

DAVID J. MEYER
VICE PRESIDENT AND CHIEF COUNSEL OF
REGULATORY & GOVERNMENTAL AFFAIRS
AVISTA CORPORATION
P.O. BOX 3727
1411 EAST MISSION AVENUE
SPOKANE, WASHINGTON 99220-3727
TELEPHONE: (509) 495-4316
FACSIMILE: (509) 495-8851

RECEIVED
2011 JUL -5 AM 11:44
IDAHO PUBLIC
UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION)	CASE NO. AVU-E-11-01
OF AVISTA CORPORATION FOR THE)	CASE NO. AVU-G-11-01
AUTHORITY TO INCREASE ITS RATES)	
AND CHARGES FOR ELECTRIC AND)	DIRECT TESTIMONY
NATURAL GAS SERVICE TO ELECTRIC)	OF
AND NATURAL GAS CUSTOMERS IN THE)	WILLIAM E. AVERA
STATE OF IDAHO)	
)	

FOR AVISTA CORPORATION

(ELECTRIC AND NATURAL GAS)

DIRECT TESTIMONY OF WILLIAM E. AVERA

TABLE OF CONTENTS

I. INTRODUCTION 1
 A. Overview..... 1
 B. Summary of Conclusions..... 4
II. RISKS OF AVISTA 7
 A. Operating Risks..... 8
 B. Implications of Attrition.....15
 C. Impact of Capital Market Conditions.....18
 D. Support For Avista's Credit Standing.....23
 E. Capital Structure.....29
III. CAPITAL MARKET ESTIMATES.....35
 A. Overview.....35
 B. Results of Quantitative Analyses.....38
 C. Flotation Costs.....47
IV. RETURN ON EQUITY RECOMMENDATION50

EXHIBIT No. 3

Schedule -1 - Qualifications of William E. Avera
Schedule -2 - Description of Quantitative Analyses
Schedule -3 - Capital Structure
Schedule -4 - Constant Growth DCF Model - Utility Proxy
 Group
Schedule -5 - Sustainable Growth Rate - Utility Proxy Group
Schedule -6 - Constant Growth DCF Model - Non-Utility Proxy
 Group
Schedule -7 - Sustainable Growth Rate - Non-Utility Proxy
 Group
Schedule -8 - Forward-looking CAPM - Utility Proxy Group
Schedule -9 - Forward-looking CAPM - Non-Utility Proxy
 Group
Schedule -10- Comparable Earnings Approach

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

I. INTRODUCTION

Q. Please state your name and business address.

A. William E. Avera, 3907 Red River, Austin, Texas, 78751.

Q. In what capacity are you employed?

A. I am the President of FINCAP, Inc., a firm providing financial, economic, and policy consulting services to business and government.

Q. Please describe your educational background and professional experience.

A. A description of my background and qualifications, including a resume containing the details of my experience, is attached as Schedule 1.

A. Overview

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

A. The purpose of my testimony is to present to the Idaho Public Utilities Commission (the "Commission" or "IPUC") my independent evaluation of the fair rate of return on equity ("ROE") for the jurisdictional electric and gas utility operations of Avista Corp. ("Avista" or "the Company"). In addition, I also examined the

1 reasonableness of Avista's capital structure, considering
2 both the specific risks faced by the Company and other
3 industry guidelines.

4 **Q. Please summarize the information and materials**
5 **you relied on to support the opinions and conclusions**
6 **contained in your testimony.**

7 A. To prepare my testimony, I used information from
8 a variety of sources that would normally be relied upon by
9 a person in my capacity. I am familiar with the
10 organization, finances, and operations of Avista from my
11 participation in prior proceedings before the IPUC, the
12 Washington Utilities and Transportation Commission, and the
13 Oregon Public Utility Commission. In connection with the
14 present filing, I considered and relied upon corporate
15 disclosures, publicly available financial reports and
16 filings, and other published information relating to
17 Avista. I also reviewed information relating generally to
18 current capital market conditions and specifically to
19 current investor perceptions, requirements, and
20 expectations for Avista's utility operations. These
21 sources, coupled with my experience in the fields of
22 finance and utility regulation, have given me a working
23 knowledge of the issues relevant to investors' required

1 return for Avista, and they form the basis of my analyses
2 and conclusions.

3 **Q. What is the practical test of the**
4 **reasonableness of the ROE used in setting a utility's**
5 **rates?**

6 A. The ROE serves to compensate common equity
7 investors for the use of their capital to finance the plant
8 and equipment necessary to provide utility service.
9 Investors commit capital only if they expect to earn a
10 return on their investment commensurate with returns
11 available from alternative investments with comparable
12 risks. To be consistent with sound regulatory economics
13 and the standards set forth by the U.S. Supreme Court in
14 the *Bluefield*¹ and *Hope*² cases, a utility's allowed ROE
15 should be sufficient to: 1) fairly compensate the utility's
16 investors, 2) enable the utility to offer a return adequate
17 to attract new capital on reasonable terms, and 3) maintain
18 the utility's financial integrity.

19 **Q. How is your testimony organized?**

20 A. I first reviewed the operations and finances of
21 Avista and industry-specific risks and capital market

¹ *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).

² *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

- 1 • In order to reflect the risks and prospects
2 associated with Avista's jurisdictional utility
3 operations, my analyses focused on a proxy group of
4 twenty-eight other utilities with comparable
5 investment risks. Consistent with the fact that
6 utilities must compete for capital with firms
7 outside their own industry, I also referenced a
8 proxy group of comparable risk companies in the
9 non-utility sector of the economy;
- 10 • Because investors' required return on equity is
11 unobservable and no single method should be viewed
12 in isolation, I applied both the DCF and CAPM
13 methods, as well as the expected earnings approach,
14 to estimate a fair ROE for Avista;
- 15 • Based on the results of these analyses, and giving
16 less weight to extremes at the high and low ends of
17 the range, I concluded that the cost of equity for
18 the proxy groups of utilities and non-utility
19 companies is in the **10.3 percent to 11.3 percent**
20 range, or **10.45 percent to 11.45 percent** after
21 incorporating an adjustment to account for the
22 impact of common equity flotation costs; and,
- 23 • As reflected in the testimony of Mark T. Thies,
24 Avista is requesting a fair ROE of 10.9 percent,
25 which is essentially equal to the midpoint of my
26 recommended range. Considering capital market
27 expectations, the exposures faced by Avista, and
28 the economic requirements necessary to maintain
29 financial integrity and support additional capital
30 investment even under adverse circumstances, it is
31 my opinion that 10.9 percent represents a fair and
32 reasonable ROE for Avista.

33 **Q. What other evidence did you consider in**
34 **evaluating your ROE recommendation in this case?**

35 A. My recommendation is reinforced by the following
36 findings:

- 37 • The reasonableness of a 10.9 percent ROE for Avista
38 is supported by the need to consider the challenges
39 to the Company's credit standing:

- 1 o The pressure of funding significant capital
2 expenditures of \$482 million in the next two
3 years, given that the Company's rate base is
4 \$2.1 billion, coupled with increased operating
5 risks, heighten the uncertainties associated
6 with Avista;
- 7 o Because of Avista's reliance on hydroelectric
8 generation and increasing dependence on natural
9 gas fueled capacity, the Company is exposed to
10 relatively greater risks of power cost
11 volatility, even with the power cost adjustment
12 ("PCA"); and,
- 13 o My conclusion that a 10.9 percent ROE for
14 Avista is a reasonable estimate of investors'
15 required return is also reinforced by the
16 greater uncertainties associated with Avista's
17 relatively small size and the fact that current
18 cost of capital estimates are likely to
19 understate investors' requirements at the time
20 the outcome of this proceeding becomes
21 effective and beyond.

22 • Sensitivity to financial market and regulatory
23 uncertainties has increased dramatically and
24 investors recognize that constructive regulation is
25 a key ingredient in supporting utility credit
26 standing and financial integrity; and,

27 • Providing Avista with the opportunity to earn a
28 return that reflects these realities is an
29 essential ingredient to support the Company's
30 financial position, which ultimately benefits
31 customers by ensuring reliable service at lower
32 long-run costs.

33 • Continued support for Avista's financial integrity,
34 including a reasonable ROE, is imperative to ensure
35 that the Company has the capability to maintain an
36 investment grade rating while confronting potential
37 challenges associated with funding infrastructure
38 development necessary to meet the needs of its
39 customers.

1 consider in evaluating their required rate of return for
2 Avista.

3 **A. Operating Risks**

4 **Q. How does Avista's generating resource mix affect**
5 **investors' risk perceptions?**

6 A. Because over 40 percent of Avista's total energy
7 requirements are provided by hydroelectric facilities, the
8 Company is exposed to a level of uncertainty not faced by
9 most utilities. While hydropower confers advantages in
10 terms of fuel cost savings and diversity, reduced
11 hydroelectric generation due to below-average water
12 conditions forces Avista to rely more heavily on wholesale
13 power markets or more costly thermal generating capacity to
14 meet its resource needs. As Standard & Poor's Corporation
15 ("S&P") has observed:

16 A reduction in hydro generation typically
17 increases an electric utility's costs by
18 requiring it to buy replacement power or run more
19 expensive generation to serve customer loads.
20 Low hydro generation can also reduce utilities'
21 opportunity to make off-system sales. At the
22 same time, low hydro years increase regional
23 wholesale power prices, creating potentially a
24 double impact - companies have to buy more power
25 than under normal conditions, paying higher
26 prices.³

³ Standard & Poor's Corporation, "Pacific Northwest Hydrology And Its Impact On Investor-Owned Utilities' Credit Quality," *RatingsDirect* (Jan. 28, 2008).

1 Investors recognize that volatile energy markets,
2 unpredictable stream flows, and Avista's reliance on
3 wholesale purchases to meet a portion of its resource needs
4 can expose the Company to the risk of reduced cash flows
5 and unrecovered power supply costs. S&P noted that Avista,
6 along with Idaho Power Company, "face the most substantial
7 risks despite their PCAs and cost-update mechanisms,"⁴ and
8 concluded that Avista's "chief risks include the electric
9 utility's exposure to replacement power costs (particularly
10 in low water years)."⁵

11 Additionally, Avista has become increasingly reliant
12 on natural gas fired generating capacity to meet base-load
13 needs. Given the significant price fluctuations
14 experienced in energy markets discussed subsequently,
15 increasing reliance on natural gas heightens Avista's
16 exposure to fuel cost volatility.

17 **Q. Does Avista anticipate the need to access the**
18 **capital markets going forward?**

19 A. Yes. Avista will require capital investment to
20 meet customer growth, provide for necessary maintenance and
21 replacements of its natural gas utility systems, as well as

⁴ *Id.*

⁵ Standard & Poor's Corporation, "Research Update: Avista Corp. Corporate Credit Rating Raised To 'BBB'; Outlook Stable," *RatingsDirect* (Mar. 2, 2011).

1 fund new investment in electric generation, transmission
2 and distribution facilities. As discussed by Company
3 witness Mr. Thies, planned capital additions for 2011-2012
4 alone total approximately \$482 million, with \$1.2 billion
5 in expenditures being expected through 2015. This
6 represents a substantial investment given Avista's rate
7 base was \$2.1 billion as of year-end 2010.

8 Continued support for Avista's financial integrity and
9 flexibility will be instrumental in attracting the capital
10 necessary to fund these projects in an effective manner.
11 Avista's reliance on purchased power to meet shortfalls in
12 hydroelectric generation magnifies the importance of
13 strengthening financial flexibility, which is essential to
14 guarantee access to the cash resources and interim
15 financing required to cover inadequate operating cash
16 flows, as well as fund required investments in the utility
17 system.

18 **Q. Is the potential for energy market volatility an**
19 **ongoing concern for investors?**

20 A. Yes. In recent years utilities and their
21 customers have had to contend with dramatic fluctuations in
22 fuel costs due to ongoing price volatility in the spot
23 markets, and investors recognize the potential for further

1 turmoil in energy markets. In times of extreme volatility,
2 utilities can quickly find themselves in a significant
3 under-recovery position with respect to power costs, which
4 can severely stress liquidity. The power industry and its
5 customers have had to contend with dramatic fluctuations in
6 gas costs due to ongoing price volatility in the spot
7 markets.

8 While current expectations for significantly lower
9 wholesale power prices reflect weaker fundamentals
10 affecting current load and fuel prices, investors recognize
11 the potential that such trends could quickly reverse. For
12 example, heightened uncertainties in the Middle East have
13 led to sharp increases in petroleum prices, and the
14 potential ramifications of the Japanese nuclear crisis on
15 the future cost and availability of nuclear generation in
16 the U.S. have not been lost on investors. S&P observed
17 that "short-term price volatility from numerous
18 possibilities ... is always possible,"⁶ while Moody's
19 recognized that "the inherent volatility of commodity costs
20 comprises one of the most significant risk factors to the
21 industry,"⁷ and concluded, "This view, that commodity

⁶ Standard & Poor's Corporation, "Top 10 Investor Questions: U.S. Regulated Electric Utilities," *RatingsDirect* (Jan. 22, 2010).

⁷ Moody's Investors Service, "Credit Opinion: Avista Corp.," *Global Credit Research* (Mar. 17, 2011).

1 prices remain low, could easily be proved incorrect, due to
2 the evidence of historical volatility."⁸

3 **Q. What other financial pressures impact investors'**
4 **risk assessment of Avista?**

5 A. Investors are aware of the financial and
6 regulatory pressures faced by utilities associated with
7 rising costs and the need to undertake significant capital
8 investments. S&P noted that cost increases and capital
9 projects, along with uncertain load growth, were a
10 significant challenge to the utility industry.⁹ As Moody's
11 observed:

12 [W]e also see the sector's overall business risk
13 and operating risks increasing, owing primarily
14 to rising costs associated with upgrading and
15 expanding the nation's trillion dollar electric
16 infrastructure.¹⁰

17 Providing the infrastructure necessary to meet the
18 energy needs of customers imposes additional financial
19 responsibilities on Avista. As noted earlier, the
20 Company's plans include electric utility capital
21 expenditures of approximately \$482 million just over the
22 2011-2012 period, and Moody's has noted that Avista's

⁸ Moody's Investors Service, "U.S. Electric Utilities: Uncertain Times Ahead; Strengthening Balance Sheets Now Would Protect Credit," *Special Comment* (Oct. 28, 2010).

⁹ Standard & Poor's Corporation, "Industry Economic And Ratings Outlook," *RatingsDirect* (Feb. 2, 2010).

¹⁰ Moody's Investors Service, "Regulation Provides Stability As Risks Mount," *Industry Outlook* (Jan. 19, 2011).

1 primary challenge is related to cost recovery of increasing
2 capital investment."¹¹ Investors are aware of the
3 challenges posed by rising costs and burdensome capital
4 expenditure requirements, especially in light of ongoing
5 capital market and economic uncertainties.

6 **Q. What other considerations affect investors'**
7 **evaluation of Avista?**

8 A. Utilities are confronting increased environmental
9 pressures that could impose significant uncertainties and
10 costs. Moody's noted that "the prospect for new
11 environmental emission legislation - particularly
12 concerning carbon dioxide - represents the biggest emerging
13 issue for electric utilities."¹² While the momentum for
14 carbon emissions legislation has slowed, expectations for
15 eventual regulations continue to pose uncertainty. Fitch
16 recently concluded, "Prospects of costly environmental
17 regulations will create uncertainty for investors in the
18 electricity business in 2011."¹³

¹¹ Moody's Investors Service, "Credit Opinion: Avista Corp.," *Global Credit Research* (Mar. 17, 2011).

¹² Moody's Investors Service, "U.S. Investor-Owned Electric Utilities," *Industry Outlook* (Jan. 2009).

¹³ Fitch Ratings Ltd., "2011 Outlook: U.S. Utilities, Power, and Gas," *Global Power North America Special Report* (Dec. 20, 2010)

1 **Q. Would investors consider Avista's relative size**
2 **in their assessment of the Company's risks and prospects?**

3 A. Yes. A firm's relative size has important
4 implications for investors in their evaluation of
5 alternative investments, and it is well established that
6 smaller firms are more risky than larger firms. With a
7 market capitalization of approximately \$1.3 billion, Avista
8 is one of the smallest publicly traded electric utilities
9 followed by The Value Line Investment Survey ("Value
10 Line"), which have an average capitalization of
11 approximately \$7.3 billion.¹⁴

12 The magnitude of the size disparity between Avista and
13 other firms in the utility industry has important practical
14 implications with respect to the risks faced by investors.
15 All else being equal, it is well accepted that smaller
16 firms are more risky than their larger counterparts, due in
17 part to their relative lack of diversification and lower
18 financial resiliency.¹⁵ These greater risks imply a higher
19 required rate of return, and there is ample empirical
20 evidence that investors in smaller firms realize higher

¹⁴ www.valueline.com (Retrieved Mar. 25, 2011).

¹⁵ It is well established in the financial literature that smaller firms are more risky than larger firms. See, e.g., Eugene F. Fama and Kenneth R. French, "The Cross-Section of Expected Stock Returns", *The Journal of Finance* (June 1992); George E. Pinches, J. Clay Singleton, and Ali Jahankhani, "Fixed Coverage as a Determinant of Electric Utility Bond Ratings", *Financial Management* (Summer 1978).

1 rates of return than in larger firms.¹⁶ Common sense and
2 accepted financial doctrine hold that investors require
3 higher returns from smaller companies, and unless that
4 compensation is provided in the rate of return allowed for
5 a utility, the legal tests embodied in the *Hope* and
6 *Bluefield* cases cannot be met.

7 **B. Implications of Attrition**

8 **Q. What causes attrition?**

9 A. Attrition is the deterioration of actual return
10 below the allowed return that occurs when the relationships
11 between revenues, costs, and rate base used to establish
12 rates (e.g., using a historical test year without adequate
13 adjustments) do not reflect the actual costs incurred to
14 serve customers during the period that rates are in effect.
15 For example, if external factors are driving costs to
16 increase more than revenues, then the rate of return will
17 fall short of the allowed return even if the utility is
18 operating efficiently. Similarly, when growth in the
19 utility's investment outstrips the rate base used for
20 ratemaking, the earned rate of return will fall below the
21 allowed return through no fault of the utility's
22 management.

¹⁶ See for example Rolf W. Banz, "The Relationship Between Return and Market Value of Common Stocks", *Journal of Financial Economics* (September 1981) at 16.

1 **Q. Why is it necessary to address the impact of**
2 **attrition?**

3 A. Investors are concerned with what they can expect
4 in the future, not what they might expect in theory if a
5 historical test year were to repeat. It is the end result
6 in the future that determines whether or not the *Hope* and
7 *Bluefield* standards are met. S&P observed that its risk
8 analysis focuses on the utility's ability to consistently
9 earn a reasonable return:

10 Notably, the analysis does not revolve around
11 "authorized" returns, but rather on actual earned
12 returns. We note the many examples of utilities
13 with healthy authorized returns that, we believe,
14 have no meaningful expectation of actually
15 earning that return because of rate case lag,
16 expense disallowances, etc.¹⁷

17 Similarly, Moody's concluded, "we evaluate the framework
18 and mechanisms that allow a utility to recover its costs
19 and investments and earn allowed returns. We are less
20 concerned with the official allowed return on equity,
21 instead focusing on the earned returns and cash flows."¹⁸

¹⁷ Standard & Poor's Corporation, "Assessing U.S. Utility Regulatory Environments," *RatingsDirect* (Nov. 7, 2008).

¹⁸ Moody's Investors Service, "Electric Utilities Face Challenges Beyond Near-Term," *Industry Outlook* (Jan. 2010).

1 **Q. Is it reasonable to consider the impact of**
2 **Avista's exposure to attrition?**

3 A. Yes. Central to the determination of reasonable
4 rates for utility service is the notion that owners of
5 public utility properties are protected from confiscation.
6 The Supreme Court has reaffirmed that the end result test
7 must be applied to the actual returns that investors expect
8 if they put their money at risk to finance utilities.¹⁹
9 This end result can only be achieved for Avista if the
10 allowed return is sufficient to offset the impact of
11 attrition. That end result would maintain the utility's
12 financial integrity, ability to attract capital and offer
13 investors fair compensation for the risk they bear.

14 In real world capital markets, investors have many
15 competing places to put their money. If the money that is
16 dedicated to utility public service does not have an
17 opportunity to earn a return commensurate with that
18 available from alternatives of equivalent risk in the
19 capital markets, investors are not being adequately
20 compensated for the use of their money and bearing risk.

¹⁹ *Verizon Communications, et al v. Federal Communications Commission, et al*, 535 U.S. 467 (2002). While I cannot comment on the legal significance of this case, I found the economic wisdom of looking to the reasonable expectations of actual investors compelling. Economic logic and common sense confirm that a utility cannot attract capital on reasonable terms if investors expect future returns to fall short of those offered by comparable investments.

1 Since the capital dedicated to utility service cannot be
2 withdrawn from public service, its economic value to
3 investors is reduced by the amount necessary to make the
4 utility investment competitive with alternative investments
5 on the open market. This reduction in economic value
6 necessary to bring the rate of earnings on utility
7 investment into line with market opportunities of
8 commensurate risk constitutes a taking of investors'
9 capital by the governmental authority setting rates.

10 **C. Impact of Capital Market Conditions**

11 **Q. What are the implications of recent capital**
12 **market conditions?**

13 A. The deep financial and real estate crisis that
14 the country experienced in late 2008, and continuing into
15 2009 led to unprecedented price fluctuations in the capital
16 markets as investors dramatically revised their risk
17 perceptions and required returns. As a result of investors'
18 trepidation to commit capital, stock prices declined
19 sharply while the yields on corporate bonds experienced a
20 dramatic increase.

21 With respect to utilities specifically, as of March
22 2011, the Dow Jones Utility Average stock index remained
23 approximately 20 percent below the previous high reached in
24 May 2008. This prolonged sell-off in common stocks and

1 sharp fluctuations in utility bond yields reflect the fact
2 that the utility industry is not immune to the impact of
3 financial market turmoil and the ongoing economic downturn.
4 As the Edison Electric Institute ("EEI") noted in a letter
5 to congressional representatives in September 2008 as the
6 financial crisis intensified, capital market uncertainties
7 have serious implications for utilities and their
8 customers:

9 In the wake of the continuing upheaval on Wall
10 Street, capital markets are all but immobilized,
11 and short-term borrowing costs to utilities have
12 already increased substantially. If the
13 financial crisis is not resolved quickly,
14 financial pressures on utilities will intensify
15 sharply, resulting in higher costs to our
16 customers and, ultimately, could compromise
17 service reliability.²⁰

18 While conditions have improved significantly since the
19 depths of the crisis, investors have nonetheless had to
20 confront ongoing fluctuations in share prices and stress in
21 the credit markets. As the Wall Street Journal noted in
22 February 2010:

23 Stocks pulled out of a 167-point hole with a late
24 rally Friday, capping a wild week reminiscent of
25 the most volatile days of the credit crisis. ... It
26 was a return to the unusual relationships, or
27 correlations, seen at major flash points over the
28 past two years when investors fled risky assets
29 and jumped into safe havens. This market

²⁰ Letter to House of Representatives, Thomas R. Kuhn, President,
Edison Electric Institute (Sep. 24, 2008).

1 behavior, which has reasserted itself repeatedly
2 since the financial crisis began, suggests that
3 investment decisions are still being driven more
4 by government support and liquidity concerns than
5 market fundamentals.²¹

6 In response to renewed capital market uncertainties
7 initiated by unrest in the Middle East, the natural
8 disaster in Japan, ongoing concerns over the European
9 sovereign debt crisis, and questions over the
10 sustainability of economic growth, investors have
11 repeatedly fled to the safety of U.S. Treasury bonds, and
12 stock prices have experienced renewed volatility.²² The
13 dramatic rise in the price of gold and other commodities
14 also attests to investors' heightened concerns over
15 prospective challenges and risks, including the overhanging
16 threat of inflation and renewed economic turmoil. With
17 respect to electric utilities, Fitch observed that, "the
18 outlook for the sector would be adversely affected by
19 significantly higher inflation and interest rates."²³
20 Moody's recently concluded:

²¹ Gongloff, Mark, "Stock Rebound Is a Crisis Flashback - Late Surge Recalls Market's Volatility at Peak of Credit Difficulties; Unusual Correlations," *Wall Street Journal* at B1 (Feb. 6, 2010).

²² The *Wall Street Journal* recently reported that the Dow Jones Industrial Average experienced its largest drop since August 2010, which marked the fourth triple-digit move in less than two weeks. Tom Lauricella and Jonathan Cheng, "Dow Below 12000 on Mideast Worries - Troubles in Europe and China Add to Jitters," *Wall Street Journal* C1 (March. 11, 2011).

²³ Fitch Ratings Ltd., "2011 Outlook: U.S. Utilities, Power, and Gas," *Global Power North America Special Report* (Dec. 20, 2010).

1 Over the past few months, we have been reminded
2 that global financial markets, which are still
3 receiving extraordinary intervention benefits by
4 sovereign governments, are exposed to turmoil.
5 Access to the capital markets could therefore
6 become intermittent, even for safer, more
7 defensive sectors like the power industry.²⁴

8 Uncertainties surrounding economic and capital market
9 conditions heighten the risks faced by electric utilities,
10 which, as described earlier, face a variety of operating
11 and financial challenges.

12 **Q. How do interest rates on long-term bonds compare**
13 **with those projected for the next few years?**

14 A. Table WEA-1 below compares current interest rates
15 on 30-year Treasury bonds, triple-A rated corporate bonds,
16 and double-A rated utility bonds with near-term projections
17 from the Value Line, IHS Global Insight, Blue Chip
18 Financial Forecasts ("Blue Chip"), and the Energy
19 Information Administration ("EIA"), which is a statistical
20 agency of the U.S. Department of Energy ("DOE"):

²⁴ Moody's Investors Service, "Regulation Provides Stability As Risks Mount," *Industry Outlook* (Jan. 19, 2011).

1
2

**TABLE WEA-1
INTEREST RATE TRENDS**

	<u>Current (a)</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
30-Yr. Treasury					
Value Line (b)	4.2%	4.9%	5.2%	5.5%	6.0%
IHS Global Insight (c)	4.2%	4.7%	5.0%	5.1%	6.0%
Blue Chip (d)	4.2%	4.8%	5.2%	5.4%	5.5%
AAA Corporate					
Value Line (b)	4.9%	5.6%	6.0%	6.3%	6.5%
IHS Global Insight (c)	4.9%	5.2%	6.0%	6.2%	6.8%
Blue Chip (d)	4.9%	5.4%	5.8%	6.1%	6.3%
S&P (e)	4.9%	6.5%	7.1%	7.2%	--
AA Utility					
IHS Global Insight (c)	5.1%	5.4%	6.3%	6.4%	7.2%
EIA (f)	5.1%	5.5%	6.4%	7.0%	7.4%

(a) Based on monthly average bond yields for the six-month period Sep. 2010 - Feb. 2011 reported at www.credittrends.moodys.com and <http://www.federalreserve.gov/releases/h15/data.htm>.

(b) The Value Line Investment Survey, Forecast for the U.S. Economy (Feb. 25, 2011).

(c) IHS Global Insight, *U.S. Economic Outlook* at 19 (February 2011).

(d) *Blue Chip Financial Forecasts*, Vol. 29, No. 12 (Dec. 1, 2010).

(e) Standard & Poor's Corporation, "U.S. Economic Forecast: Warming Up Or Frozen Over?," *RatingsDirect* (Feb. 14, 2011).

(f) Energy Information Administration, *Annual Energy Outlook 2011 Early Release* (Dec. 16, 2010).

3 As evidenced above, there is a clear consensus that the
4 cost of permanent capital will be higher in the 2012-2015
5 timeframe than it is currently. As a result, current cost
6 of capital estimates are likely to understate investors'
7 requirements at the time the outcome of this proceeding
8 becomes effective and beyond.

9 **Q. What do these events imply with respect to the**
10 **ROE for Avista?**

11 A. No one knows the future of our complex global
12 economy. We know that the financial crisis had been

1 building for a long time, and few predicted that the
2 economy would fall as rapidly as it has, or that corporate
3 bond yields would fluctuate as dramatically as they did.
4 While conditions in the economy and capital markets appear
5 to have stabilized significantly since 2009, investors
6 continue to react swiftly and negatively to any future
7 signs of trouble in the financial system or economy. The
8 fact remains that the electric utility industry requires
9 significant new capital investment. Given the importance
10 of reliable electric utility service, it would be unwise to
11 ignore investors' increased sensitivity to risk and future
12 capital market trends in evaluating a fair ROE in this
13 case. Similarly, the Company's capital structure must also
14 preserve the financial flexibility necessary to maintain
15 access to capital even during times of unfavorable market
16 conditions.

17 **D. Support For Avista's Credit Standing**

18 **Q. What credit ratings have been assigned to Avista?**

19 A. Reflecting improved financial metrics, S&P
20 recently raised its corporate credit rating for Avista one

1 notch from "BBB-" to "BBB",²⁵ and Moody's upgraded Avista's
2 Corporate Credit Rating to "Baa2" from "Baa3".²⁶

3 **Q. How have investors' risk perceptions for firms**
4 **involved in the utility industry evolved?**

5 A. The past decade witnessed steady erosion in
6 credit quality throughout the utility industry, both as a
7 result of revised perceptions of the risks in the industry
8 and the weakened finances of the utilities themselves. In
9 December 2009, S&P observed with respect to the industry's
10 future that:

11 Looming costs associated with environmental
12 compliance, slack demand caused by economic
13 weakness, the potential for permanent demand
14 destruction caused by changes in consumer
15 behavior and closing of manufacturing facilities,
16 and numerous regulatory filings seeking recovery
17 of costs are some of the significant challenges
18 the industry has to deal with.²⁷

19 Similarly, Moody's noted:

20 [A] sustained period of sluggish economic growth,
21 characterized by high unemployment, could stress
22 the sector's recovery prospects, financial
23 performance, and credit ratings. The quality of
24 the sector's cash flows are already showing signs

²⁵ Standard & Poor's Corporation, "Research Update: Avista Corp. Corporate Credit Rating Raised To 'BBB'; Outlook Stable," *RatingsDirect* (Mar. 2, 2011).

²⁶ Moody's Investor Services, "Rating Action: Moody's Upgrades Avista's Ratings to Baa2," *Global Credit Research* (Mar. 2011).

²⁷ Standard & Poor's Corporation, "U.S. Regulated Electric Utilities Head Into 2010 With Familiar Concerns," *RatingsDirect* (Dec. 28, 2009).

1 of decline, partly because of higher operating
2 costs and investments.²⁸

3 More recently, Moody's concluded, "we also see the sector's
4 overall business and operating risks increasing."²⁹

5 **Q. What are the implications for Avista, given the**
6 **potential for further dislocations in the capital markets?**

7 A. As documented in the testimony of Mr. Mark Thies,
8 the Company's prolonged efforts to regain investment grade
9 ratings and improve its financial stature have been
10 successful. Nevertheless, continued support for Avista's
11 financial integrity and credit standing is imperative to
12 ensure the Company's capability to confront potential
13 challenges.

14 Fitch observed that when credit market conditions are
15 unsettled, "'flight to quality' is selective within the
16 [utility] sector, favoring companies at higher rating
17 levels."³⁰ As Avista has experienced, the negative impact
18 of declining credit quality on a utility's capital costs
19 and financial flexibility becomes more pronounced as debt
20 ratings move down the scale from investment to non-

²⁸ Moody's Investors Service, "U.S. Electric Utilities: Uncertain Times Ahead; Strengthening Balance Sheets Now Would Protect Credit," *Special Comment* (Oct. 28, 2010).

²⁹ Moody's Investors Service, "Regulation Provides Stability As Risks Mount," *Industry Outlook* (Jan. 19, 2011).

³⁰ Fitch Ratings Ltd., "U.S. Utilities, Power, and Gas 2010 Outlook," *Global Power North America Special Report* (Dec. 4, 2009).

1 investment grade. As the Chairman of the New York State
2 Public Service Commission noted in his role as spokesman
3 for the National Association of Regulatory Utility
4 Commissioners:

5 While there is a large difference between A and
6 BBB, there is an even brighter line between
7 Investment Grade (BBB-/Baa3 bond ratings by
8 S&P/Moody's, and higher) and non-Investment Grade
9 (Junk) (BB+/Bal and lower). The cost of issuing
10 non-investment grade debt, assuming the market is
11 receptive to it, has in some cases been hundreds
12 of basis points over the yield on investment
13 grade securities. To me this suggests that you
14 do not want to be rated at the lower end of the
15 BBB range because an unexpected shock could move
16 you outside the investment grade range.³¹

17 The pressures of significant capital expenditure
18 requirements reinforce the importance of supporting
19 Avista's credit standing. Investors understand from past
20 experience in the utility industry that large capital needs
21 can lead to significant deterioration in financial
22 integrity that can constrain access to capital, especially
23 during times of unfavorable capital market conditions.
24 Considering the uncertain state of financial markets,
25 competition with other investment alternatives, and
26 investors' sensitivity to the potential for market

³¹ Brown, George, "Credit and Capital Issues Affecting the Electric Power Industry," *Federal Energy Regulatory Commission Technical Conference* (Jan. 13, 2009).

1 volatility, greater credit strength is a key ingredient in
2 maintaining access to capital at reasonable cost.

3 As Mr. Thies confirms in his testimony, continued
4 regulatory support will be a key driver in solidifying
5 Avista's financial health, which serves as a critical
6 backstop in the event of a recurring capital market crisis
7 or other operating challenges, such as poor hydro
8 conditions or increased capital outlays.

9 **Q. What role does regulation play in ensuring that**
10 **Avista has access to capital under reasonable terms and on**
11 **a sustainable basis?**

12 A. The major rating agencies have warned of exposure
13 to uncertainties associated with political and regulatory
14 developments. Investors recognize that constructive
15 regulation is a key ingredient in supporting utility credit
16 ratings and financial integrity, particularly during times
17 of adverse conditions. With respect to Avista
18 specifically, the major bond rating agencies have
19 explicitly cited the potential that adverse regulatory
20 rulings could compromise the Company's credit standing,
21 with Moody's concluding that, "Avista's ratings could be
22 negatively impacted if the level of regulatory support

1 wanes."³² S&P observed that management of Avista's
2 regulatory relationships "is a critical underpinning of its
3 investment-grade credit quality."³³

4 As Mr. Thies confirms in his testimony, regulatory
5 support will be a key driver in securing additional
6 improvement in the Company's financial health. Further
7 strengthening Avista's financial integrity is imperative to
8 ensure that the Company has the capability to maintain an
9 investment grade rating while confronting large capital
10 expenditures and other potential challenges.

11 **Q. Do customers benefit by enhancing the utility's**
12 **financial flexibility?**

13 A. Yes. While providing an ROE that is sufficient
14 to maintain Avista's ability to attract capital, even in
15 times of financial and market stress, is consistent with
16 the economic requirements embodied in the U.S. Supreme
17 Court's *Hope* and *Bluefield* decisions, it is also in
18 customers' best interests. Customers and the service area
19 economy enjoy the benefits that come from ensuring that the
20 utility has the financial wherewithal to take whatever
21 actions are required to ensure reliable service.

³² Moody's Investors Service, "Credit Opinion: Avista Corp.," *Global Credit Research* (Mar. 17, 2011).

³³ Standard & Poor's Corporation, "Avista Corp. Corporate Credit Rating Raised To 'BBB'; Outlook Stable," *RatingsDirect* (Mar. 2, 2011).

1 **E. Capital Structure**

2 **Q. Is an evaluation of the capital structure**
3 **maintained by a utility relevant in assessing its return on**
4 **equity?**

5 A. Yes. Other things equal, a higher debt ratio, or
6 lower common equity ratio, translates into increased
7 financial risk for all investors. A greater amount of debt
8 means more investors have a senior claim on available cash
9 flow, thereby reducing the certainty that each will receive
10 his contractual payments. This increases the risks to
11 which lenders are exposed, and they require correspondingly
12 higher rates of interest. From common shareholders'
13 standpoint, a higher debt ratio means that there are
14 proportionately more investors ahead of them, thereby
15 increasing the uncertainty as to the amount of cash flow,
16 if any, that will remain.

17 **Q. What common equity ratio is implicit in Avista's**
18 **requested capital structure?**

19 A. Avista's capital structure is presented in the
20 testimony of Mr. Thies. As summarized in his testimony,
21 the pro-forma common equity ratio used to compute Avista's
22 overall rate of return was 50.15 percent in this filing.

1 **Q. What was the average capitalization maintained by**
2 **the utility proxy group?**

3 A. As shown on Schedule 3, for the 28 firms in the
4 utility proxy group, common equity ratios at December 31,
5 2010 ranged between 39.2 percent and 63.8 percent and
6 averaged 49.3 percent.

7 **Q. What capitalization is representative for the**
8 **proxy group of utilities going forward?**

9 A. As shown on Schedule 3, Value Line expects an
10 average common equity ratio for the proxy group of
11 utilities of 51.5 percent for its three-to-five year
12 forecast horizon, with the individual common equity ratios
13 ranging from 41.5 percent to 67.5 percent.

14 **Q. How does Avista's common equity ratio compare**
15 **with those maintained by the reference group of utilities?**

16 A. The 50.15 percent common equity ratio requested
17 by Avista is entirely consistent with the range of equity
18 ratios maintained by the firms in the Utility Proxy Group
19 and falls within the 49.3 percent and 51.5 percent average
20 equity ratios at year-end 2010 and based on Value Line's
21 near-term expectations, respectively.

1 **Q. What implication does the increasing risk of the**
2 **utility industry have for the capital structures maintained**
3 **by utilities?**

4 A. As discussed earlier, utilities are facing energy
5 market volatility, rising cost structures, the need to
6 finance significant capital investment plans, uncertainties
7 over accommodating economic and financial market
8 uncertainties, and ongoing regulatory risks. Taken
9 together, these considerations warrant a stronger balance
10 sheet to deal with an increasingly uncertain environment.
11 A conservative financial profile, in the form of a solid
12 common equity ratio, is consistent with increasing
13 uncertainties and the need to maintain the continuous
14 access to capital under reasonable terms that is required
15 to fund operations and necessary system investment,
16 including times of adverse capital market conditions.

17 Moody's has repeatedly warned investors of the risks
18 associated with debt leverage and fixed obligations and
19 advised utilities not to squander the opportunity to
20 strengthen the balance sheet as a buffer against future
21 uncertainties.³⁴ More recently, Moody's concluded:

³⁴ Moody's Investors Service, "Storm Clouds Gathering on the Horizon for the North American Electric Utility Sector," *Special Comment* (Aug. 2007); "U.S. Electric Utility Sector," *Industry Outlook* (Jan. 2008).

1 From a credit perspective, we believe a strong
2 balance sheet coupled with abundant sources of
3 liquidity represents one of the best defenses
4 against business and operating risk and potential
5 negative ratings actions.³⁵

6 Similarly, S&P noted that, "we generally consider a debt to
7 capital level of 50% or greater to be aggressive or highly
8 leveraged for utilities."³⁶ Fitch affirmed that it expects
9 regulated utilities "to extend their conservative balance
10 sheet stance," and employ "a judicious mix of debt and
11 equity to finance high levels of planned investments."³⁷

12 **Q. What other factors do investors consider in their**
13 **assessment of a company's capital structure?**

14 A. Depending on their specific attributes,
15 contractual agreements or other obligations that require
16 the utility to make specified payments may be treated as
17 debt in evaluating Avista's financial risk. Power purchase
18 agreements ("PPAs") and leases typically obligate the
19 utility to make specified minimum contractual payments akin
20 to those associated with traditional debt financing and
21 investors consider a portion of these commitments as debt
22 in evaluating total financial risks. Because investors

³⁵ Moody's Investors Service, "U.S. Electric Utilities Face Challenges Beyond Near-Term," *Industry Outlook* (Jan. 2010).

³⁶ Standard & Poor's Corporation, "Ratings Roundup: U.S. Electric Utility Sector Maintained Strong Credit Quality In A Gloomy 2009," *RatingsDirect* (Jan. 26, 2010).

³⁷ Fitch Ratings Ltd., "U.S. Utilities, Power, and Gas 2010 Outlook," *Global Power North America Special Report* (Dec. 4, 2009).

1 consider the debt impact of such fixed obligations in
2 assessing a utility's financial position, they imply
3 greater risk and reduced financial flexibility. In order
4 to offset the debt equivalent associated with off-balance
5 sheet obligations, the utility must rebalance its capital
6 structure by increasing its common equity in order to
7 restore its effective capitalization ratios to previous
8 levels. The capital structure ratios presented earlier do
9 not include imputed debt associated with power purchase
10 agreements or the impact of other off-balance sheet
11 obligations.

12 These commitments have been repeatedly cited by major
13 bond rating agencies in connection with assessments of
14 utility financial risks.³⁸ For example, S&P reported that
15 it adjusts Avista's capitalization to include approximately
16 \$81 million in imputed debt from PPAs, leases, and
17 postretirement benefit obligations.³⁹ Unless Avista takes
18 action to offset this additional financial risk by

³⁸ See, e.g., Standard & Poor's Corporation, "Standard & Poor's Methodology For Imputing Debt For U.S. Utilities' Power Purchase Agreements," *RatingsDirect* (May 7, 2007); Standard & Poor's Corporation, "Implications Of Operating Leases On Analysis Of U.S. Electric Utilities," *RatingsDirect* (Jan. 15, 2008); Standard & Poor's Corporation, "Top 10 Investor Questions: U.S. Regulated Electric Utilities," *RatingsDirect* (Jan. 22, 2010).

³⁹ Thies Testimony, P. 18, ll. 16-19. Similarly, Moody's noted that imputed debt may cause a deterioration in Avista's financial performance. Moody's Investors Service, "Credit Opinion: Avista Corp.," Global Credit Research (Mar. 17, 2011).

1 maintaining a higher equity ratio, the resulting leverage
2 will weaken the Company's creditworthiness, implying a
3 higher required rate of return to compensate investors for
4 the greater risks.⁴⁰

5 **Q. What did you conclude with respect to the**
6 **Company's capital structure?**

7 A. Based on my evaluation, I concluded that Avista's
8 requested capital structure represents a reasonable mix of
9 capital sources from which to calculate the Company's
10 overall rate of return. While industry averages provide
11 one benchmark for comparison, each firm must select its
12 capitalization based on the risks and prospects it faces,
13 as well its specific needs to access the capital markets.
14 A public utility with an obligation to serve must maintain
15 ready access to capital under reasonable terms so that it
16 can meet the service requirements of its customers.

17 Avista's capital structure is consistent with industry
18 benchmarks and reflects the challenges posed by its
19 resource mix, the burden of significant capital spending
20 requirements, and the Company's ongoing efforts to

⁴⁰ Apart from the immediate impact that the fixed obligation of purchased power costs has on the utility's financial risk, higher fixed charges also reduce ongoing financial flexibility, and the utility may face other uncertainties, such as potential replacement power costs in the event of supply disruption.

1 strengthen its credit standing and support access to
2 capital on reasonable terms. Moody's observed that its
3 ratings for Avista anticipate "a balanced mix of debt and
4 equity."⁴¹ The need for access becomes even more important
5 when the company has capital requirements over a period of
6 years, and financing must be continuously available, even
7 during unfavorable capital market conditions.

8 **III. CAPITAL MARKET ESTIMATES**

9 **Q. What is the purpose of this section?**

10 A. This section presents capital market estimates of
11 the cost of equity. The details of my quantitative
12 analyses are contained in Schedule 2, with the results
13 being summarized below.

14 **A. Overview**

15 **Q. What role does the rate of return on common
16 equity play in a utility's rates?**

17 A. The return on common equity is the cost of
18 inducing and retaining investment in the utility's physical
19 plant and assets. This investment is necessary to finance
20 the asset base needed to provide utility service.
21 Investors will commit money to a particular investment only

⁴¹ Moody's Investors Service, "Credit Opinion: Avista Corp.," *Global Credit Research* (Mar. 17, 2011).

1 if they expect it to produce a return commensurate with
2 those from other investments with comparable risks.
3 Moreover, the return on common equity is integral in
4 achieving the sound regulatory objectives of rates that are
5 sufficient to: 1) fairly compensate capital investment in
6 the utility, 2) enable the utility to offer a return
7 adequate to attract new capital on reasonable terms, and 3)
8 maintain the utility's financial integrity. Meeting these
9 objectives allows the utility to fulfill its obligation to
10 provide reliable service while meeting the needs of
11 customers through necessary system replacement and
12 expansion.

13 **Q. Did you rely on a single method to estimate the**
14 **cost of equity for Avista?**

15 A. No. In my opinion, no single method or model
16 should be relied upon to determine a utility's cost of
17 equity because no single approach can be regarded as wholly
18 reliable. Therefore, I used both the DCF and CAPM methods
19 to estimate the cost of common equity. In addition, I also
20 evaluated a fair ROE using an earnings approach based on
21 investors' current expectations in the capital markets. In
22 my opinion, comparing estimates produced by one method with
23 those produced by other approaches ensures that the

1 estimates of the cost of equity pass fundamental tests of
2 reasonableness and economic logic.

3 **Q. Are you aware that the IPUC has traditionally**
4 **relied primarily on the DCF and comparable earnings**
5 **methods?**

6 A. Yes, although the Commission has also evidenced a
7 willingness to weigh alternatives in evaluating an allowed
8 ROE. For example, while noting that it had not focused on
9 the CAPM for determining the cost of equity, the IPUC
10 recognized in Order No. 29505 that "methods to evaluate a
11 common equity rate of return are imperfect predictors" and
12 emphasized "that by evaluating all the methods presented in
13 this case and using each as a check on the other," the
14 Commission had avoided the pitfalls associated with
15 reliance on a single method.⁴²

16 **Q. What was your conclusion regarding a fair ROE for**
17 **the proxy companies?**

18 A. Based on the results of my quantitative analyses,
19 and my assessment of the relative strengths and weaknesses
20 inherent in each method, I concluded that the cost of
21 equity for the proxy companies is in the 10.3 percent to
22 11.3 percent range, or 10.45 percent to 11.45 percent after
23 including a minimum adjustment for flotation costs.

⁴² Order No. 29505 at 38 (emphasis added).

1 **B. Results of Quantitative Analyses**

2 **Q. What specific proxy group of utilities did you**
3 **rely on for your analysis?**

4 A. In estimating the cost of equity, the DCF model
5 is typically applied to publicly traded firms engaged in
6 similar business activities or with comparable investment
7 risks. As described in detail in Schedule 2, I applied the
8 DCF model to a utility proxy group composed of those
9 dividend-paying companies included by Value Line in its
10 Electric Utilities Industry groups with: (1) S&P corporate
11 credit ratings of "BBB-" to "BBB+," (2) a Value Line Safety
12 Rank of "2" or "3", and (3) a Value Line Financial Strength
13 Rating of "B+" to "B++".⁴³ I refer to this group of 28
14 comparable-risk firms as the "Utility Proxy Group."

15 **Q. What other proxy group did you consider in**
16 **evaluating a fair ROE for Avista?**

17 A. Under the regulatory standards established by
18 *Hope* and *Bluefield*, the salient criterion in establishing a
19 meaningful benchmark to evaluate a fair ROE is relative
20 risk, not the particular business activity or degree of
21 regulation. With regulation taking the place of

⁴³ In addition, I excluded four utilities (Allegheny Energy, Inc., FirstEnergy Corp., Northeast Utilities, and Progress Energy, Inc.) that otherwise would have been in the proxy group, but are not appropriate for inclusion because they are currently involved in a major merger or acquisition.

1 competitive market forces, required returns for utilities
2 should be in line with those of non-utility firms of
3 comparable risk operating under the constraints of free
4 competition. Consistent with this accepted regulatory
5 standard, I also applied the DCF model to a reference group
6 of comparable risk companies in the non-utility sectors of
7 the economy. I refer to this group as the "Non-Utility
8 Proxy Group".

9 **Q. Do utilities have to compete with non-regulated**
10 **firms for capital?**

11 A. Yes. The cost of capital is an opportunity cost
12 based on the returns that investors could realize by
13 putting their money in other alternatives. Clearly, the
14 total capital invested in utility stocks is only the tip of
15 the iceberg of total common stock investment, and there are
16 a plethora of other enterprises available to investors
17 beyond those in the utility industry. Utilities must
18 compete for capital, not just against firms in their own
19 industry, but with other investment opportunities of
20 comparable risk.

1 **Q. Is it consistent with the *Bluefield* and *Hope***
2 **cases to consider required returns for non-utility**
3 **companies?**

4 A. Yes. Returns in the competitive sector of the
5 economy form the very underpinning for utility ROEs because
6 regulation purports to serve as a substitute for the
7 actions of competitive markets. The Supreme Court has
8 recognized that it is the degree of risk, not the nature of
9 the business, which is relevant in evaluating an allowed
10 ROE for a utility. The *Bluefield* case refers to "business
11 undertakings attended with comparable risks and
12 uncertainties."⁴⁴ It does not restrict consideration to
13 other utilities. Similarly, the *Hope* case states:

14 By that standard the return to the equity owner
15 should be commensurate with returns on
16 investments in other enterprises having
17 corresponding risks.⁴⁵

18 As in the *Bluefield* decision, there is nothing to restrict
19 "other enterprises" solely to the utility industry.

20 Indeed, in teaching regulatory policy I usually
21 observe that in the early applications of the comparable
22 earnings approach, utilities were explicitly eliminated due
23 to a concern about circularity. In other words, soon after

⁴⁴ *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).

⁴⁵ *Federal Power Comm'n v. Hope Natural Gas Co.* (320 U.S. 391, 1944).

1 the *Hope* decision regulatory commissions did not want to
2 get involved in circular logic by looking to the returns of
3 utilities that were established by the same or similar
4 regulatory commissions in the same geographic region. To
5 avoid circularity, regulators looked only to the returns of
6 non-utility companies.

7 **Q. Does consideration of the results for the Non-**
8 **Utility Proxy Group make the estimation of the cost of**
9 **equity using the DCF model more reliable?**

10 A. Yes. The estimates of growth from the DCF model
11 depend on analysts' forecasts. It is possible for utility
12 growth rates to be distorted by short-term trends in the
13 industry or the industry falling into favor or disfavor by
14 analysts. The result of such distortions would be to bias
15 the DCF estimates for utilities. For example, Value Line
16 recently observed that near-term growth rates understate
17 the longer-term expectations for gas utilities:

18 Natural Gas Utility stocks have fallen near the
19 bottom of our Industry spectrum for Timeliness.
20 Accordingly, short-term investors would probably
21 do best to find a group with better prospects
22 over the coming six to 12 months. Longer-term,
23 we expect these businesses to rebound. An
24 improved economic environment, coupled with
25 stronger pricing, should boost results across
26 this sector over the coming years.⁴⁶

⁴⁶ The Value Line Investment Survey at 445 (Mar. 12, 2010).

1 Because the Non-Utility Proxy Group includes low risk
2 companies from many industries, it diversifies away any
3 distortion that may be caused by the ebb and flow of
4 enthusiasm for a particular sector.

5 **Q. What criteria did you apply to develop the Non-**
6 **Utility Proxy Group?**

7 A. My comparable risk proxy group of non-utility
8 firms was composed of those U.S. companies followed by
9 Value Line that: (1) pay common dividends; (2) have a
10 Safety Rank of "1"; (3) have a Financial Strength Rating of
11 "B++" or greater; (4) have a beta of 0.85 or less; and, (5)
12 have investment grade credit ratings from S&P.

13 **Q. How do the overall risks of your proxy groups**
14 **compare with Avista?**

15 A. Table WEA-2 compares the Utility Proxy Group with
16 the Non-Utility Proxy Group and Avista across four key
17 indicators of investment risk:

18 **TABLE WEA-2**
19 **COMPARISON OF RISK INDICATORS**

	S&P	Value Line		
	Credit	Safety	Financial	
	Rating	Rank	Strength	Beta
Utility Group	BBB	3	B++	0.74
Non-Utility Proxy Group	A	1	A+	0.70
Avista	BBB	2	B++	0.70

1 **Q. Do these comparisons indicate that investors**
2 **would view the firms in your proxy groups as risk-**
3 **comparable to the Company?**

4 A. Yes. Considered together, a comparison of these
5 objective measures, which consider a broad spectrum of
6 risks, including financial and business position, and
7 exposure to firm-specific factors, indicates that investors
8 would likely conclude that the overall investment risks for
9 Avista are generally comparable to those of the firms in
10 the Utility Proxy Group.

11 With respect to the Non-Utility Proxy Group, its
12 average credit ratings, Safety Rank, and Financial Strength
13 Rating suggest less risk than for Avista, with its 0.70
14 average beta indicating identical risk. While the impact
15 of differences in regulation is reflected in objective risk
16 measures, my analyses conservatively focus on a lower-risk
17 group of non-utility firms.

18 **Q. What cost of equity is implied by your DCF**
19 **results for the utility proxy group?**

20 A. My application of the DCF model, which is
21 discussed in greater detail in Schedule 2, considered three
22 alternative measures of expected earnings growth, as well
23 as the sustainable growth rate based on the relationship
24 between expected retained earnings and earned rates of

1 return ("br+sv"). As shown on Schedule 4 and summarized
2 below in Table WEA-3, after eliminating illogical low- and
3 high-end values, application of the constant growth DCF
4 model resulted in the following cost of equity estimates:

5
6

TABLE WEA-3
DCF RESULTS - UTILITY PROXY GROUP

<u>Growth Rate</u>	<u>Average Cost of Equity</u>
Value Line	10.9%
IBES	10.6%
Zacks	10.6%
br+sv	9.2%

7 **Q. What were the results of your DCF analysis for**
8 **the Non-Utility Proxy Group?**

9 A. As shown on Schedule 6, I applied the DCF model
10 to the non-utility companies in exactly the same manner
11 described earlier for the Utility Proxy Group. As
12 summarized below in Table WEA-4, after eliminating
13 illogical low- and high-end values, application of the
14 constant growth DCF model resulted in the following cost of
15 equity estimates:

16
17

TABLE WEA-4
DCF RESULTS - NON-UTILITY GROUP

<u>Growth Rate</u>	<u>Average Cost of Equity</u>
Value Line	11.9%
IBES	12.4%
Zacks	12.5%
br+sv	12.1%

1 **Q. How did you apply the CAPM to estimate the cost**
2 **of equity?**

3 A. Like the DCF model, the CAPM is an ex-ante, or
4 forward-looking model based on expectations of the future.
5 As a result, in order to produce a meaningful estimate of
6 investors' required rate of return, the CAPM is best
7 applied using estimates that reflect the expectations of
8 actual investors in the market, not with backward-looking,
9 historical data. Accordingly, I applied the CAPM to the
10 utility proxy group based on a forward-looking estimate for
11 investors' required rate of return from common stocks.
12 Because this forward-looking application of the CAPM looks
13 directly at investors' expectations in the capital markets,
14 it provides a more meaningful guide to the expected rate of
15 return required to implement the CAPM.

16 **Q. What cost of equity was indicated by the CAPM**
17 **approach?**

18 A. As shown on Schedule 8, my forward-looking application
19 of the CAPM model indicated an ROE of 11.5 percent for the
20 utility proxy group. Applying the CAPM approach to the
21 firms in the non-utility proxy group (Schedule 9) implied a
22 cost of equity of 10.1 percent.

1 **Q. What other analyses did you conduct to estimate**
2 **the cost of equity?**

3 A. As I noted earlier, I also evaluated the cost of
4 equity using the comparable earnings approach. Reference
5 to rates of return available from alternative investments
6 of comparable risk can provide an important benchmark in
7 assessing the return necessary to assure confidence in the
8 financial integrity of a firm and its ability to attract
9 capital. This comparable earnings approach is consistent
10 with the economic underpinnings for a fair rate of return
11 established by the U.S. Supreme Court. Moreover, it avoids
12 the complexities and limitations of capital market methods
13 and instead focuses on the returns earned on book equity,
14 which are readily available to investors.

15 **Q. What rates of return on equity are indicated for**
16 **utilities based on the comparable earnings approach?**

17 A. Value Line reports that its analysts anticipate
18 an average rate of return on common equity for the electric
19 utility industry of 10.5 percent in 2011 and over its 2013-
20 2015 forecast horizon.⁴⁷ The capital structure
21 corresponding with this expected return reflects an equity
22 ratio of 49.5 percent. Meanwhile, for the gas utility

⁴⁷ The Value Line Investment Survey at 139 (Feb. 25, 2011).

1 industry Value Line expects returns on common equity of
2 10.0 percent throughout its forecast horizon.⁴⁸ As shown
3 on Schedule 10, Value Line's projections for the utility
4 proxy group suggested an average ROE of 10.4 percent after
5 eliminating outliers.⁴⁹

6 **C. Flotation Costs**

7 **Q. What other considerations are relevant in setting**
8 **the return on equity for a utility?**

9 A. The common equity used to finance the investment
10 in utility assets is provided from either the sale of stock
11 in the capital markets or from retained earnings not paid
12 out as dividends. When equity is raised through the sale
13 of common stock, there are costs associated with "floating"
14 the new equity securities. These flotation costs include
15 services such as legal, accounting, and printing, as well
16 as the fees and discounts paid to compensate brokers for
17 selling the stock to the public. Also, some argue that the
18 "market pressure" from the additional supply of common
19 stock and other market factors may further reduce the
20 amount of funds a utility nets when it issues common
21 equity.

⁴⁸ The Value Line Investment Survey at 546 (Mar. 11, 2011).

⁴⁹ As highlighted on Schedule 10, I eliminated two extreme low-end outliers.

1 **Q. Is there an established mechanism for a utility**
2 **to recognize equity issuance costs?**

3 A. No. While debt flotation costs are recorded on
4 the books of the utility, amortized over the life of the
5 issue, and thus increase the effective cost of debt
6 capital, there is no similar accounting treatment to ensure
7 that equity flotation costs are recorded and ultimately
8 recognized. No rate of return is authorized on flotation
9 costs necessarily incurred to obtain a portion of the equity
10 capital used to finance plant. In other words, equity
11 flotation costs are not included in a utility's rate base
12 because neither that portion of the gross proceeds from the
13 sale of common stock used to pay flotation costs is
14 available to invest in plant and equipment, nor are
15 flotation costs capitalized as an intangible asset. Unless
16 some provision is made to recognize these issuance costs, a
17 utility's revenue requirements will not fully reflect all of
18 the costs incurred for the use of investors' funds. Because
19 there is no accounting convention to accumulate the
20 flotation costs associated with equity issues, they must be
21 accounted for indirectly, with an upward adjustment to the
22 cost of equity being the most logical mechanism.

1 Q. What is the magnitude of the adjustment to the
2 "bare bones" cost of equity to account for issuance costs?

3 A. While there are a number of ways in which a
4 flotation cost adjustment can be calculated, one of the
5 most common methods used to account for flotation costs in
6 regulatory proceedings is to apply an average flotation-
7 cost percentage to a utility's dividend yield. Based on a
8 review of the finance literature, *New Regulatory Finance*
9 concluded:

10 The flotation cost allowance requires an
11 estimated adjustment to the return on equity of
12 approximately 5% to 10%, depending on the size
13 and risk of the issue.⁵⁰

14 Alternatively, a study of data from Morgan Stanley
15 regarding issuance costs associated with utility common
16 stock issuances suggests an average flotation cost
17 percentage of 3.6 percent.⁵¹

18 Issuance costs are a legitimate consideration in
19 setting the ROE for a utility, and applying these expense
20 percentages to a representative dividend yield for a

⁵⁰ Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* at 323 (2006).

⁵¹ Application of Yankee Gas Services Company for a Rate Increase, DPUC Docket No. 04-06-01, Direct Testimony of George J. Eckenroth (Jul. 2, 2004) at Exhibit GJE-11.1. Updating the results presented by Mr. Eckenroth through April 2005 also resulted in an average flotation cost percentage of 3.6%.

1 utility of 4.5 percent implies a flotation cost adjustment
2 on the order of 15 to 45 basis points.

3 **Q. Has the IPUC Staff previously considered**
4 **flotation costs in estimating a fair ROE?**

5 A. Yes. For example, in Case No. IPC-E-08-10, IPUC
6 Staff witness Terri Carlock noted that she had adjusted her
7 DCF analysis to incorporate an allowance for flotation
8 costs.⁵²

9 **IV. RETURN ON EQUITY RECOMMENDATION**

10 **Q. What did you conclude with respect to the cost of**
11 **equity implied by your analyses for the proxy groups?**

12 A. The cost of equity estimates implied by my
13 quantitative analyses are summarized in Table WEA-5, below:

⁵² Case No. IPC-E-08-10, *Direct Testimony of Terri Carlock* at 12-13 (Oct. 24, 2008).

1
2

**TABLE WEA-5
SUMMARY OF QUANTITATIVE RESULTS**

<u>DCF</u>	<u>Utility</u>	<u>Non-Utility</u>
Earnings Growth		
Value Line	10.9%	11.9%
IBES	10.6%	12.4%
Zacks	10.6%	12.5%
br + sv	9.2%	12.1%
<u>CAPM</u>	11.5%	10.1%
<u>Expected Earnings</u>	<u>Electric</u>	<u>Gas</u>
Value Line 2014-16	10.5%	10.0%
Utility Proxy Group	10.4%	--

3

4 Considering the relative strengths and weaknesses inherent
5 in each method, and conservatively giving less emphasis to
6 the upper- and lower-most boundaries of the range of
7 results, I concluded that the cost of common equity is in
8 the 10.3 percent to 11.3 percent range.

9

10 **Q. What then is your conclusion regarding a fair ROE**
11 **based on your analyses for the companies in your proxy**
12 **groups?**

13 A. After incorporating a minimum adjustment for
14 flotation costs of 15 basis points to my "bare bones" cost
15 of equity range, I concluded that my analyses indicate a
16 fair ROE in the 10.45 percent to 11.45 percent range, with
 a midpoint of 10.95 percent.

1 Q. Based on the results of your evaluation, what is
2 your opinion regarding the reasonableness of the ROE
3 requested by Avista in this case?

4 A. Because the Company's requested 10.9 percent ROE
5 falls essentially at the midpoint of my recommended range
6 it represents a reasonable estimate of investors' required
7 return that is adequate to compensate investors, while
8 maintaining Avista's financial integrity and ability to
9 attract capital on reasonable terms.

10 Apart from the results of the quantitative methods
11 summarized above, it is crucial to recognize the importance
12 of supporting the Company's financial position so that
13 Avista remains prepared to respond to unforeseen events
14 that may materialize in the future. Recent challenges in
15 the economic and financial market environment highlight the
16 imperative of maintaining the Company's financial strength
17 in attracting the capital needed to secure reliable service
18 at a lower cost for customers. The reasonableness of the
19 Company's requested ROE is reinforced by the operating
20 risks associated with Avista's reliance on hydroelectric
21 generation, the higher uncertainties associated with
22 Avista's relatively small size, and the fact that current
23 cost of capital estimates are likely to understate

1 investors' requirements at the time the outcome of this
2 proceeding becomes effective and beyond.

3 Q. Does this conclude your pre-filed direct
4 testimony?

5 A. Yes.

DAVID J. MEYER
VICE PRESIDENT AND CHIEF COUNSEL FOR
REGULATORY & GOVERNMENTAL AFFAIRS
AVISTA CORPORATION
P.O. BOX 3727
1411 EAST MISSION AVENUE
SPOKANE, WASHINGTON 99220-3727
TELEPHONE: (509) 495-4316
FACSIMILE: (509) 495-8851
DAVID.MEYER@AVISTACORP.COM

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION)	CASE NO. AVU-E-11-01
OF AVISTA CORPORATION FOR THE)	CASE NO. AVU-G-11-01
AUTHORITY TO INCREASE ITS RATES)	
AND CHARGES FOR ELECTRIC AND)	
NATURAL GAS SERVICE TO ELECTRIC)	EXHIBIT NO. 3
AND NATURAL GAS CUSTOMERS IN THE)	
STATE OF IDAHO)	WILLIAM E. AVERA
)	

FOR AVISTA CORPORATION

(ELECTRIC AND NATURAL GAS)

EXHIBIT 3, SCHEDULE 1

QUALIFICATIONS OF WILLIAM E. AVERA

Q. What is the purpose of this exhibit?

A. This exhibit describes my background and experience and contains the details of my qualifications.

Q. Please describe your qualifications and experience.

A. I received a B.A. degree with a major in economics from Emory University. After serving in the U.S. Navy, I entered the doctoral program in economics at the University of North Carolina at Chapel Hill. Upon receiving my Ph.D., I joined the faculty at the University of North Carolina and taught finance in the Graduate School of Business. I subsequently accepted a position at the University of Texas at Austin where I taught courses in financial management and investment analysis. I then went to work for International Paper Company in New York City as Manager of Financial Education, a position in which I had responsibility for all corporate education programs in finance, accounting, and economics.

In 1977, I joined the staff of the Public Utility Commission of Texas ("PUCT") as Director of the Economic Research Division. During my tenure at the PUCT, I managed a division responsible for financial analysis,

cost allocation and rate design, economic and financial research, and data processing systems, and I testified in cases on a variety of financial and economic issues. Since leaving the PUCT, I have been engaged as a consultant. I have participated in a wide range of assignments involving utility-related matters on behalf of utilities, industrial customers, municipalities, and regulatory commissions. I have previously testified before the Federal Energy Regulatory Commission ("FERC"), as well as the Federal Communications Commission, the Surface Transportation Board (and its predecessor, the Interstate Commerce Commission), the Canadian Radio-Television and Telecommunications Commission, and regulatory agencies, courts, and legislative committees in over 40 states, including the Public Utilities Commission of Ohio ("PUCO" or the "Commission").

In 1995, I was appointed by the PUCT to the Synchronous Interconnection Committee to advise the Texas legislature on the costs and benefits of connecting Texas to the national electric transmission grid. In addition, I served as an outside director of Georgia System Operations Corporation, the system operator for electric cooperatives in Georgia.

I have served as Lecturer in the Finance Department at the University of Texas at Austin and taught in the

evening graduate program at St. Edward's University for twenty years. In addition, I have lectured on economic and regulatory topics in programs sponsored by universities and industry groups. I have taught in hundreds of educational programs for financial analysts in programs sponsored by the Association for Investment Management and Research, the Financial Analysts Review, and local financial analysts societies. These programs have been presented in Asia, Europe, and North America, including the Financial Analysts Seminar at Northwestern University. I hold the Chartered Financial Analyst (CFA®) designation and have served as Vice President for Membership of the Financial Management Association. I have also served on the Board of Directors of the North Carolina Society of Financial Analysts. I was elected Vice Chairman of the National Association of Regulatory Commissioners ("NARUC") Subcommittee on Economics and appointed to NARUC's Technical Subcommittee on the National Energy Act. I have also served as an officer of various other professional organizations and societies. A resume containing the details of my experience and qualifications is attached.

WILLIAM E. AVERA

FINCAP, INC.
Financial Concepts and Applications
Economic and Financial Counsel

3907 Red River
Austin, Texas 78751
(512) 458-4644
FAX (512) 458-4768
fincap@texas.net

Summary of Qualifications

Ph.D. in economics and finance; Chartered Financial Analyst (CFA[®]) designation; extensive expert witness testimony before courts, alternative dispute resolution panels, regulatory agencies and legislative committees; lectured in executive education programs around the world on ethics, investment analysis, and regulation; undergraduate and graduate teaching in business and economics; appointed to leadership positions in government, industry, academia, and the military.

Employment

Principal,
FINCAP, Inc.
(Sep. 1979 to present)

Financial, economic and policy consulting to business and government. Perform business and public policy research, cost/benefit analyses and financial modeling, valuation of businesses (almost 200 entities valued), estimation of damages, statistical and industry studies. Provide strategy advice and educational services in public and private sectors, and serve as expert witness before regulatory agencies, legislative committees, arbitration panels, and courts.

*Director, Economic Research
Division,*
Public Utility Commission of Texas
(Dec. 1977 to Aug. 1979)

Responsible for research and testimony preparation on rate of return, rate structure, and econometric analysis dealing with energy, telecommunications, water and sewer utilities. Testified in major rate cases and appeared before legislative committees and served as Chief Economist for agency. Administered state and federal grant funds. Communicated frequently with political leaders and representatives from consumer groups, media, and investment community.

Manager, Financial Education,
International Paper Company
New York City
(Feb. 1977 to Nov. 1977)

Directed corporate education programs in accounting, finance, and economics. Developed course materials, recruited and trained instructors, liaison within the company and with academic institutions. Prepared operating budget and designed financial controls for corporate professional development program.

Lecturer in Finance,
The University of Texas at Austin
(Sep. 1979 to May 1981)
Assistant Professor of Finance,
(Sep. 1975 to May 1977)

Taught graduate and undergraduate courses in financial management and investment theory. Conducted research in business and public policy. Named Outstanding Graduate Business Professor and received various administrative appointments.

Assistant Professor of Business,
University of North Carolina at
Chapel Hill
(Sep. 1972 to Jul. 1975)

Taught in BBA, MBA, and Ph.D. programs. Created project course in finance, Financial Management for Women, and participated in developing Small Business Management sequence. Organized the North Carolina Institute for Investment Research, a group of financial institutions that supported academic research. Faculty advisor to the Media Board, which funds student publications and broadcast stations.

Education

Ph.D., Economics and Finance,
University of North Carolina at
Chapel Hill
(Jan. 1969 to Aug. 1972)

Elective courses included financial management, public finance, monetary theory, and econometrics. Awarded the Stonier Fellowship by the American Bankers' Association and University Teaching Fellowship. Taught statistics, macroeconomics, and microeconomics.

Dissertation: *The Geometric Mean Strategy as a Theory of Multiperiod Portfolio Choice*

B.A., Economics,
Emory University, Atlanta, Georgia
(Sep. 1961 to Jun. 1965)

Active in extracurricular activities, president of the Barkley Forum (debate team), Emory Religious Association, and Delta Tau Delta chapter. Individual awards and team championships at national collegiate debate tournaments.

Professional Associations

Received Chartered Financial Analyst (CFA) designation in 1977; Vice President for Membership, Financial Management Association; President, Austin Chapter of Planning Executives Institute; Board of Directors, North Carolina Society of Financial Analysts; Candidate Curriculum Committee, Association for Investment Management and Research; Executive Committee of Southern Finance Association; Vice Chair, Staff Subcommittee on Economics and National Association of Regulatory Utility Commissioners (NARUC); Appointed to NARUC Technical Subcommittee on the National Energy Act.

Teaching in Executive Education Programs

University-Sponsored Programs: Central Michigan University, Duke University, Louisiana State University, National Defense University, National University of Singapore, Texas A&M University, University of Kansas, University of North Carolina, University of Texas.

Business and Government-Sponsored Programs: Advanced Seminar on Earnings Regulation, American Public Welfare Association, Association for Investment Management and Research, Congressional Fellows Program, Cost of Capital Workshop, Electricity Consumers Resource Council, Financial Analysts Association of Indonesia, Financial Analysts Review, Financial Analysts Seminar at Northwestern University, Governor's Executive Development Program of Texas, Louisiana Association of Business and Industry, National Association of Purchasing Management, National Association of Tire Dealers, Planning Executives Institute, School of Banking of the South, State of Wisconsin Investment Board, Stock Exchange of Thailand, Texas Association of State Sponsored Computer Centers, Texas Bankers' Association, Texas Bar Association, Texas Savings and Loan League, Texas Society of CPAs, Tokyo Association of Foreign Banks, Union Bank of Switzerland, U.S. Department of State, U.S. Navy, U.S. Veterans Administration, in addition to Texas state agencies and major corporations.

Presented papers for Mills B. Lane Lecture Series at the University of Georgia and Heubner Lectures at the University of Pennsylvania. Taught graduate courses in finance and economics for evening program at St. Edward's University in Austin from January 1979 through 1998.

Expert Witness Testimony

Testified in over 300 cases before regulatory agencies addressing cost of capital, regulatory policy, rate design, and other economic and financial issues.

Federal Agencies: Federal Communications Commission, Federal Energy Regulatory Commission, Surface Transportation Board, Interstate Commerce Commission, and the Canadian Radio-Television and Telecommunications Commission.

State Regulatory Agencies: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Missouri, Nevada, New Mexico, Montana, Nebraska, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Testified in 42 cases before federal and state courts, arbitration panels, and alternative dispute tribunals (89 depositions given) regarding damages, valuation, antitrust liability, fiduciary duties, and other economic and financial issues.

Board Positions and Other Professional Activities

Audit Committee and Outside Director, Georgia System Operations Corporation (electric system operator for member-owned electric cooperatives in Georgia); Chairman, Board of Print Depot, Inc. and FINCAP, Inc.; Co-chair, Synchronous Interconnection Committee, appointed by Public Utility Commission of Texas and approved by governor; Appointed by Hays County Commission to Citizens Advisory Committee of Habitat Conservation Plan, Operator of AAA Ranch, a certified

organic producer of agricultural products; Appointed to Organic Livestock Advisory Committee by Texas Agricultural Commissioner Susan Combs; Appointed by Texas Railroad Commissioners to study group for *The UP/SP Merger: An Assessment of the Impacts on the State of Texas*; Appointed by Hawaii Public Utilities Commission to team reviewing affiliate relationships of Hawaiian Electric Industries; Chairman, Energy Task Force, Greater Austin-San Antonio Corridor Council; Consultant to Public Utility Commission of Texas on cogeneration policy and other matters; Consultant to Public Service Commission of New Mexico on cogeneration policy; Evaluator of Energy Research Grant Proposals for Texas Higher Education Coordinating Board.

Community Activities

Board of Directors, Sustainable Food Center; Chair, Board of Deacons, Finance Committee, and Elder, Central Presbyterian Church of Austin; Founding Member, Orange-Chatham County (N.C.) Legal Aid Screening Committee.

Military

Captain, U.S. Naval Reserve (retired after 28 years service); Commanding Officer, Naval Special Warfare Engineering (SEAL) Support Unit; Officer-in-Charge of SWIFT patrol boat in Vietnam; Enlisted service as weather analyst (advanced to second class petty officer).

Bibliography

Monographs

Ethics and the Investment Professional (video, workbook, and instructor's guide) and *Ethics Challenge Today* (video), Association for Investment Management and Research (1995)

"Definition of Industry Ethics and Development of a Code" and "Applying Ethics in the Real World," in *Good Ethics: The Essential Element of a Firm's Success*, Association for Investment Management and Research (1994)

"On the Use of Security Analysts' Growth Projections in the DCF Model," with Bruce H. Fairchild in *Earnings Regulation Under Inflation*, J. R. Foster and S. R. Holmberg, eds. Institute for Study of Regulation (1982)

An Examination of the Concept of Using Relative Customer Class Risk to Set Target Rates of Return in Electric Cost-of-Service Studies, with Bruce H. Fairchild, Electricity Consumers Resource Council (ELCON) (1981); portions reprinted in *Public Utilities Fortnightly* (Nov. 11, 1982)

"Usefulness of Current Values to Investors and Creditors," *Research Study on Current-Value Accounting Measurements and Utility*, George M. Scott, ed., Touche Ross Foundation (1978)

"The Geometric Mean Strategy and Common Stock Investment Management," with Henry A. Latané in *Life Insurance Investment Policies*, David Cummins, ed. (1977)

Investment Companies: Analysis of Current Operations and Future Prospects, with J. Finley Lee and Glenn L. Wood, American College of Life Underwriters (1975)

Articles

- "Should Analysts Own the Stocks they Cover?" *The Financial Journalist*, (March 2002)
- "Liquidity, Exchange Listing, and Common Stock Performance," with John C. Groth and Kerry Cooper, *Journal of Economics and Business* (Spring 1985); reprinted by National Association of Security Dealers
- "The Energy Crisis and the Homeowner: The Grief Process," *Texas Business Review* (Jan.–Feb. 1980); reprinted in *The Energy Picture: Problems and Prospects*, J. E. Pluta, ed., Bureau of Business Research (1980)
- "Use of IFPS at the Public Utility Commission of Texas," *Proceedings of the IFPS Users Group Annual Meeting* (1979)
- "Production Capacity Allocation: Conversion, CWIP, and One-Armed Economics," *Proceedings of the NARUC Biennial Regulatory Information Conference* (1978)
- "Some Thoughts on the Rate of Return to Public Utility Companies," with Bruce H. Fairchild in *Proceedings of the NARUC Biennial Regulatory Information Conference* (1978)
- "A New Capital Budgeting Measure: The Integration of Time, Liquidity, and Uncertainty," with David Cordell in *Proceedings of the Southwestern Finance Association* (1977)
- "Usefulness of Current Values to Investors and Creditors," in *Inflation Accounting/Indexing and Stock Behavior* (1977)
- "Consumer Expectations and the Economy," *Texas Business Review* (Nov. 1976)
- "Portfolio Performance Evaluation and Long-run Capital Growth," with Henry A. Latané in *Proceedings of the Eastern Finance Association* (1973)
- Book reviews in *Journal of Finance* and *Financial Review*. Abstracts for *CFA Digest*. Articles in *Carolina Financial Times*.

Selected Papers and Presentations

- "Economic Perspective on Water Marketing in Texas," 2009 Water Law Institute, The University of Texas School of Law, Austin, TX (Dec. 2009).
- "Estimating Utility Cost of Equity in Financial Turmoil," SNL EXNET 15th Annual FERC Briefing, Washington, D.C. (Mar. 2009)
- "The Who, What, When, How, and Why of Ethics," San Antonio Financial Analysts Society (Jan. 16, 2002). Similar presentation given to the Austin Society of Financial Analysts (Jan. 17, 2002)
- "Ethics for Financial Analysts," Sponsored by Canadian Council of Financial Analysts: delivered in Calgary, Edmonton, Regina, and Winnipeg, June 1997. Similar presentations given to Austin Society of Financial Analysts (Mar. 1994), San Antonio Society of Financial Analysts (Nov. 1985), and St. Louis Society of Financial Analysts (Feb. 1986)
- "Cost of Capital for Multi-Divisional Corporations," Financial Management Association, New Orleans, Louisiana (Oct. 1996)
- "Ethics and the Treasury Function," Government Treasurers Organization of Texas, Corpus Christi, Texas (Jun. 1996)
- "A Cooperative Future," Iowa Association of Electric Cooperatives, Des Moines (December 1995). Similar presentations given to National G & T Conference, Irving, Texas (June 1995), Kentucky

- Association of Electric Cooperatives Annual Meeting, Louisville (Nov. 1994), Virginia, Maryland, and Delaware Association of Electric Cooperatives Annual Meeting, Richmond (July 1994), and Carolina Electric Cooperatives Annual Meeting, Raleigh (Mar. 1994)
- "Information Superhighway Warnings: Speed Bumps on Wall Street and Detours from the Economy," Texas Society of Certified Public Accountants Natural Gas, Telecommunications and Electric Industries Conference, Austin (Apr. 1995)
- "Economic/Wall Street Outlook," Carolinas Council of the Institute of Management Accountants, Myrtle Beach, South Carolina (May 1994). Similar presentation given to Bell Operating Company Accounting Witness Conference, Santa Fe, New Mexico (Apr. 1993)
- "Regulatory Developments in Telecommunications," Regional Holding Company Financial and Accounting Conference, San Antonio (Sep. 1993)
- "Estimating the Cost of Capital During the 1990s: Issues and Directions," The National Society of Rate of Return Analysts, Washington, D.C. (May 1992)
- "Making Utility Regulation Work at the Public Utility Commission of Texas," Center for Legal and Regulatory Studies, University of Texas, Austin (June 1991)
- "Can Regulation Compete for the Hearts and Minds of Industrial Customers," Emerging Issues of Competition in the Electric Utility Industry Conference, Austin (May 1988)
- "The Role of Utilities in Fostering New Energy Technologies," Emerging Energy Technologies in Texas Conference, Austin (Mar. 1988)
- "The Regulators' Perspective," Bellcore Economic Analysis Conference, San Antonio (Nov. 1987)
- "Public Utility Commissions and the Nuclear Plant Contractor," Construction Litigation Superconference, Laguna Beach, California (Dec. 1986)
- "Development of Cogeneration Policies in Texas," University of Georgia Fifth Annual Public Utilities Conference, Atlanta (Sep. 1985)
- "Wheeling for Power Sales," Energy Bureau Cogeneration Conference, Houston (Nov. 1985).
- "Asymmetric Discounting of Information and Relative Liquidity: Some Empirical Evidence for Common Stocks" (with John Groth and Kerry Cooper), Southern Finance Association, New Orleans (Nov. 1982)
- "Used and Useful Planning Models," Planning Executive Institute, 27th Corporate Planning Conference, Los Angeles (Nov. 1979)
- "Staff Input to Commission Rate of Return Decisions," The National Society of Rate of Return Analysts, New York (Oct. 1979)
- "Discounted Cash Life: A New Measure of the Time Dimension in Capital Budgeting," with David Cordell, Southern Finance Association, New Orleans (Nov. 1978)
- "The Relative Value of Statistics of Ex Post Common Stock Distributions to Explain Variance," with Charles G. Martin, Southern Finance Association, Atlanta (Nov. 1977)
- "An ANOVA Representation of Common Stock Returns as a Framework for the Allocation of Portfolio Management Effort," with Charles G. Martin, Financial Management Association, Montreal (Oct. 1976)
- "A Growth-Optimal Portfolio Selection Model with Finite Horizon," with Henry A. Latané, American Finance Association, San Francisco (Dec. 1974)

- “An Optimal Approach to the Finance Decision,” with Henry A. Latané, Southern Finance Association, Atlanta (Nov. 1974)
- “A Pragmatic Approach to the Capital Structure Decision Based on Long-Run Growth,” with Henry A. Latané, Financial Management Association, San Diego (Oct. 1974)
- “Growth Rates, Expected Returns, and Variance in Portfolio Selection and Performance Evaluation,” with Henry A. Latané, Econometric Society, Oslo, Norway (Aug. 1973)

EXHIBIT 3, SCHEDULE 2

DESCRIPTIONS OF QUANTITATIVE ANALYSES

1 **Q. What is the purpose of this schedule?**

2 A. Schedule 2 presents capital market estimates of
3 the cost of equity. First, I examine the concept of the
4 cost of equity, along with the risk-return tradeoff
5 principle fundamental to capital markets. Next, I
6 describe DCF, CAPM, and comparable earnings analyses
7 conducted to estimate the cost of equity for reference
8 groups of comparable risk firms.

A. Overview

9 **Q. What role does the rate of return on common**
10 **equity play in a utility's rates?**

11 A. The return on common equity is the cost of
12 inducing and retaining investment in the utility's
13 physical plant and assets. This investment is necessary
14 to finance the asset base needed to provide utility
15 service. Investors will commit money to a particular
16 investment only if they expect it to produce a return
17 commensurate with those from other investments with
18 comparable risks. Moreover, the return on common equity
19 is integral in achieving the sound regulatory objectives
20 of rates that are sufficient to: 1) fairly compensate

1 capital investment in the utility, 2) enable the utility
2 to offer a return adequate to attract new capital on
3 reasonable terms, and 3) maintain the utility's financial
4 integrity. Meeting these objectives allows the utility to
5 fulfill its obligation to provide reliable service while
6 meeting the needs of customers through necessary system
7 expansion.

8 **Q. What fundamental economic principle underlies**
9 **any evaluation of investors' required return on equity?**

10 A. The fundamental economic principle underlying
11 the cost of equity concept is the notion that investors
12 are risk averse. The required rate of return for a
13 particular asset at any point in time is a function of: 1)
14 the yield on risk-free assets, and 2) its relative risk,
15 with investors demanding correspondingly larger risk
16 premiums for assets bearing greater risk. Given this
17 risk-return tradeoff, the required rate of return (k) from
18 an asset (i) can be generally expressed as:

19
$$k_i = R_f + RP_i$$

20 where: R_f = Risk-free rate of return, and
21 RP_i = Risk premium required to hold
22 riskier asset i.

23 Thus, the required rate of return for a particular asset
24 at any point in time is a function of: 1) the yield on

1 risk-free assets, and 2) its relative risk, with investors
2 demanding correspondingly larger risk premiums for assets
3 bearing greater risk.

4 **Q. Is the cost of equity observable in the capital**
5 **markets?**

6 A. No. Unlike debt capital, there is no
7 contractually guaranteed return on common equity capital
8 since shareholders are the residual owners of the utility.
9 Because it is unobservable, the cost of equity for a
10 particular utility must be estimated by analyzing
11 information about capital market conditions generally,
12 assessing the relative risks of the company specifically,
13 and employing various quantitative methods that focus on
14 investors' current required rates of return. These
15 various quantitative methods typically attempt to infer
16 investors' required rates of return from stock prices,
17 interest rates, or other capital market data.

B. Comparable Risk Proxy Groups

18 **Q. How did you implement these quantitative methods**
19 **to estimate the cost of common equity for Avista?**

20 A. Application of the DCF model and other
21 quantitative methods to estimate the cost of equity
22 requires observable capital market data, such as stock

1 prices. Moreover, even for a firm with publicly traded
2 stock, the cost of equity can only be estimated. As a
3 result, applying quantitative models using observable
4 market data only produces an estimate that inherently
5 includes some degree of observation error. Thus, the
6 accepted approach to increase confidence in the results is
7 to apply the DCF model and other quantitative methods to a
8 proxy group of publicly traded companies that investors
9 regard as risk comparable.

10 **Q. What specific proxy group did you rely on for**
11 **your analysis?**

12 A. In order to reflect the risks and prospects
13 associated with Avista's jurisdictional utility
14 operations, my DCF analyses focused on a reference group
15 of other utilities composed of those companies included by
16 The Value Line Investment Survey ("Value Line") in its
17 Electric Utilities Industry groups with: (1) S&P corporate
18 credit ratings of "BBB-" to "BBB+," (2) a Value Line
19 Safety Rank of "2" or "3", and (3) a Value Line Financial

1 Strength Rating of "B+" to "B++".¹ I refer to this group
2 as the "Utility Proxy Group."

3 **Q. What other proxy group did you consider in**
4 **evaluating a fair ROE for Avista?**

5 A. Under the regulatory standards established by
6 *Hope* and *Bluefield*, the salient criterion in establishing
7 a meaningful benchmark to evaluate a fair ROE is relative
8 risk, not the particular business activity or degree of
9 regulation. With regulation taking the place of
10 competitive market forces, required returns for utilities
11 should be in line with those of non-utility firms of
12 comparable risk operating under the constraints of free
13 competition. Consistent with this accepted regulatory
14 standard, I also applied the DCF model to a reference
15 group of comparable risk companies in the non-utility
16 sectors of the economy. I refer to this group as the
17 "Non-Utility Proxy Group".

¹ In addition, I excluded four utilities (Allegheny Energy, Inc., FirstEnergy Corp., Northeast Utilities, and Progress Energy, Inc.) that otherwise would have been in the proxy group, but are not appropriate for inclusion because they are currently involved in a major merger or acquisition.

1 **Q. What criteria did you apply to develop the Non-**
2 **Utility Proxy Group?**

3 A. My comparable risk proxy group of non-utility
4 firms was composed of those U.S. companies followed by
5 Value Line that: (1) pay common dividends; (2) have a
6 Safety Rank of "1"; (3) have a Financial Strength Rating
7 of "B++" or greater; (4) have a beta of 0.85 or less; and,
8 (5) have investment grade credit ratings from S&P.

9 **Q. Do these criteria provide objective evidence to**
10 **evaluate investors' risk perceptions?**

11 A. Yes. Credit ratings are assigned by independent
12 rating agencies for the purpose of providing investors
13 with a broad assessment of the creditworthiness of a firm.
14 Ratings generally extend from triple-A (the highest) to D
15 (in default). Other symbols (e.g., "A+") are used to show
16 relative standing within a category. Because the rating
17 agencies' evaluation includes virtually all of the factors
18 normally considered important in assessing a firm's
19 relative credit standing, corporate credit ratings provide
20 a broad, objective measure of overall investment risk that
21 is readily available to investors. Although the credit
22 rating agencies are not immune to criticism, their
23 rankings and analyses are widely cited in the investment

1 community and referenced by investors.² Investment
2 restrictions tied to credit ratings continue to influence
3 capital flows, and credit ratings are also frequently used
4 as a primary risk indicator in establishing proxy groups
5 to estimate the cost of common equity.

6 While credit ratings provide the most widely
7 referenced benchmark for investment risks, other quality
8 rankings published by investment advisory services also
9 provide relative assessments of risks that are considered
10 by investors in forming their expectations for common
11 stocks. Value Line's primary risk indicator is its Safety
12 Rank, which ranges from "1" (Safest) to "5" (Riskiest).
13 This overall risk measure is intended to capture the total
14 risk of a stock, and incorporates elements of stock price
15 stability and financial strength. Given that Value Line
16 is perhaps the most widely available source of investment
17 advisory information, its Safety Rank provides useful
18 guidance regarding the risk perceptions of investors.

19 The Financial Strength Rating is designed as a guide
20 to overall financial strength and creditworthiness, with

² While the ratings agencies were faulted during the financial crisis for failing to adequately assess the risk associated with structured finance products, investors continue to regard corporate credit ratings as a reliable guide to investment risks.

1 the key inputs including financial leverage, business
 2 volatility measures, and company size. Value Line's
 3 Financial Strength Ratings range from "A++" (strongest)
 4 down to "C" (weakest) in nine steps. Finally, Value
 5 Line's beta measures the volatility of a security's price
 6 relative to the market as a whole. A stock that tends to
 7 respond less to market movements has a beta less than
 8 1.00, while stocks that tend to move more than the market
 9 have betas greater than 1.00.

10 **Q. How do the overall risks of your proxy groups**
 11 **compare with Avista?**

12 A. Table WEA-2 compares the Utility Proxy Group
 13 with the Non-Utility Proxy Group and Avista across four
 14 key indicators of investment risk:

15 **TABLE 1**
 16 **COMPARISON OF RISK INDICATORS**

	S&P Credit Rating	Value Line		
		Safety Rank	Financial Strength	Beta
Utility Group	BBB	3	B++	0.74
Non-Utility Proxy Group	A	1	A+	0.70
Avista	BBB	2	B++	0.70

1 **Q. Do these comparisons indicate that investors**
2 **would view the firms in your proxy groups as risk-**
3 **comparable to the Company?**

4 A. Yes. Considered together, a comparison of these
5 objective measures, which consider of a broad spectrum of
6 risks, including financial and business position, and
7 exposure to firm-specific factors, indicates that
8 investors would likely conclude that the overall
9 investment risks for Avista are generally comparable to
10 those of the firms in the Utility Proxy Group.

11 With respect to the Non-Utility Proxy Group, its
12 average credit ratings, Safety Rank, and Financial
13 Strength Rating suggest less risk than for Avista, with
14 its 0.70 average beta indicating identical risk. While
15 the impact of differences in regulation is reflected in
16 objective risk measures, my analyses conservatively focus
17 on a lower-risk group of non-utility firms.

C. Discounted Cash Flow Analyses

18 **Q. How are DCF models used to estimate the cost of**
19 **equity?**

20 A. DCF models attempt to replicate the market
21 valuation process that sets the price investors are
22 willing to pay for a share of a company's stock. The
23 model rests on the assumption that investors evaluate the

1 risks and expected rates of return from all securities in
2 the capital markets. Given these expectations, the price
3 of each stock is adjusted by the market until investors
4 are adequately compensated for the risks they bear.
5 Therefore, we can look to the market to determine what
6 investors believe a share of common stock is worth. By
7 estimating the cash flows investors expect to receive from
8 the stock in the way of future dividends and capital
9 gains, we can calculate their required rate of return. In
10 other words, the cash flows that investors expect from a
11 stock are estimated, and given its current market price,
12 we can "back-into" the discount rate, or cost of equity,
13 that investors implicitly used in bidding the stock to
14 that price.

15 **Q. What market valuation process underlies DCF**
16 **models?**

17 A. DCF models assume that the price of a share of
18 common stock is equal to the present value of the expected
19 cash flows (i.e., future dividends and stock price) that
20 will be received while holding the stock, discounted at
21 investors' required rate of return. That is, the cost of
22 equity is the discount rate that equates the current price

1 of a share of stock with the present value of all expected
2 cash flows from the stock.

3 **Q. What form of the DCF model is customarily used**
4 **to estimate the cost of equity in rate cases?**

5 A. Rather than developing annual estimates of cash
6 flows into perpetuity, the DCF model can be simplified to
7 a "constant growth" form:³

8
$$P_0 = \frac{D_1}{k_e - g}$$

9 where: P_0 = Current price per share;
10 D_1 = Expected dividend per share in the
11 coming year;
12 k_e = Cost of equity;
13 g = Investors' long-term growth
14 expectations.

15 The cost of equity (k_e) can be isolated by rearranging
16 terms:

17
$$k_e = \frac{D_1}{P_0} + g$$

18 This constant growth form of the DCF model recognizes that
19 the rate of return to stockholders consists of two parts:

20 1) dividend yield (D_1/P_0), and 2) growth (g). In other

³ The constant growth DCF model is dependent on a number of assumptions, which in practice are never strictly met. These include a constant growth rate for both dividends and earnings; a stable dividend payout ratio; the discount rate exceeds the growth rate; a constant growth rate for book value and price; a constant earned rate of return on book value; no sales of stock at a price above or below book value; a constant price-earnings ratio; a constant discount rate (i.e., no changes in risk or interest rate levels and a flat yield curve); and all of the above extend to infinity.

1 words, investors expect to receive a portion of their
2 total return in the form of current dividends and the
3 remainder through price appreciation.

4 **Q. What steps are required to apply the DCF model?**

5 A. The first step in implementing the constant
6 growth DCF model is to determine the expected dividend
7 yield (D_1/P_0) for the firm in question. This is usually
8 calculated based on an estimate of dividends to be paid in
9 the coming year divided by the current price of the stock.
10 The second, and more controversial, step is to estimate
11 investors' long-term growth expectations (g) for the firm.
12 The final step is to sum the firm's dividend yield and
13 estimated growth rate to arrive at an estimate of its cost
14 of equity.

15 **Q. How was the dividend yield for the Utility Proxy**
16 **Group determined?**

17 A. Estimates of dividends to be paid by each of
18 these utilities over the next twelve months, obtained from
19 Value Line, served as D_1 . This annual dividend was then
20 divided by the corresponding stock price for each utility
21 to arrive at the expected dividend yield. The expected
22 dividends, stock prices, and resulting dividend yields for

1 the firms in the Utility Proxy Group are presented on
2 Schedule 4.

3 **Q. What is the next step in applying the constant**
4 **growth DCF model?**

5 A. The next step is to evaluate long-term growth
6 expectations, or "g", for the firm in question. In
7 constant growth DCF theory, earnings, dividends, book
8 value, and market price are all assumed to grow in
9 lockstep, and the growth horizon of the DCF model is
10 infinite. But implementation of the DCF model is more
11 than just a theoretical exercise; it is an attempt to
12 replicate the mechanism investors used to arrive at
13 observable stock prices. A wide variety of techniques can
14 be used to derive growth rates, but the only "g" that
15 matters in applying the DCF model is the value that
16 investors expect.

17 **Q. Are historical growth rates likely to be**
18 **representative of investors' expectations for utilities?**

19 A. No. If past trends in earnings, dividends, and
20 book value are to be representative of investors'
21 expectations for the future, then the historical
22 conditions giving rise to these growth rates should be
23 expected to continue. That is clearly not the case for

1 utilities, where structural and industry changes have led
2 to declining growth in dividends, earnings pressure, and,
3 in many cases, significant write-offs. While these
4 conditions serve to depress historical growth measures,
5 they are not representative of long-term expectations for
6 the utility industry or the expectations that investors
7 have incorporated into current market prices. As a
8 result, historical growth measures for utilities do not
9 currently meet the requirements of the DCF model.

10 **Q. What are investors most likely to consider in**
11 **developing their long-term growth expectations?**

12 A. While the DCF model is technically concerned
13 with growth in dividend cash flows, implementation of this
14 DCF model is solely concerned with replicating the
15 forward-looking evaluation of real-world investors. In
16 the case of electric utilities, dividend growth rates are
17 not likely to provide a meaningful guide to investors'
18 current growth expectations. This is because utilities
19 have significantly altered their dividend policies in
20 response to more accentuated business risks in the
21 industry, with the payout ratio for electric utilities
22 falling from approximately 80 percent historically to on

1 the order of 60 to 70 percent.⁴ As a result of this trend
2 towards a more conservative payout ratio, dividend growth
3 in the utility industry has remained largely stagnant as
4 utilities conserve financial resources to provide a hedge
5 against heightened uncertainties.

6 As payout ratios for firms in the utility industry
7 trended downward, investors' focus has increasingly
8 shifted from dividends to earnings as a measure of long-
9 term growth. Future trends in earnings, which provide the
10 source for future dividends and ultimately support share
11 prices, play a pivotal role in determining investors'
12 long-term growth expectations. The importance of earnings
13 in evaluating investors' expectations and requirements is
14 well accepted in the investment community. As noted in
15 *Finding Reality in Reported Earnings* published by the
16 Association for Investment Management and Research:

17 [E]arnings, presumably, are the basis for the
18 investment benefits that we all seek. "Healthy
19 earnings equal healthy investment benefits"
20 seems a logical equation, but earnings are also
21 a scorecard by which we compare companies, a
22 filter through which we assess management, and a

⁴ The Value Line Investment Survey (Sep. 15, 1995 at 161, Feb. 4, 2011 at 2237).

1 crystal ball in which we try to foretell future
2 performance.⁵

3 Value Line's near-term projections and its Timeliness
4 Rank, which is the principal investment rating assigned to
5 each individual stock, are also based primarily on various
6 quantitative analyses of earnings. As Value Line
7 explained:

8 The future earnings rank accounts for 65% in the
9 determination of relative price change in the
10 future; the other two variables (current
11 earnings rank and current price rank) explain
12 35%.⁶

13 The fact that investment advisory services, such as Value
14 Line, Thompson, and Reuters, focus on growth in earnings
15 indicates that the investment community regards this as a
16 superior indicator of future long-term growth. Indeed, "A
17 Study of Financial Analysts: Practice and Theory,"
18 published in the *Financial Analysts Journal*, reported the
19 results of a survey conducted to determine what analytical
20 techniques investment analysts actually use.⁷ Respondents
21 were asked to rank the relative importance of earnings,
22 dividends, cash flow, and book value in analyzing
23 securities. Of the 297 analysts that responded, only 3

⁵ Association for Investment Management and Research, "Finding Reality in Reported Earnings: An Overview", p. 1 (Dec. 4, 1996).

⁶ The Value Line Investment Survey, *Subscriber's Guide*, p. 53.

⁷ Block, Stanley B., "A Study of Financial Analysts: Practice and Theory", *Financial Analysts Journal* (July/August 1999).

1 ranked dividends first while 276 ranked it last. The
2 article concluded:

3 Earnings and cash flow are considered far more
4 important than book value and dividends.⁸

5 More recently, the *Financial Analysts Journal*
6 reported the results of a study of the relationship
7 between valuations based on alternative multiples and
8 actual market prices, which concluded, "In all cases
9 studied, earnings dominated operating cash flows and
10 dividends."⁹

11 **Q. Do the growth rate projections of security**
12 **analysts consider historical trends?**

13 A. Yes. Professional security analysts study
14 historical trends extensively in developing their
15 projections of future earnings. Hence, to the extent
16 there is any useful information in historical patterns,
17 that information is incorporated into analysts' growth
18 forecasts.

⁸ *Id.* at 88.

⁹ Liu, Jing, Nissim, Doron, & Thomas, Jacob, "Is Cash Flow King in Valuations?," *Financial Analysts Journal*, Vol. 63, No. 2 (March/April 2007) at 56.

1 **Q. What are security analysts currently projecting**
2 **in the way of growth for the firms in the Utility Proxy**
3 **Group?**

4 A. The Value Line earnings growth projections for
5 each of the firms in the Utility Proxy Group are displayed
6 on Schedule 4. Also presented are the earnings per share
7 ("EPS") growth projections reported by Thomson Reuters
8 ("IBES") and Zacks Investment Research ("Zacks").¹⁰

9 **Q. Some argue that analysts' assessments of growth**
10 **rates are biased. Do you believe these projections are**
11 **inappropriate for estimating investors' required return**
12 **using the DCF model?**

13 A. No. In applying the DCF model to estimate the
14 cost of common equity, the only relevant growth rate is
15 the forward-looking expectations of investors that are
16 captured in current stock prices. Investors, just like
17 securities analysts and others in the investment
18 community, do not know how the future will actually turn
19 out. They can only make investment decisions based on
20 their best estimate of what the future holds in the way of
21 long-term growth for a particular stock, and securities
22 prices are constantly adjusting to reflect their
23 assessment of available information.

¹⁰ Formerly I/B/E/S International, Inc., IBES growth rates are now compiled and published by Thomson Reuters.

1 Any claims that analysts' estimates are not relied
2 upon by investors are illogical given the reality of a
3 competitive market for investment advice. If financial
4 analysts' forecasts do not add value to investors'
5 decision making, then it is irrational for investors to
6 pay for these estimates. Similarly, those financial
7 analysts who fail to provide reliable forecasts will lose
8 out in competitive markets relative to those analysts
9 whose forecasts investors find more credible. The reality
10 that analyst estimates are routinely referenced in the
11 financial media and in investment advisory publications
12 (e.g., Value Line) implies that investors use them as a
13 basis for their expectations.

14 The continued success of investment services such as
15 Thomson Reuters and Value Line, and the fact that
16 projected growth rates from such sources are widely
17 referenced, provides strong evidence that investors give
18 considerable weight to analysts' earnings projections in
19 forming their expectations for future growth. While the
20 projections of securities analysts may be proven
21 optimistic or pessimistic in hindsight, this is irrelevant
22 in assessing the expected growth that investors have
23 incorporated into current stock prices, and any bias in

1 analysts' forecasts - whether pessimistic or optimistic -
2 is irrelevant if investors share analysts' views.
3 Earnings growth projections of security analysts provide
4 the most frequently referenced guide to investors' views
5 and are widely accepted in applying the DCF model. As
6 explained in *New Regulatory Finance*:

7 Because of the dominance of institutional
8 investors and their influence on individual
9 investors, analysts' forecasts of long-run
10 growth rates provide a sound basis for
11 estimating required returns. Financial analysts
12 exert a strong influence on the expectations of
13 many investors who do not possess the resources
14 to make their own forecasts, that is, they are a
15 cause of g [growth]. The accuracy of these
16 forecasts in the sense of whether they turn out
17 to be correct is not an issue here, as long as
18 they reflect widely held expectations.¹¹

19 **Q. How else are investors' expectations of future**
20 **long-term growth prospects often estimated for use in the**
21 **constant growth DCF model?**

22 A. In constant growth theory, growth in book equity
23 will be equal to the product of the earnings retention
24 ratio (one minus the dividend payout ratio) and the earned
25 rate of return on book equity. Furthermore, if the earned
26 rate of return and the payout ratio are constant over
27 time, growth in earnings and dividends will be equal to
28 growth in book value. Despite the fact that these

¹¹ Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 298 (2006).

1 conditions are seldom, if ever, met in practice, this
2 "sustainable growth" approach may provide a rough guide
3 for evaluating a firm's growth prospects and is frequently
4 proposed in regulatory proceedings.

5 Accordingly, while I believe that analysts' forecasts
6 provide a superior and more direct guide to investors'
7 growth expectations, I have included the "sustainable
8 growth" approach for completeness. The sustainable growth
9 rate is calculated by the formula, $g = br + sv$, where "b" is
10 the expected retention ratio, "r" is the expected earned
11 return on equity, "s" is the percent of common equity
12 expected to be issued annually as new common stock, and
13 "v" is the equity accretion rate.

14 **Q. What is the purpose of the "sv" term?**

15 A. Under DCF theory, the "sv" factor is a component
16 of the growth rate designed to capture the impact of
17 issuing new common stock at a price above, or below, book
18 value. When a company's stock price is greater than its
19 book value per share, the per-share contribution in excess
20 of book value associated with new stock issues will accrue
21 to the current shareholders. This increase to the book
22 value of existing shareholders leads to higher expected

1 earnings and dividends, with the "sv" factor incorporating
2 this additional growth component.

3 **Q. What growth rate does the earnings retention**
4 **method suggest for the Utility Proxy Group?**

5 A. The sustainable, "br+sv" growth rates for each
6 firm in the Utility Proxy Group are summarized on Schedule
7 4, with the underlying details being presented on
8 Schedule 5. For each firm, the expected retention ratio
9 (b) was calculated based on Value Line's projected
10 dividends and earnings per share. Likewise, each firm's
11 expected earned rate of return (r) was computed by
12 dividing projected earnings per share by projected net
13 book value. Because Value Line reports end-of-year book
14 values, an adjustment was incorporated to compute an
15 average rate of return over the year, consistent with the
16 theory underlying this approach to estimating investors'
17 growth expectations. Meanwhile, the percent of common
18 equity expected to be issued annually as new common stock
19 (s) was equal to the product of the projected market-to-
20 book ratio and growth in common shares outstanding, while
21 the equity accretion rate (v) was computed as 1 minus the
22 inverse of the projected market-to-book ratio.

1 **Q. What cost of equity estimates were implied for**
2 **the Utility Proxy Group using the DCF model?**

3 A. After combining the dividend yields and
4 respective growth projections for each utility, the
5 resulting cost of equity estimates are shown on
6 Schedule 4.

7 **Q. In evaluating the results of the constant growth**
8 **DCF model, is it appropriate to eliminate estimates that**
9 **are extreme low or high outliers?**

10 A. Yes. In applying quantitative methods to
11 estimate the cost of equity, it is essential that the
12 resulting values pass fundamental tests of reasonableness
13 and economic logic. Accordingly, DCF estimates that are
14 implausibly low or high should be eliminated when
15 evaluating the results of this method.

16 **Q. How did you evaluate DCF estimates at the low**
17 **end of the range?**

18 A. It is a basic economic principle that investors
19 can be induced to hold more risky assets only if they
20 expect to earn a return to compensate them for their risk
21 bearing. As a result, the rate of return that investors
22 require from a utility's common stock, the most junior and
23 riskiest of its securities, must be considerably higher
24 than the yield offered by senior, long-term debt.

1 Consistent with this principle, the DCF results must be
2 adjusted to eliminate estimates that are determined to be
3 extreme low outliers when compared against the yields
4 available to investors from less risky utility bonds.

5 **Q. What does this test of logic imply with respect**
6 **to the DCF results for the Utility Proxy Group?**

7 A. As noted earlier, the average S&P corporate
8 credit rating for the Utility proxy Group is "BBB", the
9 same as for Avista. Companies rated "BBB-", "BBB", and
10 "BBB+" are all considered part of the triple-B rating
11 category, with Moody's monthly yields on triple-B bonds
12 averaging approximately 6.1 percent in February 2011.¹² It
13 is inconceivable that investors are not requiring a
14 substantially higher rate of return for holding common
15 stock. Consistent with this principle, the DCF results
16 for the Utility Proxy Group must be adjusted to eliminate
17 estimates that are determined to be extreme low outliers
18 when compared against the yields available to investors
19 from less risky utility bonds.

20 **Q. Have similar tests been applied by regulators?**

21 A. Yes. FERC has noted that adjustments are
22 justified where applications of the DCF approach produce

¹² Moody's Investors Service, www.credittrends.com.

1 illogical results. FERC evaluates DCF results against
2 observable yields on long-term public utility debt and has
3 recognized that it is appropriate to eliminate estimates
4 that do not sufficiently exceed this threshold. In a 2002
5 opinion establishing its current precedent for determining
6 ROEs for electric utilities, for example, FERC noted:

7 An adjustment to this data is appropriate in the
8 case of PG&E's low-end return of 8.42 percent,
9 which is comparable to the average Moody's "A"
10 grade public utility bond yield of 8.06 percent,
11 for October 1999. Because investors cannot be
12 expected to purchase stock if debt, which has
13 less risk than stock, yields essentially the
14 same return, this low-end return cannot be
15 considered reliable in this case.¹³

16 Similarly, in its August 2006 decision in *Kern River Gas*
17 *Transmission Company*, FERC noted that:

18 [T]he 7.31 and 7.32 percent costs of equity for
19 El Paso and Williams found by the ALJ are only
20 110 and 122 basis points above that average
21 yield for public utility debt.¹⁴

22 The Commission upheld the opinion of Staff and the
23 Administrative Law Judge that cost of equity estimates for
24 these two proxy group companies "were too low to be
25 credible."¹⁵

¹³ *Southern California Edison Company*, 92 FERC ¶ 61,070 at p. 22 (2000).

¹⁴ *Kern River Gas Transmission Company*, Opinion No. 486, 117 FERC ¶ 61,077 at P 140 & n. 227 (2006).

¹⁵ *Id.*

1 The practice of eliminating low-end outliers has been
2 affirmed in numerous FERC proceedings,¹⁶ and in its April
3 15, 2010 decision in *SoCal Edison*, FERC affirmed that, "it
4 is reasonable to exclude any company whose low-end ROE
5 fails to exceed the average bond yield by about 100 basis
6 points or more."¹⁷

7 **Q. What else should be considered in evaluating DCF**
8 **estimates at the low end of the range?**

9 A. As indicated earlier, while corporate bond
10 yields have declined substantially as the worst of the
11 financial crisis has abated, it is generally expected that
12 long-term interest rates will rise as the recession ends
13 and the economy returns to a more normal pattern of
14 growth. As shown in Table 2 below, forecasts of IHS
15 Global Insight and the EIA imply an average triple-B bond
16 yield of 7.19 percent over the period 2012-2015:

¹⁶ See, e.g., *Virginia Electric Power Co.*, 123 FERC ¶ 61,098 at P 64 (2008).

¹⁷ *Southern California Edison Co.*, 131 FERC ¶ 61,020 at P 55 (2010) ("*SoCal Edison*").

1
2

TABLE 2
IMPLIED BBB BOND YIELD

	<u>2012-15</u>
Projected AA Utility Yield	
IHS Global Insight (a)	6.33%
EIA (b)	<u>6.58%</u>
Average	6.45%
Current BBB - AA Yield Spread (c)	<u>0.74%</u>
Implied Triple-B Utility Yield	7.19%

-
- (a) IHS Global Insight, *U.S. Economic Outlook* at 19 (February 2011).
(b) Energy Information Administration, *Annual Energy Outlook 2011 Early Release* (Dec. 16, 2010).
(c) Based on monthly average bond yields for the six-month period September 2010 - February 2011.

3 The increase in debt yields anticipated by IHS Global
4 Insight and EIA is also supported by the widely-referenced
5 Blue Chip Financial Forecasts, which projects that yields
6 on corporate bonds will climb more than 100 basis points
7 through the period 2012-2016.¹⁸

8 **Q. What does this test of logic imply with respect**
9 **to the DCF results for the Utility Proxy Group?**

10 A. As shown on Schedule 4, fourteen low-end DCF
11 estimates ranged from 2.6 percent to 6.9 percent. Eight
12 of these values were below current utility bond yields,
13 with cost of equity estimates below 7.0 percent being less

¹⁸ *Blue Chip Financial Forecasts*, Vol. 29, No. 12 (Dec. 1, 2010) & Vol. 30, No. 3 (Mar. 1, 2011).

1 than the yield on triple-B utility bonds expected during
2 the period 2012-2015. In light of the risk-return
3 tradeoff principle and the test applied in *SoCal Edison*,
4 it is inconceivable that investors are not requiring a
5 substantially higher rate of return for holding common
6 stock, which is the riskiest of a utility's securities.
7 As a result, consistent with the test of economic logic
8 applied by FERC and the upward trend expected for utility
9 bond yields, these values provide little guidance as to
10 the returns investors require from utility common stocks
11 and should be excluded.

12 **Q. Do you also recommend excluding estimates at the**
13 **high end of the range of DCF results?**

14 A. Yes. The upper end of the cost of common equity
15 range produced by the DCF analysis presented in Schedule 4
16 was set by three cost of equity estimates for Otter Tail
17 Corp. that exceeded 20 percent. When compared with the
18 balance of the remaining estimates, these values are
19 clearly implausible and should be excluded in evaluating
20 the results of the DCF model for the Utility Proxy Group.
21 This is also consistent with the precedent adopted by
22 FERC, which has established that estimates found to be

1 "extreme outliers" should be disregarded in interpreting
2 the results of the DCF model.¹⁹

3 **Q. What cost of equity is implied by your DCF**
4 **results for the Utility Proxy Group?**

5 A. As shown on Schedule 4 and summarized in Table
6 3, below, after eliminating illogical low- and high-end
7 values, application of the constant growth DCF model
8 resulted in the following cost of equity estimates:

9 **TABLE 3**
10 **DCF RESULTS - UTILITY PROXY GROUP**

<u>Growth Rate</u>	<u>Average Cost of Equity</u>
Value Line	10.9%
IBES	10.6%
Zacks	10.6%
br+sv	9.2%

11 **Q. What were the results of your DCF analysis for**
12 **the Non-Utility Proxy Group?**

13 A. I applied the DCF model to the Non-Utility Proxy
14 Group in exactly the same manner described earlier for the
15 Utility Proxy Group. The results of my DCF analysis for
16 the Non-Utility Proxy Group are presented in Schedule 6,
17 with the sustainable, "br+sv" growth rates being developed
18 on Schedule 7. As shown on Schedule 6 and summarized in
19 Table 4, below, after eliminating illogical low- and high-

¹⁹ See, e.g., *ISO New England, Inc.*, 109 FERC ¶ 61,147 at P 205 (2004).

1 end values, application of the constant growth DCF model
2 resulted in the following cost of common equity estimates:

3 **TABLE 4**
4 **DCF RESULTS - NON-UTILITY PROXY GROUP**

<u>Growth Rate</u>	<u>Average Cost of Equity</u>
Value Line	11.9%
IBES	12.4%
Zacks	12.5%
br+sv	12.1%

5 As discussed earlier, reference to the Non-Utility Proxy
6 Group is consistent with established regulatory principles
7 and required returns for utilities should be in line with
8 those of non-utility firms of comparable risk operating
9 under the constraints of free competition.

D. Capital Asset Pricing Model

10 **Q. Please describe the CAPM.**

11 A. The CAPM is a theory of market equilibrium that
12 measures risk using the beta coefficient. Assuming
13 investors are fully diversified, the relevant risk of an
14 individual asset (e.g., common stock) is its volatility
15 relative to the market as a whole, with beta reflecting
16 the tendency of a stock's price to follow changes in the
17 market. The CAPM is mathematically expressed as:

1
$$R_j = R_f + \beta_j (R_m - R_f)$$

2 where: R_j = required rate of return for stock j ;
3 R_f = risk-free rate;
4 R_m = expected return on the market
5 portfolio; and,
6 β_j = beta, or systematic risk, for stock j .

7 Like the DCF model, the CAPM is an *ex-ante*, or forward-
8 looking model based on expectations of the future. As a
9 result, in order to produce a meaningful estimate of
10 investors' required rate of return, the CAPM must be
11 applied using estimates that reflect the expectations of
12 actual investors in the market, not with backward-looking,
13 historical data.

14 **Q. How did you apply the CAPM to estimate the cost**
15 **of common equity?**

16 A. Application of the CAPM to the Utility Proxy
17 Group based on a forward-looking estimate for investors'
18 required rate of return from common stocks is presented on
19 Schedule 8. In order to capture the expectations of
20 today's investors in current capital markets, the expected
21 market rate of return was estimated by conducting a DCF
22 analysis on the dividend paying firms in the S&P 500.

23 The dividend yield for each firm was calculated based
24 on the annual indicated dividend payment obtained from
25 Value Line, increased by one-half of the growth rate

1 discussed subsequently $(1 + 0.5g)$ to convert them to year-
2 ahead dividend yields presumed by the constant growth DCF
3 model. The growth rate was equal to the earnings growth
4 projections for each firm published by IBES, with each
5 firm's dividend yield and growth rate being weighted by
6 its proportionate share of total market value. Based on
7 the weighted average of the projections for the 354
8 individual firms, current estimates imply an average
9 growth rate over the next five years of 10.5 percent.
10 Combining this average growth rate with an adjusted
11 dividend yield of 2.3 percent results in a current cost of
12 common equity estimate for the market as a whole (R_m) of
13 approximately 12.8 percent. Subtracting a 4.7 percent
14 risk-free rate based on the average yield on 30-year
15 Treasury bonds produced a market equity risk premium of
16 8.1 percent.

17 **Q. What was the source of the beta values you used**
18 **to apply the CAPM?**

19 A. I relied on the beta values reported by Value
20 Line, which in my experience is the most widely referenced
21 source for beta in regulatory proceedings. As noted in
22 *New Regulatory Finance*:

1 Value Line is the largest and most widely
2 circulated independent investment advisory
3 service, and influences the expectations of a
4 large number of institutional and individual
5 investors. ... Value Line betas are computed on a
6 theoretically sound basis using a broadly based
7 market index, and they are adjusted for the
8 regression tendency of betas to converge to
9 1.00.²⁰

10 **Q. What else should be considered in applying the**
11 **CAPM?**

12 A. As explained by *Morningstar*:

13 One of the most remarkable discoveries of modern
14 finance is that of a relationship between firm
15 size and return. The relationship cuts across
16 the entire size spectrum but is most evident
17 among smaller companies, which have higher
18 returns on average than larger ones.²¹

19 Because empirical research indicates that the CAPM does
20 not fully account for observed differences in rates of
21 return attributable to firm size, a modification is
22 required to account for this size effect.

23 According to the CAPM, the expected return on a
24 security should consist of the riskless rate, plus a
25 premium to compensate for the systematic risk of the
26 particular security. The degree of systematic risk is
27 represented by the beta coefficient. The need for the
28 size adjustment arises because differences in investors'

²⁰ Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports*
at 71 (2006).

²¹ *Morningstar*, "Ibbotson SBBI 2010 Valuation Yearbook," at p. 85
(footnote omitted).

1 required rates of return that are related to firm size are
2 not fully captured by beta. To account for this,
3 Morningstar has developed size premiums that need to be
4 added to the theoretical CAPM cost of equity estimates to
5 account for the level of a firm's market capitalization in
6 determining the CAPM cost of equity.²² Accordingly, my
7 CAPM analyses incorporated an adjustment to recognize the
8 impact of size distinctions, as measured by the average
9 market capitalization for the respective proxy groups.

10 **Q. What cost of equity estimate was indicated for**
11 **the Utility Proxy Group based on this forward-looking**
12 **application of the CAPM?**

13 A. The average market capitalization of the Utility
14 Proxy Group is \$6.8 billion. Based on data from
15 *Morningstar*, this means that the theoretical CAPM cost of
16 equity estimate must be increased by 74 basis points to
17 account for the industry group's relative size. As shown
18 on Schedule 8, adjusting the theoretical CAPM result to
19 incorporate this size adjustment results in an average
20 indicated cost of common equity of 11.5 percent.

²² *Id.* at Table C-1.

1 **Q. What cost of common equity was indicated for the**
2 **Non-Utility Proxy Group based on this forward-looking**
3 **application of the CAPM?**

4 A. As shown on Schedule 9, applying the forward-
5 looking CAPM approach to the firms in the Non-Utility
6 Proxy Group results in an average implied cost of common
7 equity of 10.1 percent.

8 **Q. Should the CAPM approach be applied using**
9 **historical rates of return?**

10 A. No. The CAPM cost of common equity estimate is
11 calibrated from investors' required risk premium between
12 Treasury bonds and common stocks. In response to
13 heightened uncertainties, investors have repeatedly sought
14 a safe haven in U.S. government bonds and this "flight to
15 safety" has pushed Treasury yields significantly lower
16 while yield spreads for corporate debt have widened. This
17 distortion not only impacts the absolute level of the CAPM
18 cost of equity estimate, but it affects estimated risk
19 premiums. Economic logic would suggest that investors'
20 required risk premium for common stocks over Treasury
21 bonds has also increased.

22 Meanwhile, backward-looking approaches incorrectly
23 assume that investors' assessment of the required risk
24 premium between Treasury bonds and common stocks is

1 constant, and equal to some historical average. At no
2 time in recent history has the fallacy of this assumption
3 been demonstrated more concretely than it is today. This
4 incongruity between investors' current expectations and
5 historical risk premiums is particularly relevant during
6 periods of heightened uncertainty and rapidly changing
7 capital market conditions, such as those experienced
8 recently.²³

E. Comparable Earnings Approach

9 **Q. What other analyses did you conduct to estimate**
10 **the cost of equity?**

11 A. As I noted earlier, I also evaluated the ROE
12 using the comparable earnings method. Reference to rates
13 of return available from alternative investments of
14 comparable risk can provide an important benchmark in
15 assessing the return necessary to assure confidence in the
16 financial integrity of a firm and its ability to attract
17 capital. This comparable earnings approach is consistent
18 with the economic underpinnings for a fair rate of return
19 established by the Supreme Court in *Hope* and *Bluefield*.
20 Moreover, it avoids the complexities and limitations of

²³ FERC has previously rejected CAPM methodologies based on historical data because whatever historical relationships existed between debt and equity securities may no longer hold. See *Orange & Rockland Utils., Inc.*, 40 F.E.R.C. P63,053, at pp. 65,208 -09 (1987), *aff'd*, *Opinion No. 314*, 44 F.E.R.C. P61,253 at 65,208.

1 capital market methods and instead focuses on expected
2 earned returns on book equity, which are more readily
3 available to investors.

4 **Q. What economic premise underlies the comparable**
5 **earnings approach?**

6 A. The simple, but powerful concept underlying the
7 comparable earnings approach is that investors compare
8 each investment alternative with the next best
9 opportunity. If the utility is unable to offer a return
10 similar to that available from other opportunities of
11 comparable risk, investors will become unwilling to supply
12 the capital on reasonable terms. For existing investors,
13 denying the utility an opportunity to earn what is
14 available from other similar risk alternatives prevents
15 them from earning their opportunity cost of capital. In
16 this situation the government is effectively taking the
17 value of investors' capital without adequate compensation.
18 The comparable earnings approach is consistent with the
19 economic rationale underpinning established regulatory
20 standards, which specifies a methodology to determine an
21 ROE benchmark based on earned rates of return for a peer
22 group of other regional utilities.

1 **Q. How is the comparison of opportunity costs**
2 **typically implemented?**

3 A. The traditional comparable earnings test
4 identifies a group of companies that are believed to be
5 comparable in risk to the utility. The actual earnings of
6 those companies on the book value of their investment are
7 then compared to the allowed return of the utility. While
8 the traditional comparable earnings test is implemented
9 using historical data taken from the accounting records,
10 it is also common to use projections of returns on book
11 investment, such as those published by recognized
12 investment advisory publications (e.g., Value Line).
13 Because these returns on book value equity are analogous
14 to the allowed return on a utility's rate base, this
15 measure of opportunity costs results in a direct, "apples
16 to apples" comparison.

17 Moreover, regulators do not set the returns that
18 investors earn in the capital markets - they can only
19 establish the allowed return on the value of a utility's
20 investment, as reflected on its accounting records. As a
21 result, the expected earnings approach provides a direct
22 guide to ensure that the allowed ROE is similar to what
23 other utilities of comparable risk will earn on invested

1 capital. This opportunity cost test does not require
2 theoretical models to indirectly infer investors'
3 perceptions from stock prices or other market data. As
4 long as the proxy companies are similar in risk, their
5 expected earned returns on invested capital provide a
6 direct benchmark for investors' opportunity costs that is
7 independent of fluctuating stock prices, market-to-book
8 ratios, debates over DCF growth rates, or the limitations
9 inherent in any theoretical model of investor behavior.

10 **Q. What rates of return on equity are indicated for**
11 **electric utilities based on the comparable earnings**
12 **approach?**

13 A. Value Line reports that its analysts anticipate
14 an average rate of return on common equity for the
15 electric utility industry of 10.5 percent over its
16 forecast horizon.²⁴ Meanwhile, for the gas utility
17 industry Value Line expects returns on common equity of
18 10.0 percent over the period 2011-2016.²⁵

19 For the firms in the Utility Proxy Group
20 specifically, the returns on common equity projected by
21 Value Line over its forecast horizon are shown on
22 Schedule 10. Consistent with the rationale underlying the

²⁴ The Value Line Investment Survey at 139 (Feb. 25, 2011).

²⁵ The Value Line Investment Survey at 546 (Mar. 11, 2011).

1 development of the br+sv growth rates, these year-end
 2 values were converted to average returns using the same
 3 adjustment factor discussed earlier and developed on
 4 Schedule 5. As shown on Schedule 10, after eliminating
 5 two low-end outliers, Value Line's projections for the
 6 utility proxy group suggested an average ROE of 10.4
 7 percent.

F. Summary of Quantitative Results

8 **Q. Please summarize the results of your**
 9 **quantitative analyses.**

10 **A. The cost of equity estimates implied by my**
 11 **quantitative analyses are summarized in Table 5 below:**

12 **TABLE 5**
 13 **SUMMARY OF QUANTITATIVE RESULTS**

<u>DCF</u>	<u>Utility</u>	<u>Non-Utility</u>
Earnings Growth		
Value Line	10.9%	11.9%
IBES	10.6%	12.4%
Zacks	10.6%	12.5%
br + sv	9.2%	12.1%
<u>CAPM</u>	11.5%	10.1%
<u>Expected Earnings</u>	<u>Electric</u>	<u>Gas</u>
Value Line 2014-16	10.5%	10.0%
Utility Proxy Group	10.4%	--

CAPITAL STRUCTURE

UTILITY PROXY GROUP

Company	At Fiscal Year-End 2010 (a)			Value Line Projected (b)		
	Debt	Preferred	Common Equity	Debt	Other	Common Equity
1 ALLETE	44.4%	0.0%	55.6%	44.0%	0.0%	56.0%
2 Alliant Energy	46.3%	4.2%	49.5%	45.0%	3.5%	51.5%
3 Ameren Corp.	47.1%	0.0%	52.9%	46.0%	1.0%	53.0%
4 American Elec Pwr	55.1%	0.2%	44.7%	49.5%	0.0%	50.5%
5 Avista Corp.	47.4%	2.2%	50.4%	48.0%	0.0%	52.0%
6 Black Hills Corp.	52.0%	0.0%	48.0%	50.5%	0.0%	49.5%
7 Cleco Corp.	51.7%	0.0%	48.2%	44.5%	0.5%	55.0%
8 Constellation Energy	34.7%	1.5%	63.8%	31.5%	1.0%	67.5%
9 DTE Energy Co.	49.9%	2.1%	48.0%	52.5%	0.0%	47.5%
10 Edison International	51.9%	3.8%	44.3%	52.0%	3.0%	45.0%
11 Empire District Elec	51.3%	0.0%	48.7%	48.0%	0.0%	52.0%
12 Entergy Corp.	54.8%	1.6%	43.6%	57.0%	1.0%	42.0%
13 Exelon Corp.	47.2%	0.3%	52.4%	46.5%	0.0%	53.5%
14 Great Plains Energy	54.0%	0.6%	45.4%	51.0%	0.5%	48.5%
15 Hawaiian Elec.	47.3%	1.2%	51.5%	47.0%	1.0%	52.0%
16 IDACORP, Inc.	51.2%	0.0%	48.8%	49.5%	0.0%	50.5%
17 Integrys Energy Group	47.6%	0.0%	52.4%	45.0%	1.0%	54.0%
18 OGE Energy Corp.	49.6%	0.0%	50.4%	50.5%	0.0%	49.5%
19 Otter Tail Corp.	40.2%	1.4%	58.3%	39.0%	0.0%	61.0%
20 PG&E Corp.	50.4%	1.1%	48.5%	45.0%	1.0%	54.0%
21 Pinnacle West Capital	49.3%	0.0%	50.7%	46.5%	0.0%	53.5%
22 Portland General Elec.	53.1%	0.0%	46.9%	50.0%	0.0%	50.0%
23 Pub Sv Enterprise Crp	48.1%	0.0%	51.9%	41.5%	0.0%	58.5%
24 SCANA Corp.	54.8%	0.0%	45.2%	50.5%	0.0%	49.5%
25 Sempra Energy	50.2%	0.5%	49.2%	47.5%	1.0%	51.5%
26 UIL Holdings	60.7%	0.0%	39.2%	58.5%	0.0%	41.5%
27 Westar Energy	54.3%	0.4%	45.3%	54.0%	0.5%	45.5%
28 Wisconsin Energy	53.5%	0.4%	46.2%	51.5%	0.5%	48.0%
Average	49.9%	0.8%	49.3%	47.9%	0.6%	51.5%

(a) Company Form 10-K and Annual Reports.

(b) The Value Line Investment Survey (Feb. 4, Feb. 25, & Mar. 25, 2011).

DCF MODEL

UTILITY PROXY GROUP

Company	(a) Dividend Yield			(b) Growth Rates			(c) Cost of Equity Estimates				
	Price	Dividends	Yield	V Line	IBES	Zacks	br-sv	V Line	IBES	Zacks	br-sv
1 ALLETE	\$ 37.02	\$ 1.79	4.8%	4.5%	5.0%	5.0%	3.8%	9.3%	9.8%	9.8%	8.7%
2 Alliant Energy	\$ 38.43	\$ 1.72	4.5%	7.0%	8.0%	5.0%	5.8%	11.5%	12.5%	9.5%	10.3%
3 Ameren Corp.	\$ 26.91	\$ 1.54	5.7%	-2.0%	-1.7%	4.0%	2.5%	3.7%	4.0%	9.7%	8.2%
4 American Elec Pwr	\$ 34.92	\$ 1.86	5.3%	3.5%	3.9%	4.0%	4.9%	8.8%	9.2%	9.3%	10.2%
5 Avista Corp.	\$ 22.16	\$ 1.10	5.0%	8.5%	4.7%	4.7%	3.6%	13.5%	9.7%	9.7%	8.6%
6 Black Hills Corp.	\$ 31.30	\$ 1.46	4.7%	6.5%	6.0%	6.0%	3.3%	11.2%	10.7%	10.7%	8.0%
7 Cleco Corp.	\$ 32.62	\$ 1.12	3.4%	8.0%	3.0%	7.0%	4.1%	11.4%	6.4%	10.4%	7.6%
8 Constellation Energy	\$ 30.90	\$ 0.96	3.1%	6.0%	9.9%	9.9%	4.7%	9.1%	13.0%	13.0%	7.8%
9 DTE Energy Co.	\$ 48.18	\$ 2.30	4.8%	5.5%	5.8%	5.0%	3.6%	10.3%	10.6%	9.8%	8.3%
10 Edison International	\$ 35.81	\$ 1.29	3.6%	-1.0%	5.0%	5.0%	4.7%	2.6%	8.6%	8.6%	8.3%
11 Empire District Elec	\$ 21.01	\$ 1.28	6.1%	7.0%	NA	NA	2.6%	13.1%	NA	NA	8.6%
12 Entergy Corp.	\$ 68.49	\$ 3.34	4.9%	1.0%	2.0%	1.5%	4.6%	5.9%	6.9%	6.4%	9.5%
13 Exelon Corp.	\$ 41.34	\$ 2.10	5.1%	-1.5%	-0.8%	-2.5%	5.8%	3.6%	4.3%	2.6%	10.9%
14 Great Plains Energy	\$ 19.25	\$ 0.85	4.4%	6.0%	8.9%	9.0%	2.1%	10.4%	13.3%	13.4%	6.5%
15 Hawaiian Elec.	\$ 24.04	\$ 1.24	5.2%	11.5%	7.0%	8.6%	4.2%	16.7%	12.2%	13.8%	9.4%
16 IDACORP, Inc.	\$ 36.77	\$ 1.20	3.3%	5.5%	4.7%	4.7%	5.0%	8.8%	8.0%	8.0%	8.2%
17 Integrys Energy Group	\$ 49.24	\$ 2.72	5.5%	9.5%	7.9%	10.4%	3.1%	15.0%	13.4%	15.9%	8.6%
18 OGE Energy Corp.	\$ 47.86	\$ 1.53	3.2%	6.5%	7.0%	5.5%	7.1%	9.7%	10.2%	8.7%	10.3%
19 Otter Tail Corp.	\$ 21.64	\$ 1.19	5.5%	17.0%	16.5%	22.0%	3.5%	22.5%	22.0%	27.5%	9.0%
20 PG&E Corp.	\$ 43.00	\$ 1.92	4.5%	6.0%	6.5%	7.7%	6.7%	10.5%	11.0%	12.2%	11.1%
21 Pinnacle West Capital	\$ 42.31	\$ 2.10	5.0%	6.0%	6.4%	5.8%	3.7%	11.0%	11.4%	10.8%	8.6%
22 Portland General Elec.	\$ 23.23	\$ 1.07	4.6%	3.0%	4.7%	5.2%	3.7%	7.6%	9.3%	9.8%	8.3%
23 Pub Sv Enterprise Grp	\$ 31.10	\$ 1.37	4.4%	2.0%	3.7%	2.0%	6.5%	6.4%	8.1%	6.4%	10.9%
24 SCANA Corp.	\$ 38.73	\$ 1.94	5.0%	3.0%	4.7%	4.6%	5.0%	8.0%	9.7%	9.6%	10.0%
25 Sempra Energy	\$ 51.94	\$ 1.92	3.7%	1.0%	5.6%	7.0%	5.7%	4.7%	9.3%	10.7%	9.4%
26 UIL Holdings	\$ 28.94	\$ 1.73	6.0%	3.0%	2.9%	2.4%	5.7%	9.0%	8.9%	8.4%	11.6%
27 Westar Energy	\$ 25.68	\$ 1.28	5.0%	8.5%	6.5%	5.3%	4.6%	13.5%	11.5%	10.3%	9.6%
28 Wisconsin Energy	\$ 29.37	\$ 1.06	3.6%	7.5%	8.5%	8.0%	5.5%	11.1%	12.1%	11.6%	9.2%
Average (g)								10.9%	10.6%	10.6%	9.2%

(a) Recent price and estimated dividend for next 12 mos. from The Value Line Investment Survey, Summary and Index (Mar. 25, 2011).

(b) The Value Line Investment Survey (Feb. 4, Feb. 25, & Mar. 25, 2011).

(c) Thomson Reuters Company in Context Report (Mar. 18, 2011).

(d) www.zacks.com (retrieved Mar. 22, 2011).

(e) See Exhibit Schedule 5.

(f) Sum of dividend yield and respective growth rate.

(g) Excludes highlighted figures.

BR + SV GROWTH RATE

UTILITY PROXY GROUP

	(a) 2015		b	I	Adjustment Factor	(c) Adjusted I	(d) "sv" Factor			br+sv
	EPS	DPS					EVPS	s	v	
1 ALLETE	\$3.00	\$1.95	\$31.25	35.0%	1.0211	9.8%	0.0187	0.2188	0.41%	3.8%
2 Alliant Energy	\$3.60	\$2.00	\$30.60	44.4%	1.0205	12.0%	0.0140	0.3558	0.50%	5.8%
3 Ameren Corp.	\$2.50	\$1.54	\$36.50	38.4%	1.0188	7.0%	0.0104	(0.2167)	-0.23%	2.5%
4 American Elec Pwr	\$3.75	\$2.10	\$36.00	44.0%	1.0287	10.7%	0.0097	0.2000	0.19%	4.9%
5 Avista Corp.	\$2.00	\$1.30	\$22.50	35.0%	1.0253	9.1%	0.0222	0.1818	0.40%	3.6%
6 Black Hills Corp.	\$2.50	\$1.55	\$30.75	38.0%	1.0237	8.3%	0.0296	0.0538	0.16%	3.3%
7 Cleco Corp.	\$2.75	\$1.60	\$28.50	41.8%	1.0265	9.9%	-	0.1231	0.00%	4.1%
8 Constellation Energy	\$3.25	\$1.00	\$47.75	69.2%	1.0250	7.0%	0.0083	(0.1938)	-0.16%	4.7%
9 DTE Energy Co.	\$4.25	\$2.70	\$46.50	36.5%	1.0200	9.3%	0.0086	0.1913	0.16%	3.6%
10 Edison International	\$3.25	\$1.40	\$40.25	56.9%	1.0285	8.3%	-	(0.0063)	0.00%	4.7%
11 Empire District Elec	\$1.75	\$1.35	\$17.50	22.9%	1.0119	10.1%	0.0080	0.3000	0.24%	2.6%
12 Entergy Corp.	\$6.75	\$3.70	\$63.75	45.2%	1.0256	10.9%	(0.0105)	0.2714	-0.29%	4.6%
13 Exelon Corp.	\$3.75	\$2.10	\$26.00	44.0%	1.0204	14.7%	(0.0136)	0.5048	-0.69%	5.8%
14 Great Plains Energy	\$1.75	\$1.20	\$23.50	31.4%	1.0231	7.6%	0.0241	(0.1190)	-0.29%	2.1%
15 Hawaiian Elec.	\$2.00	\$1.30	\$18.00	35.0%	1.0220	11.4%	0.0098	0.2653	0.26%	4.2%
16 IDACORP, Inc.	\$3.10	\$1.40	\$36.50	54.8%	1.0303	8.8%	0.0181	0.0875	0.16%	5.0%
17 Integrys Energy Group	\$4.00	\$2.72	\$42.75	32.0%	1.0141	9.5%	0.0033	0.1000	0.03%	3.1%
18 OGE Energy Corp.	\$4.00	\$1.80	\$33.50	55.0%	1.0389	12.4%	0.0076	0.3619	0.28%	7.1%
19 Otter Tail Corp.	\$1.85	\$1.30	\$21.45	29.7%	1.0353	8.9%	0.0401	0.2200	0.88%	3.5%
20 PG&E Corp.	\$4.25	\$2.20	\$36.25	48.2%	1.0384	12.2%	0.0332	0.2368	0.79%	6.7%
21 Pinnacle West Capital	\$3.50	\$2.30	\$38.25	34.3%	1.0339	9.5%	0.0418	0.1000	0.42%	3.7%
22 Portland General Elec.	\$2.00	\$1.20	\$23.75	40.0%	1.0327	8.7%	0.0385	0.0500	0.19%	3.7%
23 Pub Sv Enterprise Grp	\$3.25	\$1.50	\$27.75	53.8%	1.0375	12.2%	-	0.3063	0.00%	6.5%
24 SCANA Corp.	\$3.50	\$2.10	\$36.75	40.0%	1.0420	9.9%	0.0470	0.2263	1.06%	5.0%
25 Sempra Energy	\$4.75	\$2.05	\$47.50	56.8%	1.0230	10.2%	(0.0085)	0.1739	-0.15%	5.7%
26 UHL Holdings	\$2.35	\$1.73	\$27.00	26.4%	1.0819	9.4%	0.1394	0.2286	3.19%	5.7%
27 Westar Energy	\$2.40	\$1.44	\$24.00	40.0%	1.0207	10.2%	0.0275	0.2000	0.55%	4.6%
28 Wisconsin Energy	\$2.50	\$1.40	\$20.25	44.0%	1.0215	12.6%	-	0.4600	0.00%	5.5%

BR + SV GROWTH RATE

UTILITY PROXY GROUP

	Company	2010			2015			2015 Price			Common Shares			Growth
		Eq Ratio	Tot Cap	Com Eq	Eq Ratio	Tot Cap	Com Eq	High	Low	Avg	M/B	2010	2015	
1	ALLETE	55.8%	\$1,748	\$975	56.0%	\$2,150	\$1,204	\$45.00	\$35.00	\$40.00	1.280	35.80	38.50	1.46%
2	Alliant Energy	49.5%	\$5,841	\$2,891	51.5%	\$6,895	\$3,551	\$55.00	\$40.00	\$47.50	1.552	110.89	116.00	0.91%
3	Ameren Corp.	50.9%	\$15,185	\$7,729	53.0%	\$17,600	\$9,328	\$35.00	\$25.00	\$30.00	0.822	240.40	256.00	1.27%
4	American Elec Pwr	46.5%	\$29,185	\$13,571	50.5%	\$35,800	\$18,079	\$55.00	\$35.00	\$45.00	1.250	481.00	500.00	0.78%
5	Avista Corp.	49.1%	\$2,139	\$1,050	52.0%	\$2,600	\$1,352	\$30.00	\$25.00	\$27.50	1.222	54.84	60.00	1.81%
6	Black Hills Corp.	51.6%	\$2,101	\$1,084	49.5%	\$2,775	\$1,374	\$40.00	\$25.00	\$32.50	1.057	38.97	44.75	2.80%
7	Cleco Corp.	48.5%	\$2,718	\$1,318	55.0%	\$3,125	\$1,719	\$40.00	\$25.00	\$32.50	1.140	60.75	60.75	0.00%
8	Constellation Energy	62.8%	\$12,468	\$7,830	67.5%	\$14,900	\$10,058	\$50.00	\$30.00	\$40.00	0.838	199.00	209.00	0.99%
9	DTE Energy Co.	48.7%	\$13,811	\$6,726	47.5%	\$17,300	\$8,218	\$70.00	\$45.00	\$57.50	1.237	170.00	176.00	0.70%
10	Edison International	46.5%	\$21,185	\$9,851	45.0%	\$29,100	\$13,095	\$50.00	\$30.00	\$40.00	0.994	325.81	325.81	0.00%
11	Empire District Elec	48.7%	\$1,351	\$658	52.0%	\$1,425	\$741	\$30.00	\$20.00	\$25.00	1.429	41.58	42.75	0.56%
12	Entergy Corp.	42.1%	\$20,166	\$8,490	42.0%	\$26,100	\$10,962	\$100.00	\$75.00	\$87.50	1.373	178.75	172.00	-0.77%
13	Exelon Corp.	52.9%	\$25,651	\$13,569	53.5%	\$31,100	\$16,639	\$60.00	\$45.00	\$52.50	2.019	662.00	640.00	-0.67%
14	Great Plains Energy	49.2%	\$5,868	\$2,887	48.5%	\$7,500	\$3,638	\$25.00	\$17.00	\$21.00	0.894	135.71	155.00	2.69%
15	Hawaiian Elec.	50.7%	\$2,841	\$1,440	52.0%	\$3,450	\$1,794	\$30.00	\$19.00	\$24.50	1.361	95.52	99.00	0.72%
16	IDACORP, Inc.	49.8%	\$2,807	\$1,398	50.5%	\$3,750	\$1,894	\$50.00	\$30.00	\$40.00	1.096	47.90	52.00	1.66%
17	Integrus Energy Group	56.8%	\$5,119	\$2,907	54.0%	\$6,200	\$3,348	\$55.00	\$40.00	\$47.50	1.111	77.35	78.50	0.30%
18	OGE Energy Corp.	49.2%	\$4,653	\$2,289	49.5%	\$6,825	\$3,378	\$60.00	\$45.00	\$52.50	1.567	97.60	100.00	0.49%
19	Otter Tail Corp.	59.2%	\$1,067	\$632	61.0%	\$1,475	\$900	\$35.00	\$20.00	\$27.50	1.282	36.00	42.00	3.13%
20	PG&E Corp.	47.4%	\$21,793	\$10,330	54.0%	\$28,100	\$15,174	\$55.00	\$40.00	\$47.50	1.310	370.60	420.00	2.53%
21	Pinnacle West Capital	49.6%	\$6,687	\$3,317	53.5%	\$8,700	\$4,655	\$50.00	\$35.00	\$42.50	1.111	101.43	122.00	3.76%
22	Portland General Elec.	49.7%	\$3,100	\$1,541	50.0%	\$4,275	\$2,138	\$30.00	\$20.00	\$25.00	1.053	75.21	90.00	3.66%
23	Pub Sv Enterprise Grp	60.5%	\$15,950	\$9,650	58.5%	\$24,000	\$14,040	\$45.00	\$35.00	\$40.00	1.441	506.00	506.00	0.00%
24	SCANA Corp.	47.1%	\$7,854	\$3,699	49.5%	\$11,375	\$5,631	\$55.00	\$40.00	\$47.50	1.293	128.00	153.00	3.63%
25	Sempra Energy	54.1%	\$16,646	\$9,005	51.5%	\$22,000	\$11,330	\$65.00	\$50.00	\$57.50	1.211	246.50	238.00	-0.70%
26	UIL Holdings	47.5%	\$1,250	\$594	41.5%	\$3,250	\$1,349	\$40.00	\$30.00	\$35.00	1.296	30.00	50.00	10.76%
27	Westar Energy	46.4%	\$5,181	\$2,404	45.5%	\$6,500	\$2,958	\$35.00	\$25.00	\$30.00	1.250	112.13	125.00	2.20%
28	Wisconsin Energy	49.0%	\$7,765	\$3,805	48.0%	\$9,825	\$4,716	\$45.00	\$30.00	\$37.50	1.852	233.80	233.80	0.00%

(a) The Value Line Investment Survey (Dec. 24, 2010, Feb. 4, & Feb. 25, 2011).

(b) Computed using the formula $2^{(1+5 \cdot \text{Yr. Change in Equity}) / (2+5 \cdot \text{Yr. Change in Equity})}$.

(c) Product of average year-end "r" for 2015 and Adjustment Factor.

(d) Product of change in common shares outstanding and M/B Ratio.

(e) Computed as $1 - B/M$ Ratio.

(f) Product of total capital and equity ratio.

(g) Five-year rate of change.

(h) Average of High and Low expected market prices divided by 2014-16 BVPS.

DCF MODEL

NON-UTILITY PROXY GROUP

	(a)	(a)	(b)	(c)	(d)	(e)	(e)	(e)	(e)
	Dividend	Growth Rates				Cost of Equity Estimates			
Company	Yield	V Line	IBES	Zacks	br+sv	V Line	IBES	Zacks	br+sv
1 3M Company	2.39%	7.0%	11.9%	11.3%	12.9%	9.4%	14.3%	13.7%	15.3%
2 Abbott Labs.	3.67%	10.0%	8.9%	9.0%	15.0%	13.7%	12.6%	12.7%	18.7%
3 Alberto-Culver	1.02%	15.0%	9.4%	12.5%	8.4%	16.0%	10.4%	13.5%	9.4%
4 AT&T Inc.	6.09%	5.5%	5.7%	7.0%	5.4%	11.6%	11.8%	13.1%	11.5%
5 Automatic Data Proc.	2.93%	8.0%	10.6%	10.8%	9.5%	10.9%	13.5%	13.7%	12.4%
6 Bard (C.R.)	0.77%	9.5%	10.9%	11.8%	18.1%	10.3%	11.7%	12.6%	18.9%
7 Baxter Int'l Inc.	2.45%	10.0%	9.6%	9.3%	15.5%	12.5%	12.1%	11.8%	17.9%
8 Becton, Dickinson	1.97%	9.5%	9.9%	10.8%	9.0%	11.5%	11.9%	12.8%	11.0%
9 Bristol-Myers Squibb	5.11%	8.5%	1.8%	2.0%	5.7%	13.6%	6.9%	7.1%	10.8%
10 Brown-Forman 'B'	1.90%	7.5%	10.9%	13.0%	10.6%	9.4%	12.8%	14.9%	12.5%
11 Chubb Corp.	2.55%	2.5%	8.7%	9.8%	8.0%	5.1%	11.3%	12.4%	10.5%
12 Church & Dwight	0.97%	12.0%	11.8%	12.0%	10.3%	13.0%	12.8%	13.0%	11.3%
13 Coca-Cola	2.80%	9.5%	8.7%	9.0%	9.9%	12.3%	11.5%	11.8%	12.7%
14 Colgate-Palmolive	2.76%	11.0%	9.3%	9.2%	18.1%	13.8%	12.1%	12.0%	20.8%
15 Commerce Bancshs.	2.22%	7.0%	7.0%	7.0%	7.9%	9.2%	9.2%	9.2%	10.1%
16 ConAgra Foods	3.92%	10.5%	7.7%	8.0%	8.1%	14.4%	11.6%	11.9%	12.0%
17 Costco Wholesale	1.24%	7.5%	13.3%	12.9%	8.2%	8.7%	14.5%	14.1%	9.5%
18 Cullen/Frost Bankers	2.96%	4.5%	8.5%	8.0%	5.7%	7.5%	11.5%	11.0%	8.6%
19 CVS Caremark Corp.	1.42%	9.5%	10.1%	12.0%	7.8%	10.9%	11.5%	13.4%	9.2%
20 Ecolab Inc.	1.41%	12.0%	13.2%	13.2%	19.6%	13.4%	14.6%	14.6%	21.0%
21 Exxon Mobil Corp.	2.26%	6.0%	12.1%	8.4%	13.5%	8.3%	14.4%	10.7%	15.7%
22 Gen'l Mills	3.02%	9.5%	7.7%	8.0%	9.3%	12.5%	10.7%	11.0%	12.3%
23 Heinz (H.J.)	3.85%	6.5%	7.0%	8.0%	13.9%	10.4%	10.9%	11.9%	17.8%
24 Hormel Foods	2.01%	10.5%	10.0%	9.3%	10.7%	12.5%	12.0%	11.3%	12.7%
25 Int'l Business Mach.	1.77%	13.0%	11.5%	9.3%	20.4%	14.8%	13.3%	11.1%	22.2%
26 Johnson & Johnson	3.44%	4.5%	6.0%	5.8%	10.8%	7.9%	9.4%	9.2%	14.2%
27 Kellogg	3.14%	9.5%	8.6%	9.0%	9.7%	12.6%	11.7%	12.1%	12.9%
28 Kimberly-Clark	4.09%	6.5%	7.5%	8.7%	18.6%	10.6%	11.6%	12.8%	22.7%
29 Kraft Foods	3.71%	8.0%	8.4%	8.0%	10.7%	11.7%	12.1%	11.7%	14.4%
30 Lilly (Eli)	5.64%	-2.5%	-6.4%	-5.3%	8.4%	3.1%	-0.8%	0.3%	14.0%
31 Lockheed Martin	3.78%	10.0%	8.1%	6.8%	20.3%	13.8%	11.9%	10.6%	24.1%
32 McCormick & Co.	2.24%	8.5%	9.6%	9.5%	13.3%	10.7%	11.8%	11.7%	15.6%
33 McDonald's Corp.	3.25%	9.5%	9.8%	9.3%	10.7%	12.8%	13.1%	12.6%	13.9%
34 McKesson Corp.	0.98%	10.0%	14.2%	11.0%	11.7%	11.0%	15.2%	12.0%	12.7%
35 Medtronic, Inc.	2.47%	7.5%	8.8%	8.4%	11.7%	10.0%	11.3%	10.9%	14.1%
36 Microsoft Corp.	2.26%	12.5%	11.3%	11.7%	15.3%	14.8%	13.6%	14.0%	17.5%
37 NIKE, Inc. 'B'	1.49%	9.5%	10.9%	12.5%	12.2%	11.0%	12.4%	14.0%	13.7%
38 Northrop Grumman	2.82%	12.5%	11.0%	11.1%	7.9%	15.3%	13.8%	13.9%	10.7%
39 PepsiCo, Inc.	2.91%	11.0%	8.9%	9.5%	14.5%	13.9%	11.8%	12.4%	17.4%
40 Pfizer, Inc.	4.50%	5.0%	2.8%	3.5%	7.0%	9.5%	7.3%	8.0%	11.5%
41 Procter & Gamble	3.01%	8.0%	8.9%	9.2%	7.2%	11.0%	11.9%	12.2%	10.3%
42 Raytheon Co.	3.02%	10.0%	8.0%	10.0%	8.6%	13.0%	11.0%	13.0%	11.6%
43 Stryker Corp.	1.26%	12.5%	10.9%	11.4%	13.6%	13.8%	12.2%	12.7%	14.9%
44 Sysco Corp.	3.47%	8.0%	10.0%	9.7%	14.2%	11.5%	13.5%	13.2%	17.6%
45 TJX Companies	1.28%	13.5%	14.5%	14.4%	11.1%	14.8%	15.8%	15.7%	12.4%
46 United Parcel Serv.	2.59%	9.0%	11.7%	11.5%	17.9%	11.6%	14.3%	14.1%	20.5%
47 Verizon Communic.	5.63%	4.0%	6.2%	14.9%	5.7%	9.6%	11.8%	20.5%	11.3%
48 Walgreen Co.	1.68%	11.5%	13.4%	13.0%	8.4%	13.2%	15.1%	14.7%	10.1%
49 Wal-Mart Stores	2.16%	10.0%	10.7%	11.3%	9.9%	12.2%	12.9%	13.5%	12.1%
50 Waste Management	3.52%	5.5%	9.6%	11.0%	5.2%	9.0%	13.1%	14.5%	8.7%
Average (f)						11.9%	12.4%	12.5%	12.1%

- (a) www.valueline.com (retrieved Jan. 28, 2011).
- (b) Thomson Reuters Company in Context Report (Jan. 28, 2011).
- (c) www.zacks.com (retrieved Jan. 31, 2011).
- (d) See Schedule 7.
- (e) Sum of dividend yield and respective growth rate.
- (f) Excludes highlighted figures.

BR + SV GROWTH RATE

NON-UTILITY PROXY GROUP

	Company	(a)			(b)			(c)	(d)			(e)	br + sv
		2014	2014	2014	Factor	Adj. r	br	sv	sv	sv			
		EPS	DPS	BVPS	b	r	Factor	Adj. r	br	s	v	sv	
1	3M Company	\$7.60	\$3.10	\$40.05	59.2%	19.0%	1.0818	20.5%	12.2%	0.0106	0.6731	0.71%	12.9%
2	Abbott Labs.	\$5.70	\$2.18	\$22.05	61.8%	25.9%	1.0384	26.8%	16.6%	(0.0197)	0.7900	-1.56%	15.0%
3	Alberto-Culver	\$2.35	\$0.55	\$17.85	76.6%	13.2%	1.0315	13.6%	10.4%	(0.0330)	0.6033	-1.99%	8.4%
4	AT&T Inc.	\$3.25	\$2.00	\$24.05	38.5%	13.5%	1.0327	14.0%	5.4%	(0.0001)	0.4656	-0.01%	5.4%
5	Automatic Data Proc.	\$3.45	\$1.60	\$22.95	53.6%	15.0%	1.0786	16.2%	8.7%	0.0111	0.7039	0.78%	9.5%
6	Bard (C.R.)	\$7.75	\$0.85	\$31.45	89.0%	24.6%	1.0255	25.3%	22.5%	(0.0564)	0.7754	-4.37%	18.1%
7	Baxter Int'l Inc.	\$5.85	\$1.50	\$22.90	74.4%	25.5%	1.0560	27.0%	20.1%	(0.0633)	0.7224	-4.57%	15.5%
8	Becton, Dickinson	\$7.65	\$2.20	\$34.10	71.2%	22.4%	1.0306	23.1%	16.5%	(0.1030)	0.7216	-7.43%	9.0%
9	Bristol-Myers Squibb	\$2.35	\$1.54	\$11.65	34.5%	20.2%	1.0263	20.7%	7.1%	(0.0212)	0.6671	-1.42%	5.7%
10	Brown-Forman 'B'	\$4.50	\$1.48	\$20.40	67.1%	22.1%	1.0372	22.9%	15.4%	(0.0640)	0.7368	-4.71%	10.6%
11	Chubb Corp.	\$7.00	\$1.60	\$64.85	77.1%	10.8%	1.0184	11.0%	8.5%	(0.0319)	0.1632	-0.52%	8.0%
12	Church & Dwight	\$5.80	\$1.00	\$39.25	82.8%	14.8%	1.0465	15.5%	12.8%	(0.0414)	0.6075	-2.52%	10.3%
13	Coca-Cola	\$4.95	\$2.48	\$18.20	49.9%	27.2%	1.0479	28.5%	14.2%	(0.0526)	0.8267	-4.34%	9.9%
14	Colgate-Palmolive	\$7.20	\$3.20	\$13.25	55.6%	54.3%	1.0671	58.0%	32.2%	(0.1557)	0.9086	-14.15%	18.1%
15	Commerce Bancshs.	\$3.35	\$1.15	\$32.10	65.7%	10.4%	1.0480	10.9%	7.2%	0.0240	0.2867	0.69%	7.9%
16	ConAgra Foods	\$2.35	\$1.00	\$15.00	57.4%	15.7%	1.0288	16.1%	9.3%	(0.0217)	0.5385	-1.17%	8.1%
17	Costco Wholesale	\$4.20	\$0.95	\$33.50	77.4%	12.5%	1.0315	12.9%	10.0%	(0.0301)	0.5939	-1.79%	8.2%
18	Cullen/Frost Bankers	\$4.35	\$2.10	\$44.00	51.7%	9.9%	1.0382	10.3%	5.3%	0.0132	0.2667	0.35%	5.7%
19	CVS Caremark Corp.	\$4.00	\$0.56	\$38.15	86.0%	10.5%	1.0268	10.8%	9.3%	(0.0395)	0.3642	-1.44%	7.8%
20	Ecolab Inc.	\$3.60	\$0.85	\$14.45	76.4%	24.9%	1.0530	26.2%	20.0%	(0.0056)	0.7592	-0.43%	19.6%
21	Exxon Mobil Corp.	\$9.35	\$2.05	\$45.50	78.1%	20.5%	1.0546	21.7%	16.9%	(0.0578)	0.5956	-3.44%	13.5%
22	Gen'l Mills	\$3.15	\$1.36	\$11.95	56.8%	26.4%	1.0318	27.2%	15.5%	(0.0809)	0.7610	-6.16%	9.3%
23	Heinz (H.J.)	\$4.10	\$2.32	\$14.65	43.4%	28.0%	1.0908	30.5%	13.3%	0.0085	0.7830	0.66%	13.9%
24	Hormel Foods	\$2.10	\$0.70	\$13.55	66.7%	15.5%	1.0527	16.3%	10.9%	(0.0025)	0.6387	-0.16%	10.7%
25	Int'l Business Mach.	\$18.00	\$3.60	\$48.75	80.0%	36.9%	1.0856	40.1%	32.1%	(0.1501)	0.7759	-11.65%	20.4%
26	Johnson & Johnson	\$5.85	\$2.65	\$27.60	54.7%	21.2%	1.0378	22.0%	12.0%	(0.0185)	0.6846	-1.26%	10.8%
27	Kellogg	\$5.10	\$1.88	\$9.95	63.1%	51.3%	1.0352	53.1%	33.5%	(0.2690)	0.8829	-23.75%	9.7%
28	Kimberly-Clark	\$6.25	\$2.75	\$15.55	56.0%	40.2%	1.0140	40.8%	22.8%	(0.0506)	0.8363	-4.24%	18.6%
29	Kraft Foods	\$3.00	\$1.40	\$24.00	53.3%	12.5%	1.0480	13.1%	7.0%	0.0716	0.5200	3.72%	10.7%
30	Lilly (Eli)	\$3.40	\$2.20	\$15.60	35.3%	21.8%	1.0636	23.2%	8.2%	0.0032	0.6716	0.21%	8.4%
31	Lockheed Martin	\$13.25	\$3.50	\$31.25	73.6%	42.4%	1.0882	46.1%	34.0%	(0.1663)	0.8188	-13.62%	20.3%
32	McCormick & Co.	\$3.50	\$1.36	\$18.95	61.1%	18.5%	1.0649	19.7%	12.0%	0.0178	0.7293	1.30%	13.3%
33	McDonald's Corp.	\$6.05	\$3.00	\$19.00	50.4%	31.8%	1.0303	32.8%	16.5%	(0.0734)	0.8000	-5.87%	10.7%
34	McKesson Corp.	\$6.80	\$0.72	\$46.65	89.4%	14.6%	1.0421	15.2%	13.6%	(0.0380)	0.4957	-1.88%	11.7%
35	Medtronic, Inc.	\$4.50	\$1.18	\$25.95	73.8%	17.3%	1.0597	18.4%	13.6%	(0.0326)	0.5848	-1.91%	11.7%
36	Microsoft Corp.	\$3.35	\$0.96	\$10.75	71.3%	31.2%	1.0763	33.5%	23.9%	(0.1104)	0.7850	-8.66%	15.3%
37	NIKE, Inc. 'B'	\$5.65	\$1.50	\$34.60	73.5%	16.3%	1.0643	17.4%	12.8%	(0.0085)	0.6358	-0.54%	12.2%
38	Northrop Grumman	\$10.25	\$2.50	\$68.00	75.6%	15.1%	1.0293	15.5%	11.7%	(0.0783)	0.4868	-3.81%	7.9%
39	PepsiCo, Inc.	\$6.40	\$2.34	\$24.00	63.4%	26.7%	1.0724	28.6%	18.1%	(0.0449)	0.8118	-3.64%	14.5%
40	Pfizer, Inc.	\$2.05	\$1.16	\$13.00	43.4%	15.8%	1.0154	16.0%	7.0%	-	0.5273	0.00%	7.0%
41	Procter & Gamble	\$5.25	\$2.18	\$29.45	58.5%	17.8%	1.0230	18.2%	10.7%	(0.0495)	0.6900	-3.41%	7.2%
42	Raytheon Co.	\$7.20	\$2.00	\$38.65	72.2%	18.6%	1.0231	19.1%	13.8%	(0.0870)	0.5932	-5.16%	8.6%
43	Stryker Corp.	\$5.35	\$0.84	\$32.75	84.3%	16.3%	1.0660	17.4%	14.7%	(0.0144)	0.7213	-1.04%	13.6%
44	Sysco Corp.	\$2.75	\$1.10	\$10.10	60.0%	27.2%	1.0502	28.6%	17.2%	(0.0385)	0.7756	-2.98%	14.2%
45	TJX Companies	\$4.80	\$0.80	\$12.75	83.3%	37.6%	1.0374	39.1%	32.5%	(0.2565)	0.8355	-21.43%	11.1%
46	United Parcel Serv.	\$5.50	\$2.20	\$19.30	60.0%	28.5%	1.0912	31.1%	18.7%	(0.0090)	0.8245	-0.75%	17.9%
47	Verizon Communic.	\$3.05	\$1.96	\$18.95	35.7%	16.1%	1.0250	16.5%	5.9%	(0.0032)	0.6555	-0.21%	5.7%
48	Walgreen Co.	\$3.65	\$1.00	\$21.15	72.6%	17.3%	1.0252	17.7%	12.8%	(0.0684)	0.6475	-4.43%	8.4%
49	Wal-Mart Stores	\$6.05	\$1.75	\$23.40	71.1%	25.9%	1.0072	26.0%	18.5%	(0.1157)	0.7400	-8.56%	9.9%
50	Waste Management	\$2.90	\$1.60	\$15.30	44.8%	19.0%	1.0079	19.1%	8.6%	(0.0515)	0.6600	-3.40%	5.2%

BR + SV GROWTH RATE

NON-UTILITY PROXY GROUP

Company	--- Common Equity ---			----- 2014 Price -----			M/B	--- Common Shares ---		
	(a) 2009	(a) 2014	(f) Chg.	(a) High	(a) Low	(a) Avg.		(g)	(a) 2009	(a) 2014
1 3M Company	\$12,764	\$28,975	17.8%	\$135.00	\$110.00	\$122.50	3.059	710.60	723.00	0.35%
2 Abbott Labs.	\$22,856	\$33,550	8.0%	\$115.00	\$95.00	\$105.00	4.762	1,551.90	1,520.00	-0.41%
3 Alberto-Culver	\$1,197	\$1,640	6.5%	\$50.00	\$40.00	\$45.00	2.521	98.26	92.00	-1.31%
4 AT&T Inc.	\$102,339	\$141,895	6.8%	\$50.00	\$40.00	\$45.00	1.871	5,901.90	5,900.00	-0.01%
5 Automatic Data Proc.	\$5,323	\$11,700	17.1%	\$85.00	\$70.00	\$77.50	3.377	501.70	510.00	0.33%
6 Bard (C.R.)	\$2,194	\$2,830	5.2%	\$155.00	\$125.00	\$140.00	4.452	95.92	90.00	-1.27%
7 Baxter Int'l Inc.	\$7,191	\$12,600	11.9%	\$90.00	\$75.00	\$82.50	3.603	600.97	550.00	-1.76%
8 Becton, Dickinson	\$5,143	\$6,985	6.3%	\$135.00	\$110.00	\$122.50	3.592	237.08	205.00	-2.87%
9 Bristol-Myers Squibb	\$14,785	\$19,230	5.4%	\$40.00	\$30.00	\$35.00	3.004	1,709.50	1,650.00	-0.71%
10 Brown-Forman 'B'	\$1,895	\$2,750	7.7%	\$85.00	\$70.00	\$77.50	3.799	146.96	135.00	-1.68%
11 Chubb Corp.	\$15,634	\$18,800	3.8%	\$85.00	\$70.00	\$77.50	1.195	332.01	290.00	-2.67%
12 Church & Dwight	\$1,602	\$2,550	9.7%	\$110.00	\$90.00	\$100.00	2.548	70.55	65.00	-1.63%
13 Coca-Cola	\$24,799	\$40,035	10.1%	\$115.00	\$95.00	\$105.00	5.769	2,303.00	2,200.00	-0.91%
14 Colgate-Palmolive	\$3,116	\$6,100	14.4%	\$160.00	\$130.00	\$145.00	10.943	494.17	460.00	-1.42%
15 Commerce Bancshs.	\$1,886	\$3,050	10.1%	\$50.00	\$40.00	\$45.00	1.402	87.26	95.00	1.71%
16 ConAgra Foods	\$4,721	\$6,300	5.9%	\$35.00	\$30.00	\$32.50	2.167	441.66	420.00	-1.00%
17 Costco Wholesale	\$10,018	\$13,725	6.5%	\$90.00	\$75.00	\$82.50	2.463	435.97	410.00	-1.22%
18 Cullen/Frost Bankers	\$1,894	\$2,775	7.9%	\$65.00	\$55.00	\$60.00	1.364	60.04	63.00	0.97%
19 CVS Caremark Corp.	\$35,768	\$46,750	5.5%	\$65.00	\$55.00	\$60.00	1.573	1,391.00	1,225.00	-2.51%
20 Ecolab Inc.	\$2,001	\$3,400	11.2%	\$65.00	\$55.00	\$60.00	4.152	236.60	235.00	-0.14%
21 Exxon Mobil Corp.	\$110,569	\$191,000	11.6%	\$125.00	\$100.00	\$112.50	2.473	4,727.00	4,200.00	-2.34%
22 Gen'l Mills	\$5,175	\$7,115	6.6%	\$55.00	\$45.00	\$50.00	4.184	656.00	595.00	-1.93%
23 Heinz (H.J.)	\$1,891	\$4,700	20.0%	\$75.00	\$60.00	\$67.50	4.608	318.06	321.00	0.18%
24 Hormel Foods	\$2,124	\$3,600	11.1%	\$40.00	\$35.00	\$37.50	2.768	267.19	266.00	-0.09%
25 Int'l Business Mach.	\$22,755	\$53,650	18.7%	\$240.00	\$195.00	\$217.50	4.462	1,305.30	1,100.00	-3.36%
26 Johnson & Johnson	\$50,588	\$73,850	7.9%	\$95.00	\$80.00	\$87.50	3.170	2,754.30	2,675.00	-0.58%
27 Kellogg	\$2,272	\$3,230	7.3%	\$95.00	\$75.00	\$85.00	8.543	381.38	325.00	-3.15%
28 Kimberly-Clark	\$5,406	\$6,220	2.8%	\$105.00	\$85.00	\$95.00	6.109	417.00	400.00	-0.83%
29 Kraft Foods	\$25,972	\$42,000	10.1%	\$55.00	\$45.00	\$50.00	2.083	1,477.90	1,750.00	3.44%
30 Lilly (Eli)	\$9,524	\$18,000	13.6%	\$50.00	\$45.00	\$47.50	3.045	1,149.00	1,155.00	0.10%
31 Lockheed Martin	\$4,129	\$10,000	19.4%	\$190.00	\$155.00	\$172.50	5.520	372.90	320.00	-3.01%
32 McCormick & Co.	\$1,335	\$2,555	13.9%	\$75.00	\$65.00	\$70.00	3.694	131.80	135.00	0.48%
33 McDonald's Corp.	\$14,034	\$19,000	6.2%	\$105.00	\$85.00	\$95.00	5.000	1,076.70	1,000.00	-1.47%
34 McKesson Corp.	\$7,532	\$11,480	8.8%	\$100.00	\$85.00	\$92.50	1.983	271.00	246.00	-1.92%
35 Medtronic, Inc.	\$14,629	\$26,600	12.7%	\$70.00	\$55.00	\$62.50	2.408	1,097.30	1,025.00	-1.35%
36 Microsoft Corp.	\$39,558	\$85,000	16.5%	\$55.00	\$45.00	\$50.00	4.651	8,908.00	7,900.00	-2.37%
37 NIKE, Inc. 'B'	\$8,693	\$16,550	13.7%	\$105.00	\$85.00	\$95.00	2.746	485.50	478.00	-0.31%
38 Northrop Grumman	\$12,687	\$17,000	6.0%	\$145.00	\$120.00	\$132.50	1.949	306.87	250.00	-4.02%
39 PepsiCo, Inc.	\$17,442	\$36,015	15.6%	\$140.00	\$115.00	\$127.50	5.313	1,565.00	1,500.00	-0.84%
40 Pfizer, Inc.	\$90,014	\$105,000	3.1%	\$30.00	\$25.00	\$27.50	2.115	8,070.00	8,070.00	0.00%
41 Procter & Gamble	\$63,099	\$79,455	4.7%	\$105.00	\$85.00	\$95.00	3.226	2,917.00	2,700.00	-1.53%
42 Raytheon Co.	\$9,827	\$12,375	4.7%	\$105.00	\$85.00	\$95.00	2.458	383.20	320.00	-3.54%
43 Stryker Corp.	\$6,595	\$12,775	14.1%	\$130.00	\$105.00	\$117.50	3.588	397.90	390.00	-0.40%
44 Sysco Corp.	\$3,450	\$5,700	10.6%	\$50.00	\$40.00	\$45.00	4.455	590.03	565.00	-0.86%
45 TJX Companies	\$2,889	\$4,200	7.8%	\$85.00	\$70.00	\$77.50	6.078	409.39	330.00	-4.22%
46 United Parcel Serv.	\$7,630	\$19,035	20.1%	\$120.00	\$100.00	\$110.00	5.699	992.85	985.00	-0.16%
47 Verizon Communic.	\$41,600	\$53,439	5.1%	\$60.00	\$50.00	\$55.00	2.902	2,835.70	2,820.00	-0.11%
48 Walgreen Co.	\$14,376	\$18,500	5.2%	\$65.00	\$55.00	\$60.00	2.837	988.56	875.00	-2.41%
49 Wal-Mart Stores	\$70,749	\$76,025	1.4%	\$100.00	\$80.00	\$90.00	3.846	3,786.00	3,250.00	-3.01%
50 Waste Management	\$6,285	\$6,800	1.6%	\$50.00	\$40.00	\$45.00	2.941	486.12	445.00	-1.75%

- (a) www.valueline.com (retrieved Jan. 28, 2011).
- (b) Computed using the formula $2 \times (1 + 5\text{-Yr. Change in Equity}) / (2 + 5\text{ Yr. Change in Equity})$.
- (c) Product of year-end "r" for 2014 and Adjustment Factor.
- (d) Product of change in common shares outstanding and M/B Ratio.
- (e) Computed as $1 - B/M$ Ratio.
- (f) Five-year rate of change.
- (g) Average of High and Low expected market prices divided by 2013-15 BVPS.

CAPITAL ASSET PRICING MODEL

UTILITY PROXY GROUP

Market Rate of Return

Dividend Yield (a)	2.3%	
Growth Rate (b)	<u>10.5%</u>	
Market Return (c)		12.8%

Less: Risk-Free Rate (d)

Long-term Treasury Bond Yield		<u>4.7%</u>
-------------------------------	--	-------------

<u>Market Risk Premium (e)</u>		8.1%
--------------------------------	--	------

<u>Utility Proxy Group Beta (f)</u>		<u>0.74</u>
-------------------------------------	--	-------------

<u>Utility Proxy Group Risk Premium (g)</u>		6.0%
---	--	------

Plus: Risk-free Rate (d)

Long-term Treasury Bond Yield		<u>4.7%</u>
-------------------------------	--	-------------

Unadjusted CAPM (h)		10.7%
---------------------	--	-------

Size Adjustment (i)		<u>0.74%</u>
---------------------	--	--------------

Implied Cost of Equity (j)		<u><u>11.5%</u></u>
-----------------------------------	--	----------------------------

- (a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (retrieved Jan. 28, 2011).
- (b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 (retrieved Feb. 23, 2011).
- (c) (a) + (b)
- (d) Average yield on 30-year Treasury bonds for February 2011 from the Federal Reserve Board at http://www.federalreserve.gov/releases/h15/data/Monthly/H15_TCMNOM_Y20.txt.
- (e) (c) - (d).
- (f) The Value Line Investment Survey (Feb. 4, Feb. 25, & Mar. 25, 2011).
- (g) (e) x (f).
- (h) (d) + (g).
- (i) *Morningstar*, "Ibbotson SBBI 2010 Valuation Yearbook," at Table C-1 (2010).
- (j) (h) + (i).

CAPITAL ASSET PRICING MODEL

NON-UTILITY PROXY GROUP

Market Rate of Return

Dividend Yield (a)	2.3%	
Growth Rate (b)	<u>10.5%</u>	
Market Return (c)		12.8%

Less: Risk-Free Rate (d)

Long-term Treasury Bond Yield		<u>4.7%</u>
-------------------------------	--	-------------

<u>Market Risk Premium (e)</u>		8.1%
--------------------------------	--	------

<u>Non-Utility Proxy Group Beta (f)</u>		<u>0.71</u>
---	--	-------------

<u>Utility Proxy Group Risk Premium (g)</u>		5.7%
---	--	------

Plus: Risk-free Rate (d)

Long-term Treasury Bond Yield		<u>4.7%</u>
-------------------------------	--	-------------

Unadjusted CAPM (h)		10.4%
---------------------	--	-------

Size Adjustment (i)		<u>-0.37%</u>
---------------------	--	---------------

Implied Cost of Equity (j)		<u><u>10.1%</u></u>
-----------------------------------	--	----------------------------

- (a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (retrieved Jan. 28, 2011).
- (b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 (retrieved Feb. 23, 2011).
- (c) (a) + (b)
- (d) Average yield on 30-year Treasury bonds for February 2011 from the Federal Reserve Board at http://www.federalreserve.gov/releases/h15/data/Monthly/H15_TCMNOM_Y20.txt.
- (e) (c) - (d).
- (f) www.valueline.com (retrieved Jan. 28, 2011).
- (g) (e) x (f).
- (h) (d) + (g).
- (i) *Morningstar*, "Ibbotson S&P 500 Valuation Yearbook," at Table C-1 (2010).
- (j) (h) + (i).

EXPECTED EARNINGS APPROACH

UTILITY PROXY GROUP

	(a)	(b)	(c)
<u>Company</u>	<u>Expected Return on Common Equity</u>	<u>Adjustment Factor</u>	<u>Adjusted Return on Common Equity</u>
1 ALLETE	9.5%	1.021077	9.7%
2 Alliant Energy	12.0%	1.020547	12.2%
3 Ameren Corp.	7.0%	1.0188	7.1%
4 American Elec Pwr	10.5%	1.028674	10.8%
5 Avista Corp.	9.0%	1.02525	9.2%
6 Black Hills Corp.	8.0%	1.023679	8.2%
7 Cleco Corp.	10.0%	1.026528	10.3%
8 Constellation Energy	7.0%	1.025032	7.2%
9 DTE Energy Co.	9.0%	1.020027	9.2%
10 Edison International	8.5%	1.028458	8.7%
11 Empire District Elec	10.5%	1.011911	10.6%
12 Entergy Corp.	11.0%	1.02555	11.3%
13 Exelon Corp.	14.5%	1.020388	14.8%
14 Great Plains Energy	8.0%	1.023109	8.2%
15 Hawaiian Elec.	10.5%	1.021957	10.7%
16 IDACORP, Inc.	8.5%	1.030347	8.8%
17 Integrys Energy Group	9.5%	1.014113	9.6%
18 OGE Energy Corp.	12.0%	1.038907	12.5%
19 Otter Tail Corp.	8.5%	1.035333	8.8%
20 PG&E Corp.	12.0%	1.038435	12.5%
21 Pinnacle West Capital	8.5%	1.033878	8.8%
22 Portland General Elec.	8.5%	1.032728	8.8%
23 Pub Sv Enterprise Grp	11.5%	1.03748	11.9%
24 SCANA Corp.	9.5%	1.041985	9.9%
25 Sempra Energy	10.5%	1.022958	10.7%
26 UIL Holdings	9.0%	1.081864	9.7%
27 Westar Energy	10.0%	1.020723	10.2%
28 Wisconsin Energy	13.0%	1.021472	13.3%
Average (d)			10.4%

(a) The Value Line Investment Survey (Feb. 4, Feb. 25, & Mar. 25, 2011).

(b) Adjustment to convert year-end "r" to an average rate of return from Exhibit No. ____ (WEA-6). Case Nos. AVU-E-11-01 AVU-G-11-01

(c) (a) x (b).

(d) Excludes highlighted figures.