BEFORE THE WASHINGTON

UTILITIES & TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

Complainant,

v.

CASCADE NATURAL GAS CO.,

Respondent.

DOCKET UG-240008

RESPONSE TESTIMONY OF MICHAEL P. GORMAN ON BEHALF OF THE WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL PUBLIC COUNSEL UNIT

EXHIBIT MPG-1T

September 25, 2024

RESPONSE TESTIMONY OF MICHAEL P. GORMAN

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I. INTRODUCTION AND SUMMARY

Q. Please state your name and business address.

A. Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q. By whom are you employed and in what capacity?

A. I am a consultant in the field of public utility regulation and a Managing Principal with the firm of Brubaker & Associates, Inc. (BAI), energy, economic and regulatory consultants.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the Public Counsel Unit of the Washington Attorney General's Office (Public Counsel).

Q. Please describe your professional qualifications.

A. This information is included in my Exhibit MPG-2.

Q. What exhibits are you sponsoring in this proceeding?

A. I am sponsoring the following exhibits:

- Exhibit MPG-2: Qualifications of Michael P. Gorman
- Exhibit MPG-3: Rate of Return
- Exhibit MPG-4: Valuation Metrics
- Exhibit MPG-5: Revenue Impact
- Exhibit MPG-6: Proxy Group
- Exhibit MPG-7: Consensus Analysts' Growth Rates

- Exhibit MPG-8: Constant Growth DCF Model (Consensus Analysts' Growth Rates)
- Exhibit MPG-9: Payout Ratios
- Exhibit MPG-10: Sustainable Growth Rate
- Exhibit MPG-11: Constant Growth DCF Model (Sustainable Growth Rate)
- Exhibit MPG-12: Electricity Sales Are Linked to U.S. Economic Growth
- Exhibit MPG-13: Multi-Stage Growth DCF Model
- Exhibit MPG-14: Common Stock Market/Book Ratio
- Exhibit MPG-15: Equity Risk Premium - Treasury Bond
- Exhibit MPG-16: Equity Risk Premium - Utility Bond
- Exhibit MPG-17: Bond Yield Spreads
- Exhibit MPG-18: 13-Year Treasury and Utility Bond Yields
- Exhibit MPG-19: Betas
- Exhibit MPG-20: CAPM Return
- Exhibit MPG-21: Standard & Poor's Credit Metrics
- Exhibit MPG-22: Revised Bulkley Multi-Stage Growth DCF Model

Q. What is the purpose of your testimony?

A. My testimony will address Cascade Natural Gas Company's (Cascade or Company) overall rate of return including return on equity, embedded debt cost, and ratemaking capital structure.

Q. Does the fact that you did not address every issue raised in Cascade's testimony mean that you agree with Cascade's testimony on those issues?

A. No. It merely reflects that I chose not to address all those issues in my testimony. It should not be read as an endorsement of, or agreement with, Cascade's position on such issues.

Q. Please summarize your conclusions.

A. The evidence supports the Washington Utilities and Transportation Commission's (Commission) approval of an overall rate of return of no more than 7.16 percent as developed on Exhibit MPG-3. This overall rate of return reflects the following components:

1. A return on common equity within my recommended range of 8.9 percent to 9.9 percent, with a midpoint of 9.40 percent.

2. A ratemaking capital structure with a common equity ratio of 47.0 percent. The Company's proposal to increase its ratemaking common equity ratio from 47.0 percent to 50.3 percent is not cost justified and should be rejected. The currently authorized common equity ratio of 47 percent has allowed Cascade to maintain its credit rating and financial integrity at reasonable costs to customers and, therefore, it fairly balances the interests of all stakeholders.

3. I recommend the Short-Term Debt (STD) cost be reduced from the Company's three year average STD rate of 8.01 percent to the Company's projected STD rate for 2025 of 7.46 percent.

The supported rate of return will fairly compensate the Company for its current market cost of common equity and preserve its credit rating as well as its access to capital at reasonable terms. The overall rate of return recognizes the benefit to the utility of setting rates using a multi-year rate-setting process, by improving the utility's ability to recover its cost of service over a multi-year

period, while simultaneously adjusting the rate of return to no higher than necessary to maintain financial integrity and credit standing, and to provide fair compensation to the utility.

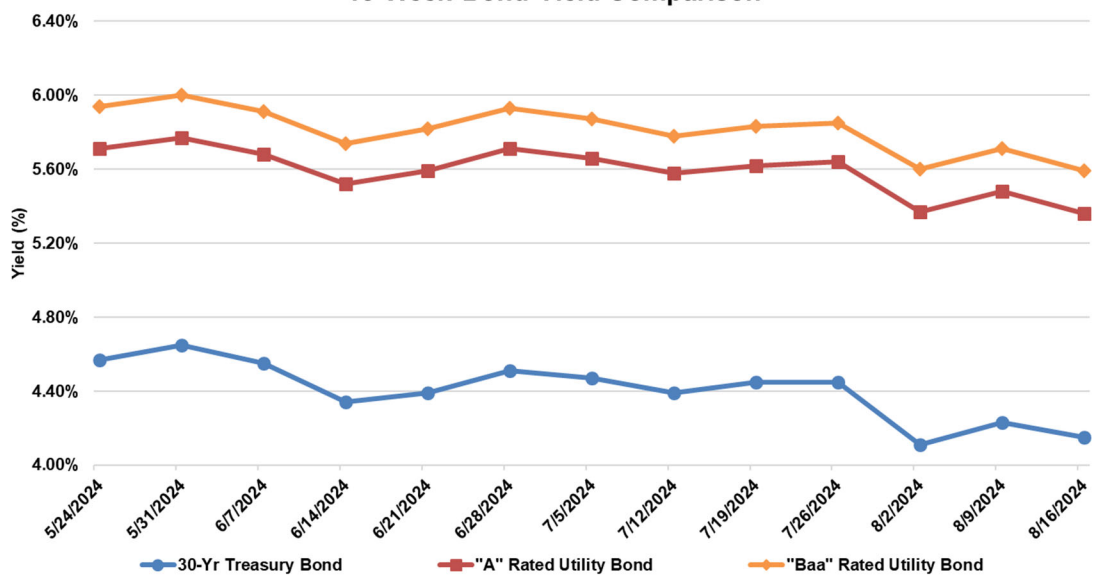
Finally, I also respond to Cascade witness Ms. Ann E. Bulkley's return on equity recommendation. Ms. Bulkley recommends an equity return in the range of 10.25 percent to 11.25 percent, with a point estimate of 10.50 percent.[1] The requested return on equity of 10.50 percent is excessive and would not result in just and reasonable rates, nor does it prioritize rate affordability for Cascade's customers.

Q. Have any significant market developments happened since you completed your market estimate of a fair return on equity for Cascade in this proceeding?

A. Yes. The Chair of the Federal Reserve Board, Jerome Powell, gave a speech on August 23, 2024, concerning reassessing the effectiveness and transition of monetary policy. Chair Powell noted in that speech that the time has come to adjust the Federal Reserve's (Fed) policy on easing monetary policy to reflect success in reducing inflation toward the Fed long-term target inflation rate, while also supporting the relatively strong economy and job market. This Fed monetary outlook was well received by the marketplace, which has resulted in reduction in long-term interest rates. The recent decline in long-term Treasury and utility bond yields is shown in Figure 1 below.

[1] Direct Test. of Ann E. Bulkley, Exh. AEB-1T at 5:25–6:2.

Figure 1
13-Week Bond Yield Comparison



Sources:
St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.
http://credittrends.moodys.com/.

More recently, on September 18, 2024, the Fed reduced the Federal Funds Rate by 50 basis points.[2] This action will most likely be followed by more market anticipation of further reductions in short-term interest rates, which will be reflected in long-term bond and common equity capital rates.

II. RATE OF RETURN MARKET EVIDENCE

Q. Please describe this section of your testimony.

A. In this section, I will provide observable market evidence to assess the state of the financial markets, credit metrics to assess the reasonableness of rate of return positions, and a detailed analysis to demonstrate a rate of return that will support Cascade's financial integrity and access to capital. I also comment on

[2] Federal Reserve press release, *Federal Reserve Board and Feral Open Market Committee release Economic Projections from the September 17-18 FOMC Meeting* (Sept. 18, 2024, 2:00 PM EDT).

market-based models to estimate the current market-required rate of return investors demand to assume the risk of an investment similar to Cascade's.

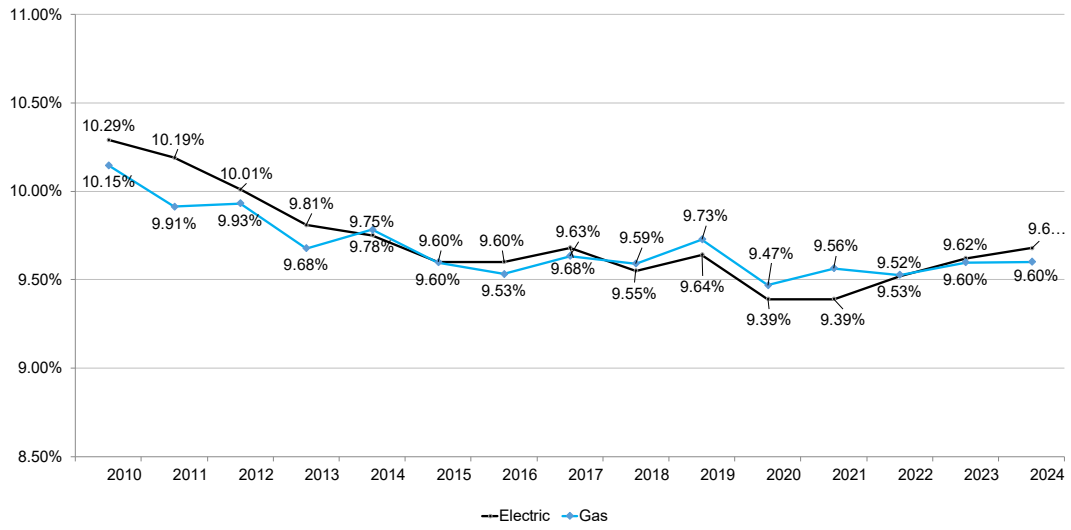
A. Utility Industry Authorized Returns on Equity, Access to Capital, and Credit Strength

Q. Please describe the observable evidence on trends in authorized returns on equity for regulated utilities.

A. Authorized returns on equity are an important part of how utilities produce revenues and cash flows adequate to support their credit standing and maintain their financial integrity, which supports their access to capital under reasonable terms and prices. Observable data, including data on industry authorized returns on equity, trends and outlooks on credit standing, and the ability of utilities to attract capital to fund large investments, provides clear evidence that industry authorized returns on equity have been judged by market participants to be fair and reasonable. With this as background, it is significant to observe that average industry authorized returns on equity for regulated utilities have ranged from 9.39 percent to 9.78 percent for the period from 2014 through the first half of 2024 and, that between 2020 and 2024, authorized returns on equity have averaged around 9.50 percent. These returns are summarized in Figure 2 below.

FIGURE 2

**Authorized Returns on Equity*
(Exclude Limited Issue Riders)**



ROE Distributions[1/2]

Electric Utilities	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<= Average	51.7%	55.0%	51.0%	50.0%	56.3%	56.5%	53.1%	61.0%	47.4%	45.5%	33.3%	31.4%	53.1%	53.2%	42.9%
> Average	48.3%	45.0%	49.0%	50.0%	43.8%	43.5%	46.9%	39.0%	52.6%	54.5%	66.7%	68.6%	46.9%	46.8%	57.1%
Gas Utilities															
<= Average	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
> Average	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sources and Notes:
[1] *S&P Global Market Intelligenc*e, RRA Regulatory Focus, Major Rate Case Decisions -- January - June 2024, July 29, 2024, p. 4.
[2] Download from S&P Global Market Intelligence, July 29, 2024.
* Returns exclude Limited Issue Rider Decisions.
* Excluding Alaska decisions due to the state unique circumstances.

Q. Have utilities been able to access external capital to support capital expenditure programs?

A. Yes. In the Regulatory Research Associates' (RRA) April 2, 2024, Utility Capital Expenditures report, *RRA Financial Focus*, a division of S&P Global Market Intelligence, made several relevant comments about utility investments generally:

- Projected 2024 capital expenditure [("capex")] for the 45 energy utilities included in the RRA representative sample of publicly traded, US-based utilities is $184 billion — an up swell of nearly 11 percent from the group's $166 billion of actual spending in 2023.

The increase is largely driven by federal legislation enacted in 2021 and 2022 supporting infrastructure investment.

- Across the small investor-owned water utility industry, total capex is forecasted to increase by more than 13 percent in 2024 to roughly $5.5 billion. This follows a growth surge of more than 13 percent in 2023.

- Energy utility capex in 2023 marked a record high, about 15.5 percent above the $144 billion invested in 2022. Investment in 2021 was likely negatively impacted by multiple supply chain issues associated with the COVID-19 pandemic; the $131 billion spent that year was only incrementally higher than the 2020 investment level of $129 billion.

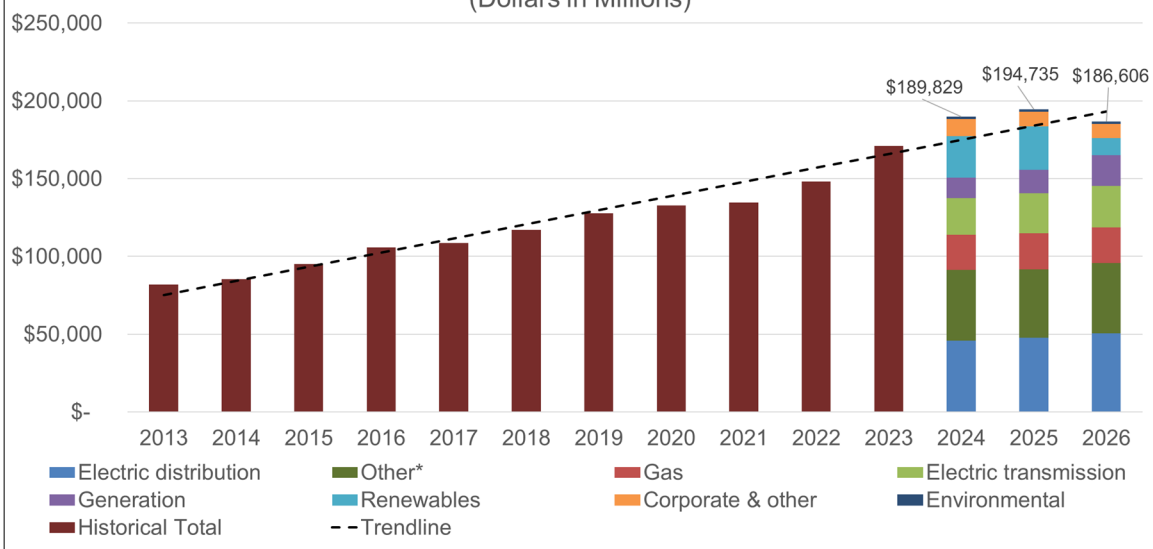
- Aggregated energy utility capex estimates for both 2024 and 2025 indicate successively higher spending levels, reaching $184 billion and $191 billion, respectively. Spending expectations for 2024 and beyond are likely to increase as the companies' plans for future projects continue to solidify around the new federal legislation supporting infrastructure investment.[3]

As shown in Figure 3 below, capital expenditures for the regulated utilities have increased considerably over the period 2023 into 2024, and the forecasted capital expenditures remain elevated through the end of 2026.

[3] S&P Global Market Intelligence, RRA Financial Focus: *Utility capex primed for profusion in 2024 and beyond* at 1, (S&P Global Apr. 2, 2024).

FIGURE 3

Utility Capital Expenditures
(Dollars in Millions)



*Other category consists of utilities that do not report capital expenditures by category: Avangrid, Hawaiian Electric, PG&E and Portland General Electric.
Source: *S&P Global Market Intelligence, RRA Financial Focus*, Utility Capital Expenditures Update, March 27, 2024, Tables 1 and 3.

As outlined in Figure 3 above, and in the comments made by *RRA S&P Global Market Intelligence*, capital investments for the utility industry continue to stay at elevated levels, and these capital expenditures are expected to fuel utilities' profit growth into the foreseeable future. This is clear evidence that the capital investments are enhancing shareholder value and are attracting both equity and debt capital to the utility industry in a manner that allows for funding these elevated capital investments. While capital markets embrace these profit-driven capital investments, regulatory commissions also must be careful to maintain reasonable prices and tariff terms and conditions to protect the customers' need for reliable utility service at reasonable rates. If this is not done, utility rates will expand beyond the ability of customers to pay, resulting in revenue constraints for utilities, which will impact their financial integrity.

Q. Have regulated utility equity securities' valuations supported access to equity capital?

A. Yes. Utility valuation metrics continue to demonstrate that utilities can sell new stock at robust market prices, which illustrates that utilities can access equity capital under reasonable terms and conditions, and at relatively low cost.

As shown on my Exhibit MPG-4, utility valuation metrics show robust valuation of utility securities more recently compared to the historical period stretching back to 2002. Specifically, *The Value Line Investment Survey* (*Value Line*) tracks and projects various valuation metrics related to regulated utility securities, as well as certain non-regulated companies followed by *Value Line*. These valuation metrics are considered by market participants in assessing the investment risk characteristics of individual company stocks and industries, and are used by market participants to derive their required rates of return for making investments. All of these valuation metrics for utility stocks indicate robust valuations of utility stocks, which in turn support my finding that utilities' cost of capital is low by historical comparison and utilities are producing competitive returns.

For example, I show a *Value Line* gas utility industry Price-to-Earnings (P/E) ratio of 16.39x that aligns with the 19-year average P/E ratio.[4]. A consistently strong P/E ratio indicates stock price valuations are stable, which supports utilities' access to external equity markets.

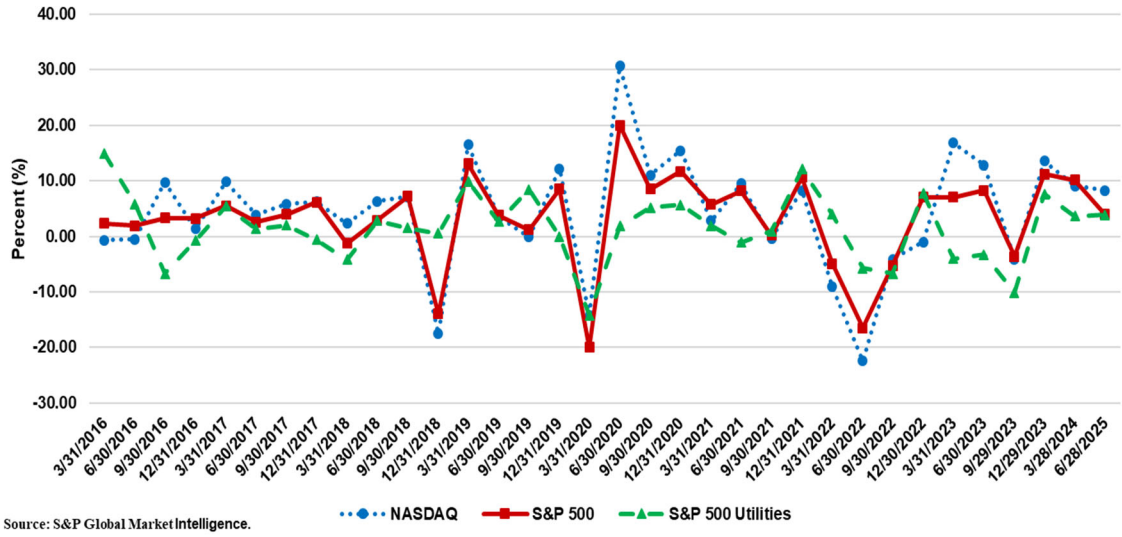
[4] Michael P. Gorman, Exh. MPG-4 at 12 (Valuation Metrics).

The market price-to-cash flow for gas utilities is currently 7.90x and the market-to-book ratio is 1.35x. These valuation metrics align with the 19-year average valuation metrics, and indicate utilities continue to have access to equity capital markets.

Q. Please describe utility stock price performance over the last several years.

A. Figure 4 below shows the utility stock price performance compared to the overall market.

FIGURE 4
Quarterly Price Returns



Utility stocks have not exhibited the higher volatility of the S&P 500 and have maintained strong valuation relative to overall market performance.

Q. Have regulated utilities maintained investment grade credit strength and financial integrity?

A. Yes. Credit ratings are reasonable assessments of the utility industry's financial integrity, because they indicate the utility's credit strength, which, in turn provides strong evidence of the utility's ability to attract capital necessary to make

infrastructure investments under reasonable terms and prices. Trends in credit ratings are an indication of whether the regulatory decisions have supported the utilities' ability to generate adequate revenue to recover their costs, produce adequate cash flows, and maintain strong credit strength. The primary drivers in these regulatory decisions are the commissions' awarded returns on equity and development of depreciation rates.

As shown in Table 1 below, electric utilities' credit standing has remained very robust through the *Tax Cuts and Jobs Act's* (2017) changes and impacts on cash flow starting around 2018, through the COVID-19 pandemic, and into the present. As shown below in Table 1, over the last several years over 80 percent of the regulated utility industry has a bond rating of BBB+ or stronger.

TABLE 1

S&P Ratings by Category
Natural Gas Utility Subsidiaries
(Year End)

Description	2016	2017	2018	2019	2020	2021	2022	2023	2024
A or higher	44%	56%	33%	38%	38%	13%	15%	17%	18%
A-	22%	11%	11%	38%	38%	38%	38%	38%	34%
BBB+	33%	33%	44%	13%	13%	25%	30%	29%	36%
BBB	0%	0%	11%	13%	13%	25%	18%	16%	12%
BBB-	0%	0%	0%	0%	0%	0%	0%	0%	0%
Below BBB-	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: S&P CAPITAL IQ and Market Intelligence, data retrieved 8/16/2024.
Note: Subsidiary ratings used.

Q. How should the Commission use this market information in assessing a fair return for Cascade?

A. Observable market evidence is quite clear that capital market costs are near historically low levels. Even as authorized returns on equity have fallen into the mid-9 percent range, utilities continue to have access to large amounts of external capital while still funding large capital programs. Furthermore, utilities' investment-grade credit ratings are stable and have improved due, in part, to supportive regulatory treatment. The Commission should carefully weigh all this important observable market evidence in assessing a fair return on equity for Cascade.

B. Federal Reserve's Impact on Cost of Capital

Q. Are the monetary policy decisions and actions of the Fed, and of the Fed's Federal Open Market Committee (FOMC), known to market participants, and is it reasonable to believe those decisions and actions are reflected in the market's valuation of both debt and equity securities?

A. Yes. The Fed has been transparent on its efforts to support the economy to achieve maximum employment, and to manage long-term inflation to around a 2 percent level. The Fed, in a July 31, 2024, press release, noted that economic activity has been expanding at a solid pace, while job gains have moderated and the unemployment rate has remained low. Meanwhile, inflation has eased and approaching the Fed's target rate. The Committee is gaining confidence in the economy outlook and while no decision has been made in regards to future rate cuts yet, Chair Powell stated that if the "balance of risks are consistent with rising confidence on inflation and maintaining a solid labor market, a reduction in our policy rate could be on the table as soon as the next meeting in September."[5]

More recently, as discussed above, on August 23, 2024, in his speech Chair Powell reemphasized the FOMC's confidence, which was positively received by market participants. The Fed noted that it is highly attentive to inflation risks.[6]

With this as a backdrop, the Fed announced it decided to maintain the target range of the Federal Funds Rate to 5.25 percent to 5.50 percent, and that it

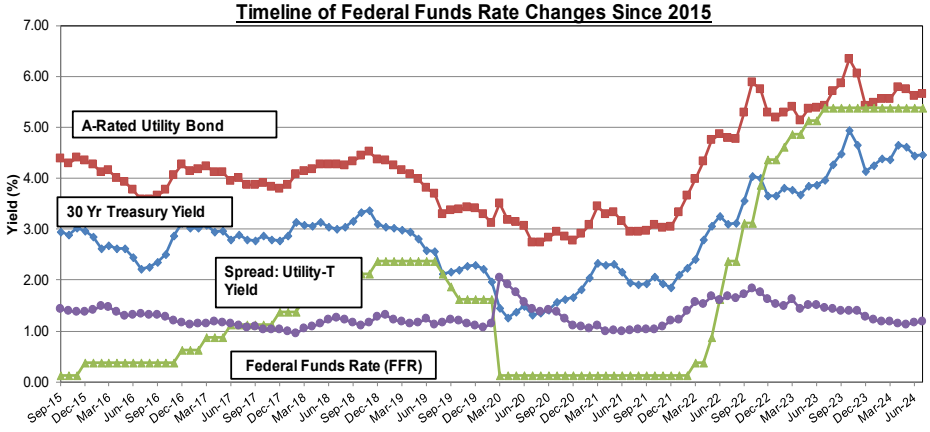
[5] Transcript of Chair Powell's Press Conference at 4 (July 31, 2024).
[6] Federal Reserve Press Release, *Federal Reserve Issues FOMC Statement* (July 31, 2024).

will continue to closely monitor the economic activity before making any adjustments needed to achieve the target 2 percent inflation rate. The Fed also stated that it will continue reducing its holdings of Treasury securities, agency debt securities and agency mortgage-backed securities. In its July 31, 2024 press release, the Fed reiterated its strong commitment to returning inflation to 2 percent.[7]

The trend in the Fed's monetary actions on the Federal Funds Rate is shown below in Figure 5.

FIGURE 5

Timeline of Federal Funds Rate Changes Since 2015



Fed FFR Actions:

1	December 2015	0.25	→	0.50	14	March 2020	0.00	→	0.25
2	December 2016	0.50	→	0.75	15	March 2022	0.25	→	0.50
3	March 2017	0.75	→	1.00	16	May 2022	0.75	→	1.00
4	June 2017	1.00	→	1.25	17	June 2022	1.50	→	1.75
5	December 2017	1.25	→	1.50	18	July 2022	2.25	→	2.50
6	March 2018	1.50	→	1.75	19	September 2022	3.00	→	3.25
7	June 2018	1.75	→	2.00	20	November 2022	3.75	→	4.00
8	September 2018	2.00	→	2.25	21	December 2022	4.25	→	4.50
9	December 2018	2.25	→	2.50	22	February 2023	4.50	→	4.75
10	August 2019	2.00	→	2.25	23	March 2023	4.75	→	5.00
11	September 2019	1.75	→	2.00	24	May 2023	5.00	→	5.25
12	October 2019	1.50	→	1.75	25	July 2023	5.25	→	5.50
13	March 2020	1.00	→	1.25					

Sources:
Federal Reserve Bank of New York, https://apps.newyorkfed.org/markets/autorates/fed-funds-search-page
Board of Governors of the Federal Reserve System, https://www.federalreserve.gov/datadownload/
Moody's Credit Trends, https://credittrends.moodys.com/

[7] *Id.*

As shown in Figure 5 above, the Federal Funds Rate, currently at a 5.25 percent to 5.50 percent range, resulted in a higher Federal Funds Rate than the rate prior to the economic effects of the worldwide pandemic starting around March/April of 2020.

Q. Do independent economists' outlooks for future interest rates reflect the Fed's current monetary policy?

A. Yes. In its most recent report, *Blue Chip Financial Forecasts* (*BCFF*) anticipates the first cut of target rate to occur in September, with very few of the panelists expecting the rate cut to be later in the year, in November or December. *BCFF* projects the Federal Funds Rate to decline over 100 basis points to 5.0 percent in December of this year and down to 3.9 percent by the end of 2025. The latest decline of long-term interest rates is expected to continue. Even though the 10-year/3-month Treasury yield curve remains inverted, the majority of the *BCFF* panelists find the yield curve as a less reliable recession indicator.[8]

These consensus economists' outlooks and projections of short-term Federal Funds Rate levels, long-term Treasury bond 30-year maturities, and of the U.S. economic outlook include an expectation that inflation and interest rates will decline in 2025, as illustrated in Table 2 below.

[8] Wolters Kluwer, *Blue Chip Financial Forecasts*: *Top Analysts' Forecasts Of U.S. And Foreign Interest Rates, Currency Values And The Factors That Influence Them,* Vol. 42, No. 8 (Aug. 1, 2024) [hereinafter *Blue Chip Financial Forecast*].

TABLE 2

Blue Chip Financial Forecasts
Projected Federal Funds Rate, 30-Year Treasury Bond Yields, and GDP Price Index

Publication Date	2Q 2023	3Q 2023	4Q 2023	1Q 2024	2Q 2024	3Q 2024	4Q 2024	1Q 2025	2Q 2025	3Q 2025	4Q 2025
Federal Funds Rate											
Aug-23	5.0	5.4	5.4	5.2	4.9	4.4	4.0				
Sep-23	**5.0**	5.3	5.4	5.3	5.0	4.6	4.2				
Oct-23		5.3	5.4	5.4	5.1	4.7	4.3	4.0			
Nov-23		5.3	5.4	5.4	5.2	4.9	4.5	4.1			
Dec-23		**5.3**	5.4	5.4	5.2	4.9	4.6	4.2			
Jan-24			5.3	5.3	5.1	4.8	4.4	4.1	3.8		
Feb-24			5.3	5.3	5.1	4.7	4.4	4.1	3.8		
Mar-24			**5.3**	5.4	5.2	4.9	4.5	4.2	3.8		
Apr-24				5.3	5.2	5.0	4.6	4.2	3.9	3.7	
May-24				5.3	5.4	5.2	4.9	4.6	4.3	4.0	
Jun-24				**5.3**	5.4	5.2	5.0	4.7	4.4	4.1	
Jul-24					5.3	5.3	5.0	4.7	4.4	4.1	3.9
Aug-24					5.3	5.3	5.0	4.7	4.4	4.1	3.9
T-Bond, 30 yr.											
Aug-23	3.8	4.0	3.9	4.0	3.9	3.9	3.8				
Sep-23	**3.8**	4.1	4.2	4.1	4.0	4.0	3.9				
Oct-23		4.2	4.4	4.3	4.2	4.2	4.1	4.0			
Nov-23		4.2	4.8	4.7	4.5	4.5	4.3	4.2			
Dec-23		**4.2**	4.8	4.7	4.5	4.5	4.4	4.3			
Jan-24			4.6	4.3	4.3	4.2	4.1	4.0	4.0		
Feb-24			4.6	4.3	4.2	4.2	4.1	4.0	4.0		
Mar-24			**4.6**	4.4	4.3	4.2	4.2	4.1	4.1		
Apr-24				4.3	4.3	4.2	4.2	4.1	4.1	4.0	
May-24				4.3	4.6	4.5	4.4	4.3	4.2	4.2	
Jun-24				**4.3**	4.6	4.5	4.5	4.4	4.3	4.3	
Jul-24					4.6	4.5	4.4	4.4	4.3	4.3	4.2
Aug-24					4.6	4.5	4.4	4.4	4.3	4.3	4.3
GDP Price Index											
Aug-23	2.2	2.7	2.6	2.5	2.3	2.3	2.3				
Sep-23	**2.0**	2.7	2.6	2.4	2.3	2.2	2.2				
Oct-23		2.7	2.7	2.4	2.2	2.2	2.2	2.2			
Nov-23		3.5	2.7	2.4	2.3	2.2	2.2	2.3			
Dec-23		**3.6**	2.7	2.4	2.3	2.2	2.2	2.2			
Jan-24			2.7	2.3	2.3	2.3	2.2	2.2	2.1		
Feb-24			1.5	2.2	2.2	2.3	2.2	2.2	2.1		
Mar-24			**1.6**	2.2	2.3	2.2	2.2	2.1	2.1		
Apr-24				2.2	2.4	2.3	2.2	2.2	2.1	2.2	
May-24				3.1	2.7	2.4	2.3	2.3	2.2	2.2	
Jun-24				**3.0**	2.8	2.5	2.3	2.3	2.3	2.2	
Jul-24					2.8	2.3	2.3	2.4	2.2	2.2	2.1
Aug-24					2.3	2.3	2.3	2.3	2.2	2.2	2.1

Source and Note:
Blue Chip Financial Forecasts, Jan 2022 through August 2024.
Actual Yields in Bold.

Moreover, the current outlook for long-term interest rates in the intermediate to longer term is also impacted by the current Fed actions and the expectation that eventually the Fed's monetary actions will return to more normal levels. Long-term interest rate projections are illustrated in Table 3 below.

TABLE 3

30-Year Treasury Bond Yield Actual Vs. Projection

Description	Actual	2-Year Projected*	5- to 10-Year Projected
2019			
Q1	3.01%	3.50%	
Q2	2.78%	3.17%	3.6% - 3.8%
Q3	2.30%	2.70%	
Q4	2.30%	2.50%	3.2% - 3.7%
2020			
Q1	1.88%	2.57%	
Q2	1.38%	1.90%	3.0% - 3.8%
Q3	1.36%	1.87%	
Q4	1.62%	1.97%	2.8% - 3.6%
2021			
Q1	2.07%	2.23%	
Q2	2.26%	2.77%	3.5% - 3.9%
Q3	1.93%	2.63%	
Q4	1.95%	2.70%	3.4% - 3.8%
2022			
Q1	2.25%	2.87%	
Q2	3.04%	3.47%	3.8% - 3.9%
Q3	3.26%	3.63%	
Q4	3.90%	3.87%	3.9% - 4.0%
2023			
Q1	3.74%	3.77%	
Q2	3.80%	3.70%	3.8% - 3.9%
Q3	4.24%	3.83%	
Q4	4.58%	4.17%	4.1% - 4.2%
2024			
Q1	4.33%	4.03%	

Source and Note:
Blue Chip Financial Forecasts, January 2019 through June 2024.
*Average of all 3 reports in Quarter.

C. Utility Industry Credit Outlook

Q. Please describe the credit rating outlook for regulated utilities.

A. In Standard & Poor's (S&P) January 9, 2024, *Industry Credit Outlook 2024* industry credit outlook, it comments that North American regulated utilities' credit quality remains under pressure. In that report, it makes the following points:

1. Credit quality remains pressured due to natural disaster risks to infrastructure, and record levels of capital spending;

2. S&P's outlook reflects its expectation of continued large capital spending, with consistent access to capital markets supported by continued supportive utility regulatory treatment;

3. The expectation that utilities will manage credit metrics by funding large capital spending with balanced amounts of debt and equity funding; and

4. Managing regulatory risk is highlighted during the large capital spending period because utilities must prioritize rate affordability and the impacts on customer bills through this period.

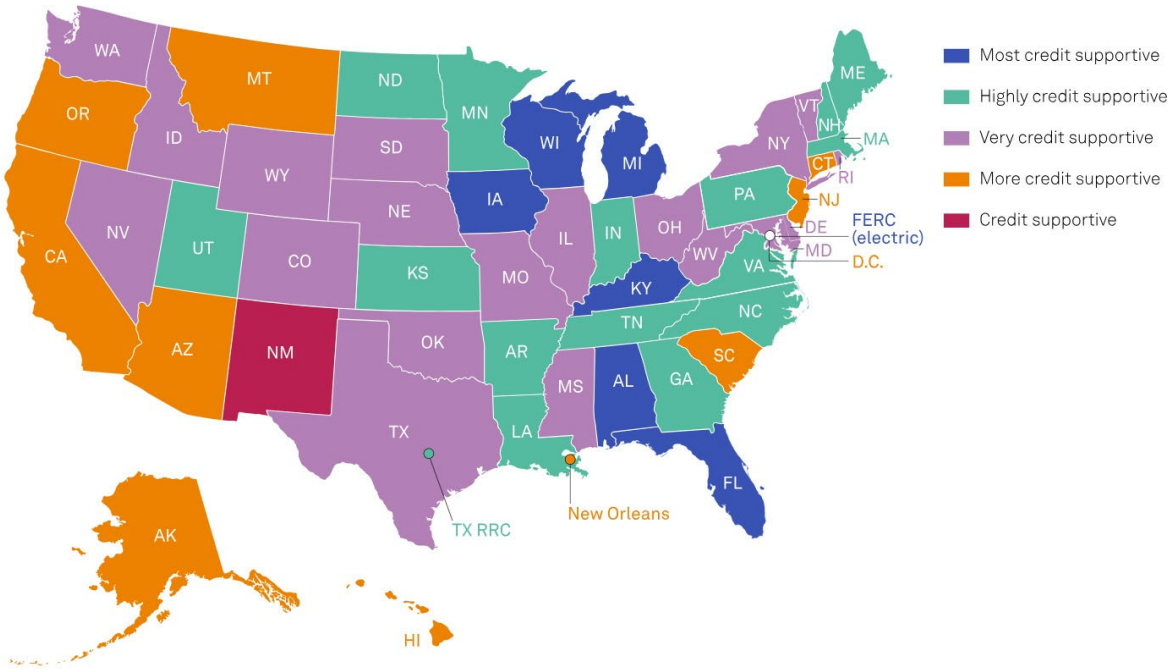
S&P notes that around 56 percent of the industry has stable credit rating outlooks, and the industry median credit rating remains in the BBB+ category.

S&P emphasizes the importance of effective utility management of regulatory risk and concludes that, "To manage regulatory risk, the industry must maintain the affordability of the customer bill."[9] From that standpoint, the credit rating agency provides a clear description of its assessment of

[9] S&P Global, *Ratings Industry Credit Outlook 2024: North American Regulated Utilities* at 8 (Jan. 9, 2024).

regulatory treatment of utilities across the various jurisdictions. S&P's regulatory risk rating of U.S. jurisdictions is copied below.

FIGURE 6
Regulatory Assessment by State[10]
(as of November 2023)



Source: S&P Global Ratings.

As outlined in Figure 6 above, the Washington jurisdiction is noted as "Very Credit Supportive," which is an indication of the confidence the investment community has of the Commission's approving regulatory mechanisms that provide utility management an ability to fully recover its cost of service. This ranking was implemented prior to the implementation of the multi-year rate plan mechanism, which enhances the utility's ability to recover its cost of service

[10] *Id.* at 9.

while rates are in effect, particularly during a period of large capital investments and growing rate base.

Q. Please outline credit agencies' stated concern about rate affordability as a credit risk to utilities.

A. Credit rating agencies have been emphasizing rate affordability, maintaining adequate financial coverages of debt obligations, and supporting utilities' overall investment grade bond ratings.

In a recent industry report, Moody's Investors Service (Moody's) explained that the regulated electric and gas utilities' outlook remains "Negative" largely due to increased pricing pressures on customers. Moody's stated that it changed its outlook from "Positive" to "Negative" due to the following:

> We have revised our outlook on the US regulated utilities sector to negative from stable. We changed the outlook because of increasingly challenging business and financial conditions stemming from higher natural gas prices, inflation and rising interest rates. These developments raise residential customer affordability issues, increasing the level of uncertainty with regard to the timely recovery of costs for fuel and purchased power, as well as for rate cases more broadly.[11]

Also, in the January report discussed above, S&P specifically mentioned commodity price volatility, in combination with significant increases in capital investments, driving utility rate increases which may strain affordability concerns.[12]

[11] Moody's Investors Service Outlook: *Regulated Electric and Gas Utilities – US 2023 outlook negative due to higher natural gas prices, inflation and rising interest rates* at 1 (Nov. 10, 2022). (Emphasis Added).
[12] S&P Global Ratings, *Industry Credit Outlook 2024: North America Regulated Utilities* at 8 (Jan. 9, 2024).

Finally, Fitch Ratings (Fitch) opined that the regulated electric and gas utilities' outlook is deteriorating due to elevated capex that put pressure on credit metrics. Fitch also notes the bill affordability concerns for ratepayers, and regulators' ability to balance the rate requests with increasing customer bills.

Specifically, Fitch states:

> Fitch's Sector Outlook: Deteriorating Fitch Ratings' deteriorating outlook for the North American Utilities, Power & Gas sector reflects continuing macroeconomic headwinds and elevated capex that are putting pressure on credit metrics in the high-cost funding environment. Bill Affordability concerns for ratepayers continue to persist despite the pull back in natural gas prices and inflationary pressures.[13]

As outlined by Moody's, S&P and Fitch above, credit analysts are focusing on rate affordability as an important factor needed to support strong credit standing. Customers must be able to afford to pay their utility bills in order for utilities to maintain their financial integrity and strong investment grade credit standing. For this reason, the Commission should carefully assess the reasonableness of cost of service in this proceeding, including an appropriate overall rate of return necessitated by a reasonably cost-effective balanced ratemaking capital structure, and a return on equity that represents fair compensation but also maintains competitive, just and reasonable rates.

[13] Fitch Ratings, *North American Utilities, Power & Gas Outlook 2024* at 1 (Dec. 6, 2023). (Emphasis Added).

D. Cascade's Investment Risk

Q. Please describe the market's assessment of Cascade's investment risk.

A. The market's assessment of Cascade's investment risk is described by credit rating analysts' reports. Cascade witness Ms. Kivisto testified that Cascade's credit ratings from S&P and Fitch are BBB, and BBB+, respectively.[14]

> **Outlook**
> The developing outlook on Cascade is consistent with the outlook on parent MDU Resources. This reflects the uncertainty regarding its strategic review and capital structure plans. We continue to consider Cascade as a core subsidiary of MDU Resources and expect that Cascade's stand-alone FFO to debt will reflect 10%-12% through 2024. We could affirm our ratings on Cascade and revise the outlook to stable over the next 18 months if we did the same for MDU Resources.[15]

S&P states that its base case forecast for Cascade reflects an expected filing of a multi-year rate plan by first quarter 2024.[16]

In November 2023, MDU Resources Group Inc. (MDU) and the majority of its subsidiaries, including Cascade, were downgraded by S&P from BBB+ to BBB and their outlook was revised to "Negative," which was triggered by MDU's decision to spin off its Construction Services Group, which in turn is expected to reduce MDU's revenues and its business diversity. However, divesting its non-core businesses will help the company focus on its regulated businesses and reduce its risk going forward.[17]

[14] Direct Test. Nichole A. Kivisto, Exh. NAK-1T at 15-16; Kivisto, Exh. NAK-3; Kivisto, Exh. NAK-4.
[15] S&P Global Ratings, *Cascade Natural Gas 'BBB+' Ratings Affirmed, Outlook Developing; SACP Revised Downward On Weaker Financial Measures* (Oct. 10, 2023).
[16] *Id*.
[17] S&P Global Ratings, *MDU Resources Group Inc. And Cascade Natural Gas Downgraded To 'BBB', Outlooks Negative; Rating Actions On Other Subs* (Nov. 8, 2023).

S&P notes that potential credit rating downside and upside for Cascade are driven by credit rating changes at its parent company, MDU:

> **Outlook—Cascade**
> The negative outlook on Cascade reflects the potential for a one-notch downgrade if we lower our ratings on parent MDU.
>
> **Downside scenario**
> We could lower our ratings on Cascade over the next 12 to 18 months if we lower our ratings on MDU.
>
> **Upside scenario**
> We could revise the outlook to stable if we revise the outlook on MDU to stable.[18]

Fitch also revised Cascade's outlook to Negative triggered by weakening financial measures due to its large capital expenditure program but positively noted recent rate case settlements as credit-supportive. [19] Specifically, Fitch states:

> **Cascade Key Rating Driver**
> **Low-Risk Business Profile:** Cascade's ratings reflect the low-risk nature of its regulated gas distribution assets across its two-state service territory in Washington and Oregon and supportive rate design, including margin decoupling and fuel cost recovery, and solid customer growth. Fitch estimates Washington represented roughly 75% of Cascade's total revenue in 2022. Cascade's service territory continues to experience above average customer growth with a CAGR of 1.7% over the last five years, driven by favorable demographic trends in the Pacific Northwest. The utility accounted for approximately 22% of combined electric and gas utilities' EBITDA in 2022.

[18] *Id*.
[19] Fitch Ratings, *Fitch Affirms MDU and Subs.; Centennial's Outlook to Positive and Cascade's Outlook to Negative* at 5-6 (August 3, 2023) (Provided by Cascade as Exhibit NAK-4).

Reasonable GRC Settlement in Washington: Fitch views regulatory approval of Cascade's settlement agreement in August 2022 with key intervenors in its 2020 GRC in Washington as reasonable. The settlement agreement provides for a $7.2 million rate increase (53% of requested) based on a 9.4% ROE (unchanged) and a 47% equity layer (2.1% lower than previous rate case).[20]

E. Cascade's Proposed Capital Structure

Q. What is the Company's proposed capital structure?

A. Cascade witness Ms. Tammy Nygard sponsors the Company's proposed capital structure, which is shown below in Table 4.

TABLE 4

Cascade's Proposed Capital Structure

Description	2024	2025
Long-Term Debt	44.214%	45.531%
Short-Term Debt	5.501%	1.747%
Common Equity	50.285%	52.722%
Total Regulatory Capital Structure	100.000%	100.000%

Nygard Direct Testimony at 3-4.

On her Exhibit TJN-2, Ms. Nygard outlines the Company's actual capital structure mix for 2023, and normalized capital structure mix excluding components of STD used to finance higher gas costs that are being amortized to cost of service. The Company's projected capital structure normalized STD in 2024 and 2025. Ms. Nygard states that the Company's ratemaking capital

[20] *Id*.

structure should reasonably approximate 50 percent debt and 50 percent equity in order to maintain the Company's credit standing and financial health. She notes that the debt cost assumptions included in the Company's filing have tended to assure the investment community that the implementation of a multi-year rate will be viewed favorably by credit rating agencies in the investment community, and will support the Company's access to capital under reasonable prices.[21]

Q. What ratemaking capital structure did the Commission approve in Cascade's last rate case in Washington?

A. In Cascade's last regulatory proceeding (Docket UG-210755), the Commission approved a capital structure containing 47 percent[22] equity down from the common equity of 49 percent awarded in the prior case. In approving this ratemaking capital structure, the Commission noted Cascade's target containing an optimal capital structure with approximately 50 percent debt and 50 percent equity, similar to the Company's stated target in this proceeding.[23]

Q. Has Cascade supported its proposal to increase the common equity ratio of its ratemaking capital structure since its last approved rate case?

A. No. The Company has not commented on the justification for increasing its cost of service by proposing a ratemaking capital structure that is more expensive than the capital structure previously approved by the Commission. The need for a cost-effective capital structure is particularly important in this proceeding due to

[21] *Id*. at 9.
[22] *Wash. Utils. & Transp. Comm'n v. Cascade Natural Gas Corp*., Docket UG-210755, Order 09 ¶¶ 94-95 (Aug. 23, 2023).
[23] *Id*. ¶ 89.

Cascade's use of a multi-year rate plan that exposes customers to more rate increases to support the utility's large capital investment program and rate base growth over the multi-year rate plan period. In exchange for the cost recovery benefit of adjusting rates in a multi-year period to accommodate rate base growth, the Company should be obligated to minimize all discretionary cost of service components as much as possible, which includes its ratemaking capital structure.

Q. In support of the proposed change in capital structure, did Cascade witness Nygard comment on the impact on rate affordability and balanced treatment to customers based on the Company's proposed change in capital structure?

A. Not specifically. However, Ms. Nygard did testify that, "the Company's capital structure must strike an appropriate balance between debt and equity with debt providing economy and equity providing safety. The capital structure must contain sufficient equity to provide financial security, but no more than necessary to keep ratepayer costs at a reasonable level."[24] However, she fails to show that this objective is achieved without placing additional and unnecessary burden on ratepayers. The Company's proposed increase in the common equity ratio of the ratemaking capital structure increases its cost of service, which creates further increases to its regulated rates. This discretionary increase to its retail rates has not been justified.

[24] Direct Test. of Tammy J. Nygard, Exh. TJN-1T at 8:11–14.

Q. What is the impact on the Company's cost of service by increasing the ratemaking capital structure common equity ratio relative to that authorized in its last rate case?

A. The Company's proposal to increase its ratemaking capital structure common equity ratio from 47.00 percent up to 50.29 percent, at the Company's requested return on equity, increases the Company's claimed revenue deficiency in this proceeding by $2.2 million, as outlined on Exhibit MPG-5.

Q. Please explain why a capital structure with too much common equity unnecessarily overstates a utility's revenue requirement.

A. Using an equity-thick capital structure increases Cascade's rate of return and revenue requirement because common equity is the most expensive form of capital, and is subject to income tax expense. For example, customers will pay a return of 12.73 percent for the revenue requirement to produce a 9.50 percent return on equity (9.50 percent x 1.34 gross-up). In comparison, customers will pay around 5.50 percent on debt capital because it is not subject to income tax expense. As such, common equity capital is more than twice as expensive as debt capital.

Because of the significantly greater cost, a utility should finance its utility plant investments with a reasonable mix of debt and equity. Equity is needed to manage the level of financial risk to support strong investment grade credit. Too much common equity, however, increases a utility's rates above the level that is necessary to support strong investment credit and reasonable access to capital markets. Conversely, a balanced capital structure will lead to reasonable costs to

customers, while still supporting a strong investment grade credit standing and in turn allowing a utility to fund necessary plant investment to maintain service quality and reliability. As such, a capital structure composed of a reasonable mix of debt and equity capital will support a utility's financial integrity and credit standing at the most reasonable and just prices to retail customers.

Q. What is your proposed capital structure for Cascade in this regulatory proceeding?

A. I recommend a ratemaking capital structure for Cascade be generally aligned with the approved ratemaking capital structure from its last rate case, as shown below in Table 5.

TABLE 5

Gorman's Proposed Capital Structure
(December 31, 2024)

Description	Weight
Long-Term Debt	47.50%
Short-Term Debt	5.50%
Common Equity	47.00%
Total Regulatory Capital Structure	100.00%

Source: Exhibit MPG-3.

My proposed return on equity of 9.40 percent and ratemaking capital structure adjustments will reduce the Company's claimed revenue deficiency by $7.4 million, as shown on Exhibit MPG-5.

Q. Will your proposed ratemaking capital structure support Cascade's financial integrity?

A. Yes. My proposed capital structure will support the Company's financial integrity and produce investment-grade credit metric coverage of debt capital as discussed in more details below.

F. Embedded Cost of Debt

Q. What is Cascade's embedded cost of long-term debt?

A. Cascade is proposing an embedded cost of short-term and long-term debt of 8.01 percent and 4.92 percent, respectively, as developed on Exhibit TJN-2 and supported by the Company's witness Ms. Nygard.[25]

Q. Do you have any issues with Cascade's cost of STD?

A. Yes. Cascade is using a STD cost of over 8.01 percent, which is above its projected market cost in 2025, during the rate effective period for this case. As discussed in Ms. Nygard's direct testimony and the Company's Federal Energy Regulatory Commission (FERC) Form-2, the higher cost is triggered by a $150 million term loan with a variable interest rate:

> ***Cascade*** On January 20, 2023, Cascade entered into a $150.0 million term loan agreement with a SOFR-based variable interest rate and a maturity date on January 19, 2024. On December 5, 2023, Cascade paid down $100.0 million of the outstanding balance. (Page 123.14, emphasis added)

Cascade's projected cost of STD at the end of 2025 is projected to be 7.460 percent as shown on page 6 of Ms. Nygard's Exhibit TJN-2. Importantly, as

[25] Nygard, Exh. TJN-1T at 3:4–7 (See Table 1).

discussed above, the interest rates are expected to further decline in 2025 due to the Fed's reserve monetary easing policy. Hence, the Company's forecasted STD cost in 2025 may be too high. Consequently, I recommend using the Company's project 2025 cost of STD of 7.46 percent.

Q. What long-term debt cost have you used?

A. I have used Cascade's proposed embedded cost of long-term debt of 4.92 percent in my calculation of an overall weighted cost of capital.

III. RETURN ON EQUITY

Q. Please describe what is meant by a "utility's cost of common equity."

A. A utility's cost of common equity is the expected return that investors require on an investment in the utility. Investors expect to earn their required return from receiving dividends and through stock price appreciation.

Q. Please describe the framework for determining a regulated utility's cost of common equity.

A. In general, determining a fair cost of common equity for a regulated utility has been framed by two hallmark decisions of the U.S. Supreme Court: *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923) and Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944)*. In these decisions, the Supreme Court found that just compensation depends on many circumstances and must be determined by fair and enlightened judgments based on relevant facts. The Supreme Court found that a utility is entitled to such rates as were permitted to earn a return on its property devoted to the convenience of the public that is generally consistent with the same returns available in other

investments of corresponding risk. The Supreme Court continued that the utility has no constitutional rights to profits such as those realized or anticipated in highly profitable enterprises or speculative ventures, and defined the ratepayer/investor balance as follows:

> 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.[26]

As such, a fair rate of return is based on the expectation that the utility's costs reflect efficient and economical management, and the return will support its credit standing and access to capital, without being in excess of this level. From these standards, rates to customers will be just and reasonable, and under economic management, compensation to the utility will be fair and support financial integrity and credit standing.

[26] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of W. Va.,* 262 U.S. 679 (1923) (Emphasis Added).

A. Risk Proxy Group

Q. Please describe how you identified a proxy utility group that could be used to estimate Cascade's current market cost of equity.

A. I relied on the same proxy group developed by Cascade witness Ms. Bulkley. I find my proxy group reasonably comparable to Cascade's investment risk characteristics.

Q. Please describe why you believe your proxy group is reasonably comparable in investment risk to Cascade.

A. My proxy group is shown in Exhibit MPG-6. The proxy group has an average credit rating from S&P of A-, which is two notches above Cascade's S&P credit rating of BBB.[27] However, Cascade's bond rating was recently downgraded from BBB+ due to a planned shareholder spinoff/divestiture by its parent company of an affiliate company.[28] The proxy group has an average credit rating from Moody's of A3. Cascade is not rated by Moody's, but has a Fitch credit rating of BBB+.

The proxy group has an average common equity ratio of 42.4 percent from S&P (including STD) and a 50.5 percent equity ratio from *Value Line* (excluding STD). My proposed equity ratio for Cascade of 47.0 percent[29] is comparable to and within the proxy group equity ratio range.

[27] Bulkley, Exh. AEB-1T at 27:13–28:6.
[28] S&P Global Ratings, *MDU Resources Group Inc. And Cascade Natural Gas Downgraded to BBB, Outlooks Negative; Rating Actions On Other Subs*, (Nov. 8, 2023).
[29] Gorman, Exh. MPG-3 (Rate of Return).

B. Discounted Cash Flow (DCF) Model

Q. Please describe the DCF model.

A. The DCF model posits that a stock price is valued by summing the present value of expected future cash flows discounted at the investor's required rate of return or cost of capital. This model is expressed mathematically as follows:

$$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} \ldots . \frac{D_\infty}{(1+K)} \qquad \text{(Equation 1)}$$

P_0 = Current stock price
D = Dividends in periods 1 - ∞
K = Investor's required return

This model can be rearranged in order to estimate the discount rate or investor-required return, known as "K." If it is reasonable to assume that earnings and dividends will grow at a constant rate, then Equation 1 can be rearranged as follows:

$$K = D_1/P_0 + G \qquad \text{(Equation 2)}$$

K = Investor's required return
D_1 = Dividend in first year
P_0 = Current stock price
G = Expected constant dividend growth rate

Equation 2 is referred to as the annual "constant growth" DCF model.

Q. Please describe the inputs to your constant growth DCF model.

A. As shown in Equation 2 above, the DCF model requires a current stock price, expected dividend, and expected growth rate in dividends.

Q. What stock price did you use in your constant growth DCF model?

A. I relied on the average of the weekly high and low stock prices of the utilities in the proxy group over a 13-week period ending on August 16, 2024. An average

stock price is less susceptible to market price variations than a price at a single point in time. Therefore, an average stock price is less susceptible to aberrant market price movements, which may not reflect the stock's long-term value.

A 13-week average stock price reflects a period that is still short enough to contain data that reasonably reflects current market expectations, but the period is not so short as to be susceptible to market price variations that may not reflect the stock's long-term value. In my judgment, a 13-week average stock price is a reasonable balance between the need to reflect current market expectations and the need to capture sufficient data to smooth out aberrant market movements.

Q. What dividend did you use in your constant growth DCF model?

A. I used the most recently paid quarterly dividend as reported in *Value Line*.[30] This dividend was annualized (multiplied by 4) and adjusted for next year's growth to produce the D_1 factor for use in Equation 2 above. In other words, I calculate D_1 by multiplying the annualized dividend (D_0) by (1+G).

Q. What dividend growth rates did you use in your constant growth DCF model?

A. There are several methods that can be used to estimate the expected growth in dividends. However, regardless of the method, to determine the market-required return on common equity, one must attempt to estimate investors' consensus about what the dividend, or earnings growth rate, will be and not what an individual investor or analyst may use to make individual investment decisions.

[30] Value Line, *The Value Line Investment Survey* (May 24, 2024).

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

For my constant growth DCF analysis, I have relied on a consensus, or mean, of professional securities analysts' earnings growth estimates as a proxy for investor consensus dividend growth rate expectations. I used the average of analysts' growth rate estimates from three sources: Zacks, S&P Global Market Intelligence (MI), and Yahoo! Finance. All such projections were available on August 16, 2024, and all were reported online.

Each consensus growth rate projection is based on a survey of securities analysts. There is no clear evidence whether a particular analyst is most influential on general market investors. Therefore, a single analyst's projection does not as reliably predict consensus investor outlooks as does a consensus of market analysts' projections. The consensus estimate is a simple arithmetic average, or mean, of surveyed analysts' earnings growth forecasts. A simple average of the growth forecasts gives equal weight to all surveyed analysts' projections. Therefore, a simple average, or arithmetic mean, of analyst forecasts is a good proxy for market consensus expectations.

[31] *See, e.g.*, David Gordon, et al., *Choice Among Methods of Estimating Share Yield*, J. Portfolio Mgmt. (Spring 1989).

Q. What are the growth rates you used in your constant growth DCF model?

A. The growth rates I used in my DCF analysis are shown in Exhibit MPG-7. The average growth rate for my proxy group is 5.58 percent.

Q. What are the results of your constant growth DCF model?

A. As shown in Exhibit MPG-8, the average and median constant growth DCF returns for my proxy group for the 13-week analysis are 9.89 percent and 10.01 percent, respectively.

Q. Do you have any comments on the results of your constant growth DCF analysis?

A. Yes. The constant growth DCF analysis for my proxy group is based on an average long-term sustainable growth rate of 5.58 percent. The three-to five-year growth rate exceeds my estimate of a maximum long-term sustainable growth rate of 4.20 percent by approximately 140 basis points. As discussed in more detail below, it is unreasonable to believe that utility earnings can grow more than the sustainable growth rate of the U.S. economy as measured by the long-term projected Gross Domestic Product (GDP) growth for an indefinite period. Therefore, I find the results of the constant growth DCF model inflated by an unsustainable short-term growth rate projection.

Q. How did you estimate a maximum long-term sustainable growth rate?

A. The long-term sustainable growth rate for a utility stock cannot exceed the growth rate of the economy in which it sells its goods and services. The long-term maximum sustainable growth rate for a utility investment is, accordingly, best proxied by the projected long-term GDP growth rate as that reflects the projected

long-term growth rate of the economy as a whole. While growth rates on shorter periods can exceed the GDP growth rate, those short-term growth periods are likely followed by other periods where the growth rate is below the GDP. On average over long periods of time, the growth rate is most accurately approximated by the long-term growth rate outlooks of the U.S. GDP.

Blue Chip Financial Forecasts projects that over the next five and 10 years, the U.S. nominal GDP will grow at an annual rate of approximately 4.2 percent. These GDP growth projections reflect a real growth outlook of around 2.1 percent and an inflation outlook of around 2.2 percent going forward. As such, the average nominal growth rate over the next five to 10 years is around 4.2 percent, which I believe is a reasonable proxy of long-term sustainable growth.[32]

Q. Is there independent authoritative support for using long-term GDP growth as a maximum sustainable growth rate?

A. Yes. In my multi-stage growth DCF analysis, I discuss academic and investment practitioner support for using the projected long-term GDP growth outlook as a maximum sustainable growth rate projection. Using the long-term GDP growth rate, however, as a conservative projection for the maximum sustainable growth rate is logical, and is generally consistent with academic and economic practitioner accepted practices.

[32] *Blue Chip Financial Forecasts* Vol. 43, No. 6 at 14 (May 31, 2024).

C. Sustainable Growth DCF

Q. Please describe how you estimated a sustainable long-term growth rate for your sustainable growth DCF model.

A. A sustainable growth rate is based on the percentage of the utility's earnings that is retained and reinvested in utility plant and equipment. These reinvested earnings increase the earnings base (rate base). Earnings grow when plant funded by reinvested earnings is put into service, and the utility is allowed to earn its authorized return on such additional rate base investment.

The internal growth methodology is tied to the percentage of earnings retained by the utility and not paid out as dividends. The earnings retention ratio is one minus the dividend payout ratio. As the payout ratio declines, the earnings retention ratio increases. An increased earnings retention ratio will fuel stronger growth because the business funds more investments with retained earnings.

The payout ratios of the proxy group are shown in my Exhibit MPG-9. These dividend payout ratios and earnings retention ratios then can be used to develop a sustainable long-term earnings retention growth rate. A sustainable long-term earnings retention ratio will help gauge whether analysts' current three-to five-year growth rate projections can be sustained over an indefinite period of time.

The data used to estimate the long-term sustainable growth rate is based on Cascade's current market-to-book ratio and on *Value Line*'s three-to five-year projections of earnings, dividends, earned returns on book equity, and stock issuances.

As shown in Exhibit MPG-10, the average sustainable growth rate using this internal growth rate model is 4.51 percent for my proxy group. However, I would point out that prior to accounting for the external sale of additional shares the internal growth rate for my proxy group is 3.96 percent, which is comparable to the maximum sustainable growth rate of 4.20 percent as described above.

Q. What is the DCF estimate using these sustainable long-term growth rates?

A. A DCF estimate based on these sustainable growth rates is developed in Exhibit MPG-11. As shown there, the sustainable growth DCF analysis produces proxy group average and median DCF results for the 13-week period of 8.77 percent and 8.65 percent, respectively.

D. Multi-Stage Growth DCF Model

Q. Have you conducted any other DCF studies?

A. Yes. My first constant growth DCF is based on consensus analysts' growth rate projections so it is a reasonable reflection of rational investment expectations over the next three-to-five years. The limitation on this constant growth DCF model is that it cannot reflect a rational expectation that a period of high or low short-term growth can be followed by a change in growth to a rate that better reflects long-term sustainable growth. Therefore, I performed a multi-stage growth DCF analysis to reflect this outlook of changing growth expectations.

Q. Why do you believe growth rates can change over time?

A. Analyst-projected growth rates over the next three to five years will change as utility earnings growth outlooks change. Utility companies go through cycles in making investments in their systems. When utility companies are making large

investments, their rate base grows rapidly, which in turn accelerates earnings growth. Once a major construction cycle is completed or levels off, growth in the utility rate base slows and its earnings growth slows from an abnormally high three-to five-year rate to a lower sustainable growth rate.

As major construction cycles extend over longer periods of time, even with an accelerated construction program, the growth rate of the utility will slow simply because the pace of rate base growth will slow and because the utility has limited human and capital resources available to expand its construction program. Therefore, the three-to five-year growth rate projection should only be used as a long-term sustainable growth rate in concert with a reasonable, informed judgment as to whether it considers the current market environment, the industry, and whether the three-to five-year growth outlook is actually sustainable.

Q. Please describe your multi-stage growth DCF model.

A. The multi-stage growth DCF model reflects the possibility of non-constant growth for a company over time. The multi-stage growth DCF model reflects three growth periods: (1) a short-term growth period consisting of the first five years; (2) a transition period, consisting of the next five years (years 6 through 10); and (3) a long-term growth period starting in year 11 through perpetuity.

For the short-term growth period, I relied on the consensus analysts' growth projections I used above in my constant growth DCF model. For the transition period, the growth rates were reduced or increased by an equal factor reflecting the difference between the analysts' growth rates and the long-term sustainable growth rate. For the long-term growth period, I assumed each

company's growth would converge to the maximum sustainable long-term growth rate, which is the projected long-term GDP growth rate.

Q. Why is the GDP growth projection a reasonable proxy for the maximum sustainable long-term growth rate?

A. Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of the economy in which they sell services. Utilities' earnings/dividend growth are created by increased utility investment or rate base. Such investment, in turn, is driven by service area economic growth and demand for utility service. In other words, utilities invest in plant to meet sales demand growth. Sales growth, in turn, is tied to economic growth in their service areas.

The U.S. Department of Energy, Energy Information Administration (EIA) has observed utility sales growth tracks U.S. GDP growth, albeit at a lower level, as shown in Exhibit MPG-12. Utility sales growth has lagged behind GDP growth for more than a decade. As a result, nominal GDP growth is a very conservative proxy for utility sales growth, rate base growth, and earnings growth. Therefore, the U.S. GDP nominal growth rate is a reasonable proxy for the highest sustainable long-term growth rate of a utility.

Q. Is there research that supports your position that, over the long term, a company's earnings and dividends cannot grow at a rate greater than the growth of the U.S. GDP?

A. Yes. This concept is supported in published analyst literature and academic work. Specifically, in "Fundamentals of Financial Management," a textbook published by Eugene Brigham and Joel F. Houston, the authors state:

> The constant growth model is most appropriate for mature companies with a stable history of growth and stable future expectations. Expected growth rates vary somewhat among companies, but dividends for mature firms are often expected to grow in the future at about the same rate as nominal gross domestic product (real GDP plus inflation).[33]

The use of the economic growth rate is also supported by investment practitioners as outlined as follows:

> **Estimating Growth Rates**
> One of the advantages of a three-stage discounted cash flow model is that it fits with life cycle theories in regards to company growth. In these theories, companies are assumed to have a life cycle with varying growth characteristics. Typically, the potential for extraordinary growth in the near term eases over time and eventually growth slows to a more stable level.
>
> * * *
>
> Another approach to estimating long-term growth rates is to focus on estimating the overall economic growth rate. Again, this is the approach used in the *Ibbotson Cost of Capital Yearbook*. To obtain the economic growth rate, a forecast is made of the growth rate's component parts. Expected growth can be broken into two main parts: expected inflation and expected real growth. By analyzing these components separately, it is easier to see the factors that drive growth.[34]

Q. Are there actual investment results that support the theory that the growth on stock investments will not exceed the nominal growth of the U.S. GDP?

A. Yes. This is evident by a comparison of the compound annual growth of the U.S. GDP to the geometric growth of the U.S. stock market. Kroll measures the historical geometric growth of the U.S. stock market over the period 1926-2023 to

[33] Eugene F. Brigham & Joel F. Houston, *Fundamentals of Financial Management* at 298 (Thomson Sw., a Div. of Thomson Corp., 11th Ed. 2007 (Emphasis Added).
[34] Morningstar, Inc.*, Ibbotson SBBI 2013 Valuation Yearbook: Market Results for Stocks, Bonds, Bills, and Inflation 1926-2012,* at 51 and 52 (Mar. 1, 2013).

be approximately 6.2 percent.[35] During this same time period, the U.S. nominal compound annual growth of the U.S. GDP was approximately 6.0 percent.[36]

As such, over the past 95 years, the geometric average growth of the U.S. nominal GDP has been comparable to the geometric average growth of the U.S. stock market capital appreciation. This historical relationship indicates that the U.S. GDP growth outlook is a reasonable estimate of the long-term sustainable growth of U.S. stock investments.

Q. What is the geometric average and why is it appropriate to use this measure to compare GDP growth to capital appreciation in the stock market?

A. The terms geometric average growth rate and compound annual growth rate are used interchangeably. The geometric annual growth rate is the calculated growth rate, or return, that measures the magnitude of growth from start to finish. The geometric average is best, and most often, used as a measurement of performance or growth over a long period of time.[37] Because I am comparing achieved growth in the stock market to achieved growth in U.S. GDP over a long period of time, the geometric average growth rate is most appropriate.

Q. How did you determine a long-term growth rate that reflects the current consensus market participant outlook?

[35] Kroll, *2023 SBBI Yearbook* at 137, Market Direct (Duff & Phelps, 2023).
[36] U.S. Bureau of Economic Analysis, *Table 1.1.5 Gross Domestic Product*, Revised May 30, 2024, https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey#eyJhcHBpZCI6MTksInN0ZXBzIjpbMSwyLDNdLCJkYXRhIjpbWyJjYXRlZ29yaWVzIiwiU3VydmV5Il0sWyJOSVBBX1RhYmxlX0xpc3QiLCI1Il1dfQ== (last visited Sept. 24, 2024)
[37] Roger Morin, *New Regulatory Finance* at 133-134 (Pub. Utils. R. 2006).

A. I relied on the economic consensus of long-term GDP growth projections. *Blue Chip Financial Forecasts* publishes the consensus for GDP growth projections twice a year. These consensus GDP growth outlooks are the best available measure of the market's assessment of long-term GDP growth because the analysts' projections reflect all current outlooks for GDP. They are, therefore, likely the most influential on investors' expectations of future growth outlooks. The consensus projection for the GDP growth rate outlook is 4.2 percent over the next five to 10 years.[38]

I propose to use the consensus for projected five-year average GDP growth rates of 4.2 percent, as published by *Blue Chip Financial Forecasts*, as an estimate of long-term sustainable growth. *Blue Chip Financial Forecasts'* projections provide real GDP growth projections of 2.1 percent and inflation of approximately 2.2 percent over the next five to 10-year (2026-2035) period, resulting in an average projected nominal annual GDP growth projection of 4.2 percent.[39] These GDP growth forecasts represent the most likely views of market participants because they are based on published economic consensus projections.

Q. Do you consider other sources of projected long-term GDP growth?

A. Yes, and these alternative sources corroborate the consensus analysts' projections I relied on. Various commonly relied upon analysts' projections are shown in Table 6 below.

[38] *Blue Chip Financial Forecasts*, Vol. 43, No. 6 at 14 (May 31, 2024).
[39] *Id*.

TABLE 6

GDP Forecasts

Source	Projected Period	Real GDP	Inflation	Nominal GDP
Blue Chip Financial Forecasts [1]	5-10 Yrs	2.1%	2.2%	4.2%
EIA - Annual Energy Outlook[2]	27 Yrs	1.9%	2.3%	4.3%
Congressional Budget Office[3]	30 Yrs	1.7%	2.0%	3.8%
Moody's Analytics[4]	31 Yrs	1.9%	2.1%	4.1%
Social Security Administration[5]	76 Yrs	1.6%	2.4%	4.0%
Economist Intelligence Unit[6]	31 Yrs	1.7%	2.2%	4.0%

Sources:
[1]Blue Chip Financial Forecasts, May 31, 2024 at 14.
[2]U.S. EnergyInformation Administration (EIA), Annual Energy Outlook 2023, September, 2022.
[3]Congressional Budget Office, Long-Term Budget Outlook, March 28, 2024.
[4]Moody's Analytics Forecast, last updated March 20, 2024.
[5]Social Security Administration, "2024 OASDI Trustees Report," Table VI.G6. May 6, 2024.
[6]S&P MI, Economist Intelligence Unit, downloaded on August 20, 2024.

As shown in the table above, the real GDP and inflation fall in the range of 1.6 percent to 2.1 percent and 2.0 percent to 2.4 percent, respectively. This results in a nominal GDP in the range of 3.8 percent to 4.3 percent.

Therefore, the nominal GDP growth projections made by these independent sources support my use of 4.2 percent as a reasonable estimate of market participants' expectations for long-term GDP growth.

Q. What stock price, dividend, and growth rates did you use in your multi-stage growth DCF analysis?

A. I relied on the same 13-week average stock prices and the most recent quarterly dividend payment data discussed above. For stage one growth, I used the consensus analysts' growth rate projections discussed above in my constant

growth DCF model. The first stage covers the first five years, consistent with the time horizon of the securities analysts' growth rate projections. The second stage, or transition stage, begins in year 6 and extends through year 10. The second stage growth transitions the growth rate from the first stage to the third stage using a straight linear trend. For the third stage, or long-term sustainable growth stage, starting in year 11, I used a 4.20 percent long-term sustainable growth rate based on the consensus economists' long-term projected nominal GDP growth rate.

Q. What are the results of your multi-stage growth DCF model?

A. As shown in Exhibit MPG-13, the average and median DCF returns on equity for my proxy group using the 13-week average stock price are 8.79 percent and 8.61 percent, respectively.

E. DCF Summary Results

Q. Please summarize the results from your DCF analyses.

A. The results from my DCF analyses are summarized in Table 7 below:

TABLE 7

Summary of DCF Results

Description	Average	Median
Constant Growth DCF Model (Analysts' Growth)	9.89%	10.01%
Constant Growth DCF Model (Sustainable Growth)	8.77%	8.65%
Multi-Stage Growth DCF Model	8.79%	8.61%

Based on the current market conditions, my DCF studies indicate a fair return on equity for Cascade of 9.20 percent, within a range of 8.9 percent to 9.5 percent.

The high end is based on the average of my Analysts growth (9.9 percent/10.0 percent) and Sustainable growth (8.8 percent/8.7 percent) DCF models. The low end is based on the Sustainable growth (8.8 percent/8.7 percent) and Multi-Stage growth (8.8 percent/8.6 percent) DCF models. My DCF studies support a fair DCF return on equity for Cascade of 9.2 percent.

F. Risk Premium Model

Q. Please describe your bond yield plus risk premium model.

A. This model is based on the principle that investors require a higher return to assume greater risk. Common equity investments have greater risk than bonds because bonds have more security of payment in bankruptcy proceedings than common equity and the coupon payments on bonds represent contractual obligations. In contrast, companies are not required to pay dividends or guarantee returns on common equity investments. Therefore, common equity securities are considered to be riskier than bond securities.

This risk premium model is based on two estimates of an equity risk premium. First, I quantify the difference between regulatory commission-authorized returns on common equity and contemporary U.S. Treasury bonds. The difference between the authorized return on common equity and the Treasury bond yield is the risk premium. I estimated the risk premium on an annual basis for each year from 1986 through the second quarter

of 2024. The authorized returns on equity were based on regulatory commission-authorized returns for utility companies. Authorized returns are typically based on expert witnesses' estimates of the investor-required return at the time of the proceeding.

The second equity risk premium estimate is based on the difference between regulatory commission-authorized returns on common equity and contemporary "A" rated utility bond yields by Moody's. I selected the period 1986 through the second quarter of 2024 because public utility stocks have consistently traded at a premium to book value during that period. This is illustrated in Exhibit MPG-14, which shows the market-to-book ratio since 1986 for the utility industry was consistently above a multiple of 1.0x. Over this period, an analyst can infer that authorized returns on equity were sufficient to support market prices that at least exceeded book value. This is an indication that commission-authorized returns on common equity supported a utility's ability to issue additional common stock without diluting existing shares. It further demonstrates utilities were able to access equity markets without a detrimental impact on current shareholders.

Based on this analysis, as shown in Exhibit MPG-15, the average indicated equity risk premium over U.S. Treasury bond yields has been 5.62 percent. Since the risk premium can vary depending upon market conditions and changing investor risk perceptions, I believe using an estimated range of risk premiums provides the best method to measure the current return on common equity for a risk premium methodology.

I incorporated five-year and 10-year rolling average risk premiums over the study period to gauge the variability over time of risk premiums. These rolling average risk premiums mitigate the impact of anomalous market conditions and skewed risk premiums over an entire business cycle. As shown on my Exhibit MPG-15, the five-year rolling average risk premium over Treasury bonds ranged from 4.17 percent to 7.15 percent, with an average of 5.66 percent. The 10-year rolling average risk premium ranged from 4.30 percent to 6.91 percent, with an average of 5.67 percent.

As shown on my Exhibit MPG-16, the average indicated equity risk premium over contemporary "A" rated Moody's utility bond yields was 4.26 percent. The five-year rolling average risk premiums ranged from 2.80 percent to 5.96 percent, with an average of 4.32 percent. The 10-year rolling average risk premiums ranged from 3.11 percent to 5.74 percent, with an average of 4.31 percent.

Q. Do you believe that the time period used to derive these equity risk premium estimates is appropriate to form accurate conclusions about contemporary market conditions?

A. Yes. Contemporary market conditions can change during the period that rates determined in this proceeding will be in effect. A relatively long period of time where stock valuations reflect premiums to book value indicates that the authorized returns on equity and the corresponding equity risk premiums were supportive of investors' return expectations and provided utilities access to the equity markets under reasonable terms and conditions. Further, this time period is

long enough to smooth abnormal market movement that might distort equity risk premiums. While market conditions and risk premiums do vary over time, this historical time period is a reasonable period to estimate contemporary risk premiums.

Alternatively, some studies, such as Kroll, have recommended that the use of "actual achieved investment return data" in a risk premium study should be based on long historical time periods. The studies find that achieved returns over short time periods may not reflect investors' expected returns due to unexpected and abnormal stock price performance. Short-term, abnormal actual returns would be smoothed over time and the achieved actual investment returns over long time periods would approximate investors' expected returns. Therefore, it is reasonable to assume that averages of annual achieved returns over long time periods will generally converge on the investors' expected returns.

My risk premium study is based on data that inherently relied on investor expectations, not actual investment returns, and, thus, need not encompass a very long historical time period.

Q. What does current observable market data suggest about investor perceptions of utility investments?

A. The equity risk premium should reflect the relative market perception of risk today in the utility industry. I have gauged investor perceptions in utility risk today in Exhibit MPG-17, where I show the yield spread between utility bonds and Treasury bonds over the last 44 years. As shown in this exhibit, the average utility bond yield spreads over Treasury bonds for "A" and "Baa" rated utility

bonds for this historical period are 1.48 percent and 1.90 percent, respectively. The utility bond yield spreads over Treasury bonds for "A" and "Baa" rated utilities in 2022 were 1.61 percent and 1.91 percent, respectively. In 2023, the spreads have declined to 1.45 percent for "A" rated utilities and 1.75 percent for "BBB" utilities. More recently, the spreads have decreased even further to 1.17 percent for "A" rated utilities and 1.40 percent for "BBB" utilities.

The current 13-week average "A" rated utility bond yield of 5.59 percent when compared to the current Treasury bond yield of 4.40 percent, as shown in Exhibit MPG-18, implies a yield spread of 1.19 percent. This current utility bond yield spread is lower than the 44-year average spread for "A" rated utility bonds of 1.48 percent. The current spread for the "Baa" rated utility bond yield of 1.41 percent is also lower than the 44-year average spread of 1.90 percent.

Q. Is there observable market evidence to help gauge market risk premiums?

A. Yes. Market data illustrates how the market is pricing investment risk and gauging the current demands for returns based on securities of varying levels of investment risk. This market evidence includes bond yield spreads for different bond return ratings as implied by the yield spreads for Treasury, corporate and utility bonds. These spreads provide an indication of the market's return requirement for securities of different levels of investment risk and required risk premiums.

Table 8 below summarizes the utility and corporate bond spreads relative to Treasury bond yields.

TABLE 8

Gas Yield Spreads - Risk Premium

Year	Utility Bonds[1] A - T	Corporate Bonds[1] Aaa - T	Utility Stock Spreads[2] 20-Year Treasury	Utility Stock Spreads[2] A	Forward Inflation
	(1)	(2)	(3)	(4)	(5)
Average Historical Spread	1.31%	0.86%	-0.04%	1.39%	2.17%
2022	1.61%	0.96%	0.16%	1.60%	2.64%
2023	1.45%	0.72%	0.57%	1.87%	2.48%
2024	1.17%	0.64%	0.40%	1.46%	2.42%

Sources:
Average Historical Spread period; 2006 - 2024.
[1]Exhibit MPG-17.
[2]Exhibit MPG-4, page 13.

As outlined above, the observable market evidence indicates that utility equity-risk premiums in the current market are very low. The equity risk premium in the current market has contracted significantly relative to historical periods. Similarly, the utility bond yield spread relative to Treasury yields has also declined. This is clear evidence that the market is placing greater investment risk in debt securities currently than equity securities, likely due to the fact that inflation risk has elevated due to more uncertain inflation outlooks, which impact bond investment risk more than equity or stock investment risk.

As outlined in the table above, the current A rated utility to Treasuries spread is lower than the spread over the last several years, approaching its long-term historical averages. Similarly, utility stock spreads to Treasuries and A rated utility bonds has also declined during the first half of 2024 and is approximating its long-term average. As also indicated in Table 8 above, inflation outlooks are relatively high now and have been for the last several years, and are considerably higher than the long-term historical average (2006-2024). But as

noted above, inflation outlooks are moderating, which is expected to reduce long-term interest rate going forward. This relationship between utility observable stock yields and bond yields, both Treasury and utility, is outlined on my Exhibit MPG-4. Based on this assessment of observable risk premiums in the market, I conclude that equity risk premiums in the current marketplace are below historical averages, and the current utility spreads are lower than historical averages. Again, this appears to be attributable to the uptick in inflation risk in the current marketplace.

Q. What return for Cascade is supported by your risk premium study?

A. As outlined above, I believe the current market is reflecting high premiums for investing in securities of greater levels of investment risk. Based on this observation, I propose to be conservative in applying a risk premium analysis. For these reasons, I recommend a risk premium near the historical average to reflect the observable market evidence of the equity risk premiums reflected in utility stock, bond and Treasury bond valuations.

For Treasury bond yields, I considered the five-year rolling average historical risk premium of 5.66 percent for my proxy group, in combination with the forecasted Treasury bond yield. I note that the forecasted Treasury bond yield of 4.3 is now about 10 basis points lower than the 13-week average yield of 4.40 at the time of my analysis. However, as shown on my Exhibit MPG-18, the long-term Treasury yield has more recently declined by over 40 basis points. Using a Treasury bond risk premium in the range of 5.4 percent (or about 95 percent of the historical average risk premium) to 5.7 percent (average

premium) and a projected 30-year Treasury bond yield of 4.3 percent[40] produces an indicated equity risk premium of approximately 9.7 percent (5.4 percent plus 4.3 percent) to 10.0 percent (5.7 percent plus 4.3 percent), with a midpoint of 9.9 percent.

A risk premium based on utility bond yields reflects current observable bond yields as measured by the five-year rolling average risk premium estimate of 4.32 percent, as shown on Exhibit MPG-16 and the 13-week average A-rated utility bond yield of 5.59 percent, as shown on my Exhibit MPG-18, page 1. As outlined above, the current equity risk premium relative to utility bond yields is well below historical averages. The consensus is for bond yields to decrease over the period rates determined in this proceeding will be in effect. Given the observable evidence that risk premiums are very low in relation to current bond yields and the expected decline in interest rates, I propose to use 90 percent of the historical utility risk premium, or 3.89 percent (4.32 percent times 90 percent) and 4.3 percent (the average premium) along with the current utility 13-week A-rated average utility yield of 5.59 percent, which results in a risk premium in the range of 9.5 percent (5.6 percent plus 3.9 percent) to 9.9 percent (5.6 percent plus 4.3 percent), with an approximate midpoint of 9.7 percent.

Therefore, a risk premium estimate based on observable risk premiums in the marketplace, and the expected outlook for moderation in long-term interest rates over the next couple years, support a risk premium based return on equity

[40] *Blue Chip Financial Forecasts*, Vol. 42, No. 8 at 2 (Aug. 1, 2024).

for Cascade in the range of 9.7 percent to 9.9 percent, with an approximate midpoint of 9.8 percent.

G. Capital Asset Pricing Model (CAPM)

Q. Please describe the CAPM.

A. The CAPM method of analysis is based upon the theory that the market-required rate of return for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. This relationship between risk and return can be expressed mathematically as follows:

$R_i = R_f + B_i \times (R_m - R_f)$ where:

R_i = Required return for stock i
R_f = Risk-free rate
R_m = Expected return for the market portfolio
B_i = Beta - Measure of the risk for stock

The stock-specific risk term in the above equation is beta. Beta represents the investment risk that cannot be diversified away when the security is held in a diversified portfolio. When stocks are held in a diversified portfolio, stock-specific risks can be eliminated by balancing the portfolio with securities that react in the opposite direction to firm-specific risk factors (e.g., business cycle, competition, product mix, and production limitations).

Risks that cannot be eliminated when held in a diversified portfolio are non-diversifiable risks. Non-diversifiable risks are related to the market and referred to as systematic risks. Risks that can be eliminated by diversification are non-systematic risks. In a broad sense, systematic risks are market risks and non-systematic risks are business risks. The CAPM theory suggests the market

will not compensate investors for assuming risks that can be diversified away. Therefore, the only risk investors will be compensated for are systematic, or non-diversifiable risks. The beta is a measure of the systematic, or non-diversifiable risks.

Q. Please describe the inputs to your CAPM.

A. The CAPM requires an estimate of the market risk-free rate, Cascade's beta, and the market risk premium.

Q. What did you use as an estimate of the market risk-free rate?

A. As previously noted, *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield is 4.30 percent.[41] The current 30-year Treasury bond yield is 4.40 percent as shown in Exhibit MPG-18.

Q. Why did you use long-term Treasury bond yields as an estimate of the risk-free rate?

A. Treasury securities are backed by the full faith and credit of the United States government. Therefore, long-term Treasury bonds are considered to have negligible credit risk. Also, long-term Treasury bonds have an investment horizon similar to that of common stock. As a result, investor-anticipated long-run inflation expectations are reflected in both common stock required returns and long-term bond yields. Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate) included in a long-term bond yield is a reasonable estimate of the nominal risk-free rate included in common stock returns.

[41] *Id*.

Treasury bond yields, however, do include risk premiums related to unanticipated future inflation and interest rates. In this regard, a Treasury bond yield is not a risk-free rate. Risk premiums related to unanticipated inflation and interest rates reflect systematic market risks. Consequently, for companies with betas less than one, using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis can produce an overstated estimate of the CAPM return.

Q. What beta did you use in your analysis?

A. For my CAPM, I largely relied on current and historical published utility betas from *Value Line*. However, for the reasons outlined below, I believe the current published betas are skewed based on statistical review of historical betas that includes two abnormal months surrounding the outbreak of the global pandemic, the inclusion of which has resulted in current published betas being at abnormally high levels. When this limited data is excluded from the measurement of betas, the beta estimates are more reflective of long-term historical normalized *Value Line* published betas, and more consistent with other methods of measuring current betas that smooth out this statistical outlier data.

Q. Have you reviewed the betas for the electric utility industry to see whether or not the data in the early onset of COVID had the effect of skewing betas across the entire electric utility industry followed by *Value Line*?

A. Yes. Using the S&P 500 utility index, relative to the New York Stock Exchange, it shows that beta estimates like those in *Value Line* are skewed due to two extraordinary months within the 60-month time period used to measure beta. The two months that skew the betas are March and April of 2020, the time period that

coincides with the start of the worldwide COVID-19 pandemic. Removing these two months to derive a more normal level of beta has the effect of reducing utility beta estimates from the very high levels right now of over 0.90, down to more normalized betas in the range of 0.65 to 0.80. This beta regression study is summarized in Table 9 below.

TABLE 9

S&P 500 Utilities vs. NYSE
Regression Betas

Period	Raw Beta	Adjusted Beta	R^2
5-Yr Ending Feb 2020	0.45	0.65	0.18
May 2020 - Current	0.65	0.78	0.34
Most Recent 5Yr Period	0.88	0.94	0.54

Note:
Calculated using Value Line's regression-based beta methodology.
The current and most recent periods are through 8/16/2024.

Q. How did you derive your market risk premium estimate?

A. I derived two market risk premium estimates: a forward-looking estimate and one based on a long-term historical average.

The forward-looking estimate was derived by estimating the expected return on the market (as represented by the S&P 500) and subtracting the risk-free rate from this estimate. I estimated the expected return on the S&P inflation rate to the long-term historical arithmetic average real return on the market. The real return on the market represents the achieved return above the rate of inflation.

Historically, I relied on Kroll's *2023 SBBI Yearbook* to estimate the market real return. However, Kroll's SBBI Yearbook has been discontinued. Therefore, using the same methodology to estimate the historical real return on the market over the period 1926 to 2023, I relied on data from Morningstar Direct. The historical arithmetic average real market return over the period 1926 to 2023 to be 9.02 percent.[42] A current consensus for projected inflation, as measured by the GDP Deflator, is 2.10 percent.[43] Using these estimates, the expected market return is 11.31 percent.[44] The market risk premium then is the difference between the 11.31 percent expected market return and my 4.30 percent risk-free rate estimate, or 7.01 percent, which I referred to as a normalized market risk premium.

I also developed a current market risk premium based on the difference between the expected return on the market of 11.31 percent as described above and the current 30-year Treasury yield of 4.40 percent as shown on my Exhibit MPG-20, which produced a current market risk premium of approximately 6.90 percent.

A historical estimate of the market risk premium was also calculated by using data provided by Morningstar Direct. Over the period 1926 through 2023, Morningstar Direct estimated that the arithmetic average of the achieved total return on the S&P 500 was 12.16 percent[45] and the total return on long-term

[42] Morningstar Direct (data provided in Workpapers).
[43] *Blue Chip Financial Forecasts* Vol. 42, No. 8 at 2 (Aug. 1, 2024).
[44] [(1 + 0.0902) ∗ (1 + 0.0210) – 1] ∗ 100.
[45] Morningstar Direct (data provided in Workpapers).

Treasury bonds was 5.62 percent.[46] The indicated market risk premium is 6.54 percent (12.16 percent minus 5.62 percent equals 6.54 percent).

The long-term Treasury bond yield of 5.62 percent occurred during a period of inflation of approximately 3.02 percent, thus, implying a real return on long-term Treasury bonds of 2.60 percent.

Q. How does your estimated market risk premium range compare to Kroll and Morningstar's Direct estimate?

A. Kroll makes several estimates of a forward-looking market risk premium based on actual achieved data from the historical period of 1926 through 2023 as well as normalized data. Using this data, Kroll estimates a market risk premium derived from the total return on the securities that comprise the S&P 500, less the income return on Treasury bonds. The total return includes capital appreciation, dividend or coupon reinvestment returns, and annual yields received from coupons and/or dividend payments. The income return, in contrast, only reflects the income return received from dividend payments or coupon yields.

Kroll's range is based on several methodologies. As noted above, Kroll no longer publishes the *SBBI Yearbook.* Utilizing data through 2023 from Morningstar Direct, using the same methodology relied on by Kroll, the market risk premium is 7.32 percent, which is based on the difference between the total market return on common stocks (S&P 500) less the income return on 20-year Treasury bond investments over the 1926-2023 period.[47]

[46] *Id*.
[47] Kroll, 2023 SBBI Yearbook at 191; Morningstar Direct (data provided in Workpapers).

Second, Kroll used the Ibbotson & Chen supply-side model which produced a market risk premium estimate of 6.22 percent.[48] Kroll explains that the historical market risk premium based on the S&P 500 was influenced by an abnormal expansion of P/E ratios relative to earnings and dividend growth during the period, primarily over the last 30 years. Kroll believes this abnormal P/E expansion is not sustainable. In order to control for the volatility of extraordinary events and their impacts on P/E ratios, Kroll takes into consideration the three-year average P/E ratio as well as the current P/E ratio.[49]

Finally, Kroll develops its own recommended equity, or market risk premium, by employing an analysis that takes into consideration a wide range of economic information, multiple risk premium estimation methodologies, and the current state of the economy by observing measures such as the level of stock indices and corporate spreads as indicators of perceived risk. Based on this methodology, and utilizing the higher of a "normalized" risk-free rate of 3.5 percent, Kroll concludes the current expected, or forward-looking, market risk premium is 5.0 percent, implying an expected return on the market of 8.5 percent. However, when the current market risk-free rate exceeds the normalized risk-free rate, Kroll recommends applying the current 20-year Treasury yield of approximately 4.2 percent. Currently, the 20-year Treasury yield is above the

[48] Kroll, *2023 SBBI Yearbook* at 198-201; *See,* Kroll, *Cost of Capital Navigator*, https://www.kroll.com/en/cost-of-capital.
[49] *Id*.

normalized risk-free rate. Hence, based on Kroll's methodology, the risk premium is 9.2 percent.[50]

Importantly, Kroll's market risk premiums are measured over a 20-year Treasury bond. Because I am relying on a projected 30-year Treasury bond yield, the results of my CAPM analysis should be considered conservative estimates for the cost of equity.

Q. What are the results of your CAPM analysis?

A. The current observable beta estimate for my proxy group is approximately 0.87. However, recognizing beta estimates are currently skewed, the average normalized beta estimate for my proxy group is reasonably estimated using the average historical beta estimate of approximately 0.75.

As shown on my Exhibit MPG-20, using a current market risk-free rate of 4.40 percent and a projected market return of 11.31 percent produces a market risk premium of 6.90 percent. When combined with the current beta of 0.87, this indicates a CAPM return estimate of 10.41 percent. I reject this CAPM because the beta estimate is abnormal and not reflective of the investment risk of utility companies.

Using a market return of 11.31 percent, with a projected risk-free rate of 4.30 percent, produces a market risk premium of approximately 7.01 percent. This market risk premium and risk-free rate with a normalized utility beta of 0.75, indicates a CAPM return of 9.54 percent, rounded to 9.60 percent.

[50] Kroll, *Kroll Lowers its Recommended U.S. Equity Risk Premium to 5.0%, Effective June 5, 2024* (July 6, 2024).

As discussed above, the current elevated betas do not reflect the low industry risk for Cascade or the utility industry as a whole. Therefore, I find a more reasonable result using a CAPM study in this case is to use a normalized utility beta, which produces a return on equity of 9.60 percent.

H. Return on Equity Summary

Q. Based on the results of your return on common equity analyses described above, what return on common equity do you recommend for Cascade?

A. Based on my analyses, I recommend Cascade's current market cost of equity be in the range of 8.9 percent to 9.9 percent.

TABLE 10

Return on Common Equity Summary

Description	Results	Range
DCF	9.2%	8.9% to 9.5%
Risk Premium	9.8%	9.7% to 9.9%
CAPM	9.6%	

My market-based return on common equity of 9.40 percent falls at the approximate midpoint of my recommended range of 8.9 percent to 9.9 percent. The low-end of my range is based on my DCF analyses, and the high-end is based on my CAPM and risk premium studies.

My return on equity estimates reflect observable market evidence, the impact of the Fed's policies on current and expected long-term capital market costs, an assessment of the current risk premium built into current market

securities, and a general assessment of the current investment risk characteristics of the regulated utility industry and the market's demand for utility securities.

I. Financial Integrity

Q. Will a 7.16 percent rate of return support an investment grade bond rating for Cascade?

A. Yes. I have reached this conclusion by comparing the key credit rating financial ratios for Cascade at my proposed return on equity and my proposed capital structure to S&P's benchmark financial ratios using S&P's new credit metric ranges.

Q. Please describe the most recent S&P financial ratio credit metric methodology.

A. S&P publishes a matrix of financial ratios corresponding to its assessment of the business risk of utility companies and related bond ratings. On May 27, 2009, S&P expanded its matrix criteria by including additional business and financial risk categories.[51]

Based on S&P's most recent credit matrix, the business risk profile categories are "Excellent," "Strong," "Satisfactory," "Fair," "Weak," and "Vulnerable." Most utilities have a business risk profile of "Excellent" or "Strong."

[51] S&P updated its 2008 credit metric guidelines in 2009, and incorporated utility metric benchmarks with the general corporate rating metrics. Standard & Poor, *RatingsDirect*: *Criteria Methodology: Business Risk/Financial Risk Matrix Expanded* (May 27, 2009).

The financial risk profile categories are "Minimal," "Modest," "Intermediate," "Significant," "Aggressive," and "Highly Leveraged." Most of the utilities have a financial risk profile of "Significant" or "Aggressive." Based on the most recent S&P report, Cascade has a "Strong" business risk profile and an "Aggressive" financial risk profile.

Q. Please describe S&P's use of the financial benchmark ratios in its credit rating review.

A. S&P evaluates a utility's credit rating based on an assessment of its financial and business risks. A combination of financial and business risks equates to the overall assessment of Cascade's total credit risk exposure. On November 19, 2013, S&P updated its methodology. In its update, S&P published a matrix of financial ratios that defines the level of financial risk as a function of the level of business risk.

S&P publishes ranges for primary financial ratios that it uses as guidance in its credit review for utility companies. The two core financial ratio benchmarks it relies on in its credit rating process include: (1) Debt to Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA); and (2) Funds From Operations (FFO) to Total Debt.[52]

Q. How did you apply S&P's financial ratios to test the reasonableness of your rate of return recommendations?

[52] Standard & Poor, *RatingsDirect*: *Criteria: Corporate Methodology* (Nov. 19, 2013).

A. I calculated each of S&P's financial ratios based on Cascade's cost of service for its regulated utility operations in its Washington service territory. While S&P would normally look at total consolidated Cascade financial ratios in its credit review process, my investigation in this proceeding is not the same as S&P's. I am attempting to judge the reasonableness of my proposed cost of capital for rate-setting in Cascade's regulated utility operations. Hence, I am attempting to determine whether my proposed rate of return will support cash flow metrics, balance sheet strength, and earnings that will in turn support an investment grade bond rating and Cascade's financial integrity.

Q. Did you include any Off-Balance-Sheet (OBS) debt equivalents?

A. No. However, I included the Company's STD obligations in calculating its adjusted debt ratio.

Q. Please describe the results of this credit metric analysis as it relates to Cascade.

A. The S&P financial metric calculations for Cascade at a 9.40 percent return and my proposed capital structure are developed on Exhibit MPG-21, page 1. The credit metrics produced below, with Cascade's financial risk profile from S&P of "Aggressive" and business risk profile of "Strong," will be used to assess the strength of the credit metrics based on Cascade's retail operations in the state of Washington.

The adjusted debt ratio for credit metric purposes assuming an authorized equity ratio of 47 percent is 53 percent. This ratio is consistent with the adjusted

debt ratio of 53.3 percent for a typical utility with a BBB credit rating, as shown on page 3 of my Exhibit MPG-21.

Based on an equity return of 9.40 percent and the Company's last approved common equity ratio of 47 percent, Cascade will be provided an opportunity to produce a Debt to EBITDA ratio of 4.6x. This is at the low end of S&P's "Aggressive" guideline range of 4.5x to 5.5x.[53]

Cascade's retail utility operations FFO to total debt coverage at a 9.40 percent equity return and 47 percent equity ratio is 16 percent, which is within S&P's "Significant" metric guideline range of 13 percent to 23 percent. This ratio is again within the FFO/total debt range that will support Cascade's credit rating.

I conclude that Cascade's core credit metrics ratios based on the Company's last approved capital structure and my return on equity will support its investment grade credit rating of BBB.

Q. Does this financial integrity assessment support your recommended overall rate of return for Cascade?

A. Yes. As noted above, I believe my return on equity and my proposed capital structure represent fair compensation in today's low capital market costs, and as outlined above, my overall rate of return will provide Cascade an opportunity to earn credit metrics that will support its bond rating.

[53] Standard & Poor, *RatingsDirect*: *Criteria: Corporate Methodology* (Nov. 19, 2013).

IV. RESPONSE TO COMPANY WITNESS ANN E. BULKLEY

A. Summary of Rebuttal

Q. What return on common equity is Cascade proposing in this proceeding?

A. Ms. Bulkley recommends a return on equity in the range of 10.25 percent to 11.25 percent with a Company requested return on equity of 10.50 percent.[54] Ms. Bulkley's recommendation reflects her assessment of the current capital market conditions and the Company's business risks relative to the companies included in her proxy group.

Q. Are Ms. Bulkley's return on equity estimates reasonable?

A. No. Ms. Bulkley's estimated return on equity is overstated and should be rejected. Ms. Bulkley's analyses produce excessive results for various reasons, including the following:

1. Her constant growth DCF results are based on unsustainably high growth rates;
2. Her CAPM is based on inflated market risk premiums;
3. Ms. Bulkley's Empirical CAPM (ECAPM) is based on a flawed methodology; and
4. Both Ms. Bulkley's CAPM and risk premium studies are based on projected interest rates that are highly uncertain and unreliable.

Q. Please compare your recommended return on equity with Ms. Bulkley's return on equity estimates.

A. Ms. Bulkley's return on equity estimates are summarized in Table 11 below. In the "Gorman Adjusted" Column 2, I show the results with prudent and sound

[54] Bulkley, Exh. AEB-1T at 5:25–6:2.

adjustments to correct the flaws referenced above. With these adjustments to Ms. Bulkley's proxy group's DCF and CAPM return estimates, Ms. Bulkley's studies reflect that my 9.40 percent recommended return on equity for Cascade is reasonable.

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TABLE 11

Bulkley's Adjusted Return on Equity Estimates

Description	Bulkley Mean / Median[1] (1)	Gorman Adjusted (2)
Constant Growth DCF		
30-Day Average	10.71% / 10.17%	9.13% / 9.30%
90-Day Average	10.78% / 10.25%	9.22% / 9.40%
180-Day Average	10.62% / 10.20%	9.04% / 9.30%
Average	10.70% / 10.21%	9.13% / 9.33%
CAPM DCF-Derived Results (*Value Line* Beta)		
Current 30-Yr Treasury (4.19%)	11.09%	10.30%
Near-Term Projected 30-Yr Treasury (4.10%)	11.08%	10.30%
Long-Term Projected 30-Yr Treasury (4.10%)	11.08%	Reject
CAPM DCF-Derived Results (Bloomberg Beta)		
Current 30-Yr Treasury (4.19%)	10.31%	9.60%
Near-Term Projected 30-Yr Treasury (4.10%)	10.29%	9.60%
Long-Term Projected 30-Yr Treasury (4.10%)	10.29%	Reject
CAPM DCF-Derived Results (Historical Beta)		
Current 30-Yr Treasury (4.19%)	10.12%	9.50%
Near-Term Projected 30-Yr Treasury (4.10%)	10.10%	9.50%
Long-Term Projected 30-Yr Treasury (4.10%)	10.10%	Reject
ECAPM	10.63% to 11.38%	Reject
Risk Premium		
Current 30-Yr Treasury (4.19%)	10.30%	9.60%
Near-Term Projected 30-Yr Treasury (4.10%)	10.25%	9.60%
Long-Term Projected 30-Yr Treasury (4.10%)	10.25%	Reject
Recommended Return on Equity	10.50%	9.40%

Sources: [1] Bulkley, Exh. AEB-1T at 73 & Exh. AEB-3.

As shown in Table 11 above, reasonable adjustments to Ms. Bulkley's return on equity estimates support a return on equity for Cascade of 9.40 percent.

B. Reliability of DCF and CAPM Return Estimates

Q. Does Ms. Bulkley comment on the reliability of market-based models to measure a fair return on equity for Cascade?

A. Yes. Ms. Bulkley opines that the traditional DCF and CAPM (based on current risk-free rates) analyses are not producing reasonable results at this time due to the current capital market conditions. She states that the DCF model, which relies on historical averages, is likely to understate the cost of equity for Cascade and needs to be considered with caution.[55] She also opines that it is important now to consider projected market data.[56]

Q. Has Ms. Bulkley identified anything different in this case to distinguish the projections that have been offered over the last five to 10 years but have yet to materialize?

A. No. Even though interest rates have recently increased due to the Fed's intervention as discussed above, they have remained relatively stable. Importantly, Ms. Bulkley's own data shows that the projected interest rates are actually lower than the current interest rates. For example, in her CAPM analyses she uses a current risk-free rate of 4.19 percent, and near-term and long-term projected risk-free rates of 4.10 percent. Also, I show that interest rate projections by independent consensus economists over the next five to 10-years have been

[55] *Id*. at 5:26–27.
[56] *Id.* at 14:26–27.

moderated. This is clear evidence that today's market is embracing the sustainability of the current capital market costs. A comparison of the components of the DCF return for utilities generally to other income return investment options and growth investment options shows that the results of DCF models are producing accurate estimates of the current market cost for utility companies.

Q. Please explain why you believe the DCF models produce a reasonable estimate of Cascade's market cost of common equity.

A. The DCF model produces an economically logical estimate of the current market cost of equity and a return that is comparable with observable returns in alternative investments of comparable risk. The DCF model sums the observable dividend yield on utility stocks and then adds to that an estimate of expected growth. These two components yield DCF returns that are comparable to alternative investments, and, thus, reasonably reflect the current market cost of capital for Cascade.

Specifically, as shown on my Exhibit MPG-4 (pages 5 and 13), the 2024 dividend yield of electric (4.14 percent) and gas (4.16 percent) utility stock is lower than the 13-week average yield on "A" rated utility bonds (5.59 percent). Historically, the stock yield spread has been at a positive spread to that of "A" rated utility bond yields as shown on my Exhibit MPG-4 (pages 5 and 13). The stock yield spread relative to the "A" rated utility bond yield spread during the study period has converged to more normal levels relative to the onset of the COVID-19 period, where stock spreads were actually at a negative level. The current stock yield is currently below the historical utility stock versus utility

bond yield spread. This suggests that the risk premium for stock investments versus utility bond investments is below the historical average. The yield component of the DCF model is comparable to alternative income investments, and produces a reasonable estimate of the current market level of income for comparable risk investments.

The growth component of the DCF return relates to earnings and stock growth over time. The growth outlook for utility stocks is not depressed generally, but rather provides a robust outlook for dividends and stock price growth. The DCF return is not understated due to the DCF growth rate component. On the contrary, due to these high growth rate estimates relative to the growth rate of the U.S. economy as described above, the DCF model produces high return estimates.

Additionally, the annual growth in dividends for utilities over the last 19 years has been approximately 4.01 percent for electric and 4.94 percent for gas as shown on my Exhibit MPG-4 (pages 6 and 14). In my constant growth DCF study presented above, the current three-to five-year forward projected growth rate for electric utilities is approximately 5.58 percent, which is higher than the historical growth rate for the electric and gas industry. Furthermore, utility earnings growth is expected to be considerably more robust than U.S. GDP growth, which generally is regarded as a reasonable proxy for the maximum sustainable rate of growth for investor capital markets. Going forward, long-term internal growth for equity investments is around 4.20 percent, as described above. Based on these factors, the growth rate component of a regulated utility DCF return is quite robust and produces a highly competitive DCF return estimate.

For these reasons, both dividend yield and growth components of a utility DCF indicate an economically logical return estimate that is competitive with comparably risky alternative investments.

C. Ms. Bulkley's Constant Growth DCF Models

Q. Please describe Ms. Bulkley's constant growth DCF return estimates.

A. Ms. Bulkley's constant growth DCF returns are developed on her Exhibit AEB-4. Ms. Bulkley's constant growth DCF models are based on consensus growth rates published by *Yahoo! Finance* and *Zacks* and individual growth rate projections made by *Value Line*. The average and median growth rate estimates for her proxy group are approximately 6.42 percent and 6.65 percent, respectively.

She relied on dividend yield calculations based on average stock prices over three different time periods: 30-day, 90-day, and 180-day ending January 31, 2024–all reflecting a half year of dividend growth adjustments. Ms. Bulkley's average mean and median DCF results are 10.70 percent and 10.21 percent, respectively.[57]

Q. Are the constant growth DCF results produced by Ms. Bulkley reasonable?

A. No. My major concern with Ms. Bulkley's DCF study is her use of unsustainable growth rate estimates. As discussed in regard to my own DCF study, the current consensus analysts' growth rates are higher than the long-term sustainable growth rate of 4.20 percent. Specifically, Ms. Bulkley's constant growth DCF model is based on an average growth rate of approximately 6.50 percent for her proxy

[57] Bulkley, Exh. AEB-4 at 36, 73; Bulkley, Exh. AEB-4.

group. This growth rate is excessive and cannot reasonably be expected to last into perpetuity, the time period which is assumed by the constant growth DCF model. As I discussed in detail above, company growth rates that exceed the growth rate of GDP in the economy in which a company provides goods and services cannot be sustained. I also discussed how over time, even with extended capital investment, growth rates will slow. Therefore, it is necessary to consider a multi-stage DCF model, which reflects a sustainable rate of growth.

Q. Is there a way to correct Ms. Bulkley's DCF model to produce a reasonable DCF return?

A. Yes. In Column 2 of Table 11 above and my Exhibit MPG-22, using Ms. Bulkley's data, I present the results of a multi-stage DCF model that is similar to my multi-stage model that reflects a reasonable long-term sustainable growth rate of 4.20 percent, as discussed in regard to my own studies.

Ms. Bulkley's DCF mean and median adjusted results generally support a return on equity of around 9.20 percent for her proxy group. This multi-stage analysis reflects the short-term growth rate used by Ms. Bulkley in her constant growth analysis and the impact on a more economically logical DCF dividend stream that could be used to value the stocks.

D. Ms. Bulkley's CAPM Studies

Q. Please describe Ms. Bulkley's CAPM analysis.

A. As indicated above, the CAPM analysis is based upon the theory that the market-required rate of return for a security is equal to the risk-free rate plus a

risk premium associated with the specific security. The risk premium associated with the specific security is expressed mathematically as:

B_i = Beta (measure of risk for stock)
R_m = Expected return for the market portfolio
R_f = Risk-free rate

Ms. Bulkley's CAPM model is based on proxy group average beta estimates of 0.86 from *Value Line*, 0.76 from Bloomberg, and a historical beta estimate of 0.74. She also relied on a market risk premium in the range of 8.03 percent to 8.12 percent and current risk-free rate of 4.19 percent, near-term projected risk-free rate of 4.10 percent and long-term projected risk-free rate of 4.10 percent. These parameters produced a CAPM return in the range of 10.10 percent to 11.09 percent.[58]

Q. Please describe the issues you have with Ms. Bulkley's CAPM studies.

A. I have two primary issues with Ms. Bulkley's CAPM studies. First, I believe the market risk premiums she used in all her CAPM studies are overstated because they do not reflect a reasonable estimate of the expected return on the market. Second, Ms. Bulkley relies on a projected risk-free rate based on the 30-year Treasury yield for 2025 to 2029. Ms. Bulkley's consistent reliance on projected interest rates is unreasonable and should be rejected.

Q. Please describe Ms. Bulkley's analysis with regard to market risk premiums.

A. Ms. Bulkley derived her market risk premiums by conducting a DCF analysis for the market (S&P 500). Ms. Bulkley used two market risk premium estimates of

[58] Bulkley, Exh. AEB-6.

8.03 percent and 8.12 percent, based on a DCF market return of 12.22 percent less the current, near-term and projected 30-year Treasury bond yields of 4.19 percent, 4.10 percent, and 4.10 percent, respectively.[59]

Q. Please describe your disagreements with regard to Ms. Bulkley's market risk premium estimates.

A. Ms. Bulkley's DCF-derived market risk premium is based on a market return of 12.22 percent, which consists of a growth rate component of 10.51 percent and market-weighted dividend yield of 1.63 percent.[60] As discussed above with respect to my own DCF model, the DCF model requires a reasonable long-term sustainable growth rate. Ms. Bulkley's sustainable market growth rate of 10.51 percent is far too high to be a rational outlook for sustainable long-term market growth. This growth rate is more than two and a half times the growth rate of the U.S. GDP long-term growth outlook of 4.20 percent.

As a result of these unreasonable long-term market growth rate estimates, Ms. Bulkley's market DCF returns used in her CAPM analyses are inflated and not reliable. Consequently, Ms. Bulkley's market risk premiums should be given minimal weight in estimating Cascade's CAPM-based return on equity.

Q. Do historical actual returns on the market support Ms. Bulkley's projected market returns?

A. No. Historical data shows just how unreasonable Ms. Bulkley's projected DCF return on the market is on a going-forward basis. Applying Kroll's methodology,

[59] *Id.*
[60] Bulkley, Exh. AEB-8.

and using updated data from Morningstar Direct, the actual capital appreciation for the S&P 500 over the period 1926 through 2023 have been 6.2 percent to 8.1 percent. This contrasts sharply to Ms. Bulkley's own projected growth rate of the market of 10.51 percent.

Further, historically the geometric growth of the market of 6.2 percent[61] has reflected geometric growth of GDP over this same time period of approximately 6.0 percent.[62]

Notably, this review of historical data establishes two facts. First, historical, actual achieved growth has been substantially less than the one projected by Ms. Bulkley. Second, historical growth of the market has tracked historical growth of the U.S. GDP. Projected growth of the U.S. GDP is now closer to the 4.0 percent to 4.5 percent range. All this information strongly supports the conclusion that Ms. Bulkley's projected growth rate on the market of 10.51 percent is substantially overstated. While I do not endorse the use of a historical growth rate to draw assessments of the market's forward-looking growth rate outlooks, this data can be used as a check of Ms. Bulkley's market return estimate and to show how unreasonable and inflated it is.

Q. Why do you believe Ms. Bulkley's reliance on a projected long-term risk-free rate is unreasonable?

[61] *Id*.
[62] U.S. Bureau of Economic Analysis, *Gross Domestic Product, First Quarter 2024 (Advance Estimate),* (May 30, 2024).

A. Ms. Bulkley relies primarily on projected yields because of her assumption that interest rates will remain at the current high levels.[63] This bond yield is largely based on projections of long-term Treasury bond yields five years out (2025-2029). In fact, her own data shows the opposite. Ms. Bulkley's long-term projected risk-free rate of 4.10 percent is lower than the current risk-free rate of 4.19 percent and the same as the near-term projected risk-free rate of 4.10 percent. The long-term projections are highly uncertain, and may not reflect the cost of capital in the test year, the period in which rates determined in this proceeding will largely be in effect. As such, the market risk premium should be based on observable bond yields in the market today. Alternatively, the market risk premium should at most reflect bond yield projections through the rate-effective period in this case.

Q. Do you have any further comments regarding Ms. Bulkley's CAPM analyses?

A. Yes. Ms. Bulkley recognizes the recent increase in utility betas and she offers an alternative CAPM analysis relying on historical or long-term average *Value Line* beta estimates for the period 2013 to 2023, which produces a return on equity that is about 100 basis points lower than the CAPM returns produced by the current beta. Importantly, Ms. Bulkley also used Bloomberg betas based on 10 years of weekly returns, which produced betas much lower than the *Value Line* betas

[63] Bulkley, Exh. AEB-1T at 14:26–27.

affected by the recent market anomalies triggered at the onset of the COVID-19 pandemic as described above.

Q. Can Ms. Bulkley's CAPM analysis be revised to reflect a more reasonable market risk premium?

A. Yes. Using my updated forward-looking risk-free rate of around 4.30 percent, her average current *Value Line* and Bloomberg beta estimates of 0.86 and 0.76,[64] and my market return of around 11.31 percent, Ms. Bulkley's CAPM will be approximately 10.30 percent and 9.60 percent, respectively.[65] Using the same parameters and Ms. Bulkley's historical *Value Line* beta of 0.74,[66] her alternative CAPM will produce returns of approximately 9.50 percent.[67] As discussed above in regard to my own CAPM analysis, the current betas produce CAPM returns that do not correspond to the low risk of the regulated utilities. Therefore, I find the results of Ms. Bulkley's revised CAPM of approximately 9.50 percent more reliable.

E. Ms. Bulkley's Empirical Capital Asset Pricing Model (ECAPM) Studies

Q. Please describe Ms. Bulkley's ECAPM analysis.

A. Ms. Bulkley relies on empirical tests of the traditional CAPM model to modify it in such a way to attempt to *correct* the original CAPM for some deficiencies inherent in the original model. Empirical tests show that the expected return line,

[64] Bulkley, Exh. AEB-6.
[65] 4.30% + 0.86 x (11.31% - 4.30%) = 10.33% and 4.30% + 0.76 x (11.31% - 4.30%) = 9.63%.
[66] Bulkley, Exh. AEB-7.
[67] 4.30% + 0.74 x (11.31% - 4.30%) = 9.49%.

or security market line, predicted by the CAPM is not as steep as the model would have us believe. In other words, the traditional CAPM understates the expected return for securities with betas less than one, and overstates the expected return for securities with betas greater than one. In order to correct for this empirical finding, Ms. Bulkley modifies the traditional CAPM model as follows:

$$R_i = R_f + 0.75 \times B_i \times (R_m - R_f) + 0.25 \times B_m \times (R_m - R_f)$$

R_i = Required return for stock *i*
R_f = Risk-free rate
R_m = Expected return for the market portfolio
B_m = Beta (measure of market volatility)
B_i = Beta (measure of stock price volatility)

Q. What issues do you take with Ms. Bulkley's ECAPM analysis?

A. The principal issue I have with Ms. Bulkley's ECAPM analysis is her use of an adjusted beta as published by *Value Line*. The impact of Ms. Bulkley's ECAPM adjustments increases her beta estimate range of 0.74 to 0.86 to a range of 0.81 to 0.90.[68] The weighting adjustments applied in the ECAPM are mathematically the same as adjusting beta since the inputs are all multiplicative as shown in the formula above. In other words, Ms. Bulkley's adjustment to the betas is duplicative of the adjustments the ECAPM already makes to correct for any shortcomings of the traditional CAPM. As a result, her model produces overstated results.

Further, Ms. Bulkley's reliance on an adjusted *Value Line* beta in her ECAPM study is inconsistent with the academic research that I am aware of

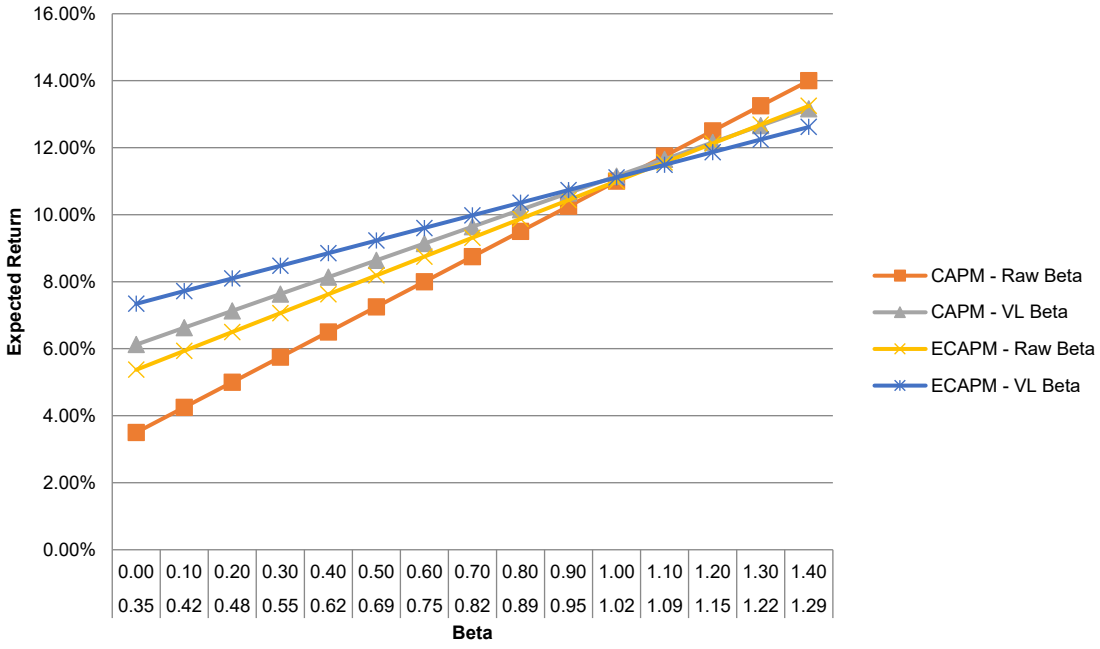
[68] 75% x 0.74 + 25% x 1 = 0.81 and 75% x 0.86 + 25% x 1 = 0.90.

supporting the development of the ECAPM.[69] The end result of using adjusted betas in the ECAPM is essentially an expected return line that has been flattened by two adjustments. In other words, the vertical intercept has been raised twice and the security market line has been flattened twice: once through the adjustments *Value Line* made to the raw beta, and again by weighting the risk-adjusted market risk premium as Ms. Bulkley has done. In addition to the many adjustments employed by Ms. Bulkley, she further increases the intercept and flattens the security market line by using projected long-term Treasury yields that are at odds with current market expectations and inconsistent with the Fed's projections and monetary policy.

Ms. Bulkley goes over the theory of the ECAPM at pages 41-43 of her direct testimony. The ECAPM with adjusted betas has the effect of increasing CAPM return estimates for companies with betas less than one, and decreasing the CAPM return estimates for companies with betas greater than one. I have modeled the expected return line resulting from the application of the various forms of the CAPM/ECAPM below in Figure 7.

[69] *See* Black, Fischer, *Beta and Return* 8-18 (J. Portfolio Mgmt., Fall 1993); and Black, Fischer, et. al., *The Capital Asset Pricing Model: Some Empirical Tests*, (1972).

FIGURE 7
Variations of the CAPM



Along the horizontal axis in Figure 7 above, I have provided the raw unadjusted beta (top row) and the corresponding adjusted *Value Line* beta (bottom row). As shown in Figure 7 above, the CAPM using a *Value Line* beta compared to the CAPM using an unadjusted beta shows that the *Value Line* beta raises the intercept point and flattens the slope of the security market line. As shown in the figure above, the two variations with the most similar slope are the CAPM with the *Value Line* beta, and the ECAPM with a raw beta. This evidence shows that the ECAPM adjustment has a very similar impact on the expected return line as a *Value Line* beta. Another observation that can be made from the figure above is the magnifying effect that the ECAPM using a *Value Line* beta has on raising the vertical intercept and flattening the slope relative to all other variations. It is unreasonable to use an adjusted beta within an ECAPM because it unjustifiably

alters the security market line and materially inflates a CAPM return for a company with a beta less than one.

Q. In your experience, is Ms. Bulkley's proposed use of an adjusted beta in an ECAPM study consistent with widely accepted practices in the regulatory field?

A. No. In my experience, regulatory commissions generally disregard the use of the ECAPM, particularly when an adjusted beta is used in the model. For example, the Illinois Commerce Commission (ICC) has stated the following regarding the ECAPM:

> The Commission cannot recall a proceeding in which it relied upon the ECAPM in establishing the cost of common equity for a utility. In the instant proceeding, the record supports a finding that use of adjusted betas in the ECAPM is inappropriate. As Staff witness Ms. Freetly explained, by using adjusted betas she already effectively transformed her Traditional CAPM into an ECAPM. Therefore, including an additional beta adjustment in the ECAPM model would result in inflated estimates of the samples' cost of common equity.[70]

Similarly, in a more recent Nicor Gas rate case the ICC stated:

> The Company also used ECAPM analyses and bond yield plus risk premium models to determine an ROE, which the Commission has also historically rejected.[71]

[70] *Illinois-American Water Company Proposed General Increase in Water & Sewer Rates*, Docket No. 11-0767, Final Order at 109 (Ill. Com. Comm'n Sept. 19, 2012).
[71] *Northern Illinois Gas Company d/b/a Nicor Gas C*o., Docket No. 21-0098, Final Order at 94 (Ill. Com. Comm'n, Nov. 18, 2021).

The California Public Utilities Commission has even more recently noted:

> We are not persuaded that ECAPM produces a result that should be considered. Electric utilities in general have low betas. Adjusting betas upward guarantees a higher ROE.[72]

Therefore, the Commission should reject Ms. Bulkley's ECAPM, which as described above is based on adjusted beta estimates.

F. Ms. Bulkley's Bond Yield Plus Risk Premium (RP)

Q. Please describe Ms. Bulkley's RP methodology.

A. As shown on her Exhibit AEB-9, Ms. Bulkley constructs a risk premium return on equity estimate based on the premise that equity risk premiums are inversely related to interest rates. She estimates an average equity risk premium of 5.29 percent over the period January 1980 through January 31, 2024.[73] She then applies a regression formula to the current, near-term, and long-term projected 30-year Treasury bond yields of 4.19 percent, 4.10 percent, and 4.10 percent, respectively, to produce equity risk premiums of 6.11 percent, 6.15 percent, and 6.15 percent, respectively. Thus, she calculates return on equity estimates of 10.30 percent, 10.25 percent, and 10.25 percent, respectively.[74]

Q. Do you agree with Ms. Bulkley's RP methodology?

A. No. Ms. Bulkley contends that there is a simplistic inverse relationship between equity risk premiums and interest rates without any regard to differences in

[72] *In re Pacific Gas and Electric Co. to Reset the Cost of Capital Adjust. Mechanism*, App. 22-04-008 et. al., Decision Addressing 2023 Cost of Capital Pacific Gas et al. at 23 (Pub. Utils. Comm'n of Cal., Dec. 19, 2022).
[73] Bulkley, Exh. AEB-1T at 45:3–16.
[74] Bulkley, Exh. AEB-9.

investment risk. Academic studies are clear that interest rates are a relevant factor in assessing current market equity risk premiums, but the risk premium ties more specifically to the market's perception of investment risk of debt and equity securities, and not simply changes in interest rates.

More specifically, while academic studies have shown that, in the past, there has been an inverse relationship among these variables, researchers have found that the relationship changes over time and is influenced by changes in perception of the risk of bond investments relative to equity investments, and not simply changes to interest rates.[75]

In the 1980s, equity risk premiums were inversely related to interest rates, but that was likely attributable to the interest rate volatility that existed at that time. As such, when interest rates were more volatile, perceptions of bond investment risk increased relative to the investment risk of equities. This changing investment risk perception caused changes in equity risk premiums.

In today's marketplace, interest rate volatility is not as extreme as it was during the 1980s.[76] Nevertheless, changes in the perceived risk of bond investments relative to equity investments still drive changes in equity premiums and cannot be measured simply by observing nominal interest rates. Changes in nominal interest rates are heavily influenced by changes to inflation outlooks,

[75] Robert S. Harris & Felicia C. Marston, *The Market Risk Premium: "Expectational Estimates Using Analysts' Forecasts,* Vol. 11. No. 1 J. Applied Fin. 10-13 (2001); Eugene F. Brigham, et. al., *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Fin. Mamt. at 42-43 (Spring, 1985).
[76] Eugene F. Brigham, et. al., *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Fin. Mamt. at 44 (Spring, 1985).

which also change equity return expectations. As such, the relevant factor needed to explain changes in equity risk premiums is the relative changes between the risk of equity versus debt investments, and not simply changes in interest rates.

Importantly, Ms. Bulkley's analysis also ignores investment risk differentials. She bases her adjustment to the equity risk premium exclusively on changes in nominal interest rates. This is a flawed methodology that does not produce accurate or reliable risk premium estimates.

Q. Do you believe that the regression study used by Ms. Bulkley in her RP demonstrates an accurate cause and effect between interest rates and equity risk premiums?

A. No. Because the returns on equity she uses are authorized by commissions, those returns are not directly adjusted by market forces. While I also use commission-authorized returns as a proxy for market-required returns, it is significant that Ms. Bulkley uses a simple regression analysis that tries to describe and gauge equity risk premiums based on only changes in interest rates.

Equity risk premiums can move based on changes in market conditions that can impact both equity returns and bond returns in a like manner. This simplistic regression analysis of equity risk premiums and interest rates ignores these relevant market factors in describing the current market-required equity risk premium.

Q. Can Ms. Bulkley's RP analysis be revised to reflect current projections of Treasury yields?

A. Yes. Ms. Bulkley's basic and incomplete notion that equity risk premiums change only with changes to nominal interest rates should be rejected. Therefore, disregarding her inverse relationship methodology and adding her average equity risk premium over Treasury bonds of 5.29 percent to an updated near-term projected Treasury yield of 4.30 percent published by independent economists, produces an RP of approximately 9.59 percent, rounded to 9.60 percent.

G. Ms. Bulkley's Consideration of Additional Risks

Q. Did Ms. Bulkley discuss consideration of additional business risks to justify her return on equity?

A. Yes. Ms. Bulkley believes that the Company is exposed to several additional risks that should be accounted for: (1) small size, (2) flotation costs, (3) the impact of Washington's greenhouse gas reduction initiatives, and (4) regulatory risk. Ms. Bulkley believes that these additional risks should be considered in determining a fair return on equity for Cascade.[77]

Q. Do you believe that Cascade faces risks that are comparable to the risks faced by Ms. Bulkley's and your proxy group companies?

A. The utility business risks identified by Ms. Bulkley are already considered in the assigning of a credit rating by the various credit rating agencies. As noted above, Cascade has an investment grade bond rating that reasonably aligns with the proxy group used to estimate a fair risk adjusted return.[78]

[77] Bulkley, Exh. AEB-1T at 46:1-68:12.
[78] Albeit, Cascade was recently downgraded due to a planned spinoff to MDU shareholders of an affiliate by its parent company MDU. S&P Global Ratings, *MDU Resources Group Inc. And Cascade Natural Gas Downgraded to BBB, Outlooks Negative; Rating Actions On Other Subs*, (Nov. 8, 2023).

Q. How does S&P assign corporate credit ratings for regulated utilities?

A. In assigning corporate credit ratings, the credit rating agency considers both business and financial risks. Business risks, among others, include a company's size, competitive position, generation portfolio, and capital expenditure programs, as well as consideration of the regulatory environment, current state of the industry, and the economy as whole. Specifically, S&P states:

> To determine the assessment for a corporate issuer's business risk profile, the criteria combine our assessments of industry risk, country risk, and competitive position. Cash flow/leverage analysis determines a company's financial risk profile assessment. The analysis then combines the corporate issuer's business risk profile assessment and its financial risk profile assessment to determine its anchor. In general, the analysis weighs the business risk profile more heavily for investment-grade anchors, while the financial risk profile carries more weight for speculative-grade anchors.[79]

As mentioned above, regulatory risk is a key credit rating consideration by credit analysts in assigning utilities' business risk, which is fully reflected in the utility's bond rating. Ms. Bulkley's focus on a limited number of investment risk characteristics, while ignoring many other significant risk factors such as actual financial performance of Washington utilities generally, and Cascade specifically, renders her analysis incomplete and her findings inconclusive. Credit analysts consider all these risk factors, along with all other risk factors, in assigning a bond rating. Therefore, including companies that have similar investment risk to Cascade by reviewing a bond rating of the proxy group companies is a more robust and reliable assessment of total investment risk, including these specific

[79] Standard & Poor, RatingsDirect*: Criteria/Corporates/General: Corporate Methodology*, (Nov. 19, 2013).

line item risks identified by Ms. Bulkley in selecting comparable risk proxy group companies.

1. Flotation Costs

Q. Did Ms. Bulkley include a flotation cost adjustment in her recommended return for Cascade?

A. Ms. Bulkley did not make an explicit adjustment to account for flotation costs because the Commission has not authorized recovery in prior regulatory proceedings. However, she quantifies the impact of flotation costs in her Exhibit AEB-11.[80] Ms. Bulkley calculated an upward adjustment of 16 basis points to her return results to compensate for flotation costs. She developed her flotation cost adjustment by observing the cost MDU Resources (Cascade's parent company) incurred in issuing equity securities in November 2002 and February 2004. The costs incurred on these two historical issuances averaged around 3.68 percent of the issuance amount.

Next, Ms. Bulkley developed a constant growth DCF model for the proxy group with and without issuance costs to derive her average flotation cost adjustment of 16 basis points.[81]

Q. Is Ms. Bulkley's flotation cost adjustment reasonable?

A. No. While she does not make a specific adjustment, Ms. Bulkley's calculation of flotation costs is not reasonable nor justified because it is not based on the recovery of prudent and verifiable actual flotation costs incurred by Cascade,

[80] Bulkley, Exh. AEB-1T at 52:12–56:16.
[81] Bulkley, Exh. AEB-11.

which I understand has long been the standard applied by the Commission in determining whether a flotation cost adjustment is appropriate. That is, the Commission, in determining whether a flotation cost adjustment is appropriate, considers whether the cost is actually incurred by the utility and is reasonable. MDU Resources receives dividend payments from its various subsidiaries and can do whatever it wants with that capital, such as redistributing it to another subsidiary. Paid-in capital at Cascade can also be derived from debt capital issued by MDU Resources. Ms. Bulkley has failed to show that the entirety of Cascade's paid-in capital portion of its common equity balance was derived from common equity issuances at its parent company, or that Cascade itself incurred any actual flotation costs, much less shown that any actual flotation costs which have been incurred by Cascade are reasonable.

Because she does not show that her consideration of flotation costs reflects Cascade's actual and verifiable flotation expenses, there are no means of verifying whether Ms. Bulkley's assessment of such costs is reasonable or appropriate. Stated differently, Ms. Bulkley's flotation costs estimate should be rejected as it is not based on known and measurable Cascade costs. Therefore, the Commission should reject any flotation cost return on equity adder, explicit or implicit, for Cascade.

2. Size Adjustment

Q. Did Ms. Bulkley include a size adjustment in her recommended return for Cascade?

A. No. Ms. Bulkley did not make an explicit size adjustment. However, she considers it in her recommended return on equity determination. She concludes that a return on equity above the average of her range is appropriate.[82]

Q. Please describe Ms. Bulkley's size adjustment.

A. Ms. Bulkley's size adjustment return on equity adder is based on estimates made by *Kroll Cost of Capital Navigator*. Kroll estimates various size adjustments based on differentials in beta estimates tied to the size of a company. Ms. Bulkley states that the capitalization for companies included in her proxy group fall in Kroll's 5th Decile, which warrants a size adjustment of a 95 basis points. Similarly, she estimates a size adjustment of 199 basis points based on Cascade's implied capitalization, which falls in the Kroll's 9th Decile. Hence, Ms. Bulkley concludes that a size adjustment of 104 (199-95) basis points is reasonable.[83]

Q. Why do you find Ms. Bulkley's size adjustment inappropriate?

A. There are several problems with this size adjustment. First, Ms. Bulkley applied a size adjustment without even considering the average capitalization of her proxy groups relative to the capitalization of MDU Resources, Cascade's parent company, to determine whether a size adjustment is even appropriate. A return on equity adder is not justified in the way performed by Ms. Bulkley. Specifically,

[82] Bulkley, Exh. AEB-1T at 52:3–11.
[83] Bulkley, Exh. AEB-1T at 48:12–49:4 and Exh. AEB-10.

MDU Resources has a market capitalization of approximately $5.05 billion, which is higher than the capitalization of her proxy group ($3.46 billion) and puts it in Kroll's 4th Decile.[84] Therefore, the size adjustment is not warranted. With a capitalization of $3.46 billion, the proxy companies fall in Kroll's 5th Decile, which is about two thirds of the capitalization of MDU Resources. Therefore, if any size adjustment is applied it should be negative and it will reduce the return on equity produced by Ms. Bulkley's CAPM analysis.

Stated very simplistically, the holding company, which owns Cascade, has a market capitalization that is higher than that of the proxy groups' average market capitalization. Cascade gets its equity from equity infusions from its parent company and earnings it retains from operations. Cascade does not sell stock to the market. For this reason, the market capitalization of its parent company is what is relevant in assessing Cascade's market capitalization risk.

Finally, the size adjustment, as applied by Ms. Bulkley, is not risk comparable to Cascade.

Q. Why is Ms. Bulkley's size adjustment not risk comparable to Cascade?

A. Her size adjustment is based on companies that have significantly more systematic risks that are not reflective of the utility industry or Cascade. The size adjustments relied on by Ms. Bulkley reflects companies that have unadjusted beta estimates well in excess of 1.00.[85] I have provided the beta estimates, as calculated by Kroll for each decile below in Table 12.

[84] *Id*.
[85] Kroll Cost of Capital Navigator, *2024 CRSP Deciles Study,* (Dec. 31, 2023).

TABLE 12

Kroll Size Adjustments and Corresponding Betas

CRSP	Market Cap ($ Bill)[1]		Size	Beta		
Decile	Smallest	Largest	Premium[1]	Kroll[1]	VL Proxy[2]	Raw Proxy[3]
1	$36,943	$2,662,326	-0.06%	0.92	0.86	0.76
2	$14,911	$ 36,391	0.46%	1.04	0.86	0.76
3	$ 7,494	$ 14,820	0.61%	1.10	0.86	0.76
4	$ 4,622	$ 7,461	0.64%	1.13	0.86	0.76
5	$ 3,011	$ 4,622	0.95%	1.16	0.86	0.76
6	$ 1,864	$ 3,011	1.21%	1.18	0.86	0.76
7	$ 1,050	$ 1,862	1.39%	1.25	0.86	0.76
8	$ 556	$ 1,046	1.14%	1.30	0.86	0.76
9	$ 213	$ 555	1.99%	1.33	0.86	0.76
10	$ 2	$ 213	4.70%	1.38	0.86	0.76

Sources:
[1]Kroll Cost of Capital Navigator, 2024 CRSP Decile Study December 31, 2023.
[2]Bulkley Direct Exhibit AEB-6.
[3]Raw Beta = (VL Beta - 0.35) / 0.67.

These unadjusted beta estimates are substantially higher than the average adjusted Value Line beta of 0.86 used by Ms. Bulkley as reflective of the Company's investment risk. To put this into a more of an apple-to-apples comparison, I have also provided the average unadjusted beta for Ms. Bulkley's proxy group of 0.76. As shown above, every decile measured by Kroll has a much higher beta than Ms. Bulkley's utility groups. The typical company in each decile is much riskier than the typical utility company. Because of this significant disparity in risk, as measured by beta, Ms. Bulkley's size adjustment produces a CAPM return estimate that does not produce a risk appropriate return for Cascade and, therefore, should be rejected.

Q. Can you explain how beta corresponds with the level of investment risk for a company and, therefore, produces an appropriate risk-adjusted return for a subject company?

A. Yes. Beta represents a measure of systematic or non-diversifiable, market-related risk. All subject companies' betas are measured relative to that of the overall market and adjusted upward by *Value Line*. The market beta is considered to be 1.0. For companies that have betas greater than one, they are regarded as having more risk than the overall market. For companies that have betas less than one, they are regarded as having less risk than the overall market.

For these reasons, utility companies which consistently and predictably have adjusted betas far less than one (usually in the range of 0.6 to 0.8 depending on market conditions) are generally reflective of lower risk investment options. I would also point out that the current beta estimates have significantly increased during the COVID-19 pandemic relative to historical estimates as shown on my Exhibit MPG-19. However, these elevated beta estimates do not represent an increase in utility risk or cost of equity. As discussed above, utility companies are well positioned to weather economic downturns and are considered defensive stocks. Their cash flow strength is consistent and supported by strong valuations.

H. Capital Market Conditions

Q. Did Ms. Bulkley also offer an assessment of current market conditions in support of her recommended return on equity?

A. Yes. Ms. Bulkley identifies several factors that she believes are helpful in evaluating the capital market environment and investor sentiment during the

post-pandemic recovery period, including inflation, the Fed's monetary policy, higher interest rates, and utility stocks' performance.[86]

Q. Do you believe that Ms. Bulkley's use of these market sentiments supports her findings that Cascade's market cost of equity is currently 10.50 percent?

A. No. A fair analysis of utility securities shows the market generally regards utility securities as low-risk investment instruments and supports a finding that utilities' cost of capital is low in today's marketplace.

Q. What is your assessment of current market sentiment for utility investments?

A. Again, the current market sentiment toward utility investments, rather than just general corporate investments, is that the market is placing high value on utility securities, recognizing their low risk and stable characteristics. This is illustrated by current utility bond yield spreads as discussed at length previously. The current strong utility bond valuation is an indication of the market's sentiment that utility bonds are lower risk and are generally regarded as defensive investments by the investment industry.

Further, other measures of utility stock valuations also support the conclusion that there is a robust market for utility stocks. As shown on my Exhibit MPG-4, financial valuation measures (*e.g.*, P/E ratio and market price to cash flow ratio) show that utility stock valuation measures are robust.

For all these reasons, direct assessments of valuation measures and market sentiment toward utility securities support the credit rating agencies' findings, as

[86] Bulkley, Exh. AEB-1T at 14:2–27:11.

quoted above, that the utility industry is largely regarded as a low-risk investment. All of this supports my finding that utilities' market cost of equity is very low in today's very low-cost capital market environment.

Q. Does this conclude your response testimony?

A. Yes, it does.