Exhibit No. ___-T (DCP-1T)
Docket No. UG-060256
Witness: David C. Parcell

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **CASCADE NATURAL GAS CORPORATION,** **Respondent.**	**DOCKET NO. UG-060256**

TESTIMONY OF

DAVID C. PARCELL

ON BEHALF OF

STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION

August 15, 2006

TABLE OF CONTENTS

I. INTRODUCTION

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

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

Q. Please briefly describe your background and 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. The large majority of my consulting experience has involved the provision of cost of capital testimony in public utility ratemaking proceedings. I have previously testified in about 375 utility proceedings before more than 30 regulatory agencies in the United States and Canada.

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 current filing of Cascade Natural Gas Corporation ("Cascade" or "Company"). I have performed independent studies and am making recommendations of the current cost of capital for Cascade.

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

A. Yes, I have prepared one exhibit, identified as Schedule 2 through Schedule 15. This exhibit was 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

Q. What are your recommendations in this proceeding?

A. My overall cost of capital recommendation for Cascade is:

	Percent	Cost	Return
Long-term Debt	54.78%	7.58%	4.15%
Short-term Debt	4.09%	6.59%	0.27%
Common Equity	41.13%	9.75%	4.01%
Total	100.00%		8.43%

This recommendation employs Cascade's December 31, 2005, capital structure, except for short-term debt, which uses a 12-month average value.

III. SUMMARY

Q. Please summarize your analyses and conclusions.

A. This proceeding is concerned with Cascade's regulated natural gas distribution 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. Cascade's proposed capital structure is a hypothetical

capital structure comprised of 50 percent long-term debt and 50 percent common equity. I have not used these capital structure ratios in my testimony but rather have employed the Company's actual December 31, 2005, capital structure ratios.

The second step in a cost of capital calculation is a determination of the embedded cost rates of debt. I have used the cost rate for long-term debt proposed by Cascade. For the cost of short-term debt, I have used the Company's current cost rate.

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 Cascade. Each of these methodologies is applied to three groups of proxy electric and natural gas utilities. These three methodologies and my findings are:

Methodology	Range	
Discounted Cash Flow	9.0-10.0%	(9.5% Mid-Point)
Capital Asset Pricing Model	10.1-10.3%	(10.2% Mid-Point)
Comparable Earnings	10.0%	

Based upon these findings, it is my conclusion that the cost of common equity for Cascade is 9.75 percent, which reflects greater weight to the DCF results. I recommend a cost of common equity for the Company of 9.75 percent, in the absence of the adoption of the Company's proposed decoupling mechanism. Should this mechanism be approved, I recommend cost of equity of 25 bases points less, or 9.5 percent.

Combining these three steps into weighted costs of capital results in an overall rate of return of 8.43 percent, which incorporates a cost of common equity of 9.75 percent.

IV. ECONOMIC/LEGAL PRINCIPLES AND METHODOLOGIES

Q. What is your understanding of the economic and legal principles that underlie the concept of a fair rate of return for a regulated utility?

A. Cost of service rates for regulated public utilities have traditionally 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 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, the 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 that 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, as I have done in my testimony.

From an economic standpoint, a fair rate of return is normally interpreted to incorporate the financial concepts of financial integrity, capital attraction and 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 U.S. Supreme Court decisions are universally cited as providing the standards for a fair rate of return. The first 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 a 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.]**

Based on my understanding, this 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.

Three economic and financial parameters identified 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, which holds 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 the economic/financial theory has 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 with 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 your analyses of the cost of common equity?

A. I have utilized three methodologies to determine Cascade's cost of common equity: the DCF, CAPM and CE methods. The results of each of these methodologies will be described in my testimony.

V. GENERAL ECONOMIC CONDITIONS

Q. What is the importance of economic and financial conditions in determining the cost of capital?

A. The costs of capital, for both fixed-cost (debt and preferred stock) components and common equity, are determined in part by economic and financial conditions. At any given time, each of the following factors has a direct and significant influence on the costs of capital: the level of economic activity, the stage of the business cycle, the level of inflation, and expected economic conditions. My understanding is that this position 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. 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 three prior business cycles and the most current cycle.

A. The most recent complete cycle began with an expansion in April 1991 and ended in the fourth quarter of 2001, constituting a length of more than 10 ½ years. Following that, the economy slowed considerably in late 2000 and 2001 and was in a recession during three quarters of 2001, notwithstanding the Federal Reserve lowering interest rates (i.e, Fed Funds rate) 11 times in 2001 (as well as twice in 2003) in an aggressive effort to create a soft landing and avoid a recession. The events of September 11, 2001, further damaged the U.S. economy.

This cycle and the two prior complete cycles cover the following periods:

Business Cycle	Expansion Period	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

The expansion phase of the recent cycle well surpassed the average length of expansions in the post-World War II era (i.e., about five years). The 1982 to 1990 expansion (seven years, eight months) was the previous longest, peacetime expansion of this era.

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. Page 1 contains general macroeconomic statistics while pages 2 and 3 contain financial market statistics. Page 1 shows that growth in the initial stage of the current cycle was somewhat slower than the typical initial recovery period. This is indicated by the growth in real (i.e., adjusted for inflation) Gross Domestic Product, industrial production and the unemployment rate.

The rate of inflation is also shown on page 1 of Schedule 2, reflected in the Consumer Price Index (CPI). The CPI 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 3.3 percent rate of inflation in 2005, along with a similar level for 2004, were slightly higher than the most recent years but were both well below the levels of the past 30 years.

Q. What have been the trends in interest rates?

A. Page 2 of Schedule 2 shows several series of interest rates. Rates rose sharply in 1975 to 1981, when the inflation rate was high and rising. Rates then fell substantially throughout the remainder of the 1980s and into the 1990s. During the recent business cycle, long-term rates remained relatively stable, in comparison to

the prior cycles. Rates have increased somewhat over the past year but, nevertheless, currently are generally lower than at any time during the prior three cycles.

This low level of interest rates, in conjunction with the apparent strengthening of the U.S. economy, may create an expectation that any near-term movement of interest rates will be upward. In fact, the Federal Reserve has, since the middle portion of 2004, increased short-term interest rates on 17 occasions, although each by only a small 0.25 percent level, 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. (In fact, the current level of Fed Funds is about the same as the level in existence when the series of reductions began in 2000.) Even if rates were to increase moderately, they would still remain well below historical levels.

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

A. Page 3 of Schedule 2 shows 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, as evidenced by the fact that the Dow Jones Industrial average (DJI) remained in the 800 to 900 range for eight years. On the other hand, the 1983 to 1991 business cycle and the most recent cycle have witnessed a significant upward trend in stock prices, as the DJI rose to over 11,000. Over the past five years, however, stock prices have been volatile.

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, such as the DCF, currently produce returns that are lower than was the case in prior years.

VI. CASCADE'S OPERATIONS AND RISKS

Q. Please briefly describe Cascade Natural Gas.

A. Cascade is a natural gas local distribution company (LDC) that serves approximately 227,000 customers, principally in northwestern Washington and eastern Oregon. Approximately 75 percent of Cascade's customers are in Washington. Cascade also has small non-regulated gas marketing and contract operations businesses, but these operations are relatively small. Due to the relative lack of unregulated operations, Cascade remains what can be described as a "pure play" utility. I am aware that Cascade has recently announced its intention to merge with Montana-Dakota Utilities. It is not apparent at this time how this may impact the Company's future cost of capital.

Q. What are the current bond ratings of Cascade?

A. Cascade's senior unsecured debt is presently rated Baa1 by Moody's and BBB+ by Standard & Poor's. As indicated on Schedule 3, these ratings have been in effect for several years.

Q. How have the rating agencies described Cascade from a credit rating perspective?

A. Standard & Poor's has provided the most detailed description as to how Cascade's securities are rated. In a 2005 Corporate Ratings report on Cascade, S&P stated:

> Rationale
>
> The ratings on Cascade Natural Gas Corp. reflect the **solid financial performance** and **excellent business profile** of the **company's regulated gas distribution business. Cascade's business risk profile is excellent** ('2' on a 10-point scale, where '1' represents the strongest) **on the basis of its regulated gas distribution business**. Cascade also operates small nonregulated gas marketing and contract operations businesses, but these businesses have only a marginal effect on Cascade's credit quality.
>
> . . .
>
> The business profile is characterized primarily by a growing retail customer base, competitive rates, and constructive regulatory environments in Washington and Oregon, which permit fuel cost recovery through annual PGA mechanisms.
>
> . . .
>
> Outlook
>
> The stable outlook reflects Cascade's regulated gas operations, solid customer growth, reliable PGA mechanism that insures recovery of gas supply costs, and manageable capital program. The outlook also reflects Standard & Poor's expectation that Cascade will maintain strong cash flow coverage in light of its **elevated debt leverage** and will also prudently hedge its expected load over the near term to avoid a recurring accumulation of gas cost deferrals**. [Emphasis added]**

These statements by S&P indicate that Cascade has very low business risk. They also reflect the recognition by S&P of the relatively high leverage that the Company's management has chosen to incur in recent years.

Q. Is it apparent that Cascade's current cost-recovery mechanisms are positive factors in its strong business risk profile?

A. Yes, it is apparent. The above-cited S&P report noted "constructive regulatory environments" and cited the Company's "reliable PGA mechanism" as a significant factor in assigning an "excellent" risk profile to Cascade.

Q. Has Standard & Poor's commented on Cascade's proposal to add further ratemaking mechanisms?

A. Yes, it has. In a February 15, 2006, Breaking News report on Cascade, S&P noted that the Company has filed a general rate case and a "Conservation Alliance Plan" with the WUTC. In this report, S&P cited the Company's proposed "implementation of a 'decoupling' mechanism that would make operating cost recovery independent of volume of natural gas sold to core customers and eliminate the penalty for customer conservation inherent in volumetric-based rate-making." In addition, S&P earlier noted, in a 2005 Corporate Ratings report on Cascade:

> Cascade has begun discussions with both the Washington and Oregon regulatory commissions regarding a decoupling mechanism that insulates cost recovery from weather and conservation effects. The company expects to conclude discussions with the Oregon commission in January 2006 and has announced that it will include a decoupling mechanism in its next Washington rate case, which it expects to file during the first quarter of 2006.

Q. Has Standard & Poor's commented generally on the positive attributes of regulatory cost-recovery mechanisms?

A. Yes, it has. In a 2006 Commentary Report, titled "Prolonged High Natural Gas Prices May Increase Credit Risk For U.S. Gas Distribution Companies," S&P made the following comments:

> …in an environment of sustained elevated natural gas prices, will regulators continue to allow the LDCs the proper tools to capture costs and maintain credit quality? The answer to this question will be key in LDCs maintaining their credit quality as, historically, companies with stable recovery mechanisms have maintained strong ratings.
> . . .
> Regulatory Mechanisms
> Most LDCs operate in jurisdictions where regulators provide a purchased-gas adjustment clause, which reduces a significant portion of the risk associated with operating with volatile gas price costs.
> In today's new cost paradigm, how quickly the purchased-gas adjustment is 'trued up' can have a bearing on an LDC's credit quality.
> . . .
> Given today's high and volatile natural gas prices, maintaining strong credit quality depends on ratepayers bearing the responsibility for commodity costs. Automatic pass-through mechanisms linked to gas price indices provide the strongest level of support.

Several points are apparent from this report. First and significantly, pass-through mechanisms have the effect of transferring a portion of an LDC's risks from its stockholders to its ratepayers. Second, it is apparent that Cascade's present cost-recovery mechanisms are the types that are the most risk-reducing. Third, the proposed additional regulatory mechanisms will have an impact, if approved, of further reducing Cascade's risks.

Q. Please summarize your understanding of the new and/or enhanced regulatory mechanisms that Cascade is proposing in this proceeding.

A. The so-called "Conservation Alliance Plan and decoupling mechanism" are the foremost regulatory mechanisms being proposed. This proposal is intended to insulate the Company from any reduced sales attributed to customer conservation. This mechanism is especially risk-reducing.

Q. What will be the impact on Cascade's perceived risks if these regulatory mechanisms are adopted?

A. The impact will be to transfer a significant portion of Cascade's business risks from its stockholders to its ratepayers. This will, in turn, reduce the cost of equity capital of Cascade.

Q. How can this reduction in cost of capital be measured?

A. One method to measure the impact of the reduction in cost of equity resulting from the potential adoption of these regulatory mechanisms (in particular, the decoupling mechanism) is to quantity the differential between the yields on bonds and preferred stock for alternative bond ratings. I have done such a calculation on Schedule 4, which shows the differential over the 2001 to 2006 period in yields between: 1) bonds with a Baa and an A rating; and 2) preferred stocks with a Baa and an A rating. For both series of securities, the average differential is about 0.3 percent, or 30 basis points. It stands to reason that the differential in cost of equity would be greater than 30 basis points, since common equity has a higher cost rate.

Q. What differential do you believe is proper to reflect the impact of the potential approval of the proposed decoupling mechanism for Cascade?

A. I believe this mechanism, if approved, would have the impact of lowering Cascade's cost of common equity by 25 to 50 basis points. I specifically recommend a 25 basis points reduction in Cascade's cost of equity, if the decoupling mechanism is adopted.

Q. How does this compare to Cascade's view of the cost of equity differential associated with the decoupling mechanism?

A. It appears that Cascade shares this view. Dr. Morin, Cascade's costs of equity witness, indicates that Cascade's cost of equity would be 25 to 50 basis points higher in the absence of the requested regulatory mechanisms.

VII. CAPITAL STRUCTURE AND COSTS OF DEBT AND PREFERRED EQUITY

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

A. A utility's capital structure is important since 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 appropriately relative to its level of business risk and to other utilities.

As discussed in Section III, the purpose of determining the proper capital structure for a utility is to help ascertain the capital costs of the company. The rate base – rate of return concept – recognizes the assets that are employed in providing utility services and provides for a return on these assets by identifying the liabilities and common equity (and their cost rates), which are 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 that normally receives the most attention. This is the case since 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 Cascade?

A. I have first examined the five-year historic (2001 to 2005) capital structure ratios of Cascade. These are shown on Schedule 5. I have summarized below the common equity ratios for Cascade:

Year 1/	Including S-T Debt	Excluding S-T Debt
2001	42.4%	49.3%
2002	40.8%	40.8%
2003	39.8%	40.4%
2004	40.0%	45.1%
2005	38.9%	40.6%

1/ As of September 30 fiscal year.

This indicates a level of common equity over the last four years of the five-year period that generally focused on about 40 percent.

Q. How do Cascade's common equity ratios compare with those of other gas distribution companies?

A. Schedule 6 shows this comparison. This indicates that Cascade's common equity ratios have been slightly lower than those of gas distribution companies in general.

Q. Has this slightly higher leverage position had any impact on the Company's security ratings in recent years?

A. Apparently not. Cascade's debt ratings have consistently been high (Triple B) for at least the past decade, as shown on Schedule 3. It is evident that Cascade's low business risk position – as described in the previous section – has been sufficient to offset any perceived higher financial risk associated with the higher leverage the Company has maintained.

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

A. The Company requests use of a hypothetical capital structure comprised of 50

percent common equity and 50 percent long-term debt. This capital structure, which has a much higher common equity component than the actual capital structure of the Company is apparently recommended by Dr. Morin in order to offset the "company's small size relative to other natural gas utilities" (page 54, line 18).

Q. Do you agree with this proposed capital structure?

A. No, I do not. Cascade has not had a common equity ratio as high as 50 percent at any time during the past five years, as shown on Schedule 5. It is further evident (per Value Line's report on Cascade) that the Company has not had an equity ratio as high as 50 percent since 1997 (note that Value Line's common equity ratio calculations do not include short-term debt).

Q. Do you agree with Dr. Morin's recommendation that Cascade be entitled to a small size premium, in terms of using a higher common equity ratio than it actually has maintained?

A. No, I do not. Clearly, Cascade is regarded as a low-risk utility, as evidenced by its S&P business position of "2." This business position reflects all of the Company's business risks, including any potentially related to the Company's size. As a result, there is no need to provide any size adjustment for the Company.

Q. What capital structure do you propose to use in this proceeding?

A. I propose to use the actual capital structure of Cascade, as of December 31, 2005. This capital structure is comprised of the following items and percentages:

Long-term Debt	54.78%
Short-term Debt	4.09% [1]
Common Equity	41.13%

Q. Why do you include short-term debt in the capital structure?

A. Schedule 4 indicates that Cascade has consistently had balances of short-term debt in its capital structure. This is also verified from Cascade's response to WUTC Staff Data Request No. 27, which indicates that Cascade had short-term debt outstanding during every month of 2005 and all but two months of 2004. In addition, the 4.09 percent ratio of short-term debt is not an excessive level of short-term debt, in terms of the ratios maintained by Cascade over the past five years (see Schedule 5). I believe it is proper to include short-term debt in the ratemaking capital structure when it is apparent that the Company consistently maintains outstanding balances of short-term debt and/or is financing part of rate base.

Q. Do you believe your proposed capital structure balances safety and economy?

A. Yes, it does. This capital structure is safe, in that it is the actual year-end 2005 capital structure of Cascade, and it is consistent with the actual capital structure used by the Company in recent years, a period in which the Company has maintained its investment grade bond ratings and has maintained a solid "2" business position by S&P. This capital structure is also economical, since it does not contain excessive amounts of common equity, unlike the proposed 50 percent common equity ratio

[1] 12 month average balance of short-term debt, as derived from the response to WUTC Data Request No. 27.

contained in the Company's proposed hypothetical capital structure. This is also evidenced by the similarity of Cascade's actual capital structure to the average capital structure ratios of the LDCs in the proxy group I use for the purpose of estimating the cost of common equity.

Q. What is the cost rate of long-term debt in the Company's application?

A. The Company's filing cites an embedded cost rate of long term debt of 7.58 percent. I use the company-proposed rate for long-term debt in my cost of capital analyses. In accepting this rate, I note that the Company represents that the calculation is consistent with the manner in which long-term debt was calculated in Cascade's last rate proceeding (see response to WUTC Staff Data Request No. 26).

Q. What is the cost of short-term debt?

A. For the cost of short-term debt, I used a rate of 6.59 percent. This reflects the average of the various short-term rates provided in the response to WUTC Staff Data Request No. 177.

Q. Can the cost of common equity be determined with the same degree of precision as the cost of debt?

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 that 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.

VIII. SELECTION OF COMPARISON GROUPS

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

A. Cascade is presently a publicly-traded company.[2] Consequently, it is possible to directly apply cost of equity models to Cascade. However, it is customary to analyze groups of comparison or "proxy" companies to determine the cost of common equity for public utilities.

I have examined three such groups for comparison to Cascade. The first group of proxy companies is the group of gas distribution companies followed by Value Line, except for those companies that have not paid cash dividends. This group, which reflects a representative sample of LDCs, is a proper proxy for Cascade.

The second proxy group is the group of 20 electricity distribution utilities that Cascade witness Morin used in his analyses. The third proxy group is the group of 12 natural gas utilities Dr. Morin utilized in his testimony.

I note that, by developing my own group of proxy companies used in conjunction with the groups of proxy companies utilized by Cascade witness Morin, I have given consideration to the Company's view as to the composition of the

[2] As noted previously, Cascade has announced its intention to merge with Montana-Dakota Utilities.

proper proxy companies for Cascade. On the other hand, I do not believe that the cost of equity results for electric companies should be given as much weight as the corresponding results for LDCs.

IX. 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. When applied to common stocks, the dividend discount model describes the value of a stock as follows:

$$P = \frac{D_1}{(1+K_1)} + \frac{D_2}{(1+K_2)^2} + \ldots + \frac{D_n}{(1+K_n)^n} = \sum_{i=1}^{n} \frac{D_t}{(1+K)^t}$$

where: P = current price
D_1 = dividends paid in period 1, etc.
K_1 = discount rate in period 1, etc.
n = infinity

This relationship can be simplified if dividends are assumed to grow at a constant rate of *g*. This variant of the dividend discount model is known as the constant growth or Gordon DCF model. In this framework, the price of a stock is determined as follows:

$$P = \frac{D}{(K - g)}$$

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

This equation can be solved for *K* (i.e, the cost of capital) to yield the following formula:

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

This formula essentially states 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 comparison 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 which 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 a quarterly compounding variant, which is expressed as follows:

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

This dividend yield component recognizes the timing of dividend payments and dividend increases. This formula essentially recognizes that, on average, each proxy company is expected to increase its dividend by the expected growth rate at the middle of the next year, which is a reasonable assumption given that individual companies will increase dividends at various times throughout the year. As such, this yield calculation provides for a proper mechanism for estimating the expected dividend yield in the next year.

The P_o in my yield calculation is the average (of high and low) stock price for each company for the most recent three month period (April to June, 2006). The D_o is the current annualized dividend rate for each 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, which 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. A wide array of techniques 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. It, therefore, 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. 2001 to 2005 (five-year average) earnings retention or fundamental growth;[3]
2. five-year average of historic growth in earnings per share (EPS), dividends per share (DPS) and book value per share (BVPS);
3. 2006 to 2010 projections of earnings retention growth;
4. 2004 to 2010 projections of EPS, DPS and BVPS; and
5. five-year projections of EPS growth as reported in First Call (formerly I/B/E/S).

This combination of growth indicators is a representative and appropriate set with which to estimate investor expectations of dividend growth for the groups of comparison companies.

Q. Please describe your DCF calculations.

A. Schedule 7 presents my DCF analysis. Page 1 shows the calculation of the "raw" (i.e., prior to adjustment for growth) dividend yield. Pages 2 to 3 show the growth rate for the groups of comparison companies. Page 4 shows the DCF calculations, which are presented on several bases: mean, median and high values. These results can be summarized as follows:

	Mean	Median	High Value
Comparison Group	9.0%	8.4%	9.5%
Morin Electric Group	9.3%	8.5%	10.8%
Morin Gas Group	9.0%	8.7%	10.1%

[3] This is also known as the internal growth, or BxR.

I note that these calculations should not be interpreted as my DCF conclusions but rather as numeric values that form the basis of quantitative and qualitative analyses of the cost of capital at the current time. I also note that the high value for the Morin Electric Group may indicate a higher DCF cost of equity than is required for LDCs.

Q. What do you conclude from your DCF analyses?

A. Based upon my analyses, I believe a range of nine percent to 10 percent (9.5 percent mid-point) represents the current DCF cost of equity for the comparison groups. This is approximated by the upper portion of the range of DCF calculations for the natural gas groups examined in the previous analysis. The nine-percent rate reflects the upper portion of the mean/median results, while the 10-percent rate approximates the "high value" DCF results.

I have focused on the upper portion of the DCF calculations, since current financial conditions (low interest rates and high market-to-book ratios for utilities) have the effect of driving DCF results to low levels by historic standards.

X. 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
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, whereas the simple risk premium method does not.

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

A. I have performed CAPM analyses for the same groups of 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 reality, there is no such thing as a truly riskless asset. In CAPM applications, the risk-free rate is generally recognized by use of U.S. Treasury

securities. This follows, since Treasury securities are default-free, owing to the government's ability to print money and/or raise taxes to pay its debts.

Two types of 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 (April to June, 2006) for 20 year U.S. Treasury bonds. Over this three month period, these bonds had an average yield of 5.29 percent.

Q. What betas did you employ in your CAPM?

A. I utilized the most recent Value Line betas for each company in the groups of comparison 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 returns of the S&P 500 (a broad-based group of large U.S. companies) and 20-year U.S. Treasury bonds.

Schedule 8 shows the return on equity for the S&P 500 group for the period 1978 to 2004 (all available years reported by S&P). The average return on equity for the S&P 500 group over the 1978 to 2004 period is 14.02 percent. 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 the risk premium is about six percent.

I have also considered the total returns for the S&P 500 group as well as for 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 2005 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 5.8 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.

Q. Please describe the results of your CAPM analysis.

A. Schedule 9 shows my CAPM results. The results are as follows:

	Mean	Median
Comparison Group	10.3%	10.2%
Morin Electric Group	10.5%	10.2%
Morin Gas Group	10.1%	10.2%

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

A. The CAPM results collectively indicate a cost of about 10.1 percent to 10.5 percent for the three groups of comparison utilities findings. I note, as was the case for the

DCF, that the Morin Electric Group has higher indicated results than the LDCs. As a result, I do not give much consideration to the CAPM results of the electric group but instead focus on the 10.1 percent to 10.3 percent CAPM findings for the LDC proxy groups.

XI. 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 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. If, in the opinion of those who save and commit capital, the prospective return from a given investment is not equal to that available from other investments of similar risk, the available capital will tend to be shifted to the alternative investments. Through this mechanism, opportunity-cost-driven pricing signals direct capital to its most productive uses; thus, a free enterprise system promotes an efficient allocation of scarce resources.

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, since it translates into practice the competitive principle upon which regulation rests.

The CE method normally examines the experienced and/or projected returns on book common equity. The logic for returns on book equity follows from the use of original cost rate base regulation for public utilities that 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 Cascade's common equity cost?

A. I conducted my CE analysis 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 essentially a market test. As a result, my comparable earnings 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 comparable earnings analysis uses prospective returns and thus is not strictly backward looking.

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

A. My CE analysis considers the experienced equity returns of the comparison groups of utilities for the period 1992 to 2005 (i.e., last 14 years). The comparable earnings 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 by 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: 2001 to 2005 (the last five years) and 1992 to 2001 (the most recently completed business cycle).

Q. Please describe your CE analysis.

A. Schedules 10 and 11 contain summaries of experienced returns on equity for several groups of companies, while Schedule 12 presents a risk comparison of utilities versus unregulated firms.

Schedule 10 shows the earned returns on average common equity and market-to-book ratios for the three groups of comparison utilities. These can be summarized as follows:

Group	Historic ROE	Historic M/B	Prospective ROE
Comparison Group	11.5-12.6%	177-189%	12.0-12.3%
Morin Electric Group	11.6-12.6%	155-169%	12.3-14.0%
Morin Gas Group	11.5-12.3%	175-184%	11.2-11.9%

These results indicate that historic returns of 11.5 to 12.6 percent have been adequate to produce market-to-book ratios of 156 to 186 percent for the groups of electric and gas utilities. Furthermore, projected returns on equity for 2006, 2007 and 2009 to 2011 are within a range of 11.2 percent to 14.0 percent for the electric and gas utility groups. These relate to 2005 market-to-book ratios of 195 percent or higher. It is apparent from these results that recent and prospective returns on equity for these utility groups have been in excess of required returns. It appears that these excessive returns and resulting market-to-book ratios reflect investor recognition of the excessive returns earned by these groups.

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 the 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 11 presents the earned returns on equity and market-to-book ratios for the S&P 500 group over the past 13 years (i.e., 1992 to 2004). As this exhibit indicates, over the two periods this group's average earned returns ranged from 12.3 to 14.7 percent with market-to-book ratios ranging between 334 to 341 percent.

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

A. The recent earnings of the electric 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 comparison utilities, however, it is necessary to compare the risk levels of the electric and gas utility industries with those of the competitive sector. I have done this in Schedule 12, 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 comparison 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 comparison utilities is no more than 10 percent. Recent returns of 11.5 to 12.6 percent have resulted in market-to-book ratios of 155 and greater. Prospective returns of 11.2 to 14.0 percent have been accompanied by market-to-book ratios of over 195 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 percent or less should thus result in a market-to-book ratio of at least 100 percent.

XII. RETURN ON EQUITY RECOMMENDATION

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

A. My three methodologies produced the following:

Methodology	Range	
Discounted Cash Flow	9.0-10.0%	(9.5% Mid-Point)
Capital Asset Pricing Model	10.1-10.3%	(10.2% Mid-Point)
Comparable Earnings	10.0%	

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

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 nine percent to 10 percent. I note that the results of my CAPM analyses (10.1 percent to 10.3 percent) and CE analyses (10 percent) corroborate my DCF findings. My specific recommendation for Cascade is 9.75 percent, which gives primary consideration to the 9.5 percent mid-point of my DCF findings, but also gives some weight to the slightly-higher CAPM and CE results.

My recommendation for Cascade takes two forms. First, I recommend that Cascade be awarded a cost of common equity of 9.75 percent, absent the adoption of the requested decoupling mechanism. This represents the 9.75 percent cost of equity for the LDC proxy groups described above. This is appropriate for the following reasons. First, my 9.75 percent conclusion was developed using the high values of the respective methodologies (i.e., high returns of DCF analysis, use of long-term

interest rate as risk-free rate in CAPM analysis). Second, Cascade can be regarded as an average-risk LDC, as indicated in a previous section.

In addition, I recommend that, should Cascade be granted authority to implement its proposed decupling mechanism, it be awarded a cost of equity of 25 basis points less than the cost of equity absent the adoption of the decoupling mechanism.

XIII. TOTAL COST OF CAPITAL

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

A. Schedule 13 reflects the total cost of capital for the Company, using the actual December 31, 2005, capital structure, the Company's proposed cost of long-term debt and current cost of short-term debt, along with my common equity cost recommendation. The resulting total cost of capital is 8.43 percent.

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 14 shows the pre-tax coverage that would result if Cascade earned my cost of capital recommendation. As the results indicate, the mid-point of my recommended range would produce a coverage level that is within the benchmark range for an A-rated utility. In addition, the debt ratio, which reflects the capital structure as proposed by the Company, is within that benchmark for a BBB-rated utility.

XIV. COMMENTS ON COMPANY TESTIMONY

Q. Have you reviewed the testimony of Cascade witness Roger A. Morin?

A. Yes, I have.

Q. What is your understanding of Dr. Morin's cost of equity recommendation for Cascade?

A. Dr. Morin is recommending an 11.15 percent cost of common equity for Cascade. This recommendation is based upon his implementation of the following cost of equity models:

	Morin Conclusions
CAPM	
Traditional	10.7-11.3%
Empirical	11.1-11.7%
Risk Premium	
Historical Natural Gas	10.4-11.0%
Allowed R.P. Electric	10.7-10.9%
DCF	
Natural Gas Distribution Zacks	9.6%
Natural Gas Distribution Value Line	11.2%
Electricity Distribution Zacks	10.4%
Electricity Distribution Value Line	9.7%

Based upon these results, he concludes that 10.9 percent is the cost of equity for an average natural gas distribution utility. He recommends an 11.15 percent return on equity for Cascade, since he believes that the Company is more risky than the average natural gas utility.

I believe each of Dr. Morin's methodologies over-states the cost of equity for Cascade.

Q. What is your understanding of Dr. Morin's CAPM analyses?

A. Dr. Morin performs CAPM analyses for several groups of natural gas and electric utilities. He combines a 0.80 beta with 4.7 percent and 5.3 percent costs of long-term (30-year) Treasury bonds and a 7.5 percent risk premium range to get the following CAPM results:

$$K = RF + \beta(RP) = 4.7 + .80(7.5) = 11.0\%$$

$$K = RF + \beta(RP) = 5.3 + .80(7.5) = 11.5\%$$

Q. Do you agree with this CAPM analysis?

A. No, I do not.

Q. Which components of his CAPM analysis do you disagree with?

A. I disagree with the risk premium component.

Q. What is your disagreement with Dr. Morin's market risk premium component?

A. Dr. Morin's 7.5 percent risk premium is derived from two studies: the 1926 to 2004 Ibbotson Associates study, showing a 7.2 percent differential between common stocks and the "income component" of Treasury bonds; and a DCF analysis he performed for Value Line's aggregate stock market index and growth forecasts versus long-term Treasury bonds produced a 7.7 percent differential.

I disagree with the first study, since Dr. Morin improperly used "income returns" from the Ibbotson Associates study rather than "total returns." What Dr. Morin did was compare the differential between total returns for common stocks (i.e., dividends and capital gains) and income returns for Treasury bonds. As such, he has ignored the capital gains component of the Treasury bonds return. As I indicated in my earlier testimony, the differential between total returns of common stocks and Treasury bonds is 5.8 percent.

Dr. Morin's second study relies upon his conclusion that the "expected return on the aggregate equity market" is 12.6 percent, which he derives by performing DCF analyses for the Value Line aggregate market. He combines a 2.1 percent dividend yield with an average projected growth rate of 10.5 percent to arrive at a 12.6 percent return. He then adjusted the dividend yield by the growth rate to arrive at his 13.0 percent DCF cost, which he in turn compared to the 5.3 percent, 30-year Treasury bond yields to arrive at a 7.7 percent risk premium.

I do not believe this is an appropriate method by which to estimate the risk premium. Dr. Morin has not attempted to verify that the Value Line group of some 5,000 stocks is an appropriate standard for the risk premium, which is normally performed by using a smaller sample of large companies, such as the S&P 500.

Q. Please describe Dr. Morin's "empirical" CAPM analysis.

A. Dr. Morin also employs what he describes as an "empirical" CAPM analysis. In this, he assumes that the appropriate beta in a CAPM analysis is a combination of the actual industry beta with a 75-percent weight and a beta of one with a 25-percent

weight. This form of the CAPM thus assumes that beta for an industry understates the industry's volatility and thus risk and it is necessary to substitute the overall market's beta (i.e., 1.0) for one-fourth of the industry's actual beta.

The use of an empirical CAPM overstates the cost of equity for companies with betas below that of the market. What the empirical CAPM actually does is inflate the CAPM cost for the selected company or industry on one-fourth of its equity and assumes that one-fourth of the company has the risk of the overall market. This is not appropriate for Cascade or for other utilities.

Q. Please describe your understanding of Dr. Morin's risk premium analysis.

A. Dr. Morin performs two risk premium analyses. Each of these involved the estimation of an equity risk premium over the 4.7 percent and 5.3 percent long-term Treasury bond yields used as the risk-free rate in his CAPM analyses. The two risk premiums he developed are:

Historic risk premium for gas distribution industry; and

Allowed risk premiums for electric industry.

Q. Please describe Dr. Morin's historic risk premium for the natural gas industry.

A. Dr. Morin's historic risk premium for the natural gas industry involves an examination of the total returns of 20-year Treasury bonds (capital gains/losses plus interest) and Moody's Natural Gas Distribution Index (capital gains/losses plus dividend yield) over the period 1954 to 2001. The average historical difference between the natural gas utility returns and the Treasury bond returns was 5.7 percent.

His historic risk premium for the natural gas distribution industry simply added the 4.7 percent and 5.3 percent current Treasury bond yield to the 5.7 percent historic risk premium to get 10.4 percent and 11.0 percent results.

Q. Do you agree with this methodology for estimating the cost of equity for Cascade?

A. No, I do not. Dr. Morin's historic risk premium of 5.7 percent is simply an examination of historical events going back to 1954. He has made no demonstration that economic and financial conditions in 2005 are similar to those in earlier years. The use of such a methodology implicitly assumes that the events of each of these years can have the same influences at the current time.

In addition, the risk premiums developed by Dr. Morin are generally dominated by the influence of capital gains in many years. For example, the year 1958 stock return of 56.2 percent reflects a 50.2 percent capital gain component. I do not believe it is proper to assign Cascade's cost of equity based upon a methodology that is dominated by stock market changes and bond market changes.

It is also apparent that the risk premium level has been very volatile over the period 1954 to 2001. The highest risk premium was 61.21 percent in 1958 and the lowest was -27.69 percent in 1982. The averages by decade have also been quite different, as is shown in Schedule 15. This indicates that the decade of the 1950s dominates the risk premium averages with a 16.89 percent premium. The decade of the 1990s, in contrast, showed a 0.79 percent risk premium. Dr. Morin's methodology weights these equally. It is doubtful that investors place equal weight

on events in the 1950s and 1990s in making investment decisions, yet Dr. Morin's risk premium analysis implicitly assumes this is the case. I also note that Dr. Morin states, in his DCF analysis, that investors do not give historic data much weight. Yet, his risk premium analysis assumes that investors consider historic data going back to 1954.

Q. Please describe Dr. Morin's analysis of allowed risk premiums for the natural gas utility industry.

A. In this phase of his risk premium testimony, Dr. Morin compares the differential between allowed returns on equity for natural gas utilities and long-term Treasury bonds over the period 1996 to 2005. The average spread over this period was 5.4 percent, but Dr. Morin does not utilize this differential as his risk premium. Instead, he performs regression analyses to track the risk premium in terms of rising and falling interest rates. He then concludes that a 6.0 percent risk premium is appropriate in conjunction with a 4.7 percent Treasury bond yield and a 5.6 percent risk premium applies to a 5.3 percent Treasury bond yield. This adjustment is not consistent with Dr. Morin's historic risk premium analyses, where he simply took the average risk premium over the entire 1954 to 2001 period and applied this to the current level of Treasury bond yields

Q. What is your understanding of Dr. Morin's DCF analyses?

A. Dr. Morin performs several sets of DCF analyses for two groups of natural gas distribution utilities and electric utilities. In these analyses, he uses "spot" dividend

yields for each company as of December 2005. For the growth rates, he used two indicators of growth: Zacks five-year EPS growth projections and Value Line projections of EPS growth.

The major problem with Dr. Morin's DCF analyses is the fact that he has used only one indicator of growth – projections of EPS. As I indicated in my DCF analysis, it is customary and proper to use alternative measures of growth.

Dr. Morin's DCF analyses implicitly assume that investors rely exclusively on EPS projections when making investment decisions. This is a very dubious assumption, and Dr. Morin has offered no evidence that it is correct. I note, for example, that Value Line - one of the sources of his growth rate estimates - contains many statistics, both of a historic and projected nature, for the benefit of investors who subscribe to this publication and presumably make investment decisions based at least in part from the information contained in Value Line. Yet, Dr. Morin would have us believe that Value Line subscribers and investors focus exclusively on one single number from this publication.

I note in this regard that the DCF model is a "cash flow" model. The cash flow to investors in a DCF framework is dividends. Dr. Morin's DCF model, in contrast, does not even consider dividend growth rates.

Q. Does this complete your testimony?

A. Yes, it does.