BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, v. CASCADE NATURAL GAS CORPORATION, Respondent.	**DOCKET UG-260127**

CASCADE NATURAL GAS CORPORATION

DIRECT TESTIMONY OF ANN E. BULKLEY

May 29, 2026

TABLE OF CONTENTS

LIST OF EXHIBITS

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Ann E. Bulkley. I am a Principal at The Brattle Group ("Brattle"). My business address is One Beacon Street, Suite 2600, Boston, Massachusetts 02108.

Q. On whose behalf are you submitting this Direct Testimony?

A. I am submitting this Direct Testimony before the Washington Utilities and Transportation Commission ("Commission") on behalf of Cascade Natural Gas Corporation ("Cascade" or the "Company"), a wholly-owned subsidiary of MDU Resources Group, Inc. ("MDU Resources").

Q. Please describe your education and experience.

A. I hold a Bachelor's degree in Economics and Finance from Simmons College and a Master's degree in Economics from Boston University, with over 30 years of experience consulting to the energy industry. I have advised numerous energy and utility clients on a wide range of financial and economic issues with primary concentrations in valuation and utility rate matters. Many of these assignments have included the determination of the cost of capital for valuation and ratemaking purposes. My resume and a listing of the testimony that I have filed in other proceedings are included as Exhibit AEB-2.

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to present evidence and provide an opinion regarding the Company's return on equity ("ROE") and capital structure to be used for ratemaking purposes.

Q. Are you sponsoring any schedules in support of your Direct Testimony?

A. Yes. My analysis and recommendations are supported by the data presented in Exhibits AEB-3 through AEB-18C, which were prepared by me or under my direction.

Q. Please provide a brief overview of the analyses that led to your ROE recommendation.

A. In developing my recommendation regarding the Company's proposed ROE in this proceeding, I have estimated the cost of equity by applying several traditional estimation methodologies to the proxy group, specifically the Discounted Cash Flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the Empirical Capital Asset Pricing Model ("ECAPM"), and a Bond Yield Risk Premium ("BYRP" or "Risk Premium") analysis. I also consider the Company's relative business and regulatory risk as compared with the proxy group; and the Company's proposed capital structure as compared with the capital structures of the operating utilities of the proxy group companies. While I do not make specific adjustments to the cost of equity for these factors in developing my opinion regarding the reasonableness of the Company's ROE, I do consider them in the aggregate.

Q. How is the remainder of your testimony organized?

A. The remainder of my testimony is organized as follows:

- Section II provides a summary of my analyses and conclusions.
- Section III reviews the regulatory guidelines pertinent to the development of the cost of capital.
- Section IV discusses current and projected capital market conditions and the effect of those conditions on the Company's cost of equity.

- Section V explains my selection of a proxy group of natural gas utilities.
- Section VI describes my analyses and the basis for my recommended ROE in this proceeding.
- Section VII provides a discussion of specific business and financial risks that have a direct bearing on the ROE to be authorized for the Company in this case.
- Section VIII discusses the Company's capital structure as compared with the capital structures of the utility operating company subsidiaries of the proxy group companies.
- Section IX presents my conclusions.

II. SUMMARY OF ANALYSES AND CONCLUSIONS

Q. Please summarize the key factors considered in your analyses and upon which you base your recommended ROE.

A. My analyses and conclusions consider the following:

- The United States Supreme Court's *Hope* and *Bluefield* decisions, which established the standards for determining a fair and reasonable authorized ROE for public utilities including consistency of the allowed return with the returns of other businesses having similar risk, adequacy of the return to provide access to capital and support credit quality, and the requirement that the result lead to just and reasonable rates.[1]
- The effect of current and prospective capital market conditions on the cost of equity estimation models and on investors' return requirements.

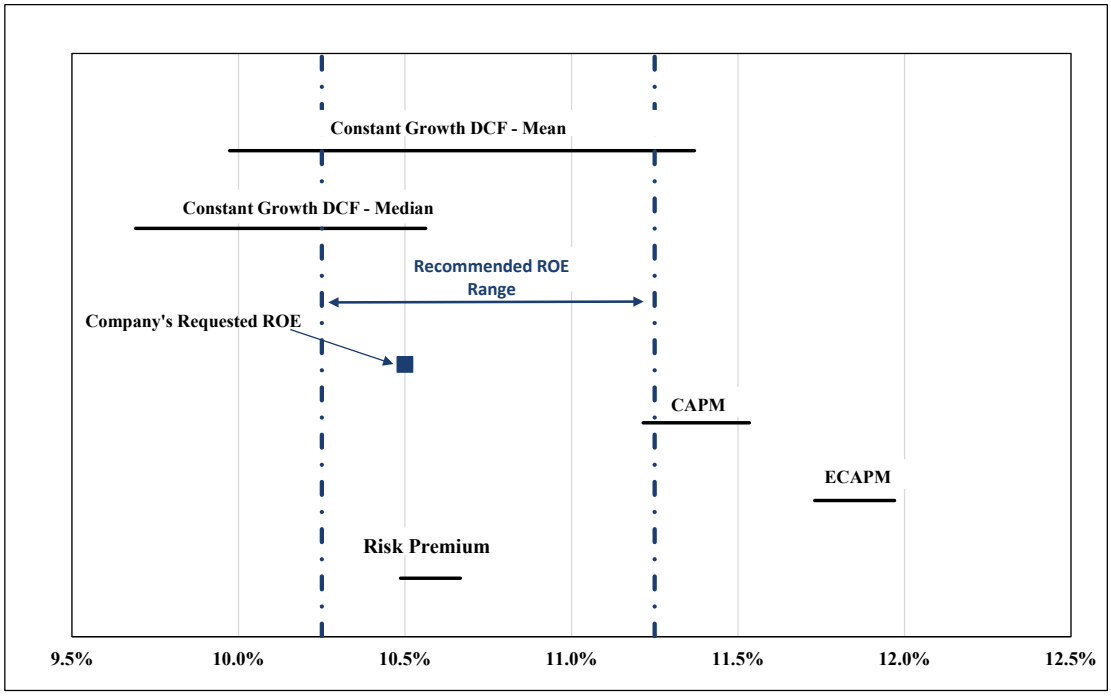
[1] *Federal Power Comm'n v. Hope Nat. Gas Co.*, 320 U.S. 591, 603, 64 S. Ct. 281, 88 L. Ed. 333 (1944) ("*Hope*"); *Bluefield Waterworks & Improvement Co., v. Pub. Serv. Comm'n of W. Va.*, 262 U.S. 679, 692-93, 43 S. Ct. 675, 67 L. Ed. 1176 (1923) ("*Bluefield*"); Bulkley, Exh. AEB-17.

- The results of several analytical approaches provide estimates of the Company's cost of equity. Because the Company's authorized ROE should be a forward-looking estimate over the period during which the rates will be in effect, these analyses rely on forward-looking inputs and assumptions (e.g., projected analyst growth rates in the DCF model, forecasted risk-free rate, and market risk premium in the CAPM analysis).
- Although the companies in my proxy group are generally comparable to Cascade, each company is unique, and no two companies have the exact same business and financial risk profiles. Accordingly, I considered the Company's regulatory, business, and financial risks relative to the proxy group of comparable companies in determining where the Company's ROE should fall within the reasonable range of analytical results to appropriately account for any residual differences in risk.

Q. What are the results of the models that you have used to estimate the cost of equity for Cascade in this proceeding?

A. Figure 1 summarizes the range of results produced by the constant growth DCF, CAPM, ECAPM, and BYRP analysis based on data through February 28, 2026. As shown in Figure 1, the range of results across all methodologies is wide. While it is common to consider multiple models to estimate the cost of equity, it is particularly important when the range of results varies considerably across methodologies.

Figure 1 – Summary of Cost of Equity Model Results



Q. What is your recommendation regarding the Company's ROE in this proceeding?

A. Based on the analytical results of the cost of equity models, and current and prospective capital market conditions, I conclude that an ROE in the range of 10.25 percent to 11.25 percent is reasonable. Within that range, the Company is requesting an ROE of 10.50 percent.

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

A. The Company proposes a 2026 projected capital structure of 50.332 percent common equity and 49.668 long-term debt and a 2027 projected capital structure 50.732 percent common equity and 49.268 long-term debt.

Q. Is the Company's requested capital structure reasonable?

A. Yes. The Company's requested equity ratio is well within the range of the actual capital structures of the utility operating subsidiaries of the proxy group companies.

III. REGULATORY GUIDELINES

Q. Please describe the principles that guide the establishment of the cost of capital for a regulated utility.

A. The United States Supreme Court's precedent-setting *Hope* and *Bluefield* cases established the standards for determining the fairness or reasonableness of a utility's allowed ROE. Among the standards established by the Court in those cases are: (1) consistency with other businesses having similar or comparable risks; (2) adequacy of the return to support credit quality and access to capital; and (3) the principle that the result reached, as opposed to the methodology employed, is the controlling factor in arriving at just and reasonable rates.[2]

Q. Has the Commission provided similar guidance in establishing the appropriate ROE?

A. Yes. In the order for Dockets UE-240004 and UG-240005, the Commission stated that:

> In determining cost of capital, the Commission is guided by the longstanding precedent of the *Hope* and *Bluefield* cases. The Commission will analyze service on debt as well as the return to the equity owner, which should be commensurate with returns on investments in other enterprises having corresponding risks. That return should be sufficient to assure confidence in the financial integrity of the enterprise, to maintain its credit and to attract capital. Moreover, "what the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. There must be a fair return upon the reasonable value of the property at the time it is being used for the public."[3]

[2] *Hope*, 320 U.S. at 603 (1944); *Bluefield*, 262 U.S. at 692-93; Bulkley, Exh. AEB-17.

[3] *Wash. Utils. & Transp. Comm'n v. Puget Sound Energy*, Dockets UE-240004 and UG-250005, Order 09 Final Order ¶ 101 (Jan. 15, 2025) (footnotes omitted) (quoting *Bluefield*, 262 U.S. at 690); Bulkley, Exh. AEB-17.

The Commission's guidance supports the expectation that an allowed rate of return ("ROR") be sufficient to enable regulated companies, like Cascade, the ability to attract capital on reasonable terms.

Q. Is determining a fair ROR just about protecting the utility's interests?

A. No. As the court noted in *Bluefield*, a proper ROR not only "assure[s] confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit[,]" but also "enable[s the utility] to raise the money necessary for the proper discharge of its public duties."[4] As the Court further explained in *Hope*, "[t]he rate-making process … involves a balancing of the investor and the consumer interests."[5]

Q. Why is it important for a utility to be allowed the opportunity to earn an ROE that is adequate to attract capital at reasonable terms?

A. An authorized ROE that is adequate to attract capital at reasonable terms enables the utility to continue to provide safe, reliable natural gas service while maintaining its financial integrity. That return should be commensurate with returns required by investors elsewhere in the market for investments of comparable risk. It is important to recognize that equity investors have a choice of where to invest capital. If the authorized ROE is not comparable to the returns available for comparable risk investments, not only is the value to current equity holders harmed, but the utility's access to incremental equity is also affected. It is reasonable to expect that equity investors will seek alternative investment opportunities for which the expected return

[4] *Bluefield*, 262 U.S. at 693; Bulkley, Exh. AEB-17.
[5] *Hope*, 320 U.S. at 603; Bulkley, Exh. AEB-17.

reflects the perceived risks, thereby inhibiting the Company's ability to attract necessary new equity capital at reasonable cost.

Q. Is a utility's ability to attract capital also affected by the ROEs authorized for other utilities?

A. Yes. Utilities compete directly for capital with other investments of similar risk, which include other utilities. Therefore, the ROE awarded to a utility sends an important signal to investors regarding whether there is regulatory support for financial integrity, dividends, growth, and fair compensation for business and financial risk. The cost of capital represents an opportunity cost to investors. If higher returns are available for other investments of comparable risk, investors have an incentive to direct their capital to those investments. Thus, an authorized ROE significantly below authorized ROEs for other utilities, on a risk adjusted basis, can inhibit the utility's ability to attract capital for investment.

Q. What is the standard for setting the ROE in any jurisdiction?

A. The stand-alone ratemaking principle is the foundation of jurisdictional ratemaking. This principle requires that the rates that are charged in any operating jurisdiction be for the costs incurred in that jurisdiction. The stand-alone ratemaking principle ensures that customers in each jurisdiction only pay for the costs of the service provided in that jurisdiction, which is not influenced by the business operations in other operating companies. In order to maintain this principle, the cost of equity analysis is performed for an individual operating company as a stand-alone entity. As such, I have evaluated the investor-required return for the Company's natural gas operations in Washington.

Q. Does the fact that Cascade is owned by MDU Resources, a publicly-traded company, affect your analysis?

A. No. In this proceeding, consistent with stand-alone ratemaking principles, it is appropriate to establish the cost of equity for Cascade, not its publicly-traded parent, MDU Resources. More importantly, however, it is appropriate to establish a cost of equity and capital structure that provide Cascade the ability to attract capital on reasonable terms both on a stand-alone basis and within its parent corporation.

Q. Is the regulatory framework, including the authorized ROE and equity ratio, important to the financial community?

A. Yes. The regulatory framework is one of the most important factors in investors' assessments of risk. Specifically, the authorized ROE and equity ratio for regulated utilities is very important for determining the degree of regulatory support for supporting a utility's creditworthiness and financial stability in the jurisdiction. To the extent that authorized returns in a jurisdiction are lower than the returns that have been authorized more broadly, such actions are considered by both debt and equity investors in the overall risk assessment of the regulatory jurisdiction in which the company operates.

Q. What are your conclusions regarding the regulatory principles to be used in establishing the cost of capital in this proceeding?

A. The ratemaking process is premised on the principle that, in order for investors and companies to commit the capital needed to provide safe and reliable utility services, a utility must have a reasonable opportunity to recover the return of, and the market-required return on, its invested capital. Accordingly, the Commission's order in this

proceeding should establish rates that provide the Company with a reasonable opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms; (2) sufficient to ensure its financial integrity; and (3) commensurate with returns on investments in enterprises with similar risk. It is important for the ROE authorized in this proceeding to take into consideration current and projected capital market conditions, as well as investors' expectations and requirements for both risks and returns. Because utility operations are capital-intensive, regulatory decisions should enable the utility to attract capital at reasonable terms under a variety of economic and financial market conditions. Providing the opportunity to earn a market-based cost of capital supports the financial integrity of the Company, which is in the interest of both customers and shareholders.

IV. CAPITAL MARKET CONDITIONS

Q. Why is it important to analyze capital market conditions?

A. The models used to estimate the cost of equity rely on market data and thus the results of those models can be affected by prevailing market conditions at the time the analysis is performed. While the ROE that is established in a rate proceeding is intended to be forward-looking, the analyst uses current and projected market data, specifically stock prices, dividends, growth rates and interest rates, in the models to estimate the required return for the subject company.

Analysts and regulatory commissions recognize the importance of considering how these conditions impact cost of equity estimation models when determining the appropriate range and recommended ROE for a future period. For example, if investors do not expect current market conditions to be sustained in the future, it is possible that the cost of equity estimation models may not provide an accurate estimate of investors'

required return during that rate period. Therefore, it is important to consider projected market data to estimate the return of the forward-looking period.

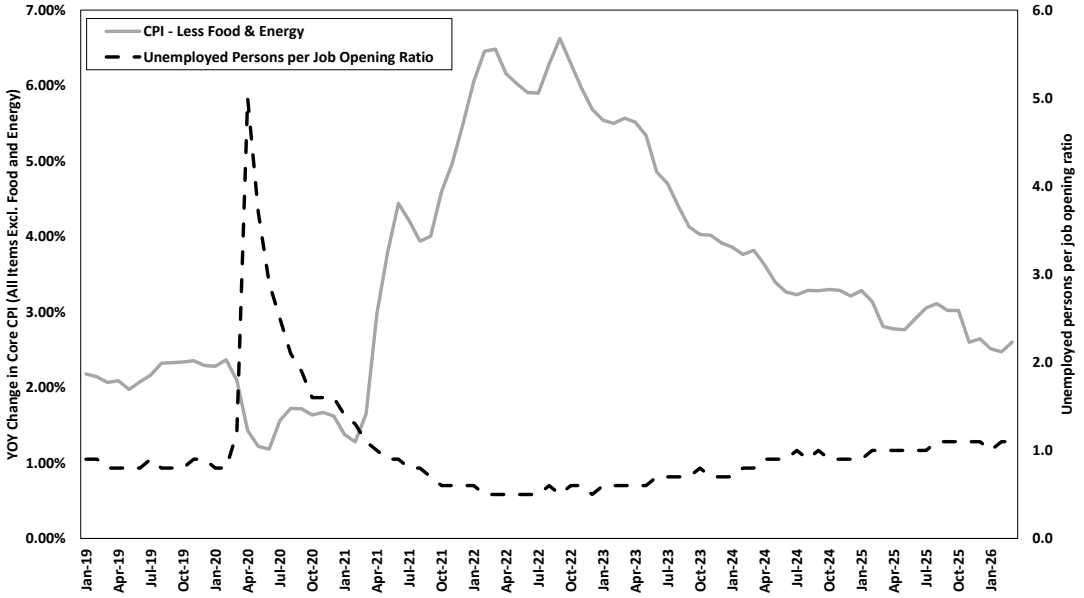
Q. What has the level of inflation been over the past few years?

A. As shown in Figure 2 below, year-over-year core inflation increased steadily beginning in early 2021, rising from 1.40 percent in January 2021 to a high of 6.64 percent in September 2022, which was the largest 12-month increase since 1982.[6] While core inflation has declined in response to the Federal Reserve's monetary policy, it continues to remain significantly above the Federal Reserve's target level of 2.00 percent.

Because the Federal Reserve's dual mandate is to promote stable prices and employment, it is important to consider employment data in addition to inflation. The ratio of unemployed persons per job opening was 1.1 in April 2026 (the most recent data available at the time of this testimony). While the ratio of unemployed persons per job opening increased slightly in recent months, it had been consistently at or below 1.00 between April 2021 and October 2025, which suggested a tighter labor market. The strength in the labor market allowed the Federal Reserve to prioritize reducing inflation by pursuing the restrictive monetary policy needed to achieve its 2.00 percent target benchmark.

[6] Reade Pickert, *Core US Inflation Rises to 40-Year High, Securing Big Fed Hike*, Bloomberg (Oct. 13, 2022); Bulkley, Exh. AEB-17.

Figure 2 – Core Inflation and Unemployed Persons-to-Job Openings, January 2019 to April 2026[7]



Q. What policy actions has the Federal Reserve enacted to respond to increased inflation?

A. The dramatic increase in inflation prompted the Federal Reserve to pursue an aggressive normalization of monetary policy, removing the accommodative policy programs used to mitigate the economic effects of COVID-19. Between the March 2022 Federal Open Market Committee ("FOMC") meeting and the July 2023 FOMC meeting, the Federal Reserve increased the target federal funds rate through a series of increases from a range of 0.00 percent to 0.25 percent to a range of 5.25 percent to 5.50 percent.

[7] Figure 2 presents the year-over-year change in core inflation, as measured by the Consumer Price Index excluding food and energy prices as published by the Bureau of Labor Statistics. I have considered core inflation because it is the preferred inflation indicator of the Federal Reserve for determining the direction of monetary policy. Core inflation is preferred by the Federal Reserve because it removes the effect of food and energy prices, which can be highly volatile.

Q. Have the yields on long-term government bonds responded to the Federal Reserve's normalization of monetary policy?

A. Since the Federal Reserve's December 2021 meeting, the yield on 10-year Treasury bonds has increased by over 350 basis points, increasing from 1.47 percent on December 15, 2021, to a peak of 4.98 percent on October 19, 2023. It currently remains well above 2021 levels (i.e., 4.31 percent 30-day average as of April 10, 2026).[8]

Q. Did the Federal Reserve recently reduce the federal funds rates?

A. Yes. The Federal Reserve reduced the federal funds rate by 50 basis points in September 2024, 25 basis points in November and December 2024, and more recently 25 basis points in September, October, and December 2025. While the Federal Reserve kept rates unchanged through the first five meetings in 2025, its decision to reduce the federal funds rate at the final three meetings in 2025 was due to an increase in the downside risk to employment in recent months.[9]

Q. What is the expected path of monetary policy over the near-term?

A. At the March 2026 FOMC meeting, Chair of the Federal Reserve Jerome Powell noted that "inflation remains somewhat elevated" and that "[w]hile job gains have remained low, the unemployment rate has been little changed in recent months[.]"[10] As a result, the FOMC decided to maintain the federal funds rate range of 3.50 percent to 3.75 percent.[11]

[8] S&P Capital IQ Pro.
[9] Press Releases, Board of Governors of the Federal Reserve System, "Federal Reserve issues FOMC statement" (Sep. 17, 2025; Oct. 29, 2025; Dec. 10, 2025); Bulkley, Exh. AEB-17.
[10] Jerome Powell, Chairman of the Federal Reserve, Press Conference Remarks 1 (Mar. 18, 2026) (transcript reproduced in Exhibit AEB-17).
[11] *Id.* at 2.

Further, Chairman Powell acknowledged that the events in the Middle East have resulted in higher energy prices which will increase inflation; however, it was "too soon to know the scope and duration of the potential effects on the economy".[12] Regarding the possible path of monetary policy, Chairman Powell indicated that the reductions since September 2026 have brought the federal funds rate "within a range of plausible estimates of [the] neutral" rate and, therefore, the Federal Reserve is well positioned to rely on incoming economic data to determine the extent and timing of any additional changes in the federal funds rates.[13] The FOMC published a forecast of the federal funds rate at the March 2026 meeting that was unchanged from December 2025 projections of one rate cut in December 2026.[14]

In a recent appearance at Harvard University, on March 20, 2026, Chairman Powell indicated that the Federal Reserve can afford a "wait-and-see" approach regarding any adjustments to interest rates in response to the economic impact of the conflict in Iran and oil price shocks.[15]

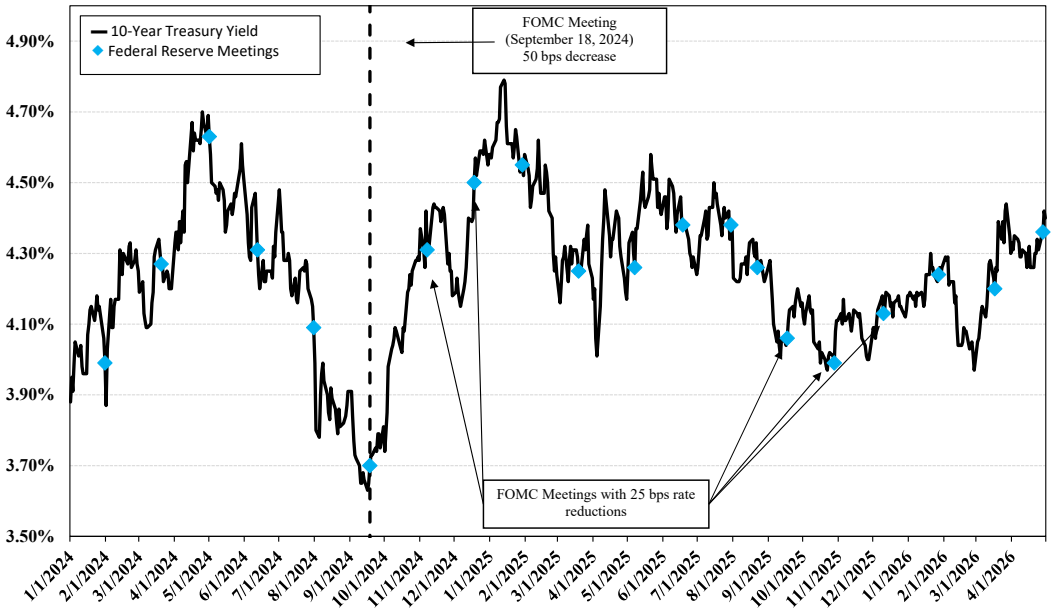
Q. What has happened to the yields on long-term government bonds since the FOMC reduced the federal funds rate in September 2024?

A. As shown in Figure 3 below, while the yield on the 10-year Treasury bond declined prior to the time of the first federal funds rate cut, the yield has generally increased since the September 2024 FOMC meeting. As of April 30, 2026, the 10-year Treasury

[12] *Id.*
[13] *Id.*
[14] *Id.* at 3.
[15] Christina Pazzanese, *Powell issues a warning on U.S. debt*, The Harvard Gazette (Apr. 1, 2026); Bulkley, Exh. AEB-17.

bond yield was 4.40 percent, which is generally consistent with levels seen in July 2024, two months prior to the first reduction in the federal funds rate.

Figure 3 – 10-Year Treasury Bond Yield, Janaury 2024 through April 30, 2026[16]



Q. Why have long-term interest rates increased since the Federal Reserve reduced the federal funds rate in September?

A. Ongoing policies of the current administration's economic plans have resulted in higher deficits and persistent inflation. For example, since January 2025, the administration announced several sets of tariffs on each of the U.S.'s trading partners.[17] The implemented tariffs are largely viewed as inflationary. Inflation affects bonds, in particular long-term government bonds, because it erodes the value of future bond payments. Therefore, in an inflationary environment, investors will demand higher returns on bonds to compensate for the added risk of inflation thus bond prices decline and the yields on those bonds increase. The longer the duration of the bond, the greater

[16] S&P Capital IQ Pro.
[17] Jennifer Clarke, *What tariffs has Trump announced and why?*, BBC News (Aug. 27, 2025); Bulkley, Exh. AEB-17.

the effect of inflation which is why inflation risk is greater for long-term government bonds. The significant tariff policy increases the risk that inflation will remain elevated, which is why the yields on long-term bonds have not decreased and in fact have increased since the Federal Reserve first reduced the federal funds rate in September 2024. Further, the use of tariffs strains the relationship with trading partners, which could result in a reduction in the foreign demand for long-term U.S. government bonds, resulting in additional upward pressure on long-term government bond yields.[18]

Q. What effect does the recent Supreme Court ruling have on the tariffs implemented by the administration in 2025?

A. On February 20, 2026, the Supreme Court ruled that the tariffs implemented in 2025 under the International Emergency Economic Powers Act were illegal. However, the administration responded to the ruling by imposing a 15 percent tariff on all goods imported into the U.S. under Section 122 of the 1974 Trade Act,[19] which allows a President to implement global tariffs up to 15 percent for a period of five months after which the approval of Congress is needed for continuation of the tariffs.[20] Therefore, the administration is still able to at least temporarily impose global tariffs, which, as noted, will continue to place upward pressure on prices.

[18] Karishma Vanjani, *U.S. Treasury Bonds Sell Off as 30-Year Yield Rises Most Since 1982*, Barron's (Apr. 9, 2025); Bulkley, Exh. AEB-17.
[19] Dearbail Jordan, *Trump says he will increase his new global tariffs to 15%*, BBC News (Feb. 22, 2026); Bulkley, Exh. AEB-17.
[20] Trade Act of 1974 § 122, 19 U.S.C. § 2132(a).

Q. Have there been any other recent developments that may affect inflation and long-term government bond yields?

A. Yes. The war in Iran and the resulting increase in underlying oil prices will likely put upward pressure on inflation as increased oil prices not only increase gasoline prices for consumers, but also the prices of other products as well given that nearly all goods need to be transported from the place of production. The likelihood of continued elevated inflation suggests interest rates will remain higher in the near term. In fact, as shown in Figure 3, above, since the start of the war in Iran, the yield on the 10-year Treasury bond has increased 34 basis points from 3.97 percent on February 27, 2026, to 4.31 percent on April 10, 2026.

Q. What are expectations for the yields on long-term government bonds?

A. While the Federal Reserve is forecasting additional cuts to the federal funds rate in 2026 and 2027, economists are still expecting elevated long-term interest rates. In the most recently published Blue Chip Financial Forecasts report, the consensus estimate of economists is that the 30-year Treasury bond yield will remain relatively stable at 4.90 percent in Q3/2026 declining to 4.80 through Q3/2027.[21] Additionally, the consensus estimate over the longer-term (i.e., 2027–2031) is 4.60 percent.[22] Further, Reuters published the results of a survey of 75 bond strategists which suggests that aggressive tax and spending reforms could add over $3 trillion to the debt over the next decade.[23] Bond strategists expect long-term bond yields to remain elevated even with

[21] Blue Chip Financial Forecasts Vol. 45, No. 5 (Wolters Kluwer, New York, NY), May. 1, 2026, at 2; Bulkley, Exh. AEB-17.
[22] *Id.* at 14.
[23] Sarupya Ganguly, *POLL Long Treasury yields to stay elevated as inflation, debt pressures blunt Fed easing*, Reuters (Oct. 15, 2025); Bulkley, Exh. AEB-17.

the expectation that the Fed will decrease the Federal Funds rate because of inflation and a "resilient" economy.[24] This is important because it means that long-term interest rates are expected to remain elevated during the period that the Company's rates will be in effect.

Q. What are your conclusions regarding the effect of current market conditions on the cost of equity for the Company?

A. It is important to consider current and projected market conditions in setting the forward-looking ROE due to its effect on the estimated cost of equity. While the FOMC reduced the federal funds rate several times in late 2025, Chairman Powell has indicated that the Federal Reserve will continue to rely on incoming data to determine future adjustments to the federal funds rate. Further, long-term interest rates remain elevated and are expected to continue to remain elevated due to inflationary policies such as tariffs and tax cuts and the uncertainty regarding the Iran conflict and the increase in underlying energy costs. With long-term interest rates expected to remain relatively high, borrowing also remains relatively more expensive, and thus investors also demand a relatively high cost of capital, which means the cost of capital also remains relatively high.

V. PROXY GROUP SELECTION

Q. Please provide a brief profile of Cascade.

A. Cascade is a natural gas distribution company that is a wholly-owned subsidiary of MDU Resources. The Company distributes natural gas to approximately

[24] *Id.*

314,500 residential, commercial and industrial customers in Washington and Oregon.[25] As of September 30, 2023, Cascade distributed natural gas to 220,000 residential, commercial and industrial customers in several non-contiguous service territories in western and central Washington.[26] Washington accounted for 35.00 percent of the natural gas distribution operating retail sales revenues of Cascade's parent, MDU Resources, in 2025.[27] Cascade currently has an investment grade long-term rating of BBB from S&P (outlook stable) and Baa2 from Moody's Investors Service ("Moody's") (outlook stable).[28] For additional description of the Company, please see the Direct Testimony of Stephanie A. Sievert (Exhibit SAS-1T).

Q. Why have you used a group of proxy companies to estimate the cost of equity for the Company?

A. In this proceeding, the cost of equity is being estimated for a natural gas utility company that is not itself publicly traded. Because the cost of equity is a market-based concept and Cascade's operations do not make up the entirety of a publicly-traded entity, it is necessary to establish a group of companies that are both publicly traded and comparable to the Company in certain fundamental business and financial respects to serve as its "proxy" in the cost of equity estimation process.

The overall purpose of developing a set of screening criteria is to select a proxy group of companies that align with the financial and operational characteristics of

[25] Cascade Natural Gas Corporation, About Us, https://www.cngc.com/in-the-community/about-us/ (last visited Mar. 24, 2026); Bulkley, Exh. AEB-17.
[26] Cascade Natural Gas Corporation, Washington State, https://www.cngc.com/in-the-community/environmental-priorities/washington-state/#1703266037372-bcc6701d-14ca (last visited Mar. 26, 2026); Bulkley, Exh. AEB-17.
[27] MDU Resources Group, Inc., 10-K, https://www.sec.gov/Archives/edgar/data/67716/000006771626000014/mdu-20251231.htm, (Feb. 20, 2026), at p. 24; Bulkley, Exh. AEB-17.
[28] Moody's Investors Service (last visited Mar. 24, 2026); S&P Capital IQ Pro (last visited Mar. 24, 2026); Bulkley, Exh. AEB-18C.

Cascade and that investors would view as comparable to the Company. I developed the screens and thresholds for each screen based on judgment with the intention of balancing the need to maintain a proxy group that is of sufficient size with the need to establish a proxy group of companies that are comparable in business and financial risk to Cascade.

Even if Cascade's regulated natural gas distribution business made up the entirety of a publicly-traded entity, it is possible that transitory events could bias its market value over a given time period. A significant benefit of using a proxy group is that it mitigates the effects of anomalous events that may be associated with any one company. The proxy companies used in my analyses all possess a set of operating and financial risk characteristics that are substantially comparable to Cascade, and, therefore, provide a reasonable basis to estimate the appropriate cost of equity for the Company.

Q. How did you select the companies included in your proxy group?

A. I began with the group of nine U.S. utilities that *Value Line Investment Survey* ("*Value Line*") classifies as "Natural Gas Distribution Companies," and then applied the following screening criteria to select companies that:

- Pay consistent quarterly cash dividends, since companies that do not pay dividends cannot be analyzed using the constant growth DCF model;
- Have investment grade long-term issuer ratings from both S&P and Moody's;
- Are covered by more than one utility industry analyst;
- Have positive long-term earnings growth forecasts from at least two equity analysts;

- Derive more than 70.0 percent of their total operating income from regulated operations;
- Derive more than 45.0 percent of regulated operating income from gas distribution operations; and
- Were not parties to a merger or transformative transaction during the analytical periods relied on.

Q. What is the composition of your proxy group?

A. The screening criteria just discussed results in a proxy group consisting of the companies shown in Figure 4 (and also in Exhibit AEB-4).

Figure 4 – Proxy Group Composition

Company	Ticker
Atmos Energy Corporation	ATO
Chesapeake Utilities Corporation	CPK
NiSource Inc.	NI
Northwest Natural Gas Company	NWN
ONE Gas, Inc.	OGS
Southwest Gas Corporation	SWX

VI. COST OF EQUITY ESTIMATION

Q. Please briefly discuss the ROE in the context of the regulated ROR.

A. The overall ROR for a regulated utility is the weighted average cost of capital in which the cost rates of the individual sources of capital are weighted by their respective book values. The ROE is the cost of common equity capital in the utility's capital structure for ratemaking purposes. While the costs of debt and preferred stock can be directly observed, the cost of equity is market-based and, therefore, must be estimated based on observable market data.

Q. How is the required cost of equity determined?

A. The required cost of equity is estimated by using analytical techniques that rely on market-based data to quantify investor expectations regarding equity returns, adjusted for certain incremental costs and risks. Informed judgment is then applied to determine where the company's cost of equity falls within the range of results produced by multiple analytical techniques. The key consideration in determining the cost of equity is to ensure that the methodologies employed reasonably reflect investors' views of the financial markets in general, as well as the subject company (in the context of the proxy group), in particular.

Q. What methods have you used to estimate the Company's cost of equity in this proceeding?

A. I consider the results of the constant growth DCF model, the CAPM, the ECAPM, and the BYRP analysis.

Q. Is it important to use more than one analytical approach to estimate the cost of equity?

A. Yes. A reasonable cost of equity estimate appropriately considers alternative methodologies and the reasonableness of their individual and collective results. Because the cost of equity is not directly observable, it must be estimated based on both quantitative and qualitative information. When faced with the task of estimating the cost of equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed. Several models have been developed to estimate the cost of equity, and I use multiple approaches to estimate the cost of equity. As a practical matter, however, all of the models available for estimating the cost of

equity are subject to limiting assumptions or other methodological constraints. Consequently, many well-regarded finance texts recommend using multiple approaches when estimating the cost of equity. For example, Copeland, Koller, and Murrin[29] suggest using the CAPM and Arbitrage Pricing Theory model, while Brigham and Gapenski[30] recommend the CAPM, DCF, and BYRP approaches.

Q. Has the Commission previously recognized the importance of considering the results of multiple cost of equity estimation models?

A. Yes. It is my understanding that the Commission has repeatedly emphasized that it "places value on each of the methodologies used to calculate the cost of equity and does not find it appropriate to select a single method as being the most accurate or instructive."[31] The Commission has explained that "[f]inancial circumstances are constantly shifting and changing, and we welcome a robust and diverse record of evidence based on a variety of analytics and cost of capital methodologies."[32] In the Company's 2020 rate case, the Commission considered multiple models including the DCF, CAPM, Risk Premium, and Comparable Earnings analyses.[33] However, the Commission relied on the results of the DCF, Risk Premium, and Comparable Earnings

[29] Tom Copeland, Tim Koller & Jack Murrin, Valuation: Measuring and Managing the Value of Companies 214 (3rd ed. 2000); Bulkley, Exh. AEB-17.
[30] Eugene Brigham & Louis Gapenski, Financial Management: Theory and Practice 341 (7th ed. 1994); Bulkley, Exh. AEB-17.
[31] *Wash. Utils. & Transp. Comm'n v. PacifiCorp, d/b/a Pac. Power & Light Co.*, Docket UE-130043, Order 05 Final Order Rejecting Tariff Sheets; Resolving Contested Issues; Authorizing and Requiring Compliance Filing ¶ 64 n.89 (Dec. 4, 2013); Bulkley, Exh. AEB-17.
[32] *Wash. Utils. & Transp. Comm'n v. PacifiCorp, d/b/a Pac. Power & Light Co.*, Docket UE-100749, Order 06 Final Order Rejecting Tariff Sheets; Authorizing Increased Rates; and Requiring Compliance Filing ¶ 91 (Mar. 25, 2011); Bulkley, Exh. AEB-17.
[33] *Wash. Utils. & Transp. Comm'n v. Cascade Nat. Gas Corp.*, Docket UG-200568, Final Order 05 Rejecting Tariff Sheets; Authorizing and Requiring Compliance Filing ¶¶ 122-125 (May 18, 2021); Bulkley, Exh. AEB-17.

analyses to develop the range of reasonable returns excluding the results of the CAPM due to the wide range of results presented.[34]

A. Constant Growth DCF Model

Q. Please describe the DCF approach.

A. The DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. In its most general form, the DCF model is expressed as follows:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \cdots + \frac{D_\infty}{(1+k)^\infty} \qquad [1]$$

Where P_0 represents the current stock price, $D_1 \ldots D\infty$ are all expected future dividends, and k is the discount rate, or required cost of equity. Equation [1] is a standard present value calculation that can be simplified and rearranged into the following form:

$$k = \frac{D_0(1+g)}{P_0} + g \qquad [2]$$

Equation [2] is often referred to as the constant growth DCF model in which the first term is the expected dividend yield and the second term is the expected long-term growth rate.

Q. What assumptions are required for the constant growth DCF model?

A. The constant growth DCF model requires the following assumptions: (1) a constant growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings ratio; and (4) a discount rate greater than the expected growth rate. To the extent any of these assumptions is violated, considered judgment and/or specific adjustments should be applied to the results.

[34] *Id.* ¶¶ 126-130.

Q. What market data do you use to calculate the dividend yield in your constant growth DCF model?

A. The dividend yield in my constant growth DCF model is based on the proxy group companies' current annual dividend and average closing stock prices over the 30-, 90-, and 180-trading days ended April 30, 2026.

Q. Why do you use 30-, 90-, and 180-day averaging periods?

A. I used an average of recent trading days to calculate the term P_0 in the DCF model to reflect current market data while also ensuring that the result of the model is not skewed by anomalous events that may affect stock prices on any given trading day.

Q. Have you made any adjustments to the dividend yield to account for periodic growth in dividends?

A. Yes. Since utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, it is reasonable to apply one-half of the expected annual dividend growth rate for purposes of calculating the expected dividend yield component of the DCF model. This adjustment ensures that the expected first year dividend yield is, on average, representative of the coming twelve-month period, and does not overstate the aggregated dividends to be paid during that time.

Q. Why is it important to select appropriate measures of long-term growth in applying the DCF model?

A. In its constant growth form, the DCF model (*i.e.*, Equation [2]) assumes a single long-term growth rate in perpetuity. In order to reduce the long-term growth rate to a single

measure, one must assume that the dividend payout ratio remains constant and that earnings per share ("EPS"), dividends per share, and book value per share all grow at the same constant rate. However, over the long run, dividend growth can only be sustained by earnings growth, meaning earnings are the fundamental driver of a company's ability to pay dividends; therefore, projected EPS growth is the appropriate measure of a company's long-term growth. In contrast, changes in a company's dividend payments are based on management decisions related to cash management and other factors. For example, a company may decide to retain earnings rather than pay out a portion of those earnings to shareholders through dividends. Therefore, dividend growth rates are less likely than earnings growth rates to accurately reflect investor perceptions of a company's growth prospects. Accordingly, I have incorporated a number of sources of long-term EPS growth rates into the constant growth DCF model.

Q. Which sources of long-term earnings growth rates do you use?

A. My constant growth DCF model incorporates three sources of long-term earnings growth rates: (1) *Zacks* Investment Research ("*Zacks*"); (2) *S&P Capital IQ*; and (3) *Value Line*.

Q. Have you previously relied on projected EPS growth rates provided by *Yahoo! Finance*?

A. Yes, however, *Yahoo! Finance* no longer reports consensus projected 3- to 5-year EPS growth rates. As a result, I replaced that estimate with the consensus projected 3- to 5-year EPS growth rates reported by *S&P Capital IQ*.

Q. Why are EPS growth rates the appropriate growth rates to be relied on in the DCF model?

A. Earnings are the fundamental driver of a company's ability to pay dividends; therefore, projected EPS growth is the appropriate measure of a company's long-term growth. In contrast, changes in a company's dividend payments are based on management decisions related to cash management and other factors. For example, a company may decide to retain earnings rather than pay out a portion of those earnings to shareholders through dividends.

Q. How do you calculate the range of results for the constant growth DCF models?

A. I calculated results using the average EPS growth rate from all three sources for each proxy group company. In addition, I calculate a low-end result for the constant growth DCF models using the minimum growth rate of the three sources (i.e., the lowest of the *Zacks*, *S&P Capital IQ*, and *Value Line* projected EPS growth rates) for each of the proxy group companies, and use a similar approach to calculate a high-end result, using the maximum growth rate of the three sources for each proxy group company.

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

A. Figure 5 summarizes the results of my DCF analyses, which can also be found in Exhibit AEB-5.

Figure 5 – Summary of DCF Results

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Mean Results:			
30-Day Avg. Stock Price	9.85%	10.58%	11.25%
90-Day Avg. Stock Price	9.98%	10.71%	11.37%
180-Day Avg. Stock Price	10.09%	10.82%	11.49%
Average	9.97%	10.70%	11.37%
Median Results:			
30-Day Avg. Stock Price	9.51%	10.15%	10.44%
90-Day Avg. Stock Price	9.72%	10.33%	10.56%
180-Day Avg. Stock Price	9.85%	10.41%	10.69%
Average	9.69%	10.30%	10.56%

B. CAPM Analysis

Q. Please briefly describe the CAPM.

A. The CAPM is a risk premium approach that estimates the cost of equity for a given security as a function of a risk-free return plus a risk premium to compensate investors for the non-diversifiable or "systematic" risk of that security.[35] This second component is the product of the market risk premium and the beta coefficient, which measures the relative riskiness of the security being evaluated.

The CAPM is defined by four components, each of which must theoretically be a forward-looking estimate:

[35] Systematic risk is the risk inherent in the entire market or market segment, which cannot be diversified away using a portfolio of assets. Unsystematic risk is the risk of a specific company that can, theoretically, be mitigated through portfolio diversification.

$$K_e = r_f + \beta(r_m - r_f) \quad [3]$$

Where:

K_e = the required market-based cost of equity of an individual security;

β = the beta coefficient of an individual security;

r_f = the risk-free rate of return; and

r_m = the required return on the market as a whole.

In this specification, the term ($r_m - r_f$) represents the market risk premium. According to the theory underlying the CAPM, because unsystematic risk can be diversified away, investors should only be concerned with systematic or non-diversifiable risk. Systematic risk is measured by beta, which is a measure of the volatility of a security as compared to the market as a whole. Beta is defined as:

$$\beta = \frac{Covariance(r_e, r_m)}{Variance(r_m)} \quad [4]$$

The variance of the market return (i.e., Variance (r_m)) is a measure of the uncertainty of the general market. The covariance between the return on a specific security and the general market (i.e., Covariance (r_e, r_m)) reflects the extent to which the return on that security will respond to a given change in the general market return. Thus, beta represents the risk of the security relative to the general market.

Q. What risk-free rate do you use in your CAPM analysis?

A. I rely on three sources for my estimate of the risk-free rate: (1) the current 30-day average yield on 30-year U.S. Treasury bonds;[36] (2) the average projected 30-year Treasury bond yield for the third quarter of 2026 through the third quarter of 2027;[37] and (3) the average projected 30-year Treasury bond yield for 2027 through 2031.[38]

[36] Bloomberg Professional, as of April 30, 2026.
[37] Blue Chip Financial Forecasts, Vol. 45, No. 5 (Wolters Kluwer, New York, NY), May 1, 2026, at 2; Bulkley, Exh. AEB-17.
[38] Blue Chip Financial Forecasts, Vol. 44, No. 12 (Wolters Kluwer, New York, NY), Dec. 1, 2025, at 14; Bulkley, Exh. AEB-17.

Q. What beta coefficients do you use in your CAPM analysis?

A. As shown in Exhibit AEB-6, I use the beta coefficients for the proxy group companies as reported by *Value Line*, which are based on five years of weekly returns relative to the New York Stock Exchange Composite Index. Additionally, as shown in Exhibit AEB-6, I consider another CAPM analysis that relies on the long-term average beta coefficient for the companies in my proxy group, which is calculated as an average of the *Value Line* beta coefficients for the companies in my proxy group from 2013 through 2025, as shown in Exhibit AEB-7.

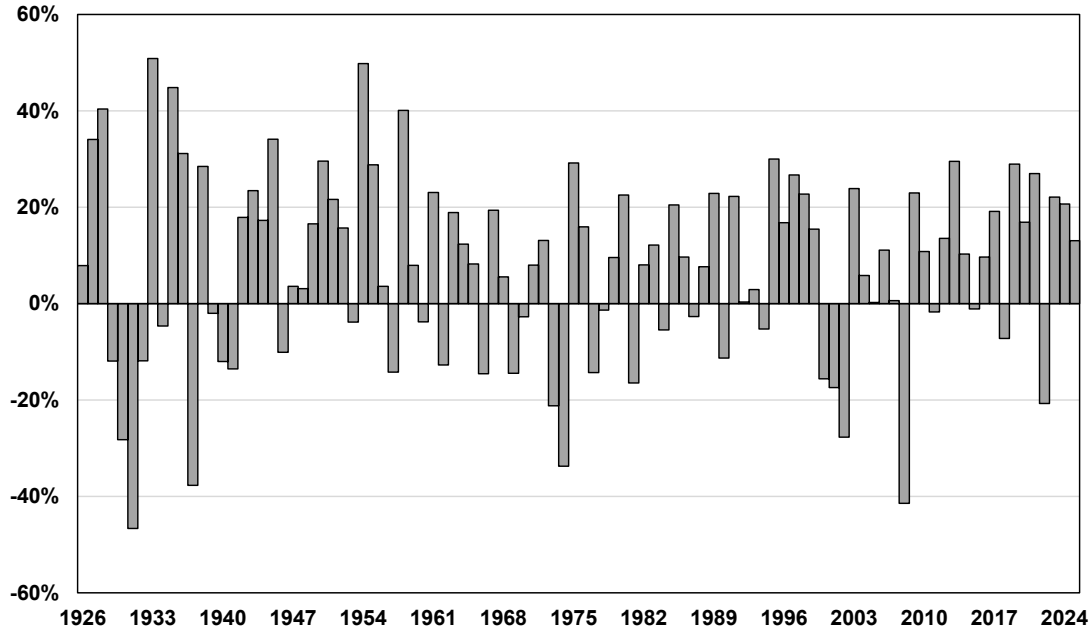
Q. How do you estimate the market risk premium in the CAPM?

A. I estimate the market risk premium as the difference between the implied expected equity market return and the risk-free rate. As shown in Exhibit AEB-8, the expected return on the S&P 500 Index is calculated using the constant growth DCF model discussed previously as applied to the companies in the S&P 500 Index. Based on an estimated market capitalization-weighted dividend yield of 1.31 percent and a weighted long-term growth rate of 11.89 percent, the estimated required market return for the S&P 500 Index as of April 30, 2026, is 13.28 percent.

Q. How does the current expected market return you have calculated compare to observed historical market returns?

A. As shown in Figure 6, given the range of annual equity returns that have been observed over the past century, a current expected market return of 13.28 percent is not unreasonable. As shown, in 53 out of the past 100 years (or 53 percent of observations), the realized equity market return was at least 13.28 percent or greater.

Figure 6 – Realized U.S. Equity Market Returns (1926-2025)[39]



Q. Did you consider another form of the CAPM?

A. Yes, I did. I have also considered the results of an ECAPM in estimating the cost of equity for the Company.[40] The ECAPM calculates the product of the adjusted beta coefficient and the market risk premium and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the market risk premium without any effect from the beta coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the ECAPM result, as noted in Equation [5] below:

[39] Depicts total annual returns on large company stocks, as reported in the 2023 *Kroll* SBBI Yearbook. See AEB WP 5.

[40] *See*, *e.g.*, Roger A. Morin, New Regulatory Finance 189 (Public Utilities Reports, Inc., 2006); Bulkley, Exh. AEB-17.

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \quad [5]$$

Where:

k_e = the required market-based cost of equity of an individual security;
β = the adjusted beta coefficient of an individual security
r_f = the risk-free rate of return
r_m = the required return on the market as a whole

In essence, the empirical form of the CAPM addresses the tendency of the "traditional" CAPM to underestimate the cost of equity for companies with low beta coefficients such as regulated utilities. In that regard, the ECAPM is not redundant to the use of adjusted betas in the traditional CAPM; rather, it recognizes the results of academic research indicating that the risk-return relationship is different (in essence, flatter) than estimated by the CAPM, and that the CAPM underestimates the cost of equity for companies with a beta less than 1.0 and overestimates the cost of equity for companies with a beta greater than 1.0.

Consistent with the CAPM, my application of the ECAPM uses the same the three yields on the 30-year Treasury bond as the risk-free rate, forward-looking market return, and beta coefficients.

Q. What are the results of your CAPM analyses?

A. The results of my CAPM and ECAPM analyses are shown in Figure 7, as well as Exhibit AEB-6.

Figure 7 – CAPM and ECAPM Results

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
CAPM:			
Value Line Beta	11.53%	11.52%	11.47%
Long-Term Avg. Beta	11.29%	11.27%	11.21%
ECAPM:			
Value Line Beta	11.97%	11.96%	11.92%
Long-Term Avg. Beta	11.79%	11.77%	11.73%

C. Bond Yield Risk Premium Analysis

Q. Please describe the BYRP analysis.

A. In general terms, this approach is based on the fundamental principle that equity investors bear the residual risk associated with equity ownership and therefore require a premium over the return they would have earned as a bondholder. That is, because returns to equity holders have greater risk than returns to bondholders, equity investors must be compensated to bear that risk. Risk premium approaches, therefore, estimate the cost of equity as the sum of the equity risk premium and the yield on a particular class of bonds. In my analysis, I use actual authorized returns for natural gas utility companies as the historical measure of the cost of equity to determine the risk premium.

Q. What is the fundamental relationship between the equity risk premium and interest rates?

A. Both academic literature and market evidence indicate that the equity risk premium (as used in this approach) is inversely related to the level of interest rates. That is, as interest rates increase, the equity risk premium decreases, and vice versa. Consequently, it is important to develop an analysis that: (1) reflects the inverse relationship between

interest rates and the equity risk premium; and (2) relies on recent and expected market conditions. The analysis presented on Exhibit AEB-9 establishes that relationship using a regression of the risk premium as a function of U.S. Treasury bond yields. When the authorized ROEs serve as the measure of required equity returns and the long-term Treasury bond yield is defined as the relevant measure of interest rates, the risk premium is the difference between those two points.[41]

Q. What did your Bond Yield Plus Risk Premium analysis reveal?

A. As shown in Figure 8, there has been a strong negative relationship between risk premia and interest rates. To estimate that relationship, I conducted a regression analysis using the following equation:

$$RP = a + b(T) \text{ [6]}$$

Where:

RP = Risk Premium (difference between authorized ROEs and the yield on 30-year Treasury bonds)

a = intercept term

b = slope term

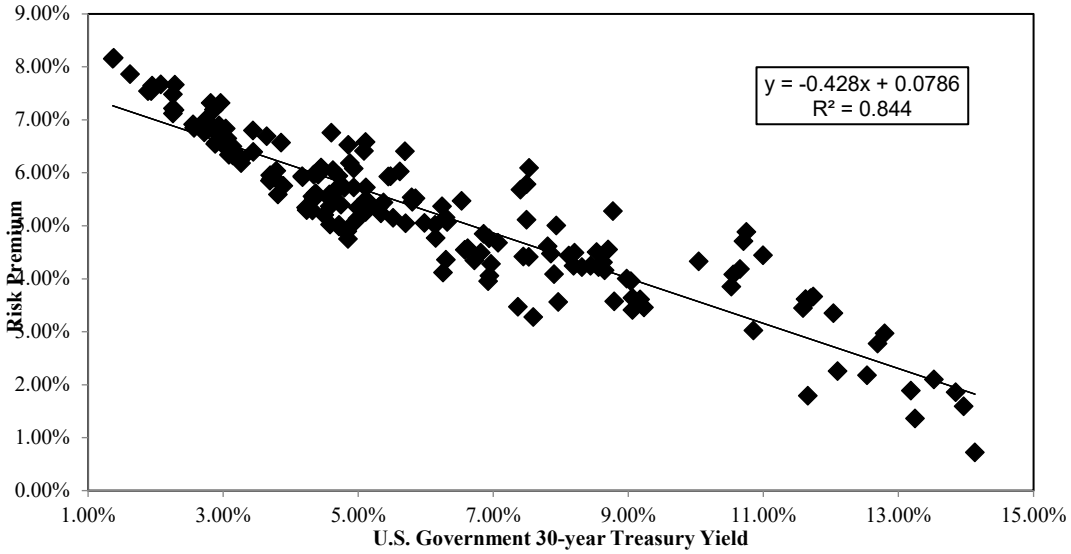
T = 30-year Treasury bond yield

Data regarding authorized ROEs were derived from all natural gas utility rate cases over this time-period as reported by Regulatory Research Associates ("RRA").[42] This equation's coefficients were statistically significant at the 99.00 percent level.

[41] *See*, *e.g.*, S. Keith Berry, *Interest Rate Risk and Utility Risk Premia During 1982-93*, 19 Manage. Decis. Econ., no. 2, Mar. 1998 (using a similar methodology, including using authorized ROEs as the relevant data source, and coming to similar conclusions regarding the inverse relationship between risk premia and interest rates); Bulkley, Exh. AEB-17. *See also*, Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholders Required Rates of Return*, Financial Management, Spring 1986, at 66.

[42] This analysis was screened to eliminate limited issue rider cases, pipeline transmission cases, and cases that were silent with respect to the authorized ROE.

Figure 8 – Risk Premium Regression Analysis



Q. What are the results of your BYRP analysis?

A. Figure 9 presents the results of my BYRP analysis, which are also presented in more detail in Exhibit AEB-9.

Figure 9 – Summary of BYRP Results

	30-Year Treasury Bond Yield		
	Current 30-Day Avg.	Near-Term Projected	Longer-Term Projected
Bond Yield Risk Premium	10.67%	10.61%	10.49%

VII. REGULATORY AND BUSINESS RISKS

Q. Please explain how you use the results of the cost of equity models in estimating the cost of equity.

A. These results provide only a range for the appropriate estimate of the Company's cost of equity. There are several additional factors that must be taken into consideration when determining where the Company's cost of equity falls within the range of results.

These factors, which are discussed below, should be considered with respect to their overall effect on the Company's risk profile.

A. Capital Expenditures

Q. Please summarize the Company's projected capital expenditure requirements.

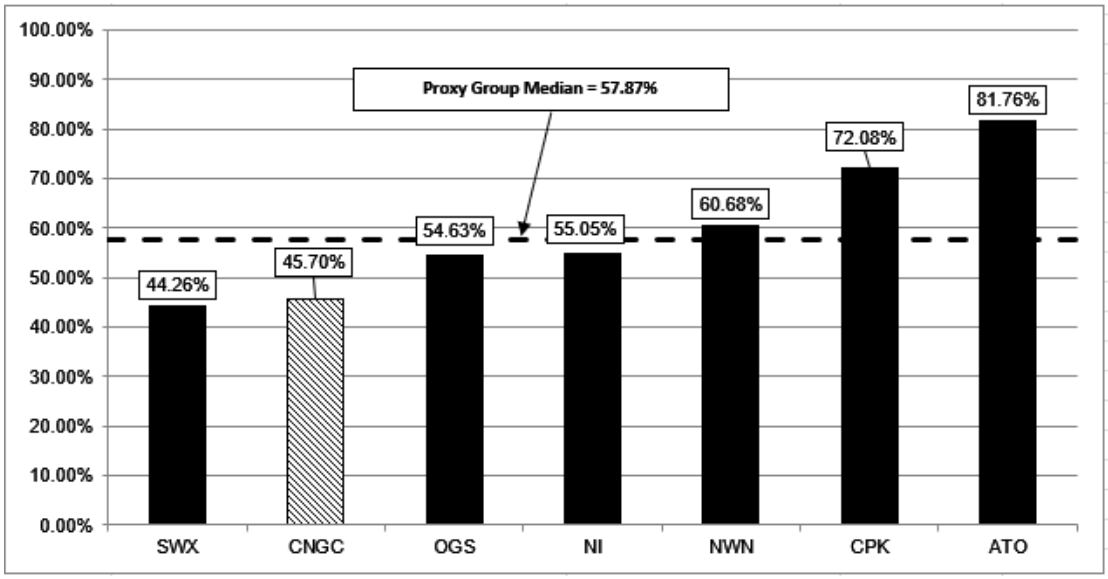
A. As of December 31, 2025, the Company had a net utility plant in Washington of approximately $776.9 billion, and the Company currently projects capital expenditures for 2026 through 2030 of approximately $335.04 billion in Washington.[43] Therefore, the Company's projected capital expenditures represent 45.70 percent of its current net utility plant as of December 31, 2025.

Q. Have you conducted any analysis of the Company's projected capital expenditures relative to the proxy companies?

A. Yes. As shown in Figure 10, and in Exhibit AEB-10, I calculated the ratio of expected capital expenditures to net utility plant for Cascade and each of the companies in the proxy group by dividing each company's projected capital expenditures for the period 2026 to 2031 by its total net utility plant as of December 31, 2025. As shown therein, the Company's ratio of capital expenditures as a percentage of net utility plant is below the median for the proxy group companies which, all else equal, indicates a risk level that is less than that of the companies in the proxy group.

[43] Data provided by the Company.

Figure 10 – Comparison of Capital Expenditures with the Proxy Group



Q. How is the Company's risk profile affected by its projected capital expenditures?

A. Capital expenditure requirements affect the Company's risk profile in two significant and related ways: (1) the heightened level of investment increases the risk of under-recovery or delayed recovery of the invested capital; and (2) an inadequate return would put downward pressure on key credit metrics.

Q. Do credit rating agencies recognize the risks associated with elevated levels of capital expenditures?

A. Yes. they do. From a credit perspective, the additional pressure on cash flows associated with high levels of capital expenditures exerts corresponding pressure on credit metrics and, therefore, credit ratings. To that point, S&P explains the importance of regulatory support for large capital projects:

> When applicable, a jurisdiction's willingness to support large capital projects with cash during construction is an important aspect of our analysis. This is especially true when the project represents a major addition to rate base and entails long lead times and technological risks that make it susceptible to construction delays. Broad support for all capital spending is the most credit-sustaining. Support for only specific

> types of capital spending, such as specific environmental projects or system integrity plans, is less so, but still favorable for creditors. Allowance of a cash return on construction work-in-progress or similar ratemaking methods historically were extraordinary measures for use in unusual circumstances, but when construction costs are rising, cash flow support could be crucial to maintain credit quality through the spending program. Even more favorable are those jurisdictions that present an opportunity for a higher return on capital projects as an incentive to investors.[44]

Recently, S&P evaluated the capital expenditure trends in the utility sector, noting that the balance between operating with negative discretionary cash flow from operations offset by reliable access to capital markets for financing may be tested through ever-increasing capital expenditure requirements as a result of the transformation of the energy sector through the focus on low/no carbon generation, electrification, and the replacement of aging infrastructure:

> We expect rising capital spending and increasing cash flow deficits that are not sufficiently funded in a credit-supportive manner will continue to pressure the industry's financial performance. Its average funds from operations (FFO) to debt was about 15% in 2021 and has gradually fallen to about 13.5%, primarily reflecting rising leverage…. Given our expectations for continued increasing capital spending over the next decade, we expect financial performance and credit quality will continue to be pressured.[45]

Therefore, to the extent that Cascade's rates do not permit the opportunity to recover its capital investments on a regular and timely basis, the Company will face increased recovery risk and thus increased pressure on its credit metrics.

[44] S&P Global Ratings, Assessing U.S. Investor-Owned Utility Regulatory Environments 7 (Aug. 10, 2016); Bulkley, Exh. AEB-18C.

[45] S&P Global Ratings, Industry Credit Outlook 2025, North American Regulated Utilities: Capex and climate change pressures credit quality 10 (Jan. 14, 2025); Bulkley, Exh. AEB-18C.

Q. Does Cascade have a capital tracking mechanism to recover the costs associated with its capital expenditures plan between rate cases?

A. Cascade has an annual pipeline Cost Recovery Mechanism ("CRM"), which allows the recovery between rate cases of investment associated with qualifying gas infrastructure that improves safety and reliability.[46] The CRM does not, however, provide for the recovery of the Company's other capital investments between rate proceedings. However, in this proceeding, the Company is proposing to eliminate the CRM and implement a multiyear rate plan ("MYRP") that covers the period May 1, 2026, and May 1, 2027, and would provide for the recovery of the Company's projected capital investment during this period. The MYRP is expected to mitigate some of the risk related to regulatory lag associated with the recovery of the Company's capital investments, which, as noted, the credit rating agencies have highlighted as a concern for the Company, as well as mitigate cash flow volatility and thus provide greater predictability in the revenue requirement over the term of the MYRP.

B. Regulatory Risk

Q. How does the regulatory environment affect investors' risk assessments?

A. The ratemaking process is premised on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility service, the subject utility must have the opportunity to recover the return of, and the market-required return on, invested capital. Regulatory authorities recognize that because utility operations are capital intensive, regulatory decisions should enable the utility to attract capital at reasonable terms, and doing so balances the long-term interests of investors

[46] Cascade Natural Gas Corporation, Washington Billing Terms and Definitions, https://www.cngc.com/rates-services/rates-tariffs (last visited Mar. 27, 2026); Bulkley, Exh. AEB-17.

and customers. To achieve this balance, the Company must be able to finance its operations assuming a reasonable opportunity to earn an appropriate return on invested capital to maintain an acceptable financial profile. In that respect, the regulatory environment is one of the most important factors considered in both debt and equity investors' risk assessments.

From the perspective of debt investors, the authorized return should enable the utility to generate the cash flow needed to meet its near-term financial obligations, make the capital investments needed to maintain and expand its systems, and maintain the necessary levels of liquidity to fund unexpected events. This financial liquidity must be derived not only from internally-generated funds, but also by efficient access to capital markets. Moreover, because fixed income investors have many investment alternatives, even within a given market sector, the utility's financial profile must be adequate on a relative basis to ensure its ability to attract capital under a variety of economic and financial market conditions.

Equity investors require that the authorized return be adequate to provide a risk-comparable return on the equity portion of the utility's capital investments. Because equity investors are the residual claimants on the utility's cash flows (which is to say that the equity return is subordinate to interest payments), they are particularly concerned with the strength of regulatory support and its effect on future cash flows.

Q. Do credit rating agencies consider regulatory risk in establishing a company's credit rating?

A. Both S&P and Moody's consider the overall regulatory framework in establishing credit ratings. Moody's establishes credit ratings based on four key factors:

(1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength. Of these criteria, regulatory framework and the ability to recover costs and earn returns are each given a broad rating factor of 25.00 percent. Therefore, Moody's assigns regulatory risk a 50.00 percent weighting in the overall assessment of business and financial risk for regulated utilities.[47]

S&P also identifies the regulatory framework as an important factor in credit ratings for regulated utilities, stating: "[W]e assess regulatory advantage because the influence of the regulatory framework and regime is of critical importance. It defines the environment in which a utility operates and has a significant bearing on a utility's financial performance."[48] S&P identifies four specific factors that it uses to assess the credit implications of the regulatory jurisdictions of investor-owned regulated utilities: (1) regulatory stability; (2) tariff-setting procedures and design; (3) financial stability; and (4) regulatory independence and insulation.[49]

Q. How does the regulatory environment in which a utility operates affect its access to and cost of capital?

A. The regulatory environment can significantly affect both the access to and cost of capital in several ways. First, the proportion and cost of debt capital available to utility companies are influenced by the rating agencies' assessment of the regulatory environment. As noted by Moody's, "[u]tility rates are set in a political/regulatory process rather than a competitive or free-market process; thus, the regulatory

[47] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities 2 (Aug. 6, 2024); Bulkley, Exh. AEB-17.
[48] S&P Global Ratings, Sector-Specific Corporate Methodology 147 (Apr. 4, 2024); Bulkley, Exh. AEB-18C.
[49] *Id.* at 147-48.

framework is a key determinant of the credit quality of a utility."[50] Moody's further highlighted the relevance of a stable and predictable regulatory environment to a utility's credit quality, noting: "The regulatory framework is important because it provides the basis for decisions that affect utilities, including rate-setting as well as the consistency and predictability of regulatory decision-making."[51]

Q. What have the credit rating agencies stated regarding the Washington regulatory jurisdiction?

A. Fitch's most recent rating action in July 2025 reaffirmed Cascade's BBB rating with a "stable" outlook. The credit rating agency noted:

> Fitch believes the Washington regulatory compact remains somewhat challenging; authorized ROE's tend to be at or below prevailing industry averages and the use of average rate base valuations and historical test years exacerbates regulatory lag. This has hindered Cascade's ability to materially improve its earned ROE and Fitch notes the utility has been earning below its authorized return for several years. Recent regulatory approval of its multi-year [general rate case ("GRC")] coupled with a timely cadence of future rate case filings should help improve earned returns. State legislation requires every utility to file a multi-year proposal in their GRC filings which we view as credit supportive.[52]

In November 2025, S&P affirmed the Company's BBB credit rating. S&P highlighted regulatory lag and historical under earning on its ROE:

> Historically, the company's earned returns have lagged its authorized levels because of weaker regulatory outcomes and significant regulatory lag. However, we believe the WUTC's reliance on a forward-looking, multiyear ratemaking framework is generally constructive and will likely reduce Cascade's regulatory lag and cash flow volatility and potentially improve its earned returns, excluding any unexpected cost overruns.[53]

[50] Moody's, Rating Methodology: Regulated Electric and Gas Utilities at 8; Bulkley, Exh. AEB-17.
[51] *Id*.
[52] Fitch Ratings, "Fitch Affirms MDU, Montana-Dakota, Cascade and CEHI, LLC; Outlooks Stable," July 2, 2025, at 6; Bulkley, Exh. AEB-17.
[53] S&P Global Ratings, Cascade Natural Gas Corp. 1 (Nov. 24, 2025); Bulkley, Exh. AEB-18C.

Q. Have you analyzed the regulatory framework in Washington relative to the jurisdictions in which the companies in your proxy group operate?

A. Yes. I evaluated the regulatory framework in Washington on three factors that are important in terms of providing a regulated utility an opportunity to earn its authorized ROE. These are: (1) test year convention (i.e., forecast vs. historical); (2) use of revenue decoupling mechanisms or other clauses that provide revenue stabilization; (3) the prevalence of capital cost recovery between rate cases. The results of this regulatory risk assessment are shown in Exhibit AEB-11 and are summarized below.

- Test Year Convention: Consistent with the requirements of RCW 80.28.425, which as of January 1, 2022, requires that every gas or electric company include a proposal for an MYRP, Cascade is proposing a forward-looking MYRP. Approximately 52.00 percent of the operating utility subsidiaries of the proxy group companies provide service in jurisdictions that use a partially or fully forecast test year. Forecast test years result in more prompt recovery of incurred costs and thus mitigates the regulatory lag associated with historical test years. As Lowry, Hovde, Getachew, and Makos explain:

> This report provides an in depth discussion of the test year issue. It includes the results of empirical research which explores why the unit costs of electric [investor-owned utilities] are rising and shows that utilities operating under forward test years realize higher returns on capital and have credit ratings that are materially better than those of utilities operating under historical test years. The research suggests that shifting to a future test year is a prime strategy for rebuilding utility credit ratings as insurance against an uncertain future.[54]

[54] Mark Newton Lowry, David Hovde, Lullit Getachew & Matt Makos, Forward Test Years for US Electric Utilities 1 (Prepared for the Edison Electric Institute by Pacific Economics Group Research, LLC, Aug. 2010); Bulkley, Exh. AEB-17.

In addition, several of the operating companies of the proxy group are operating under MYRPs or have recently applied for MYRPs.

- Volumetric Risk: Cascade has partial protection against volumetric risk in Washington through its revenue decoupling mechanism.[55] This is consistent with the proxy group where approximately 84.00 percent of the operating companies held by the proxy group companies also have some form of protection against volumetric risk either through revenue decoupling, formula-based rates, or straight fixed-variable rate design.
- Capital Cost Recovery: As discussed, the Company has a CRM and is applying for a MYRP. Approximately 80.00 percent of the operating utility subsidiaries of the proxy group companies also have some form of cost recovery for capital investments placed into service between rate cases. To the extent that the Company's rates going forward do not permit the opportunity to recover its capital investments on a regular and timely basis, it will face increased recovery risk and thus increased pressure on its credit metrics relative to the proxy group.

Q. Has the Company failed to earn its authorized ROR in the past few years?

A. Yes. As discussed in the testimony of Company witness Sievert, the Company has failed to earn its authorized ROR in each year since 2017 due to its continued program of capital investment to improve the safety and reliability of the system and significant regulatory lag.

[55] Cascade Natural Gas Corporation, Washington Billing Terms and Definitions, https://www.cngc.com/rates-services/rates-tariffs (last accessed Mar. 27, 2026); Bulkley, Exh. AEB-17.

Q. Have you developed any additional analyses to evaluate the regulatory environment in Washington as compared to the jurisdictions in which the companies in your proxy group operate?

A. Yes. I have conducted two additional analyses to compare the regulatory framework of Washington to the jurisdictions in which the companies in the proxy group operate. Specifically, I considered two different rankings: (1) the RRA ranking of regulatory jurisdictions; and (2) S&P's ranking of the credit supportiveness of regulatory jurisdictions.

Q. How does RRA evaluate the regulatory environment in each jurisdiction?

A. RRA evaluates the regulatory environment from an investor perspective, considering the relative regulatory risk associated with ownership of securities issued by the companies that are regulated in each jurisdiction. RRA considers several factors that affect the regulatory process including gubernatorial, legislative and court activity, rate case decisions and other regulatory decisions, and information obtained through contact with commissioners, staff, company and government outreach.

Q. How do you use the RRA ratings to compare the regulatory jurisdictions of the proxy group companies with the Company's regulatory jurisdiction?

A. RRA assigns a ranking for each regulatory jurisdiction between "Above Average/1" to "Below Average/3," with nine total rankings between these categories. I applied a numeric ranking system to the RRA rankings with "Above Average/1" assigned the highest ranking ("1") and "Below Average/3" assigned the lowest ranking ("9"). As shown in Exhibit AEB-12, the Washington jurisdictional ranking is "Average/3" (i.e.,

a "6"), which is lower than the proxy group average ranking, which is classified between "Average/1" and "Average/2" (i.e., "4.78").

Q. Please explain the S&P credit supportiveness analysis?

A. For credit supportiveness, S&P classifies each regulatory jurisdiction into five categories that range from "Most Credit Supportive" down to "Credit Supportive." My analysis of the credit supportiveness of the regulatory jurisdictions in which the proxy companies operate as compared to the Company's regulatory jurisdiction is similar to the analysis of the RRA overall regulatory ranking discussed above. Specifically, I have assigned a numerical ranking to each category, from Most Credit Supportive (i.e., a "1") to Credit Supportive (i.e., a "5"). As shown in Exhibit AEB-13, similar to the RRA regulatory rankings just discussed, the Washington jurisdictional classification of "Very Credit Supportive" (i.e., a "3") is below the proxy group average ranking, which is classified as between "Highly Credit Supportive" and "Very Credit Supportive" (i.e., a "2.35").

Q. What are your conclusions regarding the business and regulatory risks of the company?

A. Based on my analysis, the Company's small size, Washington's aggressive greenhouse gas ("GHG") reduction requirements, and the comparative regulatory rankings, including the regulatory lag to which the Company has been subject that has been highlighted by the credit rating agencies indicate that the Company's business risks are higher than the proxy group. Further, although the ultimate future effect on the Company's natural gas utility operations is not yet known as a result of Washington's initiatives to achieve GHG reduction requirements, the Company's natural gas

distribution business is nonetheless exposed to significant uncertainty regarding the energy transition in Washington, including the timing of and financial ramifications to the Company of such a transition. Likewise, while the Company's regulatory mechanisms and the ability to timely recover its prudently incurred costs are generally consistent with the operating utilities of the proxy group, both the RRA and S&P rankings for Washington indicate a greater regulatory risk than the average for the proxy group. Furthermore, despite the regulatory mechanisms in place, and five general rate cases, the Company has failed to earn its authorized ROR for the last eight years. As a result of all of these factors, and considered in total, I conclude that the Company has greater than average business and regulatory risk when compared to the proxy group.

C. Small Size Risk

Q. Is there a risk to a firm associated with small size?

A. Yes. Both the financial and academic communities have long accepted the proposition that the cost of equity for small firms is subject to a "size effect." While empirical evidence of the size effect often is based on studies of industries other than regulated utilities, utility analysts also have noted the risk associated with small market capitalizations. Specifically, an analyst for Ibbotson Associates noted:

> For small utilities, investors face additional obstacles, such as a smaller customer base, limited financial resources, and a lack of diversification across customers, energy sources, and geography. These obstacles imply a higher investor return.[56]

[56] Michael Annin, *Equity and the Small-Stock Effect*, Public Utils. Fortnightly 42 (Oct. 15, 1995); Bulkley, Exh. AEB-17.

Q. How does the smaller size of a utility affect its business risk?

A. In general, smaller companies are less able to withstand adverse events that affect their revenues and expenses. The impact of weather variability, the loss of large customers to bypass opportunities, or the destruction of demand as a result of general macroeconomic conditions or fuel price volatility will have a proportionately greater impact on the earnings and cash flow volatility of smaller utilities. Similarly, capital expenditures for non-revenue producing investments, such as system maintenance and replacements, will put proportionately greater pressure on customer costs, potentially leading to customer attrition or demand reduction. Taken together, these risks affect the return required by investors for smaller companies.

Q. How do Cascade's natural gas operations in Washington compare in size to the proxy group companies?

A. Cascade's natural gas distribution operations are substantially smaller than the median for the proxy group companies in terms of market capitalization. While the Company is not publicly-traded on a stand-alone basis, as shown in Exhibit AEB-14. Cascade's common equity is based on its proposed test year rate base and equity ratio is substantially smaller than the median market capitalization of the proxy group companies.

Q. How did you estimate the size premium for Cascade?

A. Given this relative size information, it is possible to estimate the impact of size on the cost of equity for the Company using *Kroll* Cost of Capital Navigator data that estimates the stock risk premia based on the size of a company's market

capitalization.[57] As shown in Exhibit AEB-14, the median market capitalization of the proxy group is approximately $5.98 billion, which corresponds to the fifth decile of *Kroll's* market capitalization data.[58] Based on *Kroll's* analysis, that decile corresponds to a size premium of 0.65 percent (i.e., 65 basis points). In comparison, the Company's implied common equity balance of approximately $376.50 million falls within the nine decile, which corresponds to a size premium of 1.68 percent (i.e., 168 basis points). The difference between the size premium for the Company and the size premium for the proxy group is 103 basis points (i.e., 1.68 percent minus 0.65 percent).

Q. Were utility companies included in the size premium study conducted by Kroll?

A. Yes. As shown in Exhibit 7.2 of the *Kroll* (formerly *Duff & Phelps*) 2019 Valuation Handbook, OGE Energy Corp. had the largest market capitalization of the companies contained in the fourth decile, which indicates that *Kroll* has included utility companies in its size risk premium study.[59]

Q. Is the size premium applicable to companies in regulated industries such as utilities?

A. Yes. For example, Zepp (2003) provided the results of two studies that showed evidence of the required risk premium for small water utilities. The first study, which was conducted by the Staff of the California Public Utilities Commission, computed proxies for beta risk using accounting data from 1981 through 1991 for 58 water utilities and concluded that smaller water utilities had greater risk and required higher

[57] *Kroll* Cost of Capital Navigator – Size Premium; annual data as of December 31, 2025.
[58] *Id*.
[59] *Kroll*, Valuation Handbook: Guide to Cost of Capital, Exhibit 7.2 (2019); Bulkley, Exh. AEB-17.

returns on equity than larger water utilities.[60] The second study examined the differences in required returns over the period of 1987 through 1997 for two large and two small water utilities in California. As Zepp (2003) showed, the required return for the two small water utilities calculated using the DCF model was on average 99 basis points higher than the two larger water utilities.[61]

Additionally, Chrétien and Coggins (2011) studied the CAPM and its ability to estimate the risk premium for the utility industry, and in particular subgroups of utilities.[62] The article considered the CAPM, the Fama-French three-factor model, and a model similar to the ECAPM, which as previously discussed, I have also considered in estimating the cost of equity for the Company. In the study, the Fama-French three-factor model explicitly included an adjustment to the CAPM for risk associated with size. As Chrétien and Coggins (2011) show, the beta coefficient on the size variable for the U.S. natural gas utility group was positive and statistically significant indicating that small size risk was relevant for regulated natural gas utilities.[63]

Q. Have regulators in other jurisdictions made a specific risk adjustment to the cost of equity results based on a company's small size?

A. Yes. For example, in Order No. 15, the Regulatory Commission of Alaska ("RCA") concluded that Alaska Electric Light and Power Company ("AEL&P") was riskier than the proxy group companies due to small size as well as other business risks. The RCA did "not believe that adopting the upper end of the range of ROE analyses in this case,

[60] Thomas M. Zepp, *Utility Stocks and the Size Effect-Revisited*, 43 Q. Rev. of Econ. & Fin., no. 3, 2003, at 578-82; Bulkley, Exh. AEB-17.
[61] *Id*. at 580.
[62] Stéphane Chrétien & Frank Coggins, *Cost of Equity for Energy Utilities: Beyond the CAPM*, 18 Energy Stud. Rev., no. 2 , 2011; Bulkley, Exh. AEB-17.
[63] *Id.*

without an explicit adjustment, would adequately compensate AEL&P for its greater risk." [64] Thus, the RCA awarded AEL&P an ROE of 12.875 percent, which was 108 basis points above the highest cost of equity estimate from any model presented in the case.[65] Similarly, the RCA has also noted that small size, as well as other business risks such as structural regulatory lag, weather risk, alternative rate mechanisms, gas supply risk, geographic isolation and economic conditions, increased the risk of ENSTAR Natural Gas Company.[66] Ultimately, the RCA concluded that:

> Although we agree that the risk factors identified by ENSTAR increase its risk, we do not attempt to quantify the amount of that increase. Rather, we take the factors into consideration when evaluating the remainder of the record and the recommendations presented by the parties. After applying our reasoned judgment to the record, we find that 11.875% represents a fair ROE for ENSTAR.[67]

Additionally, the Minnesota Public Utilities Commission ("Minnesota PUC") authorized an ROE for Otter Tail Power Company ("Otter Tail") above the mean DCF results as a result of multiple factors, including Otter Tail's small size. The Minnesota PUC stated:

> The record in this case establishes a compelling basis for selecting an ROE above the mean average within the DCF range, given Otter Tail's unique characteristics and circumstances relative to other utilities in the proxy group. These factors include the company's relatively smaller size, geographically diffuse customer base, and the scope of the Company's planned infrastructure investments.[68]

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[64] *In re the Revenue Requirement & Cost of Serv. Stud. Designated as TA381-1 Filed by Alaska Elec. Light and Power Co.*, Regul. Comm'n of Alaska, Docket No. U-10-29, Order No. 15 at 37 (Sep. 2, 2011); Bulkley, Exh. AEB-17.
[65] *Id.* at 32, 37.
[66] *In re the Tariff Revision Designated as TA285-4 Filed by ENSTAR Nat. Gas Co., a Div. of SEMCO Energy, Inc., Regul. Comm'n of Alaska*, Regul. Comm'n of Alaska, Docket No. U-16-066, Order No. 19 at 50-52 (Sep. 22, 2017); Bulkley, Exh. AEB-17.
[67] *Id*. at 52.
[68] *In re the Application of Otter Tail Power Co. for Authority to Increase Rates for Elec. Serv. in Minn.*, Minn. Pub. Utils. Comm'n, Docket No. E017/GR-15-1033, Findings of Fact, Conclusions, and Order at 55 (May 1, 2017); Bulkley, Exh. AEB-17.

Finally, in Opinion Nos. 569 and 569-A, the Federal Energy Regulatory Commission ("FERC") adopted a size premium adjustment in its CAPM estimates for electric utilities. In those decisions, the FERC noted that "the size adjustment was necessary to correct for the CAPM's inability to fully account for the impact of firm size when determining the cost of equity."[69]

Q. How have you considered the smaller size of Cascade in your recommendation of the Company's ROE in this proceeding?

A. While I have estimated the effect of the Company's small size of its natural gas operations in Washington on the cost of equity, I am not proposing that a specific adjustment for this risk factor be made. Rather, I have considered the small size of the Company's utility operations in evaluating where within the range of analytical results that the Company's ROE should fall. All else equal, the additional risk associated with the Company's small size supports an ROE that is above the average of the range of results produced by the cost of equity estimation models.

D. Flotation Costs

Q. What are flotation costs?

A. Flotation costs are the costs associated with the sale of new issues of common stock. These costs include out-of-pocket expenditures for preparation, filing, underwriting, and other issuance costs.

[69] *Ass'n. of Businesses Advocating Tariff Equity, et. al., v. Midcontinent Indep. Sys. Operator, Inc., et. al.*, 171 FERC ¶ 61,154, at P 75 (2020); Bulkley, Exh. AEB-17. The D.C. Circuit Court of Appeals recently vacated FERC Order No. 569 decisions that related to its risk premium model and remanded the case to FERC to reopen the proceedings. *MISO Transmission Owners, et. al. v. Fed. Energy Regul. Comm'n*, 45 F.4th 248, 458 U.S. App. D.C. 489 (D.C. Cir. Aug. 9, 2022); Bulkley, Exh. AEB-17. However, in its decision, the Court did not reject FERC's inclusion of the size premium to estimate the CAPM. *Id.* at 260.

Q. Why is it important to consider flotation costs in the allowed ROE?

A. A regulated utility must have the opportunity to earn an ROE that is both competitive and compensatory to attract and retain new investors. To the extent that a company is denied the opportunity to recover prudently incurred flotation costs, actual returns will fall short of expected (or required) returns, thereby diluting equity share value.

Q. Are flotation costs part of the utility's invested costs or part of the utility's expenses?

A. Yes. Flotation costs are part of the invested costs of the utility, which are properly reflected on the balance sheet under "paid in capital." They are not current expenses, and, therefore, are not reflected on the income statement. Rather, like investments in rate base or the issuance costs of long-term debt, flotation costs are incurred over time. As a result, the great majority of a utility's flotation cost is incurred prior to the test year but remains part of the cost structure that exists during the test year and beyond, and as such, should be recognized for ratemaking purposes. Therefore, it is irrelevant whether an issuance occurs during the test year or is planned for the test year because failure to allow recovery of past flotation costs may deny the Company the opportunity to earn its required rate of return in the future.

Q. Please provide an example of why a flotation cost adjustment is necessary to compensate investors for the capital they have invested.

A. Suppose MDU Resources issues stock with a value of $100, and an equity investor invests $100 in MDU Resources in exchange for that stock. Further suppose that after paying the flotation costs associated with the equity issuance, which include fees paid to underwriters and attorneys, among others, MDU Resources ends up with only $97

of issuance proceeds, rather than the $100 the investor contributed. MDU Resources invests that $97 in plant used to serve its customers, which becomes part of rate base. Absent a flotation cost adjustment, the investor will thereafter earn a return on only the $97 invested in rate base, even though she contributed $100. Making a small flotation cost adjustment gives the investor a reasonable opportunity to each the authorized return, rather than the lower return that results when the authorized return is applied to an amount less than what the investor contributed.

Q. Is the date of MDU Resources' last issued common equity important in the determination of flotation costs?

A. No. It is important to recognize flotation costs for all equity issuances since these costs reduce the permanent capital structure of the company. Therefore, the vintage of the issuance is not particularly important because an investor should have a reasonable opportunity to earn a return on the full amount of capital that she has contributed in every year of the investment. As noted in my earlier example, the investor contributed $100, but due to flotation costs, MDU Resources only ends up with $97 to invest in rate base. Without the recognition of flotation costs, the investor will only earn a return on the $97 invested in rate base in year one as well as every subsequent year of the investment. Therefore, adjusting the ROE in year one to recognize flotation costs will only award the opportunity for the investor to earn a return on her full investment in year one, while in year two and thereafter the investor will still only earn a return on the $97 invested in rate base. As a result, the ROE should be adjusted for flotation costs in every year regardless of the vintage of the issuance, because as long as the $100 is

invested, the investor should have a reasonable opportunity to earn a return on the entire amount.

Q. Is the need to consider flotation costs eliminated because Cascade is a wholly-owned subsidiary of MDU Resources?

A. No. Although Cascade is a wholly-owned subsidiary of MDU Resources, it is appropriate to consider flotation costs because wholly-owned subsidiaries receive equity capital from their parent and provide returns on the capital that roll up to the parent, which is designated to attract and raise capital based upon the returns of those subsidiaries. To deny recovery of issuance costs associated with the capital that is invested in the subsidiaries ultimately penalizes the investors that fund the utility operations and could inhibit the utility's ability to obtain new equity capital at a reasonable cost.

Q. Is the need to consider flotation costs recognized by the academic and financial communities?

A. Yes. The academic and financial communities recognize the need to reimburse investors for equity issuance costs in the same spirit that they recognize that investors should be reimbursed for the costs of issuing debt. This treatment is consistent with the philosophy of a fair rate of return. According to Dr. Shannon Pratt:

> Flotation costs occur when new issues of stock or debt are sold to the public. The firm usually incurs several kinds of flotation or transaction costs, which reduce the actual proceeds received by the firm. Some of these are direct out-of-pocket outlays, such as fees paid to underwriters, legal expenses, and prospectus preparation costs. Because of this reduction in proceeds, the firm's required returns on these proceeds equate to a higher return to compensate for the additional costs. Flotation costs can be accounted for either by amortizing the cost, thus reducing the cash flow to discount, or by incorporating the cost into the

> cost of capital. Because flotation costs are not typically applied to operating cash flow, one must incorporate them into the cost of capital.[70]

Q. Have you estimated what a reasonable flotation cost adjustment would be for Cascade?

A. Yes. My flotation cost calculation is based on the costs incurred by MDU Resources in that company's two most recent equity offerings. That flotation cost percentage is then applied to the expected dividend yields for the proxy group companies. As shown in Exhibit AEB-15, the impact on the proxy group's cost of equity amounts to 12 basis points (i.e., 0.12 percent) based on the median and 11 basis points (i.e., 0.11 percent) based on the mean.

Q. Do your cost of equity model results reflect an adjustment for flotation cost recovery?

A. No, I do not make an explicit adjustment for flotation costs to any of the quantitative results of my cost of equity models. Rather, I have considered the incremental cost associated with stock issuance as part of my overall recommendation regarding the range of a reasonable ROE for the Company and the reasonableness of the Company's proposed ROE.

E. Impact of Washington's Greenhouse Gas Reduction Initiatives

Q. Has Washington enacted legislation that increases the business risk of the Company's natural gas operations going forward?

A. Yes. The Climate Commitment Act was signed into law in Washington in May 2021 and requires natural gas distribution utilities such as Cascade to reduce overall GHG emissions 45.00 percent below 1990 levels by 2030, 70.00 percent below 1990 levels

[70] Shannon P. Pratt, Cost of Capital Estimation and Applications 220-21 (2nd ed. 2002); Bulkley, Exh. AEB-17.

by 2040, and 95.00 percent below 1990 levels by 2050.[71] Reductions may be achieved through increased energy efficiency and conservation measures, purchased emission allowances and offsets, and purchases of low carbon fuels. Emissions compliance under the law began January 1, 2023.[72]

In April 2022, the Washington State Building Code Council ("WSBCC") revised the state's commercial energy code that significantly limits the use of natural gas for space and water heating in new and retrofitted commercial and multifamily buildings. While the WSBCC has not mandated the use of electric heat pumps for new residential buildings, it has approved revised building codes that incentivize builders to choose electric heat pumps by requiring emissions offsets if natural gas is installed in new residential construction.[73]

Furthermore, while it would not apply to Cascade in its current form, a revised version of House Bill ("HB") 1589 passed the Washington House of Representatives in 2024 and the Commission adopted permanent rules implementing the law in September 2025.[74] There have been subsequent developments concerning HB 1589, including the passage of Initiative 2066, which repealed key provisions of HB 1589, and related appeals that have added to the regulatory uncertainty in the State of Washington.

[71] RCW 70A.45.020(1)(a); Bulkley, Exh. AEB-17.
[72] RCW 70A.65.070(1)(a)(i) ("The department [of Ecology] shall commence the [cap-and-invest] program by January 1, 2023[.]"); Bulkley, Exh. AEB-17.
[73] Ysabelle Kempe, Legal threats to city, state natural gas bans: A timeline, Smart Cities Dive (Jan. 2, 2024); Jerry Cornfield, Washington makes another run at heat pump rules, Washington State Standard (Nov. 28, 2023); Bulkley, Exh. AEB-17.
[74] *In re Amending Rules in WAC 480-96 Rel. to Integrated Sys. Planning*, Docket U-240281, General Order R-609 Order Adopting Rules Permanently ¶¶ 7, 147(Sep. 26, 2025); Bulkley, Exh. AEB-17.

Q. Are you aware of other risk factors that could affect Cascade's business operations?

A. Yes. Cascade is also in direct competition with other sources of energy to serve its customers and depending on how competitive the price of natural gas is to other sources of energy, there is the risk that customers could switch to an alternative energy source. In addition, a material portion of Cascade's distribution load is derived from sales to natural gas-fired generation (i.e., approximately 44.00 percent of Cascade's 2024 total company utility gas sales in Washington were derived from electric power sales volume, a percentage that was significantly higher than each of the proxy group companies).[75] However, decarbonization efforts in Washington have placed pressure on natural gas-fired generation and the need to transition away from the use of fossil fuels. For example, the Clean Energy Transformation Act ("CETA"), which was enacted in 2019, requires that 100.00 percent of electric load be met from carbon-neutral resources by 2030, and that 100.00 percent of electric load be served with carbon-free (renewable or non-emitting) resources in 2045. Thus, the fact that Cascade has material natural gas generation load increases the utility's risk with respect to future sales, earnings, and cash flow.

Q. Do these climate-related initiatives in Washington increase the Company's business risk going forward?

A. Yes. Regardless of the ultimate end state in 2050, there is currently significant uncertainty associated with the future of the Company's natural gas system and how or

[75] EIA Form 176.

to what extent the various climate initiatives will affect the Company's operations going forward.

Q. How do the risks faced by the Company associated with Washington's climate-related initiatives compare to other states in which the operating utility subsidiaries of the proxy group operate?

A. Comparatively, Washington has implemented more aggressive decarbonization programs that create greater business risk to future natural gas utility service than the proxy group companies overall face with respect to decarbonization.[76] Among the 21 unique jurisdictions where the proxy group subsidiaries operate, 11 have some form or combination of recommended, executive, or statutory GHG target, while seven jurisdictions have a statutory target similar to Washington, which is the most enforceable form of GHG target.[77]

VIII. CAPITAL STRUCTURE

Q. Is the capital structure of the Company an important consideration in the determination of the appropriate ROE?

A. Yes. The equity ratio is the primary indicator of financial risk for a regulated utility. All else equal, a higher debt ratio increases the risk to investors. For debt holders, higher debt ratios result in a greater portion of the available cash flow being required to meet debt service, thereby increasing the risk associated with the payments on debt. The result of increased risk is a higher interest rate. The incremental risk of a higher debt

[76] Northwest Natural Gas Company, which is included in the natural gas utility proxy group, has operations in numerous jurisdictions, one of which is Washington; however, none of the other proxy group companies have natural gas operations in Washington.

[77] Center of Climate and Energy Solutions, U.S. State Greenhouse Gas Emissions Targets, https://www.c2es.org/document/greenhouse-gas-emissions-targets/ (last visited May 11, 2026); Bulkley, Exh. AEB-17.

ratio is more significant for common equity shareholders, whose claim on the cash flow of the Company is secondary to debt holders. Therefore, the greater the debt service requirement, the less cash flow is available for common equity holders.

Q. What is Cascade's proposed capital structure?

A. The Company proposes to establish a projected 2026 capital structure consisting of 50.332 percent common equity, 49.668 percent long-term debt. For the projected 2027 rate year, the Company proposes a capital structure composed of 50.732 percent common equity, and 49.268 percent long-term debt.

Q. Have you conducted an analysis to assess the reasonableness of the Company's capital structure?

A. Yes. I have compared the Company's proposed capital structure relative to the actual capital structures of the utility operating subsidiaries of the companies in the proxy group. The cost of equity is estimated based on the return that is derived from companies in the proxy group that are deemed to be comparable in risk to the Company; however, those companies must be publicly-traded in order to apply the cost of equity models. The operating utility subsidiaries of the proxy group companies are most risk-comparable to the Company, and thus it is reasonable to look to the average capital structure of the operating utilities of the proxy group to benchmark the equity ratios for the Company. Specifically, I have calculated the average proportion of common equity, long-term debt, preferred equity, and short-term debt for the most recent three years for each of the utility operating subsidiaries of the proxy group companies. As shown in Exhibit AEB-16, the 3-year average equity ratios for the utility operating subsidiaries of the proxy group range from 46.51 percent to 65.95 percent, with an average of

55.07 percent. The Company's proposed equity ratio of 50.00 percent is well within the range of the equity ratios of the proxy group, and well below the average actual equity ratio of the proxy group companies.

Q. Are there other factors to be considered in setting the Company's capital structure?

A. Yes, there are other factors that should be considered in setting the Company's capital structure, namely the challenges that the credit rating agencies have highlighted as placing pressure on the credit metrics for utilities.

For example, Moody's recently maintained its "stable" outlook for 2026 for the regulated gas and electric utilities sector based on the expectation of continued regulatory support in "most states." [78] Moody's makes clear that constructive regulatory outcomes that promote timely cost recovery is the key factor in supporting utility credit quality as Moody's has identified that utilities could be exposed to a number of credit negative factors over the next 12 to 18 months. Specifically, Moody's noted the following factors: (1) macroeconomic factors are expected to be modestly credit negative due to upward pressure on electric prices and elevated inflation; and (2) increased power demand due to "the development of new data centers, electrification of transportation and buildings, manufacturing customers and underlying population growth" will increase power prices which when coupled with inflation and elevated capital spending increases utilities' exposure to affordability concerns.[79]

[78] Moody's Investors Service, Outlook Stable; supportive regulation to offset modestly negative macro factors 1 (Oct. 31, 2025); Bulkley, Exh. AEB-18C.
[79] *Id.*

S&P states that after five years of downgrades outpacing upgrades, in 2025, upgrades outpaced downgrades and the percentage of companies with a negative outlook declined which S&P noted pointed to a "more stable environment for credit quality in 2026."[80] However, S&P expects the industry to have increased cash flow deficits as a result of significant capital spending, which must be funded with both debt and equity to maintain credit quality.[81] Therefore, S&P notes that the utility industry will need ongoing access to capital markets to fund the significant capital expenditures. S&P also notes that credit quality will depend on the ability of utilities to manage regulatory risk and achieve fair rate case orders. Finally, while S&P's base case results in a stable outlook for the utility sector, S&P states that about 40 percent of the industry has "minimal financial cushion" from the downgrade threshold and therefore would have limited ability to absorb any unexpected events outside of what is assumed in S&P's base case.[82]

Fitch maintains a "neutral" outlook for the utility industry in 2026 noting that the stable outlook was supported by growth in sales related to data centers and a "generally benign" regulatory environment for utilities.[83] However, while Fitch views load growth as a "positive development" because the growth is related to data centers, it raises longer-term uncertainty related to "rate design, customer concentration, and technology risks."[84] Further, Fitch states that capital expenditures for the industry will continue to "set records" in order to meet the growing demand and to enhance

[80] S&P Global Ratings, North American Regulated Utilities: Data center growth will support credit quality in 2026 2 (Jan. 14, 2026); Bulkley, Exh. AEB-18C.
[81] *Id.*
[82] *Id.*
[83] Fitch Ratings, North American Utilities & Power Outlook 2026 1 (Dec. 9, 2025); Bulkley, Exh. AEB-18C.
[84] *Id.*

reliability and modernize. The record capital expenditures will require a balanced regulatory environment to facilitate cost recovery in a credit supportive manner.[85]

The continued concerns of the credit ratings agencies over increased capital expenditures underscore the importance of maintaining adequate cash flow metrics for the Company in the context of this proceeding.

Q. Will the capital structure and ROE authorized in this proceeding affect the Company's access to capital at reasonable rates?

A. Yes. The level of earnings authorized by the Commission directly affects the Company's ability to fund its operations with internally-generated funds. Both bond investors and rating agencies expect a significant portion of ongoing capital investments to be financed with internally-generated funds. In addition, it is important to recognize that because a utility's investment horizon is very long, investors require the assurance of a sufficiently high return to satisfy the long-term financing requirements of the assets placed into service. Those assurances, which often are measured by the relationship between internally-generated cash flows and debt (or interest expense), depend quite heavily on the capital structure. As a consequence, both the ROE and capital structure are very important to debt and equity investors, particularly given the capital market conditions discussed previously and the credit rating agencies' recently stated concerns about the Company's financial metrics.

[85] *Id.*

IX. CONCLUSIONS AND RECOMMENDATION

Q. What is your conclusion regarding a fair ROE for the Company?

A. Based on the various quantitative analyses summarized in Figure 11 below, a reasonable range of ROE results for Cascade is from 10.25 percent to 11.25 percent. Considering the qualitative analyses presented in my direct testimony, current and prospective capital market conditions and the Company's specific risk factors, it would be reasonable to conclude that the ROE should be set at or above the midpoint of my recommended range. However, the Company is requesting an ROE of 10.50 percent which is towards the low-end of my range and therefore is reasonable if not conservative.

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Figure 11 – Summary of Analytical Results

Constant Growth DCF

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Mean Results:			
30-Day Avg. Stock Price	9.85%	10.58%	11.25%
90-Day Avg. Stock Price	9.98%	10.71%	11.37%
180-Day Avg. Stock Price	10.09%	10.82%	11.49%
Average	9.97%	10.70%	11.37%
Median Results:			
30-Day Avg. Stock Price	9.51%	10.15%	10.44%
90-Day Avg. Stock Price	9.72%	10.33%	10.56%
180-Day Avg. Stock Price	9.85%	10.41%	10.69%
Average	9.69%	10.30%	10.56%

CAPM / ECAPM / Bond Yield Risk Premium

	30-Year Treasury Bond Yield		
	Current 30-Day Avg.	Near-Term Projected	Longer-Term Projected
CAPM:			
Current *Value Line* Beta	11.53%	11.52%	11.47%
Long-term Avg. *Value Line* Beta	11.29%	11.27%	11.21%
ECAPM:			
Current *Value Line* Beta	11.97%	11.96%	11.92%
Long-term Avg. *Value Line* Beta	11.79%	11.77%	11.73%
Bond Yield Risk Premium	10.67%	10.61%	10.49%

Q. What is your conclusion regarding the Company's proposed capital structures?

A. The Company's proposed capital structures for both the 2026 projected rate year and 2027 projected rate year are reasonable. The equity ratios that are proposed are 50.332 percent for 2026 and 50.732 percent for 2027, both of which are well with the range of the actual capital structures of the operating utilities of the proxy group companies and is below the average.

Q. Does this conclude your Direct Testimony?

A. Yes, it does.