BEFORE THE

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

	)	
WASHINGTON UTILITIES AND	)	
TRANSPORTATION COMMISSION,	)	
	)	DOCKETS UE-170485 and
Complainant,	)	UG-170486 (*Consolidated*)
	)	
v.	)	
	)	
AVISTA CORPORATION, DBA	)	
AVISTA UTILITIES,	)	
	)	
Respondent.	)	
	)	

RESPONSE TESTIMONY OF MICHAEL P. GORMAN

ON BEHALF OF

THE INDUSTRIAL CUSTOMERS OF NORTHWEST UTILITIES

October 27, 2017

TABLE OF CONTENTS

Exhibit MPG-2: Qualifications of Michael P. Gorman
Exhibit MPG-3: Rate of Return
Exhibit MPG-4: Valuation Metrics
Exhibit MPG-5: Timeline for Federal Funds Rate Increases
Exhibit MPG-6: Cost of Long-Term Debt
Exhibit MPG-7: Proxy Group
Exhibit MPG-8: Consensus Analysts' Growth Rates
Exhibit MPG-9: Constant Growth DCF Model (Consensus Analysts' Growth Rates)
Exhibit MPG-10: Payout Ratios
Exhibit MPG-11: Sustainable Growth Rate
Exhibit MPG-12: Constant Growth DCF Model (Sustainable Growth Rate)
Exhibit MPG-13: Electricity Sales are Linked to U.S. Economic Growth
Exhibit MPG-14: Multi-Stage Growth DCF Model
Exhibit MPG-15: Common Stock Market/Book Ratio
Exhibit MPG-16: Equity Risk Premium – Treasury Bond
Exhibit MPG-17: Equity Risk Premium – Utility Bond
Exhibit MPG-18: Bond Yield Spreads
Exhibit MPG-19: Treasury and Utility Bond Yields
Exhibit MPG-20: Value Line Beta
Exhibit MPG-21: CAPM Return
Exhibit MPG-22: Standard & Poor's Credit Metrics
Exhibit MPG-23: Accuracy of Interest Rates

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

2 **A.** Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140,

3 Chesterfield, MO 63017.

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

5 **A.** I am a consultant in the field of public utility regulation and a Managing Principal of

6 Brubaker & Associates, Inc., energy, economic and regulatory consultants.

7 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
8 **EXPERIENCE.**

9 **A.** These are set forth in Exhibit MPG-2.

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

11 **A.** I am appearing on behalf of the Industrial Customers of Northwest Utilities ("ICNU"),

12 an association of large industrial businesses, some of whom are customers of Avista

13 Corporation ("Avista" or the "Company").

14 **Q. WHAT IS THE PURPOSE OF YOUR RESPONSE TESTIMONY?**

15 **A.** My testimony will address the current market cost of equity, and resulting overall rate

16 of return, for Avista. In my analyses, I consider the results of several market models

17 and the current economic environment and outlook for the electric utility industry as

18 well as the financial integrity of Avista given my recommended return on equity,

19 capital structure, and overall rate of return.

20 My silence in regard to any issue should not be construed as an endorsement of

21 Avista's position.

I. SUMMARY

2 **Q.** **PLEASE SUMMARIZE YOUR RECOMMENDATIONS AND CONCLUSIONS**
3   **ON RATE OF RETURN.**

4 **A.** I recommend the Washington Utilities and Transportation Commission (the

5   "Commission") award a return on common equity of 9.10%, which is the approximate

6   midpoint of my recommended range of 8.80% to 9.30%. My recommended return on

7   equity will fairly compensate Avista for its current market cost of common equity, and

8   it will mitigate the claimed revenue deficiency in this proceeding by fairly balancing

9   the interests of all stakeholders.

10   I propose an adjustment to the Company's proposed ratemaking capital

11   structure in its projected test year. The Company proposes to increase its common

12   equity ratio of capital relative to its actual capital structure in 2016. The Company's

13   projected test year capital structure contains 50% equity and 50% debt. The actual

14   capital structure at year-end 2016 is based on 48.4% equity, and 51.6% long-term and

15   short-term debt. The Company's actual year-end capital structure has been recognized

16   by credit rating analysts as supportive of the Company's investment grade bond rating,

17   and has provided Avista with access to capital to support its capital program.

18   Increasing the common equity ratio as proposed by the Company will unnecessarily

19   increase the claimed revenue deficiency in this proceeding. As such, I recommend

20   maintaining Avista's actual year-end 2016 capital structure to use as a ratemaking

21   capital structure in this proceeding. This capital structure is also reasonably in line

22   with Avista's capital structure approved in its last rate case in Washington.

1   I also propose an adjustment to Avista's embedded debt cost to reflect the

2   refinancing of first mortgage bonds that mature in 2018. This adjustment reduces

3   Avista's embedded debt cost to 5.31% from 5.62%.

4   The overall rate of return produced by my recommended return on common

5   equity, and ratemaking capital structure for Avista produces an overall rate of return of

6   7.09%, as shown on my Exhibit MPG-3.

7   Finally, I will show that Avista witness Mr. McKenzie's recommended range

8   of 9.6% to 10.8%, and Avista's requested return on equity of 9.9% are excessive and

9   unreasonable.

10   **Q. DO YOU BELIEVE MARKET-BASED MODELS PRODUCE REASONABLE**
11   **ESTIMATES OF AVISTA'S CURRENT COST OF EQUITY?**

12   **A.** Yes. I believe the application of a Discounted Cash Flow ("DCF") analysis, risk

13   premium, and Capital Asset Pricing Model ("CAPM") produces reasonable and

14   accurate estimates of the current market cost of equity for Avista and other utility

15   companies of similar investment risk. More specifically, I disagree with Avista

16   witness Mr. McKenzie's suggestion that the current capital market conditions are

17   affected by unprecedented policy measures and that the Commission should consider

18   near-term interest forecasts in determining Avista's fair return on equity.[1]

19   **Q. PLEASE EXPLAIN WHY YOU BELIEVE THE MARKET MODELS**
20   **PRODUCE A REASONABLE ESTIMATE OF AVISTA'S MARKET COST OF**
21   **COMMON EQUITY.**

22   **A.** While the FERC conclusions in Opinion 531 in regard to the reliability of the DCF

23   model might have been relevant three years ago, the market now is embracing the low

24   capital costs environment and the expectations are reflected in the market derived

---

[1]   McKenzie, Exh. AMM-1T at 14-21.

1   models used by Mr. McKenzie and me. Specifically, the results of the DCF model are

2   economically logical in comparison to alternative income investments and exhibit

3   robust growth outlooks.

4   The DCF results generally produce economically logical results by comparison

5   of the two major components of the DCF return: (1) the dividend yield, and (2) the

6   growth rate. The utility stock investments are both income investments and growth

7   investments. Hence, the stock yield component of the DCF model can be compared to

8   alternative income investments of comparable risk to assess how it compares to

9   alternative market investments.

10   On my Exhibit MPG-4, page 4, I show a comparison of electric utility stock

11   dividend yields compared to A-rated utility bond yields. This is an approximate risk

12   comparable investment for the income component of a utility stock DCF return. As

13   shown on this schedule, utility stock yields are around 3.5%, which compares to

14   A-rated utility bond yields of around 4.0%. This spread of around 50 basis points is

15   relatively low in comparison to the 12-year average shown on this schedule. A high

16   utility stock yield relative to an A-rated utility bond yield is an indication that the DCF

17   model yield component is higher than normal and thus is a robust income return

18   relative to alternative similar risk income investments.

19   From a DCF growth perspective, utility stocks are also producing strong

20   growth outlooks relative to the past. The industry historical growth in dividends has

21   been around 4.0% to 4.5%.[2] This compares to outlooks for future growth in utility

22   dividends and earnings of around 4.5% to 5.5%. These growth outlooks will be

---

[2]   Gorman, Exh. MPG-4 at 5.

1   discussed in more detail later in this testimony. As such, a DCF return on utility

2   stocks reflects a yield and a growth component that both reflect robust return outlooks

3   for utility stock investors, and are economically logical in comparison to alternative

4   investments of comparable risk.

5   Further, as discussed in more detail later in this testimony, the CAPM return

6   also reflects a relatively low risk-free rate by historical standards, but this low risk-free

7   rate is combined with a market risk premium that is above historical actual achieved

8   market risk premiums relative to Treasury bond investments. Thus, the CAPM return

9   estimate is also economically logical based on observable market fundamentals and

10   alternative investments.

11   For these reasons, Avista witness McKenzie's contention that the Commission

12   should focus on projected increases in interest rates is without merit and should be

13   disregarded.

II. RATE OF RETURN

15   Q.   PLEASE DESCRIBE THIS SECTION OF YOUR TESTIMONY.

16   A.   In this section of my testimony, I will explain the analysis I performed to determine

17   the reasonable rate of return in this proceeding and present the results of my analysis.

18   I begin my estimate of a fair return on equity by reviewing the authorized returns

19   approved by the regulatory commissions in various jurisdictions, the market

20   assessment of the regulated utility industry investment risk, credit standing, and stock

21   price performance. I used this information to get a sense of the market's perception of

22   the risk characteristics of regulated electric utility investments in general, which is

23   then used to produce a refined estimate of the market's return requirement for

24   assuming investment risk similar to Avista's utility operations.

1   As described below, I find the credit rating outlook of the industry to be strong

2   and supportive of the industry's financial integrity and access to capital. Further,

3   regulated utilities' stocks have exhibited strong price performance over the last several

4   years, which is evidence of utility access to capital.
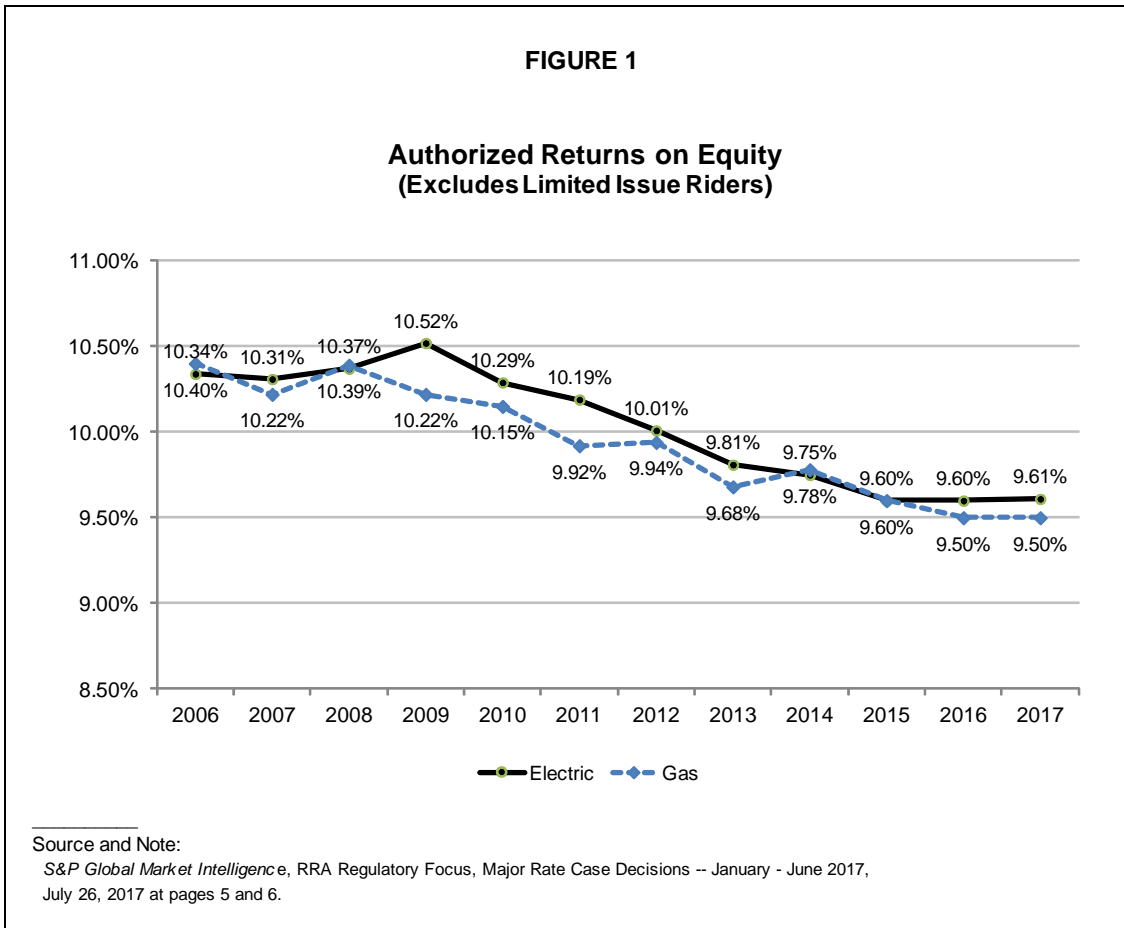
5   Based on this review of credit outlooks and stock price performance, I

6   conclude that the market continues to embrace the regulated utility industry as a

7   safe-haven investment and views utility equity and debt investments as low-risk

8   securities.

9   **II.A.   Electric Industry Authorized Returns on Equity,**
10   **Access to Capital, and Credit Strength**

11   **Q.   PLEASE DESCRIBE THE OBSERVABLE EVIDENCE ON TRENDS IN**
12   **AUTHORIZED RETURNS ON EQUITY FOR ELECTRIC AND GAS**
13   **UTILITIES, UTILITIES' CREDIT STANDING, AND UTILITIES' ACCESS**
14   **TO CAPITAL TO FUND INFRASTRUCTURE INVESTMENT.**

15   **A.**   Authorized returns on equity for both electric and gas utilities have been steadily

16   declining over the last 10 years, as illustrated in Figure 1 below. More recent

17   authorized returns on equity for electric utilities have declined down to about 9.60%,

18   and local gas delivery utilities' returns on equity have declined to 9.50%. Further,

19   authorized returns for local gas delivery utilities have consistently trended at or below

20   the returns authorized for electric utilities.

FIGURE 1

Authorized Returns on Equity
(Excludes Limited Issue Riders)

_____
Source and Note:
S&P Global Market Intelligenc e, RRA Regulatory Focus, Major Rate Case Decisions -- January - June 2017,
July 26, 2017 at pages 5 and 6.

1   While the declines in authorized returns on equity are public knowledge, and

2   align with declining capital market costs, utilities are maintaining stable investment

3   grade credit standing, and have been able to attract large amounts of capital at low

4   costs to fund very large capital programs.

5   **Q.   PLEASE DESCRIBE THE TREND IN CREDIT RATING CHANGES IN THE**
6   **ELECTRIC UTILITY INDUSTRY OVER THE LAST FIVE YEARS.**

7   **A.**   As shown in Figure 2 below, over the period 2010 – Q1, 2017, the electric utility

8   industry has experienced a significant number of upgrades in credit ratings by all of

9   the major credit rating agencies (Fitch Ratings, Moody's, and Standard & Poor's).

FIGURE 2

Credit Rating Changes
(U.S. Investor-Owned Electric Utility Industry)

	2010	2011	2012	2013	2014	2015	2016	2017 Q1
Upgrades	29	39	37	60	103	35	49	13
Downgrades	51	21	39	20	3	15	18	5
% Upgrades	36.3%	65.0%	48.7%	75.0%	97.2%	70.0%	73.1%	72.2%
Total Rating Activity	**80**	**60**	**76**	**80**	**106**	**50**	**67**	**18**
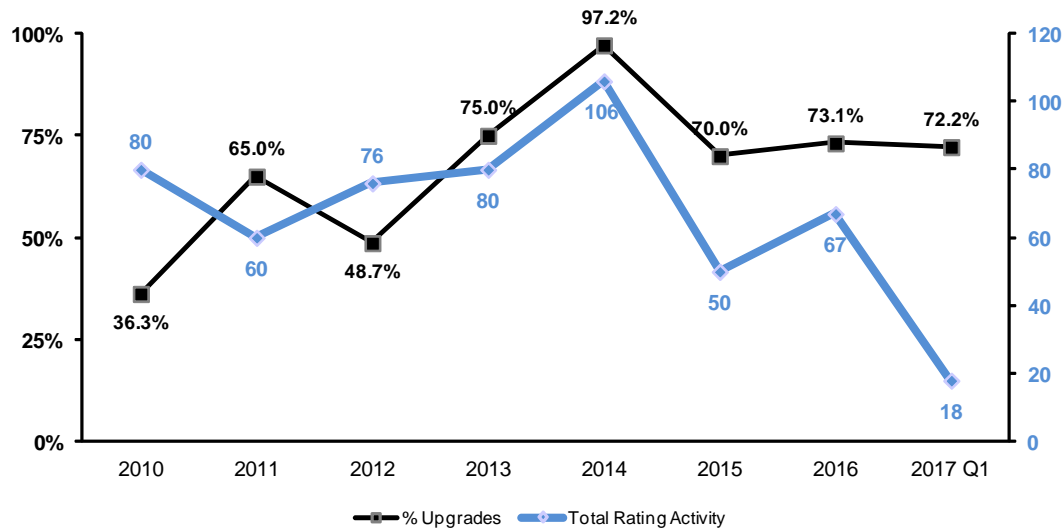
Source: EEI 2017 Q1 Credit Ratings. Tab IV. Direction of Rating Action.

1   As noted above in Figure 2, the upgrades in utility credit ratings started

2   outpacing downgrades in 2011, and more recently, the number of upgrades has

3   substantially exceeded the number of downgrades. For example, in 2014, there were

4   103 upgrades and only three downgrades. In 2015, the number of upgrades was more

5   than twice the number of downgrades (35 upgrades and 15 downgrades). This trend

6   was even more profound in 2016 and continued with data available for early 2017.

7 **Q. HOW DID THIS CREDIT RATING ACTIVITY IMPACT THE CREDIT**
8   **RATING OF THE ELECTRIC UTILITY INDUSTRY?**

9 **A.**   The credit rating changes for the electric utility industry reflected a significant

10   strengthening of the electric utility industry credit rating as shown below in Table 1.

1   As shown in this table, in 2008, approximately 69% of the electric utility industry was

2   rated from BBB- to BBB+, 18% had a bond rating better than BBB+, and around 13%

3   of the industry was below investment grade. This industry rating improved steadily

4   over the subsequent eight years. By 2017, none of the industry is below investment

5   grade, around 62% continue to be in the range of BBB- to BBB+, and approximately

6   68% of the industry has a bond rating at or above BBB+. Overall, the improvement to

7   the credit rating of the electric utility industry has been very significant.

TABLE 1

S&P Ratings by Category
(Year End)

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Q1
Regulated										
A or higher	**8%**	7%	9%	8%	6%	3%	3%	3%	6%	**6%**
A-	**10%**	15%	14%	14%	17%	20%	21%	22%	28%	**31%**
BBB+	**23%**	22%	17%	19%	14%	17%	32%	33%	36%	**31%**
BBB	23%	27%	31%	35%	36%	49%	37%	33%	22%	20%
BBB-	23%	20%	17%	14%	17%	6%	3%	3%	8%	11%
Below BBB-	13%	10%	11%	11%	11%	6%	5%	6%	0%	0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: EEI 2017 Q1 Credit Ratings. Tab V. S&P Rating by Comp. Category.

8   **Q.   HAVE CREDIT RATING AGENCIES COMMENTED ON DECLINING**
9   **AUTHORIZED RETURNS ON EQUITY?**

10   **A.**   Yes. Credit rating agencies recognize the declining trend in authorized returns and the

11   expectation that regulators will continue lowering the returns for U.S. utilities while

12   maintaining a stable credit profile. Specifically, Moody's states:

1		**Lower Authorized Equity Returns Will Not Hurt Near-Term**
2		**Credit Profiles**

3   The credit profiles of US regulated utilities will remain intact over the
4   next few years despite our expectation that regulators will continue to
5   trim the sector's profitability by lowering its authorized returns on
6   equity (ROE).[3]

7   Further, in a recent report, Standard & Poor's ("S&P") states:

8   **2. Earned returns will remain in line with authorized returns**

9   Authorized returns on equity granted by U.S. utility regulators in rate
10   cases this year have been steady at about 9.5%. Utilities have been
11   adept at earning at or very near those authorized returns in today's
12   economic and fiscal environment. A slowly recovering economy,
13   natural gas and electric prices coming down and then stabilizing at
14   fairly low levels, and the same experience with interest rates have led to
15   a perfect "non-storm" for utility ratepayers and regulators, with utilities
16   benefitting alongside those important constituencies. Utilities have
17   largely used this protracted period of favorable circumstances to
18   consolidate and institutionalize the regulatory practices that support
19   earnings and cash flow stability. We have observed and we project
20   continued use of credit-supportive policies such as short lags between
21   rate filings and final decisions, up-to-date test years, flexible and
22   dynamic tariff clauses for major expense items, and alternative
23   ratemaking approaches that allow faster rate recognition for some new
24   investments.[4]

25 **Q.** **HAVE UTILITIES BEEN ABLE TO ACCESS EXTERNAL CAPITAL TO**
26   **SUPPORT INFRASTRUCTURE CAPITAL PROGRAMS?**

27 **A.** Yes. While cost of capital and authorized returns on equity were declining, the utility

28   industry has been able to fund substantial increases in capital investments needed for

29   infrastructure modernization and expansion.

---

[3]   *Moody's Investors Service*, "US Regulated Utilities: Lower Authorized Equity Returns Will Not Hurt Near-Term Credit Profiles," March 10, 2015.

[4]   *Standard & Poor's Ratings Services*: "Corporate Industry Credit Research: Industry Top Trends 2016, Utilities," December 9, 2015, at 23, emphasis added.

1   In its October 23, 2017 Capital Expenditure Update report, *RRA Financial*

2   *Focus*, a division of S&P Global Market Intelligence, made several relevant comments

3   about utility investments generally:

4   • Projected 2017 capital expenditures for the 53 gas and electric utilities
5   in the RRA universe has stayed steady at about $117.5 billion, which
6   would be an all-time high for the sector.

7   • CapEx projections for the longer term increased modestly from our
8   previous analysis in March 2017, rising to $111.8 billion for 2018 and
9          $102.4 billion for 2019, as companies' plans for future projects
10   solidified and new opportunities arose.

11   The nation's electric and gas utilities are investing in infrastructure to
12   upgrade aging transmission and distribution systems, build new natural
13   gas, solar and wind generation and implement new technologies. We
14   expect considerable levels of spending to serve as the basis for solid
15   profit expansion for the foreseeable future.[5]

16   Indeed, historical versus projected outlooks for the electric industry's capital

17   investments are shown in Figure 3 below. As shown in this graph, electric industry

18   investment outlooks are expected to be considerably higher relative to the last 10-year

19   historical period.   As noted by S&P Global Market Intelligence, this capital

20   investment is exceeding internal sources of funds to the electric utilities, requiring

21   them to seek external capital to fund capital investments.

---

[5]   S&P Global Market Intelligence, RRA Financial Focus: "Utility Capital Expenditures,"
       October 23, 2017, Table 1.

FIGURE 3

Electric Utility Capital Expenditures

Source: *S&P Global Market Intelligence, RRA Financial Focus*, Utility Capital Expenditures, October 23, 2017, Table 1.
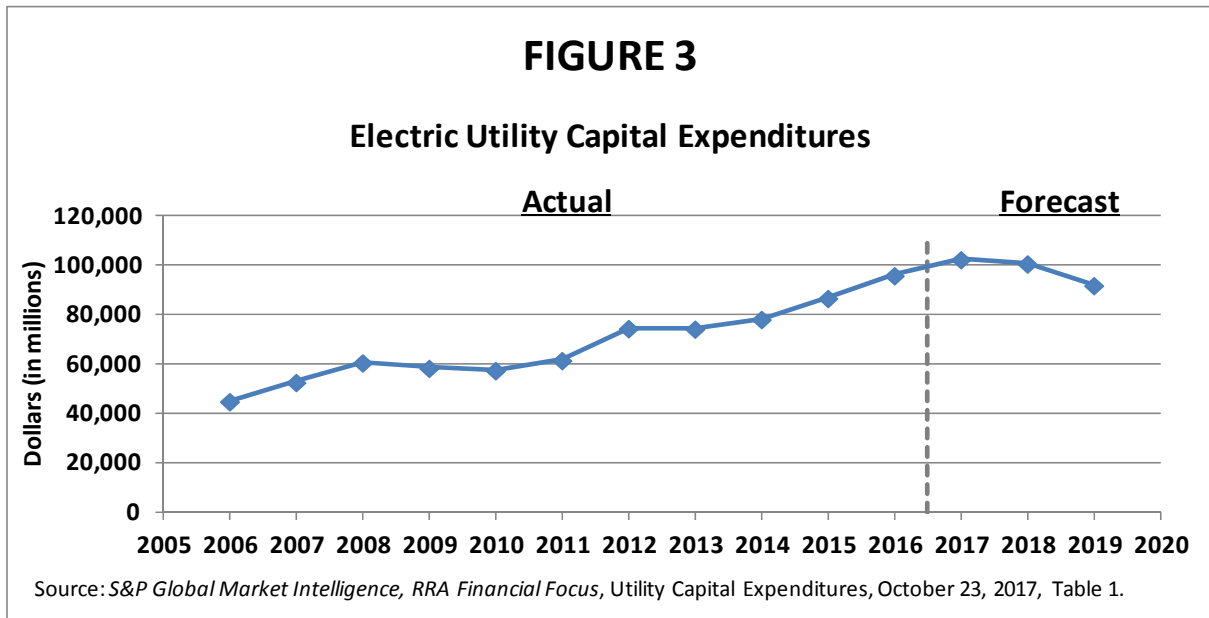
1 Q.   **IS THERE EVIDENCE OF ROBUST VALUATIONS OF ELECTRIC UTILITY**
2   **EQUITY SECURITIES?**

3 A.   Yes. On my Exhibit MPG-4, pages 1-3, I show the historical valuation of the electric

4   utility industry followed by *Value Line* based on price-to-earnings ratio, price-to-cash

5   flow ratio and market price-to-book value ratio indicators.   These electric utility

6   industry security valuation metrics show that current electric utility stock valuations

7   are very strong and robust relative to the last 10 to 15 years. These robust valuations

8   are an indication that utilities can sell equity securities at high prices, which is a strong

9   indication that they can access capital under reasonable terms and conditions, and at

10   relatively low cost.

11 Q.   **HOW SHOULD THE COMMISSION USE THIS MARKET INFORMATION**
12   **IN ASSESSING A FAIR RETURN FOR AVISTA?**

13 A.   Market evidence is quite clear that capital market costs are near historically low levels.

14   Authorized returns on equity have fallen to the mid 9.0% range; utilities continue to

15   have access to large amounts of external capital to fund large capital programs; and

16   utilities' investment grade credit standings are stable and have improved due, in part,

1   to supportive regulatory treatment. The Commission should carefully weigh all this

2   important observable market evidence in assessing a fair return on equity for Avista.

3 **II.B. Regulated Utility Industry Market Outlook**

4 **Q.**   **PLEASE DESCRIBE THE CREDIT RATING OUTLOOK FOR REGULATED**
5   **UTILITIES.**

6 **A.**   Regulated utilities' credit ratings have improved over the last few years and the

7   outlook has been labeled "Stable" by credit rating agencies. Credit analysts have also

8   observed that utilities have strong access to capital at attractive pricing (i.e., low

9   capital costs), which has supported very large capital programs.

10   S&P recently published a report titled "Corporate Industry Credit Research:

11   Industry Top Trends 2017, Utilities." In that report, S&P noted the following:

12   – **Ratings Outlook**: <u>Rating trends across regulated utilities remain</u>
13   <u>mostly stable supported by stable regulatory oversight</u>, slow but steady
14   demand for utility services, and tempered by aggressive capital
15   spending that will keep credit metrics from improving.

16   *   *   *

17   – **Forecasts:** Credit ratios are likely to be stable in 2017 with some
18   slight downside risk as revenue growth will be modest in most regions
19   in keeping with the slow demand growth in regions where the utility
20   industries are mature.

21   *   *   *

22   – **Assumptions:** <u>Sales growth at most utilities is closely tied to the</u>
23   <u>general economic outlook in its service territory</u>, which can vary
24   considerably from utility to utility.

25   *   *   *

26   – **Risks:** Transformative risks abound in utility industries. Corporate
27   transformations (M&A) are an ever-present risk to ratings. Electric
28   generation transformation is ongoing as carbon concerns and other
29   environmental considerations lead utilities to change the mix of fuel
30   sources. Grid transformation is becoming more prominent as utilities

1   react to technological advances and the need for greater attention to
2   cyber security.

3   **– Industry Trends:** The <u>utility industry in most regions is stable,</u>
4   consistent with our general ratings outlook and the nature of the
5   essential products and services utilities sell.[6]

6   Moody's recent comments on the U.S. Utility Sector state as follows:

7   **2017 Outlook - <u>Timely Cost-Recovery Drives Stable Outlook</u>**

8   Our outlook for the US regulated utilities industry is stable.   This
9   outlook reflects our expectations for the fundamental business
10   conditions in the industry over the next 12 to 18 months.

11   **A credit-supportive regulatory environment is the main driver of**
12   **our stable outlook.**   Our stable outlook for the US regulated utility
13   industry is based on our expectation that utilities will continue to
14   recover costs in a timely manner and maintain stable cash flows.

15   **CFO-to-debt ratios will hold steady in 2017**.   Utilities are contending
16   with flat to lower power demand and lower allowed returns on equity.[7]

17   **Q.   PLEASE DESCRIBE UTILITY STOCK PRICE PERFORMANCE OVER THE**
18   **LAST SEVERAL YEARS.**

19   **A.**   As shown in Figure 4 below, SNL Financial has recorded utility stock price

20   performance compared to the market. The industry's stock performance data from

21   2004 through the first half of 2017 shows that the SNL Electric Company Index has

22   outperformed the market in downturns and trailed the market during recovery. This

23   relatively stable price performance for utilities supports my conclusion that utility

24   stock investments are regarded by market participants as a moderate- to low-risk

25   investment.

---

[6]   *Standard & Poor's Global Ratings*:   "Industry Top Trends 2017: Utilities," February 16, 2017, at 1, emphasis added.
[7]   *Moody's Investors Service*: "Regulated Utilities - US: 2017 Outlook – Timely Cost-Recovery Drives Stable Outlook," November 4, 2016, at 1, emphasis added.

FIGURE 4

Index Comparison

Source: SNL Financial.
*Data through June 30, 2017
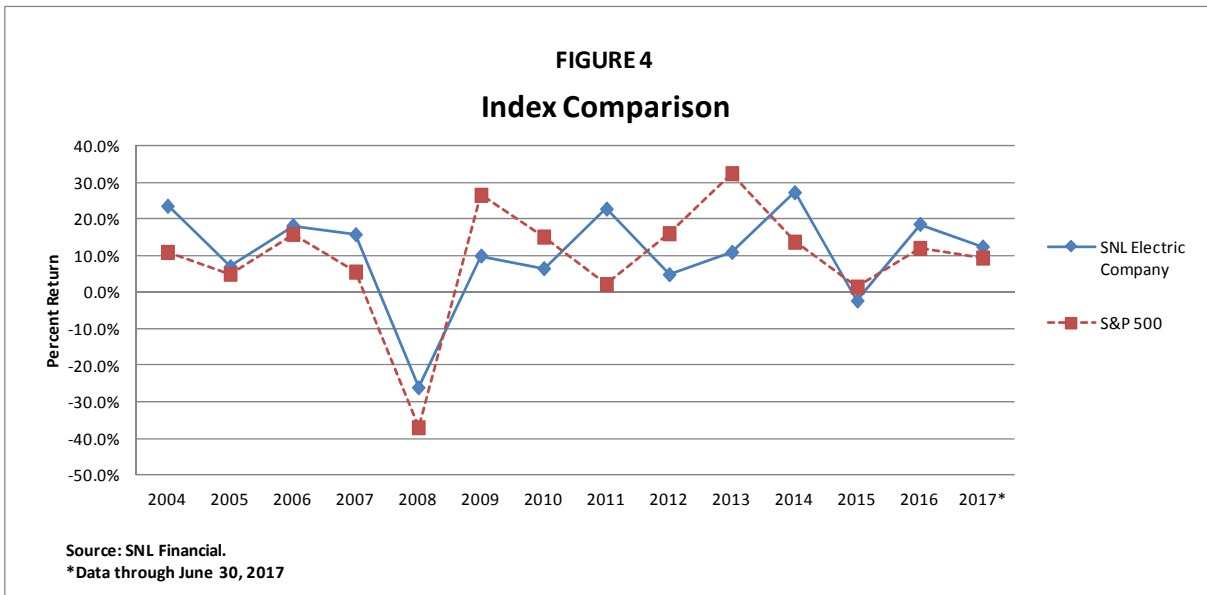
1 **Q.**   **HAVE ELECTRIC UTILITY INDUSTRY TRADE ORGANIZATIONS**
2   **COMMENTED ON ELECTRIC UTILITY STOCK PRICE PERFORMANCE?**

3 **A.**   Yes. In its 4th Quarter 2016 Financial Update, the EEI stated the following

4   concerning the EEI Electric Utility Stock Index ("EEI Index"):

5   **Industry Fundamentals Remain Stable**

6   There was little meaningful change in the industry's fundamental
7   picture during 2016. Electricity demand remained virtually flat; total
8   electric output rose only 0.2% over the level in 2015 in the lower 48
9   states. Nationwide power demand has, in fact, been about flat for a
10   decade. . . In response, a number of state utility commissions have
11   adapted rate designs that help utilities cope with flat demand while still
12   enabling investment required to comply with environmental
13   requirements, grid modernization and upgrades to vital infrastructure.
14   Nevertheless, the outlook for flat demand is a "new normal" that
15   represents a departure from the consistent demand growth that
16   characterized the industry's experience for more than a century.

17   *   *   *

18   While utility regulation largely occurs at the state level and must be
19   analyzed state by state, <u>industry analysts at yearend generally viewed</u>
20   <u>regulation as largely fair and balanced overall for the industry taken as</u>
21   <u>a whole.</u> While allowed return on equity has come down in recent
22   years, so have interest rates. Moody's in early 2017 called the
23   industry's credit outlook "stable" based on expectation that utilities will

| 1 | | continue to recover costs in a timely manner and maintain stable cash |
| 2 | | flows.[8/] |

3 **Q.** **WHAT ARE THE IMPORTANT TAKEAWAY POINTS FROM THIS**
4   **ASSESSMENT OF UTILITY INDUSTRY CREDIT AND INVESTMENT RISK**
5   **OUTLOOKS?**

6 **A.** Credit rating agencies consider the regulated utility industry to be "Stable" and believe

7   investors will continue to provide an abundance of low-cost capital to support utilities'

8   large capital programs at attractive costs and terms. All of this reinforces my belief

9   that utility investments are generally regarded as safe-haven or low-risk investments

10   and the market continues to demand low-risk investments such as utility securities.

11   The ongoing demand for low-risk investments can reasonably be expected to continue

12   to provide attractive low-cost capital for regulated utilities.

13 **II.C. Federal Reserve and Market Capital Costs Outlook**

14 **Q.** **HAVE YOU CONSIDERED CONSENSUS MARKET OUTLOOKS FOR**
15   **CHANGES IN INTEREST RATES IN FORMING YOUR RECOMMENDED**
16   **RETURN ON EQUITY IN THIS CASE?**

17 **A.** Yes.   The outlook for changes in interest rates has been highly impacted by

18   expectations that the Federal Reserve Bank Open Market Committee ("FOMC") will

19   raise short-term interest rates, and outlooks for inflation and GDP growth after the

20   recent Presidential election.   The consensus economists are expecting continued

21   increases in the Federal Funds Rate as the FOMC continues to normalize interest rates

22   in response to the strengthening of the U.S. economy.

23   This is evident from a comparison of current and forecasted changes in the

24   Federal Funds Rate, as shown in Table 2 below. However, while the Federal Funds

25   Rate is expected to increase over the next several years, consensus economists are not

---

[8/]   *EEI Q4 2016 Financial Update*: "Stock Performance" at 5-6, emphasis added.

1   projecting significant increases in long-term interest rates. This is also illustrated in

2   Table 2 below.

TABLE 2

Blue Chip Financial Forecasts
Projected Federal Funds Rate, 30-Year Treasury Bond Yields, and GDP Price Index

Publication Date	3Q 2016	4Q 2016	1Q 2017	2Q 2017	3Q 2017	4Q 2017	1Q 2018	2Q 2018	3Q 2018	4Q 2018	1Q 2019
Federal Funds Rate											
Dec-16	**0.4**	0.5	0.7	0.8	1.0	1.1	1.3				
Jan-17		0.4	0.7	0.8	1.0	1.2	1.3	1.5			
Feb-17		**0.5**	0.7	0.8	1.0	1.1	1.3	1.6			
Mar-17		**0.5**	0.7	0.8	1.0	1.2	1.4	1.6			
Apr-17			0.7	0.9	1.1	1.3	1.5	1.7	1.9		
May-17			**0.7**	1.0	1.2	1.3	1.5	1.7	1.9		
Jun-17			**0.7**	1.0	1.2	1.4	1.5	1.7	1.9		
Jul-17				0.9	1.2	1.3	1.5	1.7	1.9	2.1	
Aug-17				**0.9**	1.2	1.3	1.5	1.6	1.8	2.0	
Sep-17				**0.9**	1.2	1.3	1.5	1.6	1.8	2.0	
Oct-17					1.2	1.2	1.4	1.6	1.8	2.0	2.2
T-Bond, 30 yr.											
Dec-16	**2.3**	2.8	3.0	3.1	3.2	3.3	3.4				
Jan-17		2.8	3.1	3.2	3.3	3.5	3.6	3.7			
Feb-17		**2.8**	3.1	3.2	3.4	3.5	3.6	3.7			
Mar-17		**2.8**	3.1	3.2	3.3	3.5	3.6	3.7			
Apr-17			3.1	3.2	3.3	3.5	3.6	3.7	3.8		
May-17			**3.0**	3.1	3.3	3.4	3.5	3.6	3.7		
Jun-17			**3.0**	3.0	3.2	3.4	3.5	3.6	3.7		
Jul-17				2.9	3.0	3.2	3.3	3.5	3.6	3.7	
Aug-17				**2.9**	3.0	3.1	3.3	3.4	3.6	3.7	
Sep-17				**2.9**	2.9	3.1	3.2	3.4	3.5	3.6	
Oct-17					2.8	2.9	3.1	3.3	3.4	3.5	3.6
GDP Price Index											
Dec-16	**1.5**	2.1	1.9	2.1	2.1	2.1	2.2				
Jan-17		2.1	2.0	2.1	2.1	2.1	2.2	2.2			
Feb-17		**2.1**	2.0	2.1	2.0	2.1	2.1	2.2			
Mar-17		**2.1**	2.2	2.0	2.1	2.1	2.2	2.2			
Apr-17			2.2	1.9	2.1	2.2	2.3	2.2	2.2		
May-17			**2.3**	1.7	2.1	2.1	2.2	2.2	2.2		
Jun-17			**2.2**	1.5	2.0	2.1	2.2	2.1	2.2		
Jul-17				1.3	1.9	2.0	2.1	2.1	2.1	2.2	
Aug-17				**1.0**	1.7	2.0	2.1	2.1	2.1	2.2	
Sep-17				**1.0**	1.7	2.0	2.1	2.0	2.1	2.1	
Oct-17					1.7	2.0	1.9	1.9	2.1	2.1	2.2

Source and Note:
Blue Chip Financial Forecasts, December 2016 through October 2017.
Actual Yields in Bold

1   I note that the four increases in the Federal Funds Rate experienced over the

2   last few years have not caused comparable changes in outlooks for changes in long-

3   term interest rates. This is illustrated on my attached Exhibit MPG-5. As shown on

4   that exhibit, the actions taken by the FOMC to increase the Federal Funds Rate have

5   simply flattened the yield curve, and have not resulted in an increase in long-term

6   interest rates. This is significant because cost of common equity is impacted by long-

7   term interest rates, not short-term interest rates. As a result, the recent increases in the

8   Federal Funds Rate, and the expectation of continued increases in the Federal Funds

9   Rate, have not, and are not expected to, significantly impact long-term interest rates.

10   In a recent Federal Reserve meeting, it also announced a strategy to begin to

11   unwind its balance sheet position in long-term securities toward the end of this year.

12   Currently, the Federal Reserve has built up over approximately $4.7 trillion of

13   Treasury and mortgage-backed securities as part of a quantitative easing ("QE")

14   program that spanned 2008 to 2014. During this QE program, the Federal Reserve

15   procured long-term securities in an effort to support the Federal Reserve's monetary

16   policy and mitigate long-term interest rates. The Fed has announced plans to

17   gradually unwind the balance sheet holdings.[9]

18   For these reasons, the Federal Reserve actions on short-term interest rates have

19   not resulted in increases in long-term interest rates. Further, the Federal Reserve's

20   proposed plan for unwinding its balance sheet position is not expected to have a

21   significant impact on long-term interest rates. All this indicates that the Federal

22   Reserve QE monetary policy changes related to a strengthening economy have not and

---

[9]   Board of Governors of the Federal Reserve System, Press Release, "Federal Reserve Issues FOMC Statement," June 14, 2017.

Response Testimony of Michael P. Gorman   Exhibit MPG-1T
Dockets UE-170485 and UG-170486 *(Consolidated)*   Page 18

1   are not expected to increase long-term interest rates. Further, this outlook is reflected

2   in consensus economists' forecasts of long-term interest rates, which indicate a

3   relatively low capital market cost period for at least the intermediate period.

4   **Q.   HAVE PROJECTIONS OF INTEREST RATES MODERATED MORE**
5   **RECENTLY RELATIVE TO THE LAST FEW YEARS?**

6   **A.**   Yes. This is shown below in Table 3. There, I show the prevailing quarterly average

7   Treasury bond yield, and the projections of Treasury bond yields two years out, and

8   five to ten years out. Significantly, current Treasury bond yields in 2017 have been

9   relatively moderate and comparable to those in 2015 and 2016; however, projections

10   of future Treasury bond yields are now much lower five to ten years out than they

11   were over the last three years. Indeed, in 2014 Treasury bond yields five to ten years

12   out were projected to increase to 5.6% from 3.26% prevailing yields. These five to

13   ten-year projections have been steadily declining through 2015 and 2016. Most

14   recently, long-term projected Treasury bond yields are now expected to remain

15   relatively low, in the 4.3% to 4.5% area.

16   While the accuracy of projected increases in interest rates is uncertain, what is

17   significant is that consensus market economists now are projecting out relatively low

18   levels of capital market costs over the next five to ten years. This outlook represents a

19   material moderation in capital market costs over this intermediate forecast period.

```
                          TABLE 3

        30-Year Treasury Bond Yield Actual Vs. Projection

                      Quarterly      2-Year      5- to 10-Year
       Description     Average      Projected      Projected

         2014
         Q1             3.79%         4.40%        5.0% - 5.5%
         Q2             3.69%         4.50%
         Q3             3.44%         4.40%        5.3% - 5.6%
         Q4             3.26%         4.30%


         2015
         Q1             2.97%         4.00%        4.9% - 5.1%
         Q2             2.55%         3.70%
         Q3             2.83%         4.00%        4.8% - 5.0%
         Q4             2.84%         3.90%


         2016
         Q1             2.96%         3.80%        4.5% - 4.8%
         Q2             2.72%         3.60%
         Q3             2.64%         3.40%        4.3% - 4.6%
         Q4             2.29%         3.10%


         2017
         Q1             2.82%         3.70%        4.2% - 4.5%
         Q2             3.05%         3.80%
         Q3             2.91%         3.70%        4.3% - 4.5%

       _____
       Sources:

         Blue Chip Financial Forecasts,
         December 2013 through September 2017.
```

1 **II.D. Avista Investment Risk**

2 **Q.   PLEASE   DESCRIBE   THE   MARKET'S   ASSESSMENT   OF   THE**
3 **INVESTMENT RISK OF AVISTA.**

4 A.   The market's assessment of Avista's investment risk is described by credit rating

5   analysts' reports. Avista's current corporate bond ratings from S&P and Moody's are

1	BBB and Baa1, respectively.[10/] The Company's outlook from Moody's is "Stable."
2	S&P recently upgraded the Company's outlook from "Stable" to "Positive" because it
3	considers the proposed acquisition by Hydro One Ltd. as credit supportive.
4	In its most recent report, S&P specifically stated:

5   **Rationale**

6–16   The outlook revision on Avista reflects the <u>potential for higher ratings upon the completion of the acquisition by Hydro One Ltd. (HOL)</u>. Post-acquisition, we will view Avista as a highly strategic subsidiary of HOL. Our assessment is based on our view that Avista will be an important member of the HOL group, highly unlikely to be sold, and integral to overall group strategy and operations. Avista will be a significant cash flow contributor to the group, making up about 22% of consolidated EBITDA. We would also see a strong, long-term commitment of support from HOL senior management in almost all circumstances.

17–18   Avista's highly strategic group status would result in an issuer credit rating one notch below the rating on HOL.

19–25   <u>Our assessment of Avista's business risk reflects the strength and contribution of its regulated electric and gas utility operations</u>. Avista conducts vertically integrated electric and natural gas distribution utility operations in Washington and Idaho, electric operations in Alaska, and gas distribution in Oregon. The company serves a total of about 700,000 customers.

26–31   Our financial risk profile assessment on Avista is based on financial ratio benchmarks that are more relaxed compared with those used for typical corporate issuers. This reflects the mostly <u>steady cash flow from its regulated utility operations</u>. Our base-case scenario projects adjusted funds from operations (FFO) to debt of roughly 16%-18% over the next two years.[11/]

[10/]   McKenzie, Exh. AMM-1T at 22.

[11/]   Standard & Poor's RatingsDirect, Research Update: "Avista Corp. Outlook Revised To Positive From Stable On Planned Acquisition By Hydro One Ltd." July 19, 2017 at 2 (emphasis added).

1   Similarly, Moody's states the following:

2   **SUMMARY OF RATINGS RATIONALE**

3   Avista Corporation's (Avista, Baa1 Stable) Baa1 issuer rating
4   reflects its primary business as a <u>low-risk vertically integrated</u>
5   <u>electric and gas utility with supportive cost recovery</u>
6   <u>mechanisms, such as electric and gas revenue decoupling.</u>
7   Recent events in Washington, Avista's primary regulatory
8   jurisdiction, create some uncertainty for the company going
9   forward, but Avista's financial profile can provide cushion to
10   offset any negative effects over the next 12-18 months.

11   Avista has some unregulated exposure in addition to its
12   ownership of regulated utility Alaska Electric Light and Power
13   (AEL&P, Baa3 Stable), which provide marginal operational and
14   cash flow diversity, but remain neutral in terms of affecting the
15   ratings of Avista.[12/]

16 **II.E. Avista's Proposed Capital Structure**

17 **Q.   WHAT IS THE COMPANY'S PROPOSED CAPITAL STRUCTURE?**

18 **A.**   Avista's witness Mr. Mark Thies sponsors the Company's proposed capital structure,

19   which is shown below in Table 4. The proposed capital structure is based on the

20   projected debt and equity balances for the rate-effective period May 1, 2018.

[12/]   ICNU_DR_22 Attachment F at 1 (emphasis added).

TABLE 4

Avista's Proposed Capital Structure
(May 1, 2018)

Description	Weight
Total Debt	50.00%
Common Equity	50.00%
Total Regulatory Capital Structure	100.00%

Source: Thies, Exh. MTT-1T at 13.

1   Mr. Thies developed his projected test year capital structure by starting with

2   the year-end 2016 capital structure, and eliminating short-term debt, and projecting an

3   increase in common equity capital by May 1, 2018 of $50.8 million, and a decrease in

4   long-term debt capital of around $11.5 million from December 31, 2016 to May 1,

5   2018.

6   The resulting projected test year capital structure reflects an increased common

7   equity ratio and decreased long-term debt ratio relative to Avista's 2016 actual. In

8   developing his proposed ratemaking capital structure, Mr. Thies simply rounded his

9   projected May 1, 2018 capital structure weights to 50% debt and 50% equity.

10   **Q.   DO YOU BELIEVE THAT MR. THIES'S PROPOSED RATEMAKING**
11   **CAPITAL STRUCTURE IS REASONABLE?**

12   **A.**   No.   I believe the Company's actual capital structure mix at year-end 2016 was

13   reasonable for ratemaking purposes. Including $100 million of short-term debt, that

14   capital structure produced weights of approximately 48.6% long-term debt, 3.0%

15   short-term debt, and a common equity ratio of approximately 48.4%, after reflecting

1   regulatory adjustments.[13/]   This capital structure is reasonably consistent with the

2   capital structure previously used to set rates by the Washington Commission.

3 **Q.   DO YOU BELIEVE THAT THE COMPANY'S ACTUAL CAPITAL**
4 **STRUCTURE MIX AT YEAR-END 2016 WOULD BE REASONABLE FOR**
5 **RATEMAKING PURPOSES?**

6 **A.**   Yes. I state this for many reasons. First, Standard & Poor's and Moody's have both

7   rated Avista's credit rating outlook as "Stable." Actually, S&P improved the outlook

8   to "Positive" with potential for credit upgrade due to the proposed acquisition. This is

9   a clear indication that the financial and operating risk characteristics of the Company

10   in 2016 have supported a strong investment grade bond rating that is currently stable.

11   Second, Standard & Poor's has consistently measured Avista's adjusted debt

12   ratio, including both on-balance sheet and off-balance sheet debt obligations, to be

13   around 54% to 56%. These are based on actual measurements of adjusted debt ratio

14   by S&P's Capital IQ over the period 2011 through year-end 2016. Avista's actual

15   adjusted debt ratio using the same capital structure weights as I am proposing at year-

16   end 2016 was around 55%. This is in line with the adjusted debt ratio used to support

17   its "Stable" credit outlook over this five-year historical period.

18   Importantly, Avista's adjusted debt ratio is heavily impacted by its debt-like

19   obligation to its pension and other debt/deferred compensation. This off-balance sheet

20   debt decreased over the period 2011-2013, but then started increasing in 2014-2016.

21   Also, Avista's debt increased in 2016 due to over a $50 million debt issue from other

22   sources that is not included in its on-balance sheet debt according to S&P.

23   Importantly, however, Avista's balance sheet debt obligations have been relatively

---

[13/]   Thies, Exh. MTT-2 (AVA-May17) - Redacted.xlsx, tab "Exhibit No.(notes)."

1   stable over this historical period as measured by S&P, at approximately 52.5% to

2   53.9%, as also shown in Table 5 below.

TABLE 5

S&P Reported Financial Metrics
Avista Corporation

	2011	**2012**	**2013**	**2014**	**2015**	**2016**
Adj. FFO/Debt	19.6x	15.6x	17.7x	21.8x	17.5x	21.0x
Adj. Debt/EBITDA	3.6x	4.3x	3.8x	4.3x	4.4x	4.3x
Adj. Debt Ratio	52.1%	54.2%	54.0%	54.1%	55.6%	56.5%
Balance Sheet Debt Ratio	52.6%	52.5%	53.9%	52.8%	53.1%	52.2%

Source: S&P IQ downloaded October 2017, Avista Corporation.

3   Finally, Avista's proposal to eliminate short-term debt from a ratemaking

4   capital structure is not reasonable. The Company has projected that its test year

5   capital structure will consistently have about $100 million of short-term debt on a

6   month-by-month basis through the end of the test year.[14]

7 **Q. WHAT CAPITAL STRUCTURE DO YOU PROPOSE BE USED TO SET**
8 **RATES FOR AVISTA IN THIS PROCEEDING?**

9 **A.** I propose a capital structure that contains the same weights of capital as Avista's end-

10   of-year 2016 capital structure, adjusted for a $100 million short-term debt issue rather

11   than $120 million. That capital structure is shown below in Table 6.

---

[14]   Thies, Exh. MTT-2 (AVA-May17) - Redacted.xlsx, tab "Exhibit No. 5_1_18 Page 4."

TABLE 6

Gorman's Proposed Capital Structure
(May 1, 2018)

Description	Weight
Long-Term Debt	48.7%
Short-Term Debt	2.9%
Common Equity	48.4%
Total Regulatory Capital Structure	100.00%

Source: Exhibit MPG-3.

1   This is a capital structure based on a projection for May 1, 2018, which maintains the

2   same relative weights of long-term debt and common equity including $100 million

3   short-term debt balance in the test year.

4 **Q. DO YOU BELIEVE THAT THIS CAPITAL STRUCTURE IS REASONABLE**
5 **FOR RATEMAKING PURPOSES?**

6 **A.**   Yes. I believe it is reasonable because it has shown to be supportive of Avista's actual

7   bond rating over the last five years, as evidenced by a review of its reported adjusted

8   debt ratio by S&P, a factor that was considered in Avista's "Stable" credit rating

9   outlook over this time period. Also, I believe this capital structure is reasonably

10   consistent with the utility industry median capital structures for bond ratings

11   comparable to Avista's. Finally, and importantly, I believe this capital structure is

12   more reasonable because it achieves the objective of maintaining Avista's financial

13   integrity and credit standing at a lower cost to retail customers.

1	**Q.**	**IS A CAPITAL STRUCTURE THAT IS OVERLY WEIGHTED WITH**
2		**COMMON EQUITY UNREASONABLE FOR SETTING RATES?**

3 **A.** Yes. A capital structure too heavily weighted with common equity unnecessarily

4 increases Avista's claimed revenue deficiency because common equity is the most

5 expensive form of capital and is subject to income tax expense. For example, if

6 Avista's authorized return on equity is set at 9.1%, the revenue requirement cost to

7 customers would be approximately 14.6%. In contrast, the cost of debt capital is not

8 subject to an income tax expense. Avista's proposed embedded cost of debt is

9 approximately 4.3%. Common equity is more than three times as expensive on a

10 revenue requirement basis than debt capital.

11 A reasonable mix of debt and equity is necessary in order to balance Avista's

12 financial risk, support an investment grade credit rating, and permit Avista access to

13 capital under reasonable terms and prices. However, a capital structure too heavily

14 weighted with common equity will unnecessarily increase its cost of capital and

15 revenue requirement for ratepayers.

16	**Q.**	**HAVE THE CREDIT RATING AGENCIES COMMENTED ON AVISTA'S**
17		**CAPITAL STRUCTURE AND BALANCE SHEET SPECIFICALLY AS PART**
18		**OF THEIR CREDIT RATING REVIEW OF AVISTA?**

19 **A.** Yes. In a recent credit rating report by Standard & Poor's, S&P increased Avista

20 Corporation's credit rating outlook to "Positive" from "Stable" due to the planned

21 acquisition of Avista by Hydro One Ltd. In that same report, S&P noted that Avista

22 had a "Positive" outlook which means a possible upgrade from its current BBB rated

23 bond rating, and S&P noted that the Company's capital structure and financial policies

1		were neutral on its current stand-alone bond rating review.[15/] All of this is clear
2		evidence that Avista's 2016 actual capital structure is reasonable, and supportive of
3		Avista's current strong investment grade bond rating, with a "Stable (Positive)"
4		outlook.
5	**Q.**	**PLEASE DESCRIBE WHY YOU BELIEVE THAT AVISTA'S ACTUAL**
6		**HISTORICAL CAPITAL STRUCTURE HAS BEEN ADEQUATE TO**
7		**SUPPORT ITS CURRENT INVESTMENT GRADE BOND RATING.**
8	**A.**	I state this based on a review of Avista's actual reported adjusted common equity ratio
9		from Standard & Poor's, relative to a comparison to other regulated utility companies
10		with similar bond ratings. As a point of reference, my proposed capital structure also
11		includes a common equity ratio that is similar to the capital structure previously
12		awarded by the Washington Commission in Avista's 2015 general rate case, in Docket
13		UE-150204. In that docket, the Commission approved a capital structure including
14		48.5% common equity and 51.5% ratio of total debt in the capital structure.[16/]
15		Standard & Poor's in its Capital IQ reports that Avista's actual adjusted debt ratio,
16		which reflects its on-balance sheet debt and off-balance sheet debt, will be in the range
17		of 54% to 56% over the period 2011-2016. This adjusted debt ratio compares very
18		well with adjusted debt ratios for the range and distribution of adjusted debt ratios for
19		regulated utility companies with a BBB bond rating as shown below in Table 7.

[15/]   Standard & Poor's RatingsDirect, Research Update: "Avista Corp. Outlook Revised To Positive From Stable On Planned Acquisition By Hydro One Ltd." July 19, 2017 at 4.

[16/]   Dockets UE-150204 and UG-150205 (*Consolidated*), Order 05, Final Order, Appendix C – Settlement Stipulation at 2 (Jan. 6, 2016).

```
                          TABLE 7

                   Operating Subsidiaries
                  Electric and Gas Utilities
                      (Industry Medians)
```

		% Distribution		
Rating	Median	≤ 50	50 to 55	> 55
AA-	42.9%	100%	0%	0%
A+	53.9%	17%	42%	42%
A	48.7%	60%	31%	8%
A-	52.3%	39%	34%	27%
BBB+	52.5%	26%	45%	29%
BBB	**53.9%**	**25%**	**39%**	**36%**
BBB-	53.2%	18%	47%	35%
Avista	55%			

Source: Exhibit MPG-22.

1 **Q.** **IF THE COMMISSION ADOPTS YOUR PROPOSED CAPITAL STRUCTURE**
2 **ADJUSTMENT, WILL THAT PREVENT AVISTA FROM EARNING ITS**
3 **AUTHORIZED RETURN ON EQUITY?**

4 **A.** Avista simply needs to observe the Commission ratemaking policy in making its

5 capital structure investment decisions. Rather than increase its capital structure as it

6 projects into the test year, it should maintain the 2016 capital structure weight if the

7 Commission finds this capital structure to be reasonable as S&P has already done.

8   As such, I believe my capital structure will reduce costs to customers, will

9 maintain Avista's financial integrity and credit standing, and do so at a much lower

10 cost to retail customers than that proposed by the Company.

1   **II.F. Embedded Cost of Debt**

2   **Q.   WHAT IS THE COMPANY'S EMBEDDED COST OF LONG-TERM DEBT?**

3   **A.**   Avista is proposing an embedded cost of long-term debt of 5.62% as developed on Mr.

4   Thies's Exhibit MTT-2. I have adjusted the Company's proposed cost of long-term

5   debt in my calculation of an overall weighted cost of capital.

6   **Q.   PLEASE DESCRIBE YOUR RECOMMENDED ADJUSTMENT TO AVISTA'S**
7   **   EMBEDDED COST OF DEBT.**

8   **A.**   Avista failed to make any change to its embedded debt cost to reflect expected

9   opportunities to refinance debt that matures in 2018. Specifically, Avista has a first

10   mortgage bond Series A at 7.39% and 7.45%, and a 5.95% Series in the amounts of $7

11   million, $15.5 million and $250 million, respectively. These securities will mature in

12   May and June of 2018, respectively. The interest rates on these bonds are currently in

13   excess of the current market cost of debt.

14   As such, I adjusted Avista's embedded cost of debt to reflect the refinancing of

15   these three bond issues in the current market. To do this, I estimated a refinancing

16   cost of bonds of around 4.5% in 2018. This reflects the current cost of BBB rated debt

17   of around 4.27%, as discussed later in my testimony, adjusted for the possible increase

18   in interest rates, and for issuance costs.

19   With this adjustment, I reduce Avista's embedded cost of debt from the 5.62%

20   proposed by the Company down to 5.31%, as shown in my Exhibit MPG-6. I also

21   separate Avista's embedded cost of long-term debt and its cost of short-term debt on

22   my Exhibit MPG-6.

1		**III. RETURN ON EQUITY**
2	**Q.**	**PLEASE DESCRIBE WHAT IS MEANT BY A "UTILITY'S COST OF**
3		**COMMON EQUITY."**

4   **A.**   A utility's cost of common equity is the expected return that investors require on an

5   investment in the utility. Investors expect to earn their required return from receiving

6   dividends and through stock price appreciation.

7   **Q.**   **PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A**
8   **REGULATED UTILITY'S COST OF COMMON EQUITY.**

9   **A.**   In general, determining a fair cost of common equity for a regulated utility has been

10   framed by two hallmark decisions of the U.S. Supreme Court: Bluefield Water Works

11   & Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923) and Fed.

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

13   These decisions identify the general financial and economic standards to be

14   considered in establishing the cost of common equity for a public utility. Those

15   general standards provide the authorized return should: (1) be sufficient to maintain

16   financial integrity; (2) attract capital under reasonable terms; and (3) be commensurate

17   with returns investors could earn by investing in other enterprises of comparable risk.

18 **Q.**   **PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE**
19   **AVISTA'S COST OF COMMON EQUITY.**

20 **A.**   I have used several models based on financial theory to estimate Avista's cost of

21   common equity. These models are: (1) a constant growth Discounted Cash Flow

22   ("DCF") model using consensus analysts' growth rate projections; (2) a constant

23   growth DCF using sustainable growth rate estimates; (3) a multi-stage growth DCF

24   model; (4) a Risk Premium model; and (5) a Capital Asset Pricing Model ("CAPM").

1   I have applied these models to a group of publicly traded utilities with investment risk

2   similar to Avista.

3 **III.A. Risk Proxy Group**

4 **Q.   PLEASE DESCRIBE HOW YOU IDENTIFIED A PROXY UTILITY GROUP**
5 **   THAT COULD BE USED TO ESTIMATE AVISTA'S CURRENT MARKET**
6 **   COST OF EQUITY.**

7 **A.**   I relied on the same proxy group developed by Avista witness Mr. McKenzie with one

8   exception. I excluded Avista Corp. because on July 19, 2017, it reached a definitive

9   agreement to be purchased by Hydro One Ltd.

10 **Q.   WHY IS IT APPROPRIATE TO EXCLUDE COMPANIES WHICH ARE**
11 **   INVOLVED IN MERGER AND ACQUISITION ("M&A") ACTIVITY FROM**
12 **   THE PROXY GROUP?**

13 **A.**   M&A activity can distort the market factors used in DCF and risk premium studies.

14   M&A activity can have impacts on stock prices, growth outlooks, and relative

15   volatility in historical stock prices if the market was anticipating or expecting the

16   M&A activity prior to it actually being announced. This distortion in the market data

17   thus impacts the reliability of the DCF and risk premium estimates for a company

18   involved in M&A.

19   Moreover, companies generally enter into M&A in order to produce greater

20   shareholder value by combining companies.   The enhanced shareholder value

21   normally could not be realized had the two companies not combined.

22   When companies announce an M&A, the public assesses the proposed merger

23   and develops outlooks on the value of the two companies after the combination based

24   on expected synergies or other value adds created by the M&A.

25   As a result, the stock value before the merger is completed may not reflect the

26   forward-looking earnings and dividend payments for the company absent the merger

1		or on a stand-alone basis. Therefore, an accurate DCF return estimate on companies
2		involved in M&A activities cannot be produced because their stock prices do not
3		reflect the stand-alone investment characteristics of the companies. Rather, the stock
4		price more likely reflects the shareholder enhancement produced by the proposed
5		transaction. For these reasons, it is appropriate to remove companies involved in
6		M&A activities from a proxy group used to estimate a fair return on equity for a
7		utility.
8	Q.	**PLEASE DESCRIBE WHY YOU BELIEVE YOUR PROXY GROUP IS**
9		**REASONABLY COMPARABLE IN INVESTMENT RISK TO AVISTA.**
10	A.	The proxy group shown in Exhibit MPG-7 has an average corporate credit rating from
11		S&P of BBB+, which is a notch higher than Avista's BBB credit rating from S&P.
12		The proxy group has an average corporate credit rating from Moody's of Baa1, which
13		is identical to Avista's credit rating from Moody's. Based on this information, I
14		believe my proxy group is reasonably comparable in investment risk to Avista.
15		I also note that the proxy group has an average common equity ratio of 46.1%
16		(including short-term debt) from SNL Financial ("SNL") and 49.4% (excluding
17		short-term debt) from *The Value Line Investment Survey* ("*Value Line*") in 2016. My
18		proposed common equity ratio of 48.4% is comparable to the average proxy group
19		common equity ratio. For these reasons, I believe my proxy group is reasonably
20		comparable to Avista.

1   **III.B. Discounted Cash Flow Model**

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

3   **A.**   The DCF model posits that a stock price is valued by summing the present value of

4   expected future cash flows discounted at the investor's required rate of return or cost

5   of capital. This model is expressed mathematically as follows:

6          $$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} \dots \frac{D_\infty}{(1+K)^\infty} \qquad \text{(Equation 1)}$$

8   P_0 = Current stock price

9   D = Dividends in periods 1 - ∞

10   K = Investor's required return

11   This model can be rearranged in order to estimate the discount rate or investor-

12   required return otherwise known as "K." If it is reasonable to assume that earnings

13   and dividends will grow at a constant rate, then Equation 1 can be rearranged as

14   follows:

15         $$K = D_1/P_0 + G \qquad \text{(Equation 2)}$$

16   K = Investor's required return

17   D_1 = Dividend in first year

18   P_0 = Current stock price

19   G = Expected constant dividend growth rate

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

21   **Q.   PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF**
22   **MODEL.**

23   **A.**   As shown in Equation 2 above, the DCF model requires a current stock price,

24   expected dividend, and expected growth rate in dividends.

1 Q. **WHAT STOCK PRICE HAVE YOU RELIED ON IN YOUR CONSTANT**
2   **GROWTH DCF MODEL?**

3 A. I relied on the average of the weekly high and low stock prices of the utilities in the

4   proxy group over a 13-week period ending on September 22, 2017. An average stock

5   price is less susceptible to market price variations than a price at a single point in time.

6   Therefore, an average stock price is less susceptible to aberrant market price

7   movements, which may not reflect the stock's long-term value.

8   A 13-week average stock price reflects a period that is still short enough to

9   contain data that reasonably reflects current market expectations, but the period is not

10   so short as to be susceptible to market price variations that may not reflect the stock's

11   long-term value. In my judgment, a 13-week average stock price is a reasonable

12   balance between the need to reflect current market expectations and the need to

13   capture sufficient data to smooth out aberrant market movements.

14 Q. **WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF**
15   **MODEL?**

16 A. I used the most recently paid quarterly dividend as reported in *Value Line*.[17] This

17   dividend was annualized (multiplied by 4) and adjusted for next year's growth to

18   produce the D_1 factor for use in Equation 2 above. In other words, I calculate D_1 by

19   multiplying the annualized dividend (D_0) by $(1+G)$.

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

22 A. There are several methods that can be used to estimate the expected growth in

23   dividends. However, regardless of the method, for purposes of determining the

24   market-required return on common equity, one must attempt to estimate investors'

---

[17] *The Value Line Investment Survey*, July 28, August 18, and September 15, 2017.

1   consensus about what the dividend, or earnings growth rate, will be and not what an

2   individual investor or analyst may use to make individual investment decisions.

3   As predictors of future returns, securities analysts' growth estimates have been

4   shown to be more accurate than growth rates derived from historical data.[18/]   That is,

5   assuming the market generally makes rational investment decisions, analysts' growth

6   projections are more likely to influence investors' decisions, which are captured in

7   observable stock prices, than growth rates derived only from historical data.

8   For my constant growth DCF analysis, I have relied on a consensus, or mean,

9   of professional securities analysts' earnings growth estimates as a proxy for investor

10 consensus dividend growth rate expectations. I used the average of analysts' growth

11 rate estimates from three sources: Zacks, SNL, and Reuters. All such projections

12 were available on September 22, 2017, and all were reported online.

13   Each consensus growth rate projection is based on a survey of securities

14 analysts. There is no clear evidence whether a particular analyst is most influential on

15 general market investors. Therefore, a single analyst's projection does not as reliably

16 predict consensus investor outlooks as does a consensus of market analysts'

17 projections. The consensus estimate is a simple arithmetic average, or mean, of

18 surveyed analysts' earnings growth forecasts. A simple average of the growth

19 forecasts gives equal weight to all surveyed analysts' projections. Therefore, a simple

20 average, or arithmetic mean, of analyst forecasts is a good proxy for market consensus

21 expectations.

[18/]   *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 **Q. WHAT ARE THE GROWTH RATES YOU USED IN YOUR CONSTANT**
2 **GROWTH DCF MODEL?**

3 **A.** The growth rates I used in my DCF analysis are shown in Exhibit MPG-8. The

4 average growth rate for my proxy group is 5.52%.

5 **Q. WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF**
6 **MODEL?**

7 **A.** As shown in Exhibit MPG-9, the average and median constant growth DCF returns for

8 my proxy group for the 13-week analysis are 8.78% and 8.60%, respectively.

9 **Q. DO YOU HAVE ANY COMMENTS ON THE RESULTS OF YOUR**
10 **CONSTANT GROWTH DCF ANALYSIS?**

11 **A.** Yes. The constant growth DCF analysis for my proxy group is based on a group

12 average long-term sustainable growth rate of 5.52%. The three- to five-year growth

13 rates are higher than my estimate of a maximum long-term sustainable growth rate of

14 4.20%, which I discuss later in this testimony. I believe the constant growth DCF

15 analysis produces a reasonable high-end return estimate.

16 **Q. HOW DID YOU ESTIMATE A MAXIMUM LONG-TERM SUSTAINABLE**
17 **GROWTH RATE?**

18 **A.** A long-term sustainable growth rate for a utility stock cannot exceed the growth rate

19 of the economy in which it sells its goods and services. Hence, the long-term

20 maximum sustainable growth rate for a utility investment is best proxied by the

21 projected long-term Gross Domestic Product ("GDP"). *Blue Chip Economic*

22 *Indicators* projects that over the next 5 and 10 years, the U.S. nominal GDP will grow

23 at an annual rate of approximately 4.20%. These GDP growth projections reflect a

24 real growth outlook of around 2.1% and an inflation outlook of around 2.1% going

1   forward. As such, the average growth rate over the next 10 years is around 4.20%,

2   which I believe is a reasonable proxy of long-term sustainable growth.[19]

3   In my multi-stage growth DCF analysis, I discuss academic and investment

4   practitioner support for using the projected long-term GDP growth outlook as a

5   maximum sustainable growth rate projection. Hence, using the long-term GDP

6   growth rate as a conservative projection for the maximum sustainable growth rate is

7   logical, and is generally consistent with academic and economic practitioner accepted

8   practices.

9   **III.C. Sustainable Growth DCF**

10 **Q.** **PLEASE DESCRIBE HOW YOU ESTIMATED A SUSTAINABLE**
11   **LONG-TERM GROWTH RATE FOR YOUR SUSTAINABLE GROWTH DCF**
12   **MODEL.**

13 **A.** A sustainable growth rate is based on the percentage of the utility's earnings that is

14   retained and reinvested in utility plant and equipment. These reinvested earnings

15   increase the earnings base (rate base). Earnings grow when plant funded by reinvested

16   earnings is put into service, and the utility is allowed to earn its authorized return on

17   such additional rate base investment.

18   The internal growth methodology is tied to the percentage of earnings retained

19   in the company and not paid out as dividends. The earnings retention ratio is 1 minus

20   the dividend payout ratio. As the payout ratio declines, the earnings retention ratio

21   increases. An increased earnings retention ratio will fuel stronger growth because the

22   business funds more investments with retained earnings.

---

[19]   *Blue Chip Economic Indicators,* October 10, 2017, at 14.

1   The payout ratios of the proxy group are shown in my Exhibit MPG-10. These

2   dividend payout ratios and earnings retention ratios then can be used to develop a

3   sustainable long-term earnings retention growth rate.   A sustainable long-term

4   earnings retention ratio will help gauge whether analysts' current three- to five-year

5   growth rate projections can be sustained over an indefinite period of time.

6   The data used to estimate the long-term sustainable growth rate is based on the

7   Company's current market-to-book ratio and on *Value Line*'s three- to five-year

8   projections of earnings, dividends, earned returns on book equity, and stock issuances.

9   As shown in Exhibit MPG-11, the average sustainable growth rate for the

10   proxy group using this internal growth rate model is 4.63%.

11   **Q.   WHAT IS THE DCF ESTIMATE USING THESE SUSTAINABLE LONG-**
12   **TERM GROWTH RATES?**

13   **A.**   A DCF estimate based on these sustainable growth rates is developed in Exhibit MPG-

14   12. As shown there, and using the same formula in Equation 2 above, a sustainable

15   growth DCF analysis produces both average and median DCF results for the 13-week

16   period of 7.86%.

17   **III.D. Multi-Stage Growth DCF Model**

18   **Q.   HAVE YOU CONDUCTED ANY OTHER DCF STUDIES?**

19   **A.**   Yes. My first constant growth DCF is based on consensus analysts' growth rate

20   projections, so it is a reasonable reflection of rational investment expectations over the

21   next three to five years. The limitation on this constant growth DCF model is that it

22   cannot reflect a rational expectation that a period of high or low short-term growth can

23   be followed by a change in growth to a rate that is more reflective of long-term

1   sustainable growth. Hence, I performed a multi-stage growth DCF analysis to reflect

2   this outlook of changing growth expectations.

3 **Q.   WHY DO YOU BELIEVE GROWTH RATES CAN CHANGE OVER TIME?**

4 **A.**   Analyst-projected growth rates over the next three to five years will change as utility

5   earnings growth outlooks change. Utility companies go through cycles in making

6   investments in their systems. When utility companies are making large investments,

7   their rate base grows rapidly, which in turn accelerates earnings growth. Once a major

8   construction cycle is completed or levels off, growth in the utility rate base slows and

9   its earnings growth slows from an abnormally high three- to five-year rate to a lower

10   sustainable growth rate.

11   As major construction cycles extend over longer periods of time, even with an

12   accelerated construction program, the growth rate of the utility will slow simply

13   because rate base growth will slow and the utility has limited human and capital

14   resources available to expand its construction program. Therefore, the three- to five-

15   year growth rate projection should be used as a long-term sustainable growth rate but

16   not without making a reasonable informed judgment to determine whether it considers

17   the current market environment, the industry, and whether the three- to five-year

18   growth outlook is sustainable.

19 **Q.   PLEASE DESCRIBE YOUR MULTI-STAGE GROWTH DCF MODEL.**

20 **A.**   The multi-stage growth DCF model reflects the possibility of non-constant growth for

21   a company over time. The multi-stage growth DCF model reflects three growth

22   periods: (1) a short-term growth period consisting of the first five years; (2) a

23   transition period, consisting of the next five years (6 through 10); and (3) a long-term

24   growth period starting in year 11 through perpetuity.

1   For the short-term growth period, I relied on the consensus analysts' growth

2   projections described above in relationship to my constant growth DCF model. For

3   the transition period, the growth rates were reduced or increased by an equal factor

4   reflecting the difference between the analysts' growth rates and the long-term

5   sustainable growth rate. For the long-term growth period, I assumed each company's

6   growth would converge to the maximum sustainable long-term growth rate.

7   **Q.   WHY IS THE GDP GROWTH PROJECTION A REASONABLE PROXY FOR**
8   **THE MAXIMUM SUSTAINABLE LONG-TERM GROWTH RATE?**

9   **A.**   Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of the

10   economy in which they sell services. Utilities' earnings/dividend growth is created by

11   increased utility investment or rate base. Such investment, in turn, is driven by service

12   area economic growth and demand for utility service. In other words, utilities invest

13   in plant to meet sales demand growth. Sales growth, in turn, is tied to economic

14   growth in their service areas.

15   The U.S. Department of Energy, Energy Information Administration ("EIA")

16   has observed utility sales growth tracks the U.S. GDP growth, albeit at a lower level,

17   as shown in Exhibit MPG-13. Utility sales growth has lagged behind GDP growth for

18   more than a decade. As a result, nominal GDP growth is a very conservative proxy

19   for utility sales growth, rate base growth, and earnings growth. Therefore, the U.S.

20   GDP nominal growth rate is a conservative proxy for the highest sustainable long-term

21   growth rate of a utility.

1   **Q.**   **IS THERE RESEARCH THAT SUPPORTS YOUR POSITION THAT, OVER**
2   **THE LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT**
3   **GROW AT A RATE GREATER THAN THE GROWTH OF THE U.S. GDP?**

4   **A.**   Yes. This concept is supported in published analyst literature and academic work.

5   Specifically, in a textbook titled "Fundamentals of Financial Management," published

6   by Eugene Brigham and Joel F. Houston, the authors state as follows:

7   The constant growth model is most appropriate for mature companies
8   with a stable history of growth and stable future expectations.
9   Expected growth rates vary somewhat among companies, but <u>dividends</u>
10   <u>for mature firms are often expected to grow in the future at about the</u>
11   <u>same rate as nominal gross domestic product (real GDP plus</u>
12   <u>inflation)</u>.[20]

13   The use of the economic growth rate is also supported by investment

14   practitioners as outlined as follows:

15   **Estimating Growth Rates**

16   One of the advantages of a three-stage discounted cash flow model is
17   that it fits with life cycle theories in regards to company growth. In
18   these theories, companies are assumed to have a life cycle with varying
19   growth characteristics. Typically, the potential for extraordinary growth
20   in the near term eases over time and eventually growth slows to a more
21   stable level.

22   *   *   *

23   Another approach to estimating long-term growth rates is to focus on
24   estimating the overall economic growth rate. Again, this is the
25   approach used in the *Ibbotson Cost of Capital Yearbook*. To obtain the
26   economic growth rate, a forecast is made of the growth rate's
27   component parts. Expected growth can be broken into two main parts:
28   expected inflation and expected real growth. By analyzing these
29   components separately, it is easier to see the factors that drive
30   growth.[21]

---

[20]   *"Fundamentals of Financial Management,"* Eugene F. Brigham and Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 298 (emphasis added).

[21]   *Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook* at 51 and 52.

1	**Q.**	**IS THERE ANY ACTUAL INVESTMENT HISTORY THAT SUPPORTS THE**
2		**NOTION THAT THE CAPITAL APPRECIATION FOR STOCK**
3		**INVESTMENTS WILL NOT EXCEED THE NOMINAL GROWTH OF THE**
4		**U.S. GDP?**

5   **A.**   Yes. This is evident by a comparison of the compound annual growth of the U.S.

6   GDP compared to the geometric growth of the U.S. stock market. Morningstar

7   measures the historical geometric growth of the U.S. stock market over the period

8   1926-2016 to be approximately 5.8%.[22] During this same time period, the U.S.

9   nominal compound annual growth of the U.S. GDP was approximately 6.4%.[23]

10   As such, the geometric annual growth of the U.S. nominal GDP has been

11   higher but comparable to the geometric annual growth of the U.S. stock market capital

12   appreciation. This historical relationship indicates the U.S. GDP growth outlook is a

13   conservative estimate of the long-term sustainable growth of U.S. stock investments.

14	**Q.**	**HOW DID YOU DETERMINE A SUSTAINABLE LONG-TERM GROWTH**
15		**RATE THAT REFLECTS THE CURRENT CONSENSUS OUTLOOK OF THE**
16		**MARKET?**

17   **A.**   I relied on the consensus analysts' projections of long-term GDP growth. *Blue Chip*

18   *Economic Indicators* publishes consensus economists' GDP growth projections twice

19   a year. These consensus analysts' GDP growth outlooks are the best available

20   measure of the market's assessment of long-term GDP growth. These analyst

21   projections reflect all current outlooks for GDP and are likely the most influential on

22   investors' expectations of future growth outlooks. The consensus economists'

23   published GDP growth rate outlook is 4.20% over the next 10 years.[24]

---

[22]   *Duff & Phelps, 2017 SBBI Yearbook* at 6-17.
[23]   U.S. Bureau of Economic Analysis, February 28, 2017.
[24]   *Blue Chip Economic Indicators*, October 10, 2017, at 14.

1   Therefore, I propose to use the consensus economists' projected 5- and 10-year

2   average GDP consensus growth rates of 4.20%, as published by *Blue Chip Economic*

3   *Indicators*, as an estimate of long-term sustainable growth. *Blue Chip Economic*

4   *Indicators* projections provide real GDP growth projections of 2.1% and GDP

5   inflation of 2.1%[25] over the 5-year and 10-year projection periods. These consensus

6   GDP growth forecasts represent the most likely views of market participants because

7   they are based on published consensus economist projections.

8 **Q. DO YOU CONSIDER OTHER SOURCES OF PROJECTED LONG-TERM**
9 **GDP GROWTH?**

10 **A.** Yes, and these sources corroborate my consensus analysts' projections, as shown

11   below in Table 8.

TABLE 8

GDP Forecasts

Source	Term	Real GDP	Inflation	Nominal GDP
Blue Chip Economic Indicators	5-10 Yrs	2.1%	2.1%	4.2%
EIA – Annual Earnings Outlook	29 Yrs	2.0%	2.1%	4.2%
Congressional Budget Office	6 Yrs	1.9%	2.0%	4.0%
Moody's Analytics	25 Yrs	2.0%	2.0%	4.0%
Social Security Administration	49 Yrs			4.4%
The Economist Intelligence Unit	25 Yrs	1.7%	1.9%	3.6%

---

12   The EIA in its *Annual Energy Outlook* projects real GDP out until 2050. In its

13   2017 Annual Report, the EIA projects real GDP through 2050 to be 2.0% and a long-

---

[25]   *Id.*

---

1   term GDP price inflation projection of 2.1%. The EIA data supports a long-term

2   nominal GDP growth outlook of 4.2%.[26]

3   Also, the Congressional Budget Office ("CBO") makes long-term economic

4   projections. The CBO is projecting real GDP growth to be 1.9% during the next

5   6 years with a GDP price inflation outlook of 2.0%. The CBO 6-year outlook for

6   nominal GDP based on this projection is 4.0%.[27]

7   Moody's Analytics also makes long-term economic projections. In its recent

8   25-year outlook to 2046, Moody's Analytics is projecting real GDP growth of 2.0%

9   with GDP inflation of 2.0%.[28] Based on these projections, Moody's is projecting

10   nominal GDP growth of 4.0% over the next 25 years.

11   The Social Security Administration ("SSA") makes long-term economic

12   projections out to 2095. The SSA's nominal GDP projection, under its intermediate

13   cost scenario of approximately 50 years, is 4.4%.[29]

14   The Economist Intelligence Unit, a division of *The Economist* and a third-party

15   data provider to SNL Financial, makes a long-term economic projection out to 2050.

16   The Economist Intelligence Unit is projecting real GDP growth of 1.7% with an

17   inflation rate of 1.9% out to 2050. The real GDP growth projection is in line with the

18   consensus economists. The long-term nominal GDP projection based on these

19   outlooks is approximately 3.6%.[30]

---

[26] DOE/EIA Annual Energy Outlook 2017 With Projections to 2050, March 1, 2017, Table 20.
[27] *CBO: The Budget and Economic Outlook: 2017 to 2027*, January 2017, downloaded March 1, 2017.
[28] www.economy.com, *Moody's Analytics Forecast*, February 6, 2017.
[29] www.ssa.gov, "2017 OASDI Trustees Report," Table VI.G4.
[30] *SNL Financial, Economist Intelligence Unit*, downloaded on March 1, 2017.

1   The real GDP and nominal GDP growth projections made by these

2   independent sources support the use of the consensus economist 5-year and 10-year

3   projected GDP growth outlooks as a reasonable estimate of market participants'

4   long-term GDP growth outlooks.

5   **Q.   WHAT STOCK PRICE, DIVIDEND, AND GROWTH RATES DID YOU USE**
6   **IN YOUR MULTI-STAGE GROWTH DCF ANALYSIS?**

7   **A.**   I relied on the same 13-week average stock prices and the most recent quarterly

8   dividend payment data discussed above. For stage one growth, I used the consensus

9   analysts' growth rate projections discussed above in my constant growth DCF model.

10   The first stage covers the first five years, consistent with the time horizon of the

11   securities analysts' growth rate projections. The second stage, or transition stage,

12   begins in year 6 and extends through year 10. The second stage growth transitions the

13   growth rate from the first stage to the third stage using a straight linear trend. For the

14   third stage, or long-term sustainable growth stage, starting in year 11, I used a 4.20%

15   long-term sustainable growth rate based on the consensus economists' long-term

16   projected nominal GDP growth rate.

17   **Q.   WHAT ARE THE RESULTS OF YOUR MULTI-STAGE GROWTH DCF**
18   **MODEL?**

19   **A.**   As shown in Exhibit MPG-14, the average and median DCF returns on equity for my

20   proxy group using the 13-week average stock price are both 7.70%.

21   **Q.   PLEASE SUMMARIZE THE RESULTS FROM YOUR DCF ANALYSES.**

22   **A.**   The results from my DCF analyses are summarized in Table 9 below:

TABLE 9

Summary of DCF Results

Description	Proxy Group	
	Average	Median
Constant Growth DCF Model (Analysts' Growth)	8.78%	8.60%
Constant Growth DCF Model (Sustainable Growth)	7.86%	7.86%
Multi-Stage Growth DCF Model	7.70%	7.70%

1   I conclude that my DCF studies support a return on equity of 8.80%, primarily

2   based on my constant growth DCF (analysts' growth) result, which I find as a

3   reasonable high-end DCF return estimate. I have concerns with my constant growth

4   DCF using a sustainable growth rate and my multi-stage growth DCF model because

5   they produce results under 8%. I do not believe that a return on equity this low is

6   reasonably consistent with market evidence of required risk premiums and security

7   valuations.

8   **III.E. Risk Premium Model**

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

10   **A.**   This model is based on the principle that investors require a higher return to assume

11   greater risk. Common equity investments have greater risk than bonds because bonds

12   have more security of payment in bankruptcy proceedings than common equity and

13   the coupon payments on bonds represent contractual obligations. In contrast,

14   companies are not required to pay dividends or guarantee returns on common equity

15   investments. Therefore, common equity securities are considered to be riskier than

16   bond securities.

1   This risk premium model is based on two estimates of an equity risk premium.

2   First, I estimated the difference between the required return on utility common equity

3   investments and U.S. Treasury bonds. The difference between the required return on

4   common equity and the Treasury bond yield is the risk premium. I estimated the risk

5   premium on an annual basis for each year over the period January 1986 through June

6   2017. The common equity required returns were based on regulatory commission-

7   authorized returns for electric utility companies. Authorized returns are typically

8   based on expert witnesses' estimates of the contemporary investor-required return.

9   The second equity risk premium estimate is based on the difference between

10   regulatory commission-authorized returns on common equity and contemporary

11   "A" rated utility bond yields by Moody's. I selected the period January 1986 through

12   June 2017 because public utility stocks consistently traded at a premium to book value

13   during that period. This is illustrated in Exhibit MPG-15, which shows the market-to-

14   book ratio since 1986 for the electric utility industry was consistently above a multiple

15   of 1.0x. Over this period, regulatory authorized returns were sufficient to support

16   market prices that at least exceeded book value. This is an indication that regulatory

17   authorized returns on common equity supported a utility's ability to issue additional

18   common stock without diluting existing shares. It further demonstrates utilities were

19   able to access equity markets without a detrimental impact on current shareholders.

20   Based on this analysis, as shown in Exhibit MPG-16, the average indicated

21   equity risk premium over U.S. Treasury bond yields has been 5.51%. Since the risk

22   premium can vary depending upon market conditions and changing investor risk

23   perceptions, I believe using an estimated range of risk premiums provides the best

1   method to measure the current return on common equity for a risk premium

2   methodology.

3   I incorporated five-year and 10-year rolling average risk premiums over the

4   study period to gauge the variability over time of risk premiums. These rolling

5   average risk premiums mitigate the impact of anomalous market conditions and

6   skewed risk premiums over an entire business cycle. As shown on my Exhibit MPG-

7   16, the five-year rolling average risk premium over Treasury bonds ranged from

8   4.25% to 6.72%, while the 10-year rolling average risk premium ranged from 4.38%

9   to 6.51%.

10   As shown on my Exhibit MPG-17, the average indicated equity risk premium

11   over contemporary Moody's utility bond yields was 4.13%. The five-year and 10-year

12   rolling average risk premiums ranged from 2.88% to 5.57% and 3.20% to 5.16%,

13   respectively.

14 **Q.** **DO YOU BELIEVE THAT THE TIME PERIOD USED TO DERIVE THESE**
15   **EQUITY RISK PREMIUM ESTIMATES IS APPROPRIATE TO FORM**
16   **ACCURATE CONCLUSIONS ABOUT CONTEMPORARY MARKET**
17   **CONDITIONS?**

18 **A.** Yes. The time period I use in this risk premium study is a generally accepted period to

19   develop a risk premium study using "expectational" data.

20   Contemporary market conditions can change dramatically during the period

21   that rates determined in this proceeding will be in effect. A relatively long period of

22   time where stock valuations reflect premiums to book value is an indication the

23   authorized returns on equity and the corresponding equity risk premiums were

24   supportive of investors' return expectations and provided utilities access to the equity

25   markets under reasonable terms and conditions. Further, this time period is long

1   enough to smooth abnormal market movement that might distort equity risk

2   premiums. While market conditions and risk premiums do vary over time, this

3   historical time period is a reasonable period to estimate contemporary risk premiums.

4   Alternatively, some studies, such as Duff & Phelps referred to later in this

5   testimony, have recommended that use of "actual achieved investment return data" in

6   a risk premium study should be based on long historical time periods. The studies find

7   that achieved returns over short time periods may not reflect investors' expected

8   returns due to unexpected and abnormal stock price performance. Short-term,

9   abnormal actual returns would be smoothed over time and the achieved actual

10 investment returns over long time periods would approximate investors' expected

11 returns. Therefore, it is reasonable to assume that averages of annual achieved returns

12 over long time periods will generally converge on the investors' expected returns.

13   My risk premium study is based on expectational data, not actual investment

14 returns, and, thus, need not encompass a very long historical time period.

15 **Q.**   **BASED ON HISTORICAL DATA, WHAT RISK PREMIUM HAVE YOU**
16   **USED TO ESTIMATE AVISTA'S COST OF COMMON EQUITY IN THIS**
17   **PROCEEDING?**

18 **A.**   The equity risk premium should reflect the relative market perception of risk in the

19 utility industry today. I have gauged investor perceptions in utility risk today in

20 Exhibit MPG-18, where I show the yield spread between utility bonds and Treasury

21 bonds over the last 38 years. As shown in this exhibit, the average utility bond yield

22 spreads over Treasury bonds for "A" and "Baa" rated utility bonds for this historical

23 period are 1.51% and 1.95%, respectively. The utility bond yield spreads over

24 Treasury bonds for "A" and "Baa" rated utilities for 2017 are 1.15% and 1.55%,

25 respectively. The current average "A" rated utility bond yield spread over Treasury

1 bond yields is now lower than the 38-year average spread. The current "Baa" rated

2 utility bond yield spread over Treasury bond yields is lower than the 38-year average

3 spread.

4   A current 13-week average "A" rated utility bond yield of 3.90% when

5 compared to the current Treasury bond yield of 2.81%, as shown in Exhibit MPG-19,

6 page 1, implies a yield spread of 109 basis points. This current utility bond yield

7 spread is lower than the 38-year average spread for "A" rated utility bonds of 1.51%.

8 The current spread for the "Baa" rated utility bond yield of 1.46% is also lower than

9 the 38-year average spread of 1.95%.

10   These utility bond yield spreads are evidence that the market perception of

11 utility risk is about average relative to this historical time period and demonstrate that

12 utilities continue to have strong access to capital in the current market.

13 **Q. HOW DO YOU DETERMINE WHERE A REASONABLE RISK PREMIUM IS**
14 **IN THE CURRENT MARKET?**

15 **A.** I observed the spread of Treasury securities relative to public utility bonds and

16 corporate bonds in gauging a risk premium based on current market valuation

17 compared to measurable risk premiums in the past.

18   This market evidence is summarized below in Table 10, which shows the

19 utility and corporate bond yield spreads over Treasury bond yields on average for the

20 period 1980 through June 2017 and the spreads for 2016 and the first half of 2017.

TABLE 10

Comparison of Yield Spreads Over Treasury Bonds

Description	Utility		Corporate	
	A	**Baa**	**Aaa**	**Baa**
2016	1.33%	2.08%	1.07%	2.12%
2017 YTD	1.15%	1.55%	0.91%	1.61%
Average Historical Spread	1.51%	1.95%	0.84%	1.94%

Source: Exhibit MPG-18.

1   The yield spreads in the table above corroborate many of the projections for a

2   sustained level of lower interest rates, and suggest that current yield spreads and risk

3   perceptions of the utility industry support a current risk premium that is comparable to

4   past risk premiums.

5   As noted in the table above, the yield spreads for Baa utilities in 2017 (1.55%)

6   have fallen below the long-term historical yield spread average (1.95%). This is a

7   change from 2016 where Baa spreads (2.08%) were above the historical average.

8   Lower risk "A" yield spreads have been below the average in both 2016 (1.33%) and

9   to date in 2017 (1.15%), relative to the historical average of 1.51%. Similarly,

10   observed yield spreads for corporate bonds also support the assessment that risk

11   premiums are probably fairly close to average normal historical risk premiums. These

12   more normalized yield spreads support a finding that the equity risk premiums in the

13   current market reasonably approximate the historical average risk premiums.

1 **Q. WHAT IS YOUR RECOMMENDED RETURN FOR AVISTA BASED ON**
2   **YOUR RISK PREMIUM STUDY?**

3 **A.**   Recognizing that yield spreads are more in line with historical norms, I recommend a

4   risk premium for the current market by giving slightly more weight to the high-end

5   risk premium – or 70% weight to the high-end and 30% weight to the low-end risk

6   premium. This will accommodate my assessment of market factors such as low

7   nominal interest rates, moderate inflation outlooks, and normal utility bond yield

8   spreads that reflect normal utility security valuations relative to Treasury bond

9   investment. Because of the relatively modest outlooks for inflation growth, the

10   investment risk differentials for debt and equity securities based on market factors

11   support the use of a risk premium reasonably consistent with historical averages.

12   Applying these weights, the risk premium for Treasury bond yields would be

13   approximately 6.0.[31/] A Treasury bond risk premium of 6.0% and projected Treasury

14   bond yield of 3.6%[32] produce a risk premium estimate of 9.6%.

15   Similarly, applying these weights to the utility risk premium indicates a risk

16   premium of 4.76%.[33/] This risk premium in connection with the current Baa

17   observable utility bond yield of 4.27%, as developed on my Exhibit MPG-19,

18   produces an estimated return on equity of 9.03%, rounded to 9.00%.

19   Based on this methodology, my Treasury bond risk premium and my utility

20   bond risk premium indicate a return in the range of 9.00% to 9.60%, with a midpoint

21   of 9.30%.

[31/]   (4.25% * 30%) + (6.72% * 70%) = 5.98%, rounded to 6.0%.
[32]   *Blue Chip Financial Forecasts*, October 1, 2017, at 2.
[33/]   (2.88% * 30%) + (5.57% * 70%) = 4.76%.

1   **III.F. Capital Asset Pricing Model ("CAPM")**

2   **Q.   PLEASE DESCRIBE THE CAPM.**

3   **A.**   The CAPM method of analysis is based upon the theory that the market-required rate

4   of return for a security is equal to the risk-free rate, plus a risk premium associated

5   with the specific security. This relationship between risk and return can be expressed

6   mathematically as follows:

7    $R_i = R_f + B_i \times (R_m - R_f)$ where:

8   R_i =   Required return for stock i

9   R_f =   Risk-free rate

10   R_m =   Expected return for the market portfolio

11   B_i =   Beta - Measure of the risk for stock

12   The stock-specific risk term in the above equation is beta. Beta represents the

13   investment risk that cannot be diversified away when the security is held in a

14   diversified portfolio. When stocks are held in a diversified portfolio, firm-specific

15   risks can be eliminated by balancing the portfolio with securities that react in the

16   opposite direction to firm-specific risk factors (e.g., business cycle, competition,

17   product mix, and production limitations).

18   The risks that cannot be eliminated when held in a diversified portfolio are

19   non-diversifiable risks. Non-diversifiable risks are related to the market in general and

20   referred to as systematic risks. Risks that can be eliminated by diversification are non-

21   systematic risks.   In a broad sense, systematic risks are market risks and non-

22   systematic risks are business risks. The CAPM theory suggests the market will not

23   compensate investors for assuming risks that can be diversified away. Therefore, the

1   only risk investors will be compensated for are systematic, or non-diversifiable, risks.

2   The beta is a measure of the systematic, or non-diversifiable risks.

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

4   **A.** The CAPM requires an estimate of the market risk-free rate, the Company's beta, and

5   the market risk premium.

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

8   **A.** As previously noted, *Blue Chip Financial Forecasts*' projected 30-year Treasury bond

9   yield is 3.60%.[34/]   The current 30-year Treasury bond yield is 2.81%, as shown in

10   Exhibit MPG-19. I used *Blue Chip Financial Forecasts*' projected 30-year Treasury

11   bond yield of 3.60% for my CAPM analysis.

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

14 **A.** Treasury securities are backed by the full faith and credit of the United States

15   government, so long-term Treasury bonds are considered to have negligible credit risk.

16   Also, long-term Treasury bonds have an investment horizon similar to that of common

17   stock. As a result, investor-anticipated long-run inflation expectations are reflected in

18   both common stock required returns and long-term bond yields.   Therefore, the

19   nominal risk-free rate (or expected inflation rate and real risk-free rate) included in a

20   long-term bond yield is a reasonable estimate of the nominal risk-free rate included in

21   common stock returns.

22   Treasury bond yields, however, do include risk premiums related to

23   unanticipated future inflation and interest rates. A Treasury bond yield is not a

---

[34/]   *Blue Chip Financial Forecasts*, October 1, 2017 at 2.

1		risk-free rate. Risk premiums related to unanticipated inflation and interest rates
2		reflect systematic market risks. Consequently, for companies with betas less than 1.0,
3		using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis
4		can produce an overstated estimate of the CAPM return.
5	**Q.**	**WHAT BETA DID YOU USE IN YOUR ANALYSIS?**
6	**A.**	As shown in Exhibit MPG-20, the proxy group average *Value Line* beta estimate is
7		0.71.
8	**Q.**	**HOW DID YOU DERIVE YOUR MARKET RISK PREMIUM ESTIMATE?**
9	**A.**	I derived two market risk premium estimates: a forward-looking estimate and one
10		based on a long-term historical average.
11		The forward-looking estimate was derived by estimating the expected return
12		on the market (as represented by the S&P 500) and subtracting the risk-free rate from
13		this estimate. I estimated the expected return on the S&P 500 by adding an expected
14		inflation rate to the long-term historical arithmetic average real return on the market.
15		The real return on the market represents the achieved return above the rate of inflation.
16		Duff & Phelps' *2017 SBBI Yearbook* estimates the historical arithmetic
17		average real market return over the period 1926 to 2016 as 8.9%.[35] A current
18		consensus analysts' inflation projection, as measured by the Consumer Price Index, is
19		2.3%.[36] Using these estimates, the expected market return is 11.40%.[37] The market
20		risk premium then is the difference between the 11.40% expected market return and
21		my 3.60% risk-free rate estimate, or approximately 7.80%.

---

[35]   *Duff & Phelps, 2017 SBBI Yearbook at 6-18.*
[36]   *Blue Chip Financial Forecasts*, August 1, 2017 at 2.
[37] $\{\ [\ (1 + 0.089) * (1 + 0.023)\ ] - 1\ \} * 100.$

1   My historical estimate of the market risk premium was also calculated by using

2   data provided by Duff & Phelps in its *2017 SBBI Yearbook*. Over the period 1926

3   through 2016, the Duff & Phelps study estimated that the arithmetic average of the

4   achieved total return on the S&P 500 was 12.0%[38] and the total return on long-term

5   Treasury bonds was 6.00%.[39] The indicated market risk premium is 6.0% (12.0% -

6   6.0% = 6.0%).

7   **Q.   HOW DOES YOUR ESTIMATED MARKET RISK PREMIUM RANGE**
8   **COMPARE TO THAT ESTIMATED BY DUFF & PHELPS?**

9   **A.**   The Duff & Phelps analysis indicates a market risk premium falls somewhere in the

10   range of 5.5% to 6.9%. My market risk premium falls in the range of 6.0% to 7.8%.

11   My average market risk premium of 6.9% is at the high-end of the Duff & Phelps

12   range.

13   **Q.   HOW DOES DUFF & PHELPS MEASURE A MARKET RISK PREMIUM?**

14   **A.**   Duff & Phelps makes several estimates of a forward-looking market risk premium

15   based on actual achieved data from the historical period of 1926 through 2016 as well

16   as normalized data. Using this data, Duff & Phelps estimates a market risk premium

17   derived from the total return on large company stocks (S&P 500), less the income

18   return on Treasury bonds. The total return includes capital appreciation, dividend or

19   coupon reinvestment returns, and annual yields received from coupons and/or

20   dividend payments. The income return, in contrast, only reflects the income return

21   received from dividend payments or coupon yields. Duff & Phelps claims the income

22   return is the only true risk-free rate associated with Treasury bonds and is the best

---

[38]   *Duff & Phelps, 2017 Yearbook at 6-17.*
[39]   *Id.*

1   approximation of a truly risk-free rate.[40/] I disagree with this assessment from Duff &

2   Phelps because it does not reflect a true investment option available to the marketplace

3   and therefore does not produce a legitimate estimate of the expected premium of

4   investing in the stock market versus that of Treasury bonds. Nevertheless, I will use

5   Duff & Phelps' conclusion to show the reasonableness of my market risk premium

6   estimates.

7   Duff & Phelps' range is based on several methodologies. First, Duff & Phelps

8   estimates a market risk premium of 6.94% based on the difference between the total

9   market return on common stocks (S&P 500) less the income return on Treasury bond

10   investments over the 1926-2016 period.

11   Second, Duff & Phelps updated the Ibbotson & Chen supply-side model,

12   which found that the 6.94% market risk premium based on the S&P 500 was

13   influenced by an abnormal expansion of price-to-earnings ("P/E") ratios relative to

14   earnings and dividend growth during the period, primarily over the last 30 years. Duff

15   & Phelps believes this abnormal P/E expansion is not sustainable.[41/] Therefore, Duff

16   & Phelps adjusted this market risk premium estimate to normalize the growth in the

17   P/E ratio to be more in line with the growth in dividends and earnings. Based on this

18   alternative methodology, Duff & Phelps published a long-horizon supply-side market

19   risk premium of 5.97%.[42/]

20   Finally, Duff & Phelps develops its own recommended equity, or market, risk

21   premium by employing an analysis that takes into consideration a wide range of

---

[40/]   *Duff & Phelps 2017 Valuation Handbook* at 3-32.
[41/]   *Id.* at 3-36.
[42/]   *Id.*

1   economic information, multiple risk premium estimation methodologies, and the

2   current state of the economy by observing measures such as the level of stock indices

3   and corporate spreads as indicators of perceived risk. Based on this methodology, and

4   utilizing a "normalized" risk-free rate of 3.5%, Duff & Phelps concludes the current

5   expected, or forward-looking, market risk premium is 5.5%, implying an expected

6   return on the market of 9.0%.[43/]

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

8 **A.**   As shown in Exhibit MPG-21, based on my low market risk premium of 6.0% and my

9   high market risk premium of 7.8%, a risk-free rate of 3.6%, and a beta of 0.71, my

10   CAPM analysis produces a return of 7.86% to 9.13%. Based on my assessment of risk

11   premiums in the current market, as discussed above, I recommend the high-end

12   CAPM return estimate because it closely aligns the market risk premium with the

13   prevailing risk-free rate. I recommend a CAPM return of 9.10%.

14 **III.G. Return on Equity Summary**

15 **Q.**   **BASED ON THE RESULTS OF YOUR RETURN ON COMMON EQUITY**
16   **ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY**
17   **DO YOU RECOMMEND FOR AVISTA?**

18 **A.**   Based on my analyses, I estimate Avista's current market cost of equity to be 9.10%.

---

[43]   *Id.* at 3-48.

TABLE 11

Return on Common Equity Summary

Description	Results
DCF	8.80%
Risk Premium	9.30%
CAPM	9.10%

1   My recommended return on common equity of 9.1% is at the approximate

2   midpoint of my estimated range of 8.8% to 9.3%. As shown in Table 11 above, the

3   high-end of my estimated range is based on my risk premium study. The low-end is

4   based on my DCF return.

5   My return on equity estimates reflect observable market evidence, the impact

6   of Federal Reserve policies on current and expected long-term capital market costs, an

7   assessment of the current risk premium built into current market securities, and a

8   general assessment of the current investment risk characteristics of the regulated utility

9   industry and the market's demand for utility securities.

10   **III.H. Financial Integrity**

11   **Q.   WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT**
12   **AN INVESTMENT GRADE BOND RATING FOR AVISTA?**

13   **A.**   Yes. I have reached this conclusion by comparing the key credit rating financial ratios

14   for Avista at my proposed return on equity and my proposed capital structure to S&P's

15   benchmark financial ratios using S&P's new credit metric ranges.

16   **Q.   PLEASE DESCRIBE THE MOST RECENT S&P FINANCIAL RATIO**
17   **CREDIT METRIC METHODOLOGY.**

18   **A.**   S&P publishes a matrix of financial ratios corresponding to its assessment of the

19   business risk of utility companies and related bond ratings. On May 27, 2009, S&P

1   expanded its matrix criteria by including additional business and financial risk

2   categories.[44/]

3   Based on S&P's most recent credit matrix, the business risk profile categories

4   are "Excellent," "Strong," "Satisfactory," "Fair," "Weak," and "Vulnerable." Most

5   utilities have a business risk profile of "Excellent" or "Strong."

6   The financial risk profile categories are "Minimal," "Modest," "Intermediate,"

7   "Significant," "Aggressive," and "Highly Leveraged." Most of the utilities have a

8   financial risk profile of "Aggressive." Avista has a "Strong" business risk profile and

9   a "Significant" financial risk profile.

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

12   **A.**   S&P evaluates a utility's credit rating based on an assessment of its financial and

13   business risks. A combination of financial and business risks equates to the overall

14   assessment of Avista's total credit risk exposure. On November 19, 2013, S&P

15   updated its methodology. In its update, S&P published a matrix of financial ratios that

16   defines the level of financial risk as a function of the level of business risk.

17   S&P publishes ranges for primary financial ratios that it uses as guidance in its

18   credit review for utility companies. The two core financial ratio benchmarks it relies

19   on in its credit rating process include: (1) Debt to Earnings Before Interest, Taxes,

20   Depreciation and Amortization ("EBITDA"); and (2) Funds From Operations ("FFO")

21   to Total Debt.[45/]

[44/]   S&P updated its 2008 credit metric guidelines in 2009, and incorporated utility metric
        benchmarks with the general corporate rating metrics. *Standard & Poor's RatingsDirect*:
        "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.
[45/]   *Standard & Poor's RatingsDirect*: "Criteria: Corporate Methodology," November 19, 2013.

1 **Q. HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE**
2 **REASONABLENESS   OF   YOUR   RATE   OF   RETURN**
3 **RECOMMENDATIONS?**

4 **A.** I calculated each of S&P's financial ratios based on Avista's cost of service for its

5 retail jurisdictional operations. While S&P would normally look at total consolidated

6 Avista financial ratios in its credit review process, my investigation in this proceeding

7 is not the same as S&P's. I am attempting to judge the reasonableness of my proposed

8 cost of capital for rate-setting in Avista's retail regulated utility operations. Hence, I

9 am attempting to determine whether my proposed rate of return will in turn support

10 cash flow metrics, balance sheet strength, and earnings that will support an investment

11 grade bond rating and Avista's financial integrity.

12 **Q DID YOU INCLUDE ANY OFF-BALANCE SHEET DEBT EQUIVALENTS?**

13 **A.** Yes, I did. I included the entire amount of off-balance sheet debt equivalents as

14 reported by S&P Capital IQ, allocated to Avista's Washington jurisdiction. I used the

15 three-year average off-balance sheet debt components for debt, interest and

16 amortization for the three-year period ending 2016.

17 **Q PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS**
18 **AS IT RELATES TO AVISTA.**

19 **A.** The S&P financial metric calculations for Avista at a 9.1% return are developed on

20 Exhibit MPG-22, page 1. The credit metrics produced below, with Avista's financial

21 risk profile from S&P of "Significant" and business risk score by S&P of "Strong,"

22 will be used to assess the strength of the credit metrics based on Avista's retail

23 operations in the state of Washington.

24 Avista's adjusted total debt ratio, based on my recommended capital structure,

25 is approximately 54.5%. As shown on Exhibit MPG-22, this adjusted debt ratio is

1   within the range of S&P ratios for BBB-rated utilities. Hence, I concluded this capital

2   structure reasonably supports Avista's current investment grade bond rating.

3   Based on an equity return of 9.1%, Avista will be provided an opportunity to

4   produce an EBITDA ratio of 4.0x. This is within S&P's "Significant" guideline range

5   of 3.5x to 4.5x."[46/] This ratio supports an investment grade credit rating.

6   Avista's retail operations FFO to total debt coverage at a 9.1% equity return is

7   21%, which is within S&P's "Significant" metric guideline range of 13% to 23%.

8   This FFO/total debt ratio will support an investment grade bond rating.

9   At my recommended return on equity of 9.10%, my proposed capital structure

10   and my proposed embedded debt cost, Avista's financial credit metrics will continue

11   to support credit ratings at an investment grade utility level.

12   **IV. RESPONSE TO AVISTA WITNESS MR. ADRIEN MCKENZIE**

13   **IV.A. Summary of Response**

14   **Q.   WHAT IS AVISTA'S RETURN ON EQUITY RECOMMENDATION?**

15   **A.**   Avista is requesting a return on equity of 9.9%, which is below the midpoint of Mr.

16   McKenzie's recommended range of 9.6% to 10.8%.[47/] His recommendation includes

17   an adjustment of 10 basis points to account for flotation costs.[48/]

18   Mr. McKenzie's recommended range, and his proposed flotation cost

19   adjustment, are unreasonable and should be rejected. For the reasons discussed below,

20   his 10 basis point flotation cost adjustment further exacerbates an already overstated

21   "bare bones" fair return on equity for Avista.

[46/]   *Id.*
[47/]   McKenzie, Exh. AMM-1T at 5-6, including flotation cost.
[48/]   *Id.*

IV.B. Flotation Cost Adjustment

1

2   **Q.   PLEASE   SUMMARIZE   MR.   MCKENZIE'S   FLOTATION   COST**
3   **ADJUSTMENT?**

4   **A.**   Yes. Mr. McKenzie included an upward adjustment of 10 basis points to compensate

5   for flotation costs to his return on equity recommendation.[49] He acknowledges there

6   is no standard method for reflecting flotation costs in return on equity methodology,[50]

7   so he proposes a methodology advocated in certain regulatory finance books and that

8   used by Morgan Stanley. In effect, he grows his proxy group's average dividend yield

9   of 3.3% by a historical average flotation cost of 3.6% observed by Morgan Stanley.

10   Applying this percentage expense to a dividend yield of 3.6% produces a flotation cost

11   adjustment of 10 basis points.[51] This flotation cost adjustment is intended to recover

12   the actual cost a utility incurs by issuing additional stock to the public.

13   **Q.   IS MR. MCKENZIE'S FLOTATION COST RETURN ON EQUITY ADDER**
14   **REASONABLE?**

15   **A.**   No. Mr. McKenzie's flotation cost return on equity adder is not reasonable or justified

16   for several reasons. First, the adder is not based on the recovery of prudent and

17   verifiable actual flotation costs incurred by Avista. As discussed at pages 39-40 of

18   Mr. McKenzie's direct testimony, he derives a flotation cost adder based on generic

19   cost information of other utility companies. Because he does not show that his

20   adjustment is based on Avista's actual and verifiable flotation expenses, there are no

21   means of verifying whether Mr. McKenzie's proposal is reasonable or appropriate.

22   Stated differently, Mr. McKenzie's flotation cost return on equity adder is not based

---

[49]   *Id.* at 36-41.
[50]   *Id.* at 36-37.
[51]   *Id.* at 40.

1   on known and measurable Avista costs. Therefore, the Commission should reject a

2   flotation cost return on equity adder for Avista.

3 **IV.C. Return on Equity**

4 **Q.**   **HOW DID MR. MCKENZIE DEVELOP HIS RETURN ON EQUITY RANGE?**

5 **A.**   Mr. McKenzie developed his return on equity recommendation by applying the DCF,

6   the traditional CAPM, the Empirical CAPM ("ECAPM"), a Risk Premium model, and

7   an Expected Earnings analysis to his utility proxy group. Then he corroborates his

8   results by developing a non-utility DCF model.

9   As shown below in Table 12, Mr. McKenzie concludes that a "bare-bones"

10   return on equity is in the range of 9.5% to 10.7%. Then, Mr. McKenzie adds his

11   flotation cost adjustment of 10 basis points to produce his recommended range of

12   9.6% to 10.8%. However, reasonable adjustments to Mr. McKenzie's DCF, CAPM,

13   ECAPM, and Risk Premium studies reduce his return on equity estimate for Avista to

14   no higher than my recommended return on equity of 9.10%.

TABLE 12

Mr. McKenzie's ROE Analysis

Model	Average	Adjusted
	(1)	(2)
DCF	8.0% - 9.3%	8.0% - 9.3%
Midpoint	8.7%	8.7%
CAPM (Current)		
Unadjusted	9.1%	8.4%
Size Adjusted	9.9%	Reject
CAPM (Projected)		
Unadjusted	9.5%	8.4%
Size Adjusted	10.2%	Reject
ECAPM (Current)		
Unadjusted	9.8%	8.7%
Size Adjusted	10.5%	Reject
ECAPM (Projected)		
Unadjusted	10.0%	8.9%
Size Adjusted	10.7%	Reject
Risk Premium		
Current	10.1%	8.3%
Projected	10.9 %	9.3%
Expected Earnings	10.3%	Reject
Non-Utility DCF	10.2% - 10.8%	Reject
Range	**9.5% - 10.7%**	**8.0% - 9.3%**
Flotation Cost Adjustment	0.10%	Reject
Adjusted Range	**9.6% - 10.8%**	**8.0% - 9.3%**
Requested ROE	**9.9%**	**9.1%**

_____

Source: McKenzie Direct Testimony at 4.

1 **Q. PLEASE DESCRIBE MR. MCKENZIE'S DCF ANALYSIS.**

2 **A.** Mr. McKenzie applied the traditional DCF model to his utility proxy group. Based on

3 his utility proxy group, the DCF results average in the range of 8.0% to 9.3% with a

4 midpoint of 8.7%.

5 In developing his recommended DCF range, Mr. McKenzie excluded what he

6 found to be outlier results. Mr. McKenzie removed 19 low-end outliers and no high-

7 end outlier from his DCF results.[52]

8 **Q. DO YOU HAVE ANY COMMENTS IN REGARD TO MR. MCKENZIE'S DCF**
9 **RESULTS?**

10 **A.** Yes. Mr. McKenzie's proposal to selectively remove what he believes to be low-end

11 outliers from the proxy group has the effect of manipulating the results of the proxy

12 group study. This is hardly an independent assessment of what the current market cost

13 of equity is for Avista. Even though I disagree with Mr. McKenzie's methodology, I

14 will not take issue with his DCF results to limit the issues in this regulatory

15 proceeding. Similar to my DCF result, I consider Mr. McKenzie's DCF return as a

16 reasonable high-end DCF result.

17 **Q. PLEASE DESCRIBE MR. MCKENZIE'S CURRENT AND PROJECTED**
18 **TRADITIONAL CAPM ANALYSES.**

19 **A.** Mr. McKenzie developed a traditional CAPM analysis based on current and projected

20 Treasury bond yields. Mr. McKenzie estimates a market return of 11.6%. From this

21 market return estimate he subtracts his current and projected risk-free rates of 2.9%

---

[52] McKenzie, Exh. AMM-6.

1   and 4.1%, to arrive at current and projected market risk premiums of 8.7% and 7.5%,

2   respectively.[53]

3   He relies on the *Value Line* utility betas for the companies included in his

4   proxy group to produce an average cost of equity of 9.1% to 9.5%.[54]

5   Then he adds a size adjustment to his CAPM return estimate of approximately

6   0.75% to arrive at his cost of equity for the proxy group of 9.9% to 10.2%.

7 **Q.   ARE MR. MCKENZIE'S CURRENT AND PROJECTED CAPM ANALYSES**
8   **REASONABLE?**

9 **A.**   No. My major issue with Mr. McKenzie's CAPM analyses is his size adjustment.

10   While I disagree with the derivation of his market risk premium of 7.5% to 8.7%

11   because it is based on a market return of 11.6% consisting of an excessive growth rate

12   projection of 9.2% and a dividend yield of 2.4%, to limit the issues with Mr.

13   McKenzie's testimony, I will focus my rebuttal on the size adjustment.

---

[53]   McKenzie, Exh. AMM-8.
[54]   McKenzie, Exh. AMM-8.

1 **Q. WHY DO YOU FIND MR. MCKENZIE'S SIZE ADJUSTMENT**
2 **INAPPROPRIATE?**

3 **A.** Mr. McKenzie's size adjustment return on equity adder is based on estimates made by

4 Duff & Phelps' *2017 Valuation Handbook – Guide to Cost of Capital*. Duff & Phelps

5 estimates various size adjustments based on differentials in beta estimates tied to the

6 size of a company. There are two problems with this size adjustment. First, the size

7 adjustment, as applied by Mr. McKenzie, is not risk comparable for Avista. Second,

8 Mr. McKenzie did not fully apply the buildup methodology described in the *Valuation*

9 *Handbook*.

10 Duff & Phelps' *Valuation Handbook* includes many external adjustments

11 including: (1) a size adjustment as recognized by Mr. McKenzie, and (2) also an

12 industry risk premium adjustment to reflect the unique risk characteristics of the

13 industry the company operates in. Mr. McKenzie ignored the industry risk premium

14 factor recommended by Duff & Phelps in its CAPM build-up methodology. Rather

15 than recognizing all relevant adjustments provided in the *Valuation Handbook*, Mr.

16 McKenzie cherry-picked the size adjustment to increase the results of his CAPM

17 return estimates.

18 **Q. WHY IS MR. MCKENZIE'S SIZE ADJUSTMENT TO HIS CAPM RETURN**
19 **NOT RISK COMPARABLE TO AVISTA?**

20 **A.** His size adjustment reflects risks that are not reflective of Avista. The size adjustment

21 recommended by Mr. McKenzie reflects companies that have beta estimates in excess

22 of 1.00.[55/] These beta estimates are substantially higher than the average beta of

---

[55/] *Duff & Phelps 2017 Valuation Handbook* at 7-11, Exhibit 7.3.

1   0.72[56] for the utility proxy group used by Mr. McKenzie as reflective of Avista's

2   investment risk. Because of this disparity in beta, Mr. McKenzie's size adjustment

3   produces a CAPM return estimate that does not produce a risk appropriate return for

4   Avista and therefore, is not a reasonable and fair return for Avista.

5 **Q.   CAN YOU EXPLAIN HOW BETA CORRESPONDS WITH THE LEVEL OF**
6 **   INVESTMENT RISK FOR A COMPANY AND THEREFORE PRODUCES AN**
7 **   APPROPRIATE RISK-ADJUSTED RETURN FOR A SUBJECT COMPANY?**

8 **A.**   Yes. Beta represents a measure of systematic or non-diversifiable risk. All subject

9   companies' betas are measured relative to that of the overall market. The market beta

10   is considered to be 1.0. For companies that have betas greater than 1, they are

11   regarded as having more risk than the overall market. For companies that have betas

12   less than 1, they are regarded to have risk less than the overall market.

13   For these reasons, utility companies which consistently and predictably have

14   adjusted betas far less than 1 (usually in the range of 0.6 to 0.8 depending on market

15   conditions) are generally reflective as lower risk investment options.

---

[56]   McKenzie, Exh. AMM-1T at 44.

1　Q.　**PLEASE DESCRIBE WHY MR. MCKENZIE'S PROPOSED SIZE**
2　　　**ADJUSTMENT IS AN INCOMPLETE APPLICATION OF THE DUFF &**
3　　　**PHELPS PROPOSED CAPM BUILD-UP METHODOLOGY.**

4　A.　Duff & Phelps' CAPM build-up methodology includes adjustments to the <u>raw</u> CAPM

5　　　estimate for size, industry risk differentials, and other material risks. Mr. McKenzie

6　　　selectively included only one CAPM risk adder – the size risk adder – to his CAPM

7　　　return. However, Mr. McKenzie failed to reflect the reduced risk associated with

8　　　being in the low-risk regulated utility industry, which results in a significant

9　　　overstatement of a fair CAPM return estimate for Avista.

10　　　Specifically, Mr. McKenzie estimates a size adjustment that is appropriate for

11　　　Avista of approximately 0.75%. However, the regulated utility industry risk premium

12　　　estimate calculated by Duff & Phelps would be a reduction to the CAPM return

13　　　estimate of approximately 4.0%.[57] As such, a balanced application of Duff & Phelps'

14　　　proposed CAPM build-up methodology would have a medium increase in the CAPM

15　　　return estimate for a size adjustment, but a significant decrease in the CAPM return

16　　　estimate to reflect the low-risk nature of the regulated utility industry. Mr.

17　　　McKenzie's proposed size adjustment is imbalanced and inaccurate, without reflecting

18　　　the return on equity reduction appropriate with low-risk regulated industries as

19　　　proposed by Duff & Phelps.

20　Q.　**HOW WOULD MR. MCKENZIE'S CURRENT AND PROJECTED**
21　　　**TRADITIONAL CAPM RETURN ESTIMATES CHANGE IF A COMPLETE**
22　　　**BUILD-UP METHODOLOGY IS APPLIED?**

23　A.　Reflecting a complete build-up methodology as recommended by Duff & Phelps on a

24　　　traditional CAPM return estimate, which includes Mr. McKenzie's risk-free rates,

---

[57]　*Duff & Phelps 2017 Valuation Handbook* at Appendix 3a.

1   market risk premiums, a size adjustment and an industry risk premium, Mr.

2   McKenzie's size-adjusted CAPM return estimates would decline from 9.1% and 9.5%

3   to 8.4% for his utility proxy group.

TABLE 13

Buildup Return Estimates

Description	Current	Projected
Risk-Free Rate[1]	2.9%	4.1%
Equity RP[1]	8.7%	7.5%
Avg Size RP[1]	0.75%	0.75%
Industry RP[2]	(4.0%)	(4.0%)
	8.4%	8.4%

Sources:
[1] McKenzie, Exh. AMM-8.
[2]*Duff & Phelps 2017 Valuation Handbook* at Appendix 3a.

4   It should be noted that the market risk premium is not adjusted by beta in the

5   completed build-up model because the industry risk premium is already adjusted by a

6   full-information beta.

7 **Q.   DID MR. MCKENZIE ALSO PERFORM AN ECAPM ANALYSIS?**

8 **A.**   Yes. Mr. McKenzie performed an ECAPM analysis that relied on the same market

9   risk premiums of 8.7% and 7.5%, the same current and projected risk-free rates of

10   2.9% and 4.1%, respectively, and the same average *Value Line* betas that he used in

11   his current and projected CAPM analyses.

12   He then uses an ECAPM model that applies a 25% weighting factor to the

13   market beta of 1, and a 75% weighting factor to the utility beta. This produces an

14   ECAPM range of 9.8% to 10.0%.

1   Finally, Mr. McKenzie applied a size adjustment of approximately 0.70% to

2   his ECAPM estimates. His size-adjusted range is 10.5% to 10.7%.[58]

3   Q.   **ARE MR. MCKENZIE'S CURRENT AND PROJECTED ECAPM ANALYSES**
4   **REASONABLE?**

5   A.   No. Mr. McKenzie's ECAPM analyses share some of the same flaws as his traditional

6   CAPM analyses. Mr. McKenzie's proposal to adjust the ECAPM result upward

7   applying a size adjustment is inappropriate and should be rejected for the same reasons

8   discussed in response to his traditional CAPM.

9   Q.   **DO YOU HAVE ANY OTHER ISSUES WITH MR. MCKENZIE'S CURRENT**
10   **AND PROJECTED ECAPM ANALYSES?**

11 A.   Yes. Mr. McKenzie's ECAPM analysis is flawed because his model was developed

12   using adjusted utility betas. An ECAPM analysis flattens the security market line, and

13   is designed for raw beta estimates, not adjusted betas such as the ones published by

14   *Value Line*. Beta adjustments, on their own, accomplish virtually the same thing as an

15   ECAPM analysis. They flatten the security market line, and increase the intercept at

16   the risk-free rate. ECAPM analysis is not designed to be used with adjusted betas, but

17   rather is designed to be used with unadjusted betas. Mr. McKenzie's proposal to use

18   adjusted betas within an ECAPM analysis is unreasonable and double counts the

19   attempt to flatten the security market line and increase CAPM return estimates for

20   companies with betas below 1, and decrease CAPM return estimates for companies

21   with betas greater than 1.

---

[58]   McKenzie, Exh. AMM-9.

1   Q.   **DO YOU HAVE ANY ADDITIONAL COMMENTS REGARDING THE**
2   **ECAPM AND ADJUSTED BETAS?**

3   A.   Yes. The notion that an adjustment to beta is only a horizontal axis adjustment is not

4   true. The *Value Line* beta adjustment alters the CAPM return at both the vertical axis

5   (the intercept point) and the horizontal axis, the slope of the CAPM return line (along

6   the horizontal axis). This is depicted in Figure 5 below.

7   As shown in Figure 5, I have modeled the expected returns at various levels of

8   raw beta using both the traditional CAPM and ECAPM methodologies assuming a

9   risk-free rate of 3.50%, and a market risk premium of 7.50%. I also show the

10   expected CAPM and ECAPM returns using the associated adjusted (*Value Line*) beta

11   estimates for each raw beta estimate. As shown in Figure 5 below, the impact on the

12   traditional CAPM return using a raw beta and a traditional CAPM using an adjusted

13   beta has the effect of increasing the intercept point at a zero raw beta (y axis) from:

14   (1) risk-free rate to (2) the combination of the risk-free rate plus 35% of the market

15   risk premium. Further, as the unadjusted beta is increased above zero, the adjusted

16   beta increases the CAPM return when the raw beta is less than one, and decreases the

17   CAPM return when the raw beta is greater than one. In other words, the beta

18   adjustment raises the CAPM return at the vertical axis point and flattens the security

19   market across the horizontal axis as the raw beta increases above zero.

20   The ECAPM using raw betas has the same impact on the traditional CAPM

21   using an adjusted beta: the ECAPM increases the CAPM return at a zero raw beta

22   from: (1) the risk-free rate, to (2) the risk-free rate plus 25% of the market risk

23   premium. Further, the ECAPM using raw betas flattens the traditional CAPM return

24   line across the horizontal axis as the raw betas increase above zero.

Figure 5
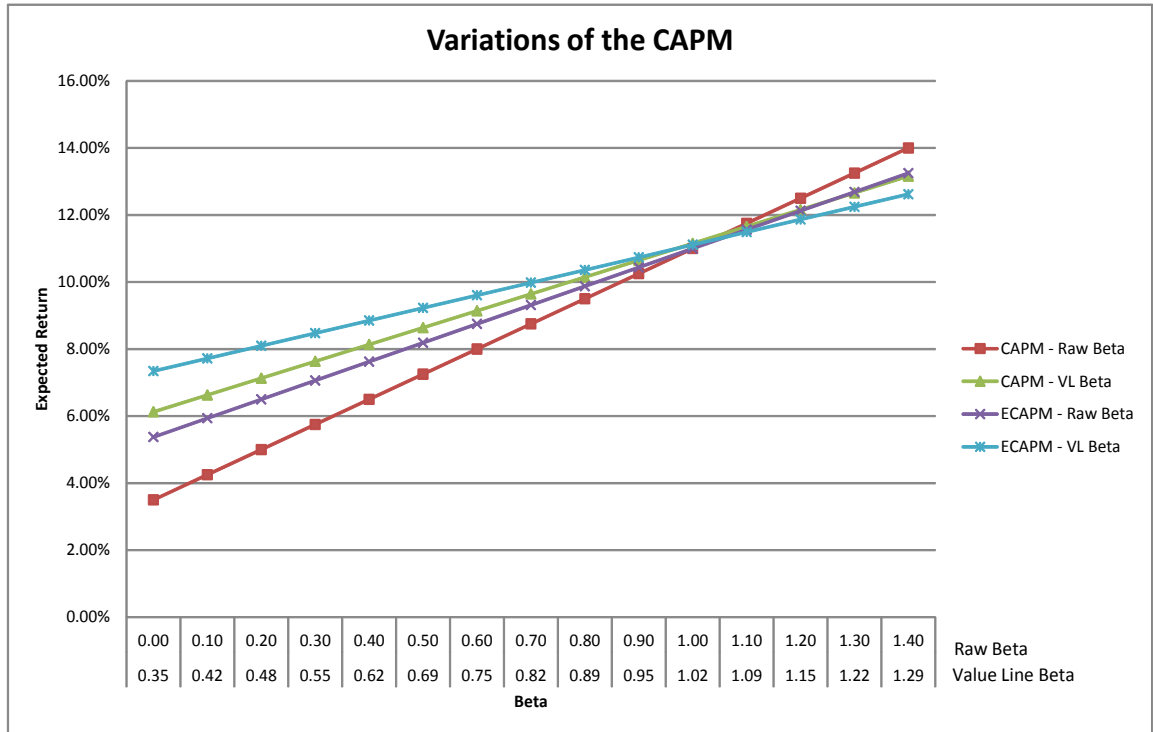
Assumptions:
Market Risk Premium is 7.50%
Risk-Free Rate is 3.50%

1   As shown in the graph above, compared to the traditional CAPM using a raw

2   beta, the traditional CAPM using an adjusted beta raises the intercept point (a y axis

3   impact) and flattens the slope of the security market line (an x axis impact). Similarly,

4   using a raw beta estimate, the ECAPM raises the intercept point at the y axis and

5   flattens the CAPM return for all raw beta estimates.

6   Significantly, if an adjusted beta is used in an ECAPM return model, the

7   CAPM return at the y axis increases from: (1) the risk-free rate, up to (2) the risk-free

8   rate plus approximately 51% of the market risk premium. Further, the CAPM return

9   for betas less than one starts at an inflated y axis intercept point and increases as the

10   raw beta increases above zero.

1   Mathematically, *Value Line*'s beta adjustments produce nearly the same effect

2   on the estimated CAPM return as does an ECAPM using a raw beta. Using an

3   adjusted beta in an ECAPM model, as Mr. McKenzie has proposed, produces a flawed

4   and inflated CAPM return estimate.

5 **Q.**   **IS THERE ANY ACADEMIC SUPPORT FOR MR. MCKENZIE'S**
6   **PROPOSED USE OF AN ADJUSTED BETA IN AN ECAPM STUDY?**

7 **A.**   No. I am unaware of any peer reviewed academic study showing that the empirical

8   CAPM is more accurate using adjusted betas. To my knowledge, the ECAPM has

9   been tested and published with raw beta estimates. Further, Mr. McKenzie has not

10   provided any academic research that was subjected to academic peer review which

11   supports his proposed use of an adjusted beta in an ECAPM study. As such, the

12   practice of using an adjusted beta in an ECAPM study is simply not supported by

13   academic research. There is, however, considerable academic support for the use of a

14   raw beta in an ECAPM study. For the reasons outlined above, Mr. McKenzie's

15   proposal to use adjusted betas in an ECAPM study should be rejected.

16 **Q.**   **HOW WOULD MR. MCKENZIE'S CURRENT AND PROJECTED ECAPM**
17   **RETURN ESTIMATES CHANGE IF THE CORRECT BETA WERE USED?**

18 **A.**   The average Value Line adjusted beta is 0.72.[59] This would equate to an unadjusted

19   beta estimate of 0.55.[60] Applying his market risk premium estimate of 8.7%, a raw

20   beta of 0.55, and his current risk-free rate of 2.9% will produce an ECAPM return of

21   8.7%.[61] Similarly, applying Mr. McKenzie's market risk premium estimate of 7.5%, a

---

[59]   McKenzie, Exh. AMM-1T at 31.
[60]   (Adj. Beta – 0.35)/0.67 = Raw Beta. Hence, Raw Beta = (0.72 – 0.35)/0.67 = 0.55.
[61]   Current ECAPM = 2.9% + 0.25 x 8.7% + 0.75 x 8.7% x 0.55 = 8.7%.

1   raw beta of 0.55, and his projected risk-free rate of 4.1% will produce an ECAPM

2   return of 8.9%.[62]

3   Also, as shown in Table 13 above, reflecting a complete build-up methodology

4   as recommended by Duff & Phelps, which includes the risk-free rate, an equity risk

5   premium, a size adjustment and an industry risk premium, Mr. McKenzie's

6   size-adjusted ECAPM return estimates would decline from 9.8% and 10.1% down to

7   8.4%, as discussed above.

8 Q. **PLEASE DESCRIBE MR. MCKENZIE'S UTILITY RISK PREMIUM**
9   **ANALYSIS.**

10 A. Mr. McKenzie's utility bond yield versus authorized return on common equity risk

11   premium is shown in his Exhibit AMM-10. As shown on page 3 of this exhibit, Mr.

12   McKenzie estimated an annual equity risk premium by subtracting Moody's utility

13   bond yield from the electric utility regulatory commission authorized return on

14   common equity over the period 1974 through 2016. Based on this analysis, Mr.

15   McKenzie estimates an average indicated equity risk premium over utility bond yields

16   of 3.67%.

17   Mr. McKenzie then adjusts this average equity risk premium using a regression

18   analysis based on an expectation that there is an ongoing inverse relationship between

19   interest rates and equity risk premiums. Using this regression analysis, Mr. McKenzie

20   increases his equity risk premium from 3.67%, up to 5.46% and 4.81% relative to

21   current and projected Baa-rated bond yields.[63] He then adds these inflated equity risk

---

[62]   Projected ECAPM = 4.1% + 0.25 x 7.5% + 0.75 x 7.5% x 0.55 = 8.9%.

[63]   McKenzie, Exh. AMM-10.

1   premiums to the current and projected Baa-rated utility bond yield of 4.60% to 6.12%,

2   to produce a return on equity of 10.06% to 10.93%.[64]

3   Mr. McKenzie's risk premium analysis is overstated because of a highly

4   suspect and inflated projected Baa-rated bond yield of 6.12%, and his development of

5   risk premiums is based on the flawed and incomplete assumption that equity risk

6   premiums change by only changes in interest rates. Academic literature is clear that

7   equity risk premiums change based on differences in the perceived risk of equity

8   securities versus bond securities, and are not simply caused by only changes in

9   nominal interest rates.

10   **Q.   DO YOU HAVE ANY COMMENTS CONCERNING MR. MCKENZIE'S**
11   **PROJECTED UTILITY YIELD OF 6.12%?**

12   **A.**   Yes. Mr. McKenzie uses a projected AA-rated utility bond yield for the period 2018

13   through 2022 of 5.45%. He then adds a current yield spread for BBB-rated and AA-

14   rated utility bond yields of 0.67% to produce his projected yield of 6.12%.[65] This

15   projected yield is incomplete. Current AA-rated utility bond yields are approximately

16   3.7% as of the 13-week period ending September 22, 2017. Mr. McKenzie's projected

17   increase to AA-rated utility bond yields does not reflect consensus market outlooks.

18   **Q.   WHY IS MR. MCKENZIE'S USE OF ONLY A SIMPLE INVERSE**
19   **RELATIONSHIP BETWEEN INTEREST RATES AND EQUITY RISK**
20   **PREMIUMS UNREASONABLE?**

21   **A.**   Mr. McKenzie's belief that there is a simple inverse relationship between equity risk

22   premiums and interest rates is unsupported by academic research. While academic

23   studies have shown that, in the past, there has been an inverse relationship with these

---

[64]   *Id.*
[65]   McKenzie, Exh. AMM-3 at 18.

1   variables, researchers have found that the relationship changes over time and is

2   influenced by changes in perception of the risk of bond investments relative to equity

3   investments, and not simply changes to interest rates.[66/]

4   In the 1980s, equity risk premiums were inversely related to interest rates, but

5   that was likely attributable to the interest rate volatility that existed at that time.

6   Interest rate volatility currently is much lower than it was in the 1980s.[67/] As such,

7   when interest rates were more volatile, the relative perception of bond investment risk

8   increased relative to the investment risk of equities. This changing investment risk

9   perception caused changes in equity risk premiums.

10   In today's marketplace, interest rate variability is not as extreme as it was

11   during the 1980s. Nevertheless, changes in the perceived risk of bond investments

12   relative to equity investments still drive changes in equity premiums. However, a

13   relative investment risk differential cannot be measured simply by observing nominal

14   interest rates. Changes in nominal interest rates are highly influenced by changes to

15   inflation outlooks, which also change equity return expectations. As such, the relevant

16   factor needed to explain changes in equity risk premiums is the relative changes to the

17   risk of equity versus debt securities investments, not simply changes to interest rates.

18   Importantly, Mr. McKenzie's analysis ignores investment risk differentials.

19   He bases his adjustment to the equity risk premium exclusively on changes in nominal

20   interest rates. This is a flawed methodology and does not produce accurate or reliable

---

[66/]   "The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts," Robert S. Harris and Felicia C. Marston, *Journal of Applied Finance*, Volume 11, No. 1, 2001 and "The Risk Premium Approach to Measuring a Utility's Cost of Equity," Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *Financial Management*, Spring 1985.

[67/]   *Duff & Phelps, 2016 SBBI Yearbook* at 6-7 to 6-10.

1   risk premium return on equity estimates. His results should be rejected by the

2   Commission.

3 **Q.   CAN MR. MCKENZIE'S RISK PREMIUM ANALYSES BASED ON**
4   **PROJECTED YIELDS BE MODIFIED TO PRODUCE MORE REASONABLE**
5   **RESULTS?**
6 **A.** Yes. Eliminating the inverse relationship adjustment to the equity risk premium of

7   3.67%, and relying on Mr. McKenzie's current Baa-rated utility yield of 4.60%, will

8   result in a risk premium return on equity of 8.27% (3.67% + 4.60%), rounded to 8.3%.

9   Importantly, Mr. McKenzie's projected Baa-rated bond yield of 6.12% is higher than

10   the current observable market Baa-rated bond yield of 4.27%.

11   The median equity premium based on the last 10 years as shown on his Exhibit

12   AMM-10 is approximately 5.02%. Using current observable Baa-rated bond yields of

13   4.27%, this would imply a common equity return of 9.3% (5.02% + 4.27%). I believe

14   this more reasonably captures a fair equity risk premium estimate using the data in Mr.

15   McKenzie's study.

16 **Q.   DO YOU HAVE ANY COMMENTS CONCERNING MR. MCKENZIE'S**
17   **CONTENTION THAT INTEREST RATES ARE GOING TO INCREASE?**

18 **A.** Yes. Mr. McKenzie develops his risk premium studies mainly relying on near-term

19   and long-term projected interest rates, which he believes are expected to increase.[68]

20   Mr. McKenzie's proposal to rely mainly on forecasted Treasury bond yields is

21   unreasonable because he is not considering the highly likely outcome that current

22   observable interest rates will prevail during the period in which rates determined in

23   this proceeding will be in effect. This is important because, while current observable

---

[68]   McKenzie, Exh. AMM-1T at 18-19.

| 1 | interest rates are actual market data that provide a measure of the current cost of |
| 2 | capital, the accuracy of forecasted interest rates is problematic at best. |

Q. WHY DO YOU BELIEVE THAT THE ACCURACY OF FORECASTED INTEREST RATES IS HIGHLY PROBLEMATIC?

A. Over the last several years, observable current interest rates have been a more accurate predictor of future interest rates than economists' consensus projections. Exhibit MPG-23 illustrates this point. On this exhibit, under Columns 1 and 2, I show the actual market yield for Treasury bonds at the time a projection is made, and the corresponding projection for Treasury bond yields two years in the future, respectively.

As shown in Columns 1 and 2, over the last several years, Treasury yields were projected to increase relative to the actual Treasury yields at the time of the projection. In Column 4, I show what the Treasury yield actually turned out to be two years after the forecast. In Column 5, I show the actual yield change at the time of the projections relative to the projected yield change.

As shown in this exhibit, economists have consistently been projecting that interest rates will increase over the near term. However, as shown in Column 5, those yield projections have turned out to be overstated in almost every case. Indeed, actual Treasury yields have decreased or remained flat over the last several years rather than increasing as the economists' projections indicated. As such, current observable interest rates are just as likely to accurately predict future interest rates as are economists' projections.

| 1 | **Q.** | **DO YOU HAVE ANY FURTHER COMMENTS IN REGARD TO MR.** |
| 2 | | **MCKENZIE'S INTEREST RATE PROJECTIONS?** |

3 **A.** Yes. First, it is simply not known how much, if any, long-term interest rates will

4 increase from current levels or whether they have already fully accounted for the

5 termination of the Federal Reserve's Quantitative Easing program and the increase in

6 the Federal Funds Rate. Nevertheless, I do agree that this Federal Reserve program

7 introduced risk or uncertainty in long-term interest rate markets. Because of this

8 uncertainty, caution should be taken in estimating Avista's current return on common

9 equity in this case. However, the increase in short-term interest rates had no impact on

10 longer-term yields that "remain at historically low levels and are influenced more by

11 the level of inflation and economic strength than by the Fed's short-term rate

12 policy."[69]

13 Second, I would note Avista is largely shielded from significant changes in

14 capital market costs. To the extent interest rates ultimately increase above current

15 levels, which may have an impact on required returns on common equity, at that point

16 in time, Avista, like all other utilities, can file to change rates to restate its authorized

17 rate of return at the prevailing market levels.

18 **Q.** **PLEASE DESCRIBE MR. MCKENZIE'S EXPECTED EARNINGS**
19 **ANALYSIS.**

20 **A.** Mr. McKenzie's expected earnings analysis is based on *Value Line*'s projected earned

21 return on book equities for his proxy group, adjusted to reflect average year equity

---

[69] *EEI Q4 2015 Financial Update*: "Stock Performance" at 6.

1		returns. Based on a review of projected earnings over the next three to five years, Mr.
2		McKenzie estimates a return on equity for Avista of 10.3%.[70]
3	**Q.**	**IS THE EXPECTED EARNINGS ANALYSIS A REASONABLE METHOD**
4		**FOR ESTIMATING A FAIR RETURN ON EQUITY FOR AVISTA?**
5	**A.**	No. An expected earnings analysis does not measure the return an investor requires in
6		order to make an investment. Rather, it measures the earned return on book equity
7		that companies have experienced in the past or are projected to achieve in the future.
8		The returns investors require in order to assume the risk of an investment are
9		measured from prevailing stock market prices. An expected earnings analysis
10		measures an accounting return on book equity. Therefore, such a return is not
11		developed from observable market data. A return estimate using an expected earnings
12		analysis can differ significantly from the return investors currently require. Therefore,
13		Mr. McKenzie's expected earnings approach should be rejected.
14	**Q.**	**DO YOU HAVE ANY ADDITIONAL COMMENTS IN REGARD TO MR.**
15		**MCKENZIE'S RETURN ESTIMATES?**
16	**A.**	Yes. Mr. McKenzie also performed a DCF model on a non-utility proxy group, which
17		he found to be a reasonable risk proxy for Avista. I disagree. I find his non-utility
18		group unreasonable. The DCF results of his non-utility group range are presented on
19		Exhibit AMM-12.
20	**Q.**	**WHY DO YOU CONSIDER MR. MCKENZIE'S NON-UTILITY GROUP**
21		**UNREASONABLE?**
22	**A.**	The companies included in Mr. McKenzie's non-utility proxy group are subject to
23		risks that are different from those affecting Avista's regulated utility operations. As
24		noted by the major credit rating agencies, the utility industry has relatively low risk in

---

[70] McKenzie, Exh. AMM-11.

1   comparison with the market. Indeed, the regulatory process itself provides an

2   effective mechanism to mitigate some of the market risks influencing the U.S.

3   economy. Therefore, using Mr. McKenzie's non-utility proxy group, which is much

4   riskier than the utility industry, will produce an unreliable and inflated return on equity

5   for a low-risk utility like Avista. Therefore, the Commission should disregard the

6   results of Mr. McKenzie's non-utility group DCF.

7 **Q. CAN YOU PROVIDE AN EXAMPLE OF WHY MR. MCKENZIE'S**
8 **NON-UTILITY GROUP IS NOT A REASONABLE RISK PROXY GROUP**
9 **FOR AVISTA?**

10 **A.** Yes. One criterion that Mr. McKenzie uses to select a comparable risk non-utility

11   group, in order to estimate Avista's return on equity, is to compare Avista's bond

12   rating to that of the non-regulated group.[71] While this is a reasonable method of

13   estimating and identifying comparable proxy groups within the industry, doing it

14   across industries is not as straightforward and not as reliable. For example, if bond

15   rating alone would adequately help to identify comparable risk companies across

16   industries, then there should not be any observable clear differences in the investment

17   cost for securities that had different bond ratings. However, the industry or

18   circumstances behind the security have a material role in the market's assessment of a

19   fair compensation.

20   While "AAA" rated corporate bonds and U.S. Treasuries have comparable

21   bond ratings, the risk differential is significant largely because of the operating risk

22   differences between the securities. The U.S. government has virtually minimal default

23   risk on its bond issuances, whereas even an "AAA" rated corporate bond has

---

[71]   McKenzie, Exh. AMM-3 at 35.

| 1 | | measurable default risk. Similarly, regulated utility operations and the ability to adjust |

1   measurable default risk. Similarly, regulated utility operations and the ability to adjust

2   prices to cost of service provide far less default risk than that of non-regulated

3   companies. A regulated company generally has a franchise to a monopolistic service

4   territory, the ability to set prices based on reasonable and prudent costs, and minimal

5   competition. In significant contrast, a non-regulated entity does not have a franchised

6   or monopolistic customer base, must price its services consistent with what the market

7   will permit, and has far more uncertainty of selling products that produce cash flows

8   that support financial obligations. Therefore, the DCF results produced by Mr.

9   McKenzie's non-utility group should be rejected.

10   **Q.   WHAT IS YOUR CONCLUSION REGARDING THE APPROPRIATE**
11   **RETURN ON EQUITY FOR AVISTA BASED ON YOUR ANALYSIS?**

12   **A.**   My analysis supports a reasonable range of Avista's current cost of market equity to

13   be from 8.80% to 9.30%, with an approximate midpoint of 9.10%. Applied to

14   Avista's rate base, and using the Company's capital structure, this will produce a

15   return which meets the *Hope* and *Bluefield* standards, and supports Avista's credit

16   metrics.

17   The Commission should reject Mr. McKenzie's recommended cost of common

18   equity for the reasons outlined above, primarily because his analysis has artificially

19   inflated Avista's cost of equity through unreasonable adjustments.

20   **Q.   DOES THIS CONCLUDE YOUR RESPONSE TESTIMONY?**

21   **A.**   Yes, it does.

\\Doc\Shares\ProlawDocs\SDW\10420\330629.docx