Exhibit No.___(AMM-14T)

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-160228

DOCKET NO. UG-160229

REBUTTAL TESTIMONY OF

ADRIEN M. MCKENZIE, CFA

REPRESENTING AVISTA CORPORATION

Exhibit No.___(AMM-14T)

REBUTTAL TESTIMONY OF ADRIEN M. MCKENZIE, CFA

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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. Did you previously submit Direct Testimony in this case?

A. Yes, I did.

Q. What is the purpose of your Rebuttal Testimony?

A. My purpose is to respond to the testimony of Mr. David C. Parcell, submitted on behalf of the Staff of the Washington Utilities and Transportation Commission ("WUTC" or "the Commission"), and Mr. Michael P. Gorman, on behalf of the Industrial Customers of Northwest Utilities ("ICNU"), concerning the fair rate of return on equity ("ROE") for the jurisdictional electric and gas utility operations of Avista Corp. ("Avista" or "the Company").

A. Summary of Conclusions

Q. Please summarize the principal conclusions of your Rebuttal Testimony.

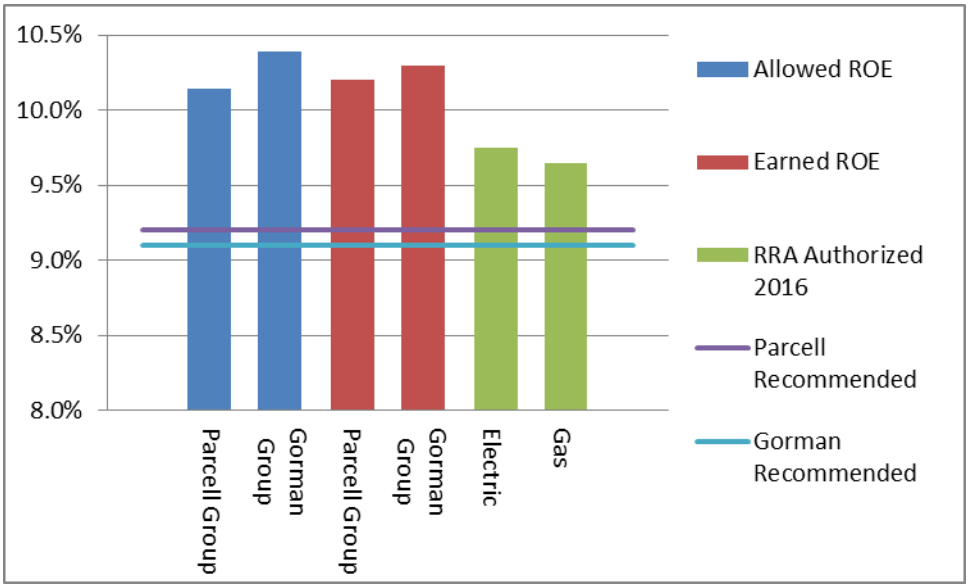
A. The cost of equity recommendations of Mr. Parcell (9.2%) and Mr. Gorman (9.1%) are simply too low and fail to reflect the risk perceptions and return requirements of real-world investors in the capital markets. Their recommendations would be significantly below recent average ROEs authorized by other state commissions. In 2015, the average allowed ROE for vertically-integrated electric companies was 9.75%; for the first half of

2016 it was 9.65%.[1] For gas utilities, the average allowed ROE was 9.60% in 2015 and 9.45% for the first half of 2016.[2]

Authorized ROE data for the specific firms in Mr. Parcell's and Mr. Gorman's proxy groups is even more compelling. As shown in Exhibit No.__(AMM-15), the average authorized ROE for the firms in Mr. Parcell's proxy group is 10.14%; for Mr. Gorman's group it is 10.39%. In other words, allowed ROEs for the utilities that Mr. Parcell characterizes as "a substitute for Avista"[3] and Mr. Gorman states are "reasonably comparable in investment risk to Avista"[4] indicate that their recommended ROEs are too low to meet regulatory standards. The significant shortfall between Mr. Parcell's and Mr. Gorman's recommendations and the ROE benchmarks discussed in my rebuttal testimony are illustrated in the chart below.

[1] Regulatory Focus, "Major Rate Case Decisions," Regulatory Research Associates, July 15, 2016 and January 14, 2016.
[2] *Id.*
[3] Parcell Direct at 22.
[4] Gorman Direct at 18.

REBUTTAL CHART 1



Finally, as I will discuss in more detail later, interest rates are expected to increase. Given this, the ROE recommendations of Mr. Parcell and Mr. Gorman should, at the very least, have come from the upper end of their ROE ranges (9.5% for Mr. Parcell and 9.4% for Mr. Gorman). Their ROE recommendations are extreme and, as I discuss below, fail to meet fundamental regulatory principles.

Q. Please summarize the technical flaws in the ROE analysis provided by Mr. Parcell.

A. There are key deficiencies in his quantitative applications that lead to a significant downward bias in his conclusions. My rebuttal testimony demonstrates that:

- Mr. Parcell's Discounted Cash Flow ("DCF") analysis contains several flaws: His analysis creates a mishmash of results, most of which are so far below his 9.2% recommendation that they are not credible; his reliance on historical data, including dividend and book value data, are not appropriate; and he has a computational shortcoming in his retention growth calculation;

- His Capital Asset Pricing Model ("CAPM") analyses also contains numerous flaws, most notably his reliance on historical data when the ROE estimation process is clearly forward-looking;

- His Comparable Earnings ("CE") approach, while the most reasonable of his methods, also contains significant shortcomings due primarily to his repeated fault of relying on historical data in a process that is forward-looking and his problematic injection of market-to-book ratios into the analysis, and;

- Finally, his criticisms of my ROE approaches are not valid, including his comments on the current interest rate outlook, low-end ROE outliers, my CAPM analysis, size adjustment, my Utility Risk Premium analysis, my Expected Earnings analysis, my Non-Utility DCF analysis, and flotation costs.

Q. What are your principal conclusions regarding the recommendations of Mr. Gorman?

A. Mr. Gorman recommends an ROE of 9.10% for the Company. I demonstrate that Mr. Gorman's recommendation is biased downward and lacks credibility based on the following:

- Mr. Gorman's DCF approach is compromised because he eliminates a valid utility company from his proxy group, he includes low-end outliers in his final results, he ignores a readily available and widely followed source of analysts' growth rates, and he relies on a multi-stage growth DCF model that wrongly assumes that investors view growth in gross domestic product ("GDP") is an upper limit on utility growth;

- The CAPM results reported by Mr. Gorman are suspect because they are based on historical data, they fail to correct for an observed bias in the CAPM result, and they ignore the impact of company size on expected returns, and;

- His risk premium analysis is flawed because he rejects the well-documented, inverse relationship between equity risk premiums and interest rate levels.

Mr. Gorman's analyses also suffer from many of the same deficiencies identified above in connection with Staff's analysis. His failure to consider the ECAPM or to recognize flotation costs is at odds with the conclusions of recognized financial research and his own admission that these are legitimate expenses that should be recovered. Finally, his criticisms of my Expected Earnings approach and Non-Utility DCF analysis are without merit. Taken as a whole, these flaws ensure that Mr. Gorman's recommended ROE falls well below a fair and reasonable level for Avista.

B. ROE Recommendations Fail to Meet Regulatory Standards

Q. How would you judge the ROE recommendations of Mr. Parcell and Mr. Gorman in relation to fundamental regulatory standards?

A. Their proposals do not meet basic regulatory principles. It is widely accepted that a utility's ability to attract capital must be considered in establishing a fair rate of return. This is a fundamental standard underlying the regulation of public utilities. The Supreme Court's *Bluefield* and *Hope* decisions established that a regulated utility's authorized returns on capital must be sufficient to assure investors' confidence and adequate, under efficient and economical management, to maintain and support a utility's credit and enable it to raise money necessary to provide safe and reliable service to its customers.[5]

Beyond these standards, one fundamental requirement that any ROE recommendation must satisfy before it can be considered reasonable is that it must grant Avista the opportunity to earn an ROE comparable to contemporaneous returns available from alternative investments of similar risk. While Mr. Parcell and Mr. Gorman correctly recognized the

[5] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679, 694 (1923) ("*Bluefield*"); *FPC v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944) ("*Hope*").

importance of these underlying economic and legal standards,[6] the end-results of their analyses fail to meet these requirements.

Q. Have other regulators recently recognized the importance of these fundamental standards in evaluating a fair ROE?

A. Yes. The Federal Energy Regulatory Commission ("FERC") recently affirmed that its "ultimate task is to ensure that the resulting ROE satisfies the requirements of *Hope* and *Bluefield*."[7] While FERC looks initially to the DCF methodology when evaluating a fair ROE, it has also made clear that it is the result reached, not the method used, that determines whether an ROE is just and reasonable.[8] As FERC observed:

> [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 in determining where to set a public utility's ROE within the range of reasonable returns . . .[9]

FERC concluded that due to anomalous capital market conditions, a mechanical application of the DCF model using GDP growth would result in an ROE that was insufficient to meet regulatory standards, and that "it is necessary and reasonable to consider additional record evidence, including evidence of alternative benchmark methodologies and

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[6] Parcell Direct at 5-7; Gorman Direct at 16.
[7] *Coakley v. Bangor Hydro-Electric Co.*, Opinion No. 531, 147 FERC ¶ 61,234 at para. 144 (2014) ("Opinion No. 531").
[8] *See, e.g.,* Opinion No. 531 at para. 142.
[9] *Id.* at para. 41. Application of the two-step DCF method without the "mid-point of the upper half of the range" adjustment would have resulted in an ROE of only 9.39%, a value FERC found unreasonable. *Id.* at para. 142.

state commission-approved ROEs," to determine a just and reasonable ROE.[10] In Opinion No. 531, FERC found that risk premium, CAPM, and expected earnings methodologies directly comparable to those applied in my Direct Testimony in this case were informative and relied on these analyses to set the just and reasonable point ROE at the upper end of the DCF range.

Q. Are there objective measures for the reasonableness of a cost of equity analysis?

A. Yes, allowed ROEs by other state commissions provide one gauge of reasonableness for the outcome of a cost of equity analysis. As I demonstrated above, the ROE recommendations of Mr. Parcell and Mr. Gorman are far below allowed returns over the 2015-2016 timeframe (9.65%-9.75% electric cases, 9.45%-9.60% gas cases) and for the companies in their own proxy groups (10.14% Parcell proxy group, 10.39% Gorman proxy group). In considering utilities with comparable risks, investors will always prefer to provide capital to the opportunity with the highest expected return. If a utility is unable to offer a return similar to that available from other investment opportunities posing equivalent risks, investors will become unwilling to supply the utility with capital on reasonable terms. While the ROEs approved in other jurisdictions do not constrain the WUTC's decision-making in this proceeding, it is important to understand that there would be a disincentive for investors to provide equity capital to Avista if the Commission were to apply an unreasonably low ROE, compared to entities of comparable risk.

[10] Opinion No. 531 at para. 145 (2014).

Q. Are expected earned rates of return also a valid benchmark for evaluating Mr. Parcell's and Mr. Gorman's ROE recommendations?

A. Yes. Expected earned rates of return for other utilities provide another useful measure to gauge the reasonableness of Mr. Parcell's and Mr. Gorman's ROE recommendations. Reference to expected earnings is predicated on the comparable earnings test, which developed as a direct result of the Supreme Court decisions in *Bluefield* and *Hope*. This test recognizes that investors compare the allowed ROE with returns available from other alternatives of comparable risk.

Q. Have the expected earnings or comparable earnings approaches been recognized as valid ROE benchmarks?

A. Yes. Mr. Parcell himself, in a textbook prepared for the Society of Utility and Regulatory Analysts, points out that the comparable earnings method is "easily understood" and firmly anchored in the regulatory economics underlying the *Bluefield* and *Hope* cases, and notes that the amount of subjective judgment required to implement this method is "minimal," particularly when compared to the DCF and CAPM methods.[11] Mr. Parcell employs a CE approach in his testimony and concludes from this analysis that an ROE range of 9.0% to 10.0% (midpoint 9.5%) is reasonable.[12]

Similarly, *New Regulatory Finance* concluded that, "because the investment base for ratemaking purposes is expressed in book value terms, a rate of return on book value, as is the case with Comparable Earnings, is highly meaningful."[13] More recently, FERC

[11] Parcell, David C., THE COST OF CAPITAL – A PRACTITIONER'S GUIDE at 115-116 (2010).
[12] Parcell Direct at 34.
[13] Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 395 (2006).

concluded that the expected earnings approach "can be useful in validating our ROE recommendation . . . given its close relationship to the comparable earnings standard that originated in *Hope,* and the fact that it is used by investors to estimate the ROE that a utility will earn in the future."[14]

Q. Do expected earned rates of return for Mr. Parcell's and Mr. Gorman's proxy groups demonstrate that their ROE recommendations are too low?

A. Yes. The year-end returns on common equity projected by the Value Line Investment Survey ("Value Line") over its forecast horizon for the firms in Mr. Parcell's and Mr. Gorman's proxy groups are shown in Exhibit No.__(AMM-16). Once adjusted to a mid-year basis,[15] reference to expected earnings implied an annual average cost of equity for the utilities referenced by Mr. Parcell of 10.2% and 10.3% for Mr. Gorman's group. These book return estimates are an "apples to apples" comparison to their ROE recommendation. If Avista is only allowed the opportunity to earn a 9.2% or 9.1% return on the book value of its equity investment, as recommended by Mr. Parcell and Mr. Gorman, while other comparable utilities are expected to earn an average of 10.2%-10.3%, the implications are clear – Avista's investors will be denied the ability to earn a return that is comparable to those available from investments with comparable risk.

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[14] Opinion No. 531 at para. 147 (2014). The Virginia Corporation Commission is required by statute (Virginia Code § 56-585.1.A.2.a) to consider the earned returns on book value of electric utilities in its region. Another example is the Idaho Public Utilities Commission, which has confirmed the relevance of return on book equity evidence. *See, e.g.,* Order No. 29505, Case No. IC-E-03-13 at 38 (Idaho Public Utilities Commission, May 25, 2004).

[15] Because Value Line reports end-of-year book values, an adjustment factor was incorporated to compute an average rate of return over the year, which is consistent with the theory underlying this approach. Use of an average return in developing the sustainable growth rate is well supported. *See, e.g.*, Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 305-306 (2006), which discusses the need to adjust Value Line's end-of-year data. FERC has affirmed the need for this adjustment to "r" in *Bangor Hydro-Elec. Co.*, 122 FERC ¶ 61,265 (2008).

Q. What other evidence indicates that Mr. Parcell's and Mr. Gorman's recommended ROEs fail to meet regulatory standards?

A. As discussed in my Direct Testimony, expected rates of return for firms in the competitive sector of the economy are also relevant in determining the appropriate return to be allowed for rate-setting purposes.[16] The idea that investors evaluate utilities against the returns available from other investment alternatives – including the low-risk companies in my Non-Utility Group – is a fundamental cornerstone of modern financial theory. Aside from this theoretical underpinning, any casual observer of stock market commentary and the investment media quickly comes to the realization that investors' choices are almost limitless. It follows that utilities must offer a return that can compete with other risk-comparable alternatives, or capital will simply go elsewhere.

In fact, 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 the degree of risk, not the nature of the business, is relevant in evaluating an allowed ROE for a utility.[17] The cost of capital is based on the returns that investors could realize by putting their money in other alternatives, and the total capital invested in utility stocks is only the tip of the iceberg of total common stock investment.

[16] McKenzie Direct at 44-48.
[17] *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

Q. Does Mr. Parcell recognize this principal and consider non-utility stocks relevant to determining the cost of capital?

A. Yes. In fact, Mr. Parcell's CE methodology considers realized ROEs of unregulated companies (in the form of the S&P 500). As Mr. Parcell states:

> The recent ROEs of the proxy utilities and S&P 500 group can be viewed as an indication of the level of return realized and expected in the regulated and competitive sectors of the economy.[18]

Mr. Parcell notes further that his CE method is derived from the "corresponding risk" concept discussed in the *Bluefield* and *Hope* cases.[19] He continues:

> This method is thus based upon the economic concept of opportunity cost. As previously noted, the ROE is an opportunity cost: the prospective return available to investors from alternative investments of similar risk.[20]

In other words, Mr. Parcell recognized that investors gauge their required returns from utilities against those available from utility and non-utility firms of comparable risk. My reference to a low-risk Non-Utility Group is entirely consistent with the guidance of the Supreme Court and the principles outlined in Mr. Parcell's own testimony.

Q. Did Mr. Parcell present any objective evidence that would support a finding that your Non-Utility Group is riskier than Avista or the companies in his proxy group?

A. No. Mr. Parcell presented no meaningful evidence to rebut the results for my Non-Utility Group, or otherwise demonstrate that my Non-Utility Group is riskier than

[18] Parcell Direct at 34.
[19] *Id*. at 30.
[20] *Id*.

Avista or his proxy group of utilities. Instead, he simply alluded to the obvious fact that "unregulated enterprises face different risk and operational characteristics that do utilities."[21]

But my Direct Testimony did not contend that the operations of the companies in the Non-Utility Group are comparable to those of utilities. Clearly, operating a worldwide enterprise in the beverage, pharmaceutical, retail, or food industry involves unique circumstances that are as distinct from one another as they are from a utility. But as the Supreme Court recognized, investors consider the expected returns available from all these opportunities in evaluating where to commit their scarce capital. The simple observation that a firm operates in non-utility businesses says nothing at all about the overall investment risks perceived by investors, which is the very basis for a fair rate of return. So long as the risks associated with the Non-Utility Group are comparable to Avista and other utilities the resulting DCF estimates provide a meaningful benchmark for the cost of equity. As demonstrated in my Direct Testimony, a comparison of objective risk measures demonstrates conclusively that the Non-Utility Group is regarded as less risky than Avista, making it a conservative benchmark for a fair ROE in this case.[22]

Q. Does the fact that utilities are regulated somehow invalidate this comparison of objective risk indicators?

A. Absolutely not. While I agree that utilities operate under a regulatory regime that differs from firms in the competitive sector, any risk-reducing benefit of regulation is already incorporated in the overall indicators of investment risk presented in Table 7 to my

[21] Parcell Direct at 54.
[22] McKenzie Direct, Table 7, at 46.

Direct Testimony. The impact of regulation on a utility's investment risks is one of the key elements considered by credit rating agencies and investment advisory services, such as Standard & Poor's Corporation ("S&P") and Value Line, when establishing corporate credit ratings and other risk measures. As a result, the impact of regulatory protections is already reflected in my risk analysis. Meanwhile, the beta values supported by modern financial theory are premised on stock price volatility relative to the market as a whole, and are not dependent on an assessment of firm-specific considerations. As a result, the impact of regulatory differences on investment risk is accounted for in the published risk indicators relied on by investors and cited in my Direct Testimony.

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

A. As shown in Exhibit No.__(AMM-12), the average ROEs for the Non-Utility group ranged from 9.9%-10.7%. The midpoint of this range is 10.3%.

Q. What do these benchmarks you discuss imply with respect to Mr. Parcell's and Mr. Gorman's ROE recommendations?

A. As set forth above, objective consideration of regulatory standards and alternative benchmarks demonstrate that the 9.2% ROE recommended by Mr. Parcell and the 9.1% ROE recommended by Mr. Gorman are too low and violate the economic and regulatory standards underlying a fair ROE.

Q. What other pitfalls are associated with an ROE that falls below those associated with other comparable companies?

A. Adopting an ROE for Avista that is well below the ROEs for comparable (or lower risk) companies could lead investors to view the Commission's regulatory framework

as unsupportive, an outcome that would undermine investors' willingness to support future capital availability for investment in Washington. Security analysts study regulatory orders in order to advise investors where to invest their money. Moody's Investors Service ("Moody's") noted that, "[f]undamentally, the regulatory environment is the most important driver of our outlook."[23] Similarly, S&P concluded that "[t]he regulatory framework/regime's influence is of critical importance when assessing regulated utilities' credit risk because it defines the environment in which a utility operates and has a significant bearing on a utility's financial performance."[24]

If WUTC actions instill confidence that the regulatory environment is supportive, investors will provide the necessary capital, even in times of turmoil in the financial markets. In evaluating Avista's ROE in this case, the WUTC has an opportunity to show that it recognizes the importance of continuity and a balanced regulatory regime. It is only rational for potential investors to consider the regulatory treatment afforded to Avista in evaluating whether to commit new capital to Washington jurisdictional utilities, and at what cost.

Q. Do customers benefit when investors have confidence that the regulatory environment is stable and constructive?

A. Yes. When investors are confident that a utility has supportive regulation, they will make funds available on more reasonable terms, and even during periods of "flight to safety" behavior in the capital markets. As a result, customers enjoy the benefits that come from ensuring that the utility has the financial wherewithal to take whatever actions are

[23] Moody's Investors Service, *Regulation Will Keep Cash Flow Stable As Major Tax Break Ends*, INDUSTRY OUTLOOK (Feb. 19, 2014).
[24] Standard & Poor's Corporation, *Key Credit Factors For The Regulated Utilities Industry*, RATINGSDIRECT (Nov. 19, 2013).

required to ensure reliable service. Staff's and ICNU's recommended ROEs fall outside the norms established for other utilities, fail to meet regulatory standards, and would be viewed negatively by investors. Challenging capital market environments highlight the benefits of stability in the ROE, and changing course from the path of financial strength would be extremely short-sighted.

Q. Does the March 10, 2015 report from Moody's cited by Mr. Gorman[25] support a dramatic drop in Avista's allowed return from those currently being authorized for comparable utilities?

A. No. The Moody's report discusses only very generally the impacts of a "slow" decline in utilities' authorized ROEs, and how regulators may lower authorized ROEs without harming utilities' cash flow, such as by "targeting depreciation." The Moody's report does not identify a cost of equity for regulated utilities at all, much less discuss a cost of equity for Avista, which is not even mentioned in the report. In my view, the Moody's report offers no relevant information about a fair ROE in this proceeding, and it certainly does not support the values recommended by the other parties to this case.

Q. Does the Moody's report indicate that equity investors would not be concerned if Avista's ROE was lowered to the levels recommended by Staff and ICNU?

A. No. I believe no one can make such an inference based on this report.[26] First, it is important to note that the primary mission of credit rating agencies like Moody's is to provide debt holders with an accurate benchmark of the relative risks of default associated

[25] Gorman Direct at 6-7.
[26] Moody's Investors Service, "Lower Authorized Equity Returns Will Not Hurt Near-Term Credit Profiles," *Sector In-Depth* (March 2015); Cited at Gorman Direct at 7.

with long-term bonds and other debt securities. As the report cited by Mr. Gorman clearly observes, Moody's evaluation is premised "from the perspective of a probability of a default and expected loss given default."

Bondholders, the constituency represented by Moody's, do not share in a utility's net income or profits. As a result, Moody's focus is on cash flows, which are viewed "as a more important rating driver."[27] On the other hand, equity investors are intensely focused on the ability of the utility to generate earnings, dividends and growth. This difference in the characteristics and priorities between debt and equity securities gives rise to the considerable distinction in the risks faced by debt holders and equity investors. While a moderate and gradual downturn in ROEs may not pose an immediate threat to the cash flow protection underlying the credit ratings on a utility's debt, it would have an immediate, negative impact on returns to common stockholders.

II. RESPONSE TO MR. PARCELL

Q. How did Mr. Parcell arrive at his 9.2% recommended ROE for Avista?

A. Mr. Parcell's recommended ROE was based on the results of three analyses.[28] From his DCF analysis, he produced a range of 8.5%-9.2%, with a midpoint of 8.85%. His CAPM resulted in a range of 6.3%-6.6%, with a midpoint of 6.45%. His third approach, the CE method, yielded a range of 9.0%-10.0%, with a midpoint of 9.5%. His final recommendation of 9.2% represents the midpoint of his DCF (8.85%) and CE (9.5%) outcomes.

[27] *Id.*
[28] Parcell Direct at 35.

A. Discounted Cash Flow Model

Q. What are the flaws in Mr. Parcell's DCF analysis?

A. Mr. Parcell's DCF analysis contains several significant defects which bias his outcomes downward. First, his DCF methodology results in almost 30 means and medians from which to choose.[29] From such a scattershot approach, his results could easily have supported almost any ROE estimate he selected. In fact, only one of his multitude of DCF results is as high as 9.2%, his ultimate ROE recommendation in this case. One result is in the 6% range, fourteen are in the 7% range, and twelve are in the 8% range, leaving just one result over 9%. His DCF values are the result of a purely mechanical application of the DCF model that appears more concerned with the quantity, rather than the quality, of the outcomes. This approach does not support his final recommendation in any substantive way and should be discounted accordingly.

Q. Are there additional flaws in Mr. Parcell's DCF analysis?

A. Yes. Mr. Parcell has relied extensively on historical growth rates in determining his final DCF ranges. I do not believe that historical trends provide a meaningful guide to investors' expectations. As discussed at length in my direct testimony,[30] it is investors' future expectations – and not actual, historical results – that determine the current price they are willing to pay for commons stocks. If past trends are to be representative of investors' expectations for the future, then the historical conditions giving rise to these growth rates should be expected to continue. That is clearly not the case for

[29] Parcell Exhibit No. DCP-9, page 4.
[30] McKenzie Exhibit No.__(AMM-3), pages 10-13.

utilities, which have experienced declining dividend payouts, earnings pressure, and, in many cases, slow or stagnant sales growth. Mr. Gorman, in his testimony, concluded:

> As predictors of future returns, security analysts' growth estimates have been shown to be more accurate than growth rates derived from historical data. That is, assuming the market generally makes rational investment decisions, analysts' growth projections are more likely to influence investors' decisions which are captured in observable stock prices than growth rates derived only from historical data.[31] [emphasis added]

While past conditions for utilities serve to depress historical growth rates, they are not representative of long-term expectations for the electric utility industry. Moreover, to the extent historical trends for electric utilities are meaningful, they are also captured in projected growth rates, such as those published by Value Line and Zacks Investment Research ("Zacks"), since securities analysts also routinely examine and assess the impact and continued relevance (if any) of historical trends.

Q. Is the downward bias inherent in historical growth rates for electric utilities evident in Mr. Parcell's DCF analysis?

A. Yes, it is. For example, consider the historical DPS growth measures displayed on Exhibit No. DCP-9, page 3, of Mr. Parcell's testimony. As shown there, almost half of the individual historical dividend growth rates for the companies in the Parcell and McKenzie proxy groups fall at or below 3.0%. Two growth rates (for Ameren and Great Plains Energy) were even below zero. Combining a growth rate of 3.0% with Mr. Parcell's dividend yield of 3.2% (Exhibit No. DCP-9, page 2) implies a DCF cost of equity of 6.2%, which is less than 150 basis points above the most recent six month average yield on triple-B

[31] Gorman Direct at 21.

utility bonds.[32] As a result, these values provide no significant information regarding investors' expectations and requirements. Clearly, any consideration of Mr. Parcell's historical DPS growth measure results in a built-in downward bias to his DCF conclusions.

Q. Beyond his misguided reliance on historical measures, Mr. Parcell also considers growth in dividends and book value in his DCF analysis. Are these valid considerations?

A. No. As I discussed in my direct testimony, evidence supports the contention that investors rely primarily on EPS growth projections in forming their expectations.[33] The continued success of investment services such as IBES, Value Line, and Zacks, and the fact that projected growth rates from such sources are widely referenced, provides strong evidence that investors give considerable weight to analysts' earnings projections in evaluating future growth. Future trends in EPS, which provide the source for dividends and ultimately support share prices, play a pivotal role in determining investors' long-term growth expectations. The importance of earnings in evaluating investors' expectations and requirements is well accepted in the investment community, and surveys of analytical techniques relied on by professional analysts indicate that growth in EPS is far more influential than trends in DPS. As explained in *New Regulatory Finance*:

> Because of the dominance of institutional investors and their influence on individual investors, analysts' forecasts of long-run growth rates provide a sound basis for estimating required returns. Financial analysts exert a strong

[32] The average of the monthly triple-B utility bond yields reported by Moody's for the six month period, February-July 2016, was 4.73%.
[33] McKenzie Exhibit No.__(AMM-3), pages 10-13.

> influence on the expectations of many investors who do not possess the resources to make their own forecasts, that is, they are a cause of *g* [growth].[34]

The availability of projected EPS growth rates also is key to investors relying upon this measure as compared to future trends in DPS. Apart from Value Line, investment advisory services do not generally publish comprehensive DPS growth projections, and this scarcity of dividend growth rates relative to the abundance of EPS forecasts attests to their relative influence. The fact that analyst EPS growth estimates are routinely referenced in the financial media and in investment advisory publications implies that investors use them as a primary basis for their expectations. As observed in *New Regulatory Finance*:

> The sheer volume of earnings forecasts available from the investment community relative to the scarcity of dividend forecasts attests to their importance. The fact that these investment information providers focus on growth in earnings rather than growth in dividends indicates that the investment community regards earnings growth as a superior indicator of future long-term growth. Surveys of analytical techniques actually used by analysts reveal the dominance of earnings and conclude that earnings are considered far more important than dividends.[35]

While I did not rely solely on EPS projections in applying the DCF model,[36] my evaluation clearly supports greater reliance on EPS growth rate projections than other alternatives.

Q. Why are Mr. Parcell's retention growth rates understated?

A. Mr. Parcell based his calculations of the internal, "br" retention growth rate on data from Value Line. If the rate of return, or "r" component of the internal growth rate, is based on end-of-year book values, such as those reported by Value Line, it will understate actual returns because of growth in common equity over the year. Mr. Gorman, like me,

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[34] Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 298 (2006).
[35] *Id.* at 302-303.
[36] As discussed in my direct testimony, I also examined the "br+sv", sustainable growth rates for the companies in my proxy groups.

makes an adjustment in his "br" analysis to convert end-of-year amounts derived from Value Line data, to average annual amounts which account for growth in common equity over the year.

B. Capital Asset Pricing Model

Q. Are the results of Mr. Parcell's CAPM analysis credible?

A. No, they are so low that they should be disregarded on their face. His CAPM estimates range from 6.3%-6.6%, with a midpoint of 6.45%. An ROE outcome of 6.45% is over 300 basis points lower than Avista's currently allowed ROE of 9.5% and only about 170 basis points above the current cost of triple-B rated debt. Even compared to Mr. Parcell's other downwardly biased methodologies (DCF midpoint of 8.85% and CE midpoint of 9.5%), his CAPM results are clear outliers.

Q. What is the fundamental problem associated with Mr. Parcell's approach to applying the CAPM method?

A. Like the DCF model, risk premium methods – including the CAPM – are *ex-ante,* or forward-looking models based on expectations of the future. As a result, in order to produce a meaningful estimate of investors' required rate of return, the risk premium approach must be applied using data that reflects the expectations of actual investors in the market. However, while Mr. Parcell recognized that "the cost of capital is an opportunity cost and is prospective-looking,"[37] his application of the CAPM method was based entirely on *historical* – not projected – rates of return. The primacy of current expectations was recognized by Morningstar, one of the sources relied on by Mr. Parcell to apply the CAPM:

[37] Parcell Direct at 7.

> The cost of capital is always an expectational or forward-looking concept. While the past performance of an investment and other historical information can be good guides and are often used to estimate the required rate of return on capital, the expectations of future events are the only factors that actually determine cost of capital.[38]

By failing to look directly at the returns investors are currently requiring in the capital markets, as I did on Exhibits 8, 9, and 10 to my Direct Testimony, Mr. Parcell's CAPM results significantly understate investors' required rate of return.

Q. Is there anything forward-looking about the CAPM data referenced by Mr. Parcell?

A. No. Mr. Parcell based his CAPM estimates on two alternative values of the market risk premium component. One value relies on data for the S&P 500 from the period 1978-2014; the other figure relies on data for the S&P 500 from the 1926-2014 period.[39] In other words, instead of directly considering requirements in today's capital markets, Mr. Parcell is implicitly asserting that events and expectations for the time periods covered by these historical studies are more representative of what is likely to occur going forward. This assertion runs counter to the assumptions underlying the use of CAPM approaches to estimate investors' required return, which are purely forward-looking models.

Q. Should the Commission give any weight to the results of historical CAPM analyses such as those presented by Mr. Parcell?

A. No. Applying the CAPM is complicated by the impact of the capital market turmoil and recession on investors' risk perceptions and required returns, as well as the ongoing effects of the Federal Reserve's monetary policies. The CAPM cost of common

[38] Morningstar, *Ibbotson SBBI, 2013 Valuation Yearbook* at 21.
[39] Parcell Direct at 29.

equity estimate is calibrated from investors' required risk premium between Treasury bonds and common stocks. In response to heightened uncertainties, investors have repeatedly sought a safe haven in U.S. government bonds and this "flight to safety" has pushed Treasury yields significantly lower while yield spreads for corporate debt widened. This distortion, which has been further exacerbated by Federal Reserve actions, not only impacts the absolute level of the CAPM cost of equity estimate, but it affects estimated risk premiums. Economic logic would suggest that investors' required risk premium for common stocks over Treasury bonds has also increased.

Meanwhile, the backward-looking approach used by Mr. Parcell incorrectly assumes that investors' assessment of the relative risk differences, and their required risk premium, between Treasury bonds and common stocks is constant and equal to some historical average. At no time in recent history has the fallacy of this assumption been demonstrated more concretely. As a result, there is every indication that the historical CAPM approach fails to fully reflect the risk perceptions of real-world investors in today's capital markets, which would violate the standards underlying a fair rate of return by failing to provide an opportunity to earn a return commensurate with other investments of comparable risk.

Q. Have other regulators recognized the distortions to the historical CAPM related to current capital market conditions?

A. Yes. The FERC determined that:

> Given the recent trends of near-historic low yields for long-term U.S. Treasury bond rates, the CAPM's input for the "risk-free" rate, we find that it is a reasonable assumption that the current equity risk premium (which is added to the risk-free rate to calculate the cost of equity data point that determines the slope of the CAPM curve) exceeds the 86-year historical average used as the consultants' CAPM input. The current low Treasury bond rate environment creates a need to adjust the CAPM results, consistent with the financial theory

> that the equity risk premium exceeds the long-term average when long-term U.S. Treasury bond rates are lower than average, and vice-versa.[40]

Q. Was Mr. Parcell justified in relying on geometric means as a measure of average rate of return when applying the historical CAPM?[41]

A. No. While both the arithmetic and geometric means are legitimate measures of average return, they provide different information. Each may be used correctly, or misused, depending upon the inferences being drawn from the numbers. The geometric mean of a series of returns measures the constant rate of return that would yield the same change in the value of an investment over time. The arithmetic mean measures what the expected return would have to be each period to achieve the realized change in value over time.

In estimating the cost of equity, the goal is to replicate what investors expect going forward, not to measure the average performance of an investment over an assumed holding period. When referencing realized rates of return in the past, investors consider the equity risk premiums in each year independently, with the arithmetic average of these annual results providing the best estimate of what investors might expect in future periods. *New Regulatory Finance* had this to say:

> The best estimate of expected returns over a given future holding period is the arithmetic average. Only arithmetic means are correct for forecasting purposes and for estimating the cost of capital. There is no theoretical or empirical justification for the use of geometric mean rates of returns as a

[40] *New York Independent System Operator, Inc.* 146 FERC ¶ 61,043 at para. 105 (2014).
[41] Parcell Direct at 29-30.

> measure of the appropriate discount rate in computing the cost of capital or in computing present values.[42] [emphasis added]

Similarly, *Morningstar* concluded that:

> For use as the expected equity risk premium in either the CAPM or the building block approach, the arithmetic mean or the simple difference of the arithmetic means of stock market returns and riskless rates is the relevant number. … The geometric average is more appropriate for reporting past performance, since it represents the compound average return.[43]

Q. What does this imply with respect to Mr. Parcell's CAPM analyses?

A. For a variable series, such as stock returns, the geometric average will always be less than the arithmetic average. Accordingly, Mr. Parcell's reference to geometric average rates of return provides yet another element of built-in downward bias.

Q. Mr. Parcell references capital market trends. Is it appropriate to consider anticipated capital market changes in applying the CAPM?

A. Yes. As discussed in my direct testimony, there is widespread consensus that interest rates will increase materially as the economy strengthens.[44] Accordingly, in addition to the use of current bond yields, I also applied the ECAPM and CAPM approaches based on the forecasted long-term Treasury bond yields developed based on projections published by Value Line, IHS Global Insight and Blue Chip.

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[42] Morin, Roger A., "New Regulatory Finance" *Public Utilities Reports, Inc.* (2006) at 116-117, (emphasis added).
[43] Morningstar, *Ibbotson SBBI 2013 Valuation Yearbook* at 56.
[44] McKenzie Direct at 19-20.

C. Comparable Earnings

Q. What are the results of Mr. Parcell's CE analysis?

A. Mr. Parcell applies his CE analysis by examining realized ROEs for the groups of proxy utilities, as well as unregulated companies. He also considers prospective returns for his proxy utilities, but not for the unregulated companies. He determines an ROE range from his CE analysis of 9.0%-10.0%, with a midpoint of 9.5%.[45]

Q. Are these results reasonable?

A. Given that Mr. Parcell's DCF results are subjective and essentially disconnected from his final ROE recommendation, and that his CAPM results are so low that they should be dismissed out of hand, his CE results can be considered the most relevant of his ROE estimations. Nonetheless, there are problems with his approach.

Q. Are there similarities with Mr. Parcell's CE approach and your Expected Earnings and Non-Utility DCF approaches?

A. Yes. Mr. Parcell applies his CE methodology to two proxy groups of utility companies, as well as to the firms in the S&P 500 Composite Index, which he says "is a well-recognized group of firms that is widely utilized in the investment community and is indicative of the competitive sector of the economy."[46] In a like manner, I apply my Expected Earnings approach to my proxy group of utility companies and consider investors' requirements for a reference group of low-risk companies in the non-utility sectors of the economy through my Non-Utility DCF approach.

[45] Parcell Direct at 30-35.
[46] Parcell Direct at 33.

We agree that reference to rates of return available from alternative investments of comparable risk (including unregulated firms) can 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. As I discuss at greater length in my direct testimony, this approach is consistent with the economic underpinnings for a fair rate of return, as reflected in the comparable earnings test established by the Supreme Court in *Hope* and *Bluefield.*

Q. What issues do you have with Mr. Parcell's CE approach?

A. I have two primary issues with Mr. Parcell's CE approach: He includes historical rates of return in his analysis and his use of market-to-book ratios as a guide to the reasonableness of returns is completely misguided. As I detailed earlier in my discussion of Mr. Parcell's DCF and CAPM analyses (and in my direct testimony), the setting of Avista's ROE is a forward-looking process, and his over-reliance on historical data is a flaw in his methodologies. This same criticism applies to his CE analysis. He examines past data from the period 2002-2015.[47] The ROE estimation process is based on investors' future expectations, not on data over an arbitrary 14-year historical period. The operating and financial environment faced by utilities, like Avista, is significantly different now than it was in 2002. The reliance on such data weakens Mr. Parcell's CE analysis.

Q. What are your comments on Mr. Parcell's consideration of market-to-book ratios in the context of his CE application?

A. Mr. Parcell uses the market-to-book ratio as a type of indicator as to the reasonableness of the returns developed in his CE analysis. For instance, he says that since

[47] Parcell Direct at 32.

recent and prospective ROEs of 8.7% to 10.6% have been accompanied by market-to-book ratios in the range of 1.3 to over 1.5, that "it is apparent that authorized returns below this level would continue to result in market-to-book ratios of well above 100 percent."[48] He adds, "the fact that M/Bs substantially exceed 100 percent indicates that historic and prospective ROEs of 9.5 percent reflect earning levels that are well above the actual cost of equity for those regulated companies."[49]

I strongly disagree with Mr. Parcell's conclusions regarding the relationship between ROE and the market-to-book ratio for utilities. There is no clear link between market-to-book ratios for utilities and allowed rates of return. For example, *Regulatory Finance: Utilities Cost of Capital* noted that:

> The stock price is set by the market, not by regulators. The market-to-book ratio is the end result of regulation, and not its starting point. The view that regulation should set an allowed rate of return so as to produce a market-to-book of 1.0, presumes that investors are irrational. They commit capital to a utility with a market-to-book in excess of 1.0, knowing full well that they will be inflicted a capital loss by regulators. This is certainly not a realistic or accurate view of regulation.[50]

With market-to-book for most utilities above 1.0, Mr. Parcell is suggesting that, unless book value grows rapidly, regulators should establish equity returns that will cause share prices to fall. Given the regulatory imperative of preserving a utility's ability to attract capital, this would be a truly nonsensical result. The market-to-book ratio is determined by investors in the stock market, and a utility would be foreclosed from attracting capital if

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[48] *Id.* at 34.
[49] *Id.*
[50] Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 376.

regulators were to push market-to-book to 1.0 while other firms command prices well in excess of 1.0 times book value.

Q. Is there anything unusual about a stock price exceeding book value?

A. No. In fact the majority of stocks currently sell substantially above book value. For example, Value Line reports that approximately 1,460 of the roughly 1,600 stocks it follows (including utilities and other industries) sell for prices in excess of book value.[51] In the figure below, I provide the average historical market price-to-book value ratios for the companies in the S&P 500 Composite Index.

[51] www.valueline.com (retrieved Aug. 9, 2016).

REBUTTAL FIGURE 1

S&P 500 Price to Book Value

Current S&P 500 Price to Book Value: 2.90
Mean: 2.75
Median: 2.73
Min: 1.78 (Mar. 2009)
Max: 5.06 (Mar. 2000)

Current price to book ratio is estimated based on current market price and S&P 500 book value as of March 2016, the latest reported by S&P.

Source: Standard & Poor's, www.multpl.com/s-p-500-price-to-book (retrieved Aug. 9, 2016).

For the 500 largest publicly-traded companies in the U.S. economy, stock market prices have averaged almost three times book value. The lowest value occurred at the market bottom in early 2009 during the "great recession," at 1.78 times.

The table below provides a listing of recent market-to-book ratios by industry.

REBUTTAL TABLE 1
Valuation by Sector
Market-to-Book

Sector	Ratio
Financial	1.37
Energy	1.61
Utilities	1.83
Basic Materials	3.04
Consumer Discretionary	3.42
Conglomerates	3.56
Services	3.76
Capital Goods	3.79
Transportation	3.93
Technology	4.22
Healthcare	4.83
Retail	6.05
Consumer Non-cyclical	6.95

Source: http://csimarket.com/screening/index.php?s=pb&pageS=3&fis= (retrieved Aug. 9, 2016).

The market-to-book ratio for the utilities sector of 1.83 is among the lowest of the industry groups, and it is well below the 2.75 times historical average for the S&P 500. The consistently higher market-to-book relationship for unregulated companies shows that Mr. Parcell's theoretical 1.0 benchmark is misplaced and that his claims about excessive utility earnings based on this benchmark are incorrect.

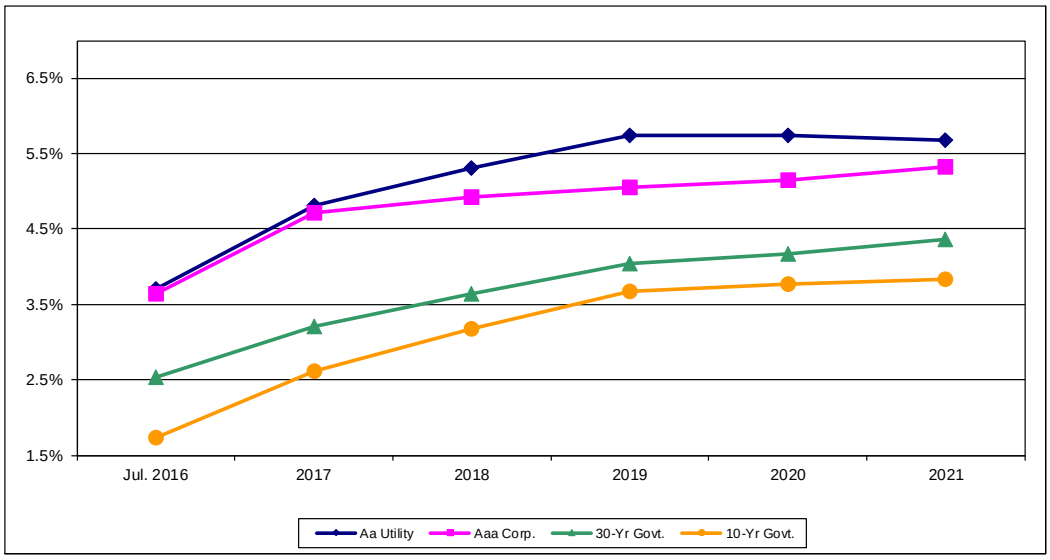
D. Other ROE Issues

Q. Mr. Parcell disagrees with your evidence that investors are expecting long-term interest rates to rise.[52] What is your response?

A. Below is an update of Figure 4 (Interest Rate Trends) from my direct testimony.

[52] Parcell Direct at 38-40.

REBUTTAL FIGURE 2
UPDATED INTEREST RATE TRENDS



Source:
Value Line Investment Survey, Forecast for the U.S. Economy (Jun. 3, 2016)
IHS Global Insight (Apr. 6 & Jun. 27, 2016)
Energy Information Administration, Annual Energy Outlook 2016 Early Release (May 17, 2016)
Wolters Kluwer, Blue Chip Financial Forecasts, Vol. 35, No. 6 (Jun. 1, 2016)

As the figure shows, investors continue to anticipate that interest rates will increase significantly from present levels. These projections are from forecasting services that are highly regarded and widely referenced, as I discuss in my direct testimony[53].

Q. Did Mr. Parcell accurately portray the process that you used to eliminate low-end outliers from your DCF analysis?

A. No. Mr. Parcell wrongly suggests that I applied the so-called "FERC low-end threshold" methodology on a mechanical basis.[54] In actuality, I referenced the FERC methodology as a guide for evaluating unrealistic outcomes resulting from my DCF analysis. As discussed in Exhibit No.__(AMM-3), I added FERC's 100 basis-point premium to

[53] McKenzie Direct at 19-20.
[54] Parcell Direct at 42.

historical and projected average utility bond yields in developing my low-end threshold. This resulted in a threshold range of 6.4% to 8.1%. The DCF estimates that I eliminated ranged from 2.7% to 6.9%. Based on my professional experience and the risk-return tradeoff principle that is fundamental to finance, I concluded that it is not plausible to think that investors would accept ROEs in this range when compared to current and future costs of debt. Mr. Parcell's attempt to "update and correct" my DCF analysis by reducing the low-end threshold to 6.0% is not fair and does not represent the methodology I applied in my direct testimony. Nor does it accurately represent FERC policy, which is based on a flexible test, not the rigid, mechanical approach suggested by Mr. Parcell.

Q. Mr. Parcell objects to your calculation of the market return component of the CAPM analysis. How do you respond?

A. In my market return computation, I used a DCF approach that relied on analysts' growth projections to estimate the growth term. Mr. Parcell's primary objections to this approach appears to be his concern with the singular reliance on analysts' opinions, the disregard of historical growth rate data, and the accuracy of analysts' forecasts.[55] I have dealt with these issues previously. Analysts' growth estimates have been shown to be more accurate than growth rates derived from historical data. To repeat the conclusion reached by Mr. Gorman:

> That is, assuming the market generally makes rational investment decisions, analysts' growth projections are more likely to influence investors' decisions which are captured in observable stock prices than growth rates derived only from historical data.[56] [emphasis added]

[55] *Id.* at 45-48.
[56] Gorman Direct at 21.

Furthermore, proving that the projections of securities analysts are optimistic or pessimistic in hindsight is irrelevant in determining the expected growth that investors have built into current stock prices. The accuracy of such projections is not the issue, as long as they reflect widely held expectations.

Q. Why is it proper to consider projected interest rates as the risk-free rate in the CAPM analysis, contrary to the opinion of Mr. Parcell?

A. Forecasted bond yields are appropriate to consider in the CAPM methodology because, as discussed earlier, the CAPM is a forward-looking model and there is widespread consensus that interest rates will increase materially as the economy continues to strengthen. This is the same approach taken by Mr. Gorman in his CAPM approach, which relied on the *Blue Chip Financial Forecasts'* projected 30-year Treasury bond yield as his risk-free rate.[57]

Q. Based on evidence cited by *Morningstar*, you applied a size adjustment in both your CAPM and ECAPM analyses. Mr. Parcell presents two examples attempting to counter your argument that such an adjustment is necessary.[58] How do you respond?

A. Mr. Parcell's examples do not refute the evidence cited by *Morningstar*, or more broadly in the financial research. His "studies" are for a small sample size and his data is not tested over a significant period of time. Furthermore, he limits his analyses to utility companies. Avista is competing for funds in the capital markets alongside firms from all segments of the economy. Limiting the comparison to utility companies paints an incomplete picture of the market conditions faced by Avista.

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[57] *Id.* at 38.
[58] Parcell Direct at 50-51.

Mr. Parcell also places significant weight on a 1992 study by Annie Wong,[59] but a closer examination of this research reveals that it is largely inconclusive, and inconsistent with the CAPM. In fact, her results demonstrate no material difference between utilities and industrial firms with respect to size premiums, and her study finds no significant relationship between beta and returns, which contradicts modern portfolio theory and the CAPM. A more recent study published in the Quarterly Review of Economics and Finance reconsiders Wong's evidence and concludes that "new information . . . indicates there is a small firm effect in the utility sector."[60]

Q. Mr. Parcell criticizes your risk premium approach.[61] Are his criticisms valid?

A. No. First, he suggests that data over the period 2011-2015 may be distorted. Second, he claims that certain data from my risk premium study is not acceptable because "[c]urrent ROEs reflect a suite of favorable regulatory mechanisms that greatly enhance utilities ability to recover costs, which is risk-reducing and thus warrants low ROEs."[62]

Neither of these assertions is persuasive. As shown on Exhibit No.__(AMM-9), page 4, the "R Square" of the data in my risk premium study, which measures the relationship between interest rate levels and equity risk premiums is about 0.86. This implies a very high correlation between these two variables over the 41 years covered by my study period. In this case, it is a "negative" or inverse relationship. That is, as the "X Variable 1" coefficient

[59] Woolridge Direct at 83.
[60] Zepp, Thomas M., "Utility stocks and the size effect—revisited," Quarterly Review of Economics and Finance, 43 (2003) 578-582.
[61] *Id.* at 52-53.
[62] Parcell Direct at 52-53.

from Exhibit__(AMM-9), page 4 indicates, for every 100 basis point decrease in interest rates, the equity risk premium increases by about 43 basis points (and vice versa). It is entirely consistent with these results that the highest risk premium would exist over the 2011-2015 period because this is the period over which the lowest bond yields occurred. According to the strong inverse correlation indicated by the statistics discussed above, this is exactly the relationship that would be expected.

To Mr. Parcell's second point, that the risk premium study is not valid because regulatory conditions are not exactly the same as they were 30-40 years ago, I would also disagree with this allegation. Regulatory mechanisms are but one measure of a utility's risk level. It is likely that utilities today face greater risk exposure related to increasingly severe weather, cyber and physical threats, the imperative to maintain reliability in response to a surge in new technologies and devices, customer demand for more flexible and customized products, and the need to address environmental concerns. A blanket statement, with no supporting analysis, that the current climate faced by utilities is less risky than any climate faced in the past, is potentially false and misleading. Moreover, it is contradictory to Mr. Parcell's observation that risk premiums implied for utilities have increased and it ignores the fact that my risk premium analysis incorporates current capital market data.

Q. Do you agree with Mr. Parcell's criticisms of your Expected Earnings and Non-Utility DCF approaches?[63]

A. No. His primary concern with my Expected Earnings approach appears to be that I did not consider market-to-book ratios as part of my analysis. I have dealt with this

[63] Parcell Direct at 53-54.

issue previously. There is no clear link between market-to-book ratios for utilities and allowed rates of return and this issue is nothing more than a red-herring intended to divert attention from the results of my Expected Earnings analysis.

His comments on the unregulated firms used in my Non-Utility DCF approach are perplexing since he used unregulated firms in his own CE approach. In fact, his unregulated group consisted of the entire S&P 500 Composite index. In contrast, I used various objective measures to insure that the risks of my Non-Utility group were comparable to (or less than) those of Avista. In this sense, my DCF approach using non-utility firms could even be considered superior to the CE analysis using unregulated companies proposed by Mr. Parcell.

Q. Finally, Mr. Parcell takes issue with your flotation cost adjustment.[64] Are his concerns valid?

A. No. Mr. Parcell would exclude a flotation cost adjustment because "there has been no demonstration that Avista has or intends to issue new common equity for the purpose of infusing equity into its Avista Utilities division."[65] But this argument misses the point. The need for a flotation cost adjustment to compensate for past equity issues is 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

[64] Parcell Direct at 55.
[65] *Id.*

the flotation cost adjustment must consider total equity, including retained earnings.[66] Similarly, *Regulatory Finance: Utilities' Cost of Capital* contains the following discussion:

> Another controversy is whether the underpricing 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 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.[67]

Q. Does the possibility that Avista might issue new common stock above, or below, book value have any bearing on its need to recover flotation costs?

A. No. This is another red herring issue raised by Mr. Parcell. When equity is raised through the sale of common stock, there are real 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. These costs exist whether the stock is sold above, or below, book value. To claim otherwise, and to argue that legitimate flotation costs should be denied on this basis, is not supportive of practical regulatory policies.

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[66] Brigham, E.F., Aberwald, D.A., and Gapenski, L.C., "Common Equity Flotation Costs and Rate Making," *Public Utilities Fortnightly,* May, 2, 1985.
[67] Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 335

III. RESPONSE TO MR. GORMAN

Q. How did Mr. Gorman arrive at his recommended cost of equity?

A. Mr. Gorman recommended an ROE of 9.1% based on his application of the constant growth and multi-stage forms of the DCF model, an application of the CAPM based on historical realized rates of return, and a risk premium approach based on allowed rates of return for utilities.[68] Mr. Gorman applied these methods to essentially the same proxy group of electric utilities identified in my Direct Testimony. Mr. Gorman eliminated two companies due to recent involvement in mergers and acquisitions (Great Plains Energy and Westar Energy) and one company (Otter Tail) due to a false claim that it lacked analysts' growth rate coverage.[69]

Q. What is your assessment of Mr. Gorman's ROE testimony and recommendation?

A. Mr. Gorman's recommendation is too low. It is understated because, in his analysis, he applies inconsistent and incorrect approaches to reach his final ROE recommendation. Several specific factors detract from Mr. Gorman's analysis. His constant growth DCF results are biased downward because he excludes a legitimate proxy company and he includes outliers in his calculations. In addition, he fails to incorporate a readily available, and widely followed, source of analysts' growth rates. His multi-stage DCF analysis should be rejected because he mistakenly assumes that investor growth expectations are capped by forecasts for growth in the U.S. economy. His CAPM analysis is not credible because it is based almost exclusively on historical data, it fails to correct for an observed

[68] Gorman Direct at 32 and 45.
[69] Gorman Direct at 17.

bias in the CAPM result, and it ignores the impact of company size on expected returns. Finally, Mr. Gorman's risk premium analysis is flawed because he rejects the well-documented, inverse relationship between equity risk premiums and interest rates levels. Equity risk premiums increase when interest rates are low and decrease when interest rates are higher. When adjustments are made to correct these areas, Mr. Gorman's results support a much higher ROE.

Q. Do you have further comments on Mr. Gorman's testimony?

A. Yes, in addition to the areas mentioned above, I will also respond to Mr. Gorman's criticisms of my ECAPM analysis, Expected Earnings Approach and Non-Utility DCF study. I will also challenge his opposition to an adjustment for flotation costs.

A. Discounted Cash Flow Model

Q. How did Mr. Gorman apply the constant growth DCF model?

A. Mr. Gorman applied the constant growth DCF model using forward-looking estimates of EPS growth based on consensus forecasts of securities analysts, as well as considering a sustainable, "br" growth rate.[70] This is comparable to the method discussed in my Direct Testimony.

Q. Did Mr. Gorman use an appropriate proxy group in his DCF analysis?

A. No. Mr. Gorman relied on the same proxy group that I did except for two adjustments. While I would not object to the removal of Great Plains Energy and Westar Energy due to merger and acquisition activity,[71] I do not agree that Otter Tail Corp. should be removed from the proxy group. Mr. Gorman excluded Otter Tail because "it did not have

[70] Gorman Direct at 21-32.
[71] Great Plains Energy announced its intention to acquire Westar Energy on May 31, 2016.

analysts' growth rates from Zacks, SNL Financial, or Reuters at the time I developed my studies."[72] As I show in my DCF study (Exhibit No.__(AMM-6), page 2), there are at least two legitimate and easily obtainable analysts' growth rates available for Otter Tail: Value Line and IBES (accessible at finance.yahoo.com). These two sources are widely-available and most assuredly relied on by the investment community in forming their return requirements for any utility company. I find it quite telling that Otter Tail has the highest results in several of the ROE analyses that I conducted as part of my direct testimony (DCF, ECAPM, and CAPM). In this light, it is disingenuous of Mr. Gorman to unnecessarily advocate for the exclusion of Otter Tail from the proxy group.

Q. Is there another obvious flaw in Mr. Gorman's constant growth DCF analysis?

A. Yes, Mr. Gorman failed to remove outliers from his final constant growth DCF results. As I discuss in my Direct Testimony and earlier in response to Mr. Parcell, when applying quantitative methods to estimate the cost of equity, it is essential that the resulting values pass fundamental tests of reasonableness and economic logic. Removing two obvious low-end outliers from the DCF results presented on page 1 of Mr. Gorman's Exhibit No. MPG-7 (Edison International at 6.57% and IDACORP at 6.81%) increases the constant growth DCF average by 36 basis points.

[72] Gorman Direct at 17.

Q. Did Mr. Gorman recommend relying on analysts' growth rates in determining an ROE for Avista?

A. Yes. Mr. Gorman properly recognized that in order to correctly apply the DCF model, "one must attempt to estimate investors' consensus about what the dividend, or earnings growth rate, will be" and concluded that "[a]s predictors of future returns, security analysts' growth estimates have been shown to be more accurate than growth rates derived from historical data."[73] In contrast to Mr. Parcell, Mr. Gorman and I agree that EPS growth forecasts represent a superior guide to investors' expectations.

Q. Did Mr. Gorman leave out a readily available, widely respected source of analysts' growth rates?

A. Yes, for no apparent reason, Mr. Gorman did not include EPS growth rate estimates from Value Line in his analysis. He used Value Line as an underlying source for many of his calculations, such as to compute the annualized dividend and sustainable growth terms for his DCF models, and he relied on beta values reported by Value Line for his CAPM studies. Value Line is readily available and is widely followed by investment professionals.[74] It is a well-recognized source of expected growth rates and Mr. Gorman's DCF analysis suffers by their omission.

Q. What is the problem with Mr. Gorman's multi-stage growth DCF analysis?

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[73] Gorman Direct at 21.

[74] As noted in *New Regulatory Finance*, "Value Line is the largest and most widely circulated independent investment advisory service, and influences the expectations of a large number of institutional and individual investors." Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 71 (2006).

A. This analysis should be completely rejected. There is no merit to Mr. Gorman's claim that each company's growth would converge to the maximum sustainable growth rate for a utility company as proxied by consensus analyst's projected growth for the U.S. GDP of 4.35%. He incorrectly claims that GDP growth sets a "maximum sustainable long-term growth rate" for a utility.[75] As I discuss below, there is no link between Mr. Gorman's GDP growth rate ceiling and the actual expectations of investors in the capital markets, which are the determining factor in any analysis of a fair ROE.

Q. What are the primary misconceptions underlying Mr. Gorman's reference to GDP growth?

A. Mr. Gorman's use of long-term GDP growth as an upper bound to the DCF growth rate for companies in his proxy group is not justified. There are several reasons why GDP growth is not relevant in applying the DCF model:

- Practical application of the DCF model does not require a long-term growth estimate over a horizon of 25 years and beyond – it requires a growth estimate that matches investors' expectations;

- Evidence supports the conclusion that investors do not reference long-term GDP growth in evaluating expectations for individual common stocks, including those in the electric utility industry;

- The theoretical proposition that growth rates for all firms converge to overall growth in the economy over the very long horizon does not guide investors' views, and growth rates for electric utilities can and do exceed GDP growth; and,

- There is no evidence that investors' growth expectations for regulated electric utilities have begun to converge to that of the economy.

Q. The DCF model is based on the assumption of an infinite stream of cash

[75] *Id.* at 26.

flows. Why wouldn't Mr. Gorman's multi-stage model using GDP growth make sense?

A. This view confuses the theory underlying the DCF model with the practicalities of its application in the real world. While Mr. Gorman's notion of long-term growth should presumably relate to the specific firm at issue, or at the very least to a particular industry, there are no long-term growth projections available for the companies in Mr. Gorman's proxy group or for the electric utility industry as a whole. Rather than applying the DCF model in a way that is consistent with the information that is available to investors and how they use it, the use of GDP growth seeks to mold investor behavior around the theoretical assumptions of a financial model. The only relevant growth rate is the growth rate used by investors. Investors do not have clarity to see far into the future, and there is little to no evidence to suggest that investors share the view that growth in GDP must be considered a limit on earnings growth over the long-term.

Q. Are long-term GDP growth rates commonly referenced as a direct guide to future expectations for specific firms, such as electric utilities?

A. No. Certainly investors consider broad secular trends in economic activity as one foundation for their expectations for a particular industry or firm. But the idea that investment advisory services view GDP growth as a direct guide to long-term expectations for a particular firm – much less every firm in an entire industry – is not borne out by evidence.

In contrast to this notion, in the financial media one observes many references to three-to-five year EPS growth forecasts for individual companies and very few references to long-term GDP forecasts. Long-term GDP growth rates are simply not discussed within the context of establishing investors' expectations for individual firms. For example, Value Line

reports are routinely relied on as an important guide to apply the DCF model to electric utilities. But despite Mr. Gorman's suggestion that GDP has a fundamental role in shaping investors' growth estimates, Value Line does not even mention trends in GDP in its evaluation of the firms in the electric utility industry. Value Line's singleness of purpose is to inform investors of the pertinent factors that impact future expectations specific to each of the common stocks it covers. If the trajectory of GDP growth out to the year 2040 and beyond had direct relevance in investors' evaluation of electric utility common stocks, it would be logical to assume that Value Line or other securities analysts would give at least passing mention to this fact. But they do not.

Q. How much confidence would investors be likely to place on long-term GDP projections?

A. Very little. Investors understand the complexities and inherent inaccuracies involved in forecasting, and that such uncertainties are significantly compounded for a long-term time horizon. Consider the example of IHS Global Insight, which is perhaps the world's foremost econometric forecasting service. IHS Global Insight currently publishes GDP projections for the U.S. economy for the next thirty years, but for other important economic variables (*e.g.*, bond yields) their forecast simply holds projected values constant after a five-year horizon. As a result, in addition to the fact that there is no evidence to suggest that common stock investors reference GDP growth rates in their analysis of a specific electric utility's prospects, the difficulties in making long-term forecasts suggest they would be foolhardy to do so.

Q. Is there evidence that long-term GDP growth rates understate investors' expectations for electric utilities?

A. Yes. Actual historical growth rates for individual firms in Mr. Gorman's own proxy group refute the notion that long-term growth for electric utilities is constrained by GDP. For example, Value Line reports that CMS Energy and El Paso Electric achieved earnings growth over the last 10 years of 13.0 % and 12.0%, respectively. Meanwhile, IDACORP had a 5-year EPS growth rate of 8.0%.[76] These values for Mr. Gorman's own proxy firms indicate that utilities can and do achieve growth over extended periods far in excess of the GDP growth rate he suggests as a limit in the multi-stage DCF model.

Q. Do expectations for the utility industry support a long-term trend towards GDP growth?

A. No. Growth rates for electric utilities are not expected to collapse beyond the next five years. At least in part, growth in the electric utility industry is created by additional infrastructure investment. Contrary to the assumption that growth trends will somehow mirror GDP, investors recognize that the electric utility industry has entered a cycle of significant capital spending on utility infrastructure.

Q. What underlying fundamentals support investors' conclusion that electric utilities are embarking on a period of growth that will outpace the economy as a whole?

A. As the president of the Edison Electric Institute ("EEI") recently observed:

> The improved credit quality greatly supports the continued surge in capital expenditures, which rose by $7.2 billion, or 7.5 percent, to a new record high of $103.3 billion in 2015.[77]

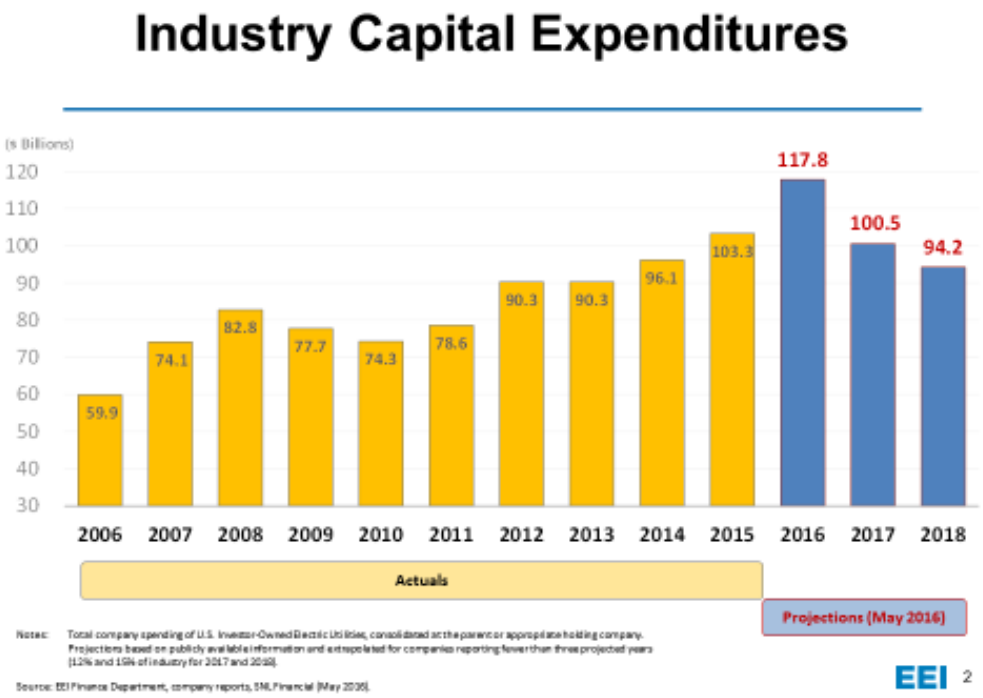
The investment community understands that utilities are facing the prospect of a long-term commitment to infrastructure investment. For example, S&P has observed that:

[76] The Value Line Investment Survey (June 17 and July 29, 2016).
[77] Thomas R. Kuhn, "President's Letter," 2015 EEI Financial Review.

S&P Global Market Intelligence foresees continued high levels of capital spending by the industry, both on regulated and unregulated investment. Regulated capital spending includes spending on infrastructure replacement, new transmission and distribution facilities and lines, and regulated power plants, including new nuclear units currently under construction.[78]

As shown in Rebuttal Figure 3 below, a 2016 forecast by the EEI regarding its members' new capital expenditures confirms the industry's continued commitment to infrastructure expansion.

REBUTTAL FIGURE 3



Source: EEI Finance Department, company reports, SNL Financial (May 2016).

Similarly, Deloitte published a report on utility capital expenditures and concluded the drivers behind continued strong spending included:

- The need to upgrade and reinforce electric and gas infrastructure due to age,

[78] Standard & Poor's Corporation, "Industry Surveys, Electric Utilities," (February 2016).

increasingly severe weather, and cyber and physical threats

- The equally critical need to deploy information technology to boost the systems' efficiency, effectiveness, and resilience; accommodate the surge of new technologies and devices; and respond to customer demand for more flexible and customized products

- The need to address environmental concerns with an increasingly clean energy slate

- The opportunity to take advantage of burgeoning supplies of domestic natural gas

Overall, company projections indicate that capital spending will likely remain substantial, which is not surprising, since key drivers behind the spending continue.[79]

Q. Are there indications that heightened capital expenditures will continue well beyond EEI's 2018 horizon?

A. Yes. A study published by the American Society of Civil Engineers ("ASCE") indicates that even with the recent upturn in utility capital spending, even more expenditures are coming:

> The needs to maintain and update existing electric energy infrastructure, to adopt new technologies, and to meet the demands of a growing population and evolving economy over the next 30 years will impose significant requirements for new energy infrastructure investment.[80]

Based on a comparison of baseline capital expenditures for 2001-2010 and required investment levels needed to ensure reliability through 2040, the ASCE report concluded that an additional $731.8 billion in future investment needs would be required.

These well-documented expectations for a long-term cycle of capital investment in

[79] Deloitte, "From growth to modernization, the changing capital focus of the US utility sector," (2016).
[80] American Society of Civil Engineers, *Failure to Act, The Economic Impact of Current Investment Trends in Electricity Infrastructure*, at 4 (Economic Development Research Group, Inc., 2011), *available at* http://www.asce.org/uploadedFiles/Infrastructure/Failure_to_Act/SCE41%20report_Final-lores.pdf.

the electric utility industry imply higher – not lower – long-term growth, and again confirm that GDP growth estimates almost certainly understate investors' expectations for electric utilities.

Q. Did the founder of the DCF approach support the use of a generic long-term growth rate, such as the GDP growth under the Mr. Gorman's multi-stage approach?

A. No. Professor Myron J. Gordon, who originated the DCF approach, concluded that reference to a generic long-term growth rate, such as Mr. Gorman advocates, was unsupported.[81] More specifically, Dr. Gordon concluded that any assumption of a single time horizon for a transition to a generic long-term growth rate was highly questionable and failed to reduce error in DCF estimates. Instead, Dr. Gordon specifically recognized that, "it is the growth that investors expect that should be used" in applying the DCF model, and he concluded:

> A number of considerations suggest that investors may, in fact, use earnings growth as a measure of expected future growth."[82]

Q. Have other regulators recognized that GDP growth rates result in cost of equity estimates that fail to reflect investors' expectations for electric utilities?

A. Yes. In Opinion No. 531 (issued June 19, 2014), FERC concluded that a 9.39% midpoint produced by a multi-stage DCF model predicated on GDP growth is insufficient to meet regulatory standards under *Hope* and *Bluefield.*[83] FERC determined that

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[81] Gordon, Myron J., THE COST OF CAPITAL TO A PUBLIC UTILITY, a 100-01 (MSU Public Utilities Studies, 1974).
[82] *Id.* at 89.
[83] Opinion No. 531, 147 FERC ¶ 61,234 at para. 142.

a cost of equity of this magnitude "does not represent a just and reasonable outcome" or "appropriately represent the utilities' risks."[84] In particular, FERC concluded that historically anomalous capital market conditions are leading to unrepresentative financial inputs to the DCF formula, which in turn results in a cost of equity "that does not satisfy the requirements of *Hope* and *Bluefield*."[85] In order to evaluate a fair and reasonable point-estimate ROE, FERC endorsed reliance on the same risk premium, CAPM, and expected earnings approaches presented in my Direct Testimony in this case.[86] In addition, FERC stressed the relevance of ROEs allowed by state regulatory commissions in its evaluation of a fair ROE from within the zone of reasonableness.[87] Based on this evidence, FERC determined that a 10.57% ROE from the top end of the DCF zone of reasonableness was warranted for an electric utility.

Q. Please summarize your objection to Mr. Gorman's use of GDP growth rates in his multi-stage growth DCF analysis?

A. Mr. Gorman presents no meaningful information to suggest that investors share his view that growth in GDP must be considered "the highest sustainable long-term growth rate of a utility."[88] The industry-wide historical comparisons of utility sales growth and GDP cited by Mr. Gorman may be factually correct, but they do not address what Mr. Gorman identified as the fundamental requirement in estimating growth – the future expectations of investors. In fact, Mr. Gorman specifically noted the pitfalls associated with

[84] *Id.* at para. 144.
[85] *Id.* at para. 142.
[86] *Id.* at para. 146.
[87] Opinion No. 531, 147 FERC ¶ 61,234 at para. 148-149.
[88] *Id.*

historical data in assessing investors' expectations of growth.

Mr. Gorman suggests that it would be illogical for investors to expect long-term growth for a utility that exceeds the rate of growth of the economy.[89] Based on this subjective assertion, he assumed that each company's growth rate would begin to converge to that of the economy as a whole after 5 years, and then extended his analysis for an additional 195 years. While few investors are likely to consider Mr. Gorman's projected cash flows in the year 2216 to be within their foreseeable horizon, it is entirely logical for investors to recognize the potential for certain companies to grow faster than the overall economy.

Q. Are there computational errors that also bias Mr. Gorman's multi-stage DCF cost of equity estimates downward?

A. Yes. As noted above, under his multi-stage DCF approach Mr. Gorman predicted the cash flows that would accrue to investors over the next 200 years. To arrive at his estimated cost of equity, Mr. Gorman used the internal rate of return ("IRR") function available in Microsoft's Excel spreadsheet program to determine the discount rate (*i.e.*, investors' required rate of return) that would equate these cash flows with the current market price of the stock.[90] This IRR calculation, however, assumes that annual cash flows are received at the end of each year, which is inconsistent with the periodic dividend payments that investors receive over the course of the year and results in a downward bias in the implied cost of equity.

[89] Gorman at 26.
[90] Gorman workpaper: UE-160228-UG-160229__Exh. Nos. MPG-5 through MPG-19.xlsx (tab MPG-12).

Q. What are your criticisms of Mr. Gorman's sustainable growth DCF analysis?

A. I disagree with Mr. Gorman's implication that analysts' growth projections should be tested against retention ratios or sustainable, br+sv growth rates. Mr. Gorman states that "a sustainable long-term earnings retention ratio will help gauge whether analysts' current three- to five-year growth rate projections can be sustained over an indefinite period of time."[91] But there is no demonstrable link between investors' growth expectations and trends in retention ratios, and Mr. Gorman has provided no explanation for what that link might be. I do agree that the sustainable growth rates referenced by Mr. Gorman, and which depend on the retention ratio as one variable, provide one potential indicator to investors' expectations. Like Mr. Gorman, I considered this growth measure in my application of the constant growth DCF model.

While this sustainable, br+sv growth measure is one guide to investors' expectations that is consistent with the theory underlying the DCF approach, there is no basis for Mr. Gorman's claim that this alternative measure can be used to test the veracity of analysts' estimates. Indeed, many of the individual br+sv growth rates for the firms in his proxy groups are far too low to be credible. For example, Mr. Gorman reports a sustainable, br+sv growth rate of 3.67% for El Paso Electric Company.[92] Combining this growth rate with Mr. Gorman's 2.81% dividend yield for El Paso Electric[93] produces a cost of equity estimate of 6.48%, which is far below his 9.1% recommendation. As indicated earlier, Mr. Gorman

[91] Gorman at 24.
[92] Gorman Exhibit No. MPG-10.
[93] *Id.*

correctly concluded that investors' expectations are the guide to the growth rate required to apply the DCF model, and that analysts' projections provide the more accurate estimate.

B. Capital Asset Pricing Model

Q. What are the weaknesses in Mr. Gorman's CAPM studies?

A. Mr. Gorman's CAPM analysis has several shortcomings. It is based almost exclusively on historical data, even though the analysis should be forward-looking. He fails to correct for an observed bias in the CAPM result. Finally, his analysis ignores the impact of company size on expected returns.

Q. What is the primary difference between Mr. Gorman's so-called "forward-looking" CAPM analysis and the approach described in your Direct Testimony?

A. As Mr. Gorman observed, the appropriate "R_m" to use in applying the CAPM is the "[e]xpected return for the market portfolio."[94] But like Mr. Parcell, Mr. Gorman's "forward-looking" CAPM was actually based almost entirely on historical data. As Mr. Gorman explained:

> I estimated the expected return on the S&P 500 by adding an expected inflation rate to the long-term historical arithmetic average real return on the market.[95] [emphasis added]

In other words, the relatively small portion of Mr. Gorman's "forward-looking" market return constituting inflation was based on projected data, but the actual return on the market itself was completely backward looking. Thus, Mr. Gorman essentially presented two variants of a CAPM using historical data. Neither one of these approaches is consistent with the

[94] Gorman Direct at 39.
[95] *Id.* at 41.

assumptions of the CAPM because as noted above, the CAPM seeks to determine the expected return, and is predicated on the forward-looking expectations of investors. As discussed earlier in response to Mr. Parcell, Mr. Gorman's use of historical returns in the CAPM is inconsistent with the underlying presumptions of the model.

Q. What about Mr. Gorman's criticism that your forward-looking estimate of the market rate of return is "not reasonable?"[96]

A. As noted earlier, the use of forward-looking expectations in estimating the market risk premium is well accepted in the financial literature and has been recognized by other regulators. Mr. Gorman's criticism of my forward-looking CAPM approach seems to hinge on the fact that this method produces an equity risk premium for the S&P 500 that is higher than the historical benchmarks he cites. But estimating investors' required rate of return by reference to current, forward-looking data, as I have done, is entirely consistent with the theory underlying the CAPM methodology. As noted earlier, 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 required rates of return, the CAPM is best applied using data that reflects the expectations of actual investors in the market. Rather than look backwards to a risk premium based largely on historical data, as Mr. Gorman advocates, my analysis appropriately focused on the expectations of actual investors in today's capital markets.

All quantitative methods used to estimate the cost of equity have their own strengths and weakness. Mr. Gorman does not suggest that the CAPM model is "wrong" to focus on

[96] Gorman Direct at 58.

forward-looking projections instead of backward, historical results, nor does he claim that looking to the future, as I have done, is a misapplication of the CAPM. Instead, Mr. Gorman simply believes that the result of applying the CAPM in a manner that is consistent with the underlying assumptions produces a result that he views as being too high.

Q. Mr. Gorman rejects your use of the ECAPM because he says it is "redundant" with the use of Value Line adjusted betas and, therefore, is unreasonable.[97] What is your response?

A. As I stated in my Direct Testimony,[98] the ECAPM is simply a variant of the traditional CAPM approach that is designed to correct for an observed bias in the CAPM result. The modification reflected in the ECAPM is distinct from the Value Line adjustment of estimated betas for the demonstrated tendency to regress toward the mean. As discussed earlier, the Value Line adjustment is intended to make betas estimated based on historical returns better estimates of forward-looking betas. In contrast, the ECAPM reflects a refinement to adjust for a systematic tendency of low beta portfolios to over-earn and high beta portfolios to under-earn relative to the predictions of the CAPM capital market line. These are separate adjustments and each one is useful for improving the traditional CAPM results.

[97] Gorman Direct at 53.
[98] McKenzie Exhibit No.__(AMM-3), page 20.

Q. Did Mr. Gorman fail to consider other important factors in applying the CAPM?

A. Yes. Like Mr. Parcell, Mr. Gorman failed to reflect the size adjustment in his CAPM application. According to the CAPM, the expected return on a security should consist of the riskless rate, plus a premium to compensate for the systematic risk of the particular security. The degree of systematic risk is represented by the beta coefficient. The need for the size adjustment arises because differences in investors' required rates of return that are related to firm size are not fully captured by beta. To account for this, *Morningstar* has developed size premiums that need to be added to the CAPM cost of equity estimates to account for the level of a firm's market capitalization in determining the CAPM cost of equity. Accordingly, Mr. Gorman should have incorporated an adjustment to recognize the impact of size distinctions between his proxy companies, as measured by the average market capitalization.

Q. Is there any merit to Mr. Gorman's contention that a size adjustment should not be applied to utilities?[99]

A. No. First, Mr. Gorman implies that I am proposing to apply a general size risk premium in arriving at a fair ROE for Avista; but this is not correct. Rather, this adjustment merely corrects for an observed inability of the CAPM to fully reflect the impact of size distinctions by market capitalization that the beta value does not otherwise capture, but which is acknowledged by empirical research. My consideration of the impact of firm size does not adjust for Avista's size relative to the proxy group; nor is it applied to the results of the DCF,

[99] Gorman Direct at 55-56.

risk premium, or expected earnings approaches. Rather, it is specifically tied to the CAPM because empirical research indicates that beta does not capture an increment of risk related to firm size.

Mr. Gorman's observation that the "size adjustment recommended by Mr. McKenzie reflects companies that have beta estimates in excess of 1.00" says nothing at all about the relevance of a size adjustment.[100] Of course, there are any number of specific factors that distinguish a utility's risks from other firms in the non-regulated sector, just as there are important distinctions between the circumstances faced by airlines and drug manufacturers. But under the assumptions of modern capital market theory on which the CAPM rests, these considerations are reduced to a single risk measure – beta – which captures stock price volatility relative to the market. Within the CAPM paradigm, the degree of regulation, the nature of competition in the industry, the competence of management, and every other firm-specific consideration is boiled down to a single question; namely, how much does the stock's price fluctuate in relation to the market as a whole? Beta is the measure of that variability, and research demonstrates that beta does not fully account for the impact of firm size.

The fact that the size premiums reported by *Morningstar* were not estimated on an industry-by-industry basis provides no basis to ignore this relationship in estimating the cost of equity for utilities. Utilities are included in the companies used by *Morningstar* to quantify the size premium, and firm size has important practical implications with respect to the risks faced by investors in the utility industry. All else being equal, it is well accepted

[100] *Id.* at 55.

that smaller firms are more risky than their larger counterparts, due in part to their smaller scale, relative lack of diversification and lower financial resiliency. In the case of a smaller utility, its earnings are principally dependent on the economic, social, regulatory, and other factors affecting a more limited constituency. This can result in significant exposure, especially where key employers or industries dominate the economy.

Larger utilities generally enjoy improved exposure to financial markets, which enhances their ability to raise additional capital relative to smaller utilities. As a result, they are better prepared to withstand adverse events and possess greater financial flexibility to respond or adapt to changing market conditions. A study reported in *Public Utilities Fortnightly* noted that the betas of small companies do not fully account for the higher realized rates of return associated with small company stocks:

> The smaller deciles show returns not fully explainable by the CAPM. The difference in risk premium (realized versus CAPM) grows larger as one moves from the largest companies in decile 1 to the smallest in decile 10. The difference is especially pronounced for deciles 9 and 10, which contain the smallest companies. [101]

The study went on to conclude that a publicly traded utility with a market capitalization of $1.0 billion would require a small company premium of approximately 130 basis points above the rate of return for larger firms.[102]

[101] Annin, Michael, "Equity and the Small-Stock Effect", Public Utilities Fortnightly (Oct. 15, 1995) at 43.
[102] This compares with the size adjustments incorporated in my application of the ECAPM and CAPM, which ranged from 215 basis points to -36 basis points. Exhibit Nos.__(AMM-8 & AMM-10).

C. Utility Risk Premium

Q. Do the results of Mr. Gorman's risk premium approach based on authorized returns provide a reliable guide to a fair ROE for Avista?

A. No. Mr. Gorman subjectively chose to truncate the data available to apply his risk premium approach by ignoring all observations prior to 1986. Mr. Gorman explained that this period was selected "because public utility stocks consistently traded at a premium to book value during that period,"[103] but such manipulation of this data runs counter to the assumptions underlying the study of historical risk premiums. Ibbotson Associates noted the pitfalls of such a subjective approach:

> Some analysts estimate the expected risk premium using a shorter, more recent time period on the basis that recent events are more likely to be repeated in the near future … This view is suspect …[104]

By choosing a truncated time period for his risk premium study, Mr. Gorman unnecessarily introduces a subjective bias that taints his analysis and artificially lowers his results.

Q. What other flaws are associated with Mr. Gorman's risk premium application?

A. Mr. Gorman failed to incorporate the inverse relationship between interest rates and equity risk premiums in his analysis of historical authorized rates of return. There is considerable empirical evidence that when interest rates are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums are greater. This inverse relationship between equity risk premiums and interest rates has been widely reported in the financial literature. As summarized in *New Regulatory Finance*:

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[103] Gorman Direct at 33.
[104] Ibbotson Associates, *2005 Yearbook, Valuation Edition* at 80.

> Published studies by Brigham, Shome, and Vinson (1985), Harris (1986), Harris and Marston (1992, 1993), Carelton, Chambers, and Lakonishok (1983), Morin (2005), and McShane (2005), and others demonstrate that, beginning in 1980, risk premiums varied inversely with the level of interest rates – rising when rates fell and declining when rates rose.[105]

New Regulatory Finance noted that, taken together, studies in the financial literature imply that a 100 basis point change in bond yields would imply a 50 basis point increase in the equity risk premium.[106]

As shown on Mr. Gorman's Exhibit Nos. MPG-14 and MPG-15, current interest rates are significantly less than those prevailing in the late 1980s and early 1990s. Given that interest rates are currently lower than the average over his study period, current equity risk premiums should be relatively higher, which Mr. Gorman's analysis entirely ignores.

Q. What cost of equity estimate is indicated if Mr. Gorman's risk premium approach is corrected to account for this factor?

A. I began with the data from Mr. Gorman's two risk premium Exhibit Nos. MPG-14 and MPG-15. The only adjustment I made to this data was to account for the inverse relationship between interest rates and risk premiums. Since rates are now (historically) low, an upward adjustment to the base risk premium is critical. As shown on Exhibit No.__(AMM-17), adjusting Mr. Gorman's risk premium analysis to account for this inverse relationship results in a current cost of equity estimate for Avista of 9.88% using Treasury yields (page 1), or 9.70% based on public utility bond yields (page 3).

[105] Morin, Roger A., "New Regulatory Finance," Public Utilities Reports, Inc. (2006) at 128.
[106] *Id.* at 129.

D. Other ROE Issues

Q. Mr. Gorman claims that your DCF results are "biased and overstated" because you removed low-end outliers from your results without removing any high-end outliers.[107] Is this a valid criticism?

A. No. As discussed above, low-end outliers were evaluated against the observable returns available from long-term bonds. But the fact that there are numerous results that fail this test of reasonableness says nothing about the validity of estimates at the upper end of the range of results, and there is no basis to discard an equal number of values from the top of the range. While the upper end cost of equity estimate of 13.9% from my Exhibit No.__(AMM-6), page 3, may exceed expectations for most utilities, the remaining low-end DCF estimates below 7.0% range are assuredly far below investors' required rate of return. Taken together and considered along with the balance of the DCF estimates, this value provides a reasonable basis on which to evaluate investors' required rate of return.

Q. Mr. Gorman contends that the Expected Earnings analysis you used is not a reasonable method for estimating a fair ROE for Avista.[108] Do you agree?

A. No. I provided support for the expected earnings method in my earlier rebuttal of Mr. Parcell and in my Direct Testimony. The appeal of the expected earnings approach is that it does not require theoretical models to indirectly infer investors' perceptions from stock prices or other market data. As long as the proxy companies are similar in risk, their expected earned returns on invested capital provide a direct benchmark for investors' opportunity costs that is independent of fluctuating stock prices, market-to-

[107] Gorman Direct at 51-52.
[108] Gorman Direct at 62-64.

book ratios, debates over DCF growth rates, or the limitations inherent in any theoretical model of investor behavior. I would reiterate that one of the methods used by Mr. Parcell to estimate the ROE in this case was the CE method, which is very similar to my Expected Earnings analysis.

Q. Do you agree with Mr. Gorman that a methodology has to depend on market data to be useful in evaluating investors' required return?[109]

A. No. Mr. Gorman wrongly contends that because the expected earnings approach is based on accounting data and not market data, it should be rejected. While I agree that market-based models are certainly important tools in estimating investors' required rate of return, in my opinion, this in no way invalidates the usefulness of the expected earnings approach. In fact, this is one of its advantages.

A very simple, conceptual principle is that when evaluating two investments of comparable risk, investors will choose the alternative with the higher expected return. If Avista is only allowed the opportunity to earn a 9.1% return on the book value of its equity investment, as recommended by Mr. Gorman, while other electric utilities are expected to earn an average of 10.2%-10.3%,[110] the implications are clear – Avista's investors will be denied the ability to earn a return commensurate with other opportunities of comparable risk.

Moreover, regulators do not set the returns that investors earn in the capital markets – they can only establish the allowed return on the value of a utility's investment, as reflected on its accounting records. As a result, the expected earnings approach provides a direct guide

[109] *Id.* at 62.
[110] The average expected return on book equity for 2019-21 calculated for Mr. Parcell's and Mr. Gorman's proxy groups, as shown on Exhibit No.__(AMM-15).

to ensure that the allowed ROE is similar to what other utilities of comparable risk will earn on invested capital. This test of economic logic does not require theoretical models to indirectly infer investors' perceptions from stock prices or other market data. As long as the proxy companies are similar in risk, their expected earned returns on invested capital provide a direct benchmark for investors' opportunity costs that is independent of fluctuating stock prices, market-to-book ratios, debates over DCF growth rates, or the limitations inherent in any theoretical model of investor behavior.

Q. Mr. Gorman argues that your Non-Utility DCF approach should not be given any weight because it includes companies that are not comparable to Avista.[111] Do you agree?

A. Not at all. The implication that an estimate of the required return for firms in the competitive sector of the economy is not useful in determining the appropriate return to be allowed for rate-setting purposes is wrong and inconsistent with reality, investor behavior, and the *Bluefield* and *Hope* decisions. In fact, 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 cost of capital is an opportunity cost based on the returns that investors could realize by putting their money in other alternatives, which include all other securities available in the stock, bond or money markets. Consistent with this view, Mr. Gorman noted the Supreme Court's economic standards and concluded that the fair rate of return on equity should be "commensurate with returns investors could earn by investing in other enterprises

[111] Gorman Direct at 63-64.

of comparable risk."[112] Clearly, there are a plethora of other "enterprises of comparable risk" available to investors beyond those in the utility industry. True enough, utilities are sheltered from competition, but they undertake other obligations and lose the ability to set their own prices and decide when to exit a market. As noted earlier, regulatory standards governing a fair ROE are based on comparable risk, not the nature of the business.[113]

Q. Is there any justification for ignoring flotation costs in the end result?

A. No. Mr. Gorman rejects a flotation cost adjustment in this case because he claims my adjustment "is not based on known and measurable Avista costs."[114] Mr. Gorman seems to agree that flotation costs can be included in the cost of equity analysis as a part of the cost of raising capital, but he argues that such an adjustment should be rejected in this case. Avista has been and will continue to invest significant amounts of equity capital to serve the public. The equity capital necessary to support this investment is supplied by proceeds from past stock issues and through retained earnings. The earnings base of this equity is permanently reduced by the amount of past flotation costs. Without a flotation adjustment, these legitimate costs of providing utility service will be excluded for ratemaking purposes and will further undercut Avista's ability to earn its authorized ROE.

Q. Does this conclude your Rebuttal Testimony in this case?

A. Yes, it does.

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[112] *Id.* at 16.
[113] *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).
[114] Gorman Direct at 50.