BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, v. CASCADE NATURAL GAS CORPORATION, Respondent.	DOCKET UG-170929

CASCADE NATURAL GAS CORPORATION

REBUTTAL TESTIMONY OF J. STEPHEN GASKE

March 22, 2018

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I. INTRODUCTION AND PURPOSE

2   **Q.   Please state your name, position and business address.**

3   A.   My name is J. Stephen Gaske and I am a Senior Vice President of Concentric Energy

4   Advisors, Inc., 1300 19th Street NW, Suite 620, Washington, DC 20036.

5   **Q.   Are you the same J. Stephen Gaske who filed Direct Testimony earlier in this**

6   **proceeding?**

7   A.   Yes.

8   **Q.   What is the purpose of your Rebuttal Testimony in this proceeding?**

9   A.   The purpose of my Rebuttal Testimony is to respond to the Testimony of David C. Parcell

10   on behalf of the Staff of the Washington Utilities and Transportation Commission

11   ("WUTC" or the "Commission") regarding the return on common equity capital and capital

12   structure for Cascade Natural Gas Corporation ("Cascade" or the "Company").

13   **II. SUMMARY AND OVERVIEW**

14   **Q.   Please provide an overview of Mr. Parcell's cost of capital analyses and**

15   **recommendations in this proceeding.**

16   A.   Mr. Parcell recommends an allowed rate of return on common equity of 9.35 percent,

17   which is the mid-point of his Constant Growth DCF analysis (i.e., 9.20 percent) and his

18   Comparable Earnings analysis (i.e., 9.50 percent). Mr. Parcell uses the same proxy group

19   of seven natural gas distribution proxy companies that I used in my analysis. The range of

20   his results is 6.7 – 10.0 percent. Mr. Parcell also conducted a CAPM analysis on the same

21   proxy group of companies, which resulted in ROE estimates of 6.7 and 6.9 percent.

22   According to Mr. Parcell, his ROE recommendation does not directly incorporate his

23   CAPM results, which he considers to be somewhat low relative to his DCF and Comparable

1   Earnings results. Mr. Parcell also recommends a capital structure for Cascade comprised

2   of 47.31 percent common equity and 52.69 percent long-term debt, based on the

3   Company's actual capital structure as of December 31, 2016.

4 **Q. Please summarize the areas in which you disagree with Mr. Parcell regarding the**

5   **allowed return on common equity for Cascade's natural gas distribution operations in**

6   **Washington.**

7 A. Mr. Parcell recommends an allowed return on common equity of 9.35 percent for

8   Cascade's Washington natural gas distribution operations. However, as shown in my

9   Direct Testimony, and as discussed herein, a return on common equity of 9.9 percent is

10   required in order for Cascade's Washington gas distribution operations to be in a position

11   to raise capital on reasonable terms. I disagree with several areas presented in the testimony

12   of Mr. Parcell that led him to recommend an equity return below the level required by

13   investors, including:

14   1) Failure to recognize that Cascade's Washington gas distribution operations are
15   significantly smaller and riskier than the typical company in the proxy group, which
16   supports a return on equity above the mean for the proxy group;

17   2) Failure to recognize that the Federal Reserve's intervention in financial markets has
18   distorted yields on government bonds as well as valuations for utility stocks, thereby
19   causing the DCF model to understate investors' required return on common equity in
20   the current market;

21   3) Mr. Parcell's use of both historical and projected growth rates, and his consideration
22   of dividend and book value growth rates rather than relying on earnings growth rates
23   in the Constant Growth Discounted Cash Flow ("DCF") model;

24   4) Mr. Parcell's capital asset pricing model ("CAPM") estimates based on a risk-free
25   rate that does not reflect investor expectations for substantially higher interest rates
26   and a flawed historical market risk premium that does not take into consideration the
27   inverse relationship between interest rates and equity risk premia and that understates
28   investors' return requirements under current market conditions;

29   5) Mr. Parcell's recommendation to deny recovery of flotation costs entirely.

1 **III.   REASONABLENESS OF ROE RECOMMENDATIONS**

2 A.   <u>Comparison with Allowed Rates of Returns</u>

3 **Q.   Please assess the reasonableness of Mr. Parcell's recommended return on common**

4 **equity.**

5 A.   Chart 1 presents all returns on common equity authorized in natural gas distribution

6 company rate proceedings covered by Regulatory Research Associates from January 2016

7 through February 2018.

8 **Chart 1: Authorized Returns on Equity for Gas Distribution (2016-2018)[1]**
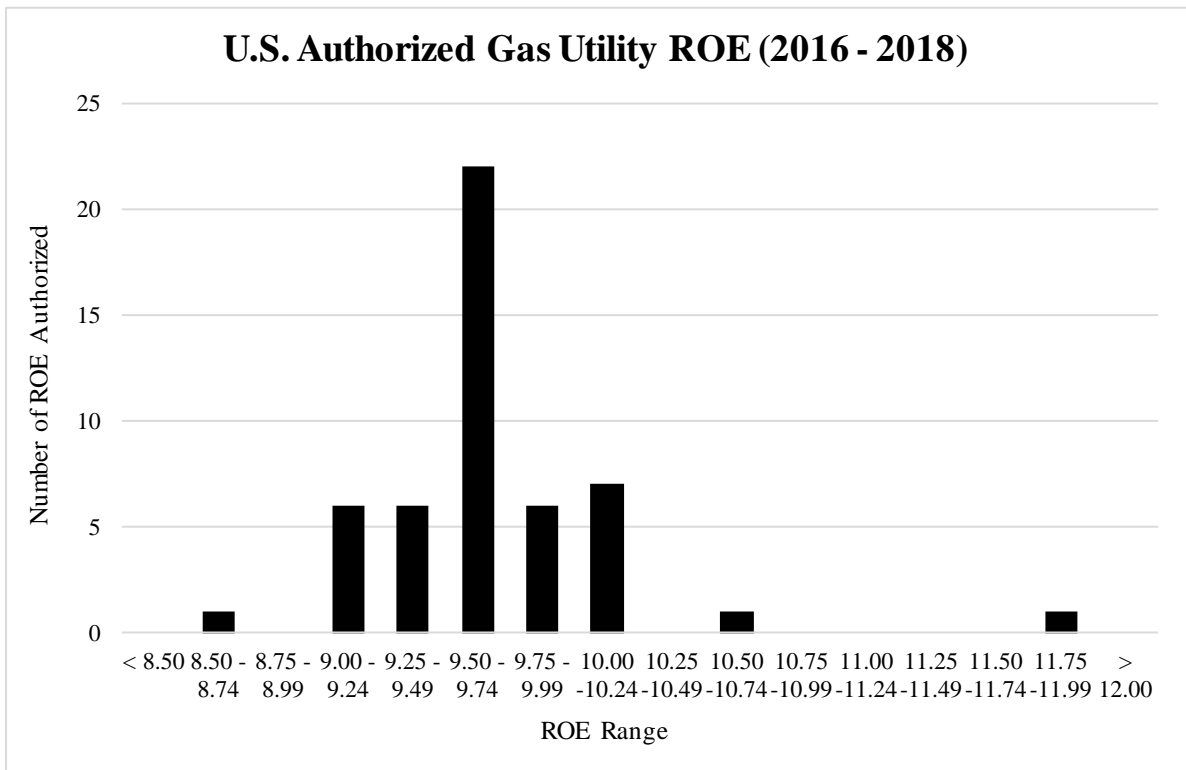
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10 As shown in Chart 1, the range of authorized returns for gas distribution companies from

11 January 2016 through February 2018 has been from 8.70 percent to 11.88 percent.   The

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[1] Source: Regulatory Research Associates.

1	median authorized return on common equity for gas distributors in 2016 was 9.50 percent,
2	and in 2017 the median authorized ROE increased to 9.60 percent. Mr. Parcell's ROE
3	recommendation of 9.35 percent is lower than 82 percent (41 of 50 decisions) of equity returns
4	authorized by Commissions since January 2016. The median authorized ROE during this
5	period for gas distribution companies was 9.55 percent, and there have been nine decisions
6	(or 18 percent of decisions) with explicit ROE awards of 10.0 percent or higher, which
7	corroborates the reasonableness of my recommended 9.9 percent cost of common equity.

8   B.   <u>Comparison with Expected Returns for Proxy Companies</u>

9   **Q.**   **Did you review other indicators of the reasonableness of Mr. Parcell's recommended**

10   **return on equity?**

11 A.   Yes. The comparable earnings and capital attraction standards both require that a regulated

12   company have an allowed rate of return that will allow it to compete with other companies

13   to attract capital to its operations. As shown in Mr. Parcell's Comparable Earnings

14   analysis, Value Line projects that the proxy companies are expected to earn the following

15   returns on equity:

1 **Table 1: Value Line Projected Earned Returns – Gas Distribution Utilities**

Company	ROE 2020-2022[2]
Atmos Energy Corporation	11.50%
New Jersey Resources Corporation	11.50%
NiSource Inc.	11.50%
Northwest Natural Gas Company	10.00%
South Jersey Industries, Inc.	9.50%
Southwest Gas Corporation	10.00%
Spire Inc.	9.50%
Average	**10.50%**

2

3   Given the higher allowed returns on equity discussed above, as well as the higher

4 returns on equity that the proxy companies are projected to earn, it would be difficult for

5 Cascade's Washington gas distribution operations to meet the comparable earnings standard

6 and compete for capital under the capital attraction standard if the Commission were to adopt

7 the return proposed by Mr. Parcell.

8 **Q.**   **Please place Cascade's current authorized return on common equity in context of**

9   **conditions in capital markets.**

10 A.   As discussed in my Direct Testimony, the settlement agreement that was approved by the

11 Commission in July 2016 included an authorized return on common equity of 9.40 percent

12 for Cascade's Washington natural gas distribution operations.[3] July 2016 also marked the

13 low point for interest rates in the current business cycle. Average monthly yields on 30-

14 year Treasury bonds have since increased from 2.22 percent in July 2016 to 2.88 percent

15 in January 2018, while yields on 10-year Treasury bonds have risen even more. This

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[2] *Value Line*, December 1, 2017.
[3] Direct Testimony of J. Stephen Gaske, at 3.

1   suggests that the cost of capital is higher, not lower, than it was at the time Cascade's

2   current authorized return on common equity was established in Washington.

3 C.   Tax Cuts and Jobs Act Effect on Utilities

4 **Q.   Please summarize the aspects of the December 2017 Tax Cuts and Jobs Act (referred**

5   **to herein as "Tax Reform") that are most relevant for the utility sector.**

6 A.   Tax Reform legislation reduces the statutory federal income tax rate for major corporations

7   from 35 percent to 21 percent, repeals the corporate alternative minimum tax, and

8   eliminates the tax deduction for bonus depreciation for regulated utility plant in 2018,

9   which is two years earlier than under the former tax code. As a result of Tax Reform, many

10   state utility commissions across the country have opened proceedings to require regulated

11   utilities under their jurisdiction to make a filing to reduce the amount of income taxes that

12   are collected in and recovered through rates.

13 **Q.   What is your understanding of the effect of Tax Reform on regulated utilities?**

14 A.   Although Tax Reform is a benefit to unregulated companies and customers of regulated

15   utilities, it is considered credit negative for investments in regulated utilities due to the

16   reduction in cash flows that will occur. Tax Reform is expected to reduce utility revenues

17   due to the lower federal income taxes and the requirement to return excess accumulated

18   deferred income taxes ("ADIT") to ratepayers. This change in revenues is expected to

19   reduce funds from operations ("FFO") metrics across the sector and, absent regulatory

20   mitigation strategies, is expected to lead to weaker credit metrics for utilities.[4]

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[4] FitchRatings, Special Report, What Investors Want to Know, "Tax Reform Impact on the U.S. Utilities, Power & Gas Sector", January 24, 2018.

1 **Q.   What have credit rating agencies said about Tax Reform?**

2 A.   Moody's Investors Services ("Moody's") has indicated that although Tax Reform is credit

3   positive for many sectors of the economy, it has an overall negative credit impact on utility

4   holding companies and their regulated operating companies due to the reduction in cash

5   flow and coverage ratios as cost-based ratemaking passes the benefits of reduced taxes

6   through to ratepayers. [5]

7   Moody's notes that regulated utilities collect revenues from customers on a book

8   tax expense basis, but typically pay much less tax in cash than they collect due to tax

9   deferrals. According to Moody's, the lower federal income tax rate combined with the loss

10   of bonus depreciation will have a negative effect on utility cash flows for three main

11   reasons.

12   1. Regulated utilities will collect less revenue from customers due to the lower income

13   tax rate. Although the taxes are ultimately paid out as an expense, under the new

14   law, regulated utilities lose the timing benefit, thereby reducing cash that may have

15   been carried over many years.

16   2. The lower tax rate also means that utilities now have excess accumulated deferred

17   income taxes on their books. As this amount is refunded to customers, it will reduce

18   cash flows, likely spread out over 20 years.

19   3. The loss of bonus depreciation means that utilities will be paying higher cash taxes

20   starting in 2019 and 2020, earlier than under the prior tax law.

21   Moody's expects that these changes will result in a decline in key financial metrics.

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[5] Moody's Investors Service, "Corporate tax cut is credit positive, while effects of other provisions vary by sector," December 21, 2017.

1   For example, it projects that gas distribution utilities' average cash flow from operations

2   will decline from 18.7 percent of debt to 16.9 percent of debt.[6]

3   FitchRatings ("Fitch") agrees that Tax Reform legislation is credit negative for

4   regulated utilities. Fitch comments:

5   The Tax Cut and Jobs Act signed into law December 22, 2017 has negative
6   credit implications for regulated utilities and utility holding companies over
7   the short to medium term. A reduction in customer bills to reflect lower
8   federal income taxes and return of excess accumulated deferred income
9   taxes (ADIT) is expected to lower revenues and FFO across the sector. [7]

10   Fitch estimates that regulated utility subsidiaries will, on average, see an

11   approximately 6 percent reduction in net revenues if tax changes are reflected in customer

12   bills right away, assuming that a substantial portion of the excess ADIT will be returned to

13   customers over the life of the utility property. The lower revenue translates into an

14   approximately 15 percent reduction in FFO across Fitch's sample of regulated utilities.

15   Fitch also indicates that any ratings actions will be guided by the response of

16   regulators and the management of the utilities. Fitch notes that seeking an immediate return

17   of tax savings to customers creates an immediate decline in cash flow for the utilities, and

18   that the outcome of Tax Reform will depend on the ability to manage the cash flow

19   implications. Fitch observes that increasing the authorized ROE and/or equity ratio are

20   measures that can be implemented to provide rate stability and moderate changes to cash

21   flow in the near term.[8]

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[6] Ibid, at 6-7.
[7] FitchRatings, Special Report, What Investors Want to Know, "Tax Reform Impact on the U.S. Utilities, Power & Gas Sector", January 24, 2018.
[8] Ibid.

| 1 | **Q.** | **Has Moody's reviewed the credit outlook of regulated utilities in light of the effect of** |

1 **Q.** **Has Moody's reviewed the credit outlook of regulated utilities in light of the effect of**

2   **Tax Reform?**

3 A.   Yes. Moody's recently reduced the rating outlook for 24 regulated utilities from stable to

4   negative. This action affected three of the gas companies in my proxy group and four of

5   the companies in Dr. Griffing's proxy group. According to Moody's, the changes were

6   made to those utilities that have a limited cushion against deterioration in financial

7   performance within their ratings category. Furthermore, Moody's expects that it will be

8   necessary for utilities to work closely with state regulators to try to mitigate the negative

9   impact of tax reform. Moody's suggests that potential regulatory ratemaking offsets to tax-

10   related cash flow reductions could include:

11   1) Accelerated cost recovery of certain regulatory assets or future investment;

12   2) Increases in the equity component of the capital structure; or

13   3) Higher allowed ROEs.[9]

14 **Q.** **How have utility stock prices responded to Tax Reform legislation?**

15 A.   The S&P Utilities index declined sharply after mid-November 2017 (when Tax Reform

16   legislation was first approved by the U.S. House of Representatives). At the same time,

17   long-term Treasury bond yields quickly increased as Tax Reform made investments in non-

18   utility common stocks more attractive relative to both bonds and utility stocks. As shown

19   in Chart 2, the share prices of the companies in my gas distribution proxy group have

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[9] Moody's Investor Services, "Global Credit Research, Rating Action: Moody's changes outlooks on 25 US regulated utilities primarily impacted by tax reform," January 19, 2018, at 1.

1   declined significantly since December 1, 2017 and bond yields increased significantly after

2   the passage of Tax Reform.

3   **Chart 2: Proxy Group Stock Prices vs. U.S. Treasury Bond Yield**[10]

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[10] Source: SNL Financial.

1 **Q.** **Have you conducted an analysis of the effect of Tax Reform on the Constant Growth**

2 **DCF model?**

3 A. Yes. I updated the Constant Growth DCF analysis performed by Mr. Parcell to determine

4 the effect of declining utility stock prices, increasing dividend yields and current earnings

5 per share growth rates from Value Line and Yahoo!Finance. As shown in Exhibit No.

6 ___(JSG-4), Schedule 1, in response to the decline in utility stock prices, the dividend yield

7 for Mr. Parcell's proxy group increased by 33 basis points from 2.87 percent for the period

8 from November 2017 through January 2018 to 3.20 percent for the period from January

9 2018 through February 2018. In addition, the average projected earnings per share growth

10 rate for Mr. Parcell's proxy group increased from 5.70 percent to 7.30 percent.[11] This

11 demonstrates the significant effect of Tax Reform and higher earnings growth rates on the

12 DCF model results.

13 **Q.** **Are you suggesting a change in your recommended ROE or equity ratio as a result of**

14 **Tax Reform legislation?**

15 A. No, I am not. However, the effect of Tax Reform provides additional support for the

16 conclusion that a rate of return on common equity of 9.90 percent, and an equity ratio of

17 50.00 percent, are reasonable and appropriate for Cascade's Washington gas distribution

18 operations in this proceeding.

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[11] In his Exh. DCP-9, pages 3 and 4, the average Value Line and First Call EPS forecasts were (6.0% + 5.4%)/2 = 5.7%. The updated values for those average forecasts are (9.3% + 5.3%) = 7.3%.

1   **IV. RELATIVE RISK OF CASCADE'S WASHINGTON GAS OPERATIONS**

2   A.   <u>Small size of Cascade's Washington gas distribution operations</u>

3   **Q.   Please explain your disagreement with Mr. Parcell's assessment of the Company's**

4   **business risk.**

5   A.   In discussing the business risks of Cascade's Washington gas distribution operations, Mr.

6   Parcell fails to recognize the significant risk associated with the small size of the

7   Washington gas distribution operations compared to the proxy group. Mr. Parcell suggests

8   that the relative risks of Cascade's Washington gas distribution operations discussed in my

9   Direct Testimony are reflected in the Company's credit ratings.[12]   According to Mr.

10   Parcell, Cascade's S&P credit rating of BBB+ is generally similar to the credit ratings of

11   the proxy group of gas distribution companies that he used to develop his cost of equity

12   recommendations.[13]

13   Although I tried to select proxy companies that were as similar as possible to

14   Cascade's Washington gas distribution operations, there were some significant risk

15   differences that remain, which must be reflected by selecting a cost of common equity

16   above the median for the proxy group. Further, the average S&P credit rating for the

17   companies in the gas distribution proxy group is A-, which is one notch higher than

18   Cascade's S&P rating of BBB+. This implies that Cascade has above average risk relative

19   to the proxy group companies.

20   As explained in my Direct Testimony, the typical proxy company is between 8 and

21   19 times larger than Cascade's Washington jurisdictional gas distribution operations.[14] That

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[12] Testimony of David C. Parcell, at 17.
[13] *Ibid*.
[14] Direct Testimony of J. Stephen Gaske, at 25.

1   is an unavoidable fact because there are no comparably-sized, publicly-traded companies with

2   analysts' consensus growth rate estimates. The higher cost of capital for smaller companies

3   also applies to regulated public utilities. For example, the higher rate of return required by

4   smaller utility operations was demonstrated empirically by Michael Annin.[15]

5   There can be many reasons why smaller companies tend to be riskier. For example,

6   smaller companies generally face greater risks due to a limited size of market, which leaves

7   them more vulnerable to a downturn in a local economy. Some smaller companies may have

8   inadequate resources to adapt to changing markets and technologies in the future, or they may

9   lack economies of scale that leave them more vulnerable to competitive alternatives.

10   Similarly, large companies are better able to absorb losses due to accidents, natural disasters,

11   lawsuits, regulatory changes or other sudden losses that could devastate the income and

12   finances of small companies.

13   In my Direct Testimony, I discussed the significantly higher returns that Duff &

14   Phelps has documented for companies in the same size range as Cascade's Washington gas

15   distribution operations. The effect of size on required returns is well-established in the finance

16   literature. For example, Fama and French found that firm size (with smaller companies

17   requiring higher returns) and market-to-book ratio are the two variables that best explain the

18   returns for common stocks.[16]

19   Similarly, Moody's considers the size and diversity of utility operations to be a

20   distinguishing factor that makes some utilities riskier than others. Specifically, in "Rating

21   Methodology for Regulated Electric and Gas Utilities" Moody's stated:

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[15] Michael Annin, *Equity and the Small-Stock Effect*, Public Utilities Fortnightly, October 15, 1995.
[16] Fama and French, "The Cross-Section of Expected Stock Returns", Journal of Finance, Vol. XLVII, No. 2, June 1992, 427-465.

1　　　　　　　We also consider the diversity of utility operations (e.g., regulated electric,
2　　　　　　　gas, water, steam) when there are material operations in more than one area.
3　　　　　　　Economic diversity is a typically a function of the population, size and
4　　　　　　　breadth of the territory and the businesses that drive its GDP and
5　　　　　　　employment. For the size of the territory, we typically consider the number
6　　　　　　　of customers and the volumes of generation and/or throughput. For breadth,
7　　　　　　　we consider the number of sizeable metropolitan areas served, the economic
8　　　　　　　diversity and vitality in those metropolitan areas, and any concentration in
9　　　　　　　a particular area or industry.[17]

10　　　　　　Cascade's Washington gas distribution operations are characterized by the small size

11　　　and small town service territory lack of diversity described by Moody's. Moody's rating

12　　　methodology confirms that utilities with those attributes have elevated risk and that an allowed

13　　　return above the average return required for the typical proxy company is appropriate in this

14　　　proceeding.

15　**Q.**　**At pages 52-55 of his testimony, Mr. Parcell argues that a small size adjustment is not**

16　　　**proper for regulated utilities, and that his evidence shows that the smallest utilities have**

17　　　**the lowest authorized ROEs. What is your response?**

18　A.　Mr. Parcell adduces what he believes are three lines of evidence, but each of these is fatally

19　　　flawed and does not show what he claims.

20　　　　　For example, he cites a study by Wang which did not find that smaller utilities have

21　　　higher betas. But a similar study by Annin did find that smaller utilities have higher betas.

22　　　More importantly, the source of the size premium in my CAPM analysis is not based on a

23　　　belief in higher betas for smaller stocks. Instead, it is based on the findings by Annin, Duff

24　　　& Phelps, and others that for any given beta the CAPM understates the returns actually

25　　　earned by companies – including utilities – and this understatement is strongly related to

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[17] Moody's Investors Service, "Rating Methodology: Regulated Electric and Gas Utilities," December 23, 2013, p. 19.

1   size. Thus, even if one accepts the study produced by Wang that utility betas do not vary

2   by size (which is contradicted by Annin's study), Wang's study is not relevant to my size

3   adjustment which is based on the fact that the CAPM *understatement* is greater for small

4   utilities.

5   Mr. Parcell's second claim of evidence is that gas and water utilities have lower

6   average allowed rates of return than electric utilities and, because electric utilities tend to

7   be much larger than gas or water utilities, he believes that smaller utilities do not have a

8   higher cost of capital. The problem with his claim is that his evidence is not a comparison

9   of large v. small utilities within the same industry. Instead, his evidence is a comparison

10   of electric v. gas and water and may primarily reflect differences in risk between different

11   industries. In contrast, my testimony is based on the fact that a gas utility that is much

12   smaller than any of the gas proxy companies within the same industry has greater risks, as

13   described by Moody's.

14   Finally, in Exhibits DCP-16 and DCP-17 he purports to show that very large

15   utilities seem to have similar safety ranks and bond ratings. However, his risk measures

16   are all heavily influenced by capital structure, which he does not consider, and all of the

17   companies in those exhibits are many times larger (and most are at least an order of

18   magnitude larger) than Cascade's Washington gas distribution operations, and generally

19   serve one or more sizeable metropolitan areas with the type of economic diversity that

20   Moody's discusses above. Thus, Mr. Parcell's exhibits exclude small utilities and do not

21   address the risks faced by utilities with a size and characteristics that are similar to

22   Cascade's Washington natural gas operations.

1   Mr. Parcell's objections to a small size adjustment are not supported by his

2   purported evidence. As discussed in my Direct Testimony, the small size of Cascade's

3   Washington gas distribution operations relative to the proxy group companies supports an

4   adjustment to the allowed return on common equity of at least 100 basis points.[18]

5   B.   Business and Financial Risk

6   **Q.   On pages 18-21 of his testimony, Mr. Parcell contends that Cascade has regulatory**

7   **mechanisms that reduce the business risk of the Company, thereby supporting an**

8   **authorized return on common equity no greater than the proxy group average. What**

9   **is your response?**

10 A.   While I agree with Mr. Parcell that Cascade has been allowed to implement certain cost

11   recovery and revenue stabilization mechanisms in Washington such as a purchased gas

12   adjustment mechanism and a revenue decoupling mechanism, the fact is that those types

13   of mechanisms are common among regulated utilities and investors have come to expect

14   those risk-reducing mechanisms. As shown in Exhibit No. ___(JSG-2), Schedule 9, the

15   majority of operating utilities held by the proxy group companies have cost recovery and

16   revenue stabilization mechanisms similar to Cascade's. Relative to the proxy group

17   companies, Cascade has comparable risk-mitigating mechanisms. Further, as discussed in

18   my Direct Testimony, the regulatory environment in Washington is considered somewhat

19   more restrictive from an investment perspective due, in part, to authorized equity returns

20   below prevailing industry averages.[19]

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[18] Direct Testimony of J. Stephen Gaske, at 26.
[19] Direct Testimony of J. Stephen Gaske, at 27-28.

1   **V. EFFECT OF CAPITAL MARKET CONDITIONS**

2 **Q.** **On pages 7-15 of his testimony, Mr. Parcell provides general information on economic**

3   **conditions and interest rates. Do you have any comments on this section?**

4 A.   Mr. Parcell attempts to support his ROE recommendation by citing the low current level

5   of inflation and the low interest rate environment that has prevailed since the Federal

6   Reserve intervened in financial markets following the Great Recession. While I agree with

7   Mr. Parcell that the inflation rate has been low in the past few years and interest rates on

8   government and utility bonds declined to historically low levels, I disagree with Mr.

9   Parcell's conclusion that the cost of capital environment for regulated utilities will remain

10   low on a going-forward basis. As discussed in my Direct Testimony, artificially low

11   interest rates have suppressed the dividend yield component of the DCF model, so that it

12   understates investors' return requirements under current market conditions.[20] Given

13   expectations for substantially higher long-term interest rates on both government and

14   corporate bonds, and given the sensitivity of utility stocks to changes in interest rates, it is

15   reasonable to expect that the cost of equity for regulated utilities on a forward-looking basis

16   will increase. In fact, as shown in Chart 2 above, the stock prices of my proxy group

17   companies have decreased significantly since December 1, 2017 as interest rates on

18   Treasury bonds have increased in response to the passage of tax reform legislation and to

19   the Federal Reserve's balance sheet unwinding, which reverses the Quantitative Easing

20   program that was implemented to push down long-term government bond yields.

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[20] *Ibid*, at 19-20.

1   For these reasons, the Commission should reject Mr. Parcell's proposal to set the allowed

2   rate of return for Cascade below that of most other gas utilities and significantly below the

3   return that Value Line expects the proxy companies to earn, as shown in Mr. Parcell's

4   Comparable Earnings analysis.

5 **Q.   At pages 45-48 of his testimony, Mr. Parcell contends that the results of the DCF model**

6 **are not being distorted by market conditions. Do you agree?**

7 A.   No, I do not. While most investors look to maximize their return for a given level of risk,

8   the extraordinary intervention of central banks in the markets in recent years is intended

9   stimulate the economy by *purposely investing to earn returns that are inadequate for the*

10   *type of normal "rational" investors that are assumed in the DCF theory*. This has created

11   anomalous conditions in the financial markets and partially undermined the most basic

12   assumption of finance theory. These anomalous conditions have had a significant effect

13   on gas utility stocks, and equity analysts have noted that gas distributors are experiencing

14   high valuations as compared to historical levels. For example, Value Line recently

15   commented that utility stocks are "expensively priced," and that:

16   "[Interest r]ates remain very low, by historical standards. Returns on cash
17   are negligible, so some investors are 'reaching for yield' by buying stocks
18   with good dividend yields, such as electric utilities. This has made the
19   valuations of many of these equities higher than normal."[21]

20   This same observation applies to gas distribution utility stocks. Value Line

21   observes that "[t]oday, it is not unusual to see a utility stock trading at a market price-

22   earnings multiple," and "it is not unusual to see a utility quotation that is within our [Value

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[21] Value Line Investment Survey, Electric Utility (East) Industry, August 18, 2017, at 138.

1   Line] 2020-2022 Target Price Range for that issue."[22] These data suggest that utility stock

2   prices are distorted, and that the dividend yield for utilities in the DCF model may be

3   artificially depressed by short-term investors who are "reaching for yield" and are less

4   interested in long-term investment.

5   An article in the December 11, 2017 edition of Barron's also discussed this condition:

6   "… what really is the biggest bubble in the world. That would be the
7   trillions of dollars worth of bonds with negative yields, contends David
8   Rolley, co-team leader of the global fixed-income and emerging debt group
9   at Loomis Sayles.

10   According to JPMorgan's latest tally, there is some $10.1 trillion in global
11   government bonds with yields below zero … That is down from the peak of
12              $12.7 trillion reached in July 2016 in the wake of the market panic following
13   the Brexit vote.

14   Of course, this isn't the product of wild-eyed speculators' relentless chase
15   of a market's accelerating assent, but the result of sober central bankers'
16   monetary policies. The European Central Bank has been buying 60 billion
17   euros' ($70.6 billion) of bonds per month. The Bank of Japan, meanwhile,
18   is acquiring Japanese government bonds in sufficient quantity to keep its
19   10-year yield pegged near zero percent.

                                                    ***
20   **The real effect of the negative bond yields has been to exert a downward**
21   **gravitational pull on interest rates everywhere, even in places where**
22   **they never fell below zero, as in the U.S. dollar market. Clearly,**
23   **however, a security that guarantees a loss (if held to maturity) can't be**
24   **rationally priced**."[23]

25   An underlying assumption of the DCF model is that investors are rational, profit-

26   maximizing (or value-maximizing) players in a competitive market where no single investor

27   has the power to affect the results. However, in recent years central banks have exercised

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[22] *Ibid.*

[23] Forsyth, Randall W., "2018's Greatest Risk", *Barron's*, December 11, 2017, pp. 7-8, emphasis added.

1   market power by printing money and "investing" at expected returns that are insufficient for

2   rational profit-maximizing investors. That disconnect occurs because central banks are

3   motivated to "stimulate" the economy and are explicitly <u>not</u> motivated to earn a reasonable

4   return on their investment. This market distortion extends into utility stocks where investors

5   are investing for the short-term dividend yield as an alternative to government bonds. That is

6   why, as discussed in my Direct Testimony, the FERC concluded that Federal Reserve actions

7   may have artificially reduced current dividend yields for utilities and caused the DCF model

8   to understate the cost of common equity capital for utilities at this time. [24]

9   **Q.   According to Mr. Parcell, FERC Opinion No. 531 has been overturned by a Federal**

10   **Appeals Court and remanded to the FERC.[25] Please comment.**

11   A.   Mr. Parcell is correct that FERC Opinion No. 531 has been remanded to the FERC.

12   However, the Federal Appeals Court's remand order has nothing to do with whether the

13   results of the DCF model are being distorted by anomalous conditions in capital markets.

14   Opinion No. 531 was remanded to the FERC for two reasons: 1) it was determined that

15   the FERC had not shown that the current authorized ROE for the New England

16   Transmission Owners was unreasonable; and 2) the Appeals Court found that the FERC

17   did not provide sufficient support for the precise ROE (10.57 percent) that the FERC

18   determined. However, the Appeals Court did not disagree with the FERC's determination

19   that the DCF model produced distorted results, nor did the Court disagree with the FERC's

20   decision to place the authorized return above the mid-point of the DCF results because of

21   those distortions. [26]

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[24] Opinion No. 531, 147 FERC ¶ 61,234 (2014); aff'd in Opinion No. 531-B, 150 FERC ¶ 61,165 (March 3, 2015); and Opinion No. 551, 156 FERC, ¶ 61,234 (Sept. 28, 2016), para. 120-122.
[25] Testimony of David C. Parcell, at 46.
[26] *Emera Maine v. Fed. Energy Regulatory Comm'n*, 854 F.3d 9 (D.C. Cir. 2017).

1 **Q.** **Please discuss how conditions in capital markets have affected the results of the DCF**

2 **model for utilities.**

3 A. The monetary policy of recent years has created artificial conditions in the secondary

4 market for utility common stocks such that the DCF model may not accurately reflect the

5 cost of capital required for investments in utility assets. For example, some of the abnormal

6 conditions in the financial markets include:

7 • An exceptionally low federal funds interest rate that represents a *negative* real
8 interest rate. For example, the federal funds rate has been held below 1.25
9 percent at a time when the GDP implicit price deflator has been increasing at
10 more than 1.6 percent per year.

11 • Federal Reserve purchases of Treasury Bonds and debts of other federal
12 entities that increased Federal Reserve holdings of securities from $0.75
13 trillion at the end of 2007, to $4.5 trillion at the end of 2016. These purchases,
14 along with the low federal funds rate, helped drive long-term Treasury Bond
15 interest rates down below 3.0 percent.

16 • Blue Chip Financial Forecasts projects that the Treasury Bond interest rate
17 will increase by more than 30 percent (from 3.10 percent to 4.10 percent) in
18 the next few years as the Federal Reserve ceases its purchases and attempts to
19 attract private investors to buy those bonds.

20 • Proxy company P/E ratios, which traditionally have been below the S&P 500
21 index average, now exceed the S&P 500 index average, as shown in Chart 3:

22

1 **Chart 3: P/E ratios for Proxy Group and S&P 500 Index**[27]
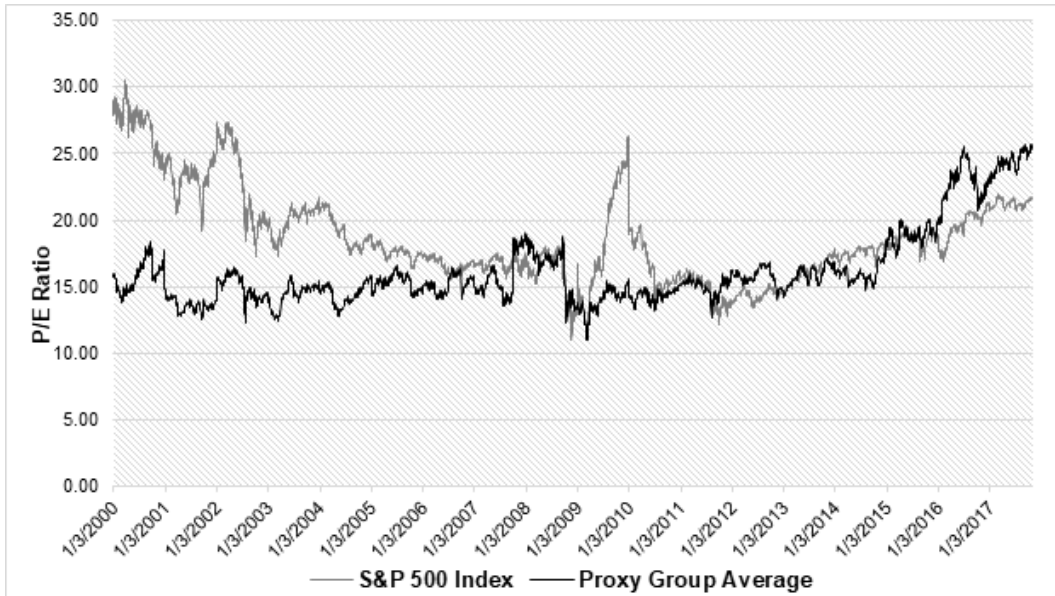
2

3   Proxy company dividend yields have declined precipitously during the time of the Federal

4   Reserve quantitative easing, while dividend yields of the S&P 500 companies have remained

5   relatively constant. As shown in Chart 4, the average dividend yield for my proxy group

6   companies declined from 4.50 percent in 2009 to 2.67 percent in 2017. The average dividend

7   yield for the companies in Mr. Parcell's proxy group was 2.80 percent.

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[27] Source: Bloomberg Professional.

1 **Chart 4: Dividend Yields of Proxy Group and S&P 500 Index[28]**
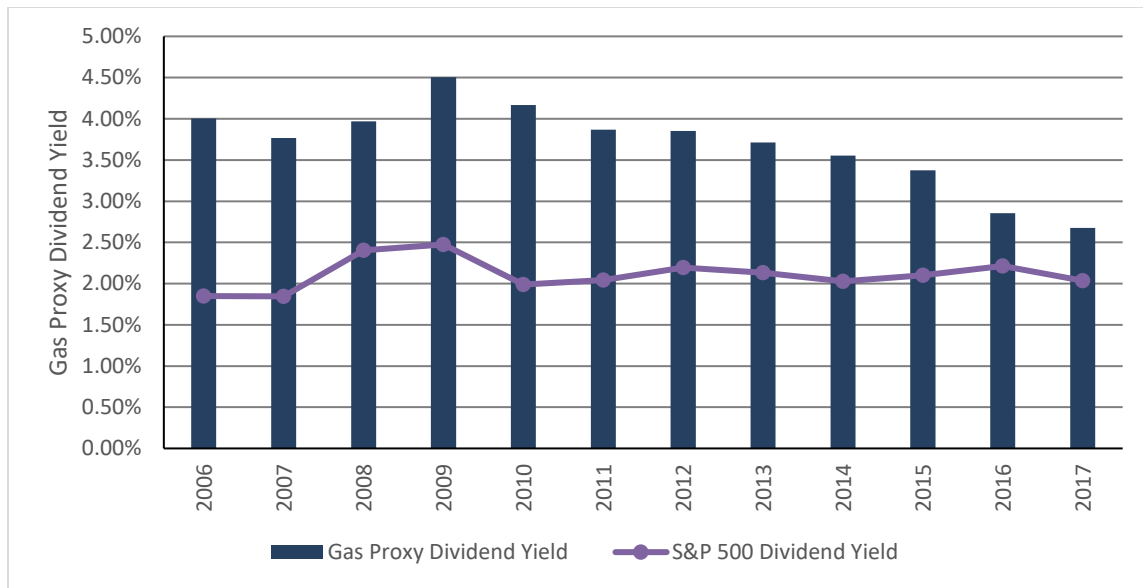
2

3

4   This suggests that Federal Reserve policies have changed the way that investors value

5 utility stocks relative to other stocks. Consequently, the results of the DCF model are

6 understated because the dividend yields of the proxy group companies have been artificially

7 suppressed due to the low interest rate environment that was created by the Federal Reserve's

8 quantitative easing program.

9   In general, normal market conditions would have: a positive real interest rate, utility

10 P/E ratios less than the market average, federal debt purchased by real investors instead of

11 large amounts purchased and held by the Federal Reserve, and projected interest rates

12 reasonably close to current rates. As the FERC noted in Opinion No. 551:

13   *"… evidence in the record regarding historically low interest rates and*
14   *Treasury bond yields as well as the Federal Reserve's persistent intervention*
15   *in markets for debt securities are sufficient to find that capital market*
16   *conditions are anomalous."[29]*

17

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[28] Source: Bloomberg Professional.
[29] 156 FERC, ¶ 61,234 (Sept. 28, 2016), para. 124.

1   Capital markets are always affected by monetary policy, but normal monetary policy

2   is intended to accommodate the underlying growth rate in the economy. Under the abnormal

3   policy of recent years, a very large portion of the "investment" in the economy has been the

4   Federal Reserve essentially printing money to purchase large amounts of bonds at yields that

5   are too low to attract real investors. This has had a ripple effect in the market for all assets,

6   including utility stocks.

7   **VI. DISCOUNTED CASH FLOW ANALYSIS**

8   **Q.   Please comment on the results of Mr. Parcell's Constant Growth DCF analysis.**

9   A.   As shown in Exhibit DCP-9, page 4, Mr. Parcell's Constant Growth DCF analysis produces

10   mean and median results of 7.5 percent and 7.8 percent, respectively, within a wide range

11   from 5.6 to 9.3 percent. From within that range, Mr. Parcell selects his high DCF results

12   of 9.1 and 9.3 percent, which are based on five-year historic growth rates for earnings,

13   dividends, and book value per share. Mr. Parcell's high Constant Growth DCF results form

14   the low end of his recommended range of 9.2 to 9.5 percent.

15   As I discuss elsewhere, the allowed rate of return in this proceeding should be set

16   well above the average or median for the proxy companies for two reasons. First,

17   Cascade's Washington gas distribution operations have risks that are above the average for

18   the proxy companies and, therefore, should have an allowed rate of return above the

19   average for the proxy companies. Second, Mr. Parcell does not include the required

20   flotation cost adjustment. Third, recent anomalous conditions in financial markets have

21   tended to depress utility dividend yields such that the DCF model may understate the cost

1   of common equity required for long-term investments in regulated utility assets. My risk

2   premium and CAPM analyses tend to support that opinion.

3 **Q.   What growth rates does Mr. Parcell use in his Constant Growth DCF analysis?**

4 A.   Mr. Parcell uses growth rates from five sources:

5   1) historical earnings retention growth for years 2012-2016 (five-year average);

6   2) five-year average historic growth in earnings per share ("EPS"), dividends per
7   share ("DPS") and book value per share ("BVPS");

8   3) projections of earnings retention growth for 2018, and 2020-2022 (Value Line);

9   4) projections of EPS, DPS, and BVPS (Value Line) for years 2014-2016 to 2020-
10   2022; and

11   5) five-year projections of EPS growth (per First Call).

12 **Q.   Do you agree with Mr. Parcell that historical measures of growth are relevant to a**

13   **forward-looking evaluation of the Company's authorized return on common equity?**

14 A.   No, I do not. Mr. Parcell states that "investors do not always use one single indicator of

15   growth" and that "it is important to recognize that individual investors have different

16   expectations and consider alternative indicators in deriving their expectations."[30] On that

17   basis, he includes both historical and forecast growth rates. I disagree with the use of

18   historical growth rates for two reasons. First, the Constant Growth DCF model is a

19   forward-looking model that evaluates investors' required returns based on future cash

20   flows. As such, the appropriate measure of growth is investors' expectations, not historical

21   results. Historical growth rates are not relevant because past growth may not reflect future

22   growth potential.   Second, securities' analysts forecasted growth rates incorporate

23   historical performance to the extent the analysts believe it is likely to continue. Additional

---

[30] Testimony of David C. Parcell, at 30.

1   consideration of historical growth rates provides no meaningful incremental information

2   regarding the proxy companies' future growth potential and places unwarranted weight on

3   historical events.

4   **Q.   Are analysts' earnings growth rates generally a superior measure of long-term investor**

5   **expectations?**

6   A.   Yes. Although analysts' longest-term growth forecasts are typically expressed as five-year

7   forecasts, these forecasts generally represent growth rate expectations for a longer period

8   of time than the five-years expressed in the forecast. There is a large amount of literature

9   that suggests analysts' growth rate forecasts are a superior measure of the long-term growth

10   rate expectations that are reflected in stock prices. For example, Vander Weide and

11   Carleton found that analysts' earnings growth rate forecasts have a very highly significant

12   relationship with stock prices.[31] This indicates that the analysts' earnings growth estimates

13   are an accurate estimator of long-term growth rate expectations implicit in stock prices,

14   even though the analysts' earnings growth estimates are putatively five-year estimates.

15   Similarly, Marston, Harris and Crawford examined publicly-available data from 1982-

16   1985 and found that plausible measures of risk are more closely related to expected returns

17   derived from a Constant Growth DCF model than to those derived from multi-stage growth

18   models.[32]

19 **Q.   Mr. Parcell also includes both historical and projected retention growth rates in his**

20 **Constant Growth DCF analysis. Do you have any comments on those growth rates?**

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[31] Vander Weide, J.H. and Carleton, W.T., "Investor Growth Expectations: Analysts vs. History," *The Journal of Portfolio Management*, Spring 1988, pp. 78-82.
[32] F. Marston, R. Harris, and P. Crawford, "Risk and Return in Equity Markets: Evidence Using Financial Analysts' Forecasts," in *Handbook of Security Analysts' Forecasting and Asset Allocation*, J. Guerard and M. Gultekin (eds.), Greenwich, CT, JAI Press; as described in R. Harris and F. Marston, "Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts," *Financial Management*, Summer 1992, p. 64.

1   A.   Mr. Parcell calculates retention growth rates for his proxy group companies based on data

2   from Value Line. However, he only includes the portion of retention growth that is derived

3   by multiplying the retention rate (B) by the rate of return on common equity (R). As

4   discussed in my Direct Testimony, it is also necessary to consider the portion of future

5   growth attributable to the issuance of additional shares of common stock, which is derived

6   by multiplying the annual percentage increase in common equity from share issuances (S)

7   by the portion of the stock issuance that increases the book value of existing shareholders

8   (V).[33] Mr. Parcell's failure to include the S*V portion in his calculation of retention

9   growth, his projected retention growth rate as shown on Exhibit DCP-9, page 2, is 4.0

10   percent compared with my projected sustainable growth rate, also using Value Line data,

11   of 5.38 percent. Consequently, Mr. Parcell's Constant Growth DCF analysis based on

12   retention growth rates understates investors' return requirements.

13 **Q.   Does Mr. Parcell's Constant Growth DCF analysis take into consideration recent**

14   **changes in capital market conditions?**

15 A.   No, Mr. Parcell's Constant Growth DCF analysis is based on stock prices and dividend

16   yields for the three-month period from November 2017 through January 2018. As shown

17   in Chart 2, stock prices for the proxy group have declined substantially since December 1,

18   2017, as yields on 30-year Treasury bonds have increased due to tighter monetary policy,

19   the implications of tax reform, and concerns about higher inflation. I have updated Mr.

20   Parcell's Constant Growth DCF analysis to cover the two-month period of January and

21   February 2018. The average dividend yield for the proxy companies has increased 32 basis

22   points, from 2.80 percent to 3.12 percent, since the time of Mr. Parcell's study. In addition,

---

[33] Direct Testimony of J. Stephen Gaske, at 17.

1   I have relied on updated projected earnings per share growth rates from Value Line and

2   First Call, as well as an update of Mr. Parcell's prospective retention growth rates. I did

3   not utilize his less relevant historic growth or Value Line DPS and BVPS growth rates.

4   Based on these modifications, as shown in Exhibit___(JSG-4), Schedule 2, the results of

5   Mr. Parcell's Constant Growth DCF analysis increase to 9.74 percent (mean) and 9.40

6   percent (median), and the range of these results is a far more plausible 8.1 – 12.6 percent.

7   If one relies only on the analysts' projected earnings per share growth rates, Schedule 3

8   indicates an average DCF return of 10.54 percent, with a median of 10.15 percent. These

9   DCF results would be even higher if I also included a flotation cost adjustment. The

10   combination of changes since the time period covered in his analysis, and use of more

11   realistic forward-looking growth rates, makes a large difference in the results.

12 **Q.   On page 44 of his testimony, Mr. Parcell characterizes your adjustment to the**

13   **dividend yield for future growth as "unorthodox." What is your response?**

14 A.   The Constant Growth DCF model attempts to reconcile two average time periods: (i) the

15   time until the next quarterly dividend payment, and (ii) the time until the next annual

16   increase in the dividend rate. Because the average time until the next annual dividend

17   increase should always be a half year away, the next dividend increase is assumed to be six

18   months away. On the other hand, because the average timing until the next quarterly

19   dividend payment is one-half quarter away, the model takes an average of the results of

20   receiving the next dividend today, and receiving the next dividend in one quarter to adjust

21   for the average timing of the payment. The result approximates the adjustment required to

22   meet the expectations associated with the two time periods. If no attempt is made to adjust

23   for the half quarter until the next dividend is to be received, a simpler model would simply

1   assume that the next dividend is one quarter away and adopt a dividend adjustment of (1 +

2   .75g).

3   For the assumption that the next dividend is received today, and the next dividend

4   increase is a half year away, the quarterly DCF model would result in the following market

5   required rate of return:

6      $$\frac{D_0}{4P_0} [(1+k) + (1+k)^{0.75} + (1+g)(1+k)^{0.5} + (1+g)(1+k)^{0.25}] = \text{k-mkt}$$

8   However, for ratemaking we would subtract the portion of the annual return that

9   can be earned by reinvesting the intra-year dividends. This dividend reinvestment income

10   is:

11     $$\frac{D_0}{4P_0} [[(1+k) - 1] + [(1+k)^{0.75} - 1] + (1+g)[(1+k)^{0.5} - 1] + (1+g)[(1+k)^{0.25} - 1]] = \text{k-div}$$

13   The appropriate ratemaking rate of return, k-reg, is k-mkt minus k-div. Thus, my

14   adjustment to the dividend yield of 0.625g is appropriate and consistent with the Constant

15   Growth DCF model.

16   **VII.   CAPITAL ASSET PRICING MODEL ANALYSIS**

17 **Q. Please describe your disagreement with Mr. Parcell's application of the Capital Asset**

18   **Pricing Model and the relevance of his estimated cost of common equity capital for**

19   **Cascade's Washington gas distribution operations using that model.**

20 A. I have several areas of disagreement concerning the Capital Asset Pricing Model

21   ("CAPM"). On a conceptual level, the CAPM is difficult to apply because there is no

22   reliable measure of Beta. Nevertheless, some analysts use the CAPM as a method for

23   estimating the cost of common equity, and I presented a CAPM analysis in my Direct

1		Testimony which uses the same method that FERC adopted in several recent decisions.
2		My primary disagreements with Mr. Parcell's CAPM analysis are his exclusive use of
3		current Treasury bond yields as the risk-free rate and his development of the market risk
4		premium.
5	**Q.**	**Please explain your concern with the risk-free rate that Mr. Parcell has used.**
6	A.	Mr. Parcell has used a current three-month average of the 20-year Treasury bond yield for
7		his risk-free rate in conjunction with a long-term historical average MRP. My primary
8		concern is that when interest rates are anomalously low, as they are today, it is important
9		to either use a normalized interest rate that is more characteristic of the long-term average,
10		or a current interest rate in conjunction with a forward-looking MRP that reflects the
11		current interest rate environment and the inverse relationship of the market risk premium
12		to interest rates.

The inputs and assumptions used in the ROE analysis should reflect the forward-looking cost of equity. As discussed previously in my Rebuttal Testimony, investors are expecting higher interest rates over the next five years. This is a very important consideration for equity investors as they assess their return requirements. Mr. Parcell makes no attempt to normalize the current anomalously low interest rates and yet combines them with the long-term average market risk premium, which is based on much higher interest rates. Mr. Parcell's risk-free rate of 2.64 percent does not adequately take into consideration the effect of the market's expectation for higher interest rates on the cost of equity for Cascade. That is one reason why Mr. Parcell's CAPM results are significantly understated.

1	Q.	On page 52 of his testimony, Mr. Parcell states that it is "improper to use prospective
		interest rates because they are not measurable and not achievable," and that "current
		levels of interest rates reflect all current information (i.e., the efficient market
		hypothesis) and should be used as the risk-free rate in the CAPM. What is your
		response?

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2 **interest rates because they are not measurable and not achievable," and that "current**

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4 **hypothesis) and should be used as the risk-free rate in the CAPM. What is your**

5 **response?**

6 A.   I disagree that current interest rates reflect investors' collective assessment of all capital

7   market conditions. As stated previously in my Rebuttal Testimony, current yields on U.S.

8   Treasury securities are being driven by the Federal Reserve's monetary policy, not by

9   typical bond market participants. Today's low interest rates are not reliable indicators of

10   investment risk or the cost of capital in equity markets. It is common practice for analysts

11   to use normalized interest rates, as I have done by using a forecast bond yield, particularly

12   in anomalous market conditions, because forecasted bond yields provide a more reliable

13   indication of investment risk and the cost of capital under those conditions.

14 **Q. What is the basis for Mr. Parcell's market risk premium?**

15 A.   Mr. Parcell considered several alternate measures of the market risk premium. On Exhibit

16   DCP-10, Mr. Parcell calculates the historical ROE of the S&P 500 for each year from 1978

17   to 2016 by dividing earnings per share by average book value per share for each year. He

18   arrives at the annual risk premium by subtracting the total return on the 20-year Treasury

19   bond. The average of all the yearly risk premiums is 7.00 percent. As an alternative

20   measure, he considers total returns for the S&P 500, less the total return of the 20-year

21   Treasury as tabulated by Duff & Phelps, using both arithmetic and geometric averages for

22   the period from 1926-2016. That analysis results in risk premiums of 6.0 percent

23   (arithmetic) and 4.5 percent (geometric). Mr. Parcell then averages those three risk

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19   bond. The average of all the yearly risk premiums is 7.00 percent. As an alternative

20   measure, he considers total returns for the S&P 500, less the total return of the 20-year

21   Treasury as tabulated by Duff & Phelps, using both arithmetic and geometric averages for

22   the period from 1926-2016. That analysis results in risk premiums of 6.0 percent

23   (arithmetic) and 4.5 percent (geometric). Mr. Parcell then averages those three risk

1   premium estimates to derive his market risk premium of 5.80 percent.

2 **Q.**   **How does Mr. Parcell's market risk premium compare to the one used in your CAPM**

3   **analysis?**

4 A.   The market risk premium in my CAPM analysis is based on a Market DCF analysis of the

5   S&P 500 companies less the near-term projected yield on the 30-year Treasury bond. As

6   shown in Exhibit___(JSG-2), Schedule 8 of my Direct Testimony, the average market

7   required rate of return for the S&P 500 of 12.54 percent, which implies a current market risk

8   premium of 9.02 percent.

9   Given that large company stocks have historically returned 12.0 percent, and that my

10   Market DCF analysis of the S&P 500 indicates a required return of 12.54 percent at this time,

11   Mr. Parcell's implied required market return of 8.44 percent[34] is significantly understated.

12   Furthermore, given the low government bond yields, coupled with the strong inverse

13   relationship between required risk premiums and bond yields, the forward-looking market

14   risk premium should be well above the historical average of 7.0 percent reported by Duff &

15   Phelps.[35] Thus, Mr. Parcell's market risk premium of 5.80 percent clearly is not reasonable.

16 **Q.**   **Does Mr. Parcell's CAPM analysis produce plausible results?**

17 A.   No. Mr. Parcell's CAPM estimate of 6.7 percent and 6.9 percent are far lower than any

18   ROE awards for a gas distribution company in at least the last 30 years.[36] At a time when

19   average Baa-rated utility bond yields for the month of February 2018 were approximately

20   4.42 percent, an estimate that the required return on common equity is as low as 6.7 percent

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[34] Risk free rate of 2.64 percent plus market risk premium of 5.80 percent equals market return of 8.44 percent.
[35] Duff & Phelps 2017 Valuation Handbook, U.S. Guide to Cost of Capital, Exhibit 2.3, at 2-4. The total return on large company stocks of 12.0 percent less the income-only return on long-term government bonds of 5.0 percent results in a market risk premium of 7.0 percent.
[36] Source: Regulatory Research Associates.

1		is not plausible.

2	**Q.**	**Does Mr. Parcell place any weight on his CAPM results in arriving at his recommended**
3		**return on common equity?**

4	A.	No. Mr. Parcell states that his ROE recommendation does not directly incorporate his
5		CAPM results because he considers them to be somewhat low at this time relative to the
6		DCF and CE results.[37] Later in his testimony, however, Mr. Parcell states that "the CAPM
7		results should be considered as one factor in determining the cost of equity for Cascade,"
8		based on his view that low interest rates can no longer be considered by investors to be
9		temporary.[38] Nevertheless, Mr. Parcell appears to recognize that his CAPM results do not
10		produce a reasonable return estimate for Cascade's Washington natural gas distribution
11		operations, and he does not use his CAPM results to establish his range of results or his
12		ROE recommendation.

13	**Q.**	**Did you provide a CAPM result in your Direct Testimony?**

14	A.	Yes. As shown in Exhibit_(JSG-2), Schedule 8, of my Direct Testimony, if one were to
15		use the CAPM as a benchmark of a reasonable return, the most reasonable current estimate
16		would be 11.26 percent for the typical proxy company.[39] This estimate, which includes
17		the Duff & Phelps CAPM size adjustments recommended for each proxy company, is
18		higher than the DCF estimates and far more plausible than Mr. Parcell's much lower
19		CAPM estimates that calculate the expected market risk premium based on unadjusted

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[37] See footnote 4 of Mr. Parcell's Testimony on page 4.

[38] Testimony of David C. Parcell, at 41.

[39] My CAPM calculation method is identical to the one adopted by the U.S. Federal Energy Regulatory Commission last year. *Martha Coakley, et al. v. Bangor Hydro-Electric Company, et al.*, Opinion No. 531, 147 FERC ¶ 61,234 (2014); aff'd in Opinion No. 531-B, 150 FERC ¶ 61,165 (March 3, 2015). Note that FERC used the CAPM only as a benchmark but set the allowed rate of return above the median indicated by a DCF analysis of proxy companies because of the current abnormal financial market conditions.

1		historical data. Even without the recommended CAPM size adjustments, the median
2		CAPM return for the proxy companies is 10.13 percent. Thus, if one were to use the CAPM
3		as a benchmark, a reasonably calculated CAPM analysis fully supports my recommended
4		ROE of 9.9 percent in this proceeding.

5   **VIII.**   **COMPARABLE EARNINGS ANALYSIS**

6   **Q.**   **Please describe with Mr. Parcell's Comparable Earnings analysis.**

7   A.   Mr. Parcell's first Comparable Earnings analysis is based on "realized returns" for his gas

8   distribution proxy group companies from 2002-2017, based on data from Value Line. As

9   shown on Exhibit DCP-12, page 1, the mean and median earned returns on common equity

10   for the proxy group companies from 2009-2017 were 10.0 percent and 9.60 percent,

11   respectively. Mr. Parcell's second Comparable Earnings analysis considers projected

12   "realized returns" for his proxy group companies in 2018 and 2020-2022. Exhibit DCP-

13   12, page 1, shows that the mean and median projected earned returns on common equity

14   for the 2020-2022 period are 10.5 percent and 10.0 percent, respectively, while the

15   projected earned returns in 2018 are 9.60 percent (mean) and 9.5 percent (median). My

16   concern is that Mr. Parcell concludes that his Comparable Earnings analyses produce an

17   ROE estimate of 9.50 percent, which he then uses to set the upper end of his range of

18   results. However, as shown on Exhibit DCP-12, Mr. Parcell's Comparable Earnings

19   analysis produces mean and median results from 9.50 percent to 10.5 percent. Thus, his

20   Comparable Earnings analysis supports my ROE recommendation of 9.90 percent for

21   Cascade's Washington natural gas distribution operations, and it does not support his

22   recommended return of 9.35 percent.

IX. FLOTATION COST ADJUSTMENT

Q. **On pages 44-45 of his testimony, Mr. Parcell opposes your flotation cost adjustment. What is your response?**

A.   Mr. Parcell asserts that the flotation cost adjustment for Cascade's Washington gas distribution operations is not justified because it has not been demonstrated that MDU Resources plans to issue common equity for the benefit of Cascade during the test year. In addition, Mr. Parcell contends that the flotation cost adjustment should not be applied to the entire equity return because that includes retained earnings which do not incur flotation costs.

With regard to Mr. Parcell's first concern, the primary purpose of the flotation cost adjustment is to be consistent with the capital attraction standard which requires that the return be sufficient to enable the company to raise capital on reasonable terms on a forward-looking basis. In this regard, it is similar to an insurance premium. A company is not required to show that it has had accidents or catastrophes in the past in order to include an insurance premium in its cost of service. Instead, the point of the insurance premium is to ensure that the company can pay for *future* costs that may or may not ever materialize. Mr. Parcell's suggestion that flotation costs can only be recovered if there is evidence that equity will be issued during the test year misses the entire point of the capital attraction standard.

In response to his second concern, I disagree with Mr. Parcell that the flotation cost adjustment should not be applied to the entire equity return. Professor Myron Gordon, who is credited with developing the DCF model for estimating rate of return, has stated that a regulatory agency should set the allowed rate of return greater than the secondary market investor return requirement so as to allow the firm to issue stock at a price that will yield

1   net proceeds equal to book value. Professor Gordon advocates the following adjustment

2   for flotation costs:

3   *The agency need only estimate the proportion that the proceeds per share on*
4   *an issue bear to the price of the stock and adjust the allowed rate of return so*
5   *that the price per share is the indicated ratio of the book value per share. If*
6   *the proceeds on an issue are 91 percent of market price, the agency should*
7   *maintain market price at about 110 percent of book value.* [40]
8
9   In making this adjustment, the allowed rate of return will be equal to the return

10   required in the primary market for funds and should therefore meet the standard that the return

11   is sufficient to enable the utility to raise capital on reasonable terms.

12   In summary, the flotation cost adjustment required in setting a regulated rate of return

13   is explicitly designed to increase the stock price by an amount sufficient to allow the regulated

14   utility to issue common stock without diluting the value of the existing investment. Thus, the

15   flotation cost adjustment used to calculate the regulated rate does not treat the stock price as

16   a given, exogenous, factor. In addition, because a single allowed rate of return applies to all

17   of the regulated assets of a utility, and it is not different between new investments and existing

18   investments, the flotation cost adjustment needs to be applied to the entire rate of return.

19   **X. RISK PREMIUM ANALYSES**

20   **Q.   At pages 48-51 of his testimony, Mr. Parcell criticizes your risk premium approaches.**

21   **Are these valid criticisms?**

22   A.   No. I examined several risk premium approaches, but the one that should receive the most

23   weight is the natural gas distribution company risk premium approach. This approach uses

24   a regression analysis of historical data to establish a relationship between current bond

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[40] Myron J. Gordon, *The Cost of Capital to a Public Utility*, Michigan State University, 1974, pages 165-166.

1   yields and the required common equity risk premium for natural gas distribution utilities.

2   As shown on pages 21-22 of my Direct Testimony, this relationship is given by the

3   following equation:

4   0.08410 + (- 0.5560 x Bond Yield) = Risk Premium

5   Although the regression equation is derived from historical data, the crucial input

6   variable – the bond yield – is based on the current value. Thus, the risk premium calculated

7   using this equation is a good estimate of the "current" required risk premium. As shown on

8   Exhibit No. ___(JSG-2), Schedule 5, page 3, the R-square for this equation is 0.80, which

9   represents a high level of significance for this equation, and a much higher level of

10   significance than one typically finds when calculating Beta coefficients for a CAPM model.

11   Moreover, this equation has the distinct advantage that it applies specifically to regulated

12   natural gas distribution operations. For these reasons, the regression equation provides a good

13   indication that the current required return on common equity for gas distribution operations is

14   approximately 9.96 percent.

15 **Q.   On page 50 of Mr. Parcell's testimony, he criticizes your Risk Premium regression**

16   **analysis on the grounds that the highest risk premiums occurred from 2008-2017, a**

17   **period during which you say that interest rates were artificially low, and because it is**

18   **not proper to compare utility authorized returns in the 1970s and 1980s with the current**

19   **time. Please comment.**

20 A.   In response to Mr. Parcell's first criticism, the purpose of the Risk Premium regression

21   analysis based on authorized returns on equity for gas distribution companies and the

22   corresponding yield on 30-year Treasury bonds is to establish the relationship between these

23   two variables. Given the R-square for this equation of 0.80, it is appropriate to then use the

1		regression analysis to estimate the required ROE based on the Treasury bond yield. In
2		summary, my Risk Premium analysis is designed to estimate the authorized return on common
3		equity regardless of the level of interest rates during a given period. It is entirely reasonable
4		that the highest risk premiums occurred from 2008-2017, during a period of low interest rates,
5		since there is a well-established inverse relationship between the equity risk premium and the
6		level of Treasury bond yields.
7		With regard to Mr. Parcell's second concern with this analysis, as shown on
8		Exhibit___(JSG-2), Schedule 5, my Risk Premium analysis is based on gas rate case decisions
9		from 1992-2017. I have not included rate cases from the 1970s and 1980s, so Mr. Parcell's
10		concern in that regard is unfounded.
11	**Q.**	**Mr. Parcell suggests that your large and small company Risk Premium analyses are**
12		**flawed because you have not demonstrated that economic and financial conditions in**
13		**2018 are similar to those over the past 90 years, and because your risk premiums are**
14		**dominated by the influence of capital gains in many years.[41] How do you respond?**
15	A.	As discussed in my Direct Testimony, the purpose of my small company historical Risk
16		Premium analysis is to serve as a benchmark to assess the reasonableness of my DCF
17		analysis and to place in context the Company's requested ROE of 9.9 percent.[42] The small
18		company risk adder serves as a useful indicator of the cost of capital for Cascade's
19		Washington gas distribution operations because a gas distribution utility must offer
20		potential returns that allow it to compete for equity capital with other investments of
21		comparable risk. I indicated in my Direct Testimony that gas distribution companies

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[41] Testimony of David C. Parcell, 49.
[42] Direct Testimony of J. Stephen Gaske, at 20-21.

1		generally have lower risks than the average of all small publicly-traded companies.
2		However, the significant average risk premiums earned by small companies are
3		informative and provide some relevant context for the authorized return for Cascade's
4		Washington gas distribution operations. Therefore, I believe this information is relevant
5		for purposes of demonstrating the reasonableness of my recommended rate of return. I
6		have not used my small company Risk Premium analysis to establish the recommended
7		cost of common equity capital for the Company, but only as a general benchmark to
8		corroborate the reasonableness of my DCF results and my recommendation.

9   **XI. MARKET DCF ANALYSIS**

10   **Q.**   **On page 51 of his testimony, Mr. Parcell contends that the return estimate produced by**

11   **your Market DCF analysis of the S&P 500 companies is not relevant because the S&P**

12   **500 group has a higher level of risk than the natural gas utility industry. What is your**

13   **response?**

14   A.   As explained in my Direct Testimony, the purpose of my Market DCF analysis of the S&P

15   500 is to demonstrate that the rate of return I am proposing in this proceeding is low relative

16   to that required by investors who invest in the S&P 500.[43] My Market DCF rate of return

17   estimate indicated by analysts' growth rate projections for the S&P 500 is 12.54 percent,

18   which is very close to the 12.0 percent long-term average return earned by large-company

19   common stocks during the period 1926-2016. Thus, a current Market DCF rate of return

20   estimate that is virtually identical to the average return achieved during the past 90 years

21   is clearly sustainable in the long run. Like my Risk Premium analysis, the purpose of my

22   Market DCF analysis is to serve as a benchmark to assess the reasonableness of my DCF

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[43] Direct Testimony of J. Stephen Gaske, at 22.

1   analysis, to provide context for my recommended ROE of 9.9 percent, and to estimate a

2   current market risk premium for my CAPM analysis.

3   As noted earlier, analysts' earnings growth rate forecasts are a superior measure of the

4   long-term growth rate expectations that are reflected in stock prices. My approach to

5   conducting a Market DCF analysis is virtually identical to one adopted by the FERC in a

6   recent order. In response to arguments similar to those proffered by Mr. Parcell in this

7   proceeding, the FERC concluded:

8   We are also unpersuaded that the growth rate projection in the NETOs'
9   CAPM study was skewed by the NETOs' reliance on analysts' projections
10   of non-utility companies' medium-term earnings growth, or that the study
11   failed to consider that those analysts' estimates reflect unsustainable short-
12   term stock repurchase programs and are not long-term projections. As
13   explained above, the NETOs based their growth rate input on data from
14   IBES, which the Commission has found to be a reliable source of such data.
15   Thus, the time periods used for the growth rate projections in the NETOs'
16   CAPM study are the time periods over which IBES forecasts earnings
17   growth. Petitioners' arguments against the time period on which the
18   NETOs' CAPM analysis is based are, in effect, arguments that IBES data
19   are insufficient in a CAPM study. [44]

20   Thus, the FERC did not agree with the argument that analysts' projections for the S&P

21   500 are unsustainable and not reliable for estimating the cost of capital for a broad-based

22   market index.

23   **XII.   CAPITAL STRUCTURE**

24   **Q.   On pages 21-27 of his testimony, Mr. Parcell discusses Cascade's proposed capital**

25   **structure and ultimately recommends a capital structure consisting of 47.31 percent**

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[44] 150 FERC ¶ 61,165, Docket Nos. EL11-66-002, Opinion No. 531-B, para. 112.

1   **common equity and 52.69 percent long-term debt. Please comment on the analysis Mr.**

2   **Parcell provided to support this recommendation.**

3   A.   Mr. Parcell opposes the Company's proposed capital structure comprised of 50 percent

4   common equity and 50 percent because he claims that this is a hypothetical capital structure

5   based on a "target" common equity ratio. According to Mr. Parcell, the average equity

6   ratio for his proxy group companies at the holding company level is 51.9 percent and the

7   median is 54.1 percent. In addition, the average authorized common equity ratio for gas

8   distribution companies from 2012 through 2017 has ranged from 49.88 to 51.13 percent.[45]

9   Thus, Mr. Parcell's own evidence demonstrates the reasonableness of Cascade's proposed

10   common equity ratio of 50 percent. The Company's proposed equity ratio is below the

11   average for the proxy group companies at the holding company level.

12   **XIII.   SUMMARY**

13   **Q.   What does your analysis of Mr. Parcell's cost of capital testimony and recommendation**

14   **indicate?**

15   A.   The 9.35 percent return on common equity recommended by Mr. Parcell is inadequate to

16   meet the tests of a reasonable rate of return. For example, his recommended return is below

17   the median allowed return in other natural gas distribution proceedings since January 2016

18   and well below the returns that Value Line forecasts that the proxy companies will earn in

19   the next few years. Mr. Parcell recommends an inadequate return primarily because he

20   does not recognize the fact that Cascade's Washington gas distribution operations are

21   riskier than the average proxy company group. In addition, Mr. Parcell places greater

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[45] Testimony of David C. Parcell, at 23.

Rebuttal Testimony of J. Stephen Gaske   Exhibit No. __(JSG-3T)
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1		weight on his DCF analysis than current conditions warrant. Market conditions created by
2		central bank interventions in the market suggest that these DCF results may be too low to
3		adequately reflect the cost of common equity that investors require to invest in gas utility
4		mains and other tangible assets required for needed growth and replacement of their
5		system.
6		In reviewing Mr. Parcell's cost of common equity analyses, I identified several flaws
7		that, when corrected, indicate that my proposed return on equity is reasonable. First, when
8		his DCF analysis is updated for more recent market data, and when only analysts' projected
9		earnings growth rates are used, the estimated DCF return increases to approximately 10.5
10		(mean) and 10.2 percent (median). Second, the core factor in Mr. Parcell's CAPM analysis
11		is based on average historical returns from 1926-2016. When a proper and reasonable current
12		market risk premium is used, my CAPM analysis indicates a size-adjusted median rate of
13		return of 11.3 percent for the proxy companies, and 10.1 percent without size adjustments.
14		Third, the Comparable Earnings analysis of Value Line projected earnings for the proxy
15		companies indicates that investors in gas distribution companies are expecting an average
16		return of 10.5 percent, with no company expected to earn less than 9.5 percent. That analysis
17		suggests that his ROE recommendation is inadequate to compete for capital. Thus, all of these
18		analyses support the reasonableness of my recommended rate of return on common equity of
19		9.90 percent. Considering the changes in the market for gas utility stocks since the Tax
20		Reform bill was passed, a return somewhat above 10 percent may now be required.

21 **Q. Does this conclude your Rebuttal Testimony?**

22 A. Yes.