Exhibit No. ___-T (DCP-1T)
Docket Nos. UE-070804 et al.
Witness: David C. Parcell

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION Complainant, vs. AVISTA CORPORATION, Respondent.	**DOCKET NO. UE-070804** **DOCKET NO. UG-070805**
In the Matter of the Petition of AVISTA CORPORATION d/b/a AVISTA UTILITIES, For an Accounting Order Regarding the Appropriate Treatment of the Net Costs Associated with the Purchase of Debt.	**DOCKET NO. UE-070311**

TESTIMONY OF

DAVID C. PARCELL

ON BEHALF OF

STAFF OF WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

October 17, 2007

TABLE OF CONTENTS

I. INTRODUCTION 1

II. RECOMMENDATIONS AND SUMMARY 2

III. ECONOMIC/LEGAL PRINCIPLES AND METHODOLOGIES .4

IV. GENERAL ECONOMIC CONDITIONS.......................................8

V. AVISTA'S OPERATIONS AND RISKS 13

VI. CAPITAL STRUCTION AND COSTS OF DEBT AND TRUST PREFERRED SECURITIES 17

VII. SELECTION OF PROXY GROUPS 20

VIII. DISCOUNTED CASH FLOW ANALYSIS 21

IX. CAPITAL ASSET PRICING MODEL ANALYSIS 26

X. COMPARABLE EARNINGS ANALYSIS 30

XI. RETURN ON EQUITY RECOMMENDATION 36

XII. TOTAL COST OF CAPITAL 37

XIII. COMMENTS ON COMPANY TESTIMONY 39

I. INTRODUCTION.

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

A. My name is David C. Parcell. I am the President and Senior Economist of Technical Associates, Inc. My business address is Suite 601, 1051 East Cary Street, Richmond, Virginia 23219.

Q. Please summarize your educational background and professional experience.

A. I hold B.A. (1969) and M.A. (1970) degrees in economics from Virginia Polytechnic Institute and State University (Virginia Tech) and an M.B.A. (1985) from Virginia Commonwealth University. I have been a consulting economist with Technical Associates since 1970. I have provided cost of capital testimony in public utility ratemaking proceedings dating back to 1972. In connection with this, I have previously filed testimony or testified in about 400 utility proceedings before some 35 regulatory agencies in the United States and Canada. Schedule 1 (Exhibit No. ___ (DCP-2)) provides a more complete description of my education and relevant work experience.

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

A. I have been retained by Commission Staff to evaluate the cost of capital aspects of the filing of Avista Corporation ("Avista" or "Company"). I have performed independent studies and am making recommendations of the current cost of capital for Avista.

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

A. Yes, I have prepared 15 exhibits, identified as Schedule 1 through Schedule 15 (Exhibit Nos. ___ (DCP-2) to (DCP-16)). These exhibits were prepared either by me or under my direction. The information contained in this exhibit is correct to the best of my knowledge and belief.

II. RECOMMENDATIONS AND SUMMARY.

Q. What are your recommendations in this proceeding?

A. My overall cost of capital recommendations for Avista are:

	Percent	Cost	Return
Long-Term Debt	50.32%	6.491%	3.26%
Trust Preferred	4.68%	6.575%	0.31%
Common Equity	45.00%	9.5-10.5%	4.28-4.73%
Total	100.00%		7.85-8.30%
			8.16% with 10.2% ROE

Avista's application requests a return on common equity of 11.3 percent and overall rate of return of 9.39 percent. The main difference between Avista's request and my recommendation is the cost of equity capital. I recommend a 10.2 percent cost of equity. There is also a slight difference in capital structure, as Avista proposed use of a pro-forma capital structure with 47.78 percent common equity and I propose a capital structure more similar to a Company's actual capital structure with a 45 percent equity ratio.

Q. Please summarize your cost of capital analyses and related conclusions for Avista.

A. This proceeding is concerned with Avista's regulated electric and gas utility operations in Washington. My analyses are concerned with the Company's total cost of capital. The first step in performing these analyses is the development of the appropriate capital structure. Avista's proposed capital structure is the pro forma capital structure ratios of the Company, reflecting a 47.78 percent common equity. I do not use this capital structure in my cost of capital analyses, but rather use a capital structure that more closely corresponds to the recent, actual capital structure of the Company. My proposed capital structure contains 45 percent common equity.

The second step in a cost of capital calculation is a determination of the embedded cost rates of debt and Trust Preferred Securities. I have used the 6.491 percent cost rate for debt and 6.575 percent cost of Trust Preferred Securities contained in Staff witness Ken Elgin's testimony.

The third step in the cost of capital calculation is the estimation of the cost of common equity. I have employed three recognized methodologies to estimate the cost of equity for Avista. Each of these methodologies is applied to two groups of proxy utilities. These three methodologies and my findings are:

Methodology	Range
Discounted Cash Flow	9.50-10.5% (10.00% mid-point)
Capital Asset Pricing Model	10.25-10.75% (10.50% mid-point)
Comparable Earnings	10.0-10.5% (10.25% mid-point)

Based upon these findings, I conclude that the cost of common equity for Avista is within a range of 9.5 percent to 10.5 percent (10.0 percent mid-point), which reflects greater weight to the DCF model results. I have also evaluated several capital market changes since Avista was awarded a 10.4 percent return on equity in late 2005, and since I have concluded that capital markets reflect slightly lower cost rates, I propose that a 10.2 percent equity return be authorized for Avista.

Combining these three steps into a weighted cost of capital results in an overall rate of return range of 7.85 percent to 8.30 percent (8.16 percent with 10.2 percent cost of equity).

III. ECONOMIC/LEGAL PRINCIPLES AND METHODOLOGIES.

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

A. Public utility rates are normally established in a manner designed to allow the recovery of their costs, including capital costs. This is frequently referred to as "cost of service" ratemaking. Rates for regulated public utilities traditionally have been primarily established using the "rate base - rate of return" concept. Under this method, utilities are allowed to recover a level of operating expenses, taxes, and depreciation deemed reasonable for rate-setting purposes, and are granted an opportunity to earn a fair rate of return on the assets utilized (*i.e.*, rate base) in providing service to their customers.

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

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

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

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

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

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

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

It is my understanding that the *Bluefield* decision established the following standards for a fair rate of return: comparable earnings, financial integrity, and capital attraction. It also noted the changing level of required returns over time as well as an underlying assumption that the utility be operated in an efficient manner.

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

> The rate-making process under the [Natural Gas] Act, i.e., the fixing of 'just and reasonable' rates, involves a **balancing** of the **investor** and **consumer interests** . . . . From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard the **return** to the equity **owner** should be **commensurate** with **returns** on **investments** in **other enterprises having**

> **corresponding risks**. That return, moreover, should be sufficient to assure confidence in the **financial integrity** of the enterprise, so as to **maintain its credit** and to **attract capital**. [Emphasis added.]

The *Hope* case is also frequently credited with establishing the "end result" doctrine, which maintains that the methods utilized to develop a fair return are not important as long as the end result is reasonable.

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

Q. How can these parameters be employed to estimate the cost of capital for a utility?

A. Neither the courts nor economic/financial theory have developed exact and mechanical procedures for precisely determining the cost of capital. This is the case because the cost of capital is an opportunity cost and is prospective-looking, which dictates that it must be estimated.

There are several useful models that can be employed to assist in estimating the cost of equity capital, which is the capital structure item that is the most difficult to determine. These include the discounted cash flow ("DCF"), capital asset pricing model ("CAPM"), comparable earnings ("CE"), and risk premium ("RP") methods. Each of these methods (or models) differs from the others and each, if properly employed, can be a useful tool in estimating the cost of common equity for a regulated utility.

Q. Which methods have you employed in you analyses of the cost of common equity in this proceeding?

A. I have utilized three methodologies to determine Avista's cost of common equity: the DCF, CAPM, and CE methods. I have not employed a RP model in my analyses although, as I indicate later, my CAPM analysis is a form of the RP methodology. Each of these methodologies will be described in more detail in my testimony that follows.

IV. GENERAL ECONOMIC CONDITIONS.

Q. Why are economic and financial conditions important in determining the costs of capital?

A. The costs of capital, for both fixed-cost (debt and preferred stock) components and common equity, are determined in part by current and prospective economic and financial conditions. At any given time, each of the following factors has an influence on the costs of capital: the level of economic activity (*i.e.*, growth rate of the economy), the stage of the business cycle (*i.e.*, recession, expansion, or transition), and the level of inflation. My understanding is that use of these factors is consistent with the Supreme Court's *Bluefield* decision, which noted that "[a] rate of return may be reasonable at one time, and become too high or too low by changes affecting opportunities for investment, the money market, and business conditions generally."

Q. What indicators of economic and financial activity have you evaluated in your analyses?

A. I have examined several sets of economic statistics for the period 1975 to the present. I chose this period because it permits the evaluation of economic conditions over three full business cycles plus the current cycle to date, and thus makes it possible to assess changes in long-term trends. This period also approximates the beginning and continuation of active rate case activities by public utilities.

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

Q. Please describe the timeframe of the three prior business cycles and the most current cycle.

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

Business Cycle	Expansion Cycle	Contraction Period
1975-1982	Mar. 1975-July 1981	Aug. 1981-Oct. 1982
1982-1991	Nov. 1982-July 1990	Aug. 1990-Mar. 1991
1991-2001	Apr. 1991-Mar. 2001	Apr. 2001-Nov. 2001
Current	Dec. 2001-Present	

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

A. Yes, I do. As I will describe below, the U.S. economy has enjoyed general prosperity and stability over the period since the early 1980s. This period has been characterized by longer economic expansions, relatively tame contractions, relatively low and declining inflation, and declining interest rates and other capital costs. The current business cycle began in late 2001, following a somewhat modest recession earlier in the year. During the recession and early in the succeeding expansion, the Federal Reserve lowered interest rates (*i.e.*, Federal Funds rate) 11 times in 2001 and twice in 2003 in an effort to stimulate the economy.

Q. Please describe recent and current economic and financial conditions and their impact on the costs of capital.

A. Schedule 2 shows several sets of economic data. Pages 1 and 2 contain general macroeconomic statistics while Pages 4 through 6 contain financial market statistics. Pages 1 and 2 of Schedule 2 show that the U.S. economy is currently in the sixth year of an economic expansion. This is indicated by the growth in real (*i.e.*, adjusted for inflation) Gross Domestic Product, industrial production, and the unemployment rate. This current expansion has generally been characterized as slower growth, in comparison to prior expansions. This has resulted in lower inflationary pressures and interest rates.

The rate of inflation is also shown on Pages 1 and 2 of Schedule 2. As is reflected in the Consumer Price Index (CPI), for example, inflation rose significantly during the 1975 to 1982 business cycle and reached double-digit levels in 1979 to 1980. The rate of inflation declined substantially in 1981 and remained at or below 6.1 percent during the 1983 to 1991 business cycle. Since 1991, the CPI has been 3.4 percent or lower. The 2.5 percent rate of inflation in 2006 was similar to the levels since 2000 and is well below the levels of the past thirty years.

Q. What have been the trends in interest rates?

A. Pages 3 and 4 of Schedule 2 show several series of interest rates. Rates rose sharply to record levels in 1975 to 1981 when the inflation rate was high and generally rising. Interest rates then fell substantially in conjunction with inflation rates throughout the remainder of the 1980s throughout the 1990s. Interest rates declined even further from 2000 to 2005 and generally recorded their lowest levels since the 1960s.

This low level of interest rates, in conjunction with the recent strength of the U.S. economy, may have created an expectation over the past few years that any near-term movement of interest rates will be upward. In fact, the Federal Reserve increased short-term interest rates on 17 occasions since the middle of 2004, although each time by only 0.25 percent, in an attempt to insure that any perceived inflationary expectations will not stifle continued economic growth. Nevertheless, the economic recovery to date has not resulted in a pronounced increase in long-term rates. Most recently, however, the Federal Reserve has lowered the Federal Funds rate (*i.e.*, short-term rate) by 50 basis points.

Q. What have been the trends in common share prices?

A. Pages 5 and 6 of Schedule 2 show several series of common stock prices and ratios. These indicate that share prices were basically stagnant during the high inflation/interest rate environment of the late 1970s and early 1980s. On the other hand, the 1983 to 1991 business cycle and the most recent cycle have witnessed a significant upward trend in stock prices. During the initial years of the current expansion, however, stock prices were volatile and declined substantially from their highs reached in 1999 and early 2000. Share prices have increased somewhat since 2003 and currently stand at near record high levels.

Q. What conclusions do you draw from this discussion of economic and financial conditions?

A. It is apparent that capital costs are currently low in comparison to the levels that have prevailed over the past three decades. In addition, even a moderate increase in interest rates, as well as other capital costs, would still result in capital costs that are low by historic standards. Therefore, it can reasonably be expected that cost of equity models currently produce returns that are lower than was the case in prior years.

V. AVISTA'S OPERATIONS AND RISKS.

Q. Please summarize Avista and its operations.

A. Avista is a public utility that generates and delivers electricity and natural gas through its generation, transmission, and distribution systems to customers in Washington, Oregon, and Idaho.

Avista, in its present form, is a public utility that owns several unregulated subsidiaries. At the end of 2006, the Company had four business segments:

- Avista Utilities—an operating division of Avista that delivers electricity and natural gas in Washington, Oregon, and Idaho;
- Energy Marketing and Resource Management—includes subsidiaries Avista Energy and Avista Power, which are engaged in unregulated electricity and natural gas marketing (Note: The assets of Avista Energy have been sold in 2007.);
- Advantage IQ—a provider of facility information and cost management services; and,
- Other—includes sheet metal fabrication, venture fund investments, and real estate investments.

I also note that Avista is currently in the process of forming a holding company that will contain Avista as a subsidiary. However, this has not been completed at this time, and any impact on Avista's cost of capital is currently unknown.

Q. What are the recent segment ratios of Avista's operations?

A. There are shown on Schedule 3, which indicates the following ratios for the Avista Utilities segment:

Year	Operating Revenues	Net Income	Capital Expenditures
2004	84%	92%	97%
2005	85%	116%	98%
2006	84%	79%	98%

This demonstrates that the Avista Utilities segment accounts for the vast majority of Avista's operations. This indicates that the utility operations of the Company dominate its activities. I note that, with the sale of the Avista Energy assets in 2007, the Avista Utilities' segment is now even greater.

Q. What are the current debt ratings of Avista?

A. The present debt ratings of Avista are as follows:

	Secured	Unsecured
Fitch	BBB-	BB+
Moody's	Baa3	Ba1
Standard & Poor's	BBB-	BB+

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

A. This is shown on Schedule 4, which indicates two points. First, Avista has experienced a decrease in its ratings in 2001. Second, the ratings of Avista have remained the same since 2001. As I indicate below, the primary reasons for the 2001 downgrades were the 2000 to 2001 "western energy crises," which led to Avista incurring large deferred energy accounts, and its non-regulated operations.

Q. What comments did the rating agencies make in connection with Avista's rating changes?

A. In July 2000, S&P downgraded Avista's debt to BBB from BBB+. In a July 31, 2000, RatingsDirect on Avista, S&P stated:

> The rating actions reflect a weakened financial profile resulting from substantial power trading losses, accompanied by increased business risk by the company's regulated utility operations. In addition, continued funding needs related to Avista's nonregulated ventures and a change in the company's nonregualted nationwide trading strategy during 1999 have contributed to increased risk in the company's business profile.

Most recently, S&P has changed Avista's outlook to positive in connection with the sale of Avista Energy. In an April 17, 2007, RatingsDirect, S&P stated:

> Standard & Poor's Ratings Services revised to positive the outlook on Avista Corp.'s rating following the company's announcement today that it intends to sell the assets of Avista Energy, its trading and marketing interest, to CoralEnergy Holdings, L.P. a subsidiary of Shell. The sale, for the net book value of the trading portfolio, plus adjustments for fixed assets and natural gas inventory, is scheduled to close at the end of the second quarter or early in the third quarter of this year. If completed, the company's exit from the trading business is expected to free up about $180 million in cash that is currently dedicated to the these operations. The company has indicated that it will use some of the funds to reduce debt at Avista Utilities.

> An **exit** from **energy and trading** operations is expected to **reduce** Avista Corp.'s consolidated business **risks** and **could result in an improvement in the company's business profile score**. Avista's current business profile score is '6' (satisfactory) on a 10-point scale where '1' is excellent. Absent Avista Energy, consolidated operations are characterized by generally stable regulatory environments, low-cost hydroelectric generation, competitive rates, and operating and regulatory diversity provided by combined electric and gas utility operations in Washington, Idaho, and Oregon.
> [Emphasis added]

Q. How do the bond ratings of Avista compare to other electric utilities?

A. As I indicated in a previous answer, Avista has triple B bond ratings on its secured debt and double-B ratings on its unsecured debt. Of the 65 electric utilities and combination gas and electric utilities covered by AUS Utility Reports, the following number of bond ratings currently exists:

	Moody's	S&P
Aa/AA	1	3
A/A	16	20
Baa/BBB	40	35
Ba/BB or Below	4	2
Not Rated	4	4

This comparison indicates that Avista's ratings are slightly below the most common rating category of electric utilities.

VI. CAPITAL STRUCTURE AND COSTS OF DEBT AND TRUST PREFERRED SECURITIES.

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

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

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

The common equity ratio (*i.e.*, the percentage of common equity in the capital structure) is the capital structure item which normally receives the most attention. This is the case because common equity: 1) usually commands the highest cost rate; 2) generates associated income tax liabilities; and, 3) causes the most controversy since its cost cannot be precisely determined.

Q. How have you evaluated the capital structure of Avista?

A. I have examined the five year historic (2002 to 2006) and recent (March 31, 2007) capital structure ratios of Avista. Schedule 5 shows the historic capital structure ratios of the Company. The respective common equity ratios are as follows:

	Avista Corp.	
	Inc'l S-T Debt	Exc'l S-T Debt
2002	38.5%	40.8%
2003	38.9%	41.3%
2004	38.6%	41.9%
2005	38.4%	40.5%
2006	45.0%	45.7%
March 31, 2007	45.6%	46.0%

This indicates a rising common equity ratio over this period. In fact, the most current common equity ratios significantly exceed the levels of five years ago.

Q. How do these capital structures compare to those of other similar investor-owned electric utilities?

A. Schedule 6 shows the common equity ratios (including short-term debt in capitalization) for the groups of electric utilities covered by AUS Utility Reports. These are:

Year	Electric	Electric & Gas
2002	38%	36%
2003	42%	38%
2004	47%	43%
2005	44%	47%
2006	45%	44%

These common equity ratios are generally higher than those of Avista over the 2002 to 2005 period, but are similar to those of Avista in 2006 and 2007.

Q. What capital structure ratios has Avista requested in this proceeding?

A. The Company requests use of the following capital structure:

Capital Item	Percent
Debt	47.54%
Trust Preferred Securities	4.68%
Common Equity	47.78%

This is described by the Company as its pro-form capital structure as of December 31, 2007.

Q. What capital structure have you used in your analyses?

A. I have utilized a slightly different capital structure than that proposed in the Company's filing for my analyses. I have used a capital structure comprised of 45 percent common equity, 4.68 percent Trust Preferred Securities (*i.e.*, actual percentage) and 50.32 percent debt (*i.e.*, balance of capital). This capital structure more closely matches the recent actual capital structures of the company, as well as the actual capital structures of other electric utilities.

Q. What cost rates of debt and Trust Preferred Securities have you used in your analysis?

A. Staff witness Elgin has analyzed Avista's cost of debt and Trust Preferred Securities. I used the 6.491 percent rate for debt and 6.575 percent cost of Trust Preferred Securities stated in his testimony.

Q. Can the cost of common equity be determined with the same degree of precision as the costs of debt and Trust Preferred Securities?

A. No. The cost rate of debt is largely determined by interest payments, issue prices, and related expenses. The cost of common equity, on the other hand, cannot be precisely quantified, primarily because this cost is an opportunity cost. There are, however, several models which can be employed to estimate the cost of common equity. Three of the primary methods—DCF, CAPM, and CE—are developed in the following sections of my testimony.

VII. SELECTION OF PROXY GROUPS.

Q. How have you estimated the cost of common equity for Avista?

A. Avista is a publicly-traded company. Consequently, it is possible to directly apply cost of equity models to this entity. However, it is generally acceptable to analyze groups of comparison or "proxy" companies as a substitute for Avista to determine its cost of common equity.

I have examined two such groups for comparison to Avista. I selected one group of eight electric utilities similar to Avista using the criteria listed on Schedule 7. These criteria are as follows:

1. Market capitalization of $1 billion to $5 billion;
2. Electric revenues 50 percent or greater;
3. Common equity ratio 45 percent or greater;
4. Value Line Safety of 1, 2, or 3;
5. S&P or Moody's bond ratings of BBB; and,
6. S&P stock ranking of A or B.

Second, I have conducted studies of the cost of equity for the utility proxy group selected by Avista's witness William E. Avera.

VIII. DISCOUNTED CASH FLOW ANALYSIS.

Q. What is the theory and methodological basis of the discounted cash flow model?

A. The discounted cash flow (DCF) model is one of the oldest, as well as the most commonly-used, models for estimating the cost of common equity for public utilities. It is my understanding that this Commission has traditionally placed primary reliance on DCF results in setting the cost of capital for the utilities it regulates. The DCF model is based on the "dividend discount model" of financial theory, which maintains that the value (price) of any security or commodity is the discounted present value of all future cash flows.

The most common variant of the DCF model assumes that dividends are expected to grow at a constant rate. This variant of the dividend discount model is known as the constant growth or Gordon DCF model. In this framework cost of capital is derived by the following formula:

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

where: K = discount rate (cost of capital);
P = current price;
D = current dividend rate; and
g = constant rate of expected growth.

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

Q. Please explain how you have employed the DCF model.

A. I have utilized the constant growth DCF model. In doing so, I have combined the current dividend yield for each group of proxy utility stocks described in the previous section with several indicators of expected dividend growth.

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

A. There are several methods that can be used for calculating the dividend yield component. These methods generally differ in the manner in which the dividend rate is employed, *i.e.*, current versus future dividends or annual versus quarterly compounding of dividends. I believe the most appropriate dividend yield component is the version listed below:

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

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

The P_0 in my yield calculation is the average (of high and low) stock price for each proxy company for the most recent three month period (July to September 2007). The D_0 is the current annualized dividend rate for each proxy company.

Q. How have you estimated the dividend growth component of the DCF equation?

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

A wide array of indicators exists for estimating the growth expectations of investors. As a result, it is evident that no single indicator of growth is always used by all investors. Therefore, it is necessary to consider alternative indicators of dividend growth in deriving the growth component of the DCF model.

I have considered five indicators of growth in my DCF analyses. These are:

1. 2002 to 2006 (five-year average) earnings retention, or fundamental growth (per Value Line);
2. Five-year average of historic growth in earnings per share (EPS), dividends per share (DPS), and book value per share (BVPS) (per Value Line);
3. 2007, 2008, and 2010 to 2012 projections of earnings retention growth (per Value Line);
4. 2004 to 2006 and 2010 to 2012 projections of EPS, DPS, and BVPS (per Value Line); and
5. Five-year projections of EPS growth as reported in First Call (per Yahoo! Finance).

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

Q. Please describe your initial DCF calculations.

A. Schedule 8 presents my DCF analysis. Page 1 shows the calculation of the "raw" (*i.e.*, prior to adjustment for growth) dividend yield for each proxy company. Pages 2 and 3 show the growth rate for the groups of proxy companies. Page 4 shows the "raw" DCF calculations, which are presented on several bases: mean, median, and high values. These results can be summarized as follows:

	Mean	Median	High[1]
Proxy Group	8.2%	8.1%	11.0%
Avera Group	9.7%	9.2%	13.3%

I note that the individual DCF calculations shown on Schedule 8 should not be interpreted to reflect the expected cost of capital for the proxy groups; rather, the individual values shown should be interpreted as alternative information considered by investors.

The DCF results in Schedule 8 indicate average (mean and median) DCF cost rates of about 8 percent to 9¾ percent. The highest DCF rates (*i.e.*, using the highest growth rates only) are about 11 percent to 13.3 percent.

Q. What do you conclude from your DCF analyses?

A. These analyses reflect a broad DCF range of 8¼ percent to 9¾ percent for the proxy groups, based on the mean and median DCF results. The high DCF results are substantially higher, but only consider a single growth rate, which I have shown to be improper. I give less weight to the lower end of the mean/median results, as well as less weight to the upper end of the proxy groups. In particular, the high DCF value for the Avera group is significantly impacted by a single growth rate for a single company (*i.e.*, 34 percent First Call EPS growth for Empire District Electric). I believe that 9.5 percent to 10.5 percent (10.0 percent mid-point) reflects the DCF cost for Avista. This range reflects a mix of the mean/median results and the high results.

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[1] Using only the highest growth rate.

IX. CAPITAL ASSET PRICING MODEL ANALYSIS.

Q. Please describe the theory and methodological basis of the capital asset pricing model.

A. The Capital Asset Pricing Model (CAPM) is a version of the risk premium method. The CAPM describes and measures the relationship between a security's investment risk and its market rate of return. The CAPM was developed in the 1960s and 1970s as an extension of modern portfolio theory (MPT), which studies the relationships among risk, diversification, and expected returns.

Q. How is the CAPM derived?

A. The general form of the CAPM is:

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

where: K = cost of equity;

R_f = risk free rate;

R_m = return on market;

β = beta; and

R_m-R_f = market risk premium.

As noted previously, the CAPM is a variant of the risk premium method. I believe the CAPM is generally superior to the simple risk premium method because the CAPM specifically recognizes the risk of a particular company or industry (*i.e.*, beta), whereas the simple risk premium method assumes the same risk premium for all companies exhibiting similar bond ratings.

Q. What groups of companies have you utilized to perform your CAPM analyses?

A. I have performed CAPM analyses for the same groups of proxy utilities evaluated in my DCF analyses.

Q. What rate did you use for the risk-free rate?

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

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

I have performed CAPM calculations using the three month average yield (July to September 2007) for 20-year U.S. Treasury bonds. Over this three month period, these bonds had an average yield of 5.01 percent.

Q. What is beta and what betas did you employ in your CAPM?

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

Q. How did you estimate the market risk premium component?

A. The market risk premium component (R_m-R_f) represents the investor-expected premium of common stocks over the risk-free rate, or government bonds. For the purpose of estimating the market risk premium, I considered alternative measures of returns of the S&P 500 (a broad-based group of large U.S. companies) and 20-year U.S. Treasury bonds.

First, I have compared the actual annual returns on equity of the S&P 500 with the actual annual yields of U.S. Treasury bonds. Schedule 9 shows the return on equity for the S&P 500 group for the period 1978 to 2005 (all available years reported by S&P). This schedule also indicates the annual yields on 20-year U.S. Treasury bonds, as well as the annual differentials (*i.e.*, risk premiums) between the S&P 500 and U.S. Treasury 20-year bonds. Based upon these returns, I conclude that this version of the risk premium is about 6.2 percent.

I have also considered the total returns (*i.e.*, dividends/interest plus capital gains/losses) for the S&P 500 group as well as for the long-term government bonds, as tabulated by Ibbotson Associates, using both arithmetic and geometric means. I have considered the total returns for the entire 1926 to 2006 period, which are as follows:

	S&P 500	L-T Gov't Bonds	Risk Premium
Arithmetic	12.3%	5.8%	6.5%
Geometric	10.4%	5.5%	4.9%

I conclude from this that the expected risk premium is about 5.9 percent (*i.e.*, average of all three risk premiums). I believe that a combination of arithmetic and geometric means is appropriate since investors have access to both types of means and, presumably, both types are reflected in investment decisions and thus stock prices and cost of capital.

Schedule 10 shows my CAPM calculations using the risk premium. The results are:

	Mean	Median
Proxy Group	10.5%	10.2%
Avera Group	10.8%	10.6%

Q. What is your conclusion concerning the CAPM cost of equity?

A. The CAPM results collectively indicate a cost of about 10.25 percent to 10.75 percent for the two groups of comparison utilities. I conclude that the CAPM cost of equity for Avista is 10.25 percent to 10.75 percent.

X. COMPARABLE EARNINGS ANALYSIS.

Q. Please describe the basis of the CE methodology.

A. The CE method is derived from the "corresponding risk" standard of the *Bluefield* and *Hope* cases. This method is thus based upon the economic concept of opportunity cost. As previously noted, the cost of capital is an opportunity cost: the prospective return available to investors from alternative investments of similar risk.

The CE method is designed to measure the returns expected to be earned on the original cost book value of similar risk enterprises. Thus, this method provides a direct measure of the fair return, because the CE method translates into practice the competitive principle upon which regulation is based.

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

Q. How have you employed the CE methodology in your analysis of Avista's common equity cost?

A. I conducted the CE methodology by examining realized returns on equity for several groups of companies and evaluating the investor acceptance of these returns by reference to the resulting market-to-book ratios. In this manner it is possible to assess the degree to which a given level of return equates to the cost of capital. It is generally recognized for utilities that market-to-book ratios of greater than one (*i.e.*, 100 percent) reflect a situation where a company is able to attract new equity capital without dilution (*i.e.*, above-book value). As a result, one objective of a fair cost of equity is the maintenance of stock prices above book value.

I would further note that the CE analysis, as I have employed it, is based upon market data (through the use of market-to-book ratios) and is thus essentially a market test. As a result, my analysis is not subject to the criticisms occasionally made by some who maintain that past earned returns do not represent the cost of capital. In addition, my analysis uses prospective returns and thus is not confined to historical data.

Q. What time periods have you examined in your CE analysis?

A. My CE analysis considers the experienced equity returns of the proxy groups of utilities for the period 1992 to 2006 (*i.e.*, last 15 years). The CE analysis requires that I examine a relatively long period of time in order to determine trends in earnings over at least a full business cycle. Further, in estimating a fair level of return for a future period, it is important to examine earnings over a diverse period of time in order to avoid any undue influence from unusual or abnormal conditions that may occur in a single year or shorter period. Therefore, in forming my judgment of the current cost of equity I have focused on two periods: 2002 to 2006 (the last five years—the average length of a business cycle) and 1992 to 2001 (the most recent complete business cycle).

Q. Please describe your CE analysis.

A. Schedules 11 and 12 contain summaries of experienced returns on equity for several groups of companies, while Schedule 13 presents a risk comparison of utilities versus unregulated firms.

Schedule 11 shows the earned returns on average common equity and market-to-book ratios for the two groups of proxy utilities. These can be summarized as follows:

	Historic		Prospective
Group	ROE	M/B	ROE
Proxy Group	8.8-10.5%	137-144%	8.2-9.4%
Avera Group	11.2-12.1%	159-163%	11.4-11.7%

These results indicate that historic returns of 8.8 to 12.1 percent have been adequate to produce market-to-book ratios of 137 to 163 percent for the groups of proxy utilities. Furthermore, projected returns on equity for 2007, 2008, and 2010 to 2012 are within a range of 8.2 percent to 11.7 percent for the utility groups. These relate to 2006 market-to-book ratios of 152 percent or higher.

Q. Have you also reviewed earnings of unregulated firms?

A. Yes. As an alternative, I also examined a group of largely unregulated firms. I have examined Standard & Poor's 500 Composite Group, since this 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. Schedule 12 presents the earned returns on equity and market-to-book ratios for the S&P 500 group over the past 14 years. As this Schedule indicates, over the two periods this group's average earned returns ranged from 12.2 to 14.7 percent with market-to-book ratios ranging between 299 percent and 341 percent.

Q. How can the above information be used to estimate the cost of equity for Avista?

A. The recent earnings of the proxy utility and S&P 500 groups can be utilized as an indication of the level of return realized and expected in the regulated and competitive sectors of the economy. In order to apply these returns to the cost of equity for proxy utilities, however, it is necessary to compare the risk levels of the utility industry with those of the competitive sector. I have done this in Schedule 13, which compares several risk indicators for the S&P 500 group and the utility groups. The information in this schedule indicates that the S&P 500 group is more risky than the utility proxy groups.

Q. What return on equity is indicated by the CE analysis?

A. Based on the recent earnings and market-to-book ratios, I believe the CE analysis indicates that the cost of equity for the proxy utilities is no more than 10.0 percent to 10.5 percent (10.25 percent mid-point). Recent returns of 8.8 to 12.1 percent have resulted in market-to-book ratios of 137 and greater. Prospective returns of 8.2 to 11.7 percent result in market-to-book ratios of over 150 percent. As a result, it is apparent that returns below this level would result in market-to-book ratios of well above 100 percent. An earned return of 10.0 percent to 10.5 percent should thus result in a market-to-book ratio of over 100 percent. As I indicated earlier, the fact that market-to-book ratios substantially exceed 100 percent indicates that historic and prospective returns of 11.0 percent to 12.0 percent reflect earnings levels that exceed the cost of equity for those regulated companies.

In applying the CE analysis, it also is important to recognize recent trends. My recommended range of 10.0 percent to 10.5 percent is further supported by the actual newly authorized returns on common equity from 2002 through June 2007, which are as follows for U.S. electric utilities as authorized by state regulatory agencies:

Year	ROE	No. of Decisions
2002	11.16%	22
2003	10.97%	22
2004	10.75%	19
2005	10.54%	29
2006	10.36%	25
2007 (6 months)	10.27%	18

Source: Regulatory Research Associates, “Regulatory Focus” July 3, 2007.

Please also note that my CE analysis is not based on a mathematic formula approach, as are the DCF and CAPM methodologies. Rather, it is based on recent trends and current conditions in equity markets. Further, it is based on the direct relationship between returns on common stock and market-to-book ratios of common stock. In utility rate setting, a fair rate of return is based on the utility's assets (*i.e.*, rate base) and the book value of the utility's capital structure. As stated earlier, maintenance of a financially stable utility's market-to-book ratio at 100 percent, or a bit higher, is fully adequate to maintain the utility's financial stability. On the other hand, a market price of a utility's common stock that is 150 percent or more above the stock's book value is indicative of earnings that exceed the utility's reasonable cost of capital. Thus, actual or projected earnings do not directly translate into a utility's reasonable cost of equity. Rather, they must be viewed in relation to the market-to-book ratios of the utility's common stock.

My 10.0 percent to 10.5 percent CE recommendation reflects the fact that historic equity returns of 8.8 percent to 12.1 percent have resulted in market-to-book ratios of 137 percent to 164 percent, which demonstrates that equity returns exceeded the cost of capital. Likewise, projected returns of about 8.2 percent to 11.7 percent relate to 2006 market-to-book ratios of over 150 percent. My 10.0 percent to 10.5 percent CE recommendation is not designed to result in market-to-book ratios as low as 1.0 for Avista. Rather, it is based on current market conditions and the proposition that ratepayers should not be required to pay rates based on earnings levels that result in excessive market-to-book ratios.

XI. RETURN ON EQUITY RECOMMENDATION.

Q. Please summarize the results of your three cost of equity analyses.

A. My three methodologies produce the following:

Discounted Cash Flow	9.5-10.5% (10.0% mid-point)
Capital Asset Pricing Model	10.25-10.75% (10.50% mid-point)
Comparable Earnings	10.0-10.5% (10.25% midpoint)

Q. What is your cost of equity recommendation for Avista?

A. It is my understanding that this Commission places the heaviest reliance on the DCF method to determine the cost of equity for the utilities it regulates. I note that this is not unusual among commissions throughout the U.S. Accordingly, my recommendation places more emphasis on the DCF findings of 9.5 percent to 10.5 percent or a 10.0 percent mid-point. I note that the results of my CAPM analyses (10.25 percent to 10.75 percent) and CE analyses (10 percent to 10.5 percent) corroborate my DCF findings. My specific finding for Avista is 10.0 percent, which gives primary consideration to the 10.0 percent mid-point of my DCF findings, but also is consistent with CAPM and CE results.

Q. Are you aware that, in recent orders, this Commission has expressed a preference for cost of capital witnesses to provide an indication of capital markets changes since the utility's last rate case was decided?

A. Yes, I am. I have reviewed the Commission's decision in the 2006 Puget Sound Energy case (Order 08 in Dockets UE-060266 and UG-0602687). In that order, the

Commission noted: “Little of the extensive testimony offered on this subject focuses squarely on what might have changed in the capital markets or at PSE in the last 18 months to justify a change in the ROE set by the Commission in February of 2005.” In that case, the Commission left the 10.4 percent cost of equity for Puget Sound Energy unchanged based in part on its finding that no meaningful changes had occurred in the capital markets.

Q. What is the most recent return on equity award for Avista?

A. Avista’s last rate proceeding was Docket Nos. UE-050482 and UG-050483, which was settled in late 2005. In that case, Avista and the other parties agreed to a 10.40 percent cost of equity, which was accepted by the Commission.

Q. How have capital costs changed since these recent rate orders?

A. My Schedule 2 provides insight into this. As this indicates, long-term interest rates at the present time are at about the same level or slightly lower than was the case in mid-2006—the timeframe of the Puget Sound Energy testimony. Further, current long-term interest rates are only slightly higher than those in late 2005—the timeframe of the last Avista rate proceeding.

In addition, as I noted previously, the average authorized return on equity for newly-issued rate orders for electric and gas utilities are slightly lower in 2007, versus the levels of 2005 and 2006.

	Electric	Gas
2005	10.54%	10.46%
2006	10.36%	10.43%
2007 (6 months)	10.27%	10.34%

Q. Based upon these trends and the Commission's stated preference to track cost of equity changes to capital market changes, what is the most appropriate cost of equity for Avista at this time?

A. Given the fact that interest rates are little changed from the time of Avista's last return on equity award by the Commission, as well as the declining return on equity awards for electric and gas utilities throughout the U.S., I believe it is currently proper to set Avista's cost of equity at 10.2 percent. This is slightly higher than my DCF findings, which this Commission prefers, but is consistent with the findings of my CAPM and CE analyses. I believe the 20 basis point reduction from the 10.4 percent established in the Puget Sound Energy (2006) and Avista (2005) cases is appropriate given changes in the capital markets since the cases were decided.

XII. TOTAL COST OF CAPITAL.

Q. What is the total cost of capital for Avista?

A. Schedule 14 reflects the total cost of capital for the Company using my proposed capital structure, Mr. Elgin's costs of long-term debt and Trust Preferred Securities, and my common equity cost recommendations. The resulting total cost of capital is a range of 7.85 percent to 8.30 percent (8.16 percent with 10.2 percent cost of equity). I recommend that this 8.16 percent total cost of capital be established for Avista.

Q. Does your cost of capital recommendation provide the company with a sufficient level of earnings to maintain its financial integrity?

A. Yes, it does. Schedule 15 shows the pre-tax coverage that would result if Avista earned my cost of capital recommendation. As the results indicate, my recommended range would produce a coverage level within the benchmark range for a BBB rated utility. In addition, the debt ratio (which reflects the Company's proposed capital structure) is within the benchmark for a BBB rated utility.

XIII. COMMENTS ON COMPANY TESTIMONY.

Q. Have you received the testimony of Avista's cost of equity witness?

A. Yes, I have. Dr. William E. Avera is the Company's cost of equity witness.

Q. Please summarize your understanding of Dr. Avera's cost of equity analyses and recommendation.

A. Dr. Avera's cost of equity findings can be summarized as follows:

DCF	10.3-12.3%
CAPM	
Forward-Looking	13.2%
Historical	12.0%
Comparable Earnings	11.0%
Cost of Equity-Proxy Group	11.3-12.3%

Q. Do you have any comments concerning Dr. Avera's DCF analyses and conclusions?

A. Yes, I do. Dr. Avera's DCF analyses for his utility proxy group contains a 9.5 percent to 10.7 percent conclusion, which is very similar to my DCF range of 9.5 percent to 10.5 percent. However, he apparently gives this methodology little weight in his 11.3 percent to 12.3 percent recommendation for Avista. Rather, his DCF results are heavily focused on his DCF analyses of unregulated firms, which produce an 11.8 percent to 12.9 percent result. I believe this is a deficiency in his analyses, in that he has virtually ignored the DCF results for the utility group and instead focused on the unregulated groups.

Q. What are your comments regarding Dr. Avera's CAPM risk premium analysis?

A. Dr. Avera's CAPM uses the following inputs:

Market rate of return	13.3%
Risk free rate	5.0%
Beta	0.99

My primary disagreement is with his 13.3 percent market return and resulting 8.2 percent risk premium (*i.e.*, 13.3 percent minus 5.0 percent) time .99 beta. Historic returns for the S&P 500 group (source of 13.3 percent return cited above) have been much lower than the 13.3 percent cited by Dr. Avera – 12.3 percent on arithmetic basis and 10.4 percent on geometric basis. Dr. Avera provides no basis for such a high expected return. I have previously indicated that risk premium associated with the S&P 500 composite group (as used by Dr. Avera in his CAPM) has been about 5.8 percent. There is no legitimate reason, therefore, to expect this group to achieve an 8.2 percent risk premium over the longer term.

Use of a more reasonable expected market return, such as that contained in my CAPM analyses, and more recent yield on risk-free rate (the 5.0 percent yield on 20-year U.S. Treasury Bonds used by Dr. Avera overstates the current level of about 4¾ percent), produces a CAPM result similar to my 10¼ to 10¾ percent conclusion.

Q. Do you have any comments about Dr. Avera's comparable earnings analysis?

A. Yes, I do. Dr. Avera's comparable earnings analysis is based on his observations that Value Line projections of electric utility returns on equity (as of early 2007) were 10.8 percent. I note that my Schedule 10 indicates that this utility group has recent market-to-book ratios well above 150 percent in recent years. This indicates that his 10.8 percent ROE exceeds the cost of capital for these utilities.

Q. Does Dr. Avera provide any reasoning as to why Avista's return on equity should have increased from 10.4 percent in 2005 to 11.8 percent currently?

A. No, he does not. As such, he does not provide the Commission any indications of changes in the capital markets since recent Washington utility return on equity awards were established.

Q. Does this conclude your pre-filed testimony?

A. Yes, it does.