BEFORE THE WASHINGTON

UTILITIES & TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

AVISTA CORPORATION, d/b/a AVISTA UTILITIES

Respondent.

DOCKETS UE-240006 & UG-240007 (*Consolidated*)

CROSS-EXAMINATION EXHIBIT OF ADRIEN M. MCKENZIE ON BEHALF OF THE WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL PUBLIC COUNSEL UNIT

AMM-__X

Direct Testimony of Adrien M. McKenzie, Exh AMM-1T, *Wash. Utils. & Transp. Comm'n v. Avista Corp.* Docket UE-170485 (May 26, 2017)

September 16, 2024

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-17_____

DOCKET NO. UG-17_____

DIRECT TESTIMONY OF

ADRIEN M. MCKENZIE, CFA

REPRESENTING AVISTA CORPORATION

DIRECT TESTIMONY OF ADRIEN M. MCKENZIE

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I. INTRODUCTION

Q. Please state your name and business address.

A. Adrien M. McKenzie, 3907 Red River, Austin, Texas, 78751.

Q. In what capacity are you employed?

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

Q. Please describe your educational background and professional experience.

A. A description of my background and qualifications, including a resume containing the details of my experience, is attached as Exh. AMM-2.

A. Overview

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

A. The purpose of my testimony is to present to the Washington Utilities and Transportation Commission (the "Commission" or "WUTC") my independent evaluation of the fair rate of return on equity ("ROE") for the jurisdictional electric and natural gas utility operations of Avista Corp. ("Avista" or "the Company"). In addition, I also examined the reasonableness of Avista's capital structure, considering both the specific risks faced by the Company and other industry guidelines.

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

A. To prepare my testimony, I used information from a variety of sources that would normally be relied upon by a person in my capacity. I am familiar with the

organization, finances, and operations of Avista from my participation in prior proceedings before the WUTC, the Idaho Public Utilities Commission, and the Oregon Public Utility Commission. In connection with the present filing, I considered and relied upon corporate disclosures, publicly available financial reports and filings, and other published information relating to Avista. I have also visited the Company's main offices and had discussions with management in order to better familiarize myself with Avista's utility operations. My evaluation also relied upon information relating to current capital market conditions and specifically to current investor perceptions, requirements, and expectations for electric and natural gas utilities. These sources, coupled with my experience in the fields of finance and utility regulation, have given me a working knowledge of the issues relevant to investors' required return for Avista, and they form the basis of my analyses and conclusions.

Q. How is your testimony organized?

A. After first summarizing my conclusions and recommendations, my testimony reviews the operations and finances of Avista and industry-specific risks and capital market uncertainties perceived by investors. With this as a background, I present the application of well-accepted quantitative analyses to estimate the current cost of equity for a reference group of comparable-risk utilities. These include the discounted cash flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the empirical form of the CAPM ("ECAPM"), an equity risk premium approach based on allowed ROEs for electric utilities, and reference to expected rates of return for electric utilities, which are all methods that are commonly relied on in regulatory proceedings. Based on the cost of equity estimates indicated by my analyses, the Company's ROE was evaluated taking into account the specific risks and

potential challenges for Avista's utility operations in Washington, as well as other factors (*e.g.*, flotation costs) that are properly considered in setting a fair ROE for the Company.

In addition, I corroborated my utility quantitative analyses by applying the DCF model to a group of low risk non-utility firms. Finally, my testimony addresses the impact of regulatory mechanisms on an evaluation of a fair ROE for Avista.

Q. What is the role of the ROE in setting a utility's rates?

A. The ROE is the cost of attracting and retaining common equity investment in the utility's physical plant and assets. This investment is necessary to finance the asset base needed to provide utility service. Investors commit capital only if they expect to earn a return on their investment commensurate with returns available from alternative investments with comparable risks. Moreover, a fair and reasonable ROE is integral in meeting sound regulatory economics and the standards set forth by the U.S. Supreme Court in the *Bluefield*[1] and *Hope*[2] cases. A utility's allowed ROE should be sufficient to: 1) fairly compensate the utility's investors, 2) enable the utility to offer a return adequate to attract new capital on reasonable terms, and 3) maintain the utility's financial integrity. These standards should allow the utility to fulfill its obligation to provide reliable service while meeting the needs of customers through necessary system replacement and expansion, but they can only be met if the utility has a reasonable opportunity to actually earn its allowed ROE.

[1] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).
[2] *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

B. Summary of Conclusions

Q. Please summarize the results of your analyses.

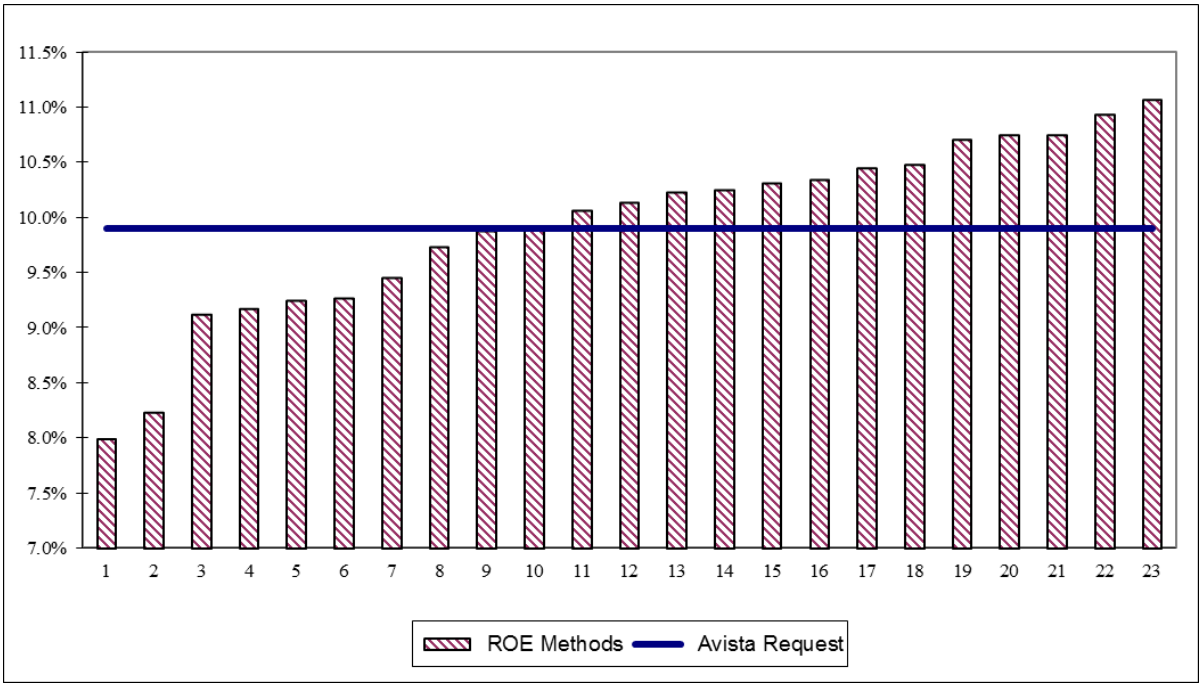
A. The results of my analyses are presented on Exh. AMM-4, and in Table 1, below:

TABLE 1
SUMMARY OF RESULTS

DCF	**Average**	**Midpoint**
Value Line	9.2% [5]	10.1% [12]
IBES	9.3% [6]	10.3% [15]
Zacks	9.2% [4]	9.7% [8]
S&P Capital/IQ	9.1% [3]	9.5% [7]
Internal br + sv	8.0% [1]	8.2% [2]
CAPM		
Historical Bond Yield	9.9% [9]	9.9% [10]
Projected Bond Yields	10.2% [13]	10.3% [14]
Empirical CAPM		
Historical Bond Yield	10.5% [18]	10.5% [17]
Projected Bond Yields	10.7% [20]	10.8% [21]
Utility Risk Premium		
Current Bond Yields	10.1% [11]	
Projected Bond Yields	10.9% [22]	
Expected Earnings		
Industry	10.7% [19]	
Proxy Group	10.3% [16]	11.1% [23]
Cost of Equity Recommendation		
Cost of Equity Range	**9.5% -- 10.7%**	
Flotation Cost Adjustment	0.10%	
ROE Recommendation	**9.6% -- 10.8%**	

Figure 1, below, presents the 23 cost of equity estimates presented in Table 1 in rank order, and compares them with Avista's 9.9 percent ROE request:

FIGURE 1
RESULTS OF ANALYSES VS. AVISTA REQUEST



A. Based on the results of my analyses and the economic requirements necessary to support continuous access to capital under reasonable terms, I determined that 9.9 percent is a conservative estimate of investors' required ROE for Avista. The bases for my conclusion are summarized below:

- In order to reflect the risks and prospects associated with Avista's jurisdictional utility operations, my analyses focused on a proxy group of 18 other utilities with comparable investment risks.
- Because investors' required return on equity is unobservable and no single method should be viewed in isolation, I applied the DCF, CAPM, ECAPM, and risk premium methods to estimate a fair ROE for Avista, as well as referencing the expected earnings approach;
- Based on the results of these analyses, and giving less weight to extremes at the high and low ends of the range, I concluded that the cost of equity for the proxy

group of utilities is in the **9.5 percent to 10.7 percent** range, or **9.6 percent to 10.8 percent** after incorporating an adjustment to account for the impact of common equity flotation costs; and,

- As reflected in the testimony of Mark T. Thies, Avista is requesting a fair ROE of **9.9 percent**, which falls below the **10.2 percent** midpoint of my recommended range. Considering capital market expectations, the exposures faced by Avista, and the economic requirements necessary to maintain financial integrity and support additional capital investment even under adverse circumstances, it is my opinion that 9.9 percent represents a conservative ROE for Avista.

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

A. My recommendation is reinforced by the following findings:

- The reasonableness of a 9.9 percent ROE for Avista is supported by the need to consider the challenges to the Company's credit standing:
  - The pressure of funding significant capital expenditures of approximately $1.2 billion over the next three years heighten the uncertainties associated with Avista, especially given that the Company's existing rate base is approximately $2.9 billion.
  - Because of Avista's reliance on hydroelectric generation and increasing dependence on natural gas fueled capacity, the Company is exposed to relatively greater risks of power cost volatility, even with the Energy Recovery Mechanism ("ERM").
  - Avista's opportunity to actually earn a fair ROE and mitigate exposure to earnings attrition is an important objective.
  - Widespread expectations for higher interest rates emphasize the implication of considering the impact of projected bond yields in evaluating the results of the CAPM, ECAPM, and risk premium methods, particularly in light of the Three-Year Rate Plan proposed by Avista.
  - My conclusion that a 9.9 percent ROE for Avista is a conservative estimate of investors' required return is also reinforced by the greater uncertainties associated with Avista's relatively small size.
- Sensitivity to financial market and regulatory uncertainties has increased dramatically and investors recognize that constructive regulation is a key ingredient in supporting utility credit standing and financial integrity;
- Providing Avista with the opportunity to earn a return that reflects these realities is an essential ingredient to support the Company's financial position, which ultimately benefits customers by ensuring reliable service at lower long-run costs;

- Continued support for Avista's financial integrity, including the opportunity to actually earn a reasonable ROE, is imperative to ensure that the Company has the capability to maintain and build its credit standing while confronting potential challenges associated with funding infrastructure development necessary to meet the needs of its customers.
- Regulatory mechanisms approved for Avista, including decoupling, are viewed as supportive by investors, and the implications of revenue decoupling and other regulatory mechanisms are fully reflected in Avista's credit ratings, which are comparable to those of the proxy group used to estimate the cost of equity. Because the utilities in my proxy group operate under a wide variety of regulatory mechanisms, including decoupling, the mitigation in risks associated with the ability to adjust revenues and attenuate the risk of cost recovery is already reflected in the results of my analyses.

These findings indicate that the 9.9 percent ROE requested by Avista is conservative, but reasonable and should be approved.

Q. What did the DCF results for your select group of non-utility firms indicate with respect to your evaluation?

A. Average DCF estimates for a low-risk group of firms in the competitive sector of the economy ranged from 10.2 percent to 10.8 percent, and averaged 10.5 percent. These results confirm that a 9.9 percent ROE falls in the lower end of the reasonable range to maintain Avista's financial integrity, provide a return commensurate with investments of comparable risk, and support the Company's ability to attract capital.

Q. What other factors should be considered in evaluating the ROE requested by Avista in this case?

A. Apart from the results of the quantitative methods summarized above, it is crucial to recognize the importance of supporting the Company's financial position so that Avista remains prepared to respond to unforeseen events that may materialize in the future. Recent challenges in the economic and financial market environment (such as interest rate increases and capital market volatility) highlight the imperative of continuing to build the

Company's financial strength in order to attract the capital needed to maintain reliable service at a reasonable cost for customers. The reasonableness of the Company's requested ROE is reinforced by the operating risks associated with Avista's reliance on hydroelectric generation, the higher uncertainties associated with Avista's relatively small size, and the fact that, due to broad-based expectations for higher bond yields, current cost of capital estimates are likely to understate investors' requirements at the time the outcome of this proceeding becomes effective and beyond.

Q. Does an ROE of 9.9 percent represent a reasonable cost for Avista's customers to pay?

A. Yes. Investors have many options vying for their money. They make investment capital available to Avista only if the expected returns justify the risk. Customers will enjoy reliable and efficient service so long as investors are willing to make the capital investments necessary to maintain and improve Avista's utility system. Providing an adequate return to investors is a necessary cost to ensure that capital is available to Avista now and in the future. If regulatory decisions increase risk or limit returns to levels that are insufficient to justify the risk, investors will look elsewhere to invest capital.

Q. What is your conclusion as to the reasonableness of the Company's capital structure?

A. Based on my evaluation, I concluded that a common equity ratio of 50.0 percent represents a reasonable basis from which to calculate Avista's overall rate of return. This conclusion was based on the following findings:

- Avista's requested capitalization is consistent with the Company's need to maintain its credit standing and financial flexibility as it seeks to raise additional

capital to fund significant system investments and meet the requirements of its service territory;

- Avista's proposed common equity ratio is entirely consistent with the range of capitalizations for the proxy utilities, both for year-end 2016 and based on Value Line's near-term expectations; and,
- The requested capitalization reflects the importance of an adequate equity layer to accommodate Avista's operating risks and the pressures of funding significant capital investments. This is reinforced by the need to consider the impact of uncertain capital market conditions, as well as off-balance sheet commitments such as purchased power agreements, which carry with them some level of imputed debt.

II. RISKS OF AVISTA

Q. What is the purpose of this section?

A. As a predicate to my capital market analyses, this section examines the investment risks that investors consider in evaluating their required rate of return for Avista.

A. Operating Risks

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

A. Because approximately 45 percent of Avista's total energy requirements are provided by hydroelectric facilities, the Company is exposed to a level of uncertainty not faced by most utilities. While hydropower confers advantages in terms of fuel cost savings and diversity, reduced hydroelectric generation due to below-average water conditions forces Avista to rely more heavily on wholesale power markets or more costly thermal generating capacity to meet its resource needs. As Standard & Poor's Corporation ("S&P") has observed:

> A reduction in hydro generation typically increases an electric utility's costs by requiring it to buy replacement power or run more expensive generation to serve customer loads. Low hydro generation can also reduce utilities' opportunity to make off-system sales. At the same time, low hydro years increase regional wholesale power prices, creating potentially a double

impact – companies have to buy more power than under normal conditions, paying higher prices.[3]

Investors recognize that volatile energy markets, unpredictable stream flows, and Avista's reliance on wholesale purchases to meet a significant portion of its resource needs can expose the Company to the risk of reduced cash flows and unrecovered power supply costs.

S&P has noted that Avista, along with Idaho Power Company, "face the most substantial risks despite their PCAs and cost-update mechanisms,"[4] and concluded that, "Northwest hydropower has been subject to significant volatility in recent years, so [Avista] is exposed to purchased power costs."[5] Similarly, Moody's Investors Service ("Moody's") has recognized that, "Avista's high dependency on hydro resources (approximately 50% of its production comes from hydro fueled electric generation resources) is viewed as a supply concentration risk which also lends to the potential for metric volatility, especially since hydro levels, due to weather, is a factor outside of management's control."[6] More recently, S&P affirmed the importance of constructive regulation in light of the potential need to "maintain operating cash flow after purchase power for customers when the hydroelectric generation is unavailable."[7] Avista's reliance on purchased power to meet shortfalls in hydroelectric generation magnifies the importance of strengthening financial flexibility, which is essential to guarantee access to the cash resources and interim financing required to cover inadequate operating cash flows.

[3] Standard & Poor's Corporation, "Pacific Northwest Hydrology And Its Impact On Investor-Owned Utilities' Credit Quality," *RatingsDirect* (Jan. 28, 2008).
[4] *Id*.
[5] Standard & Poor's Corporation, "Industry Report Card," *RatingsDirect* (Apr. 19, 2013).
[6] Moody's Investors Service, "Credit Opinion: Avista Corp.," *Global Credit Research* (Mar. 17, 2011).
[7] Standard & Poor's Financial Services, "Avista Corp.," *RatingsDirect* (May 26, 2016).

Q. Do financial pressures associated with Avista's planned capital expenditures also impact investors' risk assessment?

A. Yes. Avista will require capital investment to meet customer growth, provide for necessary maintenance and replacements of its natural gas utility systems, as well as fund new investment in electric generation, transmission and distribution facilities. Utility capital additions are expected to total approximately $405 million for each of the years 2017 through 2021. This represents a substantial investment given Avista's current rate base of approximately $2.9 billion. In addition, as discussed in the testimony of Mr. Thies, beginning in 2018 through 2022 the Company is obligated to repay maturing long-term debt totaling $654.5 million.

Continued support for Avista's financial integrity and flexibility will be instrumental in attracting the capital necessary to fund these projects and debt repayments in an effective manner. Investors are aware of the challenges posed by significant capital expenditure requirements, especially in light of ongoing capital market and economic uncertainties, and Moody's has noted that elevated capital expenditures are a primary credit concern for Avista.[8]

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

A. Yes. A firm's relative size has important implications for investors in their evaluation of alternative investments, and it is well established that smaller firms are more risky than larger firms. With a market capitalization of approximately $2.5 billion, Avista is

[8] Moody's Investors Service, "Credit Opinion: Avista Corp.," *Global Credit Research* (Mar. 11, 2015).

one of the smallest publicly traded utilities followed by The Value Line Investment Survey ("Value Line"), which have an average capitalization of approximately $16.8 billion.[9]

The magnitude of the size disparity between Avista and other firms in the utility industry has important practical implications with respect to the risks faced by investors. All else being equal, it is well accepted that smaller firms are more risky than their larger counterparts, due in part to their relative lack of diversification and lower financial resiliency.[10] These greater risks imply a higher required rate of return, and there is ample empirical evidence that investors in smaller firms realize higher rates of return than in larger firms.[11] Accepted financial doctrine holds that investors require higher returns from smaller companies, and unless that compensation is provided in the rate of return allowed for a utility, the legal tests embodied in the *Hope* and *Bluefield* cases cannot be met.

B. Other Factors

Q. Would investors consider the potential impact of Avista's exposure to earnings attrition?

A. Yes. Attrition is the deterioration of actual return below the allowed return that occurs when the relationships between revenues, costs, and rate base used to establish rates (e.g., using a historical test year without adequate adjustments) do not reflect the actual costs incurred to serve customers during the period that rates are in effect. Investors are concerned with what they can expect in the future, not what they might expect in theory if a

[9] www.valueline.com (retrieved Apr. 5, 2017).
[10] It is well established in the financial literature that smaller firms are more risky than larger firms. *See*, *e.g.*, Eugene F. Fama and Kenneth R. French, "The Cross-Section of Expected Stock Returns", *The Journal of Finance* (June 1992); George E. Pinches, J. Clay Singleton, and Ali Jahankhani, "Fixed Coverage as a Determinant of Electric Utility Bond Ratings", *Financial Management* (Summer 1978).
[11] See for example Rolf W. Banz, "The Relationship Between Return and Market Value of Common Stocks", *Journal of Financial Economics* (September 1981) at 16.

historical test year were to repeat. To be fair to investors and to benefit customers, a regulated utility must have a reasonable opportunity to actually earn a return that will maintain financial integrity, facilitate capital attraction, and compensate for risk. In other words, it is the end result in the future that determines whether or not the *Hope* and *Bluefield* standards are met.

Ratemaking practices that allow the utility an opportunity to actually earn its authorized ROE are consistent with fundamental regulatory principles. The Supreme Court has reaffirmed that the end result test must be applied to the actual returns that investors expect if they put their money at risk to finance utilities.[12] That end result would maintain the utility's financial integrity, ability to attract capital and offer investors fair compensation for the risk they bear.

Q. The Company's most recent revenue increase request was rejected by the Commission.[13] How does this affect your ROE analysis?

A. Value Line noted in its most recent review of the Company that "**Avista has been one of the worst-performing stocks in the electric utility industry so far in 2017**,"[14] concluding that:

> Wall Street is concerned about the lack of rate relief for the utility in Washington this year, after state regulators rejected Avista's rate request in December.[15]

[12] *Verizon Communications, et al v. Federal Communications Commission, et al*, 535 U.S. 467 (2002). While I cannot comment on the legal significance of this case, I found the economic wisdom of looking to the reasonable expectations of actual investors compelling. Economic logic and common sense confirm that a utility cannot attract capital on reasonable terms if investors expect future returns to fall short of those offered by comparable investments.
[13] Dockets UE-160228 and UG-160229 filed Feb. 19, 2016; Final Order issued Dec. 15, 2106.
[14] The Value Line Investment Survey (Apr. 28, 2017) at 2225 (emphasis original).
[15] *Id.*

While cautioning investors to be mindful of regulatory uncertainty, Value Line noted its expectation that upcoming regulatory proceedings in Washington would be "more fruitful" than in 2016.

Similarly, in its most recent report covering Avista, Moody's observed that "significant miscommunication" between Avista and the WUTC created "credit challenges," but despite a "recent rate filing snafu in Washington," Avista's financial profile will remain satisfactory.[16] Moody's concluded that, "we view this snafu as temporary, and expect that the company will continue to receive adequate and timely cost recovery of prudently incurred costs."[17] Consistent with Value Line and Moody's views, my analyses and recommendations are premised on a positive and constructive resolution of the issues that led to the rejection of revenue requirement increases in Dockets UE-160228 and UG-160229.

C. Outlook for Capital Costs

Q. Please summarize current capital market conditions.

A. Current capital market conditions continue to be affected by the Federal Reserve's unprecedented monetary policy actions, which were designed to push interest rates to historically and artificially low levels in an effort to support economic growth and bolster employment. Since the Great Recession, investors have also had to contend with a heightened level of economic uncertainty. The ongoing potential for renewed turmoil in the capital markets has been seen repeatedly and investors have reacted to such periods of "risk off" behavior by seeking a safe haven in U.S. government bonds. As a result of this "flight

[16] Moody's Investors Service, "Avista Corp, A Vertically Integrated Electric and Gas Utility," *Credit Opinion* Mar. 22, 2017.
[17] *Id.*

to safety," Treasury bond yields have been pushed significantly lower in the face of political, economic, and capital market risks. While serving as President of the Federal Reserve Bank of Philadelphia, Charles Plosser observed that U.S. interest rates were unprecedentedly low, and "outside historical norms."[18]

Q. Have there been any fundamental shifts in Federal Reserve monetary policies?

A. No. The Federal Reserve continues to exert considerable influence over capital market conditions through its massive holdings of Treasuries and mortgage-backed securities. Prior to the initiation of the stimulus program in 2009, the Federal Reserve's holdings of U.S. Treasury bonds and notes amounted to approximately $400-$500 billion. With the implementation of its asset purchase program, balances of Treasury securities and mortgage backed instruments climbed steadily, and their effect on capital market conditions became more pronounced. Table 2 below charts the course of the Federal Reserve's asset purchase program:

[18] Barnato, Katy, "Fed's Plosser: Low rates 'should make us nervous'," CNBC (Nov. 11, 2014). The average yield on 10-year Treasury bonds for the six-months ended March 2017 was 2.29 percent, which is essentially the same as the 2.3 percent yields prevailing at the time of Mr. Plosser's observations.

TABLE 2
FEDERAL RESERVE BALANCES OF
TREASURY BONDS AND MORTGAGE-BACKED SECURITIES
(BILLION $)

2008	$ 458
2009	$ 1,668
2010	$ 1,993
2011	$ 2,501
2012	$ 2,598
2013	$ 3,702
2014	$ 4,211
2015	$ 4,215
2016	$ 4,217

Source: Factors Affecting Reserve Balances, H.4.1
http://www.federalreserve.gov/releases/h41/

Far from representing a return to normal, the Federal Reserve's holdings of Treasury bonds and mortgage-backed securities continue to exceed $4.2 trillion. The Federal Reserve has announced its intention to maintain these balances by reinvesting principal payments from these securities "until normalization of the level of the federal funds rate is well under way."[19]

Of course, the corollary to these observations is that changes to this policy of reinvestment would further reduce stimulus measures and could place significant upward pressure on bond yields, especially considering the unprecedented magnitude of the Federal Reserve's holdings of Treasury bonds and mortgage-backed securities. As a *Financial Analysts Journal* article noted:

[19] Press Release, Federal Reserve, Federal Open Market Committee (Dec. 14, 2016), http://www.federalreserve.gov/newsevents/press/monetary/20161214a.htm.

> Because no precedent exists for the massive monetary easing that has been practiced over the past five years in the United States and Europe, the uncertainty surrounding the outcome of central bank policy is so vast. . . . Total assets on the balance sheets of most developed nations' central banks have grown massively since 2008, and the timing of when the banks will unwind those positions is uncertain.[20]

Similarly, a report from the global investment management firm BlackRock cited the potential for yield spikes and the exposure of the utilities sector to rising yields, concluding that, "We are in uncharted territory," when it comes to the implications of unwinding the Federal Reserve's balance sheet holdings.[21] The Wall Street Journal echoed these concerns:

> A great deal is at stake with the bond decision. Shrinking the portfolio could jolt financial markets, pushing up interest costs on government debt and mortgage bonds and reverberating through the broader economy.
>
> Officials don't know how markets will react when they shrink the holdings because they have never done it before. But they know plenty about the skittishness of investors. When they signaled they would end bond purchases in 2013, they sparked a market "taper tantrum" that sent interest rates higher and hurt emerging markets.[22]

More recently, the Wall Street Journal observed the potential for "considerable upward pressure on long-term interest rates" if the need to finance higher deficits associated with stimulative fiscal policies coincides with a higher supply of Treasury securities as the Federal Reserve unwinds its balance sheet holdings.[23]

[20] Poole, William, "Prospects for and Ramifications of the Great Central Banking Unwind," Financial Analysts Journal (November/December 2013).
[21] BlackRock, "When the Fed Yields," *BlackRock Investment Institute* (May 2015).
[22] Michael S. Derby, "Fed Grapples With Massive Portfolio," *The Outlook*, The Wall Street Journal, http://www.wsj.com/articles/fed-grapples-with-massive-portfolio-1485717712 (last visited Jan. 30, 2017).
[23] Josh Zumbrun, "Trump's Fiscal Plans, Fed's Asset Unwinding Could Fuel Rate Rise," *The Outlook*, The Wall Street Journal (May 8, 2017).

Q. Does the Federal Reserve's three quarter-point moves in the target range for the federal funds rate mark a return to "normal" in the capital markets?

A. No. The Federal Reserve's long-anticipated moves to increase the federal funds rate represent a modest step towards implementing the process of monetary policy normalization outlined in its September 17, 2014 press release.[24] While the Federal Reserve's action marks a continuation of the normalization process that began with its initial 25 basis point rate rise in the federal funds rate in December 2015, these gradual moves do not result in a fundamental alteration of its highly accommodative monetary policy. Nor have they removed uncertainty over the trajectory of further interest rate increases or the overhanging implications of the Federal Reserve's enormous holdings of long-term securities. Uncertainties over just how the process of normalizing the Federal Reserve's unprecedented monetary policies will affect capital markets further support the consideration of alternative DCF analyses and ROE benchmarks when evaluating a just and reasonable ROE for the Company.

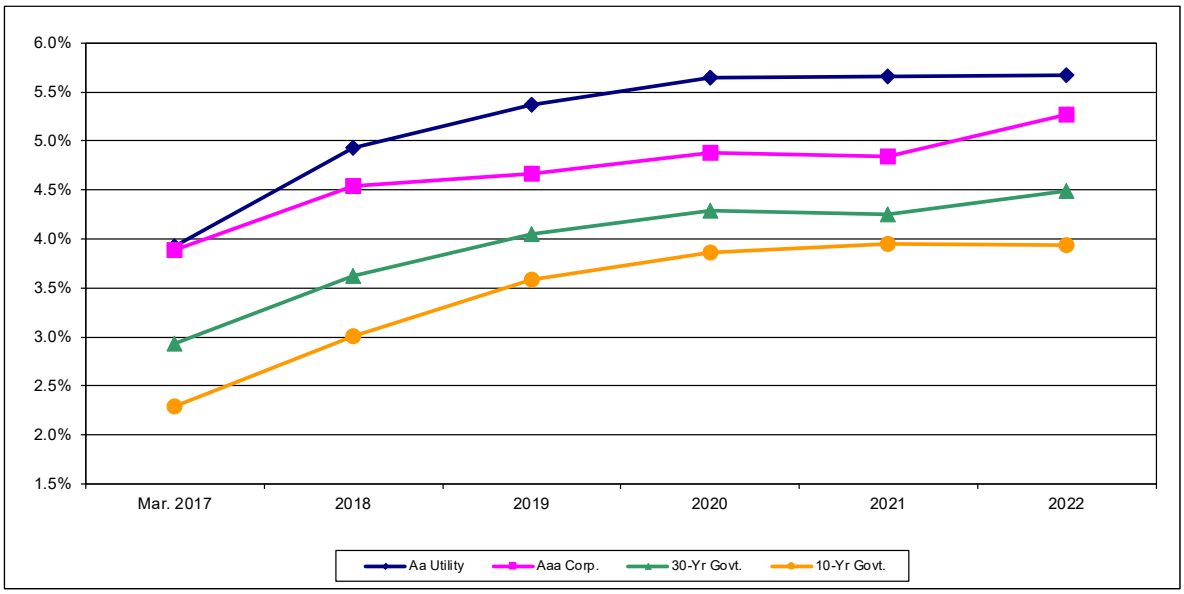
Q. Is there evidence that investors anticipate significantly higher interest rates in the foreseeable future?

A. Yes. Investors continue to anticipate that interest rates will increase significantly from present levels. With apprehension surrounding future Federal Reserve actions, uncertainties regarding future fiscal policies, world-wide geopolitical exposures, and the overhanging risk of a global economic slowdown, the potential for significant volatility and higher capital costs is clearly evident to investors.

[24] Press Release, Fed. Reserve, Policy Normalization Principles and Plans (Sept. 17, 2014), http://www.federalreserve.gov/newsevents/press/monetary/20140917c.htm.

For example, the December 1, 2016 long-term consensus forecast of economists published in the Blue Chip Financial Forecast ("Blue Chip") anticipates that corporate bond yields will increase approximately 150 basis points between 2016 and 2021.[25] Figure 2 below compares six-month average interest rates on 10-year and 30-year Treasury bonds, triple-A rated corporate bonds, and double-A rated utility bonds as of March 2017 with the respective near-term projections from Value Line, IHS Global Insight, Blue Chip, and the Energy Information Administration ("EIA"), which are sources that are highly regarded and widely referenced:

FIGURE 2
INTEREST RATE TRENDS



Source:
Value Line Investment Survey, Forecast for the U.S. Economy (Mar. 3, 2017)
IHS Global Insight (Feb. 2017)
Energy Information Administration, Annual Energy Outlook 2017 (Jan. 5, 2017)
Wolters Kluwer, Blue Chip Financial Forecasts, Vol. 35, No. 12 (Dec. 1, 2016)

[25] Wolters Kluwer, *Blue Chip Financial Forecast,* Vol. 35, No. 12 (Dec. 1, 2016).

As evidenced above, projections by investment advisors, forecasting services, and government agencies support the general consensus in the investment community that the present artificial low level of long-term interest rates will not be sustained.

Q. What do these events imply with respect to the ROE for Avista more generally?

A. Current capital market conditions continue to reflect the impact of unprecedented policy measures taken in response to recent dislocations in the economy and financial markets. As a result, current capital costs are not representative of what is likely to prevail over the near-term future. As the FERC concluded:

> [W]e also understand that any DCF analysis may be affected by potentially unrepresentative financial inputs to the DCF formula, including those produced by historically anomalous capital market conditions. Therefore, while the DCF model remains the Commission's preferred approach to determining allowed rate of return, the Commission may consider the extent to which economic anomalies may have affected the reliability of DCF analyses …[26]

This conclusion is supported by comparisons of current conditions to the historical record and independent forecasts. As demonstrated above, recognized economic forecasting services project that long-term capital costs will increase from present levels.

Thus, while the DCF model is a recognized approach to estimating the ROE, it is not without shortcomings and does not otherwise eliminate the need to ensure that the "end result" is fair. The Indiana Utility Regulatory Commission has also recognized this principle:

> There are three principal reasons for our unwillingness to place a great deal of weight on the results of any DCF analysis. One is . . . the failure of the

[26] Opinion No. 531, 147 FERC ¶ 61,234 at P 41 (2014).

> DCF model to conform to reality. The second is the undeniable fact that rarely if ever do two expert witnesses agree on the terms of a DCF equation for the same utility – for example, as we shall see in more detail below, projections of future dividend cash flow and anticipated price appreciation of the stock can vary widely. And, the third reason is that the unadjusted DCF result is almost always well below what any informed financial analysis would regard as defensible, and therefore require an upward adjustment based largely on the expert witness's judgment. In these circumstances, we find it difficult to regard the results of a DCF computation as any more than suggestive.[27]

Given investors' expectations for rising interest rates and capital costs, the WUTC should consider near-term forecasts for higher public utility bond yields in assessing the reasonableness of individual cost of equity estimates and in evaluating the ROE for Avista. As discussed in Exh. AMM-3, this result is supported by economic studies that show that equity risk premiums are higher when interest rates are at very low levels.

Q. Do ongoing economic and capital market uncertainties also influence the appropriate capital structure for Avista?

A. Yes. Financial flexibility plays a crucial role in ensuring the wherewithal to meet funding needs, and utilities with higher financial leverage may be foreclosed or have limited access to additional borrowing, especially during times of stress. As a result, the Company's capital structure must maintain adequate equity to preserve the flexibility necessary to maintain continuous access to capital even during times of unfavorable market conditions.

[27] *Ind. Michigan Power Co.*, Cause No. 38728, 116 PUR4th, 1, 17-18 (IURC 8/24/1990).

D. Support for Avista's Credit Standing

Q. What credit ratings have been assigned to Avista?

A. S&P has assigned Avista a corporate credit rating of "BBB", while Moody's has set Avista's Issuer Rating at "Baa1".

Q. What considerations impact investors' assessment of the firms in the utility industry?

A. Numerous factors have the potential to impact investors' perceptions of the relative risks inherent in the utility industry and have implications for the financial standing of the utilities themselves. These include the possibility of volatile fuel or purchased power costs, uncertain environmental mandates and associated costs, the implications of declining demand associated with economic weakness or structural changes in usage patterns, pressures associated with mandates concerning renewable resources, and increased reliance on distributed generation or other alternatives to the incumbent utility. Apart from these considerations, utilities may face increasing costs of operating their systems, as well as the financial pressures associated with large capital expenditure programs, which are magnified during periods of turmoil in capital markets.

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

A. The pressures of significant capital expenditure requirements, along with the need to refinance maturing long-term debt obligations, reinforce the importance of supporting continued improvement in Avista's credit standing. Investors understand from past experience in the utility industry that large capital needs can lead to significant deterioration in financial integrity that can constrain access to capital, especially during

times of unfavorable capital market conditions. Considering the uncertain state of financial markets, competition with other investment alternatives, and investors' sensitivity to the potential for market volatility, greater credit strength is a key ingredient in maintaining access to capital at reasonable cost. As Mr. Thies confirms in his testimony, ongoing regulatory support will be a key driver in continuing to maintain and build Avista's financial health.

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

A. Investors recognize that constructive regulation is a key ingredient in supporting utility credit ratings and financial integrity, particularly during times of adverse conditions. As Moody's noted, "the regulatory environment is the most important driver of our outlook because it sets the pace for cost recovery,"[28] With respect to Avista specifically, the major bond rating agencies have explicitly cited the potential that adverse regulatory rulings could compromise the Company's credit standing. S&P observed that the stable outlook on Avista Corp. is due in part to their expectation that the company "will continue to effectively manage regulatory risks"[29], and concluded that "greater borrowing or increased rate lag, a large deferral, or adverse regulatory decisions" could lead to a downgrade. Similarly, Moody's concluded that "Avista's ratings could be considered for downgrade with less supportive regulatory relationships over a sustained period of time..."[30] Further strengthening Avista's financial integrity is imperative to ensure that the Company has the

[28] Moody's Investors Service, "Regulation Will Keep Cash Flow Stable As Major Tax Break Ends," *Industry Outlook* (Feb. 19, 2014).
[29] Standard & Poor's Corporation, "Avista Corp.," *RatingsDirect* (May 26, 2016).
[30] Moody's Investors Service, "Credit Opinion: Avista Corp.," *Global Opinion* (Mar. 22, 2017).

capability to maintain an investment grade rating while confronting large capital expenditures and other potential challenges.[31]

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

A. Yes. Providing an ROE that is sufficient to maintain Avista's ability to attract capital under reasonable terms, even in times of financial and market stress, is not only consistent with the economic requirements embodied in the U.S. Supreme Court's *Hope* and *Bluefield* decisions, it is also in customers' best interests. Customers enjoy the benefits that come from ensuring that the utility has the financial wherewithal to take whatever actions are required to ensure safe and reliable service.

E. Capital Structure

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

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

[31] As noted in the testimony of Mr. Thies, continued regulatory support will be instrumental in achieving Avista's objective of a BBB+ rating from S&P, which is consistent with the average credit standing in the electric utility industry.

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

A. Avista's capital structure is presented in the testimony of Mr. Thies. As summarized in his testimony, the proposed capital structure used to compute Avista's overall rate of return consists of 50.0 percent equity / 50 percent long-term debt in this filing.

Q. Why is Avista proposing to exclude short-term debt from the capital structure calculation in this case?

A. As explained by Mr. Thies, the results from the Traditional Pro Forma Study will not yield the electric and natural gas rate relief necessary to provide the Company the opportunity to earn the proposed overall rate of return requested in this case. One of the rate making "tools" identified by the WUTC that can be used to arrive at an end result that provides sufficient revenues is an adjusted capital structure. In this case, Avista has adjusted its capital structure to exclude short-term debt. Both Idaho and Oregon adjust the capital structure to exclude short-term debt, and currently, Avista's approved capital structures in Idaho and Oregon are 50 percent equity / 50 percent debt. In this case Avista is proposing a similar adjustment to its capital structure, excluding short-term debt from the calculation.[32]

[32] In Order 08 of Docket No. UE-111048 and UG-111049 of Puget Sound Energy's proceeding, the Commission stated its willingness to consider adjustments to rate base beyond the historical test period, including, "Use of plant accounts (rate base) measured at the end, or subsequent to the end of the test-year rather than the test-year average," as well as an "Upward adjustment to the equity share in the capital structure."

Q. What was the average capitalization maintained by the Utility Group?

A. As shown on page 1 of Exh. AMM-5, for the 18 firms in the Utility Group, common equity ratios at December 31, 2016 ranged between 31.1 percent and 75.7 percent and averaged 48.3 percent.

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

A. As shown on page 1 of Exh. AMM-5, Value Line expects an average common equity ratio for the proxy group of utilities of 50.1 percent for its three-to-five year forecast horizon, with the individual common equity ratios ranging from 35.5 percent to 75.5 percent. The WUTC has previously observed that "[i]t is appropriate … to afford more weight to forward considerations than to historic conditions as we determine the appropriate equity ratio to be embedded in prospective rates."[33]

Q. How does Avista's proposed equity ratio compare with those of the operating companies held by the proxy group parent companies?

A. The individual operating company capital structures are presented on page 2 of Exh. AMM-5. As shown there, the operating company equity ratios ranged from 41.6 percent to 61.0 percent. The simple average of these results points to an equity ratio of 52.8 percent; the average weighted by total capitalization for each operating entity was 52.1 percent.

[33] *Order No. 06*, Docket Nos. UG-040640 and UE-040641 (consolidated) (Feb. 18, 2005) at P. 32.

Q. In summary, how does Avista's common equity ratio compare with those maintained by the reference group of utilities?

A. The 50.0 percent common equity ratio requested by Avista is entirely consistent with the range of equity ratios maintained by the parent firms in the Utility Group and their operating subsidiaries, and is in-line with the 48.3 percent and 50.2 percent average equity ratios at year-end 2016 and based on Value Line's near-term expectations, respectively.

Q. What implication do the uncertainties inherent in the utility industry have for the capital structures maintained by utilities?

A. As discussed earlier, utilities are facing rising cost structures, the need to finance significant capital investment plans, uncertainties over accommodating economic and financial market uncertainties, and ongoing regulatory risks. Coupled with the potential for turmoil in capital markets, these considerations warrant a stronger balance sheet to deal with an increasingly uncertain environment. A more conservative financial profile, in the form of a higher common equity ratio, is consistent with increasing uncertainties and the need to maintain the continuous access to capital under reasonable terms that is required to fund operations and necessary system investment, including times of adverse capital market conditions.

Moody's has repeatedly warned investors of the risks associated with debt leverage and fixed obligations and advised utilities not to squander the opportunity to strengthen the

balance sheet as a buffer against future uncertainties.[34] Similarly, S&P noted that, "we generally consider a debt to capital level of 50% or greater to be aggressive or highly leveraged for utilities."[35]

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

A. Depending on their specific attributes, contractual agreements or other obligations that require the utility to make specified payments may be treated as debt in evaluating Avista's financial risk. Power purchase agreements ("PPAs"), leases, and pension obligations typically require the utility to make specified minimum contractual payments akin to those associated with traditional debt financing and investors consider a portion of these commitments as debt in evaluating total financial risks. Because investors consider the debt impact of such fixed obligations in assessing a utility's financial position, they imply greater risk and reduced financial flexibility. In order to offset the debt equivalent associated with off-balance sheet obligations, the utility must rebalance its capital structure by increasing its common equity in order to restore its effective capitalization ratios to previous levels.

These commitments have been repeatedly cited by major bond rating agencies in connection with assessments of utility financial risks.[36] The capital structure ratios

[34] Moody's Investors Service, "Storm Clouds Gathering on the Horizon for the North American Electric Utility Sector," *Special Comment* (Aug. 2007); "U.S. Electric Utility Sector," *Industry Outlook* (Jan. 2008); "U.S. Electric Utilities Face Challenges Beyond Near-Term," *Industry Outlook* (Jan. 2010); Moody's Investors Service, "U.S. Electric Utilities: Uncertain Times Ahead; Strengthening Balance Sheets Now Would Protect Credit," *Special Comment* (Oct. 28, 2010).
[35] Standard & Poor's Corporation, "Ratings Roundup: U.S. Electric Utility Sector Maintained Strong Credit Quality In A Gloomy 2009," *RatingsDirect* (Jan. 26, 2010).
[36] *See, e.g.*, Standard & Poor's Corporation, "Utilities: Key Credit Factors For The Regulated Utilities Industry," *RatingsDirect* (Nov. 19, 2013).

presented earlier do not include imputed debt associated with power purchase agreements or the impact of other off-balance sheet obligations. Avista has continued to add to its purchased power portfolio, most recently with a 30-year PPA in connection with renewable resources from the Palouse Wind Project.

Q. What does this evidence indicate with respect to the Company's capital structure?

A. Based on my evaluation, I conclude that Avista's requested capital structure represents a reasonable mix of capital sources from which to calculate the Company's overall rate of return. While industry averages provide one benchmark for comparison, each firm must select its capitalization based on the risks and prospects it faces, as well its specific needs to access the capital markets. A public utility with an obligation to serve must maintain ready access to capital under reasonable terms so that it can meet the service requirements of its customers. Financial flexibility plays a crucial role in ensuring the wherewithal to meet the needs of customers, and utilities with higher leverage may be foreclosed from additional borrowing under reasonable terms, especially during times of stress.

Avista's capital structure is consistent with industry benchmarks and reflects the challenges posed by its resource mix, the burden of significant capital spending requirements, and the Company's ongoing efforts to strengthen its credit standing and support access to capital on reasonable terms. The reasonableness of a 50 percent common equity / 50 percent long-term debt capital structure for Avista is reinforced by the importance of supporting continued investment in system improvements and the Company's debt repayment obligations, even during times of adverse capital market conditions.

III. CAPITAL MARKET ESTIMATES

Q. What is the purpose of this section?

A. This section presents capital market estimates of the cost of equity. The details of my quantitative analyses are contained in Exh. AMM-3, with the results being summarized below.

A. Quantitative Analyses

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

A. No. In my opinion, no single method or model should be relied upon to determine a utility's cost of equity because no single approach can be regarded as wholly reliable. Therefore, I used the DCF, CAPM, ECAPM, and risk premium methods to estimate the cost of common equity. In addition, I also evaluated a fair ROE using an earnings approach based on investors' current expectations in the capital markets. In my opinion, comparing estimates produced by one method with those produced by other approaches ensures that the estimates of the cost of equity pass fundamental tests of reasonableness and economic logic. My consideration of multiple methods and approaches is consistent with the conclusions of the WUTC:

> We value each of the methodologies used to calculate the cost of equity and do not find it appropriate to select a single method as being the most accurate or instructive. Financial circumstances are constantly shifting and changing, and we welcome a robust and diverse record of evidence based on a variety of analytics and cost of capital methodologies.[37]

[37] *PacifiCorp D/B/A Pacific Power & Light Company*, Docket UE-100749, Final Order at P 91 (Mar. 25, 2011).

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

A. In estimating the cost of equity, the DCF model is typically applied to publicly traded firms engaged in similar business activities or with comparable investment risks. As described in detail in Exh. AMM-3, I applied the DCF model to a utility proxy group composed of those companies included by Value Line in its Electric Utilities Industry groups with:

1. S&P corporate credit ratings of BBB-, BBB, or BBB+;
2. Moody's issuer ratings of Baa2, Baa1, or A3;
3. Value Line Safety Rank of "2" or "3";
4. No involvement in a major merger or acquisition; and,
5. Currently paying common dividends with no recent dividend cuts.

I refer to this group of 18 comparable-risk firms as the "Utility Group."[38]

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

A. Table 3 compares the Utility Group with Avista across four key indicators of investment risk:

TABLE 3
COMPARISON OF RISK INDICATORS

	Credit Rating		Value Line		
	S&P	Moody's	Safety Rank	Financial Strength	Beta
Utility Group	BBB	Baa1	2	B++	0.72
Avista	BBB	Baa1	2	A	0.70

[38] The size and breadth of my proxy group addresses the WUTC's concern that, "In general, the smaller the proxy group, the greater possibility for bias to be introduced due to subjective factors." *PacifiCorp D/B/A Pacific Power & light Company*, Docket UE-100749, Final Order at P 78 (Mar. 25, 2011).

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

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

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

A. My application of the DCF model, which is discussed in greater detail in Exh. AMM-3, considered four alternative measures of expected earnings growth, as well as the sustainable growth rate based on the relationship between expected retained earnings and earned rates of return ("br+sv"). As shown on Exh. AMM-6 and summarized below in Table 4, after eliminating illogical values,[39] application of the constant growth DCF model resulted in the following cost of equity estimates:

TABLE 4
DCF RESULTS – UTILITY GROUP

	Cost of Equity	
Growth Rate	**Average**	**Midpoint**
Value Line	9.2%	10.1%
IBES	9.3%	10.3%
Zacks	9.2%	9.7%
S&P Capital/IQ	9.1%	9.5%
br + sv	8.0%	8.2%

[39] I provide a detailed explanation of my DCF analysis, including the evaluation of individual estimates, in Exh. AMM-3).

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

A. Like the DCF model, the CAPM is an *ex-ante,* or forward-looking model based on expectations of the future. As a result, in order to produce a meaningful estimate of investors' required rate of return, the CAPM is best applied using estimates that reflect the expectations of actual investors in the market, not with backward-looking, historical data. Accordingly, I applied the CAPM to the Utility Group based on a forward-looking estimate for investors' required rate of return from common stocks. Because this forward-looking application of the CAPM looks directly at investors' expectations in the capital markets, it provides a more meaningful guide to the expected rate of return required to implement the CAPM.

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

A. As shown on page 1 of Exh. AMM-8, my forward-looking application of the CAPM model indicated an average ROE of 9.9 percent for the Utility Group after adjusting for the impact of firm size.

Q. Did you also apply the CAPM using forecasted bond yields?

A. Yes. As discussed earlier, there is widespread consensus that interest rates will increase materially as the economy continues to strengthen. Accordingly, in addition to the use of current bond yields, I also applied the CAPM based on the forecasted long-term Treasury bond yields developed based on projections published by Value Line, IHS Global Insight and Blue Chip. As shown on page 2 of Exh. AMM-8, incorporating a forecasted Treasury bond yield for 2018-2022 implied an average cost of equity of 10.2 percent after adjusting for the impact of relative size.

Q. What cost of equity estimates were indicated by the ECAPM?

A. Empirical tests of the CAPM have shown that low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted. The ECAPM incorporates a refinement to address this observed relationship documented in the financial research. My applications of the ECAPM were based on the same forward-looking market rate of return, risk-free rates, and beta values discussed above in connection with the CAPM. As shown on page 1 of Exh. AMM-9, applying the forward-looking ECAPM approach to the firms in the Utility Group results in an average cost of equity estimate of 10.5 percent after incorporating the size adjustment corresponding to the market capitalization of the individual utilities. As shown on page 2 of Exh. AMM-9, incorporating a forecasted Treasury bond yield for 2018-2022 implied an average cost of equity of approximately 10.7 percent after adjusting for the impact of relative size.

Q. How did you implement the risk premium method?

A. I based my estimates of equity risk premiums for electric utilities on surveys of previously authorized rates of return on common equity, which are frequently referenced as the basis for estimating equity risk premiums. My application of the risk premium method also considered the inverse relationship between equity risk premiums and interest rates, which suggests that when interest rate levels are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums widen.

Q. What cost of equity was indicated by the risk premium approach?

A. As shown on page 1 of Exh. AMM-10, adding an adjusted risk premium of 5.46 percent to the six-month average yield on long-term triple-B utility bonds at March

2017 of 4.60 percent resulted in an implied cost of equity of approximately 10.1 percent.[40] As shown on page 2 of Exh. AMM-10, incorporating a forecasted yield for 2018-2022 and adjusting for changes in interest rates since the 1974-2016 study period implied a cost of equity of approximately 10.9 percent.

Q. Please summarize the results of the expected earnings approach.

A. Reference to rates of return available from alternative investments of comparable risk provide an important benchmark in assessing the return necessary to assure confidence in the financial integrity of a firm and its ability to attract capital. The simple, but powerful concept underlying the expected earnings approach is that investors compare each investment alternative with the next best opportunity. If the utility is unable to offer a return similar to that available from other opportunities of comparable risk, investors will become unwilling to supply the capital on reasonable terms. For existing investors, denying the utility an opportunity to earn what is available from other similar risk alternatives prevents them from earning their opportunity cost of capital. This expected earnings approach is consistent with the economic underpinnings for a fair rate of return established by the U.S. Supreme Court. Moreover, it avoids the complexities and limitations of capital market methods and instead focuses on the returns earned on book equity, which are readily available to investors.

Value Line's projections imply an average rate of return on common equity for the electric and gas utility industries of 10.7 percent and 10.6 percent, respectively, over its

[40] Moody's yield averages are based on seasoned bonds with a remaining maturity of at least 20 years.

three- to five-year forecast horizon.[41] As shown on Exh. AMM-11, Value Line's projections for the Utility Group suggest an average ROE of approximately 10.3 percent, with a midpoint value of 11.1 percent.

B. Flotation Costs

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

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

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

A. No. While debt flotation costs are recorded on the books of the utility, amortized over the life of the issue, and thus increase the effective cost of debt capital, there is no similar accounting treatment to ensure that equity flotation costs are recorded and ultimately recognized. No rate of return is authorized on flotation costs necessarily incurred to obtain a portion of the equity capital used to finance plant. In other words, equity flotation

[41] The Value Line Investment Survey (Jan. 27, Feb. 17, Mar. 3, & Mar. 17, 2017). Value Line reports return on year-end equity so the equivalent return on average equity would be higher.

costs are not included in a utility's rate base because neither that portion of the gross proceeds from the sale of common stock used to pay flotation costs is available to invest in plant and equipment, nor are flotation costs capitalized as an intangible asset. Unless some provision is made to recognize these issuance costs, a utility's revenue requirements will not fully reflect all of the costs incurred for the use of investors' funds. Because there is no accounting convention to accumulate the flotation costs associated with equity issues, they must be accounted for indirectly, with an upward adjustment to the cost of equity being the most appropriate mechanism.

Q. Is there a sound basis to include a flotation cost adjustment in this case?

A. Yes, the financial literature and evidence in this case supports an adjustment to include consideration of flotation costs. An adjustment for flotation costs associated with past equity issues is appropriate, even when the utility is not contemplating any new sales of common stock. The need for a flotation cost adjustment to compensate for past equity issues has been recognized in the financial literature. In a *Public Utilities Fortnightly* article, for example, Brigham, Aberwald, and Gapenski demonstrated that even if no further stock issues are contemplated, a flotation cost adjustment in all future years is required to keep shareholders whole, and that the flotation cost adjustment must consider total equity, including retained earnings.[42] Similarly, *New Regulatory Finance* contains the following discussion::

> Another controversy is whether the flotation cost allowance should still be applied when the utility is not contemplating an imminent common stock issue. Some argue that flotation costs are real and should be recognized in

[42] E. F. Brigham, D. A. Aberwald, and L. C. Gapenski, "Common Equity Flotation Costs and Rate Making," *Public Utilities Fortnightly,* May, 2, 1985.

> calculating the fair rate of return on equity, but only at the time when the expenses are incurred. In other words, the flotation cost allowance should not continue indefinitely, but should be made in the year in which the sale of securities occurs, with no need for continuing compensation in future years. This argument implies that the company has already been compensated for these costs and/or the initial contributed capital was obtained freely, devoid of any flotation costs, which is an unlikely assumption, and certainly not applicable to most utilities. … The flotation cost adjustment cannot be strictly forward-looking unless all past flotation costs associated with past issues have been recovered.[43]

Q. Can you illustrate why investors will not have the opportunity to earn their required ROE unless a flotation cost adjustment is included?

A. Yes. Assume a utility sells $10 worth of common stock at the beginning of year 1. If the utility incurs flotation costs of $0.48 (5 percent of the net proceeds), then only $9.52 is available to invest in rate base. Assume that common shareholders' required rate of return is 11.5 percent, the expected dividend in year 1 is $0.50 (i.e., a dividend yield of 5 percent), and that growth is expected to be 6.5 percent annually. As developed in Table 5 below, if the allowed rate of return on common equity is only equal to the utility's 11.5 percent "bare bones" cost of equity, common stockholders will not earn their required rate of return on their $10 investment, since growth will really only be 6.25 percent, instead of 6.5 percent:

TABLE 5
NO FLOTATION COST ADJUSTMENT

Year	Common Stock	Retained Earnings	Total Equity	Market Price	M/B Ratio	Allowed ROE	Earnings Per Share	Dividends Per Share	Payout Ratio
1	$ 9.52	$ -	$ 9.52	$ 10.00	1.050	11.50%	$ 1.09	$ 0.50	45.7%
2	$ 9.52	$ 0.59	$ 10.11	$ 10.62	1.050	11.50%	$ 1.16	$ 0.53	45.7%
3	$ 9.52	$ 0.63	$ 10.75	$ 11.29	1.050	11.50%	$ 1.24	$ 0.56	45.7%
Growth			**6.25%**	**6.25%**			**6.25%**	**6.25%**	

[43] Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 335.

The reason that investors never really earn 11.5 percent on their investment in the above example is that the $0.48 in flotation costs initially incurred to raise the common stock is not treated like debt issuance costs (*i.e.*, amortized into interest expense and therefore increasing the embedded cost of debt), nor is it included as an asset in rate base.

Including a flotation cost adjustment allows investors to be fully compensated for the impact of these costs. One commonly referenced method for calculating the flotation cost adjustment is to multiply the dividend yield by a flotation cost percentage. Thus, with a 5 percent dividend yield and a 5 percent flotation cost percentage, the flotation cost adjustment in the above example would be approximately 25 basis points. As shown in Table 6 below, by allowing a rate of return on common equity of 11.75 percent (an 11.5 percent cost of equity plus a 25 basis point flotation cost adjustment), investors earn their 11.5 percent required rate of return, since actual growth is now equal to 6.5 percent:

TABLE 6
INCLUDING FLOTATION COST ADJUSTMENT

Year	Common Stock	Retained Earnings	Total Equity	Market Price	M/B Ratio	Allowed ROE	Earnings Per Share	Dividends Per Share	Payout Ratio
1	$ 9.52	$ -	$ 9.52	$ 10.00	1.050	11.75%	$ 1.12	$ 0.50	44.7%
2	$ 9.52	$ 0.62	$ 10.14	$ 10.65	1.050	11.75%	$ 1.19	$ 0.53	44.7%
3	$ 9.52	$ 0.66	$ 10.80	$ 11.34	1.050	11.75%	$ 1.27	$ 0.57	44.7%
Growth			**6.50%**	**6.50%**			**6.50%**	**6.50%**	

The only way for investors to be fully compensated for issuance costs is to include an ongoing adjustment to account for past flotation costs when setting the return on common equity. This is the case regardless of whether or not the utility is expected to issue additional shares of common stock in the future.

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

A. The most common method used to account for flotation costs in regulatory proceedings is to apply an average flotation-cost percentage to a utility's dividend yield. Based on a review of the finance literature, *Regulatory Finance: Utilities' Cost of Capital* concluded:

> The flotation cost allowance requires an estimated adjustment to the return on equity of approximately 5% to 10%, depending on the size and risk of the issue.[44]

Alternatively, a study of data from Morgan Stanley regarding issuance costs associated with utility common stock issuances suggests an average flotation cost percentage of 3.6 percent.[45] Applying a 3.6 percent expense percentage to the proxy group dividend yield of 3.3 percent implies a flotation cost adjustment on the order of 10 basis points. I thus recommend the Commission increase the cost of equity by 10 basis points in arriving at a fair ROE for Avista.

Q. Has the WUTC previously recognized that flotation costs are properly considered in setting the allowed ROE?

A. Yes. For example, in Docket No. UE-991606 the WUTC concluded that a flotation cost adjustment of 25 basis points should be included in the allowed return on equity:

> The Commission also agrees with both Dr. Avera and Dr. Lurito that a 25 basis point markup for flotation costs should be made. This amount

[44] *Id*. at 323.
[45] *Application of Yankee Gas Services Company for a Rate Increase*, DPUC Docket No. 04-06-01, Direct Testimony of George J. Eckenroth (Jul. 2, 2004) at Exhibit GJE-11.1. Updating the results presented by Mr. Eckenroth through April 2005 also resulted in an average flotation cost percentage of 3.6 percent.

> compensates the Company for costs incurred from past issues of common stock. Flotation costs incurred in connection with a sale of common stock are not included in a utility's rate base because the portion of gross proceeds that is used to pay these costs is not available to invest in plant and equipment.[46]

Q. Have other regulators recognized flotation costs in evaluating a fair ROE?

A. Yes. For example, the South Dakota Public Utilities Commission has recognized the impact of issuance costs, concluding that, "recovery of reasonable flotation costs is appropriate."[47] Another example of a regulator that approves common stock issuance costs is the Mississippi Public Service Commission, which routinely includes a flotation cost adjustment in its Rate Stabilization Adjustment Rider formula.[48] The Public Utilities Regulatory Authority of Connecticut[49] and the Minnesota Public Utilities Commission[50] have also recognized that flotation costs are a legitimate expense worthy of consideration in setting a fair ROE.

C. Non-Utility DCF Model

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

A. As indicated earlier, I also present a DCF analysis for a low risk group of non-utility firms, with which Avista must compete for investors' money. Under the regulatory standards established by *Hope* and *Bluefield*, the salient criterion in establishing a meaningful benchmark to evaluate a fair ROE is relative risk, not the particular business

[46] *Third Supplemental Order*, WUTC Docket No. UE-991606, et al., p. 95 (September 2000).
[47] *Northern States Power Co*, EL11-019, Final Decision and Order at P 22 (2012).
[48] *See*, *e.g.*, Entergy Mississippi, Inc., Formula Rate Plan Rider (Apr. 15, 2015), http://www.entergy-mississippi.com/content/price/tariffs/emi_frp.pdf (last visited Mar. 16, 2017).
[49] *See, e.g.*, Docket No. 14-05-06, Decision (Dec. 17, 2014) at 133-134.
[50] *See, e.g.,* Docket No. E001/GR-10-276, Findings of Fact, Conclusions, and Order at 9.

activity or degree of regulation. With regulation taking the place of competitive market forces, required returns for utilities should be in line with those of non-utility firms of comparable risk operating under the constraints of free competition. Consistent with this accepted regulatory standard, I also applied the DCF model to a reference group of low-risk companies in the non-utility sectors of the economy. I refer to this group as the "Non-Utility Group".

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

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

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

A. Yes. Returns in the competitive sector of the economy form the very underpinning for utility ROEs because regulation purports to serve as a substitute for the actions of competitive markets. The Supreme Court has recognized that it is the degree of risk, not the nature of the business, which is relevant in evaluating an allowed ROE for a utility. The *Bluefield* case refers to "business undertakings attended with comparable risks

and uncertainties." [51] It does not restrict consideration to other utilities. Similarly, the *Hope* case states:

> By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.[52]

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

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

A. Yes. The estimates of growth from the DCF model depend on analysts' forecasts. It is possible for utility growth rates to be distorted by short-term trends in the industry or the industry falling into favor or disfavor by analysts. The result of such distortions would be to bias the DCF estimates for utilities. Because the Non-Utility Group includes low risk companies from many industries, it diversifies away any distortion that may be caused by the ebb and flow of enthusiasm for a particular sector.

Q. How do the overall risks of this Non-Utility Group compare with the Utility Group and Avista?

A. Table 7 compares the Non-Utility Group with the Utility Group and Avista across the four key risk measures discussed earlier:

[51] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).
[52] *Federal Power Comm'n v. Hope Natural Gas Co.* (320 U.S. 391, 1944).

TABLE 7

COMPARISON OF RISK INDICATORS

	Credit Rating		Value Line		
	S&P	Moody's	Safety Rank	Financial Strength	Beta
Non-Utility Group	A-	A3	1	A+	0.73
Utility Group	BBB	Baa1	2	B++	0.72
Avista	BBB	Baa1	2	A	0.70

As shown above, the average credit ratings, Safety Rank, and Financial Strength Rating for the Non-Utility Group suggest less risk than for Avista and the proxy group of utilities. These objective indicators suggest that investors would likely conclude that the overall investment risks for the Utility Group and Avista are greater than those of the firms in the Non-Utility Group.

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

A. As shown on Exh. AMM-12, I applied the DCF model to the non-utility companies using analysts' earnings per share ("EPS") growth projections, as described earlier for the Utility Group. As summarized below in Table 8, after eliminating illogical values, application of the constant growth DCF model resulted in the following cost of equity estimates:

TABLE 8
DCF RESULTS – NON-UTILITY GROUP

	Cost of Equity	
Growth Rate	Average	Midpoint
Value Line	10.2%	11.0%
IBES	10.8%	11.0%
Zacks	10.4%	11.4%

Q. How can you reconcile these DCF results for the Non-Utility Group against the lower estimates produced for your comparable-risk group of utilities?

A. First, it is important to be clear that the higher DCF results for the Non-Utility Group cannot be attributed to risk differences. As documented in Exh. AMM-3, the risks that investors associate with the group of non-utility firms - as measured by credit ratings and Value Line's Safety Rank and Financial Strength – are lower than the risks investors associate with the Utility Group and Avista. The objective evidence provided by these observable risk measures rules out a conclusion that the higher non-utility DCF estimates are associated with higher investment risk.

Rather, the divergence between the DCF results for these two groups of utility and non-utility firms can be attributed to the fact that DCF estimates invariably depart from the returns that investors actually require because their expectations may not be captured by the inputs to the model, particularly the assumed growth rate. Because the actual cost of equity is unobservable, and DCF results inherently incorporate a degree of error, the cost of equity estimates for the Non-Utility Group provide an important benchmark in evaluating a fair ROE for Avista. There is no basis to conclude that DCF results for a group of utilities would be inherently more reliable than those for firms in the competitive sector, and the divergence between the DCF estimates for the Utility and Non-Utility Groups suggests that both should be considered to ensure a balanced end-result.

IV. IMPACT OF REGULATORY MECHANISMS

Q. Would any adjustment to the ROE be warranted due to Avista's ERM?

A. No. S&P has cited the existing deadbands in the ERM, and a history of deferred power cost balances and rate lag as a significant credit weakness, and noted that the ERM disadvantages Avista relative to other utilities in the region:

> [T]he threshold it must meet to true-up uncollected costs in Washington is high, and the company does not automatically collect deferred costs. Each year, uncollected costs are subject to defined sharing bands, allowing the company to potentially defer certain portions for collection from customers. This mechanism is weaker than that for some utilities operating in western states with high hydrological or significant gas generation exposure.[53]

Investors recognize that the ability to adjust rates to recover energy costs is universally prevalent in the utility industry. Such adjustment mechanisms act to level the playing field, placing the Company on equal footing with its peers in the industry. As a result, no adjustment to the ROE is justified or warranted.

Q. Does the fact that, starting in January 2015, Avista's electric and gas rates include a revenue decoupling mechanism warrant any adjustment in your evaluation of a fair ROE?

A. No. The WUTC's approval of decoupling is supportive of Avista's financial integrity, but there is no evidence to suggest that implementation of these mechanisms has altered the relative risk of Avista enough to warrant any adjustment to its ROE. As noted earlier, the investment community and the major credit rating agencies in particular, pay close attention to the regulatory framework, including various adjustment mechanisms. Based largely on the expanded use of ratemaking mechanisms such as revenue decoupling

[53] Standard & Poor's Corporation, "Avista Corp.," *RatingsDirect* (Jul. 26, 2011).

and cost-recovery riders, Moody's upgraded most regulated utilities in January 2014.[54] Recognizing this industry trend, and the prospective ratemaking mechanisms already approved by the WUTC for Puget Sound Energy, Moody's premised its assessment of Avista's risks on the expectation that "similar treatment will be afforded to Avista and that the company will have improved cost recovery mechanisms (e.g., decoupling)."[55] In other words, the implications of revenue decoupling and other regulatory mechanisms are already fully reflected in Avista's credit ratings, which are comparable to those of the proxy group used to estimate the cost of equity.

Moreover approval of revenue decoupling does not remove overhanging regulatory risks. Avista remains exposed to future determinations as to the prudency of its expenditures and investments, and investors continue to evaluate expectations for balance in the regulatory framework and in establishing allowed ROEs.

Q. Do the regulatory mechanisms approved for Avista set the Company apart from other firms operating in the utility industry?

A. No. Adjustment mechanisms and cost trackers have been increasingly prevalent in the utility industry in recent years. In response to the increasing risk sensitivity of investors to uncertainty over fluctuations in costs and the importance of advancing other public interest goals such as reliability, energy conservation, and safety, utilities and their regulators have sought to mitigate some of the cost recovery uncertainty and align the interest of utilities and their customers through a variety of adjustment mechanisms.

[54] Moody's Investors Service, "US utility sector upgrades driven by stable and transparent regulatory frameworks," *Sector Comment* (Feb. 3, 2014).
[55] Moody's Investors Service, "Avista Corp.," *Global Credit Research* (Mar. 28, 2014).

Reflective of this trend, the companies in the electric and gas utility industries operate under a wide variety of cost adjustment mechanisms, which range from riders to recover bad debt expense and post-retirement employee benefit costs to revenue decoupling and adjustment clauses designed to address rising capital investment outside of a traditional rate case and increasing costs of environmental compliance measures. As Regulatory Research Associates concluded in its most recent review of adjustment clauses, "some form of decoupling is in place in the vast majority of jurisdictions."[56] Similarly, the majority of gas utilities benefit from revenue decoupling, along with a variety of other provisions that enhance their ability to recover operating and capital costs on a timely basis.[57] The firms in the Non-Utility Group also have the ability to alter prices in response to rising production costs, with the added flexibility to withdraw from the market altogether. As a result, the mitigation in risks associated with utilities' ability to adjust revenues and attenuate the risk of cost recovery is already reflected in the cost of equity range determined earlier, and no separate adjustment to Avista's ROE is necessary or warranted.

Q. Have you summarized the various tracking mechanisms available to the other firms in the Utility Group?

A. Yes. As summarized on Exh. AMM-13, reflective of industry trends, the companies in the Utility Group operate under a variety of regulatory adjustment mechanisms.[58] For example, fifteen of the firms benefit from some form of revenue

[56] Regulatory Research Associates, "Adjustment Clauses, A State-by-State Overview," *Regulatory Focus* (Aug. 22, 2016).
[57] *See, e.g.,* American Gas Association, *Innovative Rates, Non-Volumetric Rates, and Tracking Mechanisms: Current List* (Aug. 2016).
[58] Because this information is widely referenced by the investment community, it is also directly relevant to an evaluation of the risks and prospects that determine the cost of equity.

decoupling or operate in jurisdictions that allow the use of future test years. Many of these utilities operate under mechanisms that allow for cost recovery of infrastructure investment outside a formal rate proceeding, as well as the ability to implement periodic rate adjustments to reflect changes in a diverse range of operating and capital costs, including expenditures related to environmental mandates, conservation programs, transmission costs, and storm recovery efforts.

Q. Has the Commission acknowledged the prevalence of risk mitigating mechanisms in the industry?

A. Yes. As the Commission determined in a 2015 order in a Puget Sound Energy case:

> We believe it is correct that cost of capital analysis cannot be expected to produce results that support measurement of decrements to ROE ostensibly due to approval of one risk mitigation mechanism or another. Nor would cost of capital analysis be adequate to the task of identifying increments to ROE that might be considered due to some measure of additional risk a company takes on at some point in time. The Commission has never tried to account separately in its ROE determinations for specific risks or risk mitigating factors, nor should it. Circumstances in the industry today and modern regulatory practice that have led to a proliferation of risk reducing mechanisms being in place for utilities throughout the United States make it particularly inappropriate and unnecessary to consider such an undertaking. **The effects of these risk mitigating factors was by 2013, and is today, built into the data experts draw from the samples of companies they select as proxies.**[59]

[59] *Wash. Utils. & Transp. Comm'n v. Puget Sound Energy, Inc.*, Dockets UE-130130 and UG-130138 (consolidated) et al., Order 15.14 at 69, ¶ 155 (June 29, 2015). Internal citations omitted, emphasis added.

Q. Have other regulators recognized that approval of adjustment mechanisms do not warrant an adjustment to the ROE?

A. Yes. For example, the Staff of the Kansas State Corporation Commission concluded that no ROE adjustment was justified in the case of certain tariff riders because the impact of similar mechanisms is already accounted for through the use of a proxy group:

> Those mechanisms differ from company to company and jurisdiction to jurisdiction. Regardless of their nuances, the intent is the same; reduce cash-flow volatility year to year and place recent capital expenditures in rates as quickly as possible. Investors are aware of these mechanisms and their benefits are a factor when investors value those stocks. Thus, any risk reduction associated with these mechanisms is captured in the market data (stock prices) used in Staff's analysis.[60]

Similarly, the mitigation in risks associated with Avista's ability to attenuate regulatory lag through various adjustment mechanisms is already reflected in the results of the quantitative methods presented in my testimony.

Q. What does this imply with respect to the evaluation of a fair ROE for Avista?

A. While investors would consider Avista's regulatory mechanisms to be supportive of the Company's financial integrity and credit ratings, there is certainly no evidence to suggest that these mechanisms alone have altered Avista's relative risk enough to warrant an ROE adjustment. The purpose of regulatory mechanisms is to reduce the impact of regulatory lag and better match revenues to the underlying costs of providing service. This levels the playing field and improves Avista's ability to attract capital and actually earn its authorized ROE, but it does not result in a "windfall" or otherwise penalize

[60] *Direct Testimony Prepared by Adam H. Gatewood*, State Corporation Commission of the State of Kansas, Docket No. 12-ATMG-564-RTS, pp. 8-9 (June 8, 2012). This proceeding was ultimately resolved through a stipulated settlement.

customers. Utilities across the U.S. that Avista competes with for new capital are increasingly availing themselves of similar adjustments. As a result, the impact of utilities' ability to mitigate the risk of cost recovery is already reflected in the cost of equity estimates determined in this case, and no separate adjustment to Avista's ROE is necessary or warranted.

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

A. Yes.