

Complainant,

Respondent.

For an Accounting Order Regarding the Appropriate Treatment of the Net Costs Associated With the Repurchase of Debt

DOCKET NO. UE-070311

October 17, 2007

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

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

4 **Q. WHAT IS YOUR OCCUPATION?**

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

8 **Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND**
9 **EXPERIENCE.**

10 **A.** These are set forth in Exhibit No.__(MPG-2).

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

12 **A.** I am appearing on behalf of the Industrial Customers of Northwest Utilities
13 (“ICNU”).

14 **Q. WHAT IS THE SUBJECT OF YOUR TESTIMONY?**

15 **A.** I will recommend a fair return on common equity and overall rate of return for
16 Avista Corp. (“Avista” or the “Company”).

17 **Q. WHAT IS THE REVENUE IMPACT OF YOUR PROPOSED**
18 **ADJUSTMENTS TO AVISTA’S RECOMMENDED OVERALL RATE OF**
19 **RETURN?**

20 **A.** As shown on Confidential Exhibit No.__(MPG-3C), My proposed adjustments
21 to Avista’s rate of return reduces its proposed revenue increase by \$13.65 million.
22 My rate of return adjustments are described below in detail.

23 **Q. PLEASE SUMMARIZE YOUR RATE OF RETURN**
24 **RECOMMENDATIONS.**

25 **A.** I recommend the Washington Utilities and Transportation Commission (“WUTC”
26 or the “Commission”) award Avista a return on common equity of 10.0%.

1 I also recommend adjustments to the Company's estimated cost of long-
2 term debt and short-term debt. Avista has certain notes that will mature in June,
3 2008. These notes are at interest rates that are well in excess of Avista's current
4 cost of borrowing, and the refinancing or payoff of these notes will significantly
5 lower its embedded debt costs.

6 Avista's projected cost of short-term borrowing should be adjusted to
7 reflect changed market conditions since it filed its case. Specifically, the Federal
8 Reserve Board lowered the Federal Fund Rate. As a result, short-term borrowing
9 costs have declined since Avista made its rate filing. This Federal Reserve action
10 caused a decreased to Avista's short-term debt cost of approximately 50 basis
11 points. As such, I recommend adjusting the Company's projected short-term
12 borrowing costs from 5.75% down to 5.25% to reflect this updated borrowing cost
13 estimate.

14 I also propose an adjustment to the Company's proposed capital structure.
15 I recommend Avista's rates be set using a utility capital structure, and not the
16 consolidated parent company capital structure. This would result in a common
17 equity ratio of 45.31%.

18 **Q. PLEASE SUMMARIZE HOW YOU ESTIMATED A FAIR RETURN ON**
19 **EQUITY FOR AVISTA.**

20 **A.** My recommended return on equity for Avista is based on a constant growth
21 Discounted Cash Flow ("DCF") model, a two-stage growth DCF model, a Risk
22 Premium model, and a Capital Asset Pricing Model ("CAPM") analysis. These
23 analyses estimate a fair return on equity based on observable market information

1 for a group of publicly traded electric utility companies that provide a proxy for
2 Avista's investment risk.

3 I also verified that my recommended return on equity and capital structure
4 are reasonable by demonstrating that my proposed rate of return provides Avista
5 an opportunity to earn cash flows that support investment grade credit metrics,
6 and support Avista's effort to improve its corporate credit rating to an investment
7 grade level. This illustration proves that a 10% return on equity and my proposed
8 capital structure will support Avista's financial integrity and access to capital.

9 **1. CHANGES SINCE AVISTA'S LAST GENERAL RATE CASE**

10 **Q. HOW DOES YOUR RECOMMENDED RETURN ON EQUITY**
11 **COMPARE TO AVISTA'S CURRENTLY AUTHORIZED RETURN ON**
12 **EQUITY?**

13 **A.** Avista's currently authorized return on equity is 10.4%, based on a capital
14 structure of 40% equity and 60% debt, which was authorized in a rate order issued
15 in December 2005. Since that rate order, Avista's risk has been reduced through
16 rate mechanisms, the sale of higher operating risk non-regulated affiliates, the
17 issuance of additional common equity capital, the continued recovered of deferred
18 power costs, and the retirement of high cost debt. Further, the industry average
19 authorized returns on equity for utilities across the country have declined by about
20 30 basis points since Avista's last rate case. These factors all demonstrate that
21 Avista should be provided a lower return on equity than in its last general rate
22 case. My recommended return on equity of 10.0% reflects Avista's lower risk
23 and the declines to utilities' authorized return on equity. In addition, my
24 recommendation is reasonable because it is a modest reduction to Avista's last

1 authorized return on equity, which reflects the changes to Avista and the market
2 that have occurred since Avista's last general rate case.

3 **Q. WHY DO YOU BELIEVE AVISTA'S RISK HAS BEEN REDUCED SINCE**
4 **ITS LAST RATE ORDER?**

5 **A.** Avista reduced risk is evident from a review of credit reports. Moody's stated
6 that Avista's successful sale of Avista Energy's contracts and operations will
7 lower Avista's overall business profile risk. After the sale of Avista Energy,
8 Moody's found that Avista's risk will largely be related to its regulated electric
9 and natural gas businesses.^{1/}

10 This finding was echoed by Standard & Poor's ("S&P") assessment of
11 Avista's proposed sale of Avista Energy. S&P stated that Avista's exit from
12 energy and trading operations would reduce Avista's consolidated business risk
13 and result in improvement in the Company's business profile score. At that time,
14 Avista's business profile score was around "6." Hence, it is possible that the sale
15 of Avista Energy will help to reduce Avista's business profile score, thereby
16 lowering the financial measures needed to improve Avista's credit rating.^{2/}

17 Further, S&P made positive comments related to the implementation of
18 the Energy Recovery Mechanism ("ERM") in Washington that is protective of
19 Avista's credit quality.^{3/} Finally, Avista's Gas Decoupling pilot program will help
20 to protect gas utility margin from erosion created by conservation and energy
21 efficiency actions. This reduces Avista's operating risk.

^{1/} Exhibit No.____(MPG-4) at 1 (Moody's Investor Services, April 18, 2007, provided in response to ICNU data request ("DR") No. 1.07).

^{2/} Id. at 2 (S&P RatingsDirect, "Avista Corp.'s Rating Outlook Revised to Positive on Announced Intent to Sell Avista Energy," April 17, 2007).

^{3/} Id. at 5 (S&P RatingsDirect, "Bulletin: Changes in Recovery of Energy Clause in WA Protective of Avista's Credit Quality," June 19, 2006, provided in response to ICNU DR No. 1.11).

1 All of these factors indicate a reduction to Avista's operating risk relative
2 to the last rate case, which reduces Avista's total investment risk.

3 **Q HAS AVISTA REDUCED ITS FINANCIAL RISK SINCE ITS LAST RATE**
4 **CASE?**

5 **A.** Yes. Avista has successfully increased common equity and reduced high cost
6 debt, thus reducing its financial risk. Avista's corporate and utility common
7 equity ratio has increased to approximately 47% and 45%, respectively, in this
8 case from less than 40% in its last rate case. Further, Avista's embedded debt
9 cost has decreased to 7.1% in 2007, from 8.4% in its last case; and its debt cost
10 will further decline below 7.0% in 2008, when it retires a 9.75% note due in June
11 2008—this note is well above the prevailing market cost of debt.

12 This reduction in total debt and interest expense has reduced Avista's
13 leverage and strengthens its cash flow coverage of financial obligations and, thus,
14 strengthens its credit rating. This financial risk reduction, along with the decline
15 to Avista's operating risk described above, meaningfully reduces its investment
16 risk in this case compared to its last case.

17 **Q. HAVE AUTHORIZED RETURNS ON EQUITY FOR THE UTILITY**
18 **INDUSTRY IN GENERAL BEEN DECREASING SINCE 2005?**

19 **A.** Yes. In 2005, the average authorized return on equity for electric companies was
20 10.54%. Through the first six months of 2007, authorized returns on equity have
21 dropped to around 10.27% (see Exhibit No.____(MPG-13)). This is an
22 approximate 27 basis point reduction to authorized returns on equity since
23 Avista's last rate case. This decline to the average authorized return on equity
24 would support a reduction of Avista's last authorized return on equity of 10.4%

1 down to a return of about 10.1%, which is similar to my estimated return on
2 equity for Avista in this case.

3 **2. ELECTRIC UTILITY INDUSTRY MARKET PERSPECTIVE**

4 **Q. PLEASE DESCRIBE THE MARKET'S PERCEPTION OF THE**
5 **ELECTRIC UTILITY INDUSTRY OVER THE LAST SEVERAL YEARS.**

6 **A.** S&P captures the sentiment of the investment market toward the electric utility
7 industry experienced over the last several years. In 2001, S&P stated it recorded
8 81 downgrades to utility credit ratings, with only 29 upgrades. S&P stated in
9 2002 that the credit rating activity in the electric utility industry was negative due
10 to: (1) weakening financial profiles; (2) loss of investor confidence, which
11 affected the industry's liquidity and financial flexibility; (3) heightened business
12 risk derived from more investments outside the traditional regulated utility
13 business; (4) corporate restructuring and mergers and acquisitions; and (5) certain
14 regulatory difficulties.

15 S&P attributed most of the 2002 liquidity and credit erosion in the
16 industry to heavy debt funded investments in higher risk non-regulated activities,
17 and the loss of management credibility due to accounting and trading
18 irregularities.^{4/}

19 Importantly, this negative perception of the energy industry over the last
20 several years has been improved considerably because the industry has reverted to
21 a "back-to-basics" business model. As part of the back-to-basics business model,
22 utilities have been shedding non-regulated activities and using the asset sale

^{4/} Id. at 7 (Excerpt of S&P Utilities & Perspectives, Global Utilities Rating Service, October 14, 2002).

1 proceeds to retire debt. Also, utilities have adopted corporate governance policies
2 that have helped regain the confidence of the market.

3 In 2005, S&P revised its industry outlook by stating that the industry's
4 leading indicators of credit ratings tend to show that there are nearly twice as
5 many stable outlooks as negative outlooks. S&P credits improved credit quality
6 and liquidity enhancement for improving credit rating metrics resulting primarily
7 from a reduction of high cost debt and elimination of higher risk non-utility
8 investments, and the industry's shift to a back-to-basics business model, which
9 concentrates on core competencies, debt reduction and risk management.^{5/}

10 In 2006, S&P confirmed the stable credit quality of the industry, which is
11 expected to continue in the future despite increasing capital spending. Further,
12 the industry focused on strengthening its balance sheet by divesting non-core
13 business operations, which has improved utilities' ability to withstand the
14 pressure of substantial capital expenditures.^{6/} Further, S&P noted as follows:

15 Between April 1 and July 17, 2007, Standard & Poor's
16 Ratings Services raised the corporate credit ratings of 10
17 companies, six of which were related to Allegheny Energy,
18 and lowered eight corporate credit ratings, seven of which
19 were related to Ameren Corp. The past three months also
20 witnessed four outlook revisions, all of which were positive.
21 The principal drivers of the upside rating activity were
22 improving financial conditions, which were largely due to
23 significant debt reduction, stronger free cash flow, cost
24 reductions, regulatory support, and reduced business risk.^{7/}

^{5/} Id. at 8-9 (Excerpt of S&P RatingsDirect, "Industry Report Card: U.S. Electric/Water/Gas," January 4, 2005).

^{6/} Id. at 10 (Excerpt of S&P RatingsDirect, "Industry Report Card: Despite Demands for Increased Capital Spending, U.S. Utility Ratings Should Remain Stable," January 12, 2007).

^{7/} Id. at 12 (Excerpt of S&P Industry Survey, Electric Utilities, August 9, 2007).

1 **3. AVISTA DESCRIPTION**

2 **Q. PLEASE PROVIDE AN OVERVIEW OF AVISTA’S INVESTMENT RISK.**

3 **A.** Avista has a business profile score of “6” and an investment bond (secured debt)
4 rating of “BBB-” from S&P and “Baa3” from Moody’s.

5 Both S&P and Moody’s upgraded Avista’s outlook to “Positive” from
6 “Stable” upon the sale of Avista Energy.⁸ S&P noted that Avista’s greatest risk
7 after this sale would be related to its regulated utility operations. S&P noted that
8 modifications to its fuel adjustment mechanism reduced Avista’s risk for cost
9 recovery of fuel and purchased power costs. S&P also noted that Avista, unlike
10 other northwest utility companies, had modest planned capital expenditures, and
11 the Company is long on generation. The credit rating agencies are also optimistic
12 that Avista will be able to refinance 30% of its outstanding debt in 2008 when a
13 9.75% note issued during the Western power crisis matures and will either be
14 repaid or refinanced. Refinancing this well above market interest rate note will
15 significantly reduce Avista’s interest expense, and improve earnings and cash
16 coverage of interest obligations.⁹

17 **4. PROJECTED INTEREST RATES AND CAPITAL MARKET COSTS**

18 **Q. SHOULD THE COMMISSION PLACE HEAVY RELIANCE ON**
19 **PROJECTED INTEREST RATES AND FUTURE CAPITAL MARKET**
20 **COSTS RELATIVE TO TODAY’S OBSERVABLE CAPITAL MARKET**
21 **COSTS?**

22 **A.** No. While projected interest rates should be given some consideration, the
23 determination of Avista’s cost of capital today should be based primarily on
24 observable and verifiable actual current market costs. This is appropriate because

^{8/} Id. at 1-2.

^{9/} Id. at 2-3.

1 projected changes to interest rates are highly uncertain and their accuracy is at
2 best problematic. Indeed, this is clearly evident by a review of projected changes
3 to interest rates made over the last five years, in comparison to how accurate these
4 projections turned out to be. This analysis clearly illustrates that observable
5 interest rates today are as accurate as are economists' consensus projections of
6 future interest rates.

7 An analysis supporting this conclusion is illustrated on Exhibit
8 No.__(MPG-5). On this exhibit, under Columns 1 and 2, I show the actual
9 market yield at the time a projection is made for Treasury bond yields two years
10 in the future. In Column 1, I show the actual Treasury yield and, in Column 2, I
11 show the projected yield two years out. As shown in Columns 1 and 2, over the
12 last five years, Treasury yields were projected to increase relative to the actual
13 Treasury yields at the time of the projection. In Column 4, I show what the
14 Treasury yield actually turned out to be two years after the forecast. Under
15 Column 5, I show the actual yield change at the time of the projections relative to
16 the projected yield change.

17 As shown on this exhibit, over the last five years, economists have been
18 consistently projecting increases to interest rates. However, as demonstrated
19 under Column 5, those yield projections have turned out to be overstated in
20 virtually every case. Indeed, actual Treasury yields have decreased or remained
21 flat over the last five years, rather than increase as the economists' projections
22 indicated.

23 This review of the experience with projected interest rates clearly
24 illustrates that interest rate projection accuracy is highly problematic. Indeed,

1 current observable interest rates are just as likely to be a reasonable projection of
2 future interest rates as are economists' projections. Accordingly, while I will use
3 projected interest rates to provide some sense of the market's expectations of
4 future capital market costs, I will not use them exclusively. Rather, my analyses
5 will be based on the combination of current observable interest rates and projected
6 interest rates. Thus, my analyses will capture a return on equity range reflecting a
7 broad range of potential actual capital market costs during the period rates
8 determined in this proceeding will be in effect.

9 **Q. ARE THERE OTHER REASONS NOT TO RELY EXCLUSIVELY ON**
10 **UNCERTAIN PROJECTED INCREASES TO INTEREST RATES?**

11 **A.** Yes. The ratemaking process itself provides utilities protection against the
12 increasing cost of capital. Indeed, if Avista's rate of return is set based on today's
13 market cost of capital, and capital costs increase in the future, then Avista is free
14 to file for a rate change to reflect higher capital costs in the future when, or if,
15 costs change. Hence, the regulatory mechanism itself provides utilities a hedge
16 against increasing capital costs. Depriving ratepayers of today's low cost capital
17 market environment would be prejudicial and would unreasonably tilt the
18 regulatory balance in favor of investors.

19 **5. AVISTA'S PROPOSED CAPITAL STRUCTURE**

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


23 **A.** The Company's overall rate of return was developed using the capital structure
24 recommended by Mr. Malyn K. Malquist, and Exhibit No.__(MKM-2) at 2. Mr.

1 Malquist's proposed ratemaking capital structure weights are shown below in
2 Table 1.

TABLE 1	
<u>Avista's Proposed Capital Structure</u>	
<u>Description</u>	<u>Percent of Total Capital</u>
Total Debt	47.54%
Trust Preferred Securities	4.68%
Common Equity	<u>47.78%</u>
Total Regulatory Capital Structure	100.00%
<hr/>	
Source: Exhibit No.____(MKM-2) at 2.	

3 **Q. DO YOU RECOMMEND ANY ADJUSTMENTS TO MR. MALQUIST'S**
4 **PROPOSED CAPITAL STRUCTURE?**

5 **A.** Yes. Mr. Malquist's proposed capital structure for setting rates relates to Avista's
6 consolidated capital structure. I recommend using a capital structure dedicated to
7 Avista operations to set retail rates in this proceeding. Based on the Company's
8 projections, including the sale of Avista Energy and the related reduction in debt
9 from the sale proceeds, its 2007 projected capital structure supporting utility
10 operations is set forth in Table 2 below.

<p style="text-align: center;">TABLE 2</p> <p style="text-align: center;"><u>Recommended Capital Structure</u></p> <p style="text-align: center;">(2007 Year End)</p>	
<u>Description</u>	<u>Percent of Total Capital</u>
Common Equity	
Long-Term Debt	
Trust Preferred	
Total	100.00%
<p>Source: Avista Response to Staff DR No. 193C.</p>	

I find this capital structure to be reasonable, and recommend that it should be used to set rates in this proceeding. Further, using the Company's utility operations capital structure includes only capital cost supporting investments in utility plant. In comparison, the Company's proposed capital structure reflects its capital cost that supports all investments, both utility and non-utility. Hence, my proposed use of the utility capital structure is more reasonable than the capital structure proposed by the company.

1 **Q. DO YOU PROPOSE ANY ADJUSTMENTS TO AVISTA'S ESTIMATED**
2 **COST OF DEBT?**

3 **A. Yes. I propose several adjustments to Avista's proposed embedded cost of long-**
4 **term debt and short-term debt.**

5 My proposed adjustments to long-term debt reflect significantly above
6 market debt issuances that will mature in 2008, the first year rates determined in
7 this proceeding will be in effect.

1 My short-term debt cost adjustments modify the Company's estimate of
2 short-term debt to reflect the Federal Reserve's actions to lower short-term
3 interest rates that occurred after the Company made its filing. These reductions in
4 short-term interest rates should lower the Company's cost of short-term debt from
5 5.75% down by approximately 50 basis points to 5.25%. This reflects the overall
6 reduction in short-term debt markets caused by the Federal Reserve's recent
7 actions.

8 **Q. PLEASE DESCRIBE HOW YOU ADJUSTED THE COMPANY'S**
9 **EMBEDDED DEBT COSTS TO REFLECT THE RETIREMENT OF 2008**
10 **BOND ISSUANCES.**

11 **A.** I propose to re-price Avista's 9.75% note that expires in June of 2008. It is
12 known and measurable that Avista will be able to refinance this note at a much
13 lower interest rate. As an example, Mr. Malquist at page 15 of his direct
14 testimony discusses several bond issuances the Company performed in 2004 and
15 2005. All Avista's post-2004 debt issuances have been significantly lower than
16 9.75%. For example, in December of 2006, the Company issued \$150 million of
17 first mortgage bonds at an interest rate of 5.7%. As such, it is important to re-
18 price the 9.75% note in the development of rates, otherwise the Company will
19 significantly over-recover its debt cost when rates are in effect.

20 **Q. HOW DID YOU ADJUST THE PRICE OF THE 9.75% NOTE?**

21 **A.** Because this note will be in effect for approximately six months beyond the test
22 year, I recommend a weighted average of this debt cost and its replacement debt
23 cost over the period rates determined in this proceeding will be in effect.
24 Assuming rates in this proceeding will again be in effect for approximately two
25 years (comparable to the last proceeding), then the debt cost associated with the

1 note should be weighted as approximately 6/24ths at 9.75%, and 18/24ths at its
2 replacement debt cost. I estimated a replacement debt cost based on the
3 prevailing yield for “BBB” rated utility bonds of 6.5% plus approximately 25
4 basis points in flotation expense, or 6.75%. Using this methodology, the 9.75%
5 note should be replaced by a weighted average cost of debt of 7.50%.

6 Adjusting the long-term debt and short-term debt, as described above,
7 would lower the Company’s embedded debt cost from 7.7% down to 7.08%.

8 These calculations are shown on my Confidential Exhibit No.__(MPG-6C).

9 **Q. WHAT OVERALL RATE OF RETURN DO YOU RECOMMEND FOR**
10 **AVISTA IN THIS PROCEEDING?**

11 **A.** As shown on Confidential Exhibit No.__(MPG-6C), based on my proposed
12 return on equity, short-term debt cost, and my proposed capital structure, I
13 recommend the Commission set Avista’s overall rate of return at 8.40%.

14 **6. RETURN ON COMMON EQUITY**

15 **Q. PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A**
16 **REGULATED UTILITY’S COST OF COMMON EQUITY.**

17 **A.** In general, determining a fair cost of common equity for a regulated utility has
18 been framed by two decisions of the U.S. Supreme Court, in Bluefield Water
19 Works & Improvement Co. v. Public Serv. Comm’n of West Virginia, 262 U.S.
20 679 (1923) and Federal Power Comm’n v. Hope Natural Gas Co., 320 U.S. 591
21 (1944).

22 These decisions identify the general standards to be considered in
23 establishing the cost of common equity for a public utility. Those general
24 standards are that the authorized return should: (1) be sufficient to maintain
25 financial integrity; (2) attract capital under reasonable terms; and (3) be

1 commensurate with returns investors could earn by investing in other enterprises
2 of comparable risk.

3 **Q. PLEASE DESCRIBE WHAT IS MEANT BY A “UTILITY’S COST OF**
4 **COMMON EQUITY.”**

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

8 **Q. PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE**
9 **THE COST OF COMMON EQUITY FOR AVISTA.**

10 **A.** I have used several models based on financial theory to estimate Avista’s cost of
11 common equity. These models are: (1) a constant growth Discounted Cash Flow
12 (“DCF”) model; (2) a two-stage growth DCF model; (3) a Risk Premium model;
13 and (4) a Capital Asset Pricing Model (“CAPM”). I have applied these models to
14 a group of publicly traded utilities that I have determined represent the investment
15 risk of Avista.

16 **Q. PLEASE DESCRIBE THE PROXY GROUP YOU USED TO ESTIMATE**
17 **AVISTA’S RETURN ON EQUITY IN THIS PROCEEDING.**

18 **A.** I relied on the same comparable group used by Avista’s witness, Dr. William
19 Avera. However, I excluded Black Hills Corp. and Cleco Corp. due to their
20 exposure to non-related or corporate restructuring business operations.

21 Based on my risk assessment analyses, this proxy group reasonably
22 reflects Avista’s total investment risk.

23 **Q. HOW DOES YOUR PROXY GROUP RISK COMPARE TO AVISTA?**

24 **A.** My proposed proxy group is shown on Exhibit No.____(MPG-7). My proxy group
25 has an average bond rating from S&P and Moody’s of “BBB” and “Baa1,”

1 respectively. My proxy group average bond ratings are reasonably comparable to
2 Avista's senior secured credit ratings from S&P and Moody's of "BBB-" and
3 "Baa3," respectively.

4 Finally, my proxy group has an average common equity ratio of 45% from
5 Value Line and 42% from AUS, which is lower than Avista's and my
6 recommended common equity ratio of 48% and 45%. The lower common equity
7 ratio of my comparable groups represents a higher financial risk relative to
8 Avista. My proxy group has a S&P business profile score of "6," which is
9 identical to Avista profile score of "6." Based on my assessment, my proxy group
10 is reasonably comparable to Avista's total investment risk. Therefore, it is
11 reasonable to use this group to estimate a fair return on equity for Avista, which
12 will fairly compensate investors and ratepayers.

13 **7. DISCOUNTED CASH FLOW MODEL**

14 **Q. PLEASE DESCRIBE THE DCF MODEL.**

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

18
$$P_o = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} + \dots + \frac{D_\infty}{(1+K)^\infty} \quad \text{where} \quad \text{(Equation 1)}$$

19 P_o = Current stock price

20 D = Dividends in periods 1 - ∞

21 K = Investor's required return

22 This model can be rearranged in order to estimate the discount rate or
23 investor required return, " K ." If it is reasonable to assume that earnings and

1 dividends will grow at a constant rate, then Equation 1 can be rearranged as
2 follows:

3
$$K = D1/Po + G$$
 (Equation 2)

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

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

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

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

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

15 **A.** I relied on the average of the weekly high and low stock prices over a 13-week
16 period ending October 5, 2007. An average stock price is less susceptible to
17 market price variations than is a spot price. Therefore, an average stock price is
18 less susceptible to aberrant market price movements, which may not be reflective
19 of the stock's long-term value.

20 A 13-week average stock price is short enough to contain data that
21 reasonably reflects current market expectations, but is not too short a period to be
22 susceptible to market price variations that may not be reflective of the security's
23 long-term value. Therefore, in my judgment, a 13-week average stock price is a
24 reasonable balance between the need to reflect current market expectations and to
25 capture sufficient data to smooth out aberrant market movements.

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

5 **Q. WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR**
6 **CONSTANT GROWTH DCF MODEL?**

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

12 Security analysts' growth estimates have been shown to be more accurate
13 predictors of future returns than growth rates derived from historical data^{10/}
14 because they are more reliable estimates, and assuming the market generally
15 makes rational investment decisions, analysts' growth projections are the most
16 likely growth estimates considered by the market that influence observable stock
17 prices.

18 For my constant growth DCF analysis, I have relied on a consensus, or
19 mean, of professional security analysts' earnings growth estimates as a proxy for
20 the investor consensus dividend growth rate expectations. I used the average of
21 three sources of growth rate estimates: Zack's, Reuters, and SNL Financial. All
22 consensus analyst projections used were available on October 8, 2007, as reported
23 on-line.

^{10/} See, e.g., David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of Estimating Share Yield," The Journal of Portfolio Management, Spring 1989.

1 Each consensus growth rate projection is based on a survey of security
2 analysts. The consensus estimate is a simple arithmetic average, or mean, of
3 surveyed analysts' earnings growth forecasts. A simple average of the growth
4 forecasts gives equal weight to all surveyed analysts' projections. It is
5 problematic as to whether any particular analyst's forecast is most representative
6 of general market expectations. Therefore, a simple average, or arithmetic mean,
7 analyst forecast is a good proxy for market consensus expectations. The growth
8 rates I used in my DCF analysis are shown on Exhibit No.__(MPG-8).

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

11 **A.** As shown on Exhibit No.__(MPG-9), the constant growth DCF return for my
12 comparable group is 11.5%.

13 **Q. DO YOU HAVE ANY COMMENTS CONCERNING THE RESULTS OF**
14 **YOUR CONSTANT GROWTH DCF ANALYSIS?**

15 **A.** Yes. The average three- to five-year growth rate for my comparable group is
16 7.56%. This growth rate is significantly above the rational estimate of long-term
17 sustainable growth. Because the growth rate included in this model significantly
18 exceeds a reasonable estimate of long-term sustainable growth, the constant
19 growth DCF return of 11.5% is not reasonable and should not be used for setting
20 rates in this proceeding. For the reasons set forth below, earnings growth
21 projections for the next three to five years reflect abnormally large construction
22 programs at many utility companies, which create abnormally high earnings
23 growth expectations over the next three to five years that are not sustainable
24 indefinitely, or reflect earnings growth opportunities at non-regulated businesses,
25 which also do not reflect sustainable growth outlooks. Because the constant

1 growth DCF model is producing unreasonable and unreliable results, I will
2 employ a two-stage growth DCF model in this testimony to estimate Avista's cost
3 of capital for this proceeding.

4 **Q. WHY DO YOU BELIEVE THE PROXY GROUP'S THREE- TO FIVE-**
5 **YEAR GROWTH RATE IS NOT A RATIONAL ESTIMATE OF LONG-**
6 **TERM SUSTAINABLE GROWTH?**

7 **A.** The proxy group's three- to five-year growth rate exceeds the growth rate of the
8 overall U.S. economy. Based on consensus economic projections, as published
9 by Blue Chip Economic Indicators, the five- and ten-year gross domestic product
10 ("GDP") growth is estimated at a nominal rate of 5.0%.^{11/} A company cannot
11 grow, indefinitely, at a faster rate than the market in which it sells its products.
12 The U.S. economy, or GDP, growth projection represents a ceiling, or high end,
13 sustainable growth rate for a utility over an indefinite period of time.

14 Utilities cannot sustain a growth rate that exceeds the growth rate of the
15 overall economy, because utilities' earnings/dividend growth is created by
16 increased utility investment, which in turn is driven by service area economic
17 growth. In other words, utilities invest in plant to meet sales demand growth, and
18 sales growth in turn is tied to economic growth in their service areas. Hence,
19 nominal GDP growth is a proxy for sales growth, utility rate base growth, and
20 earnings growth. Therefore, GDP growth is the highest sustainable long-term
21 growth rate of a utility.

22 Moreover, the proxy group's projected growth rate of 7.56% is
23 significantly higher than the historical growth rates the proxy group has achieved
24 over the last five to ten years, and that is projected over the next three to five

^{11/} Blue Chip Economic Indicators, October 10, 2007 at 15.

1 years. As shown on Exhibit No.____(MPG-10), the historical growth of my proxy
2 group's dividend is substantially lower than the nominal GDP growth, and
3 actually less than the projected inflation growth. Importantly, this growth rate
4 exceeds the projected growth of inflation and the projected growth of nominal
5 GDP. Therefore, this growth rate estimate does not reflect investors' rational
6 expectations.

7 Further, the current and projected payout ratios of my group are 70% and
8 58%, respectively. This indicates utilities are retaining a large percentage of their
9 earnings, which will help support future growth through earnings and dividends.

10 Finally, the current and projected dividend-to-book ratios of my
11 comparable utility group both are 6.8%. This indicates that the dividend is
12 affordable in today's low-cost capital market environment, and utilities could
13 support that dividend at an authorized return on equity well under 10% and still
14 retain adequate earnings to fund future growth.

15 **Q. WHY DO YOU BELIEVE GROWTH RATES FOR ELECTRIC UTILITY**
16 **COMPANIES ARE PROJECTED TO BE HIGHER OVER THE NEXT**
17 **THREE TO FIVE YEARS?**

18 **A.** Electric utility companies are in the midst of major construction programs, which
19 are significantly increasing their outstanding capital and net plant investment. In
20 fact, in the fourth quarter 2006, the Edison Electric Institute ("EEI"), a utility
21 company trade organization, published a financial update for electric utilities. A
22 portion of the highlights identified by EEI is as follows:

- 23 ■ Shareholder-owned electric utilities brought 5,857 MW of new
24 capacity online in 2006, 42% less than in 2005. Natural gas
25 generation has dropped from 98% of new plant construction in
26 2002 to 64% in 2006. In contrast, wind has increased from 1%
27 to 32% over the same time period.

- 1 ▪ With reserve margins shrinking in several key regional
2 electricity markets and nationwide power demand growing
3 steadily, the industry is now planning a new round of plant
4 construction. Announced new capacity additions totaled
5 33,998 MW in 2006, surpassing the total for each of the last
6 four years, and over twice that of 2005.
- 7 ▪ EEI survey results indicate that the industry is planning to
8 invest \$31.5 billion in the transmission system from 2006-
9 2009, a 58% increase over the amount invested from 2002-
10 2005. Transmission investment in 2005 totaled \$5.8 billion, an
11 18% increase over the \$4.9 billion invested in 2004.^{12/}

12 In the second quarter of 2007, EEI confirmed the large capital expenditure
13 programs undertaken by U.S. utilities.

14 U.S. electricity demand is growing slowly but steadily and the utility
15 industry is in the early stages of a sizeable long-term capital investment cycle that
16 includes rising spending on emissions control equipment, transmission and
17 distribution upgrades and, over the longer term, a new round of baseload
18 generation. Much of this will likely be included in rate base. EEI's recent
19 construction survey shows that industry-wide capital spending is set to rise from
20 \$48.4 billion in 2005 to \$73.1 billion in 2007, a 51.1% increase.^{13/}

21 Thus, the projected increase in utility earnings and dividend paying ability
22 is not a sustainable trend, but rather is the result of an abnormally high period of
23 industry construction expenditures. Once generation reserve margins are
24 increased to or above target levels, transmission capacity investments are made to
25 alleviate transmission constraints and environmental upgrades are complete, it is
26 reasonable to expect that capital expenditures by utilities will decline to a more

^{12/} EEI, Construction, Q4 2006 Financial Update.

^{13/} Id.

1 normal and sustainable growth level. This will cause utility earnings also to drop
2 to a sustainable growth level.

3 EEI's assessment supports the use of a two-stage growth DCF model in
4 this case, because three- to five-year earnings growth projections will be
5 unsustainably high after the current abnormally high construction expenditure
6 period comes to an end.

7 **Q. SINCE YOU HAVE CONCLUDED THAT THE GROWTH RATES USED**
8 **IN YOUR CONSTANT GROWTH DCF MODEL ARE SIGNIFICANTLY**
9 **HIGHER THAN THE LONG-TERM SUSTAINABLE GROWTH, DO YOU**
10 **BELIEVE THAT THE RESULT OF YOUR CONSTANT GROWTH DCF**
11 **MODEL FOR YOUR PROXY GROUP IS REASONABLE?**

12 **A.** No, the result of my constant growth DCF model is not reasonable, because it
13 reflects a growth rate that is not sustainable over an indefinite period of time.
14 However, my constant growth DCF is based on consensus analysts' growth rate
15 projections, so it is a reasonable reflection of rational investment expectations
16 over the next three to five years. The limitation on the constant growth DCF
17 model is that it cannot reflect a rational expectation that a period of high/low
18 short-term growth can be followed by a change in growth to a rate that is more
19 reflective of long-term sustainable growth. Hence, I will perform a two-stage
20 DCF analysis to reflect this outlook of changing growth expectations.

21 **8. TWO-STAGE DCF MODEL**

22 **Q. WHY DO YOU PROPOSE TO USE A TWO-STAGE DCF MODEL TO**
23 **TEST THE RESULTS OF YOUR CONSTANT GROWTH DCF STUDY?**

24 **A.** I propose to use a two-stage DCF model because the growth rates used in my
25 constant growth model do not reflect reasonable estimates of long-term
26 sustainable growth. While consensus analysts' growth rate estimates are likely

1 reflective of investors' expectations over the next three to five years, rational
2 investors would not expect those growth rates to remain in effect indefinitely. As
3 noted above, utilities cannot grow faster than the economies in which they sell
4 their services. Historically, utility sales have grown at a rate that trails the growth
5 in the overall U.S. economy.

6 As such, a two-stage DCF model can capture the expectation of
7 abnormally high growth over the next five years, followed by a decline of long-
8 term sustainable growth.

9 **Q. PLEASE DESCRIBE YOUR TWO-STAGE DCF MODEL.**

10 **A.** The two-stage DCF growth model reflects the possibility of non-constant growth
11 to a company over time. The two-stage model reflects two growth periods: (1) a
12 short-term growth period, which consists of the first five years; and (2) a long-
13 term growth period, which consists of each year starting in year six through
14 perpetuity. For the short-term growth period, I relied on the consensus analysts'
15 growth projections described above in relationship to my constant growth DCF
16 model. For the long-term growth period, I assumed each company's growth
17 would increase toward the maximum sustainable growth rate for a utility
18 company as proxied by the consensus analysts' projected growth for the U.S.
19 GDP.

20 **Q. WHAT STOCK PRICE AND DIVIDEND DID YOU USE IN YOUR TWO-**
21 **STAGE DCF ANALYSIS?**

22 **A.** I relied on the same 13-week stock price, the most recent quarterly dividend
23 payment, and consensus analysts' growth rate projections discussed above in my
24 constant growth DCF model. For the long-term sustainable growth rate starting in

1 year six, I used the consensus economists' five to ten-year projected nominal
2 GDP growth rate of 5.0%.

3 **Q. WHAT ARE THE RESULTS OF YOUR TWO-STAGE GROWTH DCF**
4 **MODEL?**

5 **A.** As shown on Exhibit No.____(MPG-11), the DCF return on equity for my proxy
6 group is 9.2%.

7 **9. RISK PREMIUM MODEL**

8 **Q. PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM**
9 **MODEL.**

10 **A.** This model is based on the principle that investors require a higher ROR to
11 assume greater risk. Common equity investments have greater risk than bonds
12 because bonds have more security of payment in bankruptcy proceedings than
13 common equity, and the coupon payments on bonds represent contractual
14 obligations. In contrast, companies are not required to pay dividends on common
15 equity, or to guarantee returns on common equity investments. Therefore,
16 common equity securities are considered to be more risky than bond securities.

17 The risk premium model is based on two estimates of an equity risk
18 premium. First, I estimated the difference between the required return on utility
19 common equity investments and Treasury bonds. The difference between the
20 required return on common equity and the bond yield is the risk premium. I
21 estimated the risk premium on an annual basis for each year over the period 1986
22 through June 2007. The common equity required returns were based on
23 regulatory commission-authorized returns for electric utility companies.
24 Authorized returns are typically based on expert witnesses' estimates of the
25 contemporary investor-required return.

1 The second equity risk premium method is based on the difference
2 between regulatory commission-authorized returns on common equity and
3 contemporary “A” rated utility bond yields. I selected the period 1986 through
4 June 2007, because public utility bond yields have consistently traded at a
5 premium to book value. This is illustrated on Exhibit No.__(MPG-12), where
6 the market to book ratio since 1986 for the electric utility industry was
7 consistently above 1.0. Therefore, over this time period, regulatory-authorized
8 returns were sufficient to support market prices that at least exceeded book value.
9 This is an indication that regulatory-authorized returns on common equity
10 supported a utility’s ability to issue additional common stock, without diluting
11 existing shares. It also indicates that utilities were able to access equity markets
12 without a detrimental impact on current shareholders.

13 Based on this analysis, as shown on Exhibit No.__(MPG-13), the average
14 indicated equity risk premium of authorized electric utility common equity returns
15 over U.S. Treasury bond yields has been 5.04%. Of the 22 observations, 16
16 indicated risk premiums fall in the range of 4.4% to 5.9%. Since the risk
17 premium can vary depending upon market conditions and changing investor risk
18 perceptions, I believe using an estimated range of risk premiums provides the best
19 method to measure the current return on common equity using this methodology.

20 As shown on Exhibit No.__(MPG-14), the average indicated authorized
21 electric utility common equity return over contemporary Moody’s utility bond
22 yields was 3.67% over the period 1986 through June 2007. The equity risk
23 premium estimates based on this analysis primarily fall in the range of 3.0% to
24 4.4% over this time period.

1 **Q. BASED ON HISTORICAL DATA, WHAT RISK PREMIUM HAVE YOU**
2 **USED TO ESTIMATE AVISTA'S COST OF EQUITY IN THIS**
3 **PROCEEDING?**

4 **A.** The equity risk premium should reflect the relative market perception of risk in
5 the utility industry today. I have gauged investor perceptions of utility risk today
6 on Exhibit No.____(MPG-15). On that exhibit, I show the yield spread between
7 utility bonds and Treasury bonds over the last 27 years. As shown on this exhibit,
8 the 2007 utility bond yield spreads over Treasury bonds for "A" rated and "Baa"
9 rated utility bonds are 1.11% and 1.34%, respectively. These utility bond yield
10 spreads over Treasury bond yields are among the lowest yield spreads in the last
11 27 years, and are below the 27-year average "A" and "Baa" yield spreads of
12 1.56% and 1.92%, respectively. Hence, this comparison of utility bond yield
13 spreads indicates the market perception of utility risk to be below the average
14 industry risk over this historical time period.

15 **Q. HOW DID YOU ESTIMATE AVISTA'S COST OF COMMON EQUITY**
16 **WITH THIS MODEL?**

17 **A.** I added a projected long-term Treasury bond yield to my estimated equity risk
18 premium over Treasury yields. Blue Chip Financial Forecasts projects the 30-
19 year Treasury bond yields to be 5.2%, and a 10-year Treasury bond to be 4.9%.^{14/}
20 Using the projected 30-year bond yield of 5.2%, and a Treasury bond risk
21 premium of 4.4% to 5.9%, produces an estimated common equity return in the
22 range of 9.6% to 11.1%, with a midpoint estimate of 10.4%.

23 I next added my equity risk premium over utility bond yields to a current
24 13-week average yield on "Baa" rated utility bonds for the period ending

^{14/} Blue Chip Financial Forecasts, October 1, 2007 at 2.

1 September 7, 2007 of 6.48%. This current “Baa” utility bond yield is developed
2 on Exhibit No.____(MPG-16). Adding the utility equity risk premium of 3.0% to
3 4.4% to a “Baa” rated bond yield of 6.5%, produces a cost of equity in the range
4 of 9.8% to 10.9%, with a midpoint of 10.4%.

5 My risk premium analyses produce a return estimate of 10.4%.

6 **10. CAPITAL ASSET PRICING MODEL**

7 **Q. PLEASE DESCRIBE THE CAPM.**

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

12
$$R_i = R_f + B_i \times (R_m - R_f) \text{ where:}$$

13 R_i = Required return for stock i

14 R_f = Risk-free rate

15 R_m = Expected return for the market portfolio

16 B_i = Beta - Measure of the risk for stock

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

23 The risks that cannot be eliminated when held in a diversified portfolio are
24 nondiversifiable risks. Nondiversifiable risks are related to the market in general
25 and are referred to as systematic risks. Risks that can be eliminated by

1 diversification are regarded as nonsystematic risks. In a broad sense, systematic
2 risks are market risks, and nonsystematic risks are business risks. The CAPM
3 theory suggests that the market will not compensate investors for assuming risks
4 that can be diversified away. Therefore, the only risk that investors will be
5 compensated for are systematic or nondiversifiable risks. The beta is a measure
6 of the systematic or nondiversifiable risks.

7 **Q. PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.**

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

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

12 **A.** The Blue Chip Financial Forecasts' projected 30-year Treasury bond yield is
13 5.2%. The current 30-year bond yield is 4.9%.^{15/} I used the Blue Chip Financial
14 Forecasts' projected 30-year Treasury bond yield of 5.2% for my CAPM analysis.

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

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

^{15/} Blue Chip Financial Forecast, October 1, 2007 at 2.

1 reasonable estimate of the nominal risk-free rate included in common stock
2 returns.

3 Treasury bond yields, however, do include risk premiums related to
4 unanticipated future inflation and interest rates. Therefore, a Treasury bond yield
5 is not a risk-free rate. Risk premiums related to unanticipated inflation and
6 interest rates are systematic or market risks. Consequently, for companies with
7 betas less than 1.0, using the Treasury bond yield as a proxy for the risk-free rate
8 in the CAPM analysis can produce an overstated estimate of the CAPM return.

9 **Q. WHAT BETA DID YOU USE IN YOUR ANALYSIS?**

10 **A.** As shown on Exhibit No.__(MPG-17), my proxy group average and median
11 Value Line beta estimates both are 0.95. Based on this data and my discussion
12 below, I will use a beta of 0.90 for my CAPM analysis.

13 **Q. DO YOU RECOMMEND A CAREFUL CONSIDERATION OF A**
14 **UTILITY BETA FOR USE IN A CAPM STUDY?**

15 **A.** Yes. Utility betas have been increasing over the last five years, as shown on
16 Exhibit No.__(MPG-17), largely because electric utility stocks have
17 outperformed the overall market. While this increasing beta gives the impression
18 of increasing risk, that interpretation is incorrect.

19 Indeed, electric utility risk factors have been decreasing as these
20 companies revert to a back-to-basics investment strategy that lowers their
21 operating risks, and they have been divesting non-regulated businesses to reduce
22 debt and strengthen balance sheets, which is lowering risk. Value Line notes this
23 in a recent review of the electric utility industry. Value Line states as follows:

1 **Better Finances**

2 This decade, utilities have distanced themselves from risky
3 unregulated business forays, including commodities trading,
4 foreign energy operations, water services and aircraft leasing.
5 Currently, *Dominion Resources* plans to sell its oil and gas
6 production business, *Duke* is spinning its mid-stream gas
7 operations to shareholders, *Northeast Utilities* is divesting its
8 merchant power generation business, and *Progress Energy* is
9 shedding power plant and natural gas assets. Such actions
10 have improved earnings performance and strengthened capital
11 ratios. Companies are targeting a nearly equal weighting of
12 debt and equity on their balance sheets, a goal that should be
13 met by 2009-2011.

14 Revenue-backed and tax-exempt bonds will provide
15 economical funding for planned capital improvements. This
16 will further support overall finances.^{16/}

17 Further, Value Line notes an increase in the common equity ratio and
18 fixed charge coverage ratio over the last three to five years. These Value Line
19 parameters indicate lower financial risk and stronger earnings and cash flow
20 coverages of financial obligations. This reduces utilities' risk and limits the
21 variability to market factors that can inhibit the utilities' ability to meet investors'
22 earnings and cash flow expectations.

23 These risk reductions have resulted in robust stock return performance for
24 electric utility stocks, as shown on Exhibit No.__(MPG-19). As illustrated on
25 this exhibit, electric utility stocks have outperformed the market over the last five
26 years. This utility stock performance has contributed to an increase in betas and
27 given the impression that electric utility stock variability is comparable to the
28 overall market, but other risk factors clearly show that that is a false indication.

^{16/} Exhibit No.__(MPG-18) (Excerpt of Value Line Investment Survey, Electric Utility (East) Industry, December 1, 2006) (emphasis in original).

1 Reliance on the group median beta, which is a beta that is stronger than
2 the beta has been over the last five years, is more reflective of the majority of the
3 individual company betas included in my proxy group.

4 **Q. HOW DID YOU DERIVE YOUR MARKET PREMIUM ESTIMATE?**

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

7 The forward-looking estimate was derived by estimating the expected
8 return on the market (S&P 500) and subtracting the risk-free rate from this
9 estimate. I estimated the expected return on the S&P 500 by adding an expected
10 inflation rate to the long-term historical arithmetic average real return on the
11 market. The real return on the market represents the achieved return above the
12 rate of inflation.

13 The Ibbotson and Associates' ("Ibbotson") Stocks, Bonds, Bills and
14 Inflation 2007 Year Book publication estimates the historical arithmetic average
15 real market return over the period 1926-2006 as 9.1%. A current consensus
16 analysts' inflation projection, as measured by the Consumer Price Index, is
17 2.3%.^{17/} Using these estimates, the expected market return is 11.6%.^{18/} The
18 market premium then is the difference between the 11.6% expected market return,
19 and my 5.2% risk-free rate estimate, or 6.4%.

20 The historical estimate of the market risk premium was also estimated by
21 Ibbotson in Stocks, Bonds, Bills and Inflation, 2007 Year Book. Over the period
22 1926 through 2006, Ibbotson's study estimated that the arithmetic average of the

^{17/} Blue Chip Financial Forecasts, October 1, 2007 at 2.

^{18/} $\{ [(1 + 0.091) * (1 + 0.023)] - 1 \} * 100$.

1 achieved total return on the S&P 500 was 12.3%, and the total return on long-term
2 Treasury bonds was 5.8%. The indicated equity risk premium is 6.5% (12.3% -
3 5.8% = 6.5%).

4 **Q. WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?**

5 **A.** As shown on Exhibit No.__(MPG-20), based on the average of my prospective
6 market risk premium of 6.4% and my historical risk premium of 6.5%, a beta of
7 0.90 and a risk-free rate of 5.2% produces a CAPM return of 11.0%.

8 **Q. HAVE YOU DONE ANY TEST ON THE RESULTS OF YOUR CURRENT**
9 **CAPM ANALYSIS?**

10 **A.** Yes. As noted above, utility beta estimates are abnormally high currently due to a
11 robust performance of utility stocks over the last five years. The current proxy
12 group beta of 0.90 is much higher than the five-year actual beta for this group of
13 0.80. Hence, to test the impact on the CAPM estimate for my proxy group, I have
14 also constructed a CAPM study using the five-year historical beta of 0.80 and the
15 same risk-free rate and market risk premiums, as shown on Exhibit No.__(MPG-
16 21). This alternative would produce a CAPM estimate of 10.4%.

17 **11. RETURN ON EQUITY SUMMARY**

18 **Q. BASED ON THE RESULTS OF YOUR RATE OF RETURN ON**
19 **COMMON EQUITY ANALYSES DESCRIBED ABOVE, WHAT RETURN**
20 **ON COMMON EQUITY DO YOU RECOMMEND FOR AVISTA?**

21 **A.** Based on my analyses, I estimate Avista's current market cost of equity to be
22 10.0%.

TABLE 3	
<u>Return on Common Equity Summary</u>	
<u>Description</u>	<u>Results</u>
Constant Growth DCF	11.5%
Two-Stage DCF	9.2%
Risk Premium	10.4%
CAPM	11.0%

1 My recommended return on equity of 10.0% is at the midpoint of my
2 estimated return on equity range for Avista of 9.2% to 10.7%. The high end of
3 my estimated range is based on an average of my risk premium and CAPM
4 analyses. The low end of my estimated range is based on my two-stage DCF
5 model.

6 **12. FINANCIAL INTEGRITY**

7 **Q. WILL YOUR RECOMMENDED OVERALL RATE OF RETURN**
8 **SUPPORT AN INVESTMENT GRADE BOND RATING FROM S&P?**

9 **A.** Yes. I have reached this conclusion by comparing the key credit rating financial
10 ratios for Avista at my proposed return on equity to S&P's benchmark financial
11 ratios for an "A" rated utility and "BBB" rated utility with a business profile score
12 of "6," Avista's current business profile score.

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

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

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

3 S&P rates a utility's business risk based on a business profile score of 1,
4 lowest risk, up to 10, highest risk. Integrated electric utilities typically have a
5 business profile score from S&P of "4," "5" or "6," while transmission and
6 distribution electric utilities' profile scores primarily range from "2" to "4."

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

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

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

22 **Q. DID YOU INCLUDE AVISTA'S OFF-BALANCE SHEET DEBT**
23 **EQUIVALENTS IN THE DEVELOPMENT OF THESE CREDIT METRIC**
24 **CALCULATIONS?**

25 **A.** S&P includes off-balance sheet debt obligations in its adjusted credit metric
26 calculation. Avista has approximately \$85 million of accounts receivable off-

1 balance sheet debt obligations. These accounts receivable are priced at Avista's
2 cost of short-term debt. Hence, I included the balance of accounts receivable in
3 creating an adjusted total debt ratio for Avista, and I included the interest expense
4 on that off-balance sheet debt in the calculation of Avista's funds from operation
5 interest coverage ratios. This is consistent with S&P's formulation of adjusted
6 ratios for comparison to its credit rating guidelines.

7 **Q. PLEASE DESCRIBE THE RESULTS OF THIS ANALYSIS.**

8 **A.** The S&P financial metric calculations for Avista's utility operations are
9 developed on Confidential Exhibit No.____(MPG-22C), excluding off-balance
10 sheet debt obligations.

11 As shown on Confidential Exhibit No.____(MPG-22C), based on an equity
12 return of 10.0%, Avista will be provided an opportunity to produce a FFO to debt
13 interest expense of 3.1. This FFO to interest coverage ratio is within S&P's
14 benchmark ratio range for a "BBB" rated investment grade utility company, with
15 a business profile score of "6," of 3.5x to 2.5x.

16 Avista's adjusted total debt ratio to total capital is [REDACTED]. This is also
17 within S&P's "BBB" rated utility range of 50% to 60%. This ratio indicates a
18 strong "BBB" rating.

19 Finally, Avista's retail operations FFO to total debt coverage at a 100%
20 equity return would be 18.0%, which is at the midpoint of S&P's financial metric
21 range of 15% to 20% for a "BBB" rated utility company. Again, this indicates a
22 solid "BBB" rating.

1 **Q. PLEASE SUMMARIZE YOUR REVIEW OF AVISTA’S CREDIT**
2 **METRIC FINANCIAL RATIO ANALYSIS DESCRIBED ABOVE.**

3 **A.** Avista’s credit rating metric is consistent with a strong “BBB” investment grade
4 utility company based on my proposed return on equity and capital structure for
5 Avista. Hence, my proposed capital structure and return on equity will support
6 Avista’s target investment grade corporate credit rating and financial integrity.

7 **13. RESPONSE TO AVISTA WITNESS DR. WILLIAM AVERA**

8 **Q. HOW DID DR. AVERA DEVELOP HIS 11.3% RETURN ON EQUITY?**

9 **A.** Dr. Avera developed his 11.3% return on equity recommendation by applying the
10 DCF model, and the CAPM, as well as an alternative Capital Earnings model. He
11 arrived at his recommendations by reviewing Avista’s business operations, the
12 market conditions and utility industry trends at the time of his filing.

13 **Q. PLEASE SUMMARIZE DR. AVERA’S PROPOSED RETURN ON**
14 **EQUITY FOR AVISTA.**

15 **A.** Dr. Avera estimated Avista’s cost of equity using DCF and risk premium
16 analyses. As shown below in Table 4, Dr. Avera’s analyses produced a return on
17 equity in the range of 11.3% to 12.3%.

18 However, as I will discuss in more detail below, making reasonable
19 adjustments to Dr. Avera’s DCF and risk premium studies produces a return on
20 equity for Avista of 10.2%, which is very similar to my recommended return on
21 equity.

TABLE 4		
<u>Avista's ROE Analysis</u>		
<u>Model</u>	<u>Avera Proposed</u>	<u>Adjusted</u>
DCF	10.3%-12.3%	9.5%
CAPM: Forward	13.2%	10.9%
CAPM: Historic	12.0%	10.9%
Comparable Earnings	11.0%	Reject
Range	11.3%-12.3%	9.5%-10.9%
Midpoint	11.3%	10.2%

1 **Q. PLEASE DESCRIBE DR. AVERA'S DCF ANALYSIS.**

2 **A.** Dr. Avera applied the traditional DCF model to two groups, which according to
3 his analysis have reasonably comparable risk to Avista. Based on his utility
4 group, the DCF results yield a return in the range of 9.5% to 10.9%. Dr. Avera's
5 second group included companies operating in various industries, which are
6 followed by Value Line. Based on this non-utility group, his DCF analysis
7 produced a return on equity in the range of 11.8% to 12.9%.

8 **Q. DO YOU TAKE ISSUES WITH DR. AVERA'S DCF ANALYSES?**

9 **A.** I have two major issues concerning Dr. Avera's DCF analysis. First, his use of a
10 proxy non-utility group is flawed and his results produced by this study should be
11 rejected. Second, Dr. Avera, applied the traditional single-stage DCF model
12 without a prudent consideration of the current trends and market conditions
13 prevailing in the industry.

1 **Q. WHY DO YOU CONSIDER DR. AVERA'S NON-UTILITY GROUP**
2 **UNREASONABLE?**

3 **A.** The companies included in Dr. Avera's non-utility proxy group are subject to
4 different risk characteristics in comparison to the risk factors affecting Avista's
5 utility operations. As noted by the major credit rating agencies, the electric utility
6 industry has relatively low risk in comparison with the market. Further, the
7 regulatory process itself provides an effective mechanism to mitigate some of the
8 market risks influencing the U.S. economy. Therefore, using Dr. Avera's non-
9 utility proxy group, which is much riskier than the utility industry will produce an
10 inflated return on equity for Avista. Hence, the Commission should disregard the
11 DCF results of Dr. Avera's non-utility group.

12 **Q. YOU SAID THAT DR. AVERA APPLIED HIS DCF ANALYSIS**
13 **WITHOUT A PRUDENT A CONSIDERATION OF CURRENT TRENDS**
14 **AND MARKET CONDITIONS. PLEASE EXPLAIN.**

15 **A.** In his DCF analysis Dr. Avera used growth rate estimates published by I/B/E/S,
16 Reuters, Value Line and his internal growth rate based on Value Line estimates.
17 The average growth rate of his utility-group, derived from his estimates is 6.4%,
18 which is significantly higher than the growth rate of the U.S. economy of 5.0%.
19 Dr. Avera's projected growth rate estimates are unreasonably high and cannot be
20 sustained indefinitely. As I discussed above, utilities cannot grow faster than the
21 economy they operate in for an indefinite time period. Even though Dr. Avera
22 excludes some of his results producing abnormally high and abnormally low DCF
23 returns, his growth rate estimates are still upward biased and unreasonably inflate
24 the return on equity for Avista.

1 Further, Dr. Avera completely disregards the fact that the current high
2 growth rate estimates observed in the utility industry are primarily driven by the
3 utilities intensive capital expenditures. The projected earnings growth is not
4 sustainable, but rather a result of the industry's intense construction cycle.
5 Therefore, in order to account for the changing growth rate expectations in the
6 utility industry, a more careful review will support the use of the two-stage DCF
7 model.

8 **Q. HOW WILL DR. AVERA'S DCF RETURN CHANGE IF THE TWO-**
9 **STAGE MODEL IS APPLIED?**

10 **A.** I have applied the two-stage DCF model to Dr. Avera's utility proxy group, by
11 using the average of his four growth rate estimates for the first stage, which
12 includes the period from year 1 to year 5. For the second growth rate stage, which
13 starts in year 6 to perpetuity, I used the projected five-and ten year GDP growth
14 rate of 5.0%. Applying the two-stage DCF version to Dr. Avera's utility group
15 yields a DCF return of 9.0% as shown on my Exhibit No.__(MPG-23).
16 Therefore, the DCF result based on Dr. Avera's analysis should be in the lower
17 end of his estimated range of 9.5% to 10.9%. Hence, based on Dr. Avera's DCF
18 analysis, adjusted to reflect more reasonable market expectations, I conclude that
19 a return on equity of 10.0% for Avista is reasonable, and it will fairly compensate
20 both investors and ratepayers.

21 **Q. PLEASE DESCRIBE DR. AVERA'S FORWARD-LOOKING RISK**
22 **PREMIUM CAPM ANALYSIS.**

23 **A.** Dr. Avera estimates a forward-looking return on the market of 13.3%. From this
24 market return estimate he then subtracts a long-term Treasury bond yield of 5.0%

1 to arrive at a market risk premium of 8.3%. He relies on the utility beta of 0.99 to
2 produce an implied cost of equity for his comparable group of 13.2%.

3 **Q. IS DR. AVERA'S FORWARD-LOOKING CAPM ANALYSIS**
4 **REASONABLE?**

5 **A.** No. Dr. Avera's 13.3% projected return on the market is highly inflated and
6 unreliable. This market return estimate is based on a DCF analysis that includes a
7 growth rate projection of 11.2% and a dividend yield of 2.1%. Dr. Avera's risk
8 premium is dramatically overstated because it is based on a DCF return on the
9 market that is unattainable.

10 It is simply irrational to expect that the securities market capital
11 appreciation and growth will be 11.2% for an indefinite period of time. This is
12 important because the DCF model requires a sustainable long-term growth rate,
13 not simply a growth rate that might be appropriate for the next five years. The
14 growth rate for the overall securities market must reflect the economy in which
15 the companies operate, and the earnings and dividend paying ability of those
16 companies. Companies produce earnings and dividends by selling goods and
17 services in the marketplace. Hence, companies' earnings growth and sales growth
18 opportunities cannot be substantially in excess of the expected growth in the
19 overall economy. It is simply not a rational expectation to believe that the growth
20 rate of companies will exceed the growth of the overall economy in which they
21 sell their goods and services, and produce earnings to pay dividends for an
22 extended period of time. As I mentioned above, the Blue Chip Economic
23 Forecasts projects a five- to 10-year nominal growth in the GDP, or overall U.S.

1 economy, of 5.0%.^{19/} Hence, expecting a growth rate of 11.2% is in essence
2 assuming the securities market can grow at a rate more than twice the growth rate
3 of the overall U.S. economy. This is simply not a rational expectation.

4 **Q. DO YOU HAVE ANY OTHER ISSUES WITH DR. AVERA'S CAPM**
5 **ANALYSES?**

6 **A.** Yes. Dr. Avera uses a beta of 0.99, which is extremely high. The current utility
7 betas are driven by the utilities' intense capital investment programs, as I
8 discussed earlier. Therefore, I caution reliance on current betas without
9 considering the historical estimates. Over the last five years, utility betas have
10 averaged approximately 0.80. Hence, to reflect a more reasonable estimate of the
11 utilities' risk, I have adjusted Dr. Avera's CAPM studies using a beta of 0.90,
12 which is the midpoint of his beta estimate of 0.99 and the historical beta of 0.80.

13 **Q. WHAT WOULD A MARKET RETURN BE USING A REASONABLE**
14 **ESTIMATE OF SUSTAINABLE GROWTH?**

15 **A.** Ibbotson's data estimates that over the period 1926 through 2006 the arithmetic
16 average growth rate of the S&P 500 has been 7.9%.^{20/} Using this historical
17 growth projection of a long-term sustainable growth rate that should be used in a
18 DCF analysis, along with the current S&P 500 dividend yield of 1.7%, implies a
19 forward-looking return on the S&P 500 of 9.6%.

20 **Q. HOW WOULD DR. AVERA'S FORWARD-LOOKING CAPM RETURN**
21 **ESTIMATE CHANGE IF A REASONABLE FORWARD-LOOKING**
22 **RETURN ON THE MARKET IS USED?**

23 **A.** It is difficult to establish what a reasonable expected return on the market is.
24 However, using an 11.5% expected return on the market, which is the midpoint of

^{19/} Blue Chip Economic Indicators, October 10, 2007.

^{20/} SBBI 2007 Yearbook at 119.

1 Dr. Avera's 13.3% estimate and my 9.6% estimate, would produce a more
2 evenhanded market risk premium estimate. At a market risk premium of
3 11.5%,^{21/} Dr. Avera's forward-looking CAPM analysis would produce a return in
4 the range of 10.8% at the current Treasury yield of 4.9%, and 10.9% using a more
5 recent Treasury yield projection of 5.2%. The midpoint of his forward-looking
6 CAPM would be 10.9%.

7 **Q. PLEASE DESCRIBE DR. AVERA'S HISTORICAL RISK PREMIUM**
8 **ANALYSIS.**

9 **A.** Dr. Avera uses Ibbotson's estimated historical market risk premium of 7.1%.
10 Ibbotson estimates this is based on the achieved return on utility stocks relative to
11 the prevailing income yield on Treasury bonds. For the period 1926 though 2006,
12 Ibbotson estimates this market risk premium to be 7.1%.

13 Using this market risk premium, a utility beta of 0.99, and a current
14 Treasury bond yield of 5.2%, Dr. Avera estimates a CAPM return of 12.0%.

15 **Q. IS DR. AVERA'S ESTIMATED HISTORICAL DERIVED MARKET RISK**
16 **PREMIUM CAPM ANALYSIS REASONABLE?**

17 **A.** No. Dr. Avera's reliance on Ibbotson's market risk premium of 7.1% is
18 unreasonable because Ibbotson's methodology is flawed. Specifically, Ibbotson
19 estimates a market risk premium by subtracting the total achieved return on equity
20 stock investments, from the income return on Treasury bonds. The difference
21 between the income return and total achieved return is a material factor in
22 properly constructing the premium an investor receives by making investments in
23 equities, versus low-risk Treasury securities.

^{21/} Note that this market return is similar to the arithmetic historical return on the S&P 500 of 12.5% (1929 to 2004).

1 Ibbotson calculates a historical achieved total return on equity investments
2 by considering both capital appreciation and income returns. In contrast, its
3 income return on bonds ignores capital appreciations on bonds, and only
4 considers the contemporary income return or coupon yield. The income return
5 simply represents the coupon yield of the bond in any given year. The coupon
6 yield represents a forward-looking expected yield if capital appreciation is
7 nonexistent. Consequently, Ibbotson's methodology mismatches a historical
8 equity return with a prospective bond return. This is an apples-to-oranges method
9 of estimating the return premium realized by investing in equity securities rather
10 than Treasury bonds. Hence, the Ibbotson methodology is flawed and should be
11 rejected.

12 While Ibbotson's proposed market risk premium is flawed, the Ibbotson
13 yearbook does contain information that permits a proper estimate of a market risk
14 premium. Specifically, the Ibbotson manual demonstrates that the total achieved
15 historical return on equity investments over the period 1926 through 2006 has
16 been 12.3%, and the total achieved historical return on Treasury bonds over this
17 same time period has been 5.8%.^{22/} Hence, the premium for investing in equities
18 relative to low-risk Treasury securities has been 6.5% over the historical time
19 period. This is a proper and consistent use of market investment data that
20 produces the true market risk premium.

^{22/} SBBI 2007 Yearbook at 31.

1 **Q. HOW WOULD DR. AVERA'S HISTORICAL CAPM ANALYSIS**
2 **CHANGE IF A MORE REASONABLE MARKET RISK PREMIUM**
3 **ESTIMATE IS USED?**

4 **A.** Using a market risk premium of 6.5%, and a utility beta of 0.90, and a current
5 Treasury bond yield of 4.9% and current projected Treasury bond yield of 5.2%
6 would produce a return on equity of approximately 10.8% to 11.1%, with a
7 midpoint of 10.9%.

8 **Q PLEASE DESCRIBE DR. AVERA'S COMPARABLE EARNINGS**
9 **ANALYSIS.**

10 **A** Dr. Avera's comparable earnings analysis was based on an assessment of the
11 earned return on book equities for various companies followed by The Value Line
12 Investment Survey. Based on a review of projected earnings over the next three
13 to five years, Dr. Avera estimated a return on equity for Avista using this
14 methodology to be 11.0%.^{23/}

15 **Q IS THE COMPARABLE EARNINGS ANALYSIS A REASONABLE**
16 **METHOD FOR ESTIMATING A FAIR RETURN ON EQUITY FOR**
17 **AVISTA?**

18 **A.** No. A comparable earnings analysis does not measure the return an investor
19 requires in order to make an investment. Rather, it measures the earned return on
20 book equity companies have experienced in the past, or are projected to achieve in
21 the future. The returns investors require in order to assume the risk of an
22 investment are measured from prevailing stock market prices. A comparable
23 earnings analysis measures an accounting return on book equity. Therefore, the
24 return is not developed from market observable data. The return estimated from a
25 comparable earnings analysis can be significantly different than returns investors

^{23/} Exhibit No.__(WEA-1T) at 30.

1 currently require. Therefore, Dr. Avera's comparable earnings approach should
2 be rejected.

3 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

4 **A. Yes.**