Exh. BLR-1T

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 BRIAN L. ROBERTSON

May 29, 2026

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Brian L. Robertson and my business address is 8113 West Grandridge Boulevard, Kennewick, Washington 99336.

Q. By whom are you employed, for how long, and in what capacity?

A. I am employed by Cascade Natural Gas Corporation ("Cascade" or "Company"), a wholly owned subsidiary of MDU Resources Group, Inc. ("MDU Resources"), as Manager of Supply Resource Planning. In this capacity, I have oversight over three Resource Planning Economists while performing long-term forecasting, market research, upstream modeling, carbon compliance modeling, and other duties regarding the Integrated Resource Plan ("IRP").

Q. Please briefly describe your educational background and professional experience.

A. I graduated from Central Washington University with a degree in Actuarial Science in 2013. After graduating, I joined Cascade in February 2014 as a Regulatory Analyst. I joined the Gas Supply department in March 2015 as a Resource Planning Analyst II. In July 2016, I was promoted to Senior Resource Planning Analyst. In June 2019, I was promoted to Supervisor of Resource Planning. In December 2023, I was promoted to Manager of Supply Resource Planning.

I previously testified before the Washington Utilities and Transportation Commission ("Commission") in Cascade's most recent Washington rate cases: Dockets UG-240008, UG-210755, UG-200568, UG-190210, UG-170929, and UG-152286. I have also testified before the Public Utility Commission of Oregon in Cascade's Oregon rate cases: Dockets UG 525, UG 347, and UG 305.

II. SCOPE AND SUMMARY OF TESTIMONY

Q. What is the purpose of your testimony in this docket?

A. My testimony will address the results of Cascade's weather normalization study that I performed for this case. Based on this analysis, I show the adjustments necessary to establish the normalized level of therm sales that would have occurred during the 12 months ended December 31, 2025 ("Test Year") if Cascade had experienced normal weather during this period. The adjustments that I recommend here only apply to the Company's Residential and Commercial Schedules 503 and 504, respectively.

Q. Are you sponsoring any exhibits in this proceeding?

A. Yes, I sponsor the following exhibits:

- Exh. BLR-2 Weather Normalization Results
- Exh. BLR-3 Customer Forecast Results

III. WEATHER NORMALIZATION

Q. Generally speaking, why does Cascade perform weather normalization?

A. Weather normalization is performed to adjust the Company's test year sales volumes to represent what the test year sales volumes would have been had the weather during the test year been normal. This stabilizes delivery service gas revenues and reduces the impact of extreme weather on gas bills. The Company's billing determinants used to set rates in this case are based on weather-normalized volumes from the test year. Without adjusting the test year volumes to account for weather, the test year volumes used to calculate revenues may be distorted, potentially resulting in the over- or under-collection of revenues. Please see the Direct Testimony of Jacob A. Darrington (Exhibit JAD-1T) for a discussion of the Company's use of weather-normalized volumes for the Test Year in this case.

Q. As background, please explain the recent history leading to adoption of the weather normalization methodology performed by Cascade for this case.

A. In Docket UG-152286, and pursuant to Order 04 in that proceeding, Cascade and Washington Utilities and Transportation Commission Staff worked together to formulate the Company's weather normalization methodology in use today.[1] This same methodology was subsequently approved by the Commission and used to set rates in UG-170929 and UG-190210.[2]

Q. Please briefly describe the weather normalization model.

A. In the agreed-upon methodology, Cascade uses a linear regression model to examine ten years of National Oceanic and Atmospheric Administration weather data and ten years of historical therm usage per customer per month for residential and commercial customers. Cascade then applies monthly heating degree days ("HDDs")[3] for Cascade's four weather locations: Bellingham, Bremerton, Walla Walla, and Yakima.[4] The model produces an intercept that indicates the "base load" therms per customer. The model also provides a best fit coefficient of use per customer for each month and weather location for both the residential and commercial customer classes. The best fit coefficient represents the heat sensitivity use per customer per HDD.[5] Finally, the

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[1] *Wash. Utils. & Transp. Comm'n v. Cascade Nat. Gas Corp.*, Docket UG-152286, Order 04 Final Order Approving Settlement Agreement ¶¶ 13 & 32 (Jul. 7, 2016).

[2] *Wash. Utils. & Transp. Comm'n v. Cascade Nat. Gas Corp.*, Docket UG-170929, Order 06 Final Order Rejecting Tariff Sheets; Resolving Contested Issue; Approving and Adopting Settlement Agreement; and Authorizing and Requiring Compliance Filing ¶ 81 (Jul. 20, 2018); *Wash. Utils. & Transp. Comm'n v. Cascade Nat. Gas Corp.*, Docket UG-190210, Direct Testimony of Brian L. Robertson, Exh. BLR-1T at 2-3 (Mar. 29, 2019).

[3] An HDD is a measure of how cold the temperature was on a given day or during a given period relative to a base temperature. An HDD is calculated by taking the average of the high and low temperature for a given day and subtracting it from 60, the reference temperature. If that results in value below zero, that value is replaced with zero.

[4] Docket UG-152286, Order 04, Exhibit A ¶ 44 (Jul. 7, 2016).

[5] Heat sensitivity means that when temperatures get colder, HDDs rise, and usage rises. For example, a coefficient of 0.05 therms per HDD would mean that for each increase in HDD, usage would increase by 0.05 therms.

model includes a trend term that captures changes in customer therm usage behavior not related to weather. Cascade modified the methodology slightly, in Docket UG-200568, by changing the final calculation of the weather normalized therms.[6] This modified methodology was used to set rates in Dockets UG-210755 and UG-240008.[7]

Q. Is Cascade using the same methodology in this proceeding?

A. Yes.

Q. Please provide the results of Cascade's weather normalization study for the Test Year.

A. The proposed methodology described above produced the following conclusions and Test Year weather normalized therms: residential therm usage is calculated to be 123,832,785 therms and commercial therm usage is calculated to be 91,095,410 therms. These are the totals in columns "D" and "I" of the table in Exhibit BLR-2. The 2025 actual therms for residential and commercial are 113,823,231 and 85,892,375, respectively. This is an adjustment upwards of 10,009,554 therms for residential and 5,203,035 therms for commercial.

IV. CUSTOMER COUNT FORECAST

Q. Please describe Cascade's customer count forecasting approach in its 2025 IRP.

A. For the 2025 IRP, Cascade developed customer count forecasts using a traditional econometric modeling framework that relates historical customer growth to macroeconomic drivers, including household counts and employment. These variables

[6] *Wash. Utils. & Transp. Comm'n v. Cascade Nat. Gas Corp.*, Docket UG-200568, Direct Testimony of Brian L. Robertson, Exh. BLR-1T at 4-9 (Jun. 19, 2020).

[7] *Wash. Utils. and Transp. Comm'n v. Cascade Nat. Gas Corp.*, Docket UG-210755, Direct Testimony of Brian L. Robertson, Exh. BLR-1T at 3-6 (Sep. 30, 2021); *Wash. Utils. & Transp. Comm'n v. Cascade Nat. Gas Corp.*, Docket UG-240008, Direct Testimony of Brian L. Robertson, Exh. BLR-1T at 3-4 (Mar. 29, 2024).

were sourced from Woods & Poole Economics and have historically provided a stable and transparent basis for forecasting customer additions under relatively steady market conditions. This modeling approach was selected because it is well understood, reproducible, and consistent with methods Cascade has used in prior IRPs.

Q. How did Cascade address emerging policies such as new building codes and changes to line extension allowances in the 2025 IRP?

A. During the 2025 IRP development, Cascade carefully considered how emerging policies, particularly building code changes and the phase-out of line extension allowances, might affect future customer growth. However, due to the limited historical data available and uncertainty regarding how these policies would ultimately influence customer adoption behavior, Cascade concluded that there was insufficient information to robustly quantify their impacts using traditional econometric techniques. As a result, Cascade adopted a first-order approximation in which the reference case customer forecast did not explicitly assign a positive or negative adjustment for building code impacts. In effect, the incremental impact in the reference case resulted in zero growth, reflecting uncertainty rather than an assumption that the policies would have no effect.

Q. Why did Cascade use a first-order approximation rather than explicitly modeling building codes in the 2025 IRP?

A. A first-order approximation was used because building code impacts were both recent and evolving, with limited observed outcomes in historical customer data. While the direction of impact was uncertain, the magnitude and timing were even less clear. Explicitly embedding these effects into the reference forecast risked overstating precision or introducing bias. Setting the reference case to zero allowed Cascade to maintain a neutral baseline while evaluating policy impacts qualitatively and through scenarios.

Q. Has Cascade tested alternative customer forecasting models since the 2025 IRP process?

A. Yes. Cascade explored a range of alternative econometric model specifications since the 2025 IRP process. These included models that incorporated additional variables such as building codes represented as a binary indicator, line extension allowance phase-out timing, mortgage interest rates, natural gas price impacts, and median home prices. This testing was exploratory in nature and was intended to assess whether these additional variables could materially improve forecast performance.

Q. What were the results of testing those alternative econometric models?

A. The alternative models did not perform well enough to support their use in this case. In particular building code and line extension variables lacked sufficient historical observations to improve out of sample modeling nor did it improve the Akaike Information Criterion. These models also did not produce stable coefficients and most importantly, nearly all of the models reverted customer growth to pre-policy historical averages over time, implying that recent policy effects would dissipate even while those policies remained in place. From a planning standpoint, those outcomes were not intuitive and raised concerns about the suitability of purely econometric approaches during periods of structural change.

Q. Has Cascade considered any other alternative models?

A. Yes, Cascade has continued to evaluate alternative customer forecasting approaches that may be better suited to the current policy and market environment. This work reflects the iterative nature of integrated resource planning and Cascade's obligation to continuously improve its analytical tools as conditions evolve. As part of this post-IRP work, Cascade evaluated Error–Trend–Seasonality ("ETS") time-series models.

Q. Please describe ETS models and how they differ from traditional econometric approaches.

A. ETS models are time-series forecasting methods using an exponential smoothing technique that decompose historical data into three components: error, trend, and seasonality. The error component captures random variation, the trend component reflects the underlying direction of growth or decline, and the seasonality component captures recurring patterns, where applicable. Unlike econometric models, ETS models do not rely on explicit causal relationships between customer growth and external explanatory variables. Instead, they allow recent observed behavior in the data to directly inform the forecast trajectory.

Q. Why are ETS models useful in the current policy environment?

A. ETS models are particularly useful in environments characterized by regime change, where historical relationships may no longer hold. Policies such as building codes and changes to line extension allowances can alter customer behavior in ways that are gradual, nonlinear, and not yet fully observable. By allowing recent trends to persist without forcing long-run reversion to historical averages or the option to impose a dampening trend, ETS models can better reflect sustained changes while avoiding overly strong assumptions about recovery or rebound.

Q. What ETS configuration did Cascade evaluate?

A. For the base evaluation, Cascade examined ETS models with a dampened trend specification. A dampened trend applies a parameter that gradually reduces the influence of the most recent trend further into the forecast horizon, recognizing increasing uncertainty over time. This approach produced forecast paths that were more consistent with recent year-over-year customer growth observations while avoiding unrealistic long-term extrapolation.

Q. Is Cascade proposing to revise its customer count forecast based on the ETS results?

A. Yes. Based on the additional analytical work completed since the filing of the 2025 IRP, Cascade is proposing to revise its customer count forecast using the ETS modeling results. The ETS framework more directly reflects recent observed trends in customer growth and better aligns with current policy conditions affecting customer additions in Washington. Cascade's revised forecast provides a more reasonable and transparent representation of expected customer growth given the uncertainty surrounding building codes, line extension allowance changes, and related market dynamics.

Q. Why does Cascade believe revising the customer forecast using ETS is appropriate at this time?

A. Revising the customer forecast using ETS is appropriate because it incorporates information that was not fully available or sufficiently developed during the 2025 IRP process. Since that filing, Cascade has been able to more thoroughly evaluate alternative modeling techniques and assess how well they capture observed post-policy growth behavior. The ETS results avoid assumptions of automatic reversion to pre-policy growth rates and instead reflect sustained changes in trend while applying a dampened structure to account for increasing uncertainty over time. Incorporating these results improves forecast credibility and supports more prudent long-term planning decisions. Finally, Cascade views this revision as a measured evolution of its forecasting approach, consistent with its obligation to continuously refine assumptions as new information becomes available.

Q. Please provide the results of Cascade's customer counts for the Test Year and customer count forecast for the three years after the Test Year.

A. Cascade's Washington Test Year customer count as of December 1, 2025, was 235,639 total customers across all customer classes. Under the proposed forecast, total customers increase gradually to 237,377 by December 1, 2028, representing a net increase of 1,738 customers over the three-year forecast period. On a year-over-year basis, total customers are forecast to increase by approximately 757 customers from 2025 to 2026, 548 customers from 2026 to 2027, and 433 customers from 2027 to 2028. Residential, Commercial, and Industrial customers anticipate growing 0.25 percent, 0.2 percent, and flat rates over the next three years, respectively.

V. CONCLUSION

Q. Does this conclude your Direct Testimony?

A. Yes.