consolidated List of Commitments, at 5, Commitment 21: "MEHC and PacifiCorp will not advocate for a higher cost of capital as compared to what PacifiCorp's cost of capital would have been, using Commission standards, absent MEHC ownership.")

1 In contrast, the 46.0 percent equity ratio I propose appropriately balances
2 safety and economy. It is sufficient to achieve a corporate credit rating of BBB and
3 an A- secured rating, which are the credit ratings achieved by the majority of
4 investor-owned electric utilities operating in this country today. It will enable the
5 Company to access new capital and refinance its maturing debt on reasonable terms.
6 No more equity is necessary, and rates should support a reasonable amount of short-
7 term debt in the calculation of PacifiCorp's cost of debt.

8
9 **C. Return on Equity**

10
11 **1. Proxy Groups**

12
13 **Q. Does the number of firms in a proxy group have any significant impact on the**
14 **estimate of return on equity?**

15 A. No. As I stated earlier, the difference between my recommendation and Dr.
16 Hadaway's recommendation is due to one factor: the data used to estimate dividend
17 growth in the DCF model. Whether Dr. Hadaway uses 26, 14 or 8 companies, his
18 use of flawed dividend growth data produces an excessive dividend growth rate,
19 which results in an excessive ROE estimate.

20
21 **2. Data Used for Estimating Return on Equity**

22
23 **Q. Please generally compare how you and Dr. Hadaway applied the DCF method.**

1 A. While Dr. Hadaway and I do not apply the DCF model in exactly the same way, our
2 dividend yield estimates are still very close.

3 For dividend growth, we each provide a constant growth analysis. Dr.
4 Hadaway provides two such analyses using different data for estimating dividend
5 growth as well as a multi-stage DCF analysis.⁵³

6

7 **Q. Please compare your estimates of dividend yield.**

8 A. For my proxy group, Dr. Hadaway's dividend yield estimate is 4.22 percent,⁵⁴ and
9 my estimate is between 4.0 and 4.25 percent. For his proxy group, Dr. Hadaway's
10 average and median dividend yield are 4.33 and 4.24 percent, respectively. Again,
11 these results are very close. The difference between us relates to the dividend
12 growth rate.

13

14 **Q. What are the flaws in Dr. Hadaway's DCF constant dividend growth estimate?**

15 A. Dr. Hadaway's constant growth DCF estimate contains two flaws that overstate his
16 ROE estimate: 1) he relies on analyst earnings growth estimates; and 2) he uses
17 historical GDP growth data as a surrogate for growth in his alternate constant growth
18 and multi-stage DCF analysis.

19

20 **Q. You touched on the first flaw earlier in your testimony. Is there other evidence**
21 **undermining the use of analyst earnings growth estimates in the DCF model?**

⁵³ Hadaway, Exhibit No. ____ (SCH-7), pages 2, 3 and 4.

⁵⁴ Hadaway, Exhibit No. ____ (SCH-1T), page 2, column (3), average of lines 1, 2, 3, 6, 8, 12, and 13.

1 A. Yes, and the evidence is contained in Dr. Hadaway's own direct testimony.
2 Ironically, to support his testimony that GDP is the proper surrogate for estimating
3 long-term dividend growth, he cites a study from *The Journal of Finance*, which
4 criticizes IBES estimates as being overly optimistic:

5 IBES long-term (earnings) growth estimates are associated with
6 realized growth in the immediate short-term-future. Over long
7 horizons, however, there is little forecastability in earnings, and
8 analysts' estimates tend to be overly optimistic.⁵⁵
9

10 This same flaw is present in every earnings estimate used by Dr. Hadaway in his
11 DCF analysis.⁵⁶
12

13 **Q. Is there other evidence demonstrating why analysts' estimates should not be**
14 **used as a proxy for dividend growth in the DCF model?**

15 A. Yes. The earnings estimates of analysts within Dr. Hadaway's presentation show
16 tremendous variability that renders them useless. For example, consider Dr.
17 Hadaway's DCF estimate for Sempra using this data. *Zacks* show an earnings
18 growth estimate of 1.6 percent, but *Thompson* shows an earnings estimate of 7.00
19 percent.⁵⁷ Clearly, such variance of earnings prospects for the same company from
20 different sources is suspect. Furthermore, Dr. Hadaway's constant growth DCF
21 using this data produces one ROE estimate of 6.8 percent and two estimates of 11.5
22 percent.⁵⁸ If Dr. Hadaway's proxy group includes companies with similar risks to

⁵⁵ Hadaway, Exhibit No. ____ (SCH-1T) at 23:25-28.

⁵⁶ Hadaway, Exhibit No. ____ (SCH-7), page 2, columns (4)-(6).

⁵⁷ *Id.*, page 2, line 9, columns (5) and (6).

⁵⁸ *Id.*, page 2, lines 1, 6 and 12, column (8), "ROE".

1 PacifiCorp, it is not reasonable to see a difference in the estimate of the cost of
2 equity of over 450 basis points.

3

4 **Q. Please comment on the second flaw in Dr. Hadaway's DCF approach: his**
5 **reliance on historical nominal GDP growth as a proxy for dividend growth.**

6 A. In his alternate DCF analyses, Dr. Hadaway uses historical GDP growth as a proxy
7 for long-term dividend growth. He estimates GDP growth of 5.7 percent by
8 "weighting" historical nominal GDP growth data.⁵⁹

9 There are two significant problems with his data and the resulting estimate:

- 10 1) long-term growth of GDP is not a good surrogate for future dividend growth; and
11 2) historical nominal GDP growth figure is not an appropriate proxy for future GDP
12 growth.

13

14 **Q. Please explain why GDP growth is not a good surrogate for future dividend**
15 **growth.**

16 A. GDP growth does not consider the impact of dividend policy on investor
17 expectations for long-term dividend growth despite the fact that growth and dividend
18 yield are directly related. As I testified earlier, a firm with a high payout ratio will
19 have lower growth prospects than a firm that retains its earnings for future growth.

20

21 **Q. What other factors weigh against the use historical GDP data as an estimate of**
22 **long-term dividend growth?**

⁵⁹ *Id.*, page 3, column (12) and page 4, column (23).

1 A. The data in Exhibit No. ____ (SCH-6), which show the calculated GDP average for the
2 cumulative decades, is heavily weighted by the early data in the time series. All data
3 points prior to 1990 skew the results, particularly the data from 1960 to 1980.

4
5 **Q. Please explain how the data for periods before 1990 skew the results?**

6 A. The data for the cumulative 10-year average of the average over the 60, 50 and 40-
7 year time series, show an average GDP growth rate of 6.6, 6.9 and 6.7 percent,
8 respectively. The cumulative 30-year time series drops to 5.4 percent. The most
9 recent data for the 20-year and 10-year time series fall again to 4.7 and 4.0 percent,
10 respectively. This result can only happen if some data in the early years is
11 significantly higher than more recent time series data. In other words, the early data
12 introduces an upward bias to a calculation of the average.

13 A credible analysis would reject these early observations outright in
14 estimating future expectations. At a minimum, one should measure whether there is
15 a bias in the data. Dr. Hadaway did not perform any statistical analysis of his
16 grouped data to check for bias.⁶⁰

17
18 **Q. What specific factors in the historical data show bias?**

19 A. I calculated the historical average of nominal GDP growth for each decade in Dr.
20 Hadaway's time series. The clear bias of the data is the result of using nominal GDP
21 growth for the 1970s time period. During that decade, nominal GDP grew 9.47
22 percent. The data for the 1960s and 1980s show lower average nominal GDP
23 growth: 7.44 and 7.10 percent, respectively.

⁶⁰ Response to Staff Data Request No. 80.

1

2 **Q. What specific factor explains such growth in nominal GDP, especially for the**
3 **1970s?**

4 A. Inflation. High inflation materially affects the 1970s time series and the data also
5 show the impact of inflation on both the preceding and following decades.

6

7 **Q. Assuming you would accept historical GDP growth as a surrogate for dividend**
8 **growth in a DCF analysis, how would you weigh the historical data provided by**
9 **Dr. Hadaway?**

10 A. I would consider only the most recent data and reject any data from the period of
11 high inflation.

12 For the two most recent decades (1990-2000 and 2000-2010), the data show a
13 4.7 and 4.0 percent rate of GDP growth, respectively. The average is 4.35 percent.

14 If I were to also include the data for the period 1980-1990, I would apply the
15 following weighting factors: 20 percent to the 30-year average, 30 percent to the 20-
16 year average, and 50 percent to the most recent 10-year average. This results in a
17 weighted average of 4.5 percent, compared to Dr. Hadaway's 5.7 percent.

18

19 **Q. What other factors undermine Dr. Hadaway's use of historical nominal GDP**
20 **data as proxy for long-term growth in his DCF analysis?**

21 A. In the last two contested cases of PacifiCorp, the Commission rejected Dr.
22 Hadaway's approach. In 2005 rate case, the Commission stated, "However, in this
23 case we find persuasive Mr. Gorman's argument, that if growth in GDP is used for

1 this critical input to the DCF formula, it should be forward-looking, not an historical
2 average.”⁶¹ In the 2010 rate case, the Commission again rejected Dr. Hadaway’s use
3 of historical GDP data and specified that if GDP data is to be used at all it should be
4 short-term estimates of GDP.⁶²

5
6 **Q. Did Dr. Hadaway consider forward looking estimates of GDP growth?**

7 A. No.

8

9 **Q. Did Dr. Hadaway have any data indicating estimates of long-term GDP growth**
10 **that he did not present in his testimony?**

11 A. Yes. Dr. Hadaway provided estimates for real GDP growth of 2.50 percent with an
12 inflation rate of 1.90 percent, producing a long-term estimate of 4.40 percent.⁶³

13

14 **Q. What is your conclusion from this data in estimating future GDP growth?**

15 A. Recent historical data showing GDP growth is consistent with current estimates. It
16 suggests GDP growth of 4.5 percent is reasonable.

17

18 **Q. Does other evidence show that Dr. Hadaway’s GDP growth estimate**
19 **undermines the result of his DCF analyses?**

20 A. Yes. The impact of Dr. Hadaway’s 5.7 percent growth estimate is clearly seen in
21 Exhibit No. ___ (SCH-7), pages 3 and 4. There is virtually no difference between his
22 ROE estimates using the constant growth model and the multi-stage DCF using the

⁶¹ *WUTC v. PacifiCorp*, Docket UE-050684, Order 04 at ¶261 (April 17, 2006).

⁶² *WUTC v. PacifiCorp*, Docket UE-100749, Order 06 at ¶84 (March 25, 2011).

⁶³ Response to Staff Data Request No. 79.

1 same 5.7 percent GDP growth figure. In other words, the 5.7 percent growth figure
2 drives the result in order to achieve an ROE estimate approximating 10.0 percent.

3

4 **Q. Earlier you explained the importance of internal growth and its relationship to**
5 **earned returns on book to support investor estimates of internal growth. If Dr.**
6 **Hadaway is correct that investors expect long-term dividend growth of 5.7**
7 **percent, what is the implied investors' required return on book value necessary**
8 **to achieve that 5.7 percent growth rate?**

9 A. Using Dr. Hadaway's long-term dividend growth of 5.7 percent and assuming an
10 average retention ratio of 40 percent, the implied return from internal growth
11 (retained earnings) is 14.25 percent.⁶⁴ Such a result is not reasonable.

12

13 **Q. If the Commission were to consider GDP growth in determining how investors**
14 **evaluate long-term dividend growth, how would you suggest it use the data?**

15 A. If the Commission were to use GDP growth, along with other data I have presented,
16 to estimate dividend growth in the DCF formula, it should use a GDP growth
17 estimate of 4.50 to 4.75 percent. This will result in a ROE estimate in the range of
18 8.50 to 9.00 percent, which is consistent with my DCF result..

19

20 **Q. What is your conclusion about the cost of common equity analysis presented by**
21 **Dr. Hadaway?**

22 A. Dr. Hadaway's use of both analysts' earnings estimates and his flawed weighted
23 historical GDP data as a proxy for investor expectations of long-term growth in

1 dividends produces unreasonably high ROE estimates. If he had used more
2 reasonable estimates of earnings growth or a more reasonable estimate of GDP
3 growth consistent with prior Commission directions, his data would show a return on
4 equity consistent with my recommendation of 9.00 percent.

5

6 **Q. Does this conclude your direct testimony?**

7 A. Yes.

8