Exhibit BGM-1T
Docket UG-240008
Witness: Bradley G. Mullins

BEFORE THE

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, v. CASCADE NATURAL GAS CORPORATION, Respondent.	DOCKET UG-240008

RESPONSE TESTIMONY OF BRADLEY G. MULLINS

ON BEHALF OF

ALLIANCE OF WESTERN ENERGY CONSUMERS

September 25, 2024

TABLE OF CONTENTS TO THE
RESPONSE TESTIMONY OF BRADLEY G. MULLINS

EXHIBIT LIST

I. INTRODUCTION AND SUMMARY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Bradley G. Mullins, and my business address is Tietotie 2, Suite 208, Oulunsalo, Finland FI-90460.

Q. PLEASE STATE YOUR OCCUPATION AND ON WHOSE BEHALF YOU ARE TESTIFYING.

A. I am the Principal Consultant for MW Analytics, a consulting firm that provides professional services to large energy consumers, primarily in the Western United States. I am appearing in this matter on behalf of Alliance of Western Energy Consumers ("AWEC"). AWEC is a non-profit trade association whose members are energy consumers located throughout the Pacific Northwest, including gas service customers of Cascade Natural Gas Corporation ("Cascade").

Q. PLEASE SUMMARIZE YOUR EDUCATION AND WORK EXPERIENCE.

A. I have a Master of Accounting degree from the University of Utah. I have sponsored testimony in several regulatory jurisdictions in the United States, including before the Washington Utilities and Transportation Commission (the "Commission"). A list of recent cases where I have submitted testimony can be found in **Mullins, Exh. BGM-2**.

Q. WHAT IS THE PURPOSE OF YOUR RESPONSE TESTIMONY?

A. My testimony responds to Cascade's Direct Testimony on cost of capital, revenue requirement and rate spread. In its filing Cascade has proposed a two year rate plan, with rates effective March 1, 2025 and March 1, 2026. Cascade has calculated its revenue requirement using a calendar year 2023 Test Period and has made corresponding restating and proforma adjustments to its Test Period results to calculate revenue requirements for

calendar year 2024 (RY1) and calendar year 2025 (RY2). In total, Cascade has proposed a revenue requirement increase of $43,829,673 for RY1 and $11,669,242 for RY2.

Q. WHAT IS YOUR REVENUE REQUIREMENT RECOMMENDATION?

A. My revenue requirement recommendation is detailed in **Table 1**, below, followed by brief descriptions of the issues I have identified in my review. Details supporting these calculations may be found in **Mullins, Exh. BGM-3.**

Table 1
AWEC Recommended Revenue Requirement ($000)

	RY 1	RY2
Filed	**43,830**	**11,669**
%	29.8%	6.1%
Adjustments		
Cost of Capital	(7,581)	(707)
Remove RNG (PR-1, PR-3)	(948)	(2,645)
Discrete Projects (PR-1, PR-3)	(5,067)	(3,020)
Run Rate Capital (PR-1, PR-3)	(2,245)	(2,453)
Accumulated Depr. (PR-1, PR-3)	(1,638)	(79)
Labor Expense (R-6, P-2, PR-5)	(1,494)	(598)
Non-Labor O&M (P-9, PR-10)	(203)	(206)
D&O Expense (R-8)	(167)	-
Rate Case Expense (P-4)	(1,525)	-
Legal Expense (R-12)	(404)	-
Pension Expense (P-7, PR-6)	(686)	(804)
Total Adjustments	(21,958)	(10,513)
Adjusted	**21,872**	**1,157**
%	14.9%	0.7%

- *Cost of Capital:* I recommend the Commission: 1) approve a 9.3% return on equity ("ROE"); 2) adopt 50/50 debt-to-equity capital structure; and 3) exclude short-term debt from the cost of capital calculation.

- *Renewable Natural Gas ("RNG") Capital:* I recommend that all RNG related capital be removed from base rates in this case because those projects only benefit sales

customers and it is not yet known what portion of the projects will be used for Washington customers, as Cascade has represented in Oregon that those same RNG investments may be used for compliance with Oregon Senate Bill ("SB") 98.

- *Discrete Capital:* Based on a project-by-project review of large discrete capital projects, I recommend several modifications to Cascade's capital forecast.

- *Run Rate Capital:* Based on a project-by-project review of run rate capital projects, I recommend modifications to those expenditures to be more consistent with historical spending levels.

- *Capital Attestation*: I recommend the Commission require Cascade to file a capital attestation in its compliance filing, including a project-by-project capital review for major projects included in the final approved capital forecast.

- *Accumulated Depreciation*: To be consistent with the method for calculating depreciation expense, I recommend including incremental accumulated depreciation on existing plant when calculating end of period rate base values, as opposed to Cascade's method, which only considers incremental accumulated depreciation on pro forma plant additions.

- *Labor Expense:* I recommend modifications to Cascade's labor expense forecast, including changes to the escalation factors assumed, the methods used to prorate and annualize wage increases, and consideration of changes to Cascade's labor capitalization rate.

- *Non-Labor Operations and Maintenance ("O&M") Expense:* I identified a mathematical correction to the escalation formula used to forecast O&M expenses and recommend that the escalation factor be reduced by 1% to provide Cascade with an incentive to control its costs.

- *Director and Officer ("D&O") Expense:* I identified a correction to the adjustment for D&O expense and recommend a further adjustment to remove 100% of D&O stock compensation from revenue requirement.

- *Rate Case Expense:* I recommend that Cascade's proposal to retroactively recover its rate case expenses be rejected.

- *Legal Expense:* I recommend that certain legal expenses be excluded from revenue requirement.

- *Pension Expense:* I recommend that pension expense be held flat at the test period level considering the heightened market returns in 2024 and the likelihood of continued pension expense benefit in the rate plan period.

Q. WHAT IS YOUR RECOMMENDATION ON RATE SPREAD?

A. Given the magnitude of the rate increase at issue in this case, and the potential for rate shock, I recommend applying an equal percent of margin rate increase for all customer classes. This proposal is detailed in **Table 2**, below:

Table 2
AWEC Recommended Equal Percent of Margin Rate Spread

		Cascade		AWEC	
		RY1	RY2	RY1	RY2
1	Residential - 503	41.8%	7.0%	15.2%	0.7%
2	Commercial - 504	18.4%	7.0%	15.2%	0.7%
3	Industrial - 505	24.8%	7.0%	15.2%	0.7%
4	Large Volume - 511	24.2%	7.0%	15.2%	0.7%
5	Interruptible - 570	39.4%	7.0%	15.2%	0.7%
6	Transport - 663	45.8%	7.0%	15.2%	0.7%
7	Total	35.0%	6.9%	14.9%	0.7%

Q. HAVE YOU ATTACHED AN EXHIBIT CONTAINING CASCADE'S RESPONSES TO DISCOVERY REQUESTS?

A. Yes. Attached as **Mullins, Exh. BGM-4** is an exhibit containing discovery requests cited in this testimony. Those requests are ordered sequentially.

II. COST OF CAPITAL

Q. WHAT COST OF CAPITAL HAS CASCADE PROPOSED?

A. Cascade has proposed a cost of capital of 7.894%, including a 10.5% return on equity ("ROE"), and the capital structure detailed in **Table 3**, below.

Table 3
Cascade Proposed Cost of Capital Parameters

Filed Cost of Capital Component	Capital Structure	Cost	Weighted Cost
Long-Term Debt	44.21%	4.92%	2.17%
Short-Term Debt	5.50%	8.01%	0.44%
Common Stock	50.29%	10.50%	5.28%
Total	100.00%		7.894%

Apart from the aggressive 10.5% ROE included in its filing, one of the other notable aspects of Cascade's proposed cost of capital is the inclusion of short-term debt, which has historically been excluded. I discuss both of these elements, along with Cascade's capital structure, below.

Q. WHAT COST OF CAPITAL PARAMETERS DO YOU RECOMMEND?

A. As an initial matter, many of the monetary policy and inflationary risks have eased since Cascade filed its Direct Testimony. In the Federal Open Market Committee ("FOMC") meeting held on September 17–18, 2024, the Federal Reserve, citing diminished inflationary pressure, reduced the federal funds rate by 50 basis points. Further, even considering the current interest rate environment, the relationship between debt markets and utility stocks is not a direct one. This is why it is necessary to perform a cost of capital analysis in the first place, versus simply pegging the rate of return at a certain number of basis points more than the risk free rate. Considering these factors, my recommended cost of capital parameters are detailed in **Table 4**, below.

Table 4
AWEC Recommended Cost of Capital Parameters

AWEC Cost of Capital Component	Capital Structure	Cost	Weighted Cost
Long-Term Debt	50.00%	4.92%	2.46%
Short-Term Debt	0.00%	8.01%	0.00%
Common Stock	50.00%	9.30%	4.65%
Total	100.00%		7.11%

a. Return on Equity

Q. WHAT IS YOUR RECOMMENDED ROE?

A. I recommend a 9.3% ROE.

Q. WHAT ANALYSIS HAVE YOU PERFORMED TO SUPPORT YOUR RECOMMENDATION?

A. In supporting a 9.3% ROE, I have relied predominantly on a Capital Asset Pricing Model ("CAPM") analysis. I have also relied on my professional judgement based on my experience reviewing utility cases over the past ten years. Finally, my analysis was also informed by the principle of gradualism, as it is undesirable to make rapid major changes to a utility's approved ROE, as that can send conflicting signals to investors.

Q. PLEASE PROVIDE AN OVERVIEW OF THE CAPM METHOD FOR ESTIMATING DISCOUNT RATES.

A. The CAPM is a widely acknowledged method for estimating discount rates or the expected return for an investment. William Sharpe, along with his collaborators, were awarded the 1990 Nobel Prize in Economics due in part to the development of the CAPM. The formula, comprising only three variables—the risk-free rate, a beta, and an equity risk premium—is straightforward. Given the simplicity of the formula, the disagreements regarding the assumptions are generally narrow in scope, although the disagreements can produce significantly different outcomes. For instance, the

appropriate risk-free rate is a relatively straight forward assumption, but it can be viewed in a few different ways. On the other hand, the assumed beta (the risk variable), can be the subject of significant controversy, although in this case, the proxy group analysis Cascade has proposed results in beta estimates that fall within a relatively predictable range of between 0.8 and 0.9. The equity risk premium, however, is a more subjective element of the CAPM and, as I will discuss, the use of an excessively high risk premium assumption is the key driver of the aggressive ROE that Cascade has proposed this case. Therefore, the equity risk premium variable was my primary focus when evaluating Cascade's ROE, although I also address some issues related to the calculation of the beta variable and the risk free rate.

Q. DO CASCADE'S OTHER RETURN ON EQUITY FORECASTS ALSO WARRANT CONSIDERATION?

A. In this case, my focus is on the CAPM and Empirical CAPM ("ECAPM") results Cascade presented. I do not focus on the constant growth discounted cash flow approach because it is not a preferred method for calculating discount rates. The constant growth discounted cash flow formula tends to be biased in that it assumes short-term growth rates will be achieved in perpetuality, whereas in practice, longer term growth expectations are different than short-term growth expectations. The inaccuracy of the method can be observed plainly by the inconsistency between Cascade's calculation of a market risk premium using that model and the market consensuses risk premium, which I address below. This deficiency of the constant growth discounted cash flow model is often overcome by performing a multi-stage discounted cash flow model analysis, in which growth rates are staggered over time to be more consistent with long term

expectations. I have not performed such a modeling approach in this case, and instead have focused the analysis on the CAPM, while using my knowledge of Cascade and my professional judgement to inform a reasonable ROE recommendation. Similarly, I have not focused on the novel Bond Yield Risk Premium approach. That approach simply pegs the ROE of a utility at a certain number of basis points above bond yields. Such an approach is not appropriate because, as discussed below, debt markets and equity markets are two different markets. The premiums earned in one, versus the other, are dependent on numerous market conditions and are not static over time.

Q. DO YOU SUPPORT CASCADE'S PROPOSED PROXY GROUP?

A. While it consists of only five entities, Cascade's proxy group is not unreasonable, particularly given the narrow range of beta values it produces. In my analysis, I have added two additional securities to the proxy group: Southwest Gas and New Jersey Resources Corporation.

Q. HOW RISKY ARE STAND ALONE GAS COMPANIES RELATIVE TO THE OVERALL MARKET?

A. Beta is a variable in the CAPM that measures the riskiness of an asset relative to the overall market. In general, utility stocks historically have been less risky than the overall market. The beta variables for utility stocks tends to be less than 1.0, often ranging between 0.5 and 0.9. This fact was confirmed in Cascade's proposed proxy group which yielded average beta variables ranging from 0.7 to 0.9.

Q. HOW IS BETA CALCULATED?

A. Beta effectively measures the covariance between the returns of a security and the returns of a market portfolio relative to the variability of market returns. Importantly, a beta can

be calculated many ways. It can be calculated over different time periods—one year, five years, fifty years etc. Similarly, it can be calculated with different return horizons—daily returns, weekly returns, monthly returns, etc. It can also be calculated against different market portfolios—the S&P 500, Nasdaq Composite; Dow Jones; Russel 2000 etc. Finally, many data providers, such as Value Line and Bloomberg will apply an adjustment known as a Blume adjustment, which weights the raw beta by two-thirds and the market portfolio by one-third. A summary of some of the potential beta values for the gas proxy group are presented in **Table 5**, below.

Table 5
Proxy Group Betas Considered

	Ticker	Name	LSEG*	Mrng. Star	Google Fin.	Zachs Inv.	Motley Fool	Bloom-berg**	Value Line**
1	ATO	Atmos Energy Corp.	0.67	0.68	0.68	0.68	0.64	0.75	0.85
2	NJR	New Jersey Rscs Corp	0.61	0.59	0.57	0.59	0.91		
3	NI	NiSource Inc.	0.50	0.51	0.51	0.51	0.74	0.81	0.90
4	NWN	NW Natural	0.57	0.57	0.57	0.57	0.80	0.70	0.85
5	OGS	ONE Gas, Inc.	0.65	0.66	0.66	0.66	0.78	0.78	0.85
6	SWX	Southwest Gas Hldgs.	0.37	0.38	0.38	0.38	0.79		
7	SR	Spire, Inc.	0.53	0.52	0.52	0.52	0.72	0.77	0.85
8		Average	0.56	0.56	0.56	0.56	0.77	0.76	0.86
						Raw Beta Without Blume Adj.		*0.64*	*0.79*

** London Stock Exchange Group, from Reuters*
*** Per Cascade filing, NJR and SWX not provided*

As demonstrated in **Tabe 5** above, the beta calculations for many of the service providers are closely aligned. Most of these service providers rely on monthly returns compared to the S&P 500 and result in an average for the proxy group of approximate 0.56. Both Bloomberg and Value Line apply a Blume adjustment to their beta calculations, which is designed to account for the fact that betas generally converge towards the market average. I was unable to confirm whether Motley Fool uses a Blume adjustment.

Q. WHAT IS THE SIGNIFICANCE OF A BLUME ADJUSTMENT?

A. A Blume adjustment mutes the raw beta of a stock by only considering two-thirds of the beta value and applying one-third of the market portfolio. Whether to apply a Blume adjustment in a beta calculation is a controversial topic, but in this case is largely irrelevant given the approach of my analysis and my recommendation below. Therefore, while my opinion is that it is not accurate to use a Blume adjustment in applying the CAPM to utilities stocks for ratemaking, I do not necessarily address all of the merits of that adjustment. Notwithstanding, it is important to note that Cascade's ECAPM model is the functional equivalent of a Blume adjustment and that by using Blume adjusted betas in that formula, Cascade has effectively double counted the market convergence effect addressed through the Blume adjustment. In my analysis, I have calculated estimated ROE values both with and without the Blume adjustment, although I have not accepted the use of the ECAPM approach as that would overstate the impacts of the Blume adjustment, effectively counting it twice.

Q. WHAT BETA VALUES HAVE YOU USED IN YOUR ANALYSIS?

A. In my analysis, I calculated the CAPM results using a range of beta values, including those detailed in **Table 4**, above. Specifically, I evaluated betas ranging from 0.57 to 0.90. Since I am using these values to derive a point estimate that I believe is reasonable, I did not, similar to Cascade's approach, apply a Hamada adjustment to these beta estimates.

Q. WHAT IS THE EQUITY RISK PREMIUM?

A. The equity risk premium is an estimate of the overall risk, and correspondingly, the anticipated returns, expected in equity markets relative to near-riskless investment opportunities. In the absence of a price for risk, all market equity products would receive the same expected return, equal to the risk free rate. Since investors are generally risk adverse, however, higher average returns are required for an investment resulting in more volatile portfolio returns, compared to one that reduces volatility. The equity risk premium is the average return in excess of the risk free rate expected for a market portfolio and is used in conjunction with a beta to estimate the required return of an individual security considered in the context of a portfolio of investments.

Q. WHAT EQUITY RISK PREMIUMS HAS CASCADE PROPOSED?

A. Cascade has attempted to perform its own calculations of an equity risk premium.[1] To do so it performed a constant growth discounted cash flow analysis for the S&P 500 using an expected dividend yield of 1.63% and a perpetual growth rate of 10.51%. Using these parameters, it estimates a market cost of equity of 12.22%. It then deducts from that value, the risk free rate to calculate a market risk premium, which depending on the risk free rate assumption used, resulted in a market risk premium of 8.03% to 8.12%. There are several issues with this approach. First, the use of a perpetual, discounted cash flow analysis is inaccurate, because as discussed above, the growth rates used in the formula are not accurate when viewed in perpetuity. In fact, the exercise is largely a perfunctory one, as the returns being calculated are basically just the assumed growth rates plus

[1] Exh. AEB-1T at 40:3-20

dividends. Second, this level of equity risk premium is at odds with the equity risk premiums published by third-party market research organization.

Q. IS IT NECESSARY FOR CASCADE TO INDEPENDENTLY CALCULATE A MARKET RISK PREMIUM?

A. No. It is not necessary for Cascade to independently calculate a market risk premium. Like the beta calculations above, there are independent third party research firms that publish estimated market risk premiums based on current market conditions.

Q. IS IT VALID TO CONCLUDE THAT RISING INTEREST RATES LEAD TO HIGHER EQUITY COSTS?

A. No. While interest rates may change from period to period, equity risk premiums and equity costs are also changing. Accordingly, it is not valid to conclude, as Cascade does, that rising interest rates will automatically lead to higher equity costs. Interest rates may have risen, but equity risk premiums are also changing, leading to equity costs that may be higher or lower than they were previously. For example, if interest rates increase, but equity premiums decline by an equivalent amount, there would be no change in market equity costs. This is why it is necessary to perform a cost of equity analysis, as opposed to merely pegging a utility's ROE at a certain number of basis points above the risk free interest rate, which is basically what Cascade proposes in its Bond Yield Risk Premium approach.

Q. WHAT MARKET RESEARCH PROVIDERS PUBLISH MARKET RISK PREMIUMS?

A. There are several unbiased publications that independently forecast equity risk premiums based on current market conditions. One such provider is Kroll, formerly Duff and Phelps. Another source is a publication from the New York University, Stern Business

School, published by Aswath Damodaran, a leading expert in the field, who calculates monthly estimates of the implied equity risk premium.[2] Those equity risk premium estimates, as compared to Cascade's, are provided in **Table 6**, below:

Table 6
Unbiased Third-Party Market Risk Premium Estimates vs. Cascade

	Source	Forecast Equity Risk Premium
1	Cascade	8.03 - 8.12%
2	Kroll	5.00%
3	NYU (Damodaran) Smooth	5.83%
4	NYU (Damodaran) Sep 2024	3.86%

The reports behind the third-party estimates have been attached as **Mullins, Exh. BGM-5**. These independent, and unbiased estimates, clearly show the unreliability of Cascade's estimates as well as its use of the constant growth discounted cashflow model to derive those estimates. Notably, while interest rates have been rising, it can be noted from these reports that equity risk premiums have been declining. For example, Kroll revised its equity risk premium calculation downward from 5.5% in June 2024. The Damodaran estimates above show that the trailing 12-month estimate is higher than the September 2024 estimate, which is also indicative of declining market risk premiums.

[2] Available on the following website at https://pages.stern.nyu.edu/~adamodar/ using link "Implied ERP by month for previous months (September 2008- Current)"

Q. IS IT ACCURATE TO USE HISTORICAL DATA TO ESTIMATE THE FORWARD EQUITY RISK PREMIUM?

A. No. Cascade relies on realized U.S. equity market returns over the period 1926 to 2022 to justify using the heightened market risk premium calculation detailed in **Table 6**.[3] Use of the historical data for calculating a forward-looking equity risk premium, however, is not an accepted method. The major drawback of using historical data is that it assumes equity risk premiums do not change over time and that the equity risk premium remained stable over the period examined. However, this is highly inaccurate, and these are not academically sound assumptions. Equity risk premiums rise and fall over time depending on conditions in equity, debt and other financial markets.[4] In fact, empirical studies suggests that, due to the effects of globalization of markets, the market returns in the United States have historically been overstated relative to current conditions.[5] Consider for example, that prior to 1971, the US dollar was tied to the cost of gold under the Bretton Woods system, which heavily influenced the dollar denominated returns of all asset classes prior to that date. Just as the cost of debt markets rise and fall over time, so do equity markets. Accordingly, is not accurate to simply use the historical average market returns as the basis for justifying a forward looking equity risk premium.

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3 Bulkley, Exh. AEB-1T at 41:1-7.

4 See Damodaran, Aswath, *Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2019 Edition*, NYU Stern School of Business (May 29, 2019). Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3378246 (accessed 4/16/2024).

5 Jorion, Philippe and William N. Goetzmann, 1999, *Global Stock Markets in the Twentieth Century*, Journal of Finance, 54(3), 953-980.

Q. WHAT ASSUMPTIONS HAVE YOU MADE IN YOUR CAPM ANALYSIS?

A. **Mullins, Exh. BGM-6** details my CAPM results. I performed a calculation relying on the Kroll and Damodaran market risk premiums detailed in **Table 6**. For simplicity, my analysis evaluates three beta point estimates based on the beta ranges shown in **Table 5** above: a low beta of 0.56; a medium beta of 0.75; and a high beta of 0.90. Correspondingly, my analysis uses the current 30-year T-Bond yield of 4.09% as the risk free rate.[6] As a second data point, I have used a 2.91% risk free rate corresponding to the forward market expected T-bond yield for of June 2025.[7] **Figure 1** details the forward market expectation of 30-year treasury yields:

Figure 1
Market Forward 30-year Treasury Yields[8]

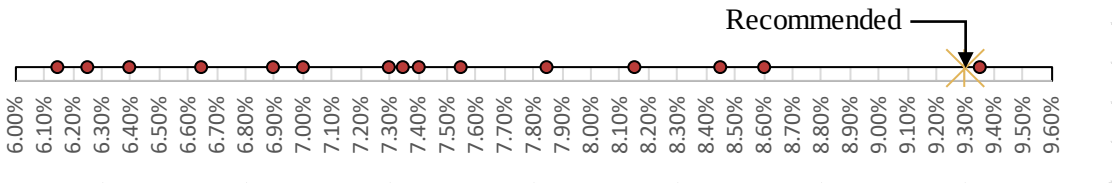
[6] From https://www.bloomberg.com/markets/rates-bonds/government-bonds/us (accessed Sep 24, 2024).
[7] Source https://econforecasting.com/forecast/t30y (accessed Sep 24, 2024)
[8] *Id.*

Notably, when calculating market risk premiums, Kroll uses 20-year T-Bonds and Damodara uses 10-year T-Bonds as the risk free rate. Since the current yield curve has 10- and 20-year T-Bond yields, which are approximately the same or lower than the 30-year T-Bond yield, I have not made a corresponding adjustment for the difference in risk free rate tenor, as doing so would further reduce the market risk premium calculation.

Q. WHAT WAS THE RESULTS OF YOUR ANALYSIS?

A. The results of my analysis and recommendation are summarized in **Figure 2**, below.

Figure 2
Summary of ROE Estimates and Recommendation



Q. BASED ON THESE ANALYSES WHAT ROE DO YOU RECOMMEND?

A. I recommend a 9.3% ROE for Cascade. I selected this value for two reasons. The first reason is gradualism. In most of the alternatives studied, the models point to a significantly lower ROE. From a practical perspective it is desirable to avoid large changes to ROE over a short period of time. I effectively limited the change in ROE to 10 basis points relative to the currently approved ROE. Second, a 9.3% ROE falls within the upper range of my analysis. The highest ROE that my analysis could support, using assumptions most favorable to Cascade (including a beta of 0.9), resulted in 9.35% ROE. Accordingly, I view a 9.3% ROE to be a reasonable estimate of Cascade's cost of equity, providing Cascade with a reasonable return on its investment.

b. Short-Term Debt

Q. WHAT HAS CASCADE PROPOSED WITH RESPECT TO SHORT-TERM DEBT?

A. For the first time, Cascade has included high-cost, short-term debt in the capital structure used in its cost of capital calculation. The cost of the proposed short-term debt is 8.1%, which Cascade proposes to include as 5.5% of its capital structure. Due to the relatively high cost of this debt, including it in the capital structure produces a higher cost of capital calculation.

Q. DO YOU AGREE WITH CASCADE'S PROPOSAL?

A. No. As a threshold issue, financing utility operations with a high portion of high cost short-term debt cannot be viewed as prudent when long-term debt can be acquired at a lower cost. Further, short-term debt costs are generally applied first in the calculation of allowance for funds used during construction ("AFUDC"), meaning that if the higher cost short-term debt is also considered in the cost of capital, Cascade will effectively over recover those financing costs. Finally, Cascade has not considered short-term debt in prior rate cases when the cost was lower than that of long-term debt. Considering these factors, I recommend short-term debt be excluded from Cascade's cost of capital.

Q. HOW DOES THE COST OF SHORT-TERM DEBT COMPARE TO THE COST RECENT DEBT ISSUANCES?

A. Comparatively, recent long-term debt issuances have been made at 6.390%, which is materially less than the short-term debt Cascade proposes to include in revenue requirement. Thus, customers would be better off if Cascade were to issue long-term debt, instead of carrying high amounts of high-cost short-term debt to finance utility

operations. From this perspective, the high short-term debt balance cannot be found to be prudent.

Q. IS THE COST OF SHORT-TERM DEBT ALREADY RECOVERED THROUGH AFUDC?

A. Yes. The formula for AFUDC is described in the Uniform System of Accounts, Electric Plant Instructions, Paragraph 3(17)(a), shown below.[9]

$A_i = s(S/W) + d(D/D + P + C)(1-S/W)$

$A_e = [1-S/W][p(P/D+P+C)+c(C/D+P+C)]$

A_i = Gross allowance for borrowed funds used during construction rate.
A_e = Allowance for other funds used during construction rate.
S = Average short-term debt.
s = Short-term debt interest rate.
D = Long-term debt.
d = Long-term debt interest rate.
P = Preferred stock.
p = Preferred stock cost rate.
C = Common equity.
c = Common equity cost rate.
W = Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment and fabrication, less asset retirement costs (See General Instruction 25) related to plant under construction.

In the formula "Ai = s(S/W) + d(D/D + P + C)(1−S/W)," the first term "s(S/W)," applies short-term debt interest against the cost of borrowed funds for construction before applying other cost of capital components (debt, preferred stock, and common stock). This means that 100% of short-term debt costs are recovered first through AFUDC prior to any other financing costs. Accordingly, if short-term debt costs were also included in the cost of capital in revenue requirement, it would result in duplicative recovery of the

[9] See 18 CFR 101.

high-cost short-term debt interest expenses. Cascade would be recovering those costs both through AFUDC and through general base rates.

Q. DID YOU REVIEW CASCADE'S ACTUAL AFUDC CALCULATION TO CONFIRM THIS?

A. Yes. In response to AWEC Data Request 56, Cascade provided its calculated AFUDC rates, which show that it is indeed recovering the cost of short-term debt through AFUDC.

Q. HAS CASCADE INCLUDED SHORT-TERM DEBT COSTS IN PRIOR RATE CASES?

A. No. In prior cases, the inclusion of short-term debt in cost of capital would have further diluted Cascade's capital structure and reduced its overall cost of capital. Further, during the low interest rate environment in the mid- to late- 2010s, the cost of short-term debt was lower than the average cost of long-term debt. In Cascade's response to AWEC Data Request 56, it can be observed that in 2020 Cascade's short-term debt rate was 3.64% compared to a 4.93% cost of long-term debt. Cascade excluded the benefit of the low cost short-term debt in prior rate cases, although now that the cost of short-term debt is higher Cascade has reversed its position.

Q. ARE SHORT-TERM DEBT COSTS STABLE?

A. No. It is also important to acknowledge that, unlike long-term debt costs, the interest rates on short term debt are unstable, changing dynamically with debt markets. This is a further reason why it is not reasonable to finance a major portion of Cascade's utility operations with short-term debt, as doing so introduces risk with respect to its revenue requirement.

c. Capital Structure

Q. WHAT CAPITAL STRUCTURE HAS CASCADE PROPOSED?

A. Inclusive of short term debt, Cascade has proposed a 50/50 debt to equity capital structure.

Q. WHAT WAS CASCADE'S ACTUAL CAPITAL STRUCTURE IN 2023?

A. According to Cascade's testimony Nygard, Exh TJN-2, Cascade's 2023 actual capital structure was 44.2% long-term debt, 13.3% short-term debt, and 43.5% equity. Only by making an unexplained normalization adjustment was Cascade able to support the lower debt percentages that it recommended in Direct Testimony. Further, if the short-term debt were excluded in its entirety from this calculation, Cascade's actual capital structure was 50.1% debt and 49.9% equity.

Q. DO YOU SUPPORT A 50/50 CAPITAL STRUCTURE?

A. Yes. I support a 50/50 debt to equity capital structure as it aligns generally with Cascade's actual capital structure in 2023. It also aligns generally with the Commission's long standing use of a hypothetical capital structure, which the Commission aptly described as follows:

> A central tenet of ratemaking is that a Company's capital structure must strike an appropriate balance between safety and economy. In other words, the capital structure must contain sufficient equity to provide financial security, but no more than necessary to keep ratepayer costs at a reasonable level.[10]

Notwithstanding, I do object to a capital structure with a higher equity percentage, considering the removal of short-term debt above. If the issuance of high amounts of

[10] *WUTC v. PacifiCorp*, Docket UE-100749, Order 06 ¶ 39 (Mar. 25, 2011).

high cost short-term debt skews Cascade's capital structure, that is reason to question its financing practices and the reasonableness of its capital structure. In such a case, it would be more reasonable for Cascade to issue more long-term debt in place of high-cost short-term debt to balance out its capital structure, consistent with the hypothetical 50/50 capital structure that I have recommended.

III. REVENUE REQUIREMENT

a. Capital Forecast (Adj. R-3, PR-1 & PR-3)

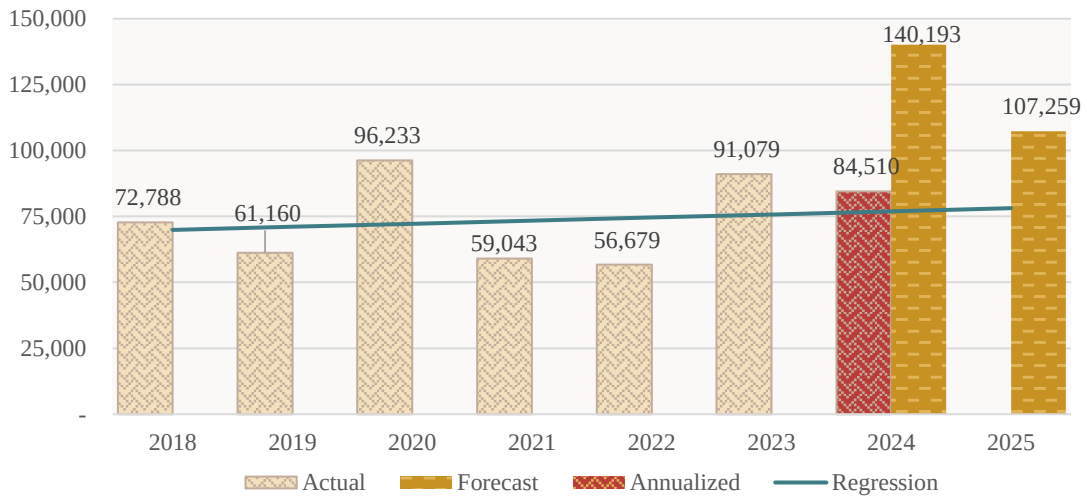
Q. HOW HAS CASCADE FORECAST CAPITAL ADDITIONS IN REVENUE REQUIREMENT?

A. Cascade's analysis starts with its Test Period results of operations, which are stated on an AMA basis over the 12-months ending December 31, 2023. It then applies an adjustment rolling forward the plant balances to the year-end December 31, 2023 values (Adjustment R-3). Next Cascade adds a provision for pro forma plant additions expected in 2024 (Adjustment PR-1). Note that the pro forma plant is referred to as provisional plant, although I use those terms interchangeably. Finally, in RY2, Cascade applies a further adjustment to include pro forma plant additions expected in 2025 (Adjustment PR-3).

Q. WHAT LEVEL OF CAPITAL HAS CASCADE INCLUDED IN ITS FILING?

A. A comparison of Cascade's historical capital additions to its forecast capital additions is detailed **Figure 3**, below.

Figure 3
Cascade Capital Forecast Compared to Historical Capital Expenditures ($000)



The historical data in **Figure 3** above was provided in response to AWEC Data Request 9. The figure details the historical expenditures over the period 2018 through 2023. As can be seen, those expenditures range from a low of $56,679,000 in 2022 to a high of $96,233,000 in 2020. A regression of the historical spending is also indicated in the dark blue line. Correspondingly, the figure also details an estimate of 2024 capital expenditures based on amounts reported through June 2024. The amount reported in June 2024 was $25,736,008, and recognizing that a larger proportion of plant comes on in the later part of the year, the partial year amount for June 2024 was annualized based on the historical proportion of monthly capital spending over the period 2018 through 2023. Using this calculation, the projected capital spending in 2024 was $84,510,000. Comparatively, Cascade's filing is requesting capital expenditures of $140,193,000 in 2024 and $107,259,000 in calendar year 2025. These capital budget requests are

approximately 82% and 37% higher, respectively, than the regression informed amounts in shown in **Figure 3**.

Q. HAS CASCADE ACKNOWLEDGED THAT IT WILL NOT BE ABLE TO COMPLETE ALL THE CAPITAL PROJECTS IT FORECASTED?

A. Yes. In its First Supplemental response to Staff Data Requests 46 and 52, Cascade acknowledged that several major plant additions, including the Burlington 20-inch Pipe project, will not be in service as expected. The Burlington 20-inch Pipe project was forecast to cost $29,040,773. As of June 2024, Cascade had only spent $1,838,115 on the Burlington 20-inch Pipe project. Accordingly, in the data request responses, Cascade proposed moving the Burlington 20-inch Pipe project to 2025, revising its capital forecast downward to $108,355,956 for RY1 and increasing its forecast to $137,591,598 for RY2. Both values, however, are still significantly above Cascade's historical spending levels. The amount of work and capital involved in the Burlington 20-inch Pipe project indicates that it is a multi-year project. Indeed, it would be challenging to deploy such a significant project (by far, the largest in recent history) within a single construction season. Accordingly, it is unlikely that the project will be in service in the time frame represented by Cascade in its filing.

Q. DO YOU HAVE CONCERNS WITH THE REASONABLENESS OF CASCADE'S PROPOSED CAPITAL BUDGET?

A. Yes. At this time, it is impossible to know with any degree of certainty what amounts will be placed into service in the respective rate years. Based on its historical spending, it is apparent that Cascade is forecasting a level of spending that far outpaces historical levels. The capital forecast in this case does include some particularly large projects,

including the Burlington 20-inch pipe with a capital budget of $29,040,773 and the Wapato 4-inch pipe project with a capital budget of $16,645,248.84. While these are large projects, they are not exceptional enough to explain such a significant deviation from the historical spending levels. For example, Cascade invested in a $14,639,787 Yakama 8-inch pipe in 2022 and $13,977,934 in an Aberdeen 8-inch pipe in 2023.

Q. HAVE YOU PREPARED AN ANALYSIS OF CASCADE'S CAPITAL BUDGET?

A. Yes. In **Mullins, Exh. BGM-7**, I prepared an analysis of Cascade's capital budget. My review focused on four principal areas: 1) RNG projects; 2) large discrete projects; 3) run rate capital projects; and 4) other small projects. Each of these categories are discussed below, and then I also present a proposal for a capital attestation process.

i. Renewable Natural Gas Projects

Q. WHAT RNG CAPITAL PROJECTS HAS CASCADE INCLUDED IN REVENUE REQUIREMENT?

A. Cascade has included approximately 15 different capital projects related to RNG in its capital forecast. In total, these projects amount to capital of $8,263,158 in RY1 and $18,341,128 in RY2.

Q. WHY HAS CASCADE BEEN INVESTING IN THESE RNG PROJECTS?

A. These projects were identified in Oregon Docket UM 2307 to supply Oregon sales customers with RNG pursuant to Oregon SB 98. Under SB 98, Cascade is allowed to procure certain percentages of its natural gas supply through RNG instead of conventional natural gas. Further, RNG can be used as a compliance pathway for Oregon's Climate Protection Plan ("CPP"). While the CPP was initially implemented in 2021, it was later invalidated by the Oregon Court of Appeals in late 2023. Since then, a

rulemaking has been underway to develop a new CPP program, in which, like the previous rule versions, RNG is a potential compliance pathway. Based on the current drafting of the rules, however, it is possible that Cascade will not need to procure RNG for a several years.

Q. WHAT PORTION OF THE PROPOSED RNG FACILITIES WILL BENEFIT WASHINGTON CUSTOMERS?

A. At this time, it is unknown what portion of the facilities will be used to benefit Washington customers, versus Oregon customers under SB 98. Until the allocation of costs and benefits between the two states has been concretely determined, it would be inappropriate to allocate any RNG costs to Washington customers.

Q. IS RNG REQUIRED FOR COMPLIANCE WITH THE WASHINGTON CLIMATE COMMITMENT ACT ("CCA")?

A. Cascade has not studied the costs and benefits of RNG for Washington customers. Therefore, it is unknown whether the RNG facilities Cascade has proposed in this docket will benefit Washington customers. RNG can be used for compliance with the CCA. Anecdotally, however, the high cost of RNG will likely make it an inferior alternative to CCA compliance than purchasing market instruments. The cost of RNG can range from $300 - $400 / MT CO2e. It is notable that the lack of consideration of RNG was a major reason for the Commission to decline to acknowledge Cascade's 2023 Integrated Resource Plan ("IRP").[11] In its letter the Commission stated the following:

> Cascade does not include Renewable Natural Gas (RNG) as a compliance resource to reduce Greenhouse Gas (GHG) emissions. This is significant because gas companies are required by WAC to assess commercially

[11] Docket UG-220131, Letter of Noncompliance Regarding 2023 Natural Gas Integrated Resource Plan, (Feb, 5 2024).

available nonconventional gas supplies and gas companies are required to plan to meet customer demand at the lowest reasonable cost.[12]

Thus, even if RNG were an economic alternative for Washington customers, Cascade did not study any of the projects it has proposed for inclusion in this docket in its most recent IRP. Prior to including the costs in rates, it is necessary to study the benefit to Washington customers, which has not occurred.

Q. IS RNG INVESTMENT APPROPRIATE TO INCLUDE IN MARGIN REVENUE REQUIREMENT?

A. No. Investment in RNG facilities results in production of RNG supplies. Those non-conventional gas supplies only benefit the sales customers to whom the supplies are sold. Gas transportation customers and Energy Intensive Trade Exposed ("EITE") entities do not receive the benefit of the underlying gas supplies. In the case of EITE entities, they do not recognize the benefit associated with RNG for CCA compliance. Therefore, it is not reasonable to require transportation customers or EITE customers to pay for the costs associated with RNG production and interconnection facilities.

Q. HAS CASCADE CONSIDERED THE BENEFIT OF THE PROPOSED RNG FACILITIES ON ITS GAS SUPPLY COSTS?

A. No. Depending on how the costs and benefits are allocated between states, the RNG produced by the facilities contemplated in Cascade's capital forecast will impact its gas supply costs. Due to the delivery of these non-conventional supplies, it will be necessary to purchase lower conventional gas volumes to supply sales customers. Those benefits, however, have not been reflected in this case, and to the extent that they are reflected

[12] Id.

through a future PGA filing, they only benefit sales customers, not transportation customers.

Q. HOW DO YOU RECOMMEND HANDLING RNG INVESTMENTS IN THIS CASE?

A. I recommend that the proposed RNG investment be removed from margin revenue requirement. Until Cascade has thoroughly studied RNG in the context of its IRP, it is speculative to include RNG investments in Washington rates. Further, if it is determined to be appropriate to acquire RNG for the benefit of Washington customers, the costs associated with those investments should be recovered through a separate surcharge and allocated only to the customers that benefit from the facilities. No RNG costs should be allocated to transportation customers or EITE customers, as they have their own compliance obligations under the CCA.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

A. Removing RNG reduces plant additions by $8,263,158 in RY1 and $18,341,128 in RY2. Correspondingly, including the effects of depreciation, the removal of these RNG investments results in $947,708 and $2,645,283 reductions to revenue requirement in RY1 and RY2, respectively.

ii. Discrete Capital Projects

Q. PLEASE DESCRIBE YOUR REVIEW OF DISCRETE CAPITAL PROJECTS?

A. Pages 4 and 5 of the capital forecast analysis in **Mullins, Exh. BGM-7** contain my analysis of Cascade's major discrete capital projects. These include projects, other than run rate capital projects and RNG, with a capital budget exceeding $1 million. In general, I considered each project separately. First, I evaluated the extent to which the

project was considered in Cascade's most recent IRP and the forecast cost in the IRP. I also considered the capital spending to date on the project as recorded to construction work in progress.

Q. DO YOU HAVE ANY GENERAL CONCERNS WITH HOW CASCADE EVALUATES CAPITAL PROJECTS IN ITS IRP?

A. Yes. In Appendix I of its IRP, Cascade includes various potential capital projects, including alternatives for addressing adverse pressure conditions. The IRP itself, however, is vague about what specific projects Cascade intends to pursue. In its 2023 IRP Action Plan, Cascade stated the following:

> "Implement various stages or review of the of the [sic] list of projects that require an increase in capacity for these projects:
>
> - Kitsap Phase V Pipeline Reinforcement
> - Aberdeen HP Reinforcements
> - Bellingham 6-inch HP Reinforcement –Meador Ave
> - Richland HP Reinforcements
> - South Kennewick Reinforcements
> - Pasco 6-inch HP Reinforcement
> - Burlington South Feed Reinforcement
> - Wapato 4-inch HP Replacement"[13]

From this, it was not entirely clear what specific actions with respect to these reinforcements Cascade was actually implementing or just reviewing. Also, of concern with the IRP, was the lack of consideration of any meaningful non-pipe alternative with respect to the above projects. In Oregon, Cascade was able to avoid making major investments, such as those contemplated above, by utilizing non-pipe alternatives, although it does not appear that a similar approach was taken in Washington.

[13] Docket UG-220131, Cascade 2023 Integrated Resource Plan at 1-13 (Feb 24, 2023).

Q. DO YOU HAVE ANY CONCERNS WITH THE KITSAP PHASE V PIPELINE REINFORCEMENT?

A. The Kitsap Phase V project involves the installation of a 12-inch, high pressure line paralleling certain segments of the Kitsap lateral. Cascade has included this project in RY2 with a total capital budget of $5,827,349. To date, however, Cascade has not undertaken any material work with respect to the lateral project. As of June 2024, zero construction work in progress has been recorded for this major project. While there appears to be a reasonable need for this project, I am concerned with the lack of any material progress on the project. Therefore, I have excluded it from my recommended capital forecast.

Q. DID YOU HAVE ANY CONCERNS WITH THE RICHLAND REINFORCEMENT?

A. Yes. In total, Cascade has proposed a total capital budget of $16,395,616 for the Richland reinforcement over three projects: RF-RICHLAND Y TBS-WILLIAMS; RF-RICHLAND Y TBS-CNGC; and RF-RICH 12" HP-3.75 miles-Ph.2. The newly proposed budget is now significantly higher than the forecast cost in the IRP. Notwithstanding, Cascade has spent virtually zero dollars on this upgrade, at least through June of 2024. In its CWIP balance for this project provided in response to AWEC Data Request 11, Cascade reported spending just $173. Given the lack of any progress on this project, as well as the significantly higher budget, I recommend that it be removed from the multi-year rate plan, pending further review of both the materially higher budget and actual progress on the project. If it is known that the project costs are going to be significantly higher than the IRP forecast, it is necessary to reevaluate the

need and approach for this project, including reevaluation of alternative approaches studied.

Q. DO YOU HAVE ANY CONCERNS WITH THE SOUTH KENNEWICK REINFORCEMENT INVESTMENTS?

A. Yes. Cascade has included $7,176,839 in capital associated with the South Kennewick Reinforcement over three projects RF; S. KENN GATE-WILLIAMS; RF-S. KENN TBS-CNGC; and RF-8" PE-KENN-2,500'. Relative to the IRP, this project is approximately 50% over budget. Notwithstanding the overbudget amounts, Cascade has been making investments in the project and it appears likely to achieve commercial operation in the rate plan period. Accordingly, my recommendation is to include these projects in the capital forecast, but cap any recovery on the projects at the amounts forecast in the rate case. That is, no further budget overages would be included in rates. This recommendation corresponds generally to my project-by-project capital attestation proposal detailed below.

Q. DO YOU HAVE ANY CONCERNS WITH THE PASCO 6-INCH REINFORCEMENT?

A. Yes. Like the Kitsap project, no activity has occurred with respect to the Pasco 6-inch steel pipe reinforcement project. Accordingly, I have removed that project from my calculation of revenue requirement.

Q. DO YOU HAVE ANY CONCERNS WITH THE BURLINGTON SOUTH FEED REINFORCEMENT?

A. Yes. In total Cascade proposes to include approximately $30,870,023 in capital investment in the Burlington area, consisting of a 6-inch plastic feeder as well as 6 miles of 20-inch, high pressure pipe. In its IRP, however, only the plastic feeder was discussed,

and the need to spend $29,040,773 on a major high pressure pipeline upgrade was never evaluated. Further, Cascade has not made significant progress towards these investments. As of June 30, 2024, Cascade had only spent 6% of the total project costs, and has acknowledged that the new project will be delayed pending resolution of issues with easements and rights of way. Considering that this major investment was not evaluated in Cascade's IRP, and that no material progress has been made on the project, I recommend it be excluded from the rate plan. Given safety concerns with a pipe of this magnitude, permitting and installing a 20-inch pipeline is a major undertaking and it is unlikely that it will be concluded by the end of the rate plan period.

Q. WERE THERE ANY OTHER PROJECTS THAT YOU TAKE ISSUE WITH?

A. Several other projects were evaluated in my supporting workpapers. There were projects, for example, where the spending in 2024 to date was not sufficient to justify including them in rates for RY1, although I reallocated the budgets to RY2. These assumptions are described in **Mullins, Exh. BGM-7.**

Q. WHAT WAS THE IMPACT OF YOUR REVIEW OF DISCRETE CAPITAL PROJECTS?

A. The impact of my review resulted in a reduction to Cascade's capital forecast for RY1 and RY2 of $44,842,774 and $21,838,488, respectively. Including the impact of depreciation expense, this change resulted in a $5,066,918 and $3,019,500 reduction to revenue requirement in RY1 and RY2, respectively.

iii. Run Rate Capital Projects

Q. HOW DID YOU CONSIDER RUN RATE CAPITAL PROJECTS IN YOUR ANALYSIS?

A. My analysis of run rate capital projects can also be found in **Mullins, Exh. BGM-7**. As shown in that exhibit, I performed an analysis of historical spending for each run rate capital project over the period 2018 through 2023. A separate analysis was performed for each capital project, with a total of 57 capital projects reviewed. Based on that information, I evaluated whether a trend existed in the historical data. I calculated a regression trendline from the historical information, and where the trendline appeared meaningful, I used that information to inform a forecast of spending in the respective rate years. Where the trend was not meaningful, I used an averaging approach. The specific assumptions and approaches used for each account are described in the exhibit.

Q. WHAT WAS THE IMPACT OF YOUR RUN RATE CAPITAL ANALYSIS?

A. My analysis resulted in a $16,849,229, and $19,155,444 reduction to Cascade's capital forecast for RY1 and RY2 respectively. Including the impact of depreciation, the revenue requirement impact of this change is a $2,244,896 reduction in RY1 and a $2,452,705 reduction in RY2.

iv. Other Small Projects

Q. WERE THERE OTHER SMALL PROJECTS THAT YOU DID NOT STUDY?

A. Yes. In total, there were small projects in the amount of $15,925,425 in RY1 and $4,488,302 in RY2, which either did not have sufficient historical information to perform a run rate capital analysis or were small discrete projects. In my analysis, I have made no adjustments to these projects, as these amounts fell within the range of spending on

similar small, non-run rate projects in the historical data. I do, however, recommend that these projects be considered in the capital attestation process that I discuss below.

v. Capital Attestation

Q. DO YOU RECOMMEND CASCADE FILE AN ATTESTATION REGARDING THE PLANT BALANCES INCLUDED IN THE RESPECTIVE RATE YEARS?

A. Yes. Rather than a retrospective review of capital, I recommend that Cascade be required to file an officers' attestation with its compliance filings in the respective rate years certifying that the capital included in the approved forecast was actually placed into service.

Q. WHAT PARAMETERS DO YOU PROPOSE FOR THE ATTESTATION PROCESS?

A. In the attestation process, I recommend that Cascade be required to present the final costs for each project. For any projects that are not placed in service or are placed in service at a capital cost less than included in the approved forecast, I recommend Cascade be required to reduce its rates by the associated impact. For all capital projects in excess of $1,000,000, I recommend that the capital review be performed on a project-by-project basis, with no ability to net overspending on one project with underspending on another. The specific projects that I recommend be subject to the project-by-project capital review process are itemized in **Mullins, Exh BGM-7.** For all projects less than $1 million, I recommend that the capital spending be reviewed in aggregate (i.e. on a portfolio basis) as if they were collectively a single project.

Q. WHY IS A PROJECT-BY-PROJECT REVIEW CRITICAL?

A. As noted above, the costs that are being included in rates are based on the amounts that are deemed to be prudent. Any spending more than the budgeted and approved amount, however, is not being evaluated for prudence in this case. This is important, because there were many alternatives to the specific capital projects that Cascade identified in its IRP. If spending is ultimately higher than it expected on a project, it may have been more beneficial to pursue one of the alternatives in the IRP. For small projects, with capital budgets less than $1 million, a portfolio review is reasonable. For other projects, such as major investment in a system reinforcement, Cascade needs to be held accountable to its budget estimates. For example, if Cascade were to spend $20 million on a reinforcement project, Pipe A, that was originally supposed to cost only $5 million, under my recommended approach, Cascade would only be able to include the $5 million in rates for Pipe A regardless of its actual spending on other projects. Cascade, however, would not be precluded from including the $15 million in overspending on Pipe A in a later rate case. Correspondingly, if there was also a $15 million reinforcement project, Pipe B, which Cascade was unable to place in service, a portfolio review would be beneficial to Cascade. Under a portfolio review, Cascade would still be able to recover on the combined $20 million of capital costs budgeted for Pipe A and Pipe B, even though Cascade dramatically overspent on Pipe A and Pipe B never entered service. Because Pipe B was delayed, Cascade would be able to recover potentially imprudent overspending on Pipe A. Underspending or under execution of one project does not justify overspending on another. Accordingly, a project-by-project review is the most

equitable way to do a capital attestation, with a focus on the greatest number of projects possible.

b. Accumulated Depreciation (Adj. PR-1 & PR-3)

Q. HOW HAS CASCADE CONSIDERED ACCUMULATED DEPRECIATION IN ITS FILING?

A. Cascade's treatment of accumulated depreciation is incongruent and inconsistent with its calculation of depreciation expense. Cascade's calculations can generally be found in the workpaper "240008-CNGC-Exh-JAD-2-through-JAD-8-3-29-24." In Adjustment RY1-R-3, on Tab "Rate Base," Cascade adjusts its plant balances to the December 31, 2023 levels, including accumulated depreciation. Subsequently, in its provisional plant adjustments (PR-1 and PR-3) on Tab "Provisional Plant Additions", Cascade includes provisional capital for RY1 (calendar year 2024) and RY2 (calendar year 2025). In that workpaper, it also makes an adjustment to its accumulated depreciation. In that adjustment, found in cells "C15" and "C45", Cascade includes an additional full year of depreciation expenses, but correspondingly just one-half of the depreciation expenses on provisional plant additions.

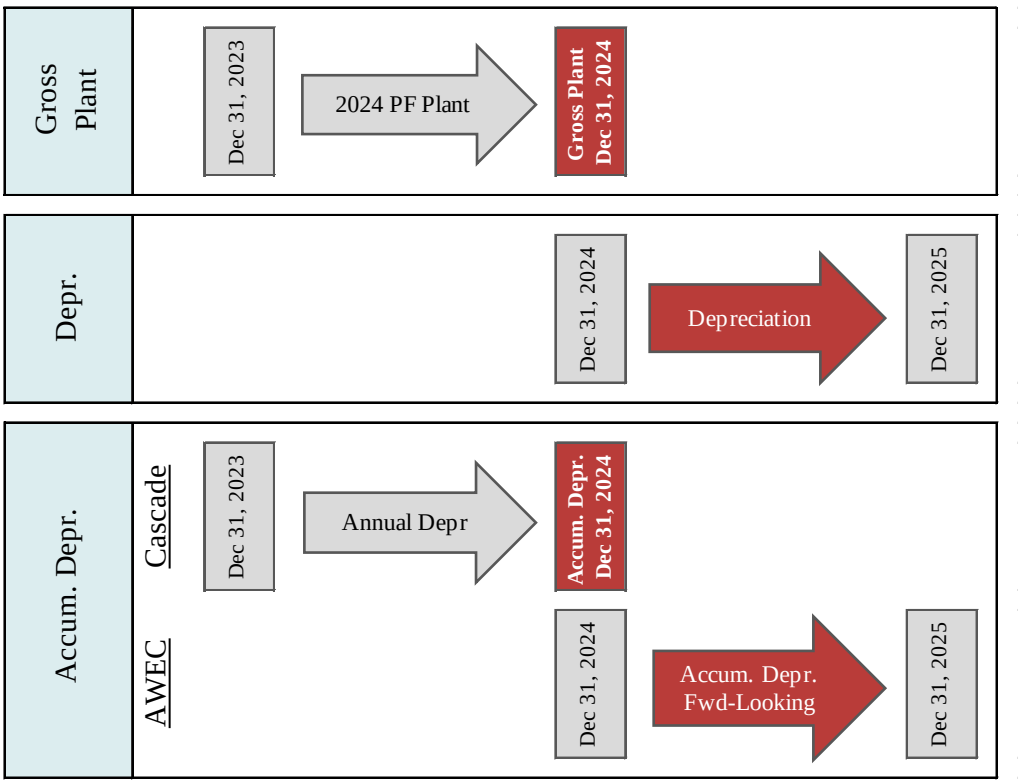
Q. HOW DOES CASCADE CALCULATE DEPRECIATION EXPENSES?

A. Cascade calculates a forward looking, annualized depreciation expense of plant balances expected on December 31, 2024 and December 31, 2025. This results in a higher depreciation expense to Cascade than if depreciation expenses were to be calculated over the respective rate years. Since plant additions are accrued ratably throughout the year, the depreciation expense will be higher if calculated based on annualized year-end values.

Q. IS CASCADE'S APPROACH TO ACCUMULATED DEPRECIATION CONSISTENT WITH ITS CALCULATION OF DEPRECIATION EXPENSE?

A. No. If Cascade is going to calculate a forward-looking depreciation expense based on plant balances as of December 31 of the respective rate years, it needs to also consider the incremental accumulated depreciation that will accrue with respect to that incremental depreciation expense. Otherwise, Cascade's approach will result in the systematic overstating of rate base. This can be observed in **Figure 4**, below.

Figure 4
Illustration of Inconsistency Between Depreciation Expense and Accumulated Depreciation in RY1



As can be seen from **Figure 4**, Cascade pro-forms its gross plant values to December 31, 2024 balances by adding pro forma plant forecast to be placed into service over calendar

year 2024. It then proceeds to calculate an annualized, forward looking depreciation expense based on the plant balances as of December 31, 2024. Correspondingly, however, Cascade calculates accumulated depreciation only considering incremental depreciation incurred between December 31, 2023 and December 31, 2024, even though its depreciation expense calculation is forward looking based on the plant balances as of December 31, 2024. This is inconsistent because the accumulated depreciation does not line up with the time period over which deprecation expense was calculated. In order to ensure that ratepayers receive the benefit of the higher depreciation expenses they are paying for, the depreciation arrow in the chart and accumulated depreciation need to line up. My recommended approach does this by calculating accumulated depreciation value over the same time frame and using the same method as depreciation expense.

Q. WHAT DO YOU RECOMMEND?

A. I recommend considering the average amount of incremental accumulated depreciation that will accrue on Cascade's forward looking depreciation expense. If Cascade is to extend the calculation of depreciation expense beyond the end of the respective rate years, through its end of period rate base method, it needs to also extend the calculation of accumulated depreciation.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

A. My recommendation results in a reduction to revenue requirement of $1,638,000 in RY1 and $79,037 in RY2.

c. Labor Expense (Adj. R-6, P-2, & PR-5)

Q. WHAT ADJUSTMENT HAS CASCADE PROPOSED WITH RESPECT TO LABOR EXPENSE?

A. Cascade has proposed three adjustments for labor expense. First, in Adjustment R-6, Cascade escalated its union labor expenses by 3.0% to annualize a wage increase that was implemented in the Test Period.[14] Second, in adjustment P-2, Cascade applied additional escalation to labor expenses for wage increases expected in RY1. Specifically, in Adjustment P-2, Cascade escalated its union labor expenses by 5.0% and its non-union labor expense by 6.17%. Finally, in Adjustment PR-5, Cascade applied further escalation for RY2, corresponding to a 3.0% wage increase in union labor expense and a 4.0% increase for non-union labor expense. Collectively, these adjustments resulted in increased revenue requirement of $1,707,614 for RY1 and 1,067,964 for RY2.

Q. WHAT INFORMATION DID CASCADE PROVIDE TO JUSTIFY THESE INCREASES?

A. The Direct Testimony of Cascade witness Hourigan describes the wage increases generally. Based on that testimony, the Union employee wage increases were based on the negotiated wage increases, which Cascade was in the process of negotiating when it filed its case. With respect to non-union employees, Cascade has a year-end process to approve an overall budgeted wage increase, which it stated was approximately 4.5%, plus $120,997 earmarked employee promotions.[15] Notwithstanding, these amounts, however, Cascade included 6.17% of wage escalation.

[14] See e.g. Workpaper "240008-CNGC-Exh-JAD-2-through-JAD-8-3-29-24," Tab "Wage Adjustments."

[15] Hourigan, Exh KBH-1T at 10:3-11:7

Q. DO YOU HAVE ANY CONCERNS WITH CASCADE'S ADJUSTMENT?

A. Yes. I have four concerns with Cascade's adjustment. First, I recommend eliminating any escalation associated with allocated service costs from affiliates. Second, I am concerned with the escalation rates applied as they far outpace the forecasted rate of inflation. Third, I have identified two issues with the way that Cascade calculated, applied, and prorated the various wage increases. Finally, in response to AWEC Data Request 39, Cascade identified that its labor capitalization percentages have increased since the 2023 Test Period, which I recommend also be factored into the labor O&M expense calculation.

Q. DOES CASCADE ONLY APPLY WAGE ESCALATION TO ITS OWN EMPLOYEES?

A. No. In addition to applying wage increases for its own employees, Cascade also assumed wage escalation for non-employee affiliates, including costs allocated from other corporate entities through intercompany cross charges.

Q. DO YOU SUPPORT INCLUSION OF ESCALATION WITH RESPECT TO INTERCOMPANY CROSS CHARGES?

A. No. While I recognize that Cascade, through its parent MDU Resources, has a complicated corporate structure, and that there are benefits associated with the sharing of services, my recommendation is to keep the intercompany service costs flat in both years relative to the test period. The wage rate increases of Cascade's affiliates are outside of the Commission's jurisdiction and the Commission is not able to regulate the policies and procedures of Cascade's affiliate entities. Further, the allocation of service costs between affiliates is not necessarily proportional to the wages of the affiliate entities. Affiliate

labor costs underlying certain cross charges may go up, although lacking the ability to audit the books of the affiliate wages cannot be demonstrated with certainty. An increase in affiliate labor costs, however, does not necessarily correspond to increased cost to Cascade, since there are many factors that influence the allocation, including the amount of services Cascade receives from the affiliate, and intercorporate allocation factors, which change from year to year. Absent a wholistic analysis of affiliate service costs, which is not possible given the limited scope of this proceeding, it is not possible to determine how Cascade's portion of those costs may change year to year. Accordingly, I recommend using the test period amount for allocated labor expenses in revenue requirement, with no escalation.

Q. HAVE INFLATION EXPECTATIONS BEEN DECLINING?

A. Yes. On September 18, 2024, the Federal Open Market Committee ("FMOC") published its economic projections for its meeting held on September 17-18, 2024. In those projections, it forecast Personal Consumption Expenditure ("PCE") inflation of 2.3% for 2024 and 2.1% for 2025.[16] As noted, this reduced rate of forecast inflation, coupled with easing labor market conditions, prompted the Federal Reserve to cut the federal funds rate by on-half of a percent.

[16] See Federal Reserve, *September 18, 2024: FOMC Projections materials, accessible version*, (Sep 18, 2024) available at https://www.federalreserve.gov/monetarypolicy/fomcprojtabl20240918.htm (accessed Sep 23, 2024).

Q. BASED ON THIS LEVEL OF FORECAST INFLATION HOW DO YOU RECOMMEND HANDLING WAGE INCREASES?

A. I recommend the non-union labor wage increase for 2025 be limited to the forecast FMOC PCE inflation rate for 2025, or 2.1%

Q. DO YOU HAVE CONCERNS WITH THE WAY CASCADE APPLIED THE CURRENTLY APPROVED LABOR WAGE INCREASES?

A. Yes. In applying the wage increases, Cascade used inconsistent assumptions to prorate the increase between calendar years. For union employees, Cascade annualized the Test Period wage increase, but also annualized the wage increase assumed in RY1 and RY2. The union wage increases, however, are effective on April 1 of the respective rate years.[17] Accordingly, including the full annualized labor increase for the rate years was not appropriate. Since the wage increase is only effective for 9 months of the respective rate years, the correct method is to apply 9/12ths of the assumed wage increase for union employees.

For non-union employees, Cascade's calculation did not consider the fact that the approved wage increases for 2024 went into effect prior to the beginning of the calendar year, on December 18, 2023. The 2024 wage increase was already in effect for 14 days in the 2023 Test Period, and thus, the incremental wage increases necessary to be modeled for RY1 is slightly smaller than the percentages Cascade modeled. Further, the 6.17% wage increase percentages that Cascade modeled did not correspond to the 4.5% wage increase that Cascade approved. While Cascade notes that an additional $120,977 was approved for promotions, that amount was not apportioned between capital and

[17] Hourigan, Exh KBH-1T at 11:9-18.

expense, nor was it apportioned between Oregon and Washington. Further, while the additional amount was budgeted for promotions, Cascade did not model the offsetting impact of attrition. As employees leave Cascade, or retire, they are often replaced by employees at a lower pay scale. Accordingly, when annualizing the 2024 wage increase, I recommend excluding this additional promotion amount, pending further clarification from Cascade.

Q. HAVE YOU ALSO CONSIDERED CASCADE'S CHANGING LABOR CAPITALIZATION RATE IN YOUR CALCULATION?

A. Yes. In response to AWEC Data Request 39, Cascade reported its labor capitalization rates over the period 2020 through September 14, 2024. The response shows that labor capitalization rates in 2024 have increased. The union labor capitalization rate was 21% in 2023, increasing to 23% year to date 2024. Similarly, the non-union labor capitalization rate was 20% in 2023, increasing to 21% in 2024. While the percentage change is small, the increasing capitalization rate has a material impact on Cascade's labor O&M expense. A reduction of the labor O&M percentage for union employees from 79% to 77%, is the equivalent of a 2.5% reduction to union labor O&M expense.[18] Similarly, a reduction of the labor O&M percentage for union employees from 80% to 79% results in a 1.3% reduction to non-union labor O&M expense. In my analysis, I have considered these percentage reductions as an offset to the wage increases in Cascade's revenue requirement model.

[18] Calculated as 77%/79%-1

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATIONS?

A. A summary of my recommended changes to Cascade's O&M labor escalation rates is detailed in **Table 7**, below.

Table 7
Summary of Recommended Changes to Labor Escalation Rates

		Union			Non-Union			Allocated Affiliate		
		TY	RY1	RY2	TY	RY1	RY2	TY	RY1	RY2
1	Cascade Proposed	3.00%	5.00%	3.00%	0.00%	6.17%	4.00%	0.00%	6.17%	4.00%
2	Remove Affiliate	3.00%	5.00%	3.00%	0.00%	6.17%	4.00%	0.00%	**0.00%**	**0.00%**
3	Adjust Non-Union	3.00%	5.00%	3.00%	0.00%	**4.15%**	**2.10%**	0.00%	0.00%	0.00%
4	Prorate Union RY1 (9/12ths)	3.00%	**3.75%**	**4.25%**	0.00%	4.15%	2.10%	0.00%	0.00%	0.00%
5	Prorate Non-Union RY1 (352/366)	3.00%	3.75%	4.25%	0.00%	**3.99%**	2.10%	0.00%	0.00%	0.00%
6	*Less: Capitalization Rate Δ*		***-2.53%***			***-1.25%***				
7	**Proposed Wage Escalation**	**3.00%**	**1.22%**	**4.25%**	**0.00%**	**2.74%**	**2.10%**	**0.00%**	**0.00%**	**0.00%**

The impact of this recommendation is a $1,493,570 reduction to revenue requirement in RY1 and a $598,317 reduction to revenue requirement in RY2.

d. Non-Labor Operating Expense (Adj. P-9 & PR-10)

Q. WHAT HAS CASCADE PROPOSED WITH RESPECT TO NON-LABOR OPERATING EXPENSE?

A. Cascade has proposed escalating non labor operating expenses based on historical increases in non-labor O&M expense. For its proposed escalation factor, Cascade calculated the arithmetic average percentage change in non-labor O&M expense over the period 2019 through 2023. This calculation can be found in the workpaper "240008-CNGC-Exh-JAD-2-through-JAD-8-3-29-24," Tab "O&M Adj." This workpaper shows that Cascade is proposing non-labor O&M escalation of 1.52% per annum.

Q. IS CASCADE'S CALCULATION MATHEMATICALLY SOUND?

A. No. Cascade used the arithmetic average to summarize the annual percentage changes in O&M expense. Use of an arithmetic average to summarize percentage changes, however, is mathematically incorrect. This is due the fact that a percentage increase of a certain magnitude carries less weight than a corresponding reduction. Because the percentages are bound by zero, a 50% reduction in an expense level carries the same weight as a 100% increase. Consider the following example: if a $100 expense declines by 50% in one year the resulting expense value is $50. If the $50 expense were to then increase by 100% in the next year, the corresponding expense value would be $100, the same as the original. Using an arithmetic average, one would calculate an average percentage rate change of 25%, i.e. [100% + (-)50%] / 2. However, there was really zero net change to the expense level. It started at $100 and ended at $100. Using an arithmetic average to imply that there was an average 25% increase in this example is, therefore, incorrect because the reduction had more of an impact than the increase. This is why other metrics, such as compound growth rates or geometric averages are typically used as a summary statistic for percentage rates of change. This is demonstrated further in **Table 8**, below, using the O&M data from Cascade's filing.

Table 8
O&M Average Change Calculations

	2019	2020	2021	2022	2023	Summary
O&M	13,702,689	12,699,754	12,786,882	14,758,462	14,359,682	
Compound Growth						*1.178%* =
% Chage		-7.32%	0.69%	15.42%	-2.70%	
Average						*1.521%*
Log Difference ln(yr[n]/yr[n-1])		-7.60%	0.68%	14.34%	-2.74%	
Log Average (a)						*1.171%*
Base 10 Average [e^(a)-1]						*1.178%* =

As **Table 8** illustrates, while Cascade calculated a 1.521% growth using the arithmetic average, the compound growth rate over the period was just 1.178%. Correspondingly, if the logarithmic difference is used to summarize the percentage changes, the corresponding growth is just 1.171%, which if converted back to a Base 10 value, is 1.178%. Notably, the use of the logarithmic difference to summarize the values is the equivalent to compound growth rate.

Q. HAVE CASCADE'S NON LABOR O&M EXPENSES GROWN SUFFICIENTLY TO JUSTIFY ESCALATION?

A. No. As a general matter, the amount of escalation calculated using the above percentages is relatively small. Further, simply using historical values does not provide any additional incentive for a utility such as Cascade to control its costs. To provide Cascade with such an incentive, my recommendation is to set the escalation rate equal to the historical percentage increase level, calculated above, minus one percent.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

A. My recommendation results in a $202,867 reduction to revenue requirement in RY1 and a $206,313 reduction to revenue requirement in RY2.

e. Director & Officer Expense (Adj. R-8)

Q. WHAT ADJUSTMENT DID CASCADE MAKE FOR DIRECTORS AND OFFICER'S EXPENSE?

A. In Adjustment R-8, Cascade made an adjustment to remove 50% of D&O expenses.

Q. DID CASCADE IDENTIFY A CORRECTION TO ITS ADJUSTMENT IN DISCOVERY?

A. Yes. In response to Staff Data Request 145, Cascade noted that it inadvertently excluded certain expenses associated with D&O insurance from the calculation.

Q. DO YOU HAVE ANY OTHER GENERAL CONCERNS WITH CASCADE'S APPROACH?

A. Yes. Cascade's directors' compensation includes $165,021 in stock compensation, on a Washington allocated basis. In addition to including the insurance amounts in the calculation, I recommend eliminating all stock compensation from the calculation. Stock compensation is not a cash outlay to the utility, and is therefore not an appropriate cost to include in a revenue requirement calculation. Stock compensation results in the dilution of shareholder equity, and while that dilution is considered as an expense in financial accounting under generally accepted accounting principles, it is not necessary to be included in operating results for ratemaking. Further, stock compensation is explicitly designed to align the interest of shareholders and those receiving the stock compensation. It is possible to give monetary incentives to employees and directors tied to specific objectives that benefit ratepayers. In the case of stock incentives, however, the specific incentive is to maximize shareholder wealth, as opposed to benefitting ratepayers. Thus, including stock incentives in revenue requirement is not appropriate.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATIONS?

A. The impact of my recommendation is a $167,338 reduction to RY1 revenue requirement.

f. Rate Case Expenses (Adj. P-4)

Q. WHAT HAS CASCADE PROPOSED WITH RESPECT TO RATE CASE EXPENSES?

A. In Adjustment P-4, Cascade has proposed increasing revenue requirement by $1,390,266 to collect $2,900,000 in estimated rate case expenditures associated with preparing this rate case. It has proposed spreading those costs over a two-year period. Cascade's estimated rate case expenses are detailed in **Table 9**, below.

Table 9
Rate Case Expenses Proposed Retroactive Recovery

Guidehouse	400,000
Brattle	40,000
Attrium	225,250
Perkins Coie	2,084,750
H Gil Peach & Associates LLC	150,000
Total	2,900,000

Q. DO YOU SUPPORT CASCADE'S RECOVERY OF THESE AMOUNTS IN REVENUE REQUIREMENT?

A. No. As a general matter, these costs represent one time expenses incurred prior to the rate effective date in this matter, and therefore, are not appropriate for recovery on an ongoing basis. Effectively, Cascade has proposed that the Commission allow it to defer the costs that it has incurred in preparing and litigating this rate case. Since these are not extraordinary expenditures and Cascade has not sought to defer them, they are not appropriate to be amortized in rates as Cascade has proposed.

Further, the amounts seem to be excessive. These amounts represent the legal and expert fees for non-company consultants and represent a level of expense much higher than I would expect for a company the size of Cascade.

Q. WHAT IS YOUR RECOMMENDATION FOR RATE CASE EXPENSES?

A. I recommend that the adjustment for rate case expense be removed from revenue requirement. This recommendation results in a $1,525,094 reduction to revenue requirement in RY1.

g. Legal Expense (Adj. R-12)

Q. HAVE YOU CONDUCTED A REVIEW OF THE LEGAL EXPENSE CASCADE INCLUDED IN REVENUE REQUIREMENT?

A. Yes. In response to AWEC Data Request 3, Cascade identified its legal expense included in the Test Period. In response to AWEC Data Request 30 and 31, Cascade was also asked to explain several legal expenses line items included in its results.

Q. HAVE YOU IDENTIFIED ANY LEGAL EXPENSES THAT YOU RECOMMEND BE ELIMINATED FROM REVENUE REQUIREMENT?

A. Yes. Included as legal expenses in the Test Period are challenges to several Washington state policies, such as its building code and state civil charges. In addition, there were several instances, where Cascade was unable to adequately explain the nature of the legal services performed. In total, I recommend eliminating approximately $384,574 in legal expenditures from revenue requirement. I have attached the specific transactions that I recommend be removed in **Mullins, Exh. BGM-8.**

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION.

A. My recommendation reduces RY1 revenue requirement by $404,491.

h. Pension Expense (Adj. P-7 & PR-6)

Q. HOW HAS CASCADE CONSIDERED PENSION EXPENSE IN ITS FILING?

A. In Adjustments P7 and P6, Cascade makes adjustments to increase its total-Company pension expense by $1,100,652 in RY1 and an additional $1,290,085 in RY2. As noted in response to Staff Data Request 131, Cascade's 2023 Test Year pension expense was not an expense, but rather a benefit of (-)$673,850. Thus, Cascades' proposal would result in pension expenses of approximately $426,802 in RY1 and $1,716,887 in RY2.

Q. HOW DID CASCADE ARRIVE AT THESE INCREASES?

A. Cascade's calculations are not clear to me. In response to Staff Data Request 27, Cascade provided workpapers used to calculate its adjustments, along with an explanation for how the adjustment was performed. The workpapers contained only hardcoded numbers, so it was impossible to determine how the calculation was performed. Further, the net impacts discussed above did not match the amounts included in the textual response.

Q. IS THERE ENOUGH INFORMATION AVAILABLE AT THIS TIME TO KNOW WHAT THE PENSION EXPENSE WILL BE FOR 2024 AND 2025?

A. No. Cascade's pension plan was frozen as of 2006, and as of 2023, the plan was effectively fully funded. Cascade provided its most recent actuarial report in its confidential response to Staff Data Request 27. Without discussing the confidential information in that report, it can be noted that the plan was underfunded by only a fraction. In response to Staff Data Request 130, for example, Cascade noted that as of December 31, 2023, the plan was 97.63% funded. Since the plan is effectively fully

funded, changes to discount rates and return on plan assets is the key driver of any ongoing changes to pension expense or pension benefit (as was experienced in 2023).

Q. DO MARKET RETURNS IN 2024 SUPPORT THE CONTINUATION OF A PENSION BENEFIT?

A. Year to date, the S&P 500 has yielded approximately 20%. Given these high market returns, it is likely that a pension benefit, as experienced in 2023, will continue. Even if Cascade's pension yields are 10% or 15%, the plan will be well over funded relative to the benefit obligation, supporting the continuation of a pension benefit in revenue requirement, rather than an expense.

Q. HOW DO YOU RECOMMEND HANDLING PENSION EXPENSE IN THIS CASE?

A. I recommend eliminating the pension expense Adjustments P-7 and P-6 from Cascade's revenue requirement, and instead retaining the Test Period pension expense benefit amount.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

A. The impact of removing the pension adjustments results in a $686,367 and $804,497 reduction to RY1 and RY2 revenue requirement, respectively.

IV. RATE SPREAD

Q. WHAT HAS CASCADE RECOMMENDED WITH RESPECT TO RATE SPREAD?

A. Cascade has proposed moving all rate schedules to full cost of service based on the cost of service study performed by Witness Amen.

Q. DOES CASCADE'S PROPOSAL RESULT IN MAJOR IMPACTS TO CERTAIN CUSTOMER CLASSES?

A. Yes. Cascade's proposal results in certain classes, namely residential and transportation customers receiving rate increases in excess of 40% based on its filed case. Such significant impacts qualify as rate shock and are therefore appropriate to mitigate in the rate design.

Q. WHAT IS YOUR RECOMMENDATION?

A. Given the magnitude of the rate increase at issue, my recommendation is for the Commission to apply an equal percent of margin rate spread, allocating the same percentage margin rate increase to all customer classes. My proposed rate spread is described in **Table 2** above.

Q. DOES THIS CONCLUDE YOUR RESPONSE TESTIMONY?

A. Yes.