

**Exhibit No. DCP-1T
Dockets UE-160228/UG-160229
Witness: David C. Parcell**

**BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

**AVISTA CORPORATION d/b/a
AVISTA UTILITIES,**

Respondent.

**DOCKETS UE-160228 and
UG-160229 (*Consolidated*)**

TESTIMONY OF

DAVID C. PARCELL

**ON BEHALF OF THE STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION**

Cost of Capital

August 17, 2016

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	RECOMMENDATIONS AND SUMMARY	2
III.	ECONOMIC/LEGAL PRINCIPLES AND METHODOLOGIES.....	4
IV.	GENERAL ECONOMIC CONDITIONS	8
V.	AVISTA’S OPERATIONS AND BUSINESS RISKS.....	15
VI.	CAPITAL STRUCTURE AND COSTS OF DEBT.....	17
VII.	SELECTION OF PROXY GROUPS	22
VIII.	DISCOUNTED CASH FLOW (“DCF”) ANALYSIS	23
IX.	CAPITAL ASSET PRICING MODEL (“CAPM”) ANALYSIS.....	27
X.	COMPARABLE EARNINGS (“CE”) ANALYSIS.....	30
XI.	RETURN ON EQUITY RECOMMENDATIONS	35
XII.	TOTAL COST OF CAPITAL	36
XIII.	COMMENTS ON COMPANY TESTIMONY	37

LIST OF EXHIBITS

Exhibit No. DCP-2	Background and Experience Profile
Exhibit No. DCP-3	Avista Total Cost of Capital
Exhibit No. DCP-4	Economic Indicators
Exhibit No. DCP-5	Avista History of Credit Ratings
Exhibit No. DCP-6	Avista Capital Structure Ratios
Exhibit No. DCP-7	AUS Utility Reports Electric Utility Groups-Average Common Equity Ratios
Exhibit No. DCP-8	Proxy Companies Basis for Selection
Exhibit No. DCP-9	Proxy Companies DCF Cost Rates
Exhibit No. DCP-10	Standard & Poor's 500 ROE and 20-Year Treasury Bond Returns
Exhibit No. DCP-11	Proxy Companies CAPM Cost Rates
Exhibit No. DCP-12	Proxy Companies ROE and M/B
Exhibit No. DCP-13	Standard & Poor's 500 ROE and M/B
Exhibit No. DCP-14	Risk Indicators
Exhibit No. DCP-15	Update/Corrections to McKenzie DCF Analyses
Exhibit No. DCP-16	Risk Indicators of Electric Utilities by Size

1 I. INTRODUCTION

2

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

4 A. My name is David C. Parcell. I am President and Senior Economist of Technical
5 Associates, Inc. My business address is Suite 130, 1503 Santa Rosa Rd., Richmond,
6 Virginia 23229.

7

8 **Q. Please summarize your educational background and professional experience.**

9 A. I hold B.A. (1969) and M.A. (1970) degrees in economics from Virginia Polytechnic
10 Institute and State University (Virginia Tech) and a M.B.A. (1985) from Virginia
11 Commonwealth University. I have been a consulting economist with Technical
12 Associates since 1970. I have provided cost of capital testimony in public utility
13 ratemaking proceedings dating back to 1972 and I have previously filed testimony and/or
14 testified in over 545 utility proceedings before about 50 regulatory agencies in the United
15 States and Canada. I have previously filed testimony on behalf of the Staff of the
16 Washington Utilities and Transportation Commission (Commission) in proceedings
17 involving Cascade Natural Gas, Puget Sound Energy and Pacific Power & Light
18 Company, as well as Avista. Exhibit No. DCP-2 provides a more complete description of
19 my education and relevant work experience.

20

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

22 A. I have been retained by the Commission Staff to evaluate the cost of capital (“COC”)
23 aspects of the current electric and natural gas rate cases of Avista Corporation (“Avista”).

1 I have performed independent studies and I am making recommendations of the current
2 COC for Avista.

3

4 **Q. Have you prepared an exhibit in support of your testimony?**

5 A. Yes. In addition to Exhibit No. DCP-2, identified above, I have prepared Exhibit Nos.
6 DCP-3 through DCP-16. These exhibits were prepared either by me or under my
7 direction. The information contained in these exhibits is correct to the best of my
8 knowledge and belief.

9

10 **II. RECOMMENDATIONS AND SUMMARY**

11

12 **Q. What are your COC recommendations in this proceeding?**

13 A. My overall COC recommendations for Avista are shown on Exhibit No. DCP-3 and can
14 be summarized as follows:

Item	Percent	Cost	Weighted Cost		
Short-Term Debt	3.12%	2.663%		0.08%	
Long-Term Debt	48.38%	5.696%		2.76%	
Common Equity	48.50%	8.8% 9.20% 9.50%	4.27%	4.46%	4.61%
Total	100.0%		7.11%		7.45%
				7.30%	

15

16 Avista's application requests a COC of 7.64 percent and a cost of equity ("ROE") of 9.90
17 percent.

18

1 **Q. Please summarize your analyses and conclusions.**

2 A. This proceeding is concerned with Avista's regulated electric utility and natural gas
3 operations in Washington. My analyses concern the Company's COC. As noted in a
4 later section of my testimony, Avista performs its electric and natural gas operations in
5 Washington, and all other states except Alaska, through its Avista Utilities division.
6 Avista Utilities is not a distinct corporate entity and does not have its own financial
7 statements and capital structure. Avista has traditionally used its corporate structure to
8 establish rates in Washington. In addition, it has not distinguished between its electric
9 and natural gas operations from a COC perspective. I have followed this tradition in my
10 COC analyses and thus focus on Avista's capitalization and a single ROE for both its
11 electric and natural gas operations.

12 The first step in performing my COC analyses is to develop the appropriate
13 capital structure. Avista proposes use of a capital structure comprised of 48.5 percent
14 common equity and 51.5 percent debt, which is "an estimated capital structure during
15 2017.¹ These are the same capital structure ratios adopted by the Commission in the
16 previous rate proceedings.² I also use this capital structure,³ which I believe remains the
17 proper capital structure for the Company.

18 The second step in a cost of capital calculation is to determine the embedded cost
19 rates of debt. Avista proposes use of a 2.663 cost of short-term debt and 5.696 percent

¹ Thies, Exh. No. ____ (MTT-1T), 17:19-20.

² Dockets UE-150204 and UG-150205.

³ My COC analyses separate the short-term debt and long-term debt components. Avista's analyses combine these. There is no difference in the COC conclusions arising from these different approaches.

1 cost of long-term debt, estimated cost rates as of December 31, 2016.⁴ I also use these
2 proposed cost rates for short-term debt and long-term debt.

3 The third step in the COC calculation is to estimate the ROE. I employ three
4 recognized methodologies to estimate Avista's ROE, each of which I apply to two proxy
5 groups of utilities. These three methodologies and my findings are:

<u>Methodology</u>	<u>Range</u>
Discounted Cash Flow ("DCF")	8.5%–9.2% (8.85% mid-point)
Capital Asset Pricing Model ("CAPM")	6.3–6.6% (6.45% mid-point)
Comparable Earnings ("CE")	9.0%–10.0% (9.50% mid-point)

6
7 Based upon these findings, I conclude that Avista's ROE is within a range of 8.85 percent
8 to 9.5 percent, which is based upon the mid-point of the range of the results for the DCF
9 model and the CE model.⁵ I specifically recommend a 9.20 percent ROE for Avista.

11 III. ECONOMIC/LEGAL PRINCIPLES AND METHODOLOGIES

12
13 **Q. What are the primary economic and legal principles that establish the standards for**
14 **determining a fair rate of return for a regulated utility?**

15 A. Public utility rates are normally established in a manner designed to allow the recovery of
16 their costs, including capital costs. This is frequently referred to as "cost of service"
17 ratemaking. Rates for regulated public utilities traditionally have been primarily
18 established using the "rate base – rate of return" concept. Under this method, utilities are
19 allowed to recover a level of operating expenses, taxes, and depreciation deemed

⁴ Thies, Exh. No. ____ (MTT-2).

⁵ As I indicate in a later section, my ROE recommendation does not directly incorporate the CAPM results, which I believe to be somewhat low at this time, relative to the DCF and CE results.

1 reasonable for rate-setting purposes, and are granted an opportunity to earn a fair rate of
2 return on the assets utilized (i.e., rate base) in providing service to their customers.

3 The rate base is derived from the asset side of the utility's balance sheet as a
4 dollar amount and the rate of return is developed from the liabilities/owners' equity side
5 of the balance sheet as a percentage. Thus, the revenue impact of the cost of capital is
6 derived by multiplying the rate base by the rate of return, including income taxes.

7 The rate of return is developed from the cost of capital, which is estimated by
8 weighting the capital structure components (i.e., debt, preferred stock, and common
9 equity) by their percentages in the capital structure and multiplying these values by their
10 cost rates. This is also known as the weighted cost of capital.

11 Technically, "fair rate of return" is a legal and accounting concept that refers to an
12 ex post (after the fact) earned return on an asset base, while the cost of capital is an
13 economic and financial concept which refers to an ex ante (before the fact) expected, or
14 required, return on a capital base. In regulatory proceedings, however, the two terms are
15 often used interchangeably, and I have equated the two concepts in my testimony.

16 From an economic standpoint, a fair rate of return is normally interpreted to mean
17 that an efficient and economically managed utility will be able to maintain its financial
18 integrity, attract capital, and establish comparable returns for similar risk investments.
19 These concepts are derived from economic and financial theory and are generally
20 implemented using financial models and economic concepts.

21 Although I am not a lawyer and I do not offer a legal opinion, my testimony is
22 based on my understanding that two United States Supreme Court decisions provide the
23 controlling standards for a fair rate of return. The first decision is *Bluefield Water Works*

1 *and Improvement Co. v. Public Serv. Comm'n of West Virginia*, 262 U.S. 679 (1923). In
2 this decision, the Court stated:

3 The annual rate that will constitute just compensation depends upon many
4 circumstances and must be determined by the exercise of fair and
5 enlightened judgment, having regard to all relevant facts. A public utility
6 is entitled to such rates as will permit it to earn a return on the value of the
7 property which it employs for the convenience of the public equal to that
8 generally being made at the same time and in the same general part of the
9 country on investments in other business undertakings which are attended
10 by corresponding risks and uncertainties; but it has no constitutional right
11 to profits such as are realized or anticipated in highly profitable enterprises
12 or speculative ventures. The return should be reasonably sufficient to
13 assure confidence in the financial soundness of the utility, and should be
14 adequate, under efficient and economical management, to maintain and
15 support its credit and enable it to raise the money necessary for the proper
16 discharge of its public duties. A rate of return may be reasonable at one
17 time, and become too high or too low by changes affecting opportunities
18 for investment, the money market, and business conditions generally.
19

20 It is generally understood that the *Bluefield* decision established the following
21 standards for a fair rate of return: comparable earnings, financial integrity, and capital
22 attraction. It also noted that required returns change over time, and there is an underlying
23 assumption that the utility be operated efficiently.

24 The second decision is *Federal Power Comm'n v. Hope Natural Gas Co.*, 320
25 U.S. 591 (1942). In that decision, the Court stated:

26 The rate-making process under the [Natural Gas] Act, i.e., the fixing of
27 'just and reasonable' rates, involves a balancing of the investor and
28 consumer interests. . . . From the investor or company point of view it is
29 important that there be enough revenue not only for operating expenses
30 but also for the capital costs of the business. These include service on the
31 debt and dividends on the stock. By this standard the return to the equity
32 owner should be commensurate with returns on investments in other
33 enterprises having corresponding risks. That return, moreover, should be
34 sufficient to assure confidence in the financial integrity of the enterprise,
35 so as to maintain its credit and to attract capital.
36

1 The three economic and financial parameters in the *Bluefield* and *Hope* decisions
2 – comparable earnings, financial integrity, and capital attraction – reflect the economic
3 criteria encompassed in the “opportunity cost” principle of economics. The opportunity
4 cost principle provides that a utility and its investors should be afforded an opportunity
5 (not a guarantee) to earn a return commensurate with returns they could expect to achieve
6 on investments of similar risk. The opportunity cost principle is consistent with the
7 fundamental premise on which regulation rests, namely, that it is intended to act as a
8 surrogate for competition.

9
10 **Q. How can the *Bluefield* and *Hope* parameters be employed to estimate the cost of**
11 **capital for a utility?**

12 A. Neither the courts nor economic/financial theory has developed exact and mechanical
13 procedures for precisely determining the cost of capital. This is the case because the cost
14 of capital is an opportunity cost and is prospective-looking, which dictates that it must be
15 estimated. However, there are several useful models that can be employed to assist in
16 estimating the ROE, which is the capital structure item that is the most difficult to
17 determine. These include the DCF, CAPM, CE and risk premium (“RP”) methods. I
18 have not directly employed a RP model in my analyses although, as discussed later, my
19 CAPM analysis is a form of the RP methodology. Each of these methodologies will be
20 described in more detail later in my testimony.

1 IV. GENERAL ECONOMIC CONDITIONS

2
3 **Q. Are economic and financial conditions important in determining the costs of capital**
4 **for a public utility?**

5 A. Yes. The costs of capital, for both fixed-cost (debt and preferred stock) components and
6 common equity, are determined in part by current and prospective economic and
7 financial conditions. At any given time, each of the following factors has an influence on
8 the costs of capital:

- 9
- 10 • The level of economic activity (i.e., growth rate of the economy);
 - 11 • The stage of the business cycle (i.e., recession, expansion, or transition);
 - 12 • The level of inflation;
 - 13 • The level and trend of interest rates; and,
 - 14 • Current and expected economic conditions.

15 My understanding is that this position is consistent with the *Bluefield* decision that
16 noted “[a] rate of return may be reasonable at one time and become too high or too low
17 by changes affecting opportunities for investment, the money market, and business
18 conditions generally.” *Bluefield*, 262 U.S. at 693.

19 **Q. What indicators of economic and financial activity did you evaluate in your**
20 **analyses?**

21 A. I examined several sets of economic statistics from 1975 to the present. I chose this time
22 period because it permits the evaluation of economic conditions over four full business
23 cycles plus the current cycle, allowing for an assessment of changes in long-term trends.

1 Consideration of economic/financial conditions over a relatively long period of time
2 allows me to assess how such conditions have had impacts on the level and trends of the
3 costs of capital. This period also approximates the beginning and continuation of active
4 rate case activities by public utilities, which generally began in the mid-1970s.

5 A business cycle is commonly defined as a complete period of expansion
6 (recovery and growth) and contraction (recession). A full business cycle is a useful and
7 convenient period over which to measure levels and trends in long-term capital costs
8 because it incorporates the cyclical (i.e., stage of business cycle) influences and, thus,
9 permits a comparison of structural (or long-term) trends.

10

11 **Q. Please describe the timeframes of the four prior business cycles and the current**
12 **cycle.**

13 A. The four prior complete cycles and current cycle cover the following periods:

14

<u>Business Cycle</u>	<u>Expansion Cycle</u>	<u>Contraction Period</u>
1975-1982	Mar. 1975-July 1981	Aug. 1981-Oct. 1982
1982-1991	Nov. 1982-July 1990	Aug. 1990-Mar. 1991
1991-2001	Mar. 1991-Mar. 2001	Apr. 2001-Nov. 2001
2001-2009	Nov. 2001-Nov. 2007	Dec. 2007-June 2009
Current	July 2009-	

Source: National Bureau of Economic Research, "Business Cycle Expansions and Contractions."⁶

15

16

⁶ <http://www.nber.org/cycles/cyclesmain.html>.

1 Q. Do you have any general observations concerning the recent trends in economic
2 conditions and their impact on capital costs over this broad period?

3 A. Yes, I do. From the early 1980s until the end of 2007, the United States economy had
4 enjoyed general prosperity and stability. This period had been characterized by longer
5 economic expansions, relatively tame contractions, low and declining inflation, and
6 declining interest rates and other capital costs.

7 However, in 2008 and 2009, the economy declined significantly, initially as a
8 result of the 2007 collapse of the “sub-prime” mortgage market and the related liquidity
9 crisis in the financial sector of the economy. Subsequently, this financial crisis
10 intensified with a more broad-based decline, initially based on a substantial increase in
11 petroleum prices and a dramatic decline in the U.S. financial sector, culminating with the
12 collapse and/or bailouts of a significant number of well-known institutions such as Bear
13 Stearns, Lehman Brothers, Merrill Lynch, Freddie Mac, Fannie Mae, AIG and Wachovia.
14 The recession also witnessed the demise of national companies such as Circuit City and
15 the bankruptcies of automotive manufacturers such as Chrysler and General Motors.

16 This decline has been described as the worst financial crisis since the Great
17 Depression and has been referred to as the “Great Recession.” Beginning in 2008, the
18 U.S. and other governments implemented unprecedented actions to attempt to correct or
19 minimize the scope and effects of this recession.

20 The recession reached its low point in mid-2009, when the economy began to
21 expand again, although at a slow and uneven rate. However, the length and severity of
22 the recession, as well as a relatively slow and uneven recovery, indicate that the impacts
23 of the recession have been and will be felt for an extended period of time.

1 **Q. Please describe recent and current economic and financial conditions and their**
2 **impact on the cost of capital.**

3 A. One impact of the Great Recession has been a reduction in actual and expected
4 investment returns and a corresponding reduction in the costs of capital. This decline is
5 evidenced by a decline in both short-term and long-term interest rates and the
6 expectations of investors and is reflected in ROE model results (such as DCF, CAPM and
7 CE). Regulatory agencies throughout the U.S. have recognized the decline in capital
8 costs by authorizing lower ROEs for regulated utilities in each of the last several years.

9 Exhibit No. DCP-4 shows several sets of relevant economic and financial
10 statistics for the cited time periods. Pages 1 and 2 contain general macroeconomic
11 statistics; pages 3 and 4 show interest rates; and pages 5 and 6 contain equity market
12 statistics.

13 Pages 1 and 2 show that in 2007 the economy subsequently entered a significant
14 decline, as indicated by the lower growth rate in real (i.e., adjusted for inflation) Gross
15 Domestic Product ("GDP"), lower levels of industrial production, and an increase in the
16 unemployment rate. This recession lasted until mid-2009, making it a longer-than-
17 normal recession, as well as a much deeper recession. Since then, economic growth has
18 been somewhat erratic and the economy has grown slower than the prior expansions.

19 Pages 1 and 2 also show the rate of inflation. As reflected in the Consumer Price
20 Index ("CPI"), for example, inflation rose significantly during the 1975-1982 business
21 cycle and reached double-digit levels in 1979-1980. The rate of inflation has declined
22 substantially since 1981. Since 2008, the CPI has been 3 percent or lower, with 2013
23 being only 1.5 percent and both 2014 and 2015 being below 1 percent. It is thus apparent

1 that the rate of inflation has generally been declining over the past several business
2 cycles. Recent and current levels of inflation are at the lowest levels of the past 35 years,
3 which is reflective of lower capital costs.⁷
4

5 **Q. What have been the trends in interest rates over the four prior business cycles and**
6 **at the current time?**

7 A. Pages 3 and 4 of Exhibit No. DCP-4 show several series of interest rates. Both short-
8 term and long-term rates rose sharply to record levels in 1975-1981 when the inflation
9 rate was high. Interest rates declined substantially in conjunction with the corresponding
10 declines in inflation since the early 1980's.

11 From 2008 to late 2015, the Federal Reserve System ("Federal Reserve")
12 maintained the Federal Funds rate (i.e., short-term interest rate) at 0.25 percent, an all-
13 time low. The Federal Reserve raised it slightly to 0.50 percent in December of 2015, but
14 contrary to some expectations, has not raised it further in the first several months of 2016.
15 The Federal Reserve also purchased U.S. Treasury securities to stimulate the economy.⁸
16 As seen on page 4, in 2012, both U.S. and corporate bond yields declined to their lowest
17 levels in the past four business cycles and in more than 35 years. Even with the
18 "tapering" and eventual ending of the Federal Reserve's Quantitative Easing program,
19 interest rates have remained low. Currently, both government and corporate lending rates
20 remain at historically low levels, again reflective of lower capital costs.

⁷ The rate of inflation is one component of interest rate expectations of investors, who generally expect to receive a return in excess of the rate of inflation. Thus, a lower rate of inflation has a downward impact on interest rates and other capital costs.

⁸ This is referred to as Quantitative Easing, which was comprised of three "rounds." In "round" 3, known as QE3, the Federal Reserve initially purchased some \$85 billion of U.S. Treasury Securities per month in order to stimulate the economy. The Federal Reserve eventually "tapered" its purchase of U.S. Treasury securities through October 2014, at which time Quantitative Easing ended.

1 **Q. What does this exhibit show for trends of common share prices?**

2 A. Pages 5 and 6 show several series of common stock prices and ratios. These indicate that
3 stock prices were essentially stagnant during the high inflation/high interest rate
4 environment of the late 1970s and early 1980s. The 1983-1991 business cycle and the
5 more recent cycles witnessed a significant upward trend in stock prices. The beginning
6 of the recent financial crisis saw stock prices decline precipitously, as stock prices in
7 2008 and early 2009 were down significantly from peak 2007 levels, reflecting the
8 financial/economic crisis. Beginning in the second quarter of 2009, prices recovered
9 substantially and ultimately reached and exceeded the levels achieved prior to the
10 “crash.” On the other hand, recent equity markets have been somewhat volatile.

11
12 **Q. What conclusions do you draw from your discussion of economic and financial**
13 **conditions?**

14 A. Recent economic and financial circumstances have differed from any that have prevailed
15 since at least the 1930s. The late 2008-early 2009 deterioration in stock prices, the
16 decline in U.S. Treasury bond yields, and an increase in corporate bond yields were
17 evidenced in the then-evident “flight to safety.” Concurrently, there was a decline in
18 capital costs and returns, which significantly reduced the value of most retirement
19 accounts, investment portfolios and other assets. One significant aspect of this has been a
20 decline in investor expectations of returns,⁹ even with the return of stock prices to levels
21 achieved prior to the “crash.” This is evident in several ways: 1) lower interest rates on
22 bank deposits; 2) lower interest rates on U.S. Treasury and corporate bonds; 3), lower

⁹ See, for example, Kiplinger’s Personal Finance, “Investors Brace for Smaller Gains, Focus on Long-Term,” August 30, 2015.

1 increases in social security cost of living benefits;¹⁰ and 4) lower authorized ROEs by
2 regulatory commissions. Finally, as noted above, utility bond interest rates are currently
3 at levels below those prevailing prior to the financial crisis of late 2008 to early 2009 and
4 are near the lowest levels in the past 35 years. It is also noteworthy that long-term
5 interest rates have declined slightly in recent months, in spite of the Federal Reserve's
6 raising of short-term rates in December of 2015.

7
8 **Q. How do these economic/financial conditions impact the determination of a return on**
9 **equity for regulated utilities?**

10 A. The costs of capital for regulated utilities have declined in recent years. For example, the
11 current interest costs that utilities pay on new debt remain near the low point of the last
12 several decades. In addition, the results of the traditional ROE models (i.e., DCF, CAPM
13 and CE) are lower than was the case prior to the Great Recession. In light of this, it is not
14 surprising that the average ROEs authorized by state regulatory agencies have declined
15 and continue to decline into 2016, as follows:

<u>Year</u>	<u>Electric¹¹</u>	<u>Natural Gas</u>
2012	10.01%	9.94%
2013	9.94%	9.68%
2014	9.76%	9.78%
2015	9.58%	9.60%
2016 (2Q)	9.52%	9.45%

¹⁰ The 2015 increase in Social Security benefits was 1.70 percent – near an all-time low. There is no increase in 2016 Social Security benefits.

¹¹ Average ROE values for electric utilities exclude Virginia surcharge/rider generation cases that incorporate plan-specific ROE premiums. See Regulatory Research Associates, Regulatory Focus, July 15, 2016, p. 1.

1 V. **AVISTA’S OPERATIONS AND BUSINESS RISKS**

2

3 **Q. Please summarize Avista and its operations.**

4 A. Avista is a public utility that generates and delivers electricity and natural gas through its
5 generation, transmission, and distribution systems to customers in Washington, Oregon,
6 Idaho, Alaska and a small portion of Montana.

7 Avista, in its present form, is a public utility that operates two reportable business
8 segments:¹²

- 9 • Avista Utilities – an operating division of Avista that delivers electricity and
10 natural gas in Washington, Oregon, Idaho and Montana; and,
- 11 • Alaska Electric Light & Power (“AEL&P”) – a subsidiary of Avista (acquired
12 July 1, 2014) that is an electric utility located in Juneau, Alaska. AEL&P is a
13 direct subsidiary of Alaska Energy and Resources Co. (“AERC”) which, in
14 turn, is owned by Avista.

15 Avista’s other businesses include sheet metal fabrication, venture fund
16 investments, real estate investments, a company that explores markets, as well as certain
17 other investments of Avista Capital, which is a direct, wholly owned subsidiary of Avista.
18 These activities do not represent a reportable business segment and are conducted by
19 various direct and indirect subsidiaries of Avista Corp., including AM&D, doing business
20 as METALfx.¹³

¹² Avista Corp., 2015 Form 10-K, p. 3.

¹³ Avista Corp., 2015 Form 10-K, p. 3.

1 The Avista Utilities segment accounts for the vast majority of Avista's operations,
2 as it accounted for about 95 percent of Avista's 2015 operating revenues.¹⁴
3

4 **Q. What are the current security ratings of Avista?**

5 A. The present debt ratings of Avista are shown in Exhibit No. DCP-5 and are as follows:

	<u>Secured</u>	<u>Unsecured</u>	<u>Corp./Issuer</u>
Moody's	A2	Baa1	Baa1
Standard & Poor's	A-	BBB	BBB

6
7 **Q. What have been the trends in Avista's bond ratings?**

8 A. This is also shown on Exhibit No. DCP-5. As this indicates, Avista's ratings have
9 improved over the past decade.
10

11 **Q. How do the bond ratings of Avista compare to other electric and combination
12 gas/electric utilities?**

13 A. As I indicated in the previous answer, Avista has Single A bond ratings on its secured
14 long-term debt. Below is a table depicting the bond ratings of the 48 electric utilities and
15 combination gas/electric utilities covered by AUS Utility Reports:

<u>Moody's Rating</u>	<u>Number of Companies</u>	<u>S&P Rating</u>	<u>Number of Companies</u>
Aa2	1	AA	-
Aa3	-	AA-	1
A1	1	A+	--
A2*	7	A	7
A3	18	A-*	18
Baa1	11	BBB+	11
Baa2	7	BBB	9
Baa3	--	BBB-	3
Ba or less	--	BB	--
NR	3	NR	3

* Avista's ratings.

¹⁴ Avista Corp., 2015 Form 10-K, p. 24.

1 As this indicates, Avista's ratings compare favorably with most electric and combination
2 utilities.

3
4 **VI. CAPITAL STRUCTURE AND COSTS OF DEBT**

5
6 **Q. What is the importance of determining a proper capital structure in a regulatory
7 framework?**

8 A. A utility's capital structure is important because the concept of rate base – rate of return
9 regulation requires the capital structure to be utilized in estimating the total cost of
10 capital. Within this framework, it is proper to ascertain whether the utility's capital
11 structure is appropriate relative to its level of business risk and relative to other utilities.

12 As discussed in Section III of my testimony, the purpose of determining the
13 proper capital structure for a utility is to ascertain its capital costs. The rate base – rate of
14 return concept recognizes the assets employed in providing utility services and provides
15 for a return on these assets by identifying the liabilities and common equity (and their
16 cost rates) used to finance the assets. In this process, the rate base is derived from the
17 asset side of the balance sheet and the cost of capital is derived from the
18 liabilities/owners' equity side of the balance sheet. The inherent assumption in this
19 procedure is that the dollar values of the capital structure and the rate base are
20 approximately equal and the former is utilized to finance the latter.

21 The common equity ratio (i.e., the percentage of common equity in the capital
22 structure) is the capital structure item which normally receives the most attention. This is
23 the case because common equity: (1) usually commands the highest cost rate; (2)

1 generates associated income tax liabilities; and (3) causes the most controversy since its
2 cost cannot be precisely determined.

3
4 **Q. What are the historic capital structure ratios of Avista?**

5 A. I have examined the historic (2011-2015) capital structure ratios of Avista, which is
6 shown on Exhibit No. DCP-6. The common equity ratios have been:

	Avista Consolidated		Avista Regulatory	
	Including S-T Debt	Excluding S-T Debt	Including S-T Debt	Excluding S-T Debt
2011	46.4%	48.6%	48.1%	49.6%
2012	47.0%	49.2%	47.6%	48.7%
2013	45.4%	48.6%	47.8%	48.8%
2014	47.4%	49.2%	49.0%	50.4%
2015	46.9%	50.0%	47.8%	49.3%

7
8 This indicates that Avista, on a consolidated basis, has had an equity ratio that has
9 slightly increased over the past five years. The “regulatory” capital structure¹⁵ has been
10 fairly stationary.

11
12 **Q. How do these capital structures compare to those of investor-owned electric
13 utilities?**

14 A. Exhibit No. DCP-7 shows the common equity ratios (including short-term debt in
15 capitalization) for the groups of electric and combination electric utilities followed by
16 AUS Utility Reports. These are:

¹⁵ Avista’s “regulatory” capital structures exclude affiliate debt and equity (Source: Company response to UTC Staff Data Request No. 65).

Year	Electric	Combination Gas and Electric
2011	47%	46%
2012	47%	46%
2013	48%	47%
2014	47%	47%
2015	48%	46%

(Source: AUS Utility Reports).

1 These equity ratios are similar to those of Avista.

2

3 **Q. What capital structure has Avista requested in the proceedings?**

4 A. Avista proposes a capital structure comprised as follows:

	Percent
Debt	51.5%
Common Equity	48.5%

5 According to the Direct Testimony of Avista witness Mark T. Thies, this “requested
6 capital structure is an estimated capital structure during 2017.” Mr. Thies also indicates
7 that this capital structure excludes the debt and equity of AERC, which is the immediate
8 parent of AEL&P.¹⁶

9

10 **Q. How does this proposed capital structure compare to the capital structure approved
11 in Avista’s most recent rate proceedings?**

12 A. They are the same. In Dockets UE-150204/UG-150205 the parties stipulated to a capital
13 structure with 51.5 percent debt/48.5 percent equity.¹⁷ This capital structure was Avista’s
14 “forecast capital structure at December 31, 2015.”¹⁸

¹⁶ Exh. No. ____ (MTT-1T) 17:17-20 and 19:2-6.

¹⁷ Multiparty Settlement Stipulation dated May 1, 2015.

¹⁸ *Wash. Utils. & Transp. Comm’n v. Avista Corp.*, Dockets UE-150204 and UG-150205, Thies Exh. No. MTT-1T 14:20-23.

1 **Q. What capital structures do you propose to use in these proceedings?**

2 A. I have also used a capital structure with 48.5 percent equity for the purposes of these
3 proceedings. My proposed capital structure is:

Short-Term Debt	3.12%
Long-Term Debt	48.38%
Common Equity	48.50%

4

5 I note that my proposed capital structure shows short-term debt separately from the total
6 debt contained in Avista's proposal. However, there is no difference in the ultimate COC
7 calculations resulting from this difference in presentation.

8

9 **Q. Why are you proposing a capital structure for Avista containing 48.5 percent**
10 **common equity?**

11 A. I first note that Avista's actual consolidated capital structure as of December 31, 2015
12 contained 46.9 percent common equity, as shown on Exhibit No. DCP-6. Thus, my
13 proposed capital structure is similar to, but slightly exceeds, the recent actual capital
14 structure ratio of Avista.

15 Second, this capital structure matches the capital structure stipulated to by the
16 parties and adopted by the Commission in Avista's last rate proceeding.¹⁹

17 Third, as noted in Avista's filing and as stated previously, this capital structure
18 matches the Company's estimated 2017 capital structure ratios (excluding AEL&P).

19 Fourth, the proposed capital structure is similar to that of other electric and
20 combination electric utilities, as shown on Exhibit No. DCP-7.

¹⁹ Dockets UE-150204 and UG-150205.

1 **Q. What is your understanding of this Commission’s recent policy on the proper**
2 **capital structure to use to determine the COC?**

3 A. It is my understanding that the Commission’s policy on determining a capital structure
4 balances safety (the preservation of investment quality credit ratings and access to
5 capital) against economy (the lowest overall cost to attract and maintain capital). The
6 Commission noted that the appropriate capital structure can either be the Company’s
7 historical capital structure, the projected capital structure, or a hypothetical capital
8 structure.²⁰

9
10 **Q. Is your recommended capital structure consistent with this policy?**

11 A. Yes. The capital structure that I use is similar to recent actual ratios of Avista, as well as
12 its estimated 2017 capital structure, and is consistent with the capital structure of other
13 utilities. I also believe that the capital structure that I propose provides a “balance of
14 safety and economy” as cited above.

15
16 **Q. What are the cost rates of debt in Avista’s applications?**

17 A. Avista proposes the respective costs of short-term and long-term debt as of December 31,
18 2016. I also use these rates in my COC analyses.

19
20 **Q. Can the ROE be determined with the same degree of precision as the cost of debt?**

21 A. No. The cost rates of debt are largely determined by interest payments, issue prices, and
22 related expenses. The ROE, on the other hand, cannot be precisely quantified, primarily
23 because this cost is an opportunity cost. As mentioned previously, there are several

²⁰ *WUTC v. Puget Sound Energy, Inc.*, Dockets UE-040640 and UG-040641, Order 06, ¶ 27 (February 18, 2005).

1 models that can be employed to estimate the ROE. Three of the primary methods – DCF,
2 CAPM, and CE – are developed in the following sections of my testimony.

3
4 **VII. SELECTION OF PROXY GROUPS**

5
6 **Q. How have you estimated the ROE for Avista?**

7 A. Avista is a publicly-traded company. Consequently, it is possible to directly apply ROE
8 models to Avista. However, in COC analyses, it is customary to analyze groups of
9 comparison, or “proxy,” companies as a substitute for Avista to determine its ROE.

10 I have accordingly selected two groups for comparison to Avista. I selected one
11 group of electric utilities similar to Avista using the criteria listed on Exhibit No. DCP-8.

12 These criteria are as follows:

- 13 (1) Market cap of \$1 billion to \$10 billion or greater;
14 (2) Electric revenues 50% or greater;
15 (3) Common equity ratio 40% or greater;
16 (4) Value Line Safety rank of 1, 2, or 3;
17 (5) Standard & Poor’s (“S&P”) stock ranking of A or B;
18 (6) S&P and/or Moody’s bond ratings of A;
19 (7) Currently pays dividends; and
20 (8) Not involved in major merger or acquisition.

21 In addition, I have conducted studies of the cost of equity for the proxy group that
22 was selected by Avista witness Adrian M. McKenzie.

1 **Q. Please explain why you are using two proxy groups in your cost of equity analyses.**

2 A. It has long been my practice to develop my own independently-determined proxy group
3 and to also conduct cost of equity analyses on the utility witness' proxy group. My
4 conclusions and recommendations, in turn, are based upon the results of both proxy
5 groups.

6

7 **VIII. DISCOUNTED CASH FLOW ("DCF") ANALYSIS**

8

9 **Q. What is the theory and methodological basis of the DCF model?**

10 A. The DCF model is one of the oldest and most commonly-used models for estimating the
11 ROE for public utilities.²¹

12 The DCF model is based on the "dividend discount model" of financial theory,
13 which maintains that the value (price) of any security or commodity is the discounted
14 present value of all future cash flows.

15 The most common variant of the DCF model assumes that dividends are expected
16 to grow at a constant rate (the "constant growth" or "Gordon DCF model"). In this
17 framework, the ROE is derived from the following formula:

18
$$K = \frac{D}{P} + g$$

19 where: P = current price

20 D = current dividend rate

21 K = discount rate (cost of capital)

22 G = constant rate of expected growth

²¹ Certain regulatory commissions (e.g., Federal Energy Regulatory Commission) rely primarily on the DCF methodology in determining the ROE for public utilities.

1 This formula essentially recognizes that the return expected or required by investors is
2 comprised of two factors: the dividend yield (current income) and expected growth in
3 dividends (future income).

4

5 **Q. Please explain how you employ the DCF model.**

6 A. I use the constant growth DCF model. In doing so, I combine the current dividend yield
7 for each of the proxy utility stocks described in the previous section with several
8 indicators of expected dividend growth.

9

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

11 A. Several methods can be used to calculate the dividend yield component. These methods
12 generally differ in the manner in which the dividend rate is employed (i.e., current versus
13 future dividends or annual versus quarterly compounding variant, which is expressed as
14 follows:

15
$$Yield = \frac{D_0(1 + 0.5g)}{P_0}$$

16 This dividend yield component recognizes the timing of dividend payments and dividend
17 increases.

18 The P_0 in my yield calculation is the average of the high and low stock price for
19 each proxy company for the most recent three month period (May - July 2016). The D_0 is
20 the current annualized dividend rate for each proxy company.

21

1 **Q. How do you estimate the dividend growth component of the DCF equation?**

2 A. The DCF model's dividend growth rate component is usually the most crucial and
3 controversial element involved in using this methodology. The objective of estimating
4 the dividend growth component is to reflect the growth expected by investors that is
5 embodied in the price (and yield) of a company's stock. As such, it is important to
6 recognize that individual investors have different expectations and consider alternative
7 indicators in deriving their expectations. This is evidenced by the fact that every
8 investment decision resulting in the purchase of a particular stock is matched by another
9 investment decision to sell that stock.

10 A wide array of indicators exists for estimating investors' growth expectations.
11 As a result, it is evident that investors do not always use one single indicator of growth.
12 It therefore is necessary to consider alternative dividend growth indicators in deriving the
13 growth component of the DCF model. I have considered five indicators of growth in my
14 DCF analyses. These are:

- 15 1. Years 2011-2015 (5-year average) earnings retention, or fundamental growth;
- 16 2. Five-year average of historic growth in earnings per share (EPS), dividends
17 per share (DPS), and book value per share (BVPS);
- 18 3. Years 2016, 2017 and 2019-2021 projections of earnings retention growth
19 (per Value Line);
- 20 4. Years 2013-2015 to 2019-2021 projections of EPS, DPS, and BVPS (per
21 Value Line); and
- 22 5. Five-year projections of EPS growth (per First Call).

I believe this combination of growth indicators is a representative and appropriate set with which to begin the process of estimating investor expectations of dividend growth for the groups of proxy companies. I also believe that these growth indicators reflect the types of information that investors consider in making their investment decisions. As I indicated previously, investors have an array of information available to them, all of which would be expected to have some impact on their decision-making process.

Q. Please describe your DCF calculations.

A. Exhibit No. DCP-9 presents my DCF analysis. Page 1 shows the calculation of the “raw” (i.e., prior to adjustment for growth) dividend yield for each proxy company. Pages 2 and 3 show the growth rates for the groups of proxy companies. Page 4 shows the DCF calculations, which are presented on several bases: mean, median, low and high values.

These results can be summarized as follows:

	Mean	Median	Mean Low ²²	Mean High ²³	Median Low ²¹	Median High ²²
Parcell Proxy Group	7.9%	7.9%	7.0%	8.9%	7.0%	9.2%
McKenzie Proxy Group	7.8%	7.7%	7.1%	8.6%	6.9%	8.5%

I note that the individual DCF calculations shown on Exhibit No. DCP-9 should not be interpreted to reflect the expected cost of capital for individual companies in the proxy groups; rather, the individual values shown should be interpreted as alternative information considered by investors.

²² Using the lowest growth rate.

²³ Using only the highest growth rate.

1 **Q. What do you conclude from your DCF analyses?**

2 A. The DCF rates resulting from the analysis of the proxy groups fall into a wide range
3 between 7.0 percent and 9.2 percent. The highest DCF rates are 8.5 percent to 9.2
4 percent.

5 I believe a range of 8.5 percent to 9.2 percent (8.85 percent mid-point) represents
6 the current DCF-derived ROE for the proxy groups. This range includes the highest DCF
7 rates and exceeds the low and mean/median DCF rates.

8

9 **IX. CAPITAL ASSET PRICING MODEL (“CAPM”) ANALYSIS**

10

11 **Q. Please describe the theory and methodological basis of the CAPM.**

12 A. CAPM was developed in the 1960s and 1970s as an extension of modern portfolio theory
13 (MPT), which studies the relationships among risk, diversification, and expected returns.
14 The CAPM describes and measures the relationship between a security’s investment risk
15 and its market rate of return.

16

17 **Q. How is the CAPM derived?**

18 A. The general form of the CAPM is:

19

$$K = R_f + \beta(R_m - R_f)$$

20

where: K = cost of equity

21

R_f = risk free rate

22

R_m = return on market

23

β = beta

1 $R_m - R_f =$ market risk premium

2 The CAPM is a variant of the RP method. I believe the CAPM is generally superior to
3 the simple RP method because the CAPM specifically recognizes the risk of a particular
4 company or industry (i.e., beta), whereas the simple RP method assumes the same ROE
5 for all companies exhibiting similar bond ratings or other characteristics.

6
7 **Q. What do you use for the risk-free rate?**

8 A. The first input of the CAPM is the risk-free rate (R_f). The risk-free rate reflects the level
9 of return that can be achieved without accepting any risk.

10 In CAPM applications, the risk-free rate is generally recognized by use of U.S.
11 Treasury securities. Two general types of U.S. Treasury securities are often utilized as
12 the R_f component, short-term U.S. Treasury bills and long-term U.S. Treasury bonds.

13 I have performed CAPM calculations using the three-month average yield (May -
14 July 2016) for 20-year U.S. Treasury bonds. I use the yields on long-term Treasury
15 bonds since this matches the long-term perspective of ROE analyses. Over this three
16 month period, these bonds had an average yield of 2.02 percent.

17
18 **Q. What is beta and what betas do you employ in your CAPM?**

19 A. Beta is a measure of the relative volatility (and thus risk) of a particular stock in relation
20 to the overall market. Betas less than 1.0 are considered less risky than the market,
21 whereas betas greater than 1 are more risky. Utility stocks traditionally have had betas
22 below 1. I utilize the most recent Value Line betas for each company in the proxy
23 groups.

1 **Q. How do you estimate the market risk premium component?**

2 A. The market risk premium component ($R_m - R_f$) represents the investor-expected premium
3 of common stocks over the risk-free rate, or long-term government bonds. For the
4 purpose of estimating the market risk premium, I considered alternative measures of
5 returns of the S&P 500 (a broad-based group of large U.S. companies) and 20-year U.S.
6 Treasury bonds (i.e., same timeframe as employed in Morningstar sources used to
7 develop risk premiums).

8 First, I compared the actual annual returns on equity of the S&P 500 with the
9 actual annual income returns of U.S. Treasury bonds. Exhibit No. DCP-10 shows the
10 ROE for the S&P 500 group for the period 1978-2014 (all available years reported by
11 S&P). This schedule also indicates the annual income returns on 20-year U.S. Treasury
12 bonds and the annual differentials (i.e., risk premiums) between the S&P 500 and U.S.
13 Treasury 20-year bonds. Based upon these returns, I conclude that the risk premium from
14 this analysis is 6.85 percent.

15 I next considered the total returns (i.e., dividends/interest plus capital
16 gains/losses) for the S&P 500 group as well as for long-term government bonds, as
17 tabulated by Morningstar/Ibbotson, using both arithmetic and geometric means. I
18 considered the total returns for the entire 1926-2014 period reported by this source, which
19 are as follows:

	<u>S&P 500</u>	<u>L-T Gov't Bonds</u>	<u>Risk Premium</u>
Arithmetic	12.1%	6.1%	6.0%
Geometric	10.1%	5.7%	4.4%

20
21 I conclude from this analysis that the expected risk premium is about 5.75 percent (i.e.,
22 average of all three risk premiums: 6.85 percent from Exhibit No. DCP-10; 6.0 percent

1 arithmetic and 4.4 percent geometric from Morningstar/Ibbotson). I believe that a
2 combination of arithmetic and geometric means is appropriate since investors have access
3 to both types of means²⁴ and presumably, both types are reflected in investment decisions
4 and thus, stock prices and the ROE.

5
6 **Q. What are your CAPM results?**

7 A. Exhibit No. DCP-11 shows my CAPM calculations. The results are:

	<u>Mean</u>	<u>Median</u>
Parcell Proxy Group	6.6%	6.3%
McKenzie Proxy Group	6.3%	6.3%

8
9
10 **Q. What is your conclusion concerning the CAPM ROE?**

11 A. The CAPM results collectively indicate a ROE of 6.3 percent to 6.6 percent for the
12 groups of proxy utilities. I conclude that an appropriate CAPM ROE estimation for
13 Avista is 6.3 percent to 6.6 percent.

14
15 **X. COMPARABLE EARNINGS (“CE”) ANALYSIS**

16
17 **Q. Please describe the basis of the CE methodology.**

18 A. The CE method is derived from the “corresponding risk” concept discussed in the
19 *Bluefield* and *Hope* cases. This method is thus based upon the economic concept of
20 opportunity cost. As previously noted, the ROE is an opportunity cost: the prospective
21 return available to investors from alternative investments of similar risk.

²⁴ For example, Value Line uses compound (i.e., geometric) growth rates in its projection. In addition, mutual funds report growth rates on a compound basis.

1 The CE method is designed to measure the returns expected to be earned on the
2 original cost book value of similar risk enterprises. Thus, it provides a direct measure of
3 the fair return, since it translates into practice the competitive principle upon which
4 regulation rests.

5 The CE method normally examines the experienced and/or projected return on
6 book common equity. The logic for examining returns on book equity follows from the
7 use of original cost rate base regulation for public utilities, which uses a utility's book
8 common equity to determine the cost of capital. This cost of capital is, in turn, used as
9 the fair rate of return which is then applied (multiplied) to the book value of rate base to
10 establish the dollar level of capital costs to be recovered by the utility. This technique is
11 thus consistent with the rate base – rate of return methodology used to set utility rates.

12
13 **Q. How do you apply the CE methodology in your analysis of Avista's ROE?**

14 A. I apply the CE methodology by examining realized ROEs for the groups of proxy
15 utilities, as well as unregulated companies, and evaluating investor acceptance of these
16 returns by reference to the resulting market-to-book ratios ("M/B"). In this manner it is
17 possible to assess the degree to which a given level of return equates to the COC. It is
18 generally recognized for utilities that an M/B of greater than one (i.e., 100 percent)
19 reflects a situation where a company is able to attract new equity capital without dilution
20 (i.e., above book value). As a result, one objective of a fair cost of equity is the
21 maintenance of stock prices at or above book value. There is no regulatory obligation to
22 set rates designed to maintain an M/B significantly above one.

1 I further note that my CE analysis is based upon market data (through the use of
2 M/Bs) and is thus essentially a market test. As a result, my CE analysis is not subject to
3 the criticisms occasionally made by some who maintain that past earned returns do not
4 represent the cost of capital. In addition, my CE analysis also uses prospective returns
5 and thus is not backward looking.
6

7 **Q. What time periods do you examine in your CE analysis?**

8 A. My CE analysis considers the experienced ROEs of the proxy groups of utilities for the
9 period 2002-2015 (i.e., the last 14 years). The CE analysis requires that I examine a
10 relatively long period of time in order to determine trends in earnings over at least a full
11 business cycle. Further, in estimating a fair level of return for a future period, it is
12 important to examine earnings over a diverse period of time in order to avoid any undue
13 influence from unusual or abnormal conditions that may occur in a single year or shorter
14 period. Therefore, in forming my judgment of the current cost of equity, I focused on
15 two periods: 2009-2015 (the current business cycle) and 2002-2008 (the most recent
16 business cycle). I have also considered projected ROEs for 2016, 2017 and 2019-2021.
17

18 **Q. Please describe your CE analysis.**

19 A. Exhibit Nos. DCP-12 and DCP-13 contain summaries of experienced ROEs and M/Bs for
20 three groups of companies, while Exhibit No. DCP-14 presents a risk comparison of
21 utilities versus unregulated firms.

22 Exhibit No. DCP-12 shows the ROEs and M/Bs for the groups of proxy utilities.

23 These can be summarized as follows:

	<u>Parcell Proxy Group</u>	<u>McKenzie Proxy Group</u>
Historic ROE		
Mean	8.7–9.4%	9.2–10.6%
Median	8.9–9.3%	9.3–10.4%
Historic M/B		
Mean	131–141%	139–152%
Median	129–134%	135–150%
Prospective ROE		
Mean	9.1–10.1%	9.1–10.0%
Median	9.0–10.0%	9.0–9.8%

1

2 These results indicate that historic ROEs of 8.7 percent to 10.6 percent have been
3 adequate to produce M/Bs of 129 percent to 155 percent for the groups of utilities.
4 Furthermore, projected returns on equity for 2016, 2017 and 2019-2021 are within a
5 range of 9.0 percent to 10.1 percent for the utility groups. These relate to 2015 M/Bs of
6 150 percent or greater.

7

8 **Q. Do you also review the earnings of unregulated firms?**

9 A. Yes. As an alternative, I also examine the S&P's 500 Composite group. This is a well-
10 recognized group of firms that is widely utilized in the investment community and is
11 indicative of the competitive sector of the economy. Exhibit No. DCP-13 presents the
12 earned ROEs and M/Bs for the S&P 500 group over the past 13 years (i.e., 2002-2014).
13 As this schedule indicates, over the two business cycle periods, this group's average
14 ROEs ranged from 12.4 percent to 13.6 percent, with average M/Bs ranging between 220
15 percent and 275 percent.

16

1 **Q. How can the above information be used to estimate Avista's ROEs?**

2 A. The recent ROEs of the proxy utilities and S&P 500 group can be viewed as an indication
3 of the level of return realized and expected in the regulated and competitive sectors of the
4 economy. In order to apply these returns to the ROE for the proxy utilities, however, it is
5 necessary to compare the risk levels of the utilities and the competitive companies. I do
6 this in Exhibit No. DCP-14, which compares several risk indicators for the S&P 500
7 group and the utility groups. The information in this exhibit indicates that the S&P 500
8 group is more risky than the utility proxy groups.

9
10 **Q. What ROE is indicated by your CE analysis?**

11 A. Based on recent ROEs and M/Bs, my CE analysis indicates that the ROE for the proxy
12 utilities is no more than 9.0 percent to 10.0 percent (9.5 percent mid-point). Recent
13 ROEs of 8.7 percent to 10.6 percent have resulted in M/Bs of 130 percent and over.
14 Prospective ROEs of 9.0 percent to 10.1 percent have been accompanied by M/Bs over
15 150 percent. As a result, it is apparent that authorized returns below this level would
16 continue to result in M/Bs of well above 100 percent. As I indicated earlier, the fact that
17 M/Bs substantially exceeds 100 percent indicates that historic and prospective ROEs of
18 9.5 percent reflect earning levels that are well above the actual cost of equity for those
19 regulated companies. I also note that a company whose stock sells above book value can
20 attract capital in a way that enhances the book value of existing stockholders, thus
21 creating a favorable environment for financial integrity. Finally, I note that my 9.0
22 percent to 10.0 percent CE recommendation generally reflects the actual and prospective

1 ROEs for the proxy groups. I have made no adjustments to these return levels to reflect
2 the high M/Bs.

3

4 **XI. RETURN ON EQUITY RECOMMENDATIONS**

5

6 **Q. Please summarize the results of your three ROE analyses.**

7 A. My three ROE analyses produced the following:

	<u>Mid-Point</u>	<u>Range</u>
DCF	8.85%	8.5–9.2%
CAPM	6.45%	6.3–6.6%
CE	9.5%	9.0–10.0%

8

9 These results indicate an overall broad range of 6.3 percent to 10.0 percent, which
10 focuses on the respective individual model results. Using mid-point values, the range is
11 6.45 percent to 9.5 percent. I recommend a ROE range of 8.85 percent to 9.50 percent
12 for Avista (mid-point of 9.175 percent). This range includes the mid-point of my DCF
13 results and the mid-point of my CE results. My specific ROE recommendation is 9.20
14 percent (9.175 percent mid-point rounded).

15

16 **Q. It appears that your CAPM results are less than your DCF and CE results. Does
17 this imply that the CAPM results should not be considered in determining the cost
18 of equity for Avista?**

19 A. No. It is apparent that the CAPM results are less than the DCF and CE results. There are
20 two reasons for the lower CAPM results. First, risk premiums are lower currently than
21 was the case in prior years. This is the result of lower equity returns that have been
22 experienced over the past several years. This is also reflective of a decline in investor

1 expectations of equity returns and risk premiums. Second, the level of interest rates on
2 U.S. Treasury bonds (i.e., the risk free rate) has been lower in recent years. This is
3 partially the result of the actions of the Federal Reserve System to stimulate the economy.
4 This also impacts investor expectations of returns in a negative fashion. I note that,
5 initially, investors may have believed that the decline in Treasury yields was a temporary
6 factor that would soon be replaced by a rise in interest rates. However, this has not been
7 the case as interest rates have remained low and continued to decline for the past six-plus
8 years. As a result, it cannot be maintained that low interest rates (and low CAPM results)
9 are temporary and do not reflect investor expectations. Consequently, the CAPM results
10 should be considered as one factor in determining the cost of equity for Avista.

11 12 **XII. TOTAL COST OF CAPITAL**

13
14 **Q. What is the total COC for Avista?**

15 A. Exhibit No. DCP-3 reflects the total COC for Avista using my proposed capital structure
16 and embedded costs of debt, as well as my ROE recommendations. The resulting COC is
17 a range of 7.11 percent to 7.45 percent. With my 9.20 percent ROE, my COC
18 recommendation is 7.30 percent.

19
20 **Q. Avista is requesting an 18-month rate plan ending June 30, 2018, as part of its filing,**
21 **and Staff is recommending an attrition adjustment that corrects revenue shortfall**
22 **over the same period. Do your ROE and COC recommendations apply throughout**
23 **the 18 months?**

1 A. Yes, they do. I note, in this regard, that the proposed capital structure is similar to
2 Avista's capital structures on both historic (December 31, 2015 on a consolidated basis)
3 and forecasted (December 31, 2017) bases, so my COC recommendations reflect an "on-
4 going" capital structure. The costs of debt, as proposed by Avista and utilized by me,
5 reflect 2016 figures. Avista's maturities during the 18-month rate period occur in May
6 and June of 2018, near the end of the rate period.²⁵ Thus, there is likely little impact on
7 the Company's embedded cost of debt during this period.. Finally, my ROE
8 recommendation is based on financial models which are forward-looking and thus reflect
9 an on-going perspective.

10
11 **XIII. COMMENTS ON COMPANY TESTIMONY**

12
13 **Q. What ROE is Avista requesting in this proceeding?**

14 A. Avista is requesting a 9.9 percent ROE for both its electric and natural gas operations.
15 This 9.9 percent ROE is sponsored by Avista's cost of capital witness Adrien M.
16 McKenzie.²⁶

17
18 **Q. What is the basis of Mr. McKenzie's 9.9 percent ROE recommendation?**

19 A. Mr. McKenzie's ROE analyses are summarized on page 4 of Exhibit No. ___ (AMM-1T)
20 as well as in Exhibit No. ___ (AMM-4). These are shown as follows:

21
22

²⁵ Thies, Exh. No. ___ (MTT-1T) 16, Illustration No. 3.

²⁶ Exh. No. ___ (AMM-1T) 5:1-2.

	<u>Average</u>	<u>Midpoint</u>
<u>DCF</u>		
Value Line	10.4%	11.3%
IBES	9.4%	9.7%
Zacks	8.8%	9.0%
Internal br + sv	9.1%	10.4%
<u>Empirical CAPM</u>		
Historical Bond Yield	10.8%	10.7%
Projected Bond Yield	11.0%	11.0%
<u>CAPM</u>		
Historical Bond Yield	10.3%	10.3%
Projected Bond Yield	10.6%	10.5%
<u>Utility Risk Premium</u>		
Historical Bond Yield		10.7%
Projected Bond Yield		11.7%
<u>Expected Earnings</u>		
Industry		10.7%
Proxy Group	10.4%	10.8%
<u>Cost of Equity Recommendation</u>		
Cost of Equity Range	9.8%	-- 10.8%
<u>Flotation Cost Adjustment</u>		
Dividend Yield		3.6%
Flotation Cost Percentage Adjustment		0.13%
<u>ROE Recommendation</u>		
	9.93%	-- 10.93%

1 Q. Do you have any general comments on Mr. McKenzie's methodologies and
2 conclusions?

3 A. Yes. Each of Mr. McKenzie's methodologies is biased in a way that overstates the
4 current and prospective ROE for his proxy group and for Avista. I address each of his
5 methodologies and conclusions below.

7 Q. Mr. McKenzie claims, on page 17, that "there is a clear consensus in the investment
8 community that the present low level of interest rates is an anomaly and will not be
9 sustained." What is your response to this assertion?

10 A. I disagree with Mr. McKenzie. I note that this is a crucial and underlying component of
11 Mr. McKenzie's testimony and conclusion.

1 There is no “clear consensus” that interest rates on long-term debt will increase
2 significantly.

3
4 **Q. What is your basis for your disagreement with Mr. McKenzie’s claims?**

5 A. There have been several predictions, from the investment community, that any increase in
6 long-term interest rates may be slow and gradual, rather than “increase significantly” as
7 Mr. McKenzie claims. Examples include:

- 8 • Kiplinger Letter (November 2015) “Why Bond Yields Aren’t Going Up”
- 9 • Kiplinger Forecasts (November 6, 2015) “Long-Term Interest Rates to Stay
10 Lower Despite Fed Moves”
- 11 • Bloomberg Businessweek Design 2016 (January 8, 2016) “Fed’s Williams
12 sees Balance Sheet taking six years to normalize”
- 13 • The Guardian, May 1, 2016 “The golden age of investing is over: get used to
14 Wall Street’s ‘new normal’”

15 This is demonstration that there is no “consensus” expectation that long-term interest
16 rates will dramatically increase.

17
18 **Q. Have long-term utility bond yields risen in recent months in conjunction with the
19 expected and eventual raising of short-term interest rates by the Federal Reserve?**

20 A. No, they have not. The table below depicts the trends in long-term utility bond yields
21 over the latter half of 2015 (i.e., the time frame leading up to Mr. McKenzie’s COC
22 analyses):

Month	A-Rated	Baa-Rated
July	4.40%	5.22%
August	4.25%	5.23%
September	4.39%	5.42%
October	4.29%	5.47%
November	4.40%	5.57%
December	4.35%	5.55%

1

2

This shows no increase in A-rated utility bond yields since July and little change in Baa-rated utility bond yields since October. Both declined in December, the month the Federal Reserve raised short-term rates.

3

4

5

It is also evident that as of August 1, interest rates on utility bonds remain below

6

the interest rate levels for those securities on December 16, 2015, after the Federal

7

Reserve action raising the target range for Federal Funds on that day.

Month	A-Rated	Baa-Rated
January	4.27%	5.49%
February	4.11%	5.28%
March	4.16%	5.12%
April	4.00%	4.75%
May	3.93%	4.60%
June	3.78%	4.47%

8

9

Q. Please begin with Mr. McKenzie's DCF methodology. Please summarize this and

10

describe how he over-states Avista's ROE in his methodology and interpretation of

11

DCF results.

12

A. Mr. McKenzie calculates DCF results for his group of sixteen proxy electric utilities by

13

combining each proxy company's dividend yield (for last 30 trading days as of January

14

29, 2016 with four sets of growth rates, three of which are forecasts of EPS.²⁷

²⁷ Exh. No. ___ (AMM-6), p. 1.

1 I do not have any serious disagreements with Mr. McKenzie's yield calculation.
2 His use of 30 trading days, which usually amounts to about 40 calendar days, is a
3 somewhat shorter date than the three months I use in my DCF yield calculations, but our
4 respective calculations are not materially different due to this. My DCF calculations are,
5 of course, more current than his due to the sequence of our respective filings in this
6 proceeding. Current dividend yields are currently lower than was the case when Mr.
7 McKenzie's DCF calculations were prepared.

8 Mr. McKenzie considers four sets of growth rates in his DCF analyses:²⁸

9 Value Line EPS estimates

10 IBES EPS Estimates

11 Zack's EPS Estimates

12 br + sv growth

13 Mr. McKenzie calculates individual DCF results for each proxy company with
14 each of the four growth rates, then calculates average and midpoint values for the proxy
15 group using each of the four growth rates. The respective results are:²⁹

<u>Growth Rate</u>	<u>Average</u>	<u>Midpoint</u>
Value Line EPS	10.4%	11.3%
IBES EPS	9.4%	9.7%
Zacks EPS	8.8%	9.0%
Br + sv	9.1%	10.4%

16 I note that these conclusions do not reflect all of Mr. McKenzie's individual DCF
17 calculations as he eliminates those below a "threshold" of 6.4 percent to 8.1 percent
18 ("illogical values").³⁰ As justification for this, he cites the Federal Energy Regulatory
19

²⁸ Exh. No. ___ (AMM-6), p. 2.

²⁹ Exh. No. ___ (AMM-6), p. 3.

³⁰ Exh. No. ___ (AMM-1T) 33:15.

1 Commission's ("FERC") "100 basis-point premium to the historical and projected
2 average utility bond yields...."³¹

3
4 **Q. Do you agree with Mr. McKenzie's interpretation and use of the so-called "FERC
5 low-end threshold?"**

6 A. No. Mr. McKenzie has misrepresented the actual process that FERC uses to eliminate
7 "low-end outliers." What the FERC actually does is eliminate individual DCF results
8 that are less than 100 basis points greater than actual historical yields on utility debt.
9 FERC does not apply the threshold to "projected" utility bond yields.³²

10 During the six-month period prior to Mr. McKenzie's DCF analyses (i.e.,
11 procedure actually used by FERC), the average yield on Baa utility bonds was 5.41
12 percent (as shown on Exhibit No. DCP-4, page 4). This implies a low-end threshold of
13 6.41 percent. The average for the most current six-month period (January – June, 2016)
14 was 5.0 percent, which implies a low-end threshold of 6.0 percent.

15
16 **Q. Have you updated and corrected Mr. McKenzie's DCF analyses?**

17 A. Yes, I have. Exhibit No. DCP-15 updates and corrects Mr. McKenzie's DCF analyses
18 using the following data and methodologies:

19 Yield – current DPS and average stock prices for May – July 2016

20 Growth

21 Most current Value Line EPS for each proxy company

22 Most current IBES EPS as of August 1, 2016

³¹ Exh. No. ____ (AMM-3) 18:27-28.

³² *Martha Coakley, Mass. Attorney Gen. v. Bangor Hydro-Elec. Co.*, 147 FERC ¶ 61,234, ¶¶ 122-123 (Order on Initial Decision) (2014), available at <http://www.ferc.gov/whats-new/comm-meet/2014/061914/E-7.pdf>.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

Most current Zacks EPS as of August 1, 2016

br + sv (not updated)

Low-end outliers – individual DCF results less than 6.0 percent not included in averages

As is shown on Exhibit No. DCP-15, the updated and corrected DCF results are as follows:

<u>Growth Rate</u>	<u>Average</u>	<u>Midpoint</u>
Value Line EPS	9.2%	8.7%
IBES EPS	8.8%	8.5%
Zacks EPS	8.7%	8.4%

These DCF results are seen to be more in line with my DCF results.

Q. Please now turn to Mr. McKenzie’s CAPM results. What is your response to his analyses and conclusions?

- A. Mr. McKenzie performs four sets of CAPM analyses:³³
- Empirical (ECAPM) with current bond yields
 - Empirical (ECAPM) with projected bond yields
 - Traditional (CAPM) with current bond yields
 - Traditional (CAPM) with projected bond yields

³³ Exh. No. ___ (AMM-4).

1 **Q. What are your disagreements with these various CAPM methodologies and**
2 **conclusions?**

3 A. Each of these over-state the cost of equity for the proxy group and Avista. Mr.
4 McKenzie's methodologies contain the following problems and/or data sources:

- 5 • Mr. McKenzie over-states the proper risk premium component in both his
6 ECAPM and CAPM
- 7 • Mr. McKenzie is incorrect in using projected interest rates as the risk-free rate
- 8 • Mr. McKenzie is incorrect in making a "size adjustment" to his ECAPM and
9 CAPM

10
11 **Q. Why is it improper to use an ECAPM for a utility such as Avista?**

12 A. The traditional CAPM directly recognizes and quantifies the risk of individual companies
13 through the use of the beta coefficient. As such, each proxy company's risk and beta is
14 identified and used in the calculation of its CAPM ROE. The ECAPM, in contrast,
15 "adjusts" each proxy company's actual beta by assigning only 75 percent weight to the
16 actual beta and "assumes" a beta of 1.0 with the remaining 25 percent weight. As a
17 result, the ECAPM does not use the actual betas of the proxy companies, but rather
18 calculates hypothetical betas that are upward biased due to the fact that electric utility
19 betas are below 1.0.

20
21 **Q. Please summarize Mr. McKenzie's risk premium components.**

22 A. Mr. McKenzie calculates two sets of risk premiums. These two risk premiums are
23 developed as follows. The "market return" (R_m) component of both risk premiums is an

1 11.2 percent DCF cost of equity for the dividend-paying companies of the S&P 500. The
2 “current bond yield” risk premium subtracts from this 11.2 percent Rm the 3.0 percent
3 average yield on 30-year U.S. Treasury bonds to derive an 8.2 percent risk premium.³⁴ In
4 turn, the “projected bond yield” risk premium subtracts from this 11.2 percent Rm the 4.2
5 percent forecast yield on 30-year U.S. Treasury bonds to derive a 7.0 percent risk
6 premium.³⁵

7
8 **Q. Do you have any criticisms of Mr. McKenzie’s CAPM Market Risk Premium**
9 **components?**

10 A. Yes, I do. My initial disagreement is with Mr. McKenzie’s 8.8 percent and 7.2 percent
11 market risk premium estimations. There are several problems with his methodology
12 employed to develop this market risk premium.

13 Mr. McKenzie derives a DCF cost for the dividend-paying stocks in the S&P 500
14 using only 5-year EPS growth projections as the growth component.³⁶ It is not
15 appropriate to rely exclusively on analysts’ short-term EPS growth projections in a DCF
16 analysis.

17
18 **Q. Please explain why it is not appropriate to rely exclusively on those EPS growth**
19 **forecasts in a DCF context.**

20 A. There are several reasons why it is not appropriate to rely exclusively on analysts’ short-
21 term EPS growth forecasts in a DCF context. First, it is not realistic to believe that
22 investors rely exclusively on a single factor, such as analysts’ forecasts, in making their

³⁴ Exh. No. ____ (AMM-8), p. 1.

³⁵ Exh. No. ____ (AMM-8), p. 2.

³⁶ Exh. No. ____ (AMM-9).

1 investment decisions. Investors have an abundance of available information to assist
2 them in evaluating stocks; EPS forecasts are only one of many such statistics.

3 Second, Value Line – one of Mr. McKenzie’s sources of EPS projections –
4 publishes both historic and forecasted data, as well as ratios, for a large number of
5 publicly-traded companies. Presumably, both types of information are published for the
6 consideration of its subscribers/investors. Yet Mr. McKenzie considers only one factor,
7 the forecast version of EPS, in his analyses.

8 Third, the vast majority of information available to investors, by both individual
9 companies in the form of annual reports and offering circulars, and by investment
10 publications such as Value Line, is historic data. It is neither realistic nor logical to
11 maintain that investors only consider projected (estimated) data to the exclusion of other
12 data.

13 Fourth, the experience over the past several years should be a clear signal to
14 investors that analysts cannot accurately predict EPS levels. Few, if any, analysts
15 predicted the decline in security prices in the financial crisis of 2008 and 2009.³⁷ Thus,
16 relying only on forecasted EPS levels, while ignoring other growth indicators, cannot and
17 will not produce accurate results.

18 In summary, investors are now very much aware of recent inabilities of security
19 analysts to accurately predict EPS growth. These problems clearly call into question the
20 reliance on analysts’ forecasts as the only source of growth in a DCF context. As a
21 result, the landscape has changed in recent years and investors have ample reasons to
22 doubt the reliability of such forecasts at the present time. In light of the above, it is

³⁷ As a demonstration of this, see “Security Analysts and their Recommendations”,
(<http://thismatter.com/money/stocks/valuation/security-analysts.htm>).

1 problematic to rely exclusively on such forecasts in determining the DCF result for Mr.
2 McKenzie's portfolio of S&P 500 stocks.

3
4 **Q. Are you aware of any recent analyses and comments on the accuracy of analysts'**
5 **forecasts?**

6 A. Yes, I am. A 2010 study by McKinsey & Company, titled, "Equity Analysts: Still Too
7 Bullish" concludes that "after almost a decade of stricter regulation, analysts' earnings
8 forecasts continue to be excessively optimistic."³⁸ The significance of this study, as well
9 as the points I raised previously, is that investors should be hesitant to rely exclusively on
10 analysts' forecasts in making investment decisions.

11
12 **Q. Has the United States Securities and Exchange Commission issued any reports that**
13 **address the exclusive reliance on analysts' recommendations?**

14 A. Yes. In a 2010 "Investor Alert: Analyzing Analyst Recommendations" the Securities
15 and Exchange Commission ("SEC") made the following statement:³⁹

16 As a general matter, investors should not rely solely on an analyst's
17 recommendation when deciding whether to buy, hold, or sell a stock.
18 Instead, they should also do their own research – such as reading the
19 prospectus for new companies or for public companies, the quarterly and
20 annual reports filed with the SEC – to confirm whether a particular
21 investment is appropriate for them in light of their individual financial
22 circumstances.

23
24 This SEC "Investor Alert" also cites the potential conflicts of interests that analysts face.

³⁸ McKinsey on Finance, "Equity Analysts: Still Too Bullish", No. 35, Spring 2010.

³⁹ United States Securities and Exchange Commission "Investor Alert: Analyzing Analysts Recommendations", 2010.

1 This "Investor Alert" thus also calls into question the exclusive reliance on
2 analysts' forecasts, as proposed by Mr. McKenzie.

3
4 **Q. What is the next issue you have identified with Mr. McKenzie's CAPM analyses?**

5 A. Mr. McKenzie claims that recent and current levels of U.S. Treasury bonds are not
6 reflective of "normal" market yields.⁴⁰ If this is the case, use of such non-normal market
7 yields should not be used to estimate the market risk premium in a CAPM context. Such
8 a methodology results in a higher risk premium, since the "below normal" interest rates
9 subtracted from the market return produces a higher risk premium. It is illogical and
10 improper to claim that current interest rate levels are not reflective of "market" forces and
11 then use these same interest rate level to derive a risk premium. If, as he claims, current
12 and recent interest rate levels are not reflective of actual capital market conditions, their
13 use in a risk premium derivation would not reflect a realistic going-forward risk premium
14 under more "normal" capital market conditions.

15 In addition, one of Mr. McKenzie's risk-free rates is a projected interest rate.

16
17 **Q. Why is it not proper to use projected interest rates as the risk-free rate in a CAPM?**

18 A. It is proper to use the current yield as the risk-free rate in a CAPM context. This is the
19 case since the current yield is known and measurable and reflects investors' collective
20 assessment of all capital market conditions. Prospective interest rates, in contrast, are not
21 measurable and not achievable. For example, if the current yield on 20-year U.S.
22 Treasury Bonds is about 2.0 percent, this reflects the rate that investors can actually

⁴⁰ Exh. No. ___ (AMM-1T) 17:32-34.

1 receive on their investment. Investors cannot receive a prospective yield on their
2 investments since such a yield is not actual but rather speculative.

3 Use of the current risk-free rate in a CAPM context is similar to using the current
4 yield in a DCF context. Analysts do not use prospective stock prices as the basis for the
5 dividend yield in a DCF analysis, as use of prospective stock prices is speculative. Use
6 of current stock prices is appropriate, as are used by Mr. McKenzie. Likewise, current
7 levels of interest rates reflect all current information (i.e., the efficient market hypothesis)
8 and should be used as the risk-free rate in the CAPM.

9
10 **Q. Please turn to the third problem with Mr. McKenzie's CAPM methodology.**

11 **A.** Mr. McKenzie adds a "size" premium to his CAPM results. Mr. McKenzie maintains
12 that there is justification for making a small-firm risk adjustment that results in a higher
13 cost of capital for small firms. His proposed size adjustment varies among the proxy
14 companies with individual values up to 2.15 percent.⁴¹ Such an adjustment is improper
15 and results in an overstatement of the ROE for electric utilities.

16 There are compelling reasons why a small size adjustment is not proper for
17 regulated utilities. Mr. McKenzie's proposed size adjustment is based upon his reference
18 to the previously-cited Morningstar/Ibbotson studies. However, the small size adjustment
19 in the Morningstar/Ibbotson studies is based on the analysis of all stocks, the majority of
20 which are unregulated and include industries that are much more risky than utilities.

21 While it may or may not be true that on an overall market basis, smaller publicly-traded
22 firms exhibit more risk than larger firms, these smaller companies tend to be engaged in

⁴¹ Exh. No. ___ (AMM-9).

1 riskier businesses as a whole than do larger businesses. Such is not the case for regulated
2 utilities.

3 Indeed, an academic study conducted by Professor Annie Wong found that:

4 "utility and industrial stocks do not share the same characteristics. First,
5 given firm size, utility stocks are consistently less risky than industrial
6 stocks. Second, industrial betas tend to decrease with firm size but utility
7 betas do not. These findings may be attributed to the fact that all public
8 utilities operate in an environment with regional monopolistic power than
9 regulated financial structure. As a result, the business and financial risks
10 are very similar among the utilities regardless of their sizes. Therefore,
11 utility betas would not necessarily be expected to be related to firm size.
12

13 This implies that although the price phenomenon has been strongly
14 documented for the industrials, the findings suggest that there is no need
15 to adjust for the firm size in utility rate regulation."⁴²
16

17 **Q. Can you provide any evidence that "size" or "business risk" adjustments are not**
18 **generally recognized as risk factors in regulatory proceedings such as this one?**

19 **A.** Yes, I can. The following table reflects the average size (as measured by net plant) and
20 currently authorized returns on equity of various types of regulated utilities:

Industry	Average Net Plant	Average Authorized ROE ⁴³
Electric	\$18,285	10.42%
Combination		
Electric-Gas	\$17,856	10.30%
Natural Gas	\$3,519	10.28%
Water	\$2,604	9.65%

26 Source: AUS Utility Reports, January 2016.
27

⁴² Wong, Annie, "Utility Stocks And The Size Effect: An Empirical Analysis," Journal of the Midwest Finance Association, 1993, pp. 95-101.

⁴³ Note that "Authorized" ROEs do not necessarily indicate "recently authorized" ROEs, since some ROEs were established in prior periods. Moreover, AUS reports each utility's most recent explicitly-authorized ROE even where that result is aged and has been superseded by a more recent "black box" rate settlement.

1 As shown here the smallest utilities have the lowest authorized ROEs (i.e., smallest type
2 of utilities, as measured by Net Plant, has lowest authorized ROEs).

3
4 **Q. Can you provide any direct comparisons of electric utilities that demonstrates that
5 smaller utilities are not more risky than larger ones?**

6 A. Yes. Implicit in Mr. McKenzie's proposal is an assumption that any perceived small size
7 risk adjustment for unregulated companies (i.e., the information cited in the
8 Morningstar/Ibbotson source Mr. McKenzie relies on for his small size adjustment)
9 applies to regulated public utilities. Exhibit No. DCP-16 demonstrates objectively that
10 this is not the case. As this exhibit shows, there is no significant difference and there is
11 no discernible pattern of increase among the risk indicators of publicly-traded electric
12 utilities of different sizes. The table below summarizes the information contained in this
13 schedule.

Cap Size	Safety	Beta	Financial Strength	S&P Rank	S&P Rating	Moody's Rating
Under \$2 B	2.0	.74	B++	B+	A-/BBB+	A3
\$2-\$5 B	2.3	.78	B++	A-/B+	BBB+	A3/Baa1
\$5-\$10 B	1.8	.78	A/B++	A-/B+	BBB+	A3
\$10-\$20 B	2.1	.72	B++	A-/B+	BBB+	A3/Baa1
\$20 B Plus	2.0	.68	A	B+	A-/BBB+	A3

14
15
16
17
18
19
20 The safety rank, beta values, financial strength and S&P stock rankings are about
21 the same for all sizes of electric utilities. These risk indicators do not reflect any risk
22 differential as the size of the electric utilities decrease from large to small. To the
23 contrary, this data indicates that regulated monopoly utility providers have approximately
24 the same risk regardless of size. As a result, the logic Mr. McKenzie uses to justify his
25 proposed small size adjustment is not justified.

1 **Q. Please summarize Mr. McKenzie's electric utility risk premium approach.**

2 A. Mr. McKenzie's risk premium approach compares authorized ROEs for electric utilities
3 (between 1974 and 2015) with yields on public utility bonds. He then performs a
4 regression analysis to account for his perception of the inverse relationship between
5 interest rates and risk premiums. He concludes that the current risk premium is 5.26
6 percent, which he adds to the current yield on Baa utility bonds (5.41%) and projected
7 utility bond yield (7.14%) to get his risk premium conclusions of 10.7 percent to 11.7
8 percent.⁴⁴

9
10 **Q. What are your primary disagreements with this approach and his conclusions?**

11 A. There are several problems with Mr. McKenzie's risk premium analyses, all of which
12 have the effect of overstating the ROE for the proxy companies and Avista. First, the
13 highest risk premium values over this period occurred in 2011-2015.⁴⁵ This corresponds
14 to the period which Mr. McKenzie describes as an "anomaly"⁴⁶ for bond yields. Thus,
15 Mr. McKenzie's recent above-average risk premiums are driven by "anomalous" interest
16 rates. He cannot have it both ways – if recent interest rates are anomalous, they cannot
17 be used as a standard for establishing Avista's ROE.

18 Second, it is not proper to compare utility authorized ROEs in the 1970's and
19 1980's with the current time. Current ROE's reflect a suite of favorable regulatory

⁴⁴ Exh. No. ____ (AMM-3) 30:1-12.

⁴⁵ Exh. No. ____ (AMM-10), p. 3.

⁴⁶ Exh. No. ____ (AMM-1T) 17:32-34.

1 mechanisms that greatly enhance utilities' ability to recover costs, which is risk-reducing
2 and thus warrants low ROEs.⁴⁷

3
4 **Q. Please now turn to Mr. McKenzie's expected earnings methodology. Please**
5 **summarize his use of this methodology and his conclusions.**

6 A. Mr. McKenzie's Expected Earnings Approach is a form of the comparable earnings
7 methodology. Mr. McKenzie has tabulated Value Line's "expected" return on equity for
8 his proxy group of companies, which he "adjusts" for a return on average equity (as
9 opposed to Value Line's reporting on year-end equity).

10 Mr. McKenzie's tabulation shows a "Range of Reasonableness" of 7.6 percent to
11 13.9 percent (10.4 percent average and 10.8 percent mid-point).⁴⁸ He concludes that 10.4
12 percent to 10.8 percent is the Expected Earnings Approach findings.⁴⁹

13
14 **Q. Do you have any criticisms of Mr. McKenzie's expected earnings approach and**
15 **related conclusions?**

16 A. It is inappropriate to focus only on expected ROE without any reference to how such
17 returns are accepted by investors. A more appropriate analysis of expected returns on
18 equity is done in conjunction with M/Bs. I reviewed Mr. McKenzie's Expected Earnings
19 Approach methodology by evaluating the investor acceptance of these cited ROEs by
20 reference to the corresponding M/Bs. In this manner, it is possible to assess the degree to
21 which a given level of ROE equates to the cost of capital. Book value is a relevant

⁴⁷ See, for example, Moody's Investors Service, Sector Comments, "US Utility Sector Upgrades Driven by Stable and Transparent Regulatory Frameworks", February 3, 2014.

⁴⁸ Exh. No. ____ (AMM-11).

⁴⁹ Exh. No. ____ (AMM-1T) 4:26.

1 concept for regulated utilities due to the use of rate base – rate of return regulation, which
2 employs book value for both rate base and capital structure. Investors know that utility
3 rates are established based, in part, on book values. Exhibit No. DCP-12 shows the 2015
4 market-to-book ratios of the proxy companies. These are above 160 percent, which
5 indicates that the ROEs are expected to exceed the cost of capital.

6 Third, it is evident that the expected ROEs for the proxy companies which are
7 mostly holding companies are substantially higher than the authorized ROEs for electric
8 utilities (cited elsewhere in my testimony).

9 Mr. McKenzie’s “Expected Earnings Approach” is thus shown to also overstate
10 the ROE for electric utilities. The use of expected ROEs for the proxy companies,
11 without reference to or corroboration with either M/Bs or the levels of authorized ROEs,
12 does not provide useful information concerning the ROE for the Avista.

13
14 **Q. Mr. McKenzie also performs an expected earnings methodology using unregulated**
15 **firms. Is this proper?**

16 **A.** No, it is not. I disagree with his use of unregulated firms as a proxy group for Avista. It
17 is not proper to use non-regulated firms in the manner Mr. McKenzie proposes. This is
18 the case since unregulated enterprises face different risk and operational characteristics
19 than do utilities.

20

1 **Q. Mr. McKenzie applies a 0.13 percent flotation cost adjustment to his ROE model**
2 **results. Is this proper?**

3 A. No, it is not. There has been no demonstration that Avista has or intends to issue new
4 common equity for the purpose of infusing equity into its Avista Utilities division.

5 In addition, should Avista issue new shares of common stock, the existence of its
6 stock well above book value indicates that existing shareholders will have their book
7 value enhanced. Thus, there is no need for any further return associated with flotation
8 costs, to the extent they exist.

9

10 **Q. Does this conclude your testimony?**

11 A. Yes, it does.