

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
DIRECT TESTIMONY OF STEPHANIE SIEVERT

EXHIBIT 100

November 2025

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I. INTRODUCTION

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

2 A. My name is Stephanie Sievert and my business address is 1200 West Century
3 Avenue, Bismarck, North Dakota 58503. I am the Chief Accounting & Regulatory
4 Affairs Officer for MDU Resources Group, Inc. ("MDU Resources"). Cascade Natural
5 Gas Corporation ("Cascade" or "Company") is a wholly owned subsidiary of MDU
6 Resources.

7 **Q. Please describe your duties and responsibilities.**

8 A. As Chief Accounting & Regulatory Affairs Officer, I am responsible for providing
9 executive leadership of the accounting and regulatory affairs functions. In addition, I
10 am a member of the Management Policy Committee, which establishes policy and
11 direction for MDU Resources and its subsidiaries.

12 **Q. Please briefly describe your educational background and professional
13 experience.**

14 A. I graduated from the University of North Dakota with a Bachelor of Accountancy
15 degree. I am a certified public accountant. I have worked within the MDU Resources
16 family of companies since June 1996. During my tenure with MDU Resources, I have
17 held positions of increasing responsibility across the company.

II. SCOPE AND SUMMARY OF TESTIMONY

18 **Q. Please summarize your testimony.**

19 A. My testimony provides an overview of Cascade's corporate profile and its "CORE"
20 strategy, followed by an outline of the specific strategies the Company is pursuing to
21 prioritize customer affordability while continuing to supply safe and reliable service. I
22 discuss the work the Company has done to advance equity and energy justice and its
23 customer support programs. I summarize Cascade's need for its rate request, which
24 is primarily driven by ongoing capital investments and cost increases since the

1 Company's last rate case and is necessary to offer safe and reliable service to both
2 existing customers and those we are required to serve natural gas. I explain the
3 Company's focus on cost management and uncovering efficiencies that are helping to
4 mitigate cost increases. I next discuss Cascade's efforts towards decarbonization
5 initiatives and compliance, which includes pursuing a Hybrid Heating Pilot Project and
6 investments in renewable natural gas ("RNG"). I describe Cascade's proposed
7 approach to modify its line extension allowance policy and the rationale for the need
8 to maintain an allowance. Next, I discuss the importance of fair and timely recovery of
9 prudently incurred expenses and a reasonable rate of return and demonstrate the
10 challenges the Company is facing in earning its allowed rate of return due to regulatory
11 lag. Finally, I introduce the Company witnesses who provide testimony and other
12 evidence in support of the Company's proposals.

13 **Q. Are you sponsoring any exhibits in this proceeding?**

14 **A.** Yes, I sponsor the following exhibits:

- 15 • Exhibit CNGC/101 – S&P Global Ratings Research Update November 8, 2023
- 16 • Exhibit CNGC/102 – Fitch Rating Action Commentary July 5, 2024
- 17 • Exhibit CNGC/103 – Fitch Rating Agency Commentary July 2, 2025
- 18 • Exhibit CNGC/104 – Moody's Ratings Action August 15, 2025

III. OVERVIEW OF CASCADE

19 **Q. Please briefly provide an overview of the Company.**

20 **A.** Cascade was originally formed in 1953 to serve small and predominantly rural
21 communities in the Pacific Northwest with natural gas. Cascade provides natural gas
22 distribution services in 97 communities in Washington and Oregon. Cascade serves
23 28 communities in Oregon, the largest of those communities are Bend, Baker City,
24 and Pendleton. Cascade's headquarters are located in Kennewick, Washington.
25 Cascade is wholly owned by MDU Resources, located in Bismarck, North Dakota. As

1 of October 31, 2025, Cascade has 321,275 customers, of which 86,149 are in Oregon.
2 Cascade serves a non-contiguous service territory with 312 dedicated employees.

3 Cascade's parent company, MDU Resources, recently reached a significant
4 milestone by celebrating 100 years in business on March 14, 2024. Over the past
5 100 years, MDU Resources has continued to evolve and grow its utility business,
6 including its 2007 acquisition of Cascade. MDU Resources is now a pure play
7 regulated energy delivery company, allowing management and the board of directors
8 to focus on the utility and pipeline businesses. The Company has implemented a
9 "CORE" strategy, which prioritizes customers and communities, operational
10 excellence, returns focused initiatives, and an employee driven culture.¹ Achieving
11 100 years in business at MDU Resources, and over 70 years in business at Cascade,
12 underscores our long-term commitment to doing what's right for our customers,
13 employees, communities, and shareholders.

IV. CASCADE'S STRATEGIES TO PRIORITIZE CUSTOMER EQUITY AND AFFORDABILITY

14 **Q. How has the Company addressed equity in this rate case?**

15 A. As discussed in greater detail in the Direct Testimony of Noemi Ortiz, Cascade has
16 taken several actions to incorporate an equity lens into the Company's daily operations
17 so that vulnerable, under-represented, and financially constrained customers are
18 considered or heard in Cascade's decision-making processes and that they are more
19 apt to experience equal outcomes with the rest of Cascade's customer base.²

20 Cascade's equity approach began in earnest after Oregon's Senate Bill
21 ("SB") 978 (2017) was passed, which laid the groundwork for equity considerations at

¹ For additional discussion of the CORE strategy, please refer to the Direct Testimony of Roxanne Roerick, CNGC/1300.

² CNGC/200, Ortiz.

1 the Public Utility Commission of Oregon (“Commission”).³ The COVID-19 pandemic
2 accelerated the focus on equity, with the Commission taking regulatory actions to
3 protect customers from disconnection and financial hardship. House Bill (“HB”) 2475
4 (2021) further directed the Commission to consider energy burdens and equity
5 factors,⁴ leading to docket UM 2211, which is an on-going proceeding dedicated to
6 addressing topics concerning energy justice and procedural equity.

7 At Cascade, equity is prioritized from the top down, with executive sponsorship
8 and annual company-wide equity training for managers. Cascade has invested in
9 resources to foster an equity culture, including creating a new position focused on
10 equity-related issues and mandating training. The Company’s initiatives include a
11 language access plan to address linguistic barriers and the development of a
12 Distributional Equity Analysis (“DEA”) tool to assess community impacts of Company
13 decisions. Cascade hired a data analyst to correlate vulnerabilities (e.g.,
14 disconnections for non-payment) with outcomes. The Company is engaging third-party
15 providers for data interfaces that combine billing and demographic data, and for lists
16 of income-qualified customers to improve targeted outreach for assistance programs.

17 Cascade collaborates with stakeholders through advisory groups, including
18 Oregon’s Energy Assistance Advisory Group and its Washington Equity Advisory
19 Group (“EAG”). Plans are underway to create an Oregon EAG, modeled after the
20 Washington EAG, to broaden representation and guide equity processes. The
21 establishment of the Oregon EAG has been delayed by the removal of federal
22 Diversity, Equity, and Inclusion (“DEI”) resources and the timeline for the Oregon
23 Energy Justice Mapping Tool being pushed out; however, Cascade is considering

³ SB 978, 79th Leg. Assemb., 2017 Reg. Sess. (Or. 2017), available at <https://olis.oregonlegislature.gov/liz/2017R1/Downloads/MeasureDocument/SB978/Enrolled>.

⁴ HB 2475, 81st Leg. Assemb., 2021 Reg. Sess. at § 2(1) (Or. 2021), available at <https://olis.oregonlegislature.gov/liz/2021R1/Downloads/MeasureDocument/HB2475>.

1 alternative data sources and leveraging experience from the Washington EAG to
2 inform Oregon efforts in activities related to community engagement, energy
3 efficiency, regulatory obligations, bill payment assistance, resource planning,
4 decarbonization, and expanding access for underserved customers. Collaboration
5 with the Washington EAG has led to benefits for the Company's Oregon customers by
6 allowing the Company to leverage results from that group through improved outreach
7 materials, better translation services, focused bill pay resources, and proactive
8 solicitation of minority-owned businesses for procurement contracts.

9 Cascade's efforts to incorporate equity considerations into its work will be an
10 ongoing process.

11 **Q. What work has Cascade done to advance energy justice?**

12 A. As further discussed in the Direct Testimony of Dan L. Tillis, Cascade uses insights
13 from its Low-Income Rate Analysis (2022) and Energy Burden Assessment (2025) to
14 help inform the Company to shape and refine its assistance programs.⁵ Cascade
15 employs a multi-channel outreach strategy including bill inserts, postcards, social
16 media, Google Ads, and streaming media to reach vulnerable customers with
17 communications tailored using Cascade's Low-Income Propensity Model, and
18 materials are available in multiple languages to overcome linguistic barriers. In
19 addition, Cascade works closely with its Energy Assistance Advisory Group to help
20 shape its energy equity initiatives and customer support programs. The Company
21 stands by its progress but acknowledges there is more to do to achieve energy justice
22 and equal outcomes for its customers.

⁵ CNGC/300, Tillis/16-20.

1 **Q. How has Cascade addressed provisions related to low-income programs since**
2 **its last general rate case?**

3 A. Since its last general rate case, the Company has revised practices for disconnections,
4 deposits and reporting, and launched new assistance programs in response to
5 regulatory changes. As further discussed in the Direct Testimony of Dan L. Tillis, some
6 of the notable customer affordability initiatives include the Energy Discount Program
7 ("EDP"), which was implemented in 2022 and provides ongoing monthly bill discounts
8 for income-qualified residential customers, with discounts ranging from 15 percent to
9 95 percent of the bill, depending on household income relative to the state median
10 income.⁶ In addition, the Oregon Low-Income Bill Assistant ("OLIBA") was revised in
11 2022 to complement the EDP, with OLIBA offering arrearage forgiveness grants for
12 qualifying customers experiencing financial hardship. Cascade also identifies
13 customers eligible for auto-enrollment through data analytics, increasing the program's
14 reach and effectiveness. See the Direct Testimony of Dan L. Tillis for discussion of
15 how auto-enrollment is enhancing EDP participation.⁷ Program enrollment for bill
16 assistance programs for eligible customers increased by 5,967 percent from 2018 to
17 2025, demonstrating Cascade's success in connecting vulnerable customers with
18 resources.

19 **Q. How does Cascade's customer satisfaction compare to other similarly situated**
20 **utilities?**

21 A. Cascade has a consistent track record of high rankings within the J.D. Power
22 Residential Natural Gas Customer Satisfaction Study. In 2024, Cascade was ranked
23 second in overall customer satisfaction in the West Midsize segment. Over the last

⁶ CNGC/300, Tillis/17.

⁷ CNGC/300, Tillis/19, 24.

1 thirteen years, Cascade placed either first or second in the West Midsize segment,
2 ranking first six times and second seven times.⁸

3 Six factors influence a utility's ranking within the study: Safety & Reliability,
4 Billing & Payment, Price, Corporate Citizenship, Communications, and Customer
5 Care. Cascade's success within the J.D. Power study is a testament to the
6 commitment of each employee, from the top down, to serve Cascade's communities.
7 For more details on this, see Exhibit CNGC/301, J.D. Power Summary for Cascade
8 Natural Gas Corporation.

9 **Q. What are some of the ways the Company's Customer Experience Team ("CXT")**
10 **continues to provide excellent customer service?**

11 A. Cascade's CXT provides customers multiple options to communicate with the
12 Company in the manner most convenient for the customer. This includes phone, email,
13 mail, and online options. In addition, Cascade is staffed to handle emergency calls
14 24 hours a day, seven days a week, which allows Cascade to respond quickly to
15 customer requests and provide a rapid response to urgent emergency situations.
16 Further, the CXT is adapting to evolving customer preferences by increasing and
17 improving online self-service options on its website. The Direct Testimony of Dan L.
18 Tillis discusses the excellent customer service provided by Cascade in greater detail.⁹

V. REASONS FOR RATE INCREASE REQUEST

19 **Q. Please summarize Cascade's requested increase in this filing.**

20 A. The Company's request for a rate increase is largely driven by increased investment
21 in the safety and reliability of our system. Cascade is requesting an overall rate
22 increase of \$16.4 million, or 15.82 percent. This includes a requested base rate
23 increase of \$16.2 million and a requested increase of \$228,803 associated with the

⁸ CNGC/301, Tillis.

⁹ CNGC/300, Tillis.

1 amortization of previously deferred environmental remediation costs. The Company is
2 using a forecasted test period of November 1, 2026, to October 31, 2027 ("Test Year"),
3 and the base year is the twelve months ended June 30, 2025 ("Base Year"). The
4 forecasted Test Year was selected as the most appropriate and supportable for the
5 period during which rates will be in effect. The Direct Testimony of Matthew Larkin
6 provides further discussion regarding the Test Year.¹⁰ Cascade's request ensures the
7 Company can continue to provide safe and reliable service to customers, while the
8 Company's existing customer assistance programs protect vulnerable customers
9 ensuring customers maintain access to essential service without undue financial
10 burden. The Company is using the results of a Long-Run Incremental Cost analysis
11 as a starting point in the proposed spread of the requested increase to the various rate
12 schedules. The Direct Testimony of Cynthia A. Menhorn provides support for the
13 proposed rate design based on the results of the Cost-of Service study and policy
14 considerations.¹¹

15 Cascade is obligated to serve persons and corporations with natural gas.¹² The
16 rate increase requested in this filing is necessary for the Company to continue to meet
17 its obligation to provide safe and reliable service to its Oregon customers through
18 necessary infrastructure investments, as well as through cost adjustments needed to
19 keep pace with inflationary pressures.

¹⁰ CNGC/700, Larkin.

¹¹ CNGC/800, Menhorn.

¹² ORS 757.020.

1 **Q. Has the Company calculated the impact of Cascade’s rate request on**
2 **customers?**

3 A. Yes. Based on an average usage level of 59 therms per month, the average residential
4 customer will see a bill increase of \$11.07 per month, from \$63.63 to \$74.70. This
5 equates to an average increase on a residential customer bill of 17.40 percent.

6 **Q. What are the primary drivers of Cascade’s request for a rate increase in this**
7 **filing?**

8 A. The main drivers of the proposed base rate increase in this case are rate base growth,
9 growth in operations and maintenance (“O&M”) expenses, and growth in depreciation
10 expense associated with new investments included in rate base. Cascade has not
11 requested a general rate revision since the filing of docket UG 390 in March 2020
12 (“2020 General Rate Case”) over five years ago. Since that time, the costs to construct,
13 maintain, and operate Cascade’s system have increased in a number of key areas as
14 demonstrated by a comparison between the components of the Company’s revenue
15 requirement filed in the 2020 General Rate Case and the revenue requirement
16 presented in the current filing. Since the filing of the 2020 General Rate Case,
17 Cascade’s Test Year rate base has increased by \$98.3 million, reflecting growth in
18 plant-in-service of \$151.1 million. This increased investment in the Company’s system
19 leads to a related increase in annual depreciation expense, which grew from \$9.4
20 million in the 2020 General Rate Case to \$12.2 million in the current filing, an increase
21 of 30 percent. Most of the growth in rate base is related to the Company’s investments
22 in the safe, reliable distribution system that is used to provide energy to customers
23 throughout the year, but especially on the coldest days.

24 **Q. What are the primary drivers in the rate base growth?**

25 A. As further discussed in the Direct Testimonies of Patrick C. Darras and Eric P.
26 Martuscelli, Cascade has emphasized investments in infrastructure, technology, and

1 system integrity enhancements that ensure the continued safety, reliability, and
2 regulatory compliance of the natural gas distribution system, while supporting long-
3 term operational efficiency and customer service improvements.¹³ The key capital
4 investment project categories since the last rate case include system safety and
5 integrity projects, which include: pipe replacement programs and updates to gas
6 meters and regulators; technology upgrades; and, significant reinforcements and
7 replacements in Bend, Pendleton, Hermiston, and Redmond, Oregon, which provide
8 a variety of benefits to customers such as improving reliability and safety or mitigating
9 system constraints to ensure reliability.

10 **Q. Please describe the specific drivers behind the O&M increase and the impact it**
11 **has on the proposed increase.**

12 A. Total O&M expense (excluding depreciation and taxes) increased from \$15.1 million
13 in the 2020 general rate case filing to \$21.0 million in the current filing, an increase of
14 approximately 39 percent. The primary driver of this increase was growth in
15 Administrative & General (“A&G”) expense, which increased approximately 75 percent
16 between rate case filings, from \$6.0 million in the 2020 general rate case to
17 \$10.5 million in the current filing. A primary component of A&G expense is O&M labor.
18 As discussed in the Direct Testimony of Roxanne Roerick, attracting and retaining a
19 skilled workforce with competitive pay is crucial for Cascade to construct, operate, and
20 maintain a safe and reliable system.¹⁴ In addition to increases in A&G expense,
21 Cascade also experienced growth in all other operating functions (production,
22 transmission, distribution, customer-related) by \$1.5 million. Like all businesses,
23 Cascade has been impacted by inflation. As discussed in the Direct Testimony of Ann

¹³ CNGC/900, Darras; CNGC/1000, Martuscelli.

¹⁴ CNGC/1300, Roerick.

1 E. Bulkley, the period since Cascade's last general rate case has been marked by the
2 highest inflation seen in over forty years.¹⁵

3 **Q. How has Cascade controlled costs in order to mitigate the impact of rate cases?**

4 A. Since the acquisition of Cascade by MDU Resources, the Company has been part of
5 a process that has resulted in synergistic savings in the form of joint senior
6 management, a unified customer service center, joint billing and payment processing,
7 uniform accounting systems, combined engineering support, and shared information
8 technology resources. Since the Company's last general rate case, Cascade has
9 implemented a cost review initiative to help mitigate the impact of economy-wide
10 inflationary pressures. Cascade's Officer Team drives this initiative. All departments
11 in the Company were tasked with reviewing existing processes to identify opportunities
12 for increased efficiencies to minimize O&M increases and potentially provide cost
13 savings. Company-wide, a manager must make a business case for any job opening
14 before the position is allowed to be filled. This has resulted in re-organizing work in
15 some cases, restructuring teams, and utilizing technology solutions where they make
16 sense.

17 Other process reviews that have resulted in: cost savings include an analysis
18 of telephone and cell phone costs; a review of vehicles for underutilization; a review to
19 determine whether the Company has excess equipment; a review and assessment of
20 materials and outside services for potential efficiencies and savings; and a review of
21 facilities to determine the efficiency of building use. The building review resulted in
22 consolidating the CXT into an existing facility that was underutilized, which allowed for
23 the sale of the building that had previously been used by the CXT. Although the
24 associated rate base was not located in Oregon, this move resulted in a reduction of

¹⁵ CNGC/500, Bulkley.

1 the O&M expense on the building that would have been allocated to Oregon.
2 Additionally, Cascade is encouraging the use of Microsoft Teams as a replacement for
3 all non-essential travel.

4 Cascade has a history of mitigating increased cost pressures in order to avoid
5 filing general rate cases. In particular, Cascade has a robust budgeting process in
6 place that allows the Company to scrutinize and prioritize not only capital projects but
7 also O&M expenditures as well. The budgeting process starts with managers and
8 directors compiling a budget based on parameters provided by the executive group.
9 These budgets then are reviewed at the officer level and prioritized based on safety
10 and reliability above everything else. Typically, budgets are then reduced to control
11 costs to an acceptable level. There are a number of rounds of review prior to taking a
12 recommended budget to the board of directors for approval. As a result, Cascade has
13 been able to aggressively manage its costs.

14 **Q. What return on equity and capital structure is Cascade proposing in this case?**

15 A. Cascade is proposing a 10.40 percent return on common equity and a capital structure
16 that includes 50.0 percent equity. The capital structure, costs of debt, and common
17 equity result in an overall rate of return requested by Cascade of 7.866 percent.
18 Support for the rate of return request is provided in the Direct Testimony of Ann E.
19 Bulkley and the Direct Testimony of Tammy J. Nygard.

20 **Q. Has the Company historically earned its authorized rate of return?**

21 A. No. Cascade has experienced chronic underearning since 2017 due to its continued
22 program of capital investment to improve the safety and reliability of the system and
23 significant regulatory lag. Table 1 below provides the Company's achieved rate of
24 return compared to its authorized rate of return based on the Company's annual Spring
25 Earnings Review with adjusted Net Operating Income and AMA rate base. The
26 Company's achieved rate of return in 2021 improved with the implementation of new

rates; however, the Company's earnings quickly deteriorated and remained significantly below its authorized rate of return since that time. As discussed in the Direct Testimony of Matthew Larkin, the rate of return based on actual results of operations was 3.77 percent, while the rate of return based on adjusted results of operations was 2.92 percent which are both well below Cascade's currently authorized rate of return.¹⁶

Table 1 – Cascade's Adjusted Results of Operations (*in percentages*)

Year	2017	2018	2019	2020	2021	2022	2023	2024
Authorized Rate of Return (A)	7.28	7.28	7.27	7.27	7.07	7.07	7.07	7.07
Actual Rate of Return (B)	6.48	6.57	5.90	6.09	6.85	4.70	5.50	4.74
Underearning (B - A)	(0.80)	(0.71)	(1.37)	(1.18)	(0.22)	(2.37)	(1.57)	(2.33)

Q. Please explain the timing for the Company's rate case filing.

A. As I mentioned above, Cascade is facing significant rate pressure on account of the capital projects investments incurred since the last rate case and increased expenses. Cascade has been working on and planning this rate case filing for the past several months and targeted November 25, 2025, for its filing to allow for rates to become effective on October 31, 2026.

Q. Is the Company facing financial challenges?

A. Yes. Cascade's cost of doing business in Oregon continues to increase, despite the Company's efforts to control costs and increase efficiency. In addition, ratings agencies have become concerned with Cascade's financial performance. On October 10, 2023, S&P Global ("S&P") revised its stand-alone credit profile ("SACP") on Cascade downward from 'BBB' to 'BB+' reflecting expectations that Cascade's stand-alone financial measures will remain consistently below previous levels.

¹⁶ CNGC/700, Larkin.

1 In November 2023, S&P lowered their issuer credit ratings on Cascade by one
2 notch from BBB+ to BBB with a Negative Outlook.¹⁷ Even though Cascade's SACP is
3 BB+, Cascade is viewed as core to MDU Resources. As a result, Cascade benefits
4 from the credit rating of the larger organization and is upgraded to the MDU Resources
5 credit rating of BBB. Similarly, in July 2024, Fitch Ratings ("Fitch") downgraded
6 Cascade's Issuer Default Rating to BBB from BBB+ with a stable outlook. Fitch also
7 downgraded Cascade's short-term rating to F3 from F2 reflecting Fitch's assessment
8 of the company's financial structure and operating environment.¹⁸ The report stated
9 the one-notch downgrade reflects weaker leverage measures over the last few years
10 due to a large cap-ex program coupled with a lag of rate relief. Fitch provided an
11 updated report in July 2025,¹⁹ reaffirming Cascade's ratings and stating that
12 Cascade's FFO leverage measures are expected to remain flat at approximately 7.2X
13 through 2025 as capital spending peaks but improve thereafter with timely recovery
14 easing financial pressures. This improvement is contingent on balanced regulatory
15 outcomes and a cadence of rate case filings that mitigate regulatory lag. Fitch expects
16 leverage to strengthen to 5.1X in 2026-2029, but still leaves Cascade's financial profile
17 below its peers.

18 MDU Resources and Cascade also received a rating from Moody's Ratings
19 beginning in 2025. Moody's assessed Cascade's ratings as Baa2 with a stable
20 outlook.²⁰ Moody's highlighted Cascade's weakening financial metrics in recent years
21 with the impact of higher gas costs and market volatility reducing timeliness of
22 recovery. Credit metrics are expected to strengthen moving forward with lower capital
23 spending and timely regulatory recovery.

¹⁷ CNGC/101, Sievert.

¹⁸ CNGC/102, Sievert.

¹⁹ CNGC/103, Sievert.

²⁰ CNGC/104, Sievert.

1 **Q. Why are credit ratings important to Cascade?**

2 A. Utilities require ready access to capital markets in all types of economic environments.
3 The capital-intensive nature of Cascade's business necessitates the ability to obtain
4 funding from the financial markets under reasonable terms at regular intervals. To
5 maintain this access, investors need to understand the risks related to any of their
6 investments.

7 To help investors assess the creditworthiness of a company, firms such as
8 S&P, Moody's and Fitch developed their own standardized ratings scales, otherwise
9 known as credit ratings. These credit ratings indicate the creditworthiness of a
10 company and assist investors in determining if they want to invest in a company and
11 its comparative level of risk compared to other investment choices. The credit rating
12 can also affect the type of investor who will be interested in purchasing the debt.
13 Investment risks include, but are not limited to, liquidity risk, market risk, operational
14 risk, regulatory risk, and credit risk. These risks are considered by S&P, Moody's, and
15 Fitch, and investors in assessing Cascade's creditworthiness.

16 **Q. Does Cascade's credit rating matter to customers?**

17 A. Yes. It is important for Cascade to maintain an investment grade credit rating so it is
18 able to access debt financing at reasonable rates. If Cascade's credit ratings were to
19 fall below investment grade, it would cause additional harm to the risk perception of
20 the Company in debt capital markets. The Company's borrowing costs would increase
21 substantially. A downgrade would immediately raise Cascade's cost of short-term
22 borrowing and would increase the cost for future long-term borrowings. Given the
23 current outlooks and reference to weaker credit metrics from S&P, Moody's, and Fitch,
24 the Company is concerned that continued underearning and an adverse regulatory
25 outcome would put additional pressure on its financial metrics and may result in a
26 credit rating downgrade. A downgrade would also negatively impact MDU Resources'

1 stock price, decreasing the value the Company would receive for issuances in the
2 equity capital markets.

3 **Q. What factors affect a company's credit rating?**

4 A. There is an expectation that companies will meet certain financial performance
5 standards. As discussed in the Direct Testimony of Ann E. Bulkley, credit rating
6 agencies evaluate utilities based on a combination of financial metrics and business
7 risk factors. The expectation for financial performance is measured by the financial
8 and liquidity ratios published by the rating agencies. The Company is doing what it can
9 to improve its financial performance through the cost review initiatives outlined
10 previously. As discussed in the rating agencies' analysis, however, another important
11 piece of the rating is based on regulatory factors such as regulatory lag and weak
12 regulatory outcomes. Cascade believes this rate plan provides an excellent
13 opportunity for improvement on both fronts. A financially strong Company will be better
14 positioned to meet the challenges and opportunities of the energy transition, while
15 continuing to provide the safe and reliable service our existing customers depend on.
16 Cascade is confident this rate plan with the use of forecasted capital, along with its
17 proposed RNG recovery mechanism will help stabilize and improve the Company's
18 credit ratings.

VI. DECARBONIZATION

19 **Q. Describe Cascade's business strategy.**

20 A. Cascade strives to be a top performing utility and provide safe, reliable, competitively
21 priced, and environmentally responsible energy services to its customers. The
22 Company focuses on its "CORE" strategy which prioritizes customers and
23 communities, operational excellence, returns focused initiatives and an employee
24 driven culture. All these elements must work together to be successful.

1 Energy is fundamental to support Oregon residents and the businesses and
2 industries where they work. Cascade has an ongoing mission to provide safe, reliable
3 energy delivery to its customers. At the same time, the state of Oregon is in the midst
4 of a complex energy transition. Oregon's regulatory framework to reduce greenhouse
5 gas ("GHG") emissions from fossil fuels is the Climate Protection Program ("CPP"),
6 which establishes a declining cap on emissions from regulated entities, including
7 natural gas utilities.

8 Carbon emissions mitigation will only be successful if it can be done in a way
9 that does not diminish the ability of residents, businesses, and industry to access the
10 energy that fuels modern life. Cascade has an important role to play in the
11 achievement of Oregon's decarbonization commitments. The Company is dedicated
12 to utilizing its existing assets and deploying new assets to support statewide
13 decarbonization efforts while also meeting Cascade's duty to serve customers in its
14 Oregon service territory. The clean energy transition will require significant investment.
15 It is critical to maintain the safe, reliable natural gas service provided by the Company's
16 existing distribution system.

17 At the same time, as further detailed in the Direct Testimony of Hart Gilchrist,²¹
18 the Pacific Northwest Utilities Conference Committee and a study by consultancy, E3,
19 have highlighted growing resource adequacy concerns in the region, which
20 underscores the need for balanced decarbonization strategies that maintain reliability
21 while meeting Oregon's climate goals. Cascade's intent is to proactively formulate a
22 multi-pronged approach to meeting Oregon's climate goals, including purchasing
23 compliance instruments; investing in durable, direct capital investments in
24 decarbonization measures such as RNG projects; and piloting innovative technologies

²¹ CNGC/1200, Gilchrist.

1 such as hybrid heating systems in Oregon and Thermal Energy Network Systems in
2 Washington. Cascade collaborates with organizations like Energy Trust of Oregon and
3 the Gas Technology Institute to leverage research and funding opportunities. These
4 initiatives are designed to reduce emissions cost-effectively while ensuring equitable
5 outcomes for all customer classes. These initiatives aim to reduce emissions while
6 maintaining system integrity and customer equity.

7 Cascade remains committed to meeting Oregon's climate objectives through a
8 balanced and cost-effective decarbonization strategy. By combining innovative
9 technologies, collaborative partnerships, and timely cost recovery mechanisms,
10 Cascade will continue to deliver safe, reliable, and affordable service while advancing
11 the state's greenhouse gas reduction goals.

VII. INTRODUCTION OF COMPANY WITNESSES

12 **Q. Would you please introduce and provide a brief description of each of the**
13 **witnesses filing testimony on behalf of Cascade in this proceeding?**

14 **A.** Yes. The following additional witnesses present direct testimony on behalf of Cascade:

- 15 • Noemi Ortiz, Manager, Energy Efficiency Programs for Cascade, presents
16 testimony regarding Cascade's efforts to incorporate an equity lens into the
17 Company's daily operations so that vulnerable, under-represented, and
18 financially constrained customers are considered or heard in Cascade's
19 decision-making processes and that they are more apt to experience equal
20 outcomes with the rest of Cascade's customer base.
- 21 • Dan L. Tillis, Director, Customer Services for MDU Resources, presents
22 testimony regarding Cascade's leadership in customer service and energy
23 assistance, responding proactively to regulatory changes and the needs of
24 Oregon's most vulnerable customers. He also discusses how, through
25 innovative programs and collaborative partnerships, Cascade has dramatically

1 expanded its reach, improved affordability, and set a new standard for utility
2 service in the region.

- 3 • Tammy J. Nygard, Controller for MDU Resources, reviews the Company's
4 capital structure and addresses the Company's cost of debt and the overall
5 rate of return.

- 6 • Ann E. Bulkley, Principal at The Brattle Group, presents evidence and provides
7 a recommendation regarding the appropriate return on equity for the Company
8 and assesses the reasonableness of its proposed capital structure for
9 ratemaking purposes. Witness Bulkley underscores the importance of
10 maintaining strong credit ratings to ensure affordable access to capital and
11 mitigate financial risk.

- 12 • Travis R. Jacobson, Vice President, Regulatory Affairs of Montana Dakota-
13 Utilities Co., details Cascade's rate plan using a fully forecasted test year
14 approach and the Company's proposal regarding its line extension allowance
15 ("LEA"). He also introduces Cascade's proposed RNG Cost Recovery
16 Mechanism to support decarbonization efforts, and lastly, addresses customer
17 affordability concerns and related customer protection programs.

- 18 • Matthew Larkin, Director in the Regulatory Services practice of MCR
19 Performance Solutions ("MCR") discusses the Company's proposed revenue
20 requirement and supporting calculations as well as the cost-of-service study
21 performed.

- 22 • Cynthia A. Menhorn, Vice President of Regulatory Services practice of MCR,
23 presents the proposed changes to Cascade's rate design, and resulting
24 customer bill impacts.

- 1 • Patrick C. Darras, Vice President of Engineering, Operations Services and
2 Compliance for Montana-Dakota Utilities Co., provides an overview of the
3 Company's project selection and budgeting process and supports the
4 Company's capital system investments since the last rate case (2021-2025),
5 as well as the proposed system investment additions scheduled to be
6 completed before the end of the forecasted Test Year.
- 7 • Eric P. Martuscelli, Vice President of Field Operations & Customer Experience
8 for Montana-Dakota Utilities Co., discusses Cascade's operational priorities
9 and capital investments strategy related to growth installation and replacement
10 projects as well as fleet services.
- 11 • Zachary L. Harris, Manager of Regulatory Affairs for Cascade, presents tariff
12 and rate-design proposals including creation of a new Schedule to recover
13 future RNG costs, a new firm transportation service option, and changes to the
14 LEA policy.
- 15 • Hart Gilchrist, Vice President of Business Development and External Affairs for
16 Cascade, discusses the Company's strategy to comply with the CPP and
17 emphasizes Cascade's commitment to supporting statewide GHG goals
18 through initiatives such as RNG development and hybrid heating systems,
19 while maintaining reliable and equitable service to customers.
- 20 • Roxanne Roerick, Director of Human Resources for MDU Resources, focuses
21 on labor, compensation, and benefits strategies that support Cascade's ability
22 to attract and retain skilled employees. She describes the Total Rewards
23 approach, including base pay, incentive compensation, and comprehensive
24 benefits programs and how these investments ensure safe, reliable service
25 while managing costs responsibly.

- 1 • Brian L. Robertson, Manager of Supply Resource Planning for Cascade,
2 presents and discusses the results of the demand forecast model approach
3 which ensures Cascade's Test Year volumes used for this rate case accurately
4 reflect anticipated conditions.

VIII. CONCLUSION

5 **Q. Does this conclude your direct testimony?**

6 **A. Yes.**

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
S&P GLOBAL RATING RESEARCH UPDATE,
NOVEMBER 2024

EXHIBIT 101

November 2025

Research Update:

MDU Resources Group Inc. And Cascade Natural Gas Downgraded To 'BBB', Outlooks Negative; Rating Actions On Other Subs

November 8, 2023

Rating Action Overview

- MDU Resources Group Inc. (MDU) completed its strategic review of its construction services business, MDU Construction Services Group Inc. (CSG), and will divest CSG through a spinoff to MDU shareholders by year-end 2024. This announcement follows the successful May 2023 spinoff of MDU's construction materials business Knife River Corp.
- We expect the separation of these higher-risk businesses to reduce MDU's consolidated business risk while weakening consolidated financial measures given the loss of operating cash flows. However, with the completed and pending divestitures, MDU's credit profile no longer benefits from the moderate diversification through owning multiple uncorrelated business lines.
- Accordingly, we lowered our issuer credit ratings on MDU and subsidiary Cascade Natural Gas Corp. by one notch to 'BBB' from 'BBB+'. The outlooks are negative. We lowered our issue-level rating on Cascade's senior unsecured debt to 'BBB' from 'BBB+'.
- We affirmed our ratings on Montana-Dakota Utilities Co. and on Centennial Energy Holdings Inc., and our short-term ratings on MDU, Montana-Dakota, and Centennial.
- We affirmed our 'A-2' commercial paper rating on Montana-Dakota. In addition, we withdrew our 'A-3' commercial paper rating on Centennial after MDU terminated the program.
- We revised our outlook on Montana-Dakota to negative from developing and revised our outlook on Centennial to positive from developing.
- The negative outlook on MDU, Cascade, and Montana-Dakota reflects the possibility of weaker consolidated financial measures from higher leverage following the separation of CSG. Our base case post divestiture reflects funds from operations (FFO) to debt consistently below 15%.
- Our positive outlook on Centennial reflects our expectation that the remaining Centennial businesses, after the CSG spin-off, will be core to MDU. Therefore, we would likely align the Centennial issuer credit rating with the rating on the MDU group.

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Rating Action Rationale

Our downgrades of MDU and Cascade reflect the more limited diversification of the remaining businesses under MDU. We previously viewed MDU as a conglomerate operating multiple uncorrelated business lines that together provided moderate diversification benefits to MDU's credit profile. This benefit resulted in one notch of uplift to our issuer credit rating on the company. However, with the completed and pending separation of the CSG businesses, MDU will no longer benefit from moderate diversification of having multiple uncorrelated business lines, resulting in a one-notch lowering of our issuer credit ratings on MDU and Cascade.

Due to the presence of insulating measures at Montana-Dakota, we affirmed our issuer credit rating on the company. We view existing insulation at Montana-Dakota as sufficient to rate the company up to one notch above MDU's group credit profile. Montana-Dakota's stand-alone credit profile (SACP) is 'bbb+', supporting our 'BBB+' issuer credit rating.

For further information regarding the insulation measures, please see Montana-Dakota Utilities full analysis published June 22, 2023.

We assess MDU's business risk profile above the midpoint for its respective category. We expect MDU's lower-risk, rate-regulated utilities will contribute a significantly greater proportion to consolidated EBITDA (about 55%), following the spinoff of Knife River, and before the spinoff of CSG. Although we expect Centennial's remaining nonutility businesses of CSG (prior to spinoff) and WBI Holdings Inc. (natural gas transportation and storage) to contribute about 45% to consolidated EBITDA, we would assess MDU's business risk profile above the midpoint for its assessment of satisfactory relative to peers. We expect business risk will further strengthen after the spinoff of CSG by year-end 2024.

The loss of Knife River and CSG's cash flows weaken MDU's consolidated financial measures.

Our base-case scenario assumes MDU successfully spins off CSG by year-end 2024, resulting in the loss of its cash flows starting in 2025. In addition, we expect regulated utility capital spending to remain elevated to accommodate volumetric growth predominantly in Cascade's service territory, Montana-Dakota's ongoing replacement of aging infrastructure, and WBI's ongoing expansion projects in the Bakken region. This incorporates a capital plan of between \$500 million to \$600 million annually through 2026.

Furthermore, in August, MDU realigned its dividend policy to a payout of 60%-70% of its regulated energy delivery earnings. In addition, we expect the disposal of its remaining shares in Knife River to provide over \$300 million in cash proceeds (based on a \$58 per share price assumption). Incorporating these assumptions, we forecast MDU's consolidated FFO to debt in the 14%-17% range for 2023-2025, compared with consolidated FFO to debt of 25% at year-end 2022. With the majority of MDU's cash flow now from utilities, we assess MDU's financial risk profile using our medial volatility benchmarks. These are more relaxed than the standard benchmarks we use for typical corporate issuers. This reflects MDR's lower-risk regulated utility operations and effective management of regulatory risk.

The repayment of over \$1.1 billion in debt at Centennial strengthened its consolidated financial measures.

Using proceeds from an \$825 million one-time distribution from Knife River and new debt at MDU that the company intends to repay with the proceeds from the disposal of its remaining interest in Knife River, MDU repaid the entirety of Centennial's senior long-term debt, including about \$455 million associated with Knife River and CSG, and about \$645 million in

outstanding term loans and borrowings under its revolving credit agreement. We forecast Centennial's stand-alone debt to EBITDA will improve to about 1.5x per year in 2023 and 2024 as compared to our prior expectations of 2x-2.5x over the same time period. Accordingly, we revised our assessment of Centennial's financial risk profile upward to intermediate from significant. After the spinoff of CSG (expected by year-end 2024), we expect Centennial's financial measures to weaken modestly following the cash flow loss.

We continue to incorporate a volatility adjustment at Centennial which reflects the potential for significant cash flow volatility at CSG during periods of stress. This volatility adjustment lowers its financial risk profile to intermediate from modest. The combination of a satisfactory business risk profile and intermediate financial risk profile, in addition to the strength of its consolidated financial measures within its respective financial risk profile category, raises Centennial's SACP to 'bbb-' from 'bb+'.

We revised upward our assessment of MDU's group support of Centennial. MDU's decision to spin off Centennial's higher-risk businesses is consistent with its stated strategy to focus on its core energy delivery businesses over the longer term. We believe this heightens the importance of Centennial's natural gas transportation and storage business under WBI, which we expect will contribute 100% of Centennial's EBITDA and 25% of MDU's consolidated EBITDA post-2024. Over 45% of WBI's revenues are generated through long-term transmission and storage contracts with affiliate Montana-Dakota; and given this relationship, we believe MDU will have a higher degree of support for Centennial. We therefore revised our group status on Centennial to strategically important from moderately strategic, reflecting our view that Centennial is unlikely to be sold, is important to the group's long-term strategy, has the long-term commitment of the group, and is a significant contributor to the MDU group.

Outlook-- MDU

The negative outlook on MDU reflects the possibility of weaker financial measures from higher leverage following the spinoff of CSG. Our base-case forecast incorporates MDU's consolidated FFO to debt in the 14%-17% range in 2023-2025.

Downside scenario

We could lower our ratings on MDU by one notch over the next 12 to 18 months if the company's financial measures reflect higher leverage following the spinoff of CSG, such that FFO to debt is consistently below 15%.

Upside scenario

We could revise the outlook to stable if MDU successfully spins off CSG, while maintaining FFO to debt consistently above 15%.

Outlook -- Cascade

The negative outlook on Cascade reflects the potential for a one-notch downgrade if we lower our ratings on parent MDU.

Downside scenario

We could lower our ratings on Cascade over the next 12 to 18 months if we lower our ratings on MDU.

Upside scenario

We could revise the outlook to stable if we revise the outlook on MDU to stable.

Outlook— Montana-Dakota Utilities

The negative outlook on Montana-Dakota reflects the potential for a one notch downgrade if we lower our ratings on parent MDU.

Downside scenario

We could lower our ratings on Montana-Dakota over the next 12 to 18 months if we lower our ratings on MDU, or if Montana-Dakota's stand-alone financial measures weaken such that its FFO to debt is consistently below 13%.

Upside scenario

We could revise the outlook to stable if we revise the outlook on MDU to stable, while Montana-Dakota maintains its stand-alone FFO to debt consistently above 13%.

Outlook-- Centennial

The positive outlook on Centennial reflects the potential for a one-notch upgrade if parent MDU maintains its credit quality consistent with current levels, following the spinoff of CSG, at which time we could align the ratings of Centennial with the group credit profile of MDU.

Downside scenario

We could affirm our ratings on Centennial and revise the outlook to stable if we lower our ratings on parent MDU by one notch.

Upside scenario

We could raise our ratings on Centennial if we affirm our ratings on MDU following the spinoff of CSG, at which time we would align the ratings on Centennial with the group credit profile of MDU.

Company Description

MDU is a holding company of businesses in three primary segments: regulated electric and natural gas utility distribution (55% EBITDA); engineering and construction (CSG; 30%); and

natural gas pipelines (WBI; 15%). The company's utilities serve about 1,035,000 natural gas customers and 145,000 electric customers across eight states.

Our Base-Case Scenario

- MDU's regulated utilities benefit from ongoing cost recovery through authorized mechanisms and periodic rate case filings.
- The disposal of its remaining shares in Knife River generates between \$300 million to \$330 million in proceeds in 2023.
- Elevated capital spending between \$500 million to \$600 million per year through at least 2025.
- MDU maintains a dividend payout ratio between 60%-70%.
- Negative discretionary cash flow that indicates ongoing external funding needs.
- All debt maturities are refinanced.

Liquidity

MDU's short-term rating of 'A-2' is based on our issuer credit rating on the company. As of Sept. 30, 2023, we assess MDU's liquidity as adequate, with sources covering uses by 1.1x over the next 12 months, even if EBITDA declines 10%. We use slightly less stringent thresholds to assess MDU's liquidity because we believe its regulated utilities benefit from generally constructive regulatory frameworks that provide a manageable level of cash flow stability even in times of economic stress.

MDU maintains \$750 million in committed credit facility capacity maturing beyond the next 12 months. We believe the company can lower its high capital spending during stressful periods, which limits the need to refinance under such conditions. Furthermore, our assessment reflects the company's generally prudent risk management, sound relationships with its banks, and a satisfactory standing in the credit markets.

Overall, we believe the company will likely withstand adverse market circumstances during the next 12 months with sufficient liquidity to meet its obligations. We expect MDU to manage upcoming long-term debt maturities and refinance well in advance of scheduled due dates.

Principal liquidity sources

- Cash and liquid investments of about \$32 million;
- Credit facility availability of \$465 million;
- Estimated cash FFO of \$430 million; and
- Sale proceeds (remaining Knife River shares) of \$330 million.

Principal liquidity uses

- Debt maturities, including outstanding commercial paper, of about \$368 million;
- Capital spending of roughly \$575 million; and

- Dividends of about \$130 million.

Ratings Score Snapshot

MDU Resources Group Inc.

BBB/Negative/A-2

Business risk: Satisfactory

- Country risk: Very low
- Industry risk: Low
- Competitive position: Satisfactory

Financial risk: Significant

- Cash flow/leverage: Significant

Anchor: bbb-

Modifiers

- Diversification/portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Financial policy: Neutral (no impact)
- Liquidity: Adequate (no impact)
- Management and governance: Satisfactory (no impact)
- Comparable rating analysis: Positive (+1 notch)

Stand-alone credit profile: bbb

- Group credit profile: bbb

Cascade Natural Gas Corp.

BBB/Negative/--

Business risk: Strong

Country risk: Very low

- Industry risk: Very low
- Competitive position: Satisfactory

Financial risk: Aggressive

- Cash flow/leverage: Aggressive

Anchor: bb+

Modifiers

- Diversification/portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Financial policy: Neutral (no impact)
- Liquidity: Adequate (no impact)
- Management and governance: Satisfactory (no impact)
- Comparable rating analysis: Neutral (no impact)

Stand-alone credit profile: bb+

- Group credit profile: bbb
- Entity status within group: Core

Montana-Dakota Utilities Co.

BBB+/Negative/A-2

Business risk: Excellent

- Country risk: Very low
- Industry risk: Very low
- Competitive position: Strong

Financial risk: Significant

- Cash flow/leverage: Significant

Anchor: a-

Modifiers

- Diversification/portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Financial policy: Neutral (no impact)
- Liquidity: Adequate (no impact)
- Management and governance: Satisfactory (no impact)
- Comparable rating analysis: Negative (-1 notch)

Stand-alone credit profile: bbb+

- Group credit profile: bbb
- Entity status within group: Insulated

Centennial Energy Holdings Inc.

BBB-/Positive/A-3

Research Update: MDU Resources Group Inc. And Cascade Natural Gas Downgraded To 'BBB', Outlooks Negative; Rating Actions On Other Subs

Business risk: Fair

- Country risk: Very low
- Industry risk: Moderately High
- Competitive position: Fair

Financial risk: Intermediate

- Cash flow/leverage: Intermediate

Anchor: bb+

Modifiers

- Diversification/portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Financial policy: Neutral (no impact)
- Liquidity: Adequate (no impact)
- Management and governance: Satisfactory (no impact)
- Comparable rating analysis: Positive (+1 notch)

Stand-alone credit profile: bbb-

- Group credit profile: bbb
- Entity status within group: Strategically important (no impact)

Related Criteria

- Criteria | Corporates | Industrials: Key Credit Factors For The Midstream Energy Industry, Nov. 15, 2021
- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013

Research Update: MDU Resources Group Inc. And Cascade Natural Gas Downgraded To 'BBB', Outlooks Negative; Rating Actions On Other Subs

- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

Ratings List**Downgraded; Outlook Action; Ratings Affirmed**

	To	From
MDU Resources Group Inc.		
Issuer Credit Rating	BBB/Negative/A-2	BBB+/Developing/A-2

Downgraded; Outlook Action

	To	From
Cascade Natural Gas Corp.		
Issuer Credit Rating	BBB/Negative/--	BBB+/Developing/--

Ratings Affirmed; Outlook Action

	To	From
Centennial Energy Holdings Inc.		
Issuer Credit Rating	BBB-/Positive/A-3	BBB-/Developing/A-3

Montana-Dakota Utilities Co.

Issuer Credit Rating	BBB+/Negative/A-2	BBB+/Developing/A-2
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Issue-Level Ratings Lowered

	To	From
Cascade Natural Gas Corp.		
Senior Unsecured	BBB	BBB+

Issue-Level Ratings Affirmed**Montana-Dakota Utilities Co.**

Commercial Paper	A-2	
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Not Rated Action

	To	From
Centennial Energy Holdings Inc.		
Commercial Paper	NR	A-3

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.spglobal.com/ratings for further information. Complete ratings information is available to RatingsDirect subscribers at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.spglobal.com/ratings.

Research Update: MDU Resources Group Inc. And Cascade Natural Gas Downgraded To 'BBB', Outlooks Negative; Rating Actions On Other Subs

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BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
FITCH RATING ACTION COMMENTARY, JULY 5, 2024

EXHIBIT 102

November 2025



RATING ACTION COMMENTARY

Fitch Takes Various Rating Actions on MDU and its Subsidiaries; Downgrades Cascade Natural Gas

Thu 25 Jul, 2024 - 5:23 PM ET

Fitch Ratings - Chicago - 25 Jul 2024: Fitch Ratings has affirmed MDU Resources Group, Inc.'s (MDU) Long-Term Issuer Default Rating (IDR), including those of its utility subsidiary, Montana-Dakota Utilities Co. (Montana-Dakota), at 'BBB+'.

Fitch has also downgraded Cascade Natural Gas Corp.'s (Cascade) IDR to 'BBB' from 'BBB+' and assigned a Stable Rating Outlook. Fitch has additionally affirmed CEHI, LLC's (CEHI, holding company for MDU's non-utility operations) IDR at 'BBB' and maintained its Positive Outlook. The Outlooks for MDU and Montana-Dakota are Stable.

Fitch has downgraded Cascade's short-term rating to 'F3' from 'F2' and has withdrawn CEHI's 'F2' short-term rating. Fitch has also affirmed MDU and Montana-Dakota's short-term ratings at 'F2'. Cascade's short-term rating downgrade to 'F3' reflects Fitch's "Short-Term Ratings Criteria" and Fitch's assessment of the company's financial structure, flexibility and operating environment, and currently rated 'BBB' IDR.

Fitch believes MDU's plan is to become a fully regulated energy delivery company by spinning off its remaining non-regulated construction services business this year, Everus, is supportive of MDU's current 'BBB+' IDR. A upgrade of subsidiary CEHI's Long-Term IDR to 'BBB+' from 'BBB' would likely follow the completion of the transaction expected later this year.

MDU's ratings reflect Fitch's expectations of an improved business risk profile comprised of nearly 100% regulated operations following the transaction and for leverage measures to weaken but remain sufficient for its current ratings given the strong cashflows generated by its construction business. Montana-Dakota's ratings reflect the low-risk nature of its

integrated electric and gas utility businesses, credit-supportive rate mechanisms, and sufficient credit metrics.

The CEHI's Positive Outlook reflects an improving business risk profile focused on its Federal Energy Regulatory Commission (FERC)-regulated pipeline business and Fitch's expectations for leverage measures to remain strong.

Cascade's one-notch downgrade reflects weak leverage measures over the last few years that are more consistent with a 'BBB' IDR due to a large capex program coupled with a lack of rate relief since mid-2022 amid a challenging regulatory environment in Washington.

Fitch expects the spinoff of Everus to close in 2H24 and will resolve CEHI's Positive Outlook at that time.

Fitch has withdrawn CEHI's 'F2' short-term rating as the company is not planning to issue short-term debt due to the retirement of its revolving credit facility.

KEY RATING DRIVERS

MDU Resources Group, Inc.

Improving Business Risk Profile: MDU's ratings reflect an improving business risk profile focused on regulated utility operations following the expected spin-off of Everus in late 2024 with the proportion of EBITDA derived from regulated operations improving to nearly 100% from 68% in 2023. Everus currently accounts for 32% of consolidated EBITDA. Post-spin Montana-Dakota, Cascade and CEHI, LLC are projected to account for approximately 46%, 18%, and 24% of MDU's consolidated EBITDA in 2025. MDU's regulated gas distribution subsidiary in Idaho, Intermountain Natural Gas Co. (not rated), accounts for the remainder at approximately 12% of consolidated EBITDA.

Utilities Anchor Credit Profile: MDU owns four low-risk regulated electric and natural gas utilities that operate in relatively balanced regulatory compacts overall and serve parts of eight contiguous states from Minnesota to Washington, providing regulatory diversity. Post-spin of Everus in 2024, Fitch expects utility operations to contribute approximately 79% of ongoing EBITDA with the remainder provided by the FERC regulated pipeline business.

Relatively Balanced Regulation: Regulatory mechanisms are generally supportive of credit quality. Some regulatory jurisdictions allow the use of decoupling and riders for

investments in renewables, gas pipe replacement, transmission and environmental equipment.

All jurisdictions allow trackers for fuel and purchased power costs, and a purchased gas adjustment clause for gas utilities. North Dakota and Montana were the largest contributors to electric revenue accounting for 66% and 20% of total electric retail revenues for 2023 while Idaho and Washington were the largest contributors to natural gas revenue accounting for 33% and 28%, respectively.

Conservative Financing Policy: Fitch recognizes MDU's continued commitment to manage its businesses' balance sheet conservatively. CEHI's financial profile benefits from relatively modest financial leverage, with debt/total capitalization managed at around 35%-40%. Utilities' financial policies are managed consistent with their authorized regulatory capital structures. Management anticipates no equity needs until 2027 and is targeting a 60%-70% dividend payout ratio. MDU's payout ratio was low at 39% for 2023.

Limited Headroom in Leverage Metrics: Post-Spin MDU's pro forma FFO leverage are projected to weaken and average 4.7x in 2024-2027 from approximately 4.0x in 2023, near Fitch's recently revised negative FFO leverage sensitivity threshold of 4.8x. There remains no headroom for further deterioration in leverage measures at the current rating level. Fitch believes MDU's improved business risk profile that is focused on utility operations is a mitigant to the negative financial impacts of the separation of its construction businesses.

Parent-Subsidiary Linkage: There is parent subsidiary relationship between MDU and all of its rated subsidiaries. Fitch determines MDU's standalone credit profile (SCP) based upon consolidated metrics. MDU's consolidated profile and its regulated utility subsidiary Montana-Dakota are rated 'BBB+' while its gas distribution utility subsidiary Cascade is rated 'BBB'. Fitch would limit the difference between MDU and any of its regulated subsidiaries to two notches if Fitch were to determine the subsidiaries' SCPs to be stronger than MDU's. The assessment would be based upon Fitch's porous assessment for legal ring fencing and access and control.

Fitch follows a stronger parent/weaker subsidiary path for CEHI, which houses MDU's non-utility operations. Fitch considers CEHI's legal, strategic and operational incentives as weak, which leads itself to a standalone credit profile.

CEHI, LLC

Improving Business Risk Profile: Given the expected spin-off of Everus in late 2024, CEHI's ratings consider the relatively low-risk of its nearly 100% FERC regulated natural gas pipeline and storage business in the Bakken Basin. CEHI's operations moved approximately half of Bakken gas to consuming markets in Montana, Wyoming, Minnesota and North and South Dakota. CEHI's credit profile is supported by take or pay contracts comprising over 75% of revenue with a weighted average contract length of more than four years.

Constructive Rate Case Outcome: Fitch views CEHI's latest FERC-approved rate case outcome as part of a settlement agreement with key stakeholders as constructive. The settlement is projected by the company to result in a 7% revenue increase of approximately \$10M on an annual basis. New rates were effective August of 2023. As per the settlement agreement the company has agreed to a two-year rate case moratorium through August 2025 and has to file a new rate case within five years.

Creditworthy Counterparties: CEHI's pipeline contracts are primarily with investment grade creditworthy counterparties with a weighted average credit rating approximating 'BBB'. Notably, affiliate subsidiary Montana-Dakota is the company's largest anchor shipper accounting for approximately 39% of revenue for 2023.

Strong Credit Metrics: Post-spin of Everus FFO leverage is projected to weaken but remain strong and average 2.3x in 2024-2027 as compared to 0.9x in 2023. Those metrics are in line with an IDR of 'BBB+' for a 100% FERC regulated natural gas pipeline and storage system.

Montana-Dakota Utilities Co.

Low-Risk Business Profile: Montana-Dakota's credit profile reflects the relatively low-risk nature of its integrated electric and gas businesses that operate in North Dakota, South Dakota, Montana and Wyoming. The multi-state operations provide earnings and regulatory diversity that is supportive of credit quality. The utility has limited exposure to commodity prices. Fitch calculates electric operations represented approximately 76% of total EBITDA in 2023. North Dakota and Montana were the largest contributors, approximating 66% and 20% of total revenue, respectively. Due to the addition of a large datacenter customer retail sales increased 26% in 2023.

Generally Supportive Regulation: The utility benefits from favorable rate mechanisms in North Dakota that feature riders for transmission and environmental/renewables investments, interim rate relief and a fuel adjustment clause. In Montana, the utility can recover property tax expenses via a property tax tracker. A weather normalization clause in

both North Dakota and South Dakota adds partial cash flow stability to natural gas operations. All four regulatory jurisdictions use forward looking test years and Montana-Dakota has generally done well in rate cases, in Fitch's view.

GRC Pending in North and South Dakota: Fitch anticipates a reasonable outcome in Montana-Dakota's pending General Rate Cases' (GRC) in North and South Dakota. In South Dakota the company filed GRC's for its electric and gas operations in August 2023. The electric business filed for a rate increase of a \$3 million based on a 10.5% ROE while the gas distribution business filed for a rate increase of a \$7.4 million based on a 10.5% ROE.

For the electric and gas operations interim rates of \$2.7 million and \$7.4 million were effective since March 2024 and a decision is expected in 3Q 2024. In North Dakota the gas business filed for a rate increase of \$11.6 million in November 2023 based on a 10.5% ROE and an equity layer of 50.2%. Fitch expects a final regulatory decision in 3Q24.

GRC Pending in Montana; Expected in Wyoming: In July the company filed a GRC for its utility gas distribution business in Montana and a GRC filing for its gas distribution business in Wyoming is anticipated later this year. In Montana the company is requesting a \$9.4 million increase in revenues based on a 10.8% ROE. Fitch views prior outcomes in previous rate cases in Montana and Wyoming as fair and balanced.

Wildfire Risk: Montana Dakota's electric utilities operate in Montana, North Dakota, South Dakota, and Wyoming - four states with areas of elevated exposure to wildfire risk. Management has implemented strategies to mitigate potential exposure to wildfire risk, including implementing line re-closure procedures, increased line inspections and vegetation management efforts, hardening and upgrading of the electric system in highest risk areas and is in the process of developing a wildfire plan to share with regulators. The utilities electric operations do not have a history of major wildfires that have resulted in significant damages. Nonetheless, the rise of more frequent, significantly larger and more destructive wildfires in recent years, especially in the U.S. West, is a credit concern.

Supportive Ring-Fencing Provisions: Like its utility affiliates, Montana-Dakota's credit profile benefits from ring-fencing mechanisms that insulate the utility from MDU's other regulated and unregulated businesses. Ring-fencing mechanisms include no Montana-Dakota guarantees or cross-default provisions within debt agreements at other MDU entities that could impact Montana-Dakota; a prohibition on intercompany loans; and dividend payment restrictions so that Montana-Dakota may not make dividend payments that would reduce its common equity ratio below 45%.

Manageable Capex: Fitch projects capex to total \$1.2 billion over 2024-2027, with capital spending increasing and peaking in 2027 at around \$374 million per annum. Following the in-service date of the \$73 million 88MW simple cycle natural gas combustion turbine in North Dakota in July 2024, capex is focused on new transmission and distribution investments and pipeline system safety and integrity projects.

Renewables comprised approximately 29% of MDU's electric generation resource mix for 2024 and renewable investments are recoverable under environmental rate riders in North and South Dakota while generation investments in North Dakota are also eligible for rider recovery. Fitch expects Montana-Dakota to fund capex in a conservative manner with a mix of internal cash flows, debt and parent equity infusions as needed to align with the statutory capital structure.

Adequate Credit Metrics: Fitch projects FFO-adjusted leverage to average 4.5x in 2024-2027, consistent with a 'BBB+' utility credit profile. While a large capex program pressures credit metrics in the near-term, the benefit of timely rate case filings, riders, and tax credits from renewable investments, provides support to credit measures over the next few years.

Cascade Key Rating Driver

Low-Risk Business Profile: Cascade's ratings reflect the low-risk nature of its regulated gas distribution assets across its two-state service territory in Washington and Oregon and supportive rate design, including margin decoupling and fuel cost recovery, and solid customer growth. Fitch estimates Washington represented roughly 75% of Cascade's total revenue in 2023. Cascade's service territory continues to experience customer growth with a CAGR of 1.4% and 0.3% in Washington and Oregon over the last five years, driven by favorable demographic trends in the Pacific Northwest. The utility accounted for approximately 23% of combined electric and gas utilities' EBITDA in 2023.

Pending GRC in Washington: In an effort to address regulatory lag Cascade filed a multi-year GRC in March 2024 and is requesting approximately \$55.5 million rate increase based on a 10.5% ROE and a 50.3% equity layer for \$43.8 million of new rates effective March 1, 2025 and \$11.7 million of new rates effective March 1, 2026. A decision is expected in February 2025. Fitch views the outcome of Cascade's prior GRC in Washington as reasonable whereby the utility received a \$7.2 million rate increase (53% of requested) based on a 9.4% ROE. In Oregon Cascade received a favorable outcome in its last GRC in 2021 and was authorized a rate increase of \$3.2 million (71% of requested) based on a ROE of 9.4%. A new rate case filing in Oregon is anticipated later this year.

Challenging compact in Washington: Fitch believes the Washington regulatory compact remains somewhat challenging; authorized ROE's tend to be at or below prevailing industry averages and the use of average rate base valuations and historical test years exacerbates regulatory lag. This hinders Cascade's ability to materially improve its earned ROE and Fitch notes the utility has been earning below its authorized return for several years. A timely cadence of future rate case filings coupled with expectations for balanced regulatory outcomes should help improve earned returns and alleviate persistent regulatory lag.

Sizable Capex: Fitch estimates Cascade's capital spending to approximate \$441 million through 2024-2027 with the peak occurring in 2024 at approximately \$150 million and declining thereafter. Capex is earmarked for new infrastructure and replacement of aging pipes, with a portion of investments subject to timely recovery under an infrastructure tracking mechanism. Fitch expects the utility to fund capex with a balanced mix of internal cash flows, debt and equity infusions from MDU.

Pressured Credit Metrics: At Cascade, FFO leverage approximated 6.5x for 2023 and is projected to weaken further to an average of 7.6x in 2024-2025 before strengthening to an average of 5.3x in 2026-2027 due to anticipated rate relief in 2025-2026 from their pending multi-year rate case in Washington. Current and projected leverage is more in line with a 'BBB' IDR.
Ring-Fencing Mechanisms: Cascade's credit profile benefits from ring-fencing mechanisms that insulate the utility from MDU's other regulated and unregulated businesses. Ring-fencing mechanisms include no Cascade guarantees or cross-default provisions within debt agreements at other MDU entities that could affect Cascade, a prohibition on intercompany loans and dividend payment restrictions so that Cascade may not make dividend payments that would reduce its common equity ratio below 38%.

DERIVATION SUMMARY

MDU Resources Group, Inc.

MDU's ratings reflect an improving business risk profile focused on regulated utility operations following the expected spin-off of Everus in the second half of 2024 with the proportion of EBITDA derived from regulated operations improving to nearly 100% from 68% in 2023. Everus currently accounts for 32% of consolidated EBITDA.

MDU's closest utility peers include Black Hills Corp. (BKH; BBB+/Negative), Xcel Energy, Inc. (BBB+/Negative), and Otter Tail Corp. (BBB/Stable). Like Xcel and BKH, MDU benefits from earnings and regulatory diversification with utility operations in multiple states. Otter Tail's earnings can be more volatile than MDU due to the ownership of cyclical

manufacturing businesses that are subject to greater market competition than MDU's construction services business. Post-Spin MDU's pro forma FFO leverage are projected to weaken and average 4.7x in 2024- 2027 from approximately 4.0x in 2023, near Fitch's recently revised negative FFO leverage sensitivity threshold of 4.8x. Fitch believes MDU's improved business risk profile that is focused on utility operations is an offset to the negative financial impacts of the separation of its construction businesses and the leverage measures will remain weak but sufficient for its current 'BBB+' IDR.

MDU's financial profile is stronger than BKH's and Xcel's and similar to Otter Tail's. BKH's high leverage primarily reflects its debt-funded acquisition of Black Hills Gas Holdings LLC (f/k/a SourceGas Holdings LLC) in 2016. For 2023 FFO leverage was 4.0x at MDU, 5.2x at Xcel, 6.4x at BKH, and 2.1x at Otter Tail.

CEHI, LLC.

CEHI's ratings reflect an improving business risk profile focused on its FERC regulated pipeline business and Fitch's expectations for leverage measures to remain strong due to management's pro-active efforts to strengthen the balance sheet. In early 2023 MDU spun-off its construction materials business, Knife River Corp., to its shareholders and is pursuing a similar spin-off of its Everus subsidiary which is expected to close in late 2024.

Fitch for the midstream sector generally considers \$500 million in annual EBITDA as the boundary line between investment grade and below-investment grade. The long-distance regulated natural gas pipeline sector is an exception to this limitation due to extremely low business risk. CEHI's closest peers in the sector include Southern Natural Gas Company (SNG; BBB+/Stable), Southern Star Central Gas Pipeline Inc. (Southern Star; BBB/Stable), and Portland Natural Gas Transmission System (PNGTS; A-/Stable).

On an EBITDA basis, CEHI with projected EBITDA averaging \$130 million in 2025-2027 following the anticipated spin-off of Everus is larger than PNGTS at \$88 million for 2023, similar in size to Southern Star at \$189 million and smaller than SNG at \$418 million for the same period. CEHI is a 100% FERC regulated natural gas pipeline and storage system in the Bakken basin with the majority of its 2023 revenue coming from long-term take-or pay contracts. Like CEHI, its peers are also FERC regulated natural gas pipeline systems which Fitch views as a credit positive as it is considered lower risk than state regulation. CEHI has approximately 79% of its revenue underpinned by long-term take-or-pay contracts as compared with PNGTS and Southern Star at 100% and 95%, respectively. CEHI's pipeline serves a demand-pull customer base, similar to peers and like SNG, serves affiliate utilities which are the anchor shippers.

CEHI has a remaining weighted average contract life of approximately four years, longer than Southern Star at roughly three years, similar to SNG at four years, and much shorter than PNGTS at 15.1 years. In terms of leverage, FFO leverage at CEHI is projected to remain strong and average 2.3x in 2024-2027, in line with Southern Star at 2.2x-2.4x through 2024 and slightly better than PNGTS at less than 3x and SNG at 3.0x-3.3x for the same period.

Montana-Dakota Utilities Co.

Montana-Dakota's business risk profile as a regulated integrated utility is stronger than NorthWestern Corp. (NWE; BBB/Stable) and comparable to Otter Tail Power Co. (OTP; BBB+/Stable) and Black Hills Power Inc. (BHP; BBB+/Stable). Montana-Dakota's integrated electric and gas businesses operate across North Dakota, South Dakota, Montana and Wyoming with North Dakota providing the majority of 2023 revenue at 66%. Regulation is relatively constructive overall. Like Montana-Dakota, BHP's credit profile benefits from balanced regulation in South Dakota, where the majority of its operations reside. NWE is a single-state utility that lacks Montana-Dakota's regulatory diversification and has faced more regulatory challenges in Montana than its utility peer. OTP also benefits from relatively balanced regulation in its three states of operations.

Montana-Dakota's financial profile is stronger than NWE's, in line with OTP and that of BHP. Fitch projects Montana-Dakota's FFO leverage to average 4.5x in 2023-2027 in line with an average of 4.2x at OTP and BHP with FFO leverage projected weaken to 4.5x in 2026 but better than NWE, whose FFO leverage is expected to average 5.2x during the same period.

Cascade Natural Gas Corporation

Cascade is a local gas distribution company (LDC) with a relatively weaker business profile than LDC peers, Connecticut Natural Gas Corporation (CNG; A-/Stable), Wisconsin Gas LLC (A-/Stable) and Peoples Gas Light & Coke Co. (A-/Stable). Cascade and CNG are some of the smallest regulated utilities under Fitch's coverage and much smaller than its larger peers. Cascade's EBITDA is similar in size to CNG and about 3.0x smaller than WI Gas and about 6.0x smaller than Peoples Gas. Fitch considers Washington regulation to be relatively challenging and Connecticut regulation to be relatively balanced, while regulation in Wisconsin and Illinois are viewed as constructive.

At Cascade FFO leverage approximated 6.5x for 2023 and is projected to weaken further to an average of 7.6x in 2024-2025 before strengthening to an average of 5.3x in 2026-2027

due to anticipated rate relief in 2025-2026 from their pending multi-year rate case in Washington. Current and projected leverage is more in line with a 'BBB' IDR and reflects a weaker financial profile than its peers. Similarly, Fitch expects FFO leverage metrics will average 3.7x 2024-2027 at WI Gas, average under 4.0x in 2024-2027 at Peoples Gas and average 2.2x at CNG through 2025.

KEY ASSUMPTIONS

- Everus spin-off closes in 2nd half of 2024;
- Pay out dividends to shareholders with proceeds;
- Constructive regulatory environment;
- Maintain utility authorized equity ratios as per GRC outcomes;
- Targeting utility dividend payout ratio of 60%-70%;
- Capex of \$2.4 billion in 2024-2027.

RATING SENSITIVITIES

MDU Resources Group, Inc.

Factors that could, individually or collectively, lead to positive rating action/upgrade:

- An upgrade is not anticipated at this time, however, sustained FFO leverage below 3.8x could warrant positive rating actions.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

- A material deterioration of the regulatory environments in which the utilities operate;
- Addition of significant unregulated cashflows;
- FFO leverage greater than 4.8x on a sustained basis.

CEHI, LLC

Factors that could, individually or collectively, lead to positive rating action/upgrade:

--Successful spin-off of Everus in 2024 would likely result in a one-notch upgrade to 'BBB+' due to an improved business risk profile focused on regulated operations;

--Significant growth in scale;

--Sustained debt with equity credit to operating EBITDA leverage below 2.5x.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

--Sustained total debt with equity credit to operating EBITDA above 3.5x;

--Failure to complete the expected spin-off of Everus in 2024 would likely result in a revision of CEHI's Outlook to Stable.

Montana-Dakota Utilities Co.

Factors that could, individually or collectively, lead to positive rating action/upgrade:

--FFO leverage below 3.8X on a sustained basis.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

--A material deterioration of the North Dakota regulatory compact;

--FFO leverage greater than 4.8x on a sustained basis.

Cascade Natural Gas Corp.

Factors that could, individually or collectively, lead to positive rating action/upgrade:

--Given the recent downgrade a positive rating action is not expected at this time;

--FFO leverage below 4.5x on a sustained basis.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

--FFO leverage greater than 5.5x on a sustained basis over the rating horizon would likely result in a rating downgrade;

--Further deterioration of the Washington regulatory compact.

LIQUIDITY AND DEBT STRUCTURE

Adequate Liquidity: Fitch expects MDU to have adequate liquidity and had \$502 million of available liquidity under its consolidated credit facilities at June 30, 2024. At MDU liquidity is provided by a \$200 million credit facility due May 2028. At Montana-Dakota, liquidity is provided by a \$175 million unsecured revolver that matures in October 2028. The revolver backstopped the utility's CP program.

At Cascade, liquidity is provided by a \$175 million credit facility that matures in 2029. Intermountain, Cascade's sister gas utility, maintains liquidity through a \$175 million credit facility with a 2029 maturity date. All four bank agreements restrict debt/capitalization from exceeding 65% and MDU was in compliance with a debt to total capitalization ratio of 44% as of March 31, 2024. Maturities of long-term debt includes \$61 million in 2024, \$348 million in 2025, \$141 million in 2026, \$141 million in 2027 and \$235 million in 2028.

ISSUER PROFILE

MDU Resources Group, Inc. (MDU) is a holding company of several regulated electric and gas utilities, a FERC regulated natural gas pipeline and storage system and a construction services business. The company benefits from regulatory diversity, owning four low-risk regulated electric and gas utilities that operate in relatively balanced regulatory environments and serve parts of eight contiguous states from Minnesota to Washington. The regulated segment also includes FERC-regulated pipeline system located in the Bakken basin serving primarily the Rocky Mountain and northern Great Plains regions of the U.S.

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

ESG CONSIDERATIONS

The highest level of ESG credit relevance is a score of '3', unless otherwise disclosed in this section. A score of '3' means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. Fitch's ESG Relevance Scores are not inputs in the rating process; they are an observation on the relevance and materiality of ESG factors in the rating decision. For more

information on Fitch's ESG Relevance Scores, visit

<https://www.fitchratings.com/topics/esg/products#esg-relevance-scores>.

RATING ACTIONS

ENTITY / DEBT ⚡	RATING ⚡			PRIOR ⚡
Cascade Natural Gas Corporation	LT IDR	BBB Rating Outlook Stable		BBB+ Rating Outlook Negative
	Downgrade			
	ST IDR	F3	Downgrade	F2
senior unsecured	LT	BBB+	Downgrade	A-
CEHI, LLC	LT IDR	BBB Rating Outlook Positive		BBB Rating Outlook Positive
	Affirmed			
	ST IDR	WD	Withdrawn	F2
senior unsecured	LT	BBB	Affirmed	BBB
senior unsecured	ST	WD	Withdrawn	F2
Montana-Dakota Utilities Co.	LT IDR	BBB+ Rating Outlook Stable		BBB+ Rating Outlook Stable
	Affirmed			
	ST IDR	F2	Affirmed	F2

senior unsecured

LT A- Affirmed

A-

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Additional information is available on www.fitchratings.com**PARTICIPATION STATUS**

The rated entity (and/or its agents) or, in the case of structured finance, one or more of the transaction parties participated in the rating process except that the following issuer(s), if any, did not participate in the rating process, or provide additional information, beyond the issuer's available public disclosure.

APPLICABLE CRITERIA

[Corporates Recovery Ratings and Instrument Ratings Criteria \(pub. 13 Oct 2023\) \(including rating assumption sensitivity\)](#)

[Corporate Rating Criteria \(pub. 03 Nov 2023\) \(including rating assumption sensitivity\)](#)

[Sector Navigators – Addendum to the Corporate Rating Criteria \(pub. 21 Jun 2024\)](#)

APPLICABLE MODELS

Numbers in parentheses accompanying applicable model(s) contain hyperlinks to criteria providing description of model(s).

Corporate Monitoring & Forecasting Model (COMFORT Model), v8.1.0 ([1](#))

ADDITIONAL DISCLOSURES

[Dodd-Frank Rating Information Disclosure Form](#)

[Solicitation Status](#)

[Endorsement Policy](#)

ENDORSEMENT STATUS

Cascade Natural Gas Corporation	EU Endorsed, UK Endorsed
CEHI, LLC	EU Endorsed, UK Endorsed
MDU Resources Group, Inc.	EU Endorsed, UK Endorsed
Montana-Dakota Utilities Co.	EU Endorsed, UK Endorsed

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The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Fitch also provides information on best-case rating upgrade scenarios and worst-case rating downgrade scenarios (defined as the 99th percentile of rating transitions, measured in each direction) for international credit ratings, based on historical performance. A simple average across asset classes presents best-case upgrades of 4 notches and worst-case downgrades of 8 notches at the 99th percentile. For more details on sector-specific best- and worst-case scenario credit ratings, please see [Best- and Worst-Case Measures](#) under the Rating Performance page on Fitch's website.

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BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
FITCH RATING ACTION COMMENTARY, JULY 2, 2025

EXHIBIT 103

November 2025

RATING ACTION COMMENTARY

Fitch Affirms Ratings of MDU, Montana-Dakota, Cascade and CEHI, LLC; Outlooks Stable

Wed 02 Jul, 2025 - 1:15 PM ET

Fitch Ratings - Chicago - 02 Jul 2025: Fitch Ratings has affirmed MDU Resources Group, Inc.'s (MDU) Long-Term Issuer Default Rating (IDR) and Montana-Dakota Utilities Co.'s (Montana-Dakota) IDR at 'BBB+'. Fitch has also affirmed Cascade Natural Gas Corp.'s (Cascade) IDR at 'BBB' and CEHI, LLC's IDR at 'BBB+'. All Rating Outlooks are Stable. Fitch has affirmed MDU and Montana-Dakota's Short-Term (ST) ratings at 'F2' and Cascade's ST rating at 'F3'.

MDU's ratings reflect an improved risk profile with nearly 100% regulated operations following the spin-off of Everus and adequate leverage. Montana-Dakota's ratings reflect its low-risk electric and gas utility businesses, credit-supportive rate mechanisms, and sufficient credit metrics. Cascade's ratings reflect its low-risk gas distribution assets, supportive rate design and expected credit metric improvement post-approval of its Washington multi-year rate case settlement.

CEHI's ratings reflect an improved risk profile focused on its FERC-regulated pipeline and storage business, strong customer demand including ongoing system expansions, and expectations of adequate leverage.

KEY RATING DRIVERS

MDU Resources Group, Inc.

Improved Business Risk Profile: MDU's ratings reflect an improved business risk profile focused on regulated utility operations following the spin-off of Everus, its non-regulated construction group subsidiary, in 3Q 2024, with the proportion of EBITDA derived from regulated operations improving to nearly 100% from 75% in 2024. Fitch projects Montana-Dakota, Cascade and CEHI, LLC will account for approximately 49%, 20%, and 27%,

respectively, of MDU's consolidated EBITDA in 2025. MDU's regulated gas distribution subsidiary in Idaho, Intermountain Natural Gas Co. (not rated), accounts for the rest at about 4% of consolidated EBITDA.

Utilities Anchor Credit Profile: MDU owns four low-risk regulated electric and natural gas utilities that operate in relatively balanced regulatory compacts overall and serve parts of eight contiguous states from Minnesota to Washington, providing regulatory diversity. Fitch expects utility operations to contribute about 75%-80% of ongoing EBITDA with the rest provided by the FERC-regulated pipeline business.

Relatively Balanced Regulation: Regulatory mechanisms are generally supportive of credit quality. Some regulatory jurisdictions allow decoupling and riders for investments in renewables, gas pipe replacement, transmission and environmental equipment. All jurisdictions allow trackers for fuel and purchased power costs, and a purchased gas adjustment clause for gas utilities. North Dakota and Montana were the largest contributors to electric revenue, accounting for 65% and 21%, respectively, of total electric retail revenues for 2024, while Washington and Idaho were the largest contributors to natural gas revenue accounting for 34% and 29%, respectively.

Conservative Financing Policy: Fitch recognizes MDU's continued commitment to managing its businesses' balance sheet conservatively. CEHI's financial profile benefits from relatively modest financial leverage, with debt/total capitalization managed at 35%-40%. Utilities' financial policies are managed consistently with their authorized regulatory capital structures. Management anticipates no equity needs in 2025 and is targeting a 60%-70% dividend payout ratio. MDU's payout ratio was low at 37% for 2024.

Limited Headroom in Leverage Metrics: We project MDU's pro forma FFO leverage to remain steady and average 4.7x in 2025-2029 from 4.7x in 2024, near its negative FFO leverage sensitivity threshold of 4.8x. There is no headroom for further deterioration in leverage measures at the rating level. Fitch believes MDU's improved business risk profile focused on utility operations is a mitigant of the negative financial impacts of the separation of its construction businesses.

Parent-Subsidiary Linkage: There is a parent-subsidiary relationship between MDU and its rated subsidiaries. Fitch determines MDU's standalone credit profile (SCP) based on consolidated metrics. MDU and its utility subsidiary Montana-Dakota are rated 'BBB+', its gas utility subsidiary Cascade is rated 'BBB' and its FERC regulated interstate gas pipeline with storage subsidiary CEHI is rated 'BBB+'. Fitch would limit the difference between MDU and any of its regulated subsidiaries to two notches if we were to determine the

subsidiaries' SCPs to be stronger than MDU's. The assessment would be based upon Fitch's porous assessment for legal ring-fencing and access and control.

CEHI, LLC

Improved Business Risk Profile: CEHI's ratings consider the relatively low risk of its nearly 100% FERC-regulated natural gas pipeline and storage business in the Bakken Formation. CEHI's operations moved approximately half of Bakken gas to consuming markets in Montana, Wyoming, Minnesota, and North and South Dakota. CEHI's credit profile is supported by take-or-pay contracts comprising over 75% of revenue with a weighted average contract length of more than four years. Record transportation volumes and higher storage and transportation rates support credit quality.

Record Volumes, Ongoing Pipeline Expansions: CEHI's pipeline and storage business continues to move record transportation volumes in Q12025, driven by strong demand and system expansions entered service over the past year. These expansions include the Line Section 28 expansion project which serves a natural gas-fired power plant and added 137 million cubic feet of natural gas transportation capacity per day, and the Wahpeton Expansion Project in eastern North Dakota which added an additional 20 million cubic feet of natural gas transportation capacity per day.

The Line 28 expansion project entered service on July 1, 2024, while the Wahpeton expansion project entered service on Dec. 1, 2024. In addition, the company completed a small tuck-in acquisition of a 28-mile natural gas pipeline lateral that extends the company's pipeline system to a natural gas processing plant in the Bakken on Nov. 1, 2024. The total cost was \$17 million, and the lateral is projected to provide \$3 million in incremental earnings per annum.

Growing Demand, Future Projects: Amid growing demand for takeaway capacity from the Bakken, CEHI recently held a non-binding open season for the potential Bakken East pipeline, a 375-mile pipeline to move gas from the Bakken region to the eastern part of North Dakota. Fitch expects the pipeline will be supported by long-term take-or-pay contracts. The company also announced a binding open season for the Baker storage field enhancement project, which would add 72 million cubic feet per day of capacity. Fitch views growing customer demand as a credit positive.

Constructive Rate Case Outcome: Fitch views CEHI's last FERC-approved rate case outcome as part of a settlement agreement with key stakeholders as constructive. The settlement is projected by the company to result in a 7% revenue increase of approximately

\$10 million on an annual basis. New rates were effective August 2023. As per the settlement agreement, the company has agreed to a two-year rate case moratorium through August 2025 and must file a new rate case by 2028.

Creditworthy Counterparties: CEHI's pipeline contracts are primarily with investment-grade creditworthy counterparties with a weighted average credit rating approximating 'BBB'. Notably, affiliate subsidiary Montana-Dakota is one of the company's largest customers.

Adequate Credit Metrics: CEHI's FFO leverage is projected to remain adequate and average 3.1x in 2025-2029 as compared to 3.3x in 2024. Those metrics are in line with an IDR of 'BBB+' for a 100% FERC-regulated natural gas pipeline and storage system.

Montana-Dakota Utilities Co.

Low-Risk Business Profile: Montana-Dakota's credit profile reflects the relatively low-risk nature of its integrated electric and gas businesses, which operate in North Dakota, South Dakota, Montana and Wyoming. The multi-state operations provide earnings and regulatory diversity that is supportive of credit quality. Fitch calculates electric operations represented about 71% of total EBITDA in 2024. North Dakota and Montana were the largest contributors to electric revenue, accounting for 65% and 21%, respectively.

Generally Supportive Regulation: The utility benefits from favorable rate mechanisms in North Dakota that feature riders for transmission and environmental/renewables investments, interim rate relief and a fuel adjustment clause. In Montana, the utility can recover property tax expenses via a property tax tracker. A weather normalization clause in both North Dakota and South Dakota adds partial cash flow stability to natural gas operations. All four regulatory jurisdictions use forward-looking test years. Renewable investments are recoverable under environmental rate riders in North and South Dakota, while generation investments in North Dakota are also eligible for rider recovery.

Data Centers Driving Sales Growth: Retail sales increased 25% in Q12025 primarily due to growing data center demand from large customers as well as colder weather. This continues a recent trend of significant retail sales growth over the last two years with retail sales growing by 1% in 2024 and 26% in 2023. MDU has 580MW of data center load under signed agreements with 180MW currently online and an additional 100MW expected online by year end. The remaining 300MW is expected to be phased in over three years. Data center customers purchase power from Midcontinent Independent System Operator, Inc. and the load is accretive to Montana-Dakota's ROE.

GRCs Pending in Montana, Wyoming: Fitch anticipates a reasonable outcome in Montana-Dakota's pending GRCs for its gas utilities in Montana and Wyoming, pending regulatory approval. In Montana, the company has entered into a settlement agreement with intervenors requesting a \$7.3 million rate increase (77% of ask) based on a 9.6% ROE and a 50.2% equity layer. Montana-Dakota self-implemented \$7.7 million of new rates effective Feb. 1, 2025. In Wyoming, Montana-Dakota is requesting a \$2.6 million rate increase based on a 10.8% ROE (currently authorized 9.35% ROE) and a 50.2% equity layer. For both GRCs Fitch expects a final regulatory decision in June or July.

Key States Pass Wildfire Legislation: Montana-Dakota's electric utilities operate in Montana, North Dakota, South Dakota and Wyoming, four states with areas of high exposure to wildfire risk. Recently, wildfire legislation was passed in Montana, Wyoming and North Dakota which Fitch views as a credit positive. The bills establish a regulatory framework for wildfire planning with regulators, establishes prudence and limit liabilities while shifting the burden of proof onto the plaintiffs. Management continues its efforts to mitigate exposure to wildfires, including increasing inspections and vegetation management efforts while hardening/upgrading the grid system.

Wildfire Risk Remains a Concern: The utilities' electric operations do not have a history of major wildfires that have resulted in significant damages, and recently passed legislation in key states does mitigate financial risk from wildfires. Nonetheless, the rise of more frequent, significantly larger and more destructive wildfires in recent years, especially in the West, is a credit concern.

Manageable Capex: Capex is projected to total \$1.7 billion over 2025-2029, with capex peaking in 2026 at around \$588 million and moderating thereafter, averaging \$287 million per year in 2027-2029. Capex is focused on electric generation, transmission and distribution investments and pipeline system safety and integrity projects. The capex peak reflects a \$294 million investment for a 49% ownership interest totaling 122.5MW in the 250MW Badger Wind Farm in North Dakota. This project will significantly enhance the company's clean generation mix by increasing the proportion of renewables to 39% from 29% and is expected to enter service in 2026 pending regulatory approval.

Adequate Credit Metrics: Fitch projects FFO-adjusted leverage to average 4.7x in 2025-2029, consistent with a 'BBB+' utility credit profile. A large capex program pressures credit metrics in the near term, but timely rate case filings, riders, and tax credits from renewable investments provide support to credit measures over the next few years. Capex is anticipated to be funded conservatively to maintain the utility's authorized capital structure and to support credit quality.

Cascade Natural Gas Corporation

Low-Risk Business Profile: Cascade's ratings reflect the low-risk nature of its regulated gas distribution assets across its two-state service territory in Washington and Oregon, its supportive rate design, including margin decoupling and fuel cost recovery, and solid customer growth. Fitch estimates Washington represented roughly 75% of Cascade's total revenue in 2024. Cascade's service territory continues to benefit from customer growth with a CAGR of 1.2% and 0.2% in Washington and Oregon, respectively, over the last four years, driven by favorable demographic trends in the Pacific Northwest. The utility accounted for about 23% of combined electric and gas utilities' EBITDA in 2024.

Favorable GRC Outcome in Washington: Fitch views regulatory approval of Cascade's first multi-year GRC in Washington as favorable and should help to mitigate regulatory lag. In February regulators approved Cascade's settlement agreement with intervenors and authorized a \$40.6 million rate increase (73% of ask) based on a 9.5% ROE (10 bps higher) and a 49.5% equity layer. The rate increase will be phased in over two years including a \$29.8 million rate increase effective March 2025 and a \$10.8 million rate increase effective March 2026. This follows a reasonable outcome in Cascade's prior GRC in Washington.

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

Sizable Capex: Fitch estimates Cascade's capital spending to be about \$550 million through 2025-2029 with the peak occurring in 2025 at around \$148 million and declining thereafter. Capex is earmarked for new infrastructure and replacement of aging pipes, with a portion of investments subject to timely recovery under an infrastructure tracking mechanism. Fitch expects the utility to fund capex with a balanced mix of internal cash flows, debt and equity infusions from MDU.

Expectation for Strengthening Credit Metrics: At Cascade, FFO leverage is projected to remain flat at 7.2x in 2025 before strengthening to an average of 5.1x in 2026-2029, following new rates effective in 2025-2026 from recent regulatory approval of its multi-

year rate case in Washington and anticipated rate relief from future rate cases. Projected leverage is in line with a 'BBB' IDR.

Ring-Fencing Mechanisms: Cascade's credit profile benefits from ring-fencing mechanisms that insulate the utility from MDU's other regulated and unregulated businesses. Ring-fencing mechanisms include no Cascade guarantees or cross-default provisions within debt agreements at other MDU entities that could affect Cascade, a prohibition on intercompany loans, and dividend payment restrictions so that Cascade may not make dividend payments that would reduce its common equity ratio below 38%.

PEER ANALYSIS

MDU Resources Group, Inc.

MDU's ratings reflect an improved business risk profile focused on regulated utility operations following the spin-off of Everus.

MDU's closest utility peers include Xcel Energy, Inc. (BBB+/Negative) and Otter Tail Corporation (BBB/Stable). Like Xcel, MDU benefits from earnings and regulatory diversification with utility operations in multiple states. Otter Tail's earnings can be more volatile than MDU's due to the ownership of cyclical manufacturing businesses that are in competitive markets.

We project MDU's pro forma FFO leverage to remain steady and average 4.7x in 2025-2029 from 4.7x in 2024, near its negative FFO leverage sensitivity threshold of 4.8x. Fitch believes MDU's improved business risk profile focused on utility operations is an offset to the negative financial impacts of the separation of its construction businesses, and that the leverage measures will remain sufficient for its current 'BBB+' IDR.

MDU's financial profile is slightly stronger than Xcel and weaker than Otter Tail. Fitch forecasts FFO leverage for Xcel to be around 5.0x through 2028 and FFO leverage for OTTR to average 3.1x through the same period.

CEHI, LLC

CEHI's ratings reflect an improving business risk profile focused on its FERC-regulated pipeline business and Fitch's expectations for leverage measures to remain strong. For the midstream sector, Fitch generally considers \$500 million in annual EBITDA as the boundary line between investment grade and below investment grade.

CEHI's closest peers in the sector include Southern Natural Gas Company LLC (SNG; BBB+/Stable) and Southern Star Central Gas Pipeline Inc. (Southern Star; BBB/Stable). On an EBITDA basis, CEHI with projected EBITDA averaging \$130 million in 2025-2027 is similar in size to Southern Star at \$214 million and smaller than SNG at \$412 million.

CEHI is a 100% FERC-regulated natural gas pipeline and storage system, like its peers. CEHI has approximately 80% of its revenue underpinned by long-term take-or-pay contracts as compared with SNG at about 88% and Southern Star at 94%. CEHI's pipeline serves a demand-pull customer base, similar to its peers. Like SNG, it serves affiliate utilities which are the anchor shippers.

CEHI has a remaining weighted average contract life of approximately four to four and half years, similar to Southern Star and SNG at approximately four years. EBITDA leverage at CEHI is projected to remain strong and average 3.1x in 2025-2029. This is slightly better than Southern Star, whose EBITDA leverage is projected to remain below 2.5x through 2025, and better than SNG, whose EBITDA leverage to temporarily exceed 4.0x in the 2028 forecast period before rapidly declining to back under 4.0x in 2029.

Montana-Dakota Utilities Co.

Montana-Dakota's business risk profile as a regulated integrated utility is stronger than regional peer NorthWestern Corporation (NWE; BBB/Stable) and comparable to Otter Tail Power Company (OTP; BBB+/Stable). Montana-Dakota's integrated electric and gas businesses operate across North Dakota, South Dakota, Montana and Wyoming, with North Dakota providing the majority of 2024 revenue at 65%. Regulation is relatively constructive overall.

NWE is a single-state utility that lacks Montana-Dakota's regulatory diversification. Like Montana-Dakota, OTP also benefits from relatively balanced regulation across its three states of operations in Minnesota, North Dakota and South Dakota.

Montana-Dakota's financial profile is stronger than NWE's and in line with OTP. Fitch projects Montana-Dakota's FFO-adjusted leverage to average 4.7x in 2025-2029, in line with an average of 4.3x at OTP and better than NWE, whose FFO leverage is projected to average 5.3x during the same period.

Cascade Natural Gas Corporation

Cascade is a local gas distribution company (LDC) with a relatively weaker business profile than LDC peers Connecticut Natural Gas Corporation (CNG; A-/Negative), Wisconsin Gas LLC (A-/Stable) and Peoples Gas Light & Coke Company (A-/Stable). Cascade and CNG are among the smallest regulated utilities under Fitch's coverage and are much smaller than their larger peers.

Cascade's EBITDA is similar in size to CNG's and about 3.0x smaller than Wisconsin Gas' and about 6.0x smaller than Peoples Gas'. Fitch considers Washington regulation to be historically challenging and Connecticut regulation to be deteriorating and increasingly restrictive. In contrast, regulation in Wisconsin and Illinois is viewed as constructive.

Cascade's financial profile is weaker than its peers but is expected to improve. Cascade's FFO leverage is projected to strengthen to an average of 5.1x in 2026-2029 following rate relief in 2025-2026 from recent regulatory approval of its multi-year rate case in Washington, which Fitch views as favorable, and expected rate relief from a timely cadence of future rate cases. Fitch expects FFO leverage metrics to average 4.0x in 2024-2028 at Wisconsin Gas and average under 4.0x in 2024-2028 at Peoples Gas, while CNG's FFO leverage is projected to weaken considerably following an unfavorable rate case outcome which could result in a one-notch downgrade.

KEY ASSUMPTIONS

- Constructive regulatory environments;
- Maintaining utility authorized equity ratios in line with GRC outcomes;
- Targeting a utility dividend payout ratio of 60%-70%;
- Capex of \$3.1 billion in 2025-2029.

RATING SENSITIVITIES

MDU Resources Group, Inc.

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

- A material deterioration of the regulatory environments in which the utilities operate;
- Addition of significant unregulated cash flows;

-- FFO leverage greater than 4.8x on a sustained basis.

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

-- We do not expect an upgrade at this time, but sustained FFO leverage below 3.8x could warrant positive rating actions.

CEHI, LLC

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

-- Sustained total debt with equity credit to operating EBITDA above 3.5x;

-- Unfavorable rate case outcomes in future rate proceedings at the FERC.

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

-- Significant growth in scale;

-- Sustained debt with equity credit to operating EBITDA leverage below 2.5x.

Montana-Dakota Utilities Co.

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

-- A material deterioration of the North Dakota regulatory compact;

-- FFO leverage greater than 4.8x on a sustained basis.

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

-- FFO leverage below 3.8x on a sustained basis.

Cascade Natural Gas Corporation

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

- FFO leverage greater than 5.5x on a sustained basis over the rating horizon, which would likely result in a rating downgrade;
- Further deterioration of the Washington regulatory compact.

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

- Positive rating action is not expected at this time given the recent downgrade, but FFO leverage below 4.5x on a sustained basis could warrant positive rating action.

LIQUIDITY AND DEBT STRUCTURE

Fitch expects MDU to have adequate liquidity, and it had \$580 million of available liquidity under its consolidated credit facilities at March 31, 2025. At MDU, liquidity is provided by a \$200 million credit facility due May 2028. At Montana-Dakota, liquidity is provided by a \$200 million unsecured revolver that matures in October 2028. The revolver backstopped the utility's commercial paper program. At Cascade, liquidity is provided by a \$175 million credit facility that matures in June 2029. Intermountain, Cascade's sister gas utility, maintains liquidity through a \$175 million credit facility with a June 2029 maturity date.

At CEHI, borrowing needs are provided by access to parent MDU's \$200 million credit facility. All four bank agreements restrict debt/capitalization from exceeding 65% and MDU was in compliance with a debt to total capitalization ratio of 44% as of March 31, 2025. Maturities of long-term debt are expected to be manageable and includes \$162 million in 2025, \$145 million in 2026, \$25 million in 2027, \$161 million in 2028 and \$244 million in 2029.

ISSUER PROFILE

MDU is a fully regulated holdco with regulated electric and gas utilities and FERC-regulated pipeline and storage businesses. It benefits from regulatory diversity, owning four low-risk utilities operating in balanced regulatory environments across eight contiguous states from Minnesota to Washington.

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

[Click here](#) to access Fitch's latest quarterly Global Corporates Macro and Sector Forecasts data file which aggregates key data points used in our credit analysis. Fitch's macroeconomic forecasts, commodity price assumptions, default rate forecasts, sector key performance indicators and sector-level forecasts are among the data items included.

ESG CONSIDERATIONS

The highest level of ESG credit relevance is a score of '3', unless otherwise disclosed in this section. A score of '3' means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. Fitch's ESG Relevance Scores are not inputs in the rating process; they are an observation on the relevance and materiality of ESG factors in the rating decision. For more information on Fitch's ESG Relevance Scores, visit <https://www.fitchratings.com/topics/esg/products#esg-relevance-scores>.

RATING ACTIONS

ENTITY / DEBT ⚡	RATING ⚡			PRIOR ⚡
Cascade Natural Gas Corporation	LT IDR	BBB	Affirmed	BBB
	ST IDR	F3	Affirmed	F3
senior unsecured	LT	BBB+	Affirmed	BBB+
CEHI, LLC	LT IDR	BBB+	Affirmed	BBB+
senior unsecured	LT	BBB+	Affirmed	BBB+
Montana-Dakota Utilities Co.	LT IDR	BBB+	Affirmed	BBB+

	ST IDR	F2	Affirmed	F2
senior unsecured	LT	A-	Affirmed	A-
senior unsecured	ST	F2	Affirmed	F2
MDU Resources Group, Inc.	LT IDR	BBB+	Affirmed	BBB+

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NEXT

VIEW ADDITIONAL RATING DETAILS

Additional information is available on www.fitchratings.com

PARTICIPATION STATUS

The rated entity (and/or its agents) or, in the case of structured finance, one or more of the transaction parties participated in the rating process except that the following issuer(s), if any, did not participate in the rating process, or provide additional information, beyond the issuer's available public disclosure.

APPLICABLE CRITERIA

[Corporates Recovery Ratings and Instrument Ratings Criteria \(pub. 02 Aug 2024\)](#)
(including rating assumption sensitivity)

[Corporate Hybrids Treatment and Notching Criteria \(pub. 08 Apr 2025\)](#)

[Parent and Subsidiary Linkage Rating Criteria \(pub. 27 Jun 2025\)](#)

[Corporate Rating Criteria \(pub. 27 Jun 2025\) \(including rating assumption sensitivity\)](#)

[Sector Navigators – Addendum to the Corporate Rating Criteria \(pub. 27 Jun 2025\)](#)

APPLICABLE MODELS

Numbers in parentheses accompanying applicable model(s) contain hyperlinks to criteria providing description of model(s).

Corporate Monitoring & Forecasting Model (COMFORT Model), v8.2.0 (08 Apr 2025, 27 Jun 2025)

ADDITIONAL DISCLOSURES

[Dodd-Frank Rating Information Disclosure Form](#)

[Solicitation Status](#)

[Endorsement Policy](#)

ENDORSEMENT STATUS

Cascade Natural Gas Corporation	EU Endorsed, UK Endorsed
CEHI, LLC	EU Endorsed, UK Endorsed
MDU Resources Group, Inc.	EU Endorsed, UK Endorsed
Montana-Dakota Utilities Co.	EU Endorsed, UK Endorsed

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within the entity summary page for each rated entity and in the transaction detail pages for structured finance transactions on the Fitch website. These disclosures are updated on a daily basis.

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
MOODY'S RATINGS ACTION, AUGUST 15, 2025

EXHIBIT 104

November 2025

MOODY'S

RATINGS

Rating Action: Moody's Ratings assigns Baa1 rating to Montana-Dakota Utilities and Baa2 ratings to MDU Resources and Cascade Natural Gas; outlooks stable

15 Aug 2025

New York, August 15, 2025 -- Moody's Ratings (Moody's) has assigned a Baa2 Issuer rating to MDU Resources Group, Inc. (MDU Resources), a natural gas and electric distribution utility holding company operating in the Great Plains and Pacific Northwest regions. We have also assigned a Baa1 Issuer rating to subsidiary Montana-Dakota Utilities Co. (Montana-Dakota), and a Baa2 Issuer Rating to subsidiary Cascade Natural Gas Corporation (Cascade). The rating outlooks are stable.

RATINGS RATIONALE

The Baa2 rating of MDU Resources reflects the stability of its regulated utility companies, which are engaged primarily in lower-risk natural gas transportation and distribution, along with vertically integrated electric operations. These businesses are diversified across multiple states and jurisdictions and serve customer bases with stable to growing demand trends. Supportive regulatory environments and timely cost recovery mechanisms have resulted in stable financial metrics overall, notwithstanding the cash flow volatility experienced over the last two years at some of its local gas distribution company (LDC) subsidiaries. As a newly assigned rating, governance considerations are also a key driver of the Baa2 rating and stable outlook.

Consolidated cash flow coverage was strong in 2024 at over 19% CFO pre-WC/debt. We expect coverage to moderate over the next 2-3 years as the company funds major capital investments in cleaner generation and transmission at Montana-Dakota, but we expect metrics will remain supportive of the Baa2 rating at about 15% CFO pre-WC/debt. Less than 5% of consolidated indebtedness is at an intermediate holding company, MDU Energy Capital, and there is no outstanding indebtedness at the ultimate holding company level. While the holding company's rating is one notch below that of Montana-Dakota due to the structural subordination of the parent obligations compared to the debt at its principal operating subsidiary, this is balanced by the modest amount of holding company debt and the material financial contribution from other subsidiaries, including its WBI Energy gas pipeline business. We expect MDU Resources will continue to manage the consolidated capital structure to maintain its Baa2 rating in accordance with its financial policies.

The Baa1 rating of Montana-Dakota reflects its vertically integrated electric and gas local distribution company (LDC) operations in overall supportive regulatory environments, anchored by approximately two-thirds of revenue and rate base under a favorable jurisdiction in North Dakota. Approximately 75% of MDU's rate base is electric, comprised of vertically integrated electric operations in four states and FERC-regulated transmission assets. Overall, Montana-Dakota benefits from consistent regulatory regimes and an array of cost recovery mechanisms that support stable cash flow.

Montana-Dakota's performance has also been underpinned by a modestly sized but growing customer base along with increasing electric volumes. The company's capital plan will add capacity and cleaner generation sources with renewables, along with investments in system reliability and FERC-regulated transmission assets. Debt financing for a portion of the capital spending will cause credit metrics to temporarily moderate from historical levels, but we expect CFO pre-WC/debt will recover thereafter.

The Baa2 rating of Cascade reflects the company's low business risk profile as a regulated natural gas LDC operating in generally supportive regulatory environments under the purview of the Washington Utilities and Transportation Commission (WUTC, 78% of rate base) and Oregon Public Utility Commission (OPUC, 22% of rate base). Cascade benefits from several supportive cost recovery mechanisms that include revenue

decoupling, weather normalization adjustments and purchased gas adjustments in Washington and Oregon. Financial metrics have weakened in recent years with the impact of higher gas costs due to market volatility and reduced timeliness in the recovery of certain costs. But we expect metrics to strengthen going forward, supported by a new multi-year rate plan in Washington along with lower capital spending. Overall, we expect Cascade to generate CFO pre-W/C to debt of 10%-14% over the next two years. A growing customer base and manageable planned investment will also support the credit profile.

Approximately 25% of the consolidated earnings of MDU Resources are derived from a natural gas pipeline business, WBI Energy (unrated), which is engaged primarily in interstate transportation and storage across five states in the Great Plains region. WBI Energy Transmission, a FERC-regulated pipeline accounting for 95% of WBI Energy's revenue, has exhibited strong growth and an increasingly stable revenue profile, with approximately 80% of revenue fixed and driven by long-term natural gas transportation. Modest contract tenors and a degree of geographic concentration in the Bakken are balanced by more than 25% of sales from affiliate Montana-Dakota, a trend of growing volumes and a prudent approach to growth projects driven by customer demand.

Outlook

The stable outlook for MDU Resources reflects our expectation that the ratio of CFO pre-W/C to debt will approximate 15% over the next two years, giving it adequate cushion and financial flexibility at the current rating. We also expect its utility regulatory environments in North Dakota and Washington will remain credit supportive and continue to incorporate existing regulatory provisions including the use of timely cost and investment recovery mechanisms for its LDC subsidiaries.

For Montana-Dakota, the stable outlook reflects our view that the ratio of CFO pre-W/C to debt will temporarily moderate due to the impact of strategic capital investments over the next several years, and improve thereafter. For Cascade, we expect the timeliness of cost recovery to improve with the current multi-year rate plan in Washington and that rate mechanisms in both of its jurisdictions will remain supportive of financial performance, resulting in CFO pre-W/C to debt rising from 10% currently to above 13% over the next two years.

FACTORS THAT COULD LEAD TO AN UPGRADE OR DOWNGRADE OF THE RATINGS

Factors that could lead to an upgrade

MDU Resources could be upgraded if financial performance improves such that its ratio of CFO pre-W/C to debt increases to above 17% on a sustained basis. An upgrade could also be considered if the regulatory environments in which its subsidiaries operate become more credit supportive through additional recovery mechanisms and either of its utility subsidiaries is upgraded. A rating upgrade would be predicated on the company maintaining a conservative financial profile in its FERC-regulated pipeline segment such that the risk profile for the consolidated group remains balanced.

Montana-Dakota could be upgraded if its regulatory environments remain credit supportive and financial performance improves such that its ratio of CFO pre-W/C to debt increases to above 20% on a sustained basis. Cascade could be upgraded if its regulatory environments remain credit supportive and its financial performance improves such that its ratio of CFO pre-W/C to debt increases to above 15% on a sustained basis.

Factors that could lead to a downgrade

MDU Resources could be downgraded if the degree of regulatory support were to decline materially, or if the company's financial profile were to weaken including a ratio of CFO pre-W/C to debt below 14% for an extended period. The rating could also be negatively pressured if business risk related to the non-utility operations increases or if the company undertakes aggressive debt financed shareholder friendly activities such that the risk profile of the corporate family deteriorates.

Montana-Dakota could be downgraded if the company's regulatory environments deteriorate and its financial profile were to weaken, including a ratio of CFO pre-W/C to debt below 17% for an extended period. Cascade could be downgraded if the degree of regulatory support were to decline materially, or if the company's financial profile were to remain weak including a ratio of CFO pre-W/C to debt remaining below 13% for an extended period.

LIST OF AFFECTED RATINGS

..Issuer: Cascade Natural Gas Corporation

Assignments:

.... LT Issuer Rating , Assigned Baa2

Outlook:

....Outlook, Assigned Stable

..Issuer: MDU Resources Group, Inc.

Assignments:

.... LT Issuer Rating, Assigned Baa2

Outlook:

....Outlook, Assigned Stable

..Issuer: Montana-Dakota Utilities Co.

Assignments:

.... LT Issuer Rating, Assigned Baa1

Outlook:

....Outlook, Assigned Stable

The principal methodology used in these ratings was Regulated Electric and Gas Utilities published in August 2024 and available at <https://ratings.moodys.com/rmc-documents/426183>. Alternatively, please see the Rating Methodologies page on <https://ratings.moodys.com> for a copy of this methodology.

The net effect of any adjustments applied to rating factor scores or scorecard outputs under the primary methodology(ies), if any, was not material to the ratings addressed in this announcement.

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At least one ESG consideration was material to the credit rating action(s) announced and described above. Moody's general principles for assessing environmental, social and governance (ESG) risks in our credit analysis can be found at <https://ratings.moodys.com/rmc-documents/435880>.

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BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
DIRECT TESTIMONY OF NOEMI ORTIZ

EXHIBIT 200

November 2025

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I. INTRODUCTION

1 **Q. Please state your name and business address.**

2 A. My name is Noemi Ortiz. My business address is 8113 West Grandridge Boulevard,
3 Kennewick, Washington 99336.

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

5 A. I am employed by Cascade Natural Gas Corporation ("Cascade" or "Company"). I am
6 the Manager of Energy Efficiency Programs.

7 **Q. How long has Cascade employed you?**

8 A. I have been employed by Cascade since July 2022.

9 **Q. What are your duties as Manager of Energy Efficiency Programs?**

10 A. I am responsible for the Company's equity initiatives including establishing the
11 Company's Equity Advisory Groups ("EAG"). In Washington, I currently facilitate EAG
12 meetings and manage relationships with EAG members, which means coordinating
13 meetings, providing information and background on relevant issues, and ensuring the
14 Company is responsive to their questions and concerns. I will provide the same
15 support for the Company's EAG in Oregon after it is established.

16 I also manage Cascade's low-income conservation programs in Oregon and
17 Washington, which includes overseeing program administration, implementation, and
18 outreach, as well as the Company's engagement with both the Company's other
19 advisory groups in Oregon and Washington, including Oregon's Energy Assistance
20 Advisory Group.

1 My responsibilities also include oversight of the Company's programs for
2 reducing carbon emissions, including the voluntary renewable natural gas ("RNG")
3 programs in Oregon and Washington, and the Oregon Hybrid System Pilot.¹

4 **Q. Briefly describe your educational and relevant employment experience.**

5 A. I hold a bachelor's degree in law and justice from Central Washington University, and
6 I am one semester from having a Master of Business Administration from Western
7 Governors University. Before joining Cascade in my current role, I worked nine years
8 for the Northwest Community Action Center ("NCAC"), a division of the Yakima Valley
9 Farm Workers Clinic. At NCAC, I had progressively increasing responsibilities in
10 providing social services and energy efficiency services to vulnerable and
11 disadvantaged residents in Yakima County. Most of my time with NCAC was spent
12 managing the department that provided whole-house weatherization services to
13 qualifying low-income residents of Yakima County, which is where I live and raise my
14 family.

II. SCOPE AND SUMMARY OF TESTIMONY

15 **Q. What is the purpose of your testimony in this proceeding?**

16 A. The purpose of my testimony is to discuss the actions Cascade has taken to
17 incorporate an equity lens into the Company's daily operations so that vulnerable,
18 under-represented, and financially constrained customers are considered or heard in
19 Cascade's decision-making processes and that they are more likely to experience
20 equal outcomes with the rest of Cascade's customer base.

21 **Q. Do you sponsor any exhibits in support of your recommendations?**

22 A. Yes, I sponsor the following exhibits in support of my testimony:

¹ The Oregon Voluntary RNG Program is offered per Schedule 805 and the Hybrid System Pilot is offered per Schedule 810; both schedules are found on Cascade's webpage: <https://www.cngc.com/rates-services/rates-tariffs/>.

- 1 • Exhibit CNGC/201 – Incorporating Equity into Daily Business Operations
- 2 • Exhibit CNGC/202 – Cascade Equity Advisory Group Draft Charter
- 3 • Exhibit CNGC/203 – Oregon Environmental Justice Mapping Tool Extension
- 4 • Exhibit CNGC/204 – MBE Tracking Summary of Solicited Bidders

III. CASCADE'S ADOPTION OF AN EQUITY LENS

5 **Q. When did Cascade begin applying an equity lens to its operations?**

6 A. Cascade has a long history of providing resources to vulnerable customers or
7 customers in crisis, including financial assistance, medical certificates, and extended
8 time-payment time agreements.² However, “equity” as a holistic approach for program
9 design and decision-making did not enter Cascade’s vernacular for Oregon operations
10 until 2017 with the passage of Senate Bill (“SB”) 978.³ While this bill was specific to
11 electric utilities, it laid the groundwork for equity-related considerations at the Public
12 Utility Commission of Oregon (“Commission”) by requiring the Commission to examine
13 obligations and benefits to customers, the perception of bias in decision-making, and
14 public policy objectives.

15 The coronavirus (“COVID-19”) pandemic beginning in 2020 ushered in the
16 rapid advancement of an equity perspective in the retail energy sector. Utility
17 customers impacted by business closures and the lockdown experienced an
18 unprecedented inability to pay for their energy services. The sitting governor, Governor
19 Kate Brown, declared a statewide emergency and worked with utilities to ensure that
20 Oregon residents would stay connected to their electricity and natural gas service. The
21 Commission issued a series of orders in docket UM 2114 that imposed limits on late

² The Direct Testimony of Dan L. Tillis provides a detailed discussion on Cascade's specific programs. See CNGC/300, Tillis.

³ SB 978, 79th Leg. Assemb., 2017 Reg. Sess. (Or. 2017), available at <https://olis.oregonlegislature.gov/liz/2017R1/Downloads/MeasureDocument/SB978/Enrolled>.

1 payment charges, reconnection fees, deposits, and disconnections for nonpayment.⁴
2 The COVID-19 pandemic underscored the importance of staying connected to utility
3 services.

4 In 2021, the 81st Oregon Legislative Assembly passed House Bill (“HB”) 2475,
5 which directed the Commission to consider “differential energy burdens on low-income
6 customers and other economic, social equity or environmental justice factors that
7 affect affordability for certain classes of utility customers.”⁵ From this directive, the
8 Commission opened docket UM 2211, which considers energy justice and procedural
9 equity within multiple workstreams. For a more detailed discussion on docket
10 UM 2211, see Section VII of the Direct Testimony of Dan L. Tillis.⁶

11 This history provides the backdrop for how equity has become a key
12 consideration in Cascade’s ongoing decision-making and program or service design.
13 Cascade acknowledges that implementing such a significant paradigm shift from
14 traditional cost-of-service thinking to equity takes time, and I was hired to marshal in
15 the change. Since joining Cascade in 2022, I have continued to work diligently to foster
16 the Company’s understanding and adoption of an equity lens in decision-making.

17 **Q. What qualifications make you suitable to lead the equity initiative for Cascade?**

18 A. Besides my formal education and my professional experience as a manager at a
19 community action agency, my intersectionality as a non-white, Latina, Spanish-
20 speaking female, working mother, and daughter of immigrant parents gives me a broad
21 understanding of the disadvantaged, highly impacted, and hard-to-reach communities

⁴ See e.g., *In re Pub. Util. Comm’n of Or., Investigation into the Effects of the COVID-19 Pandemic on Util. Custs.*, Docket No. UM 2114, Order No. 20-324 (Oct. 2, 2020).

⁵ HB 2475, 81st Leg. Assemb., 2021 Reg. Sess. at § 2(1) (Or. 2021), available at <https://olis.oregonlegislature.gov/liz/2021R1/Downloads/MeasureDocument/HB2475>.

⁶ See CNGC/300, Tillis/19-22.

1 in Cascade's service territory. My voice is their voice, and I empathize with the
2 experience of being part of marginalized communities.

3 My lived experience is extensive. I currently reside in one of the most highly
4 impacted communities in Washington, where 90 percent of the population is Hispanic.
5 I grew up in a family of seven, living on twelve thousand dollars a year, with parents
6 working in agriculture, not knowing at times where our next meal would come from.
7 Living from food pantries, churches, and other community resources, we accessed the
8 same low-income resources I have dedicated my career to providing. At a very young
9 age I became the interpreter and translator for my parents, who are non-English
10 speakers. I learned to advocate for my family and others at a young age. My siblings
11 and I used to work on farms and in orchards with my parents before school and every
12 summer. My father repeatedly told us, "I don't bring you to work with me because we
13 need the money; I bring you with me, because you need to see and understand this is
14 not easy and it is not the life I want for you. You need to work hard, go to school, and
15 make something of yourselves; don't be like your dad." So, in vulnerable,
16 disadvantaged faces, I am reminded of my family, my loved ones, and our struggles.

17 **Q. Where is Cascade now in its process of applying equity to its decisions and**
18 **planning?**

19 A. Cascade understands that moving from the pure cost-causation lens it has applied for
20 decades to an equity lens—a shift from treating all customer classes the same to
21 treating subsections of customer classes differently to create an equal outcome—is a
22 huge paradigm shift and it cannot happen quickly. The Company's growth and
23 understanding is iterative. Cascade has applied the tenet of recognition justice in that
24 it understands that its historic actions—however "just, fair, and reasonable" they were
25 deemed in established processes at one time—may have contributed to inequities
26 among its customers. The next two important steps are: (1) gathering data and

1 analyzing it to identify inequities, and (2) building the structures and the relationships
2 to build trust and facilitate collaboration with its communities. It is within these
3 collaborative forums that Cascade will further define inequities with data and then seek
4 to mitigate them by incorporating distributional equity and restorative equity
5 considerations into program development and daily decision-making.

IV. CASCADE'S DEDICATION TO EQUITY

6 **Q. What actions has Cascade taken that demonstrate its dedication to equity?**

7 A. Cascade understands that prioritizing equity must come from the top down. The
8 Company's former Vice President, Regulatory Affairs and Customer Service led a
9 discussion related to equity initiatives with the Company's officer team and the current
10 Vice President, Regulatory Affairs is the executive sponsor for the Company's ongoing
11 equity work.

12 Cascade is also taking active steps to incorporate equity considerations across
13 the Company. Cascade requires annual company-wide equity training for its
14 managers. The training explains how equity developed as a lens to be applied in the
15 regulatory environment and defines general terms related to energy justice. The
16 general intent of the training is to communicate that the Company values equity and
17 expects its management to also value equity and lead their employees in adopting an
18 equity lens to their work. The training presentation is provided as Exhibit CNGC/201.

19 Cascade has been proactive in other equity-related initiatives specific to
20 customer outreach and to matching available resources and programs to customers
21 with a need. For instance, Cascade procured a language access plan to address
22 linguistic barriers some customers experience with Cascade's communication
23 materials. The language access plan and other efforts to bring equity to customers'

1 experience with Cascade are discussed in detail in the Direct Testimony of Dan L.
2 Tillis.⁷

3 Additionally, Cascade retained a contractor to develop a distributional equity
4 analysis (“DEA”) tool and a plan for integrating the use of DEA scoring in decision-
5 making processes. Cascade needs a DEA tool for both its Oregon and Washington
6 operations; however, the Washington Utilities and Transportation Commission
7 (“WUTC”) recently stated in docket A-230217 that it intends to develop its own DEA
8 tool.⁸ Accordingly, Cascade has paused its efforts to develop a DEA tool until after the
9 WUTC issues its policy statement.

10 Finally, I have personally been identified as a resource to colleagues with
11 questions about how to overlay energy justice into existing processes, and the
12 Regulatory Affairs department is a backup resource for training and clarification.
13 Further, the Company’s creation of the position I currently hold demonstrates that it is
14 investing in long-term human resources to facilitate the Company’s growth in equity.

15 **Q. Do you believe Cascade’s integration of equity is happening quickly enough?**

16 A. That is a difficult question because when one recognizes something is wrong, the
17 impulse is to want a solution immediately. However, Cascade understands that the
18 application of equity into its business must be iterative. Making the paradigm shift
19 quickly would require the Company to act on its own assumptions without
20 collaboration, which would contradict efforts towards recognition justice and
21 procedural justice. Although a truly collaborative process takes some time, Cascade

⁷ See CNGC/300, Tillis/13-14; CNGC/306, Tillis.

⁸ See *Commission-led Proceeding to Develop a Policy Statement to Address the Application of Equity and Justice in Commission and Regulated Company Processes and Decisions*, WUTC Docket No. A-230217, Notice of Opportunity to File Written Comments (July 22, 2025), available at <https://apiproxy.utc.wa.gov/cases/GetDocument?docID=61&year=2023&docketNumber=230217>.

1 believes collaboration will be essential in producing outcomes that integrate energy
2 justice into Cascade's business processes going forward.

V. IDENTIFYING INEQUITIES THROUGH DATA

3 **Q. How is Cascade identifying inequities through data collection?**

4 A. Below is an overview of the steps Cascade has taken to better its understanding of
5 energy and distributional justice among its customers:

- 6 • New Data Analyst. As part of the umbrella process of docket UM 2211, the
7 Commission opened docket AR 668 for the purpose of revising and expanding
8 the reporting requirements under OAR 860-021-0408. During this rulemaking,
9 Cascade hired a data analyst who will spend part of his time analyzing data for
10 correlations between vulnerabilities and negative outcomes such as increased
11 instances of disconnections for non-payment. As tools identifying the highly
12 impacted communities within Oregon's service territory become available,
13 Cascade should be well-equipped to better correlate vulnerabilities with
14 outcomes. The intent of this work will be to identify inequities and then
15 collaborate on restorative justice, which would likely be new practices or
16 programs to level the outcomes among customer segments.
- 17 • Data Interface. Cascade is engaging with a third-party provider who will provide
18 Cascade with a data interface that will combine Cascade's billing information
19 with demographic data, such as income level, home value, and education level.
20 Cascade's expectation is that this tool will offer the Company the information
21 to better match customer needs with available resources.
- 22 • Categorical Eligibility. Cascade is engaging with a different third-party
23 contractor for access to lists of customers known to be income-qualified for
24 Cascade's low-income programs, such as the Oregon Low-Income Bill
25 Assistance Program and the Oregon Low-Income Energy Conservation

1 Program. The lists will include customers who are enrolled in state or federal
2 needs-based programs, which means they also qualify for Cascade's
3 assistance program. This will improve energy justice through targeted
4 outreach.

VI. COLLABORATION ON EQUITY ISSUES

5 **Q. How is Cascade planning to collaborate with others?**

6 A. Cascade collaborates with various stakeholders through its Energy Assistance
7 Advisory Group, discussed in detail in the Direct Testimony of Dan L. Tillis,⁹ and its
8 Technical Advisory Group, which discusses Cascade's integrated resource planning.
9 Cascade understands that these advisory groups are often attended by seasoned or
10 professional intervenors who have represented special interest groups for years or
11 even decades, but this status quo must be further broadened to make space for
12 representatives of other vulnerable and under-represented communities; therefore,
13 the Company plans to create an Oregon EAG, modeling it after the Company's
14 Washington EAG.

15 **Q. Who will be the members of Cascade's EAG?**

16 A. The EAG will be comprised of representatives from the Company's most impacted
17 communities. Cascade also foresees having Commission Staff attend EAG meetings
18 in an advisory capacity.

19 **Q. What purpose will the EAG serve?**

20 A. Cascade has a draft Oregon EAG Charter, provided as Exhibit CNGC/202. Under that
21 Charter, the EAG will be established to:

22 inform the development of the Company's energy equity processes and
23 provide guidance on other [C]ompany activities relevant, but not limited
24 to, community engagement, energy efficiency, regulatory obligations,
25 bill payment assistance programs, resource planning, decarbonization,

⁹ See CNGC/300, Tillis/14.

1 expanding access and removal of barriers for underserved and
2 overburdened customers.¹⁰

3 **Q. Why is Cascade's Oregon EAG not fully formed and meeting at this time?**

4 A. Cascade relies on state and federal resources to identify its most vulnerable
5 communities and then to recruit representatives from these communities for its EAG.
6 Specifically, Cascade was relying on a Center of Disease Control ("CDC") website to
7 identify its most vulnerable communities. However, when the current federal
8 administration took office in January 2025, President Trump signed an executive order
9 ceasing virtually all diversity, equity, and inclusion ("DEI") activities in the federal
10 government.¹¹ This action removed public access to the CDC resource. Cascade had
11 to pivot and adjust its timetable for establishing an Oregon EAG accordingly.

12 In response to Section 12 in HB 4077,¹² adopted in the 2022 Regular Session
13 of the 81st Oregon Legislative Assembly, the Governor's Environmental Justice
14 Council, with staff support from the Oregon Department of Environmental Quality, is
15 developing a state-specific tool to identify and rank vulnerable communities at the
16 census tract level. Cascade expected that tool would be available by September 15,
17 2025, based on the language in Section 18 of the bill, but this tool is now not expected
18 to be available to the public until December 31, 2027.¹³ Cascade plans to use this tool
19 to identify the most vulnerable census tracts in its Oregon service territory and
20 understand the circumstances or factors that contribute to the barriers experienced in
21 each area. After ranking communities for vulnerabilities, Cascade would then initiate
22 outreach campaigns within the identified communities to solicit EAG members.

¹⁰ CNGC/202, Ortiz/4.

¹¹ See Exec. Order No. 14151, 90 FR 8339 (Jan. 20, 2025).

¹² HB 4077, 81st Leg. Assemb., 2022 Reg. Sess. at § 12 (Or. 2022), available at <https://olis.oregonlegislature.gov/liz/2022r1/Downloads/MeasureDocument/HB4077>.

¹³ See CNGC/203, Ortiz/7.

1 **Q. Is Cascade taking any action while waiting for these tools and information?**

2 A. Yes. This unexpected delay has caused Cascade to consider alternative means for
3 identifying the regions for EAG recruitment. As mentioned above, Cascade is in the
4 process of engaging a third-party provider for access to a data interface. This
5 alternative tool may provide Cascade with means to expedite the process of evaluating
6 vulnerabilities experienced within the communities Cascade serves. The Company will
7 need to finalize contracting and the creation of the data interface, and then have
8 internal resources initiate data collection and analysis. At this point in time, Cascade
9 is unable to speculate if this is a viable path for the purpose of standing up an EAG,
10 and if it is, how long it would take to accomplish EAG member solicitation.

11 Although Cascade's plans to develop an Oregon EAG have been significantly
12 delayed, the Company was able to establish an EAG in Washington using the
13 Washington Department of Health rankings for highly impacted communities. Since
14 Washington has had a state-specific resource for identifying vulnerable communities
15 that was not impacted by the Trump administration's scrub of DEI resources, Cascade
16 was able to establish a Washington EAG and commenced meeting in the fourth
17 quarter of 2023. While Cascade did not plan for, and does not celebrate, the delay of
18 its Oregon EAG, the silver lining is that Cascade will be able to use the experience
19 gained in Washington for outreach, recruitment, and collaboration to create a
20 successful EAG experience in Oregon. Also, collaboration with the Company's
21 Washington EAG has been beneficial for Cascade's Oregon customers.

22 **Q. How has Cascade's collaboration with its Washington EAG been beneficial for**
23 **the Company's Oregon customers?**

24 A. Cascade has received beneficial and actionable advice from its Washington EAG,
25 which it has implemented company-wide to benefit customers in both Oregon and

1 Washington. Below are examples of collaboration that have resulted in improved
2 equity for Cascade's Oregon customers and its Oregon operations:

- 3 • Improved Outreach Materials. Technical language in outreach materials has
4 been replaced with more accessible and readily understood language.
- 5 • Improved Translations. Cascade improved the readability of its Spanish
6 website translation by upgrading its translation services subscription. The
7 Company also asked me (a Spanish-speaker) and other Spanish-speakers
8 from the EAG to review outreach materials and website content that were
9 translated into Spanish to verify that the materials were clearly communicated
10 and readable.
- 11 • Focused Resource for Bill Pay Assistance. The Company provided a dedicated
12 webpage explaining both its Oregon and Washington bill assistance programs.
- 13 • Improved Solicitation of Minority-Owned Businesses ("MBEs"). The Company
14 has demonstrated a proactive commitment to inclusivity and equitable
15 business practices by developing the Summary of Solicited Bidders MBE
16 Tracking Form.¹⁴ By using this form on all procurement contracts over
17 \$150,000, the Company seeks to extend deference to MBEs.

18 **Q. How were other Oregon utilities able to identify community representatives to**
19 **stand up their EAGs?**

20 A. It is Cascade's understanding that the other utilities that have EAGs identified the
21 vulnerable communities within their service territories prior to the federal government's
22 removal of all federal DEI resources. Cascade began by forming its EAG in
23 Washington, not expecting to lose access to necessary resources for finding Oregon
24 EAG representatives.

¹⁴ See CNGC/204, Ortiz.

1 **Q. Is Cascade still committed to creating an Oregon EAG, despite the difficulties**
2 **experienced this year?**

3 **A.** Absolutely. Cascade values collaboration and understands the need to bring
4 underrepresented and vulnerable community representatives into the Company's
5 conversations. Cascade is committed to creating an Oregon EAG and will continue to
6 engage with its other advisory groups on equity issues to solicit input.

VII. CONCLUSION

7 **Q. Does this conclude your testimony?**

8 **A.** Yes.

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
INCORPORATING EQUITY INTO DAILY
BUSINESS OPERATIONS

EXHIBIT 201

November 2025

Incorporating Equity into Daily Business Operations

Presented By:
Noemi Ortiz





Adopting an Equity Lens



Why does Cascade need to adopt an equity lens?

The Washington Public Utility Commission is focused on equity.

- ▶ **CETA Statute (2019):** Required electric IOUs to consider equity
- ▶ **MYRP Statute (2021):** Expanded public interest standard to include equity and applied to natural gas utilities
- ▶ **A-230217:** Ongoing rulemaking to develop a WUTC policy statement to address the application of equity in Commission and company processes and decisions.



Why does Cascade need to adopt an equity lens?

The Washington Utilities and Transportation Commission has clearly stated utilities' filings must demonstrate that equity has been incorporated into their daily operations

Final Order 09, in UG-310755

So that the Commission's decisions do not continue to contribute to ongoing systemic harm, we must apply an equity lens in all public interest considerations going forward. Recognizing that no action is equity-neutral, regulated companies should inquire whether each proposed modification to their rates, practices, or operations corrects or perpetuates inequities. Companies likewise should be prepared to provide testimony and evidence to support their position. Meeting this expectation will require a comprehensive understanding of the ways in which systemic racism and other inequities are self-perpetuating in the existing regulatory framework absent corrective intervention. It is incumbent upon regulated companies to educate themselves on topics related to equity just as it is incumbent upon the Commission to do the same.



Why does Cascade need to adopt an equity lens?

The Oregon Public Utility Commission is likewise focused on equity.

- **Senate Bill 978 (2017):** This legislation laid the groundwork for the PUC's current efforts on diversity, equity, and inclusion. The bill emphasized the need to improve equitable and affordable access to energy services and promote engagement and inclusion in PUC processes.
- **Executive Order 20-04:** Sections 3 and 5 of the executive order specifically direct the PUC to take actions promoting equity. As a result, the PUC has been considering equity in its decision-making processes.



What does this mean?

Without a meaningful integration of equity into Cascade Natural Gas's daily operations, Cascade is likely to have poor outcomes in regulatory proceedings.



What is Equity?

Equity in the energy sector tries to achieve energy justice by:

- Addressing disparities so that everyone has a fair opportunity to benefit from natural gas service or utility programs
- Remediating social, economic, and health burdens faced by marginalized communities
- Including affected communities in the decision-making process for energy policies, project and infrastructure
- The Commission defined energy justice as being comprised of 4 tenets



What does applying an equity lens mean?

- Applying an equity lens requires making a paradigm shift in how the Company does business and makes decisions.
- Historically, our regulatory environment has been based on the following principles:
 - Cost causation: charge costs to the customers (e.g., line extensions) or customer classes (e.g. rates) that have incurred the costs.
 - Treat customer classes equally and fairly in the application of the cost causation principle. This has been considered “just, fair, and reasonable.”
- Under an Equity Lens, we do not seek to treat all customers/customer classes the same; Rather we are willing to treat customers/customer classes differently so that we achieve an equal outcome.



What is Energy Justice?

The four tenets of Energy Justice are:

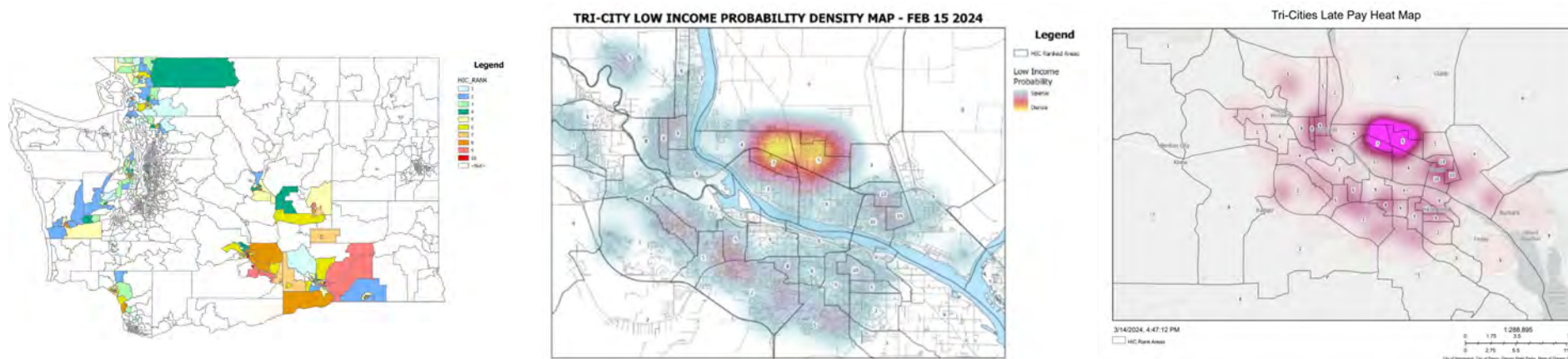
1. Recognition Justice
2. Procedural Justice
3. Distributional Justice
4. Restorative Justice



Recognition Justice

Recognition Justice refers to understanding and acknowledging historical and ongoing inequalities.

- An example would be collecting, correlating, and analyzing data to understand and identify any current inequities.



Procedural Justice

Procedural justice means that when we begin a process that will result in a change that will significantly impact customers, we should seek to collaborate with a broad range of constituents within our service territory.

- Identify the community directly or indirectly impacted by the project, plan, or action
- Plan an accessible and transparent process to collaborate with those customers or groups that will be impacted
- Consider the needs of those with whom you will collaborate. Do they need childcare, translation services, after hours meetings, transportation, etc.



Distributional Justice



Distributional justice refers to the distribution of benefits and burdens across populations with the goal of ensuring that marginalized and vulnerable populations do not receive an inordinate share of the burdens or are denied access to benefits.

- This is understanding how communities are impacted, understanding the benefits and burdens of Company actions, decisions, policies, projects, etc.



Restorative Justice

- ▶ Restorative Justice is using regulatory outcomes to address or change inequities identified through the distributive justice process (the data collection).



What has Cascade done to make Energy Justice part of its daily operations?

2022

- Procured a low income needs assessment study

Cascade Natural Gas Corporation: Low-Income Rate Analysis for Washington

Prepared for:
Cascade Natural Gas Corporation

Prepared by:
*Forefront Economics Inc
H. Gil Peach & Associates, LLC*

with contributions from:
*Mark E. Thompson
H. Gil Peach*

May 31, 2022

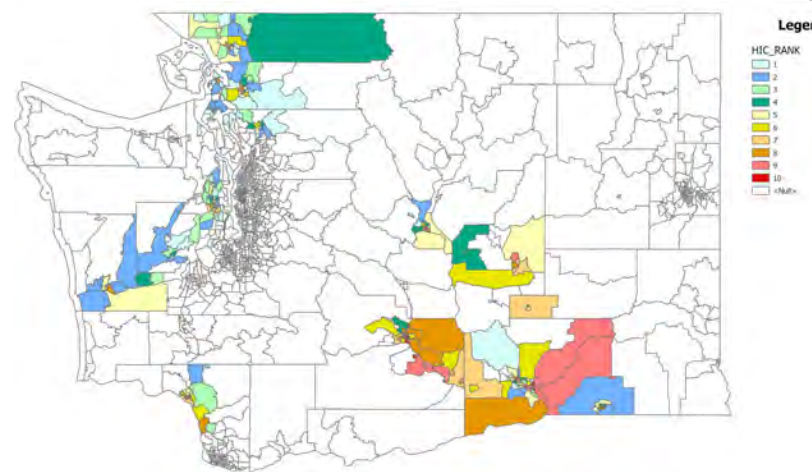


14

What has Cascade done to make Energy Justice part of its daily operations?

2023

- Mapped Cascade's Highly Impacted Communities
- Merged Highly Impacted Community data with billing data to identify correlations and trends which may point to inequities
- Mapped the census tracts most apt to be low-income per our Low-Income Propensity Model



What has Cascade done to make Energy Justice part of its daily operations?

2023

- Established an Equity Advisory Group
 - Comprised of seven members living in and representing different vulnerable populations
 - Monthly meetings on regulatory proceedings, filings, Company outreach, and planning



16

What has Cascade done to make Energy Justice part of its daily operations?

2023

- Improved accessibility of customer communications for linguistically isolated customers
 - Access to customer communications in multiple languages
 - Improved readability of translations
 - Working on providing all pdfs posted on cngc.com in both English and Spanish



17

What has Cascade done to make Energy Justice part of its daily operations?

2023

- Improved bill pay assistance by offering a bill discount and arrearage relief program (CARES)
 - CARES program designed in collaboration with the Company's Advisory Group
 - Piloting the use of community-based organization for outreach to hard-to reach populations



18

What will Cascade be doing to make Energy Justice part of its daily operations?

2025

- Continued engagement with the Washington Equity Advisory Group
 - Discuss the multi-year rate plan, IRP, Climate Commitment Act, potential pilot projects
- Establish the Oregon Equity Advisory Group
 - Identified vulnerable populations
 - Solicited interested community representatives
 - Next steps in 2025 will include selecting advisory group members and establishing regular meetings to begin collaboration



19

What will Cascade be doing to make Energy Justice part of its daily operations?

2025

- Continued engagement
 - Technical Advisory Group
 - CARES Advisory Group
 - Conservation Advisory Group
- Develop a set of questions that can be applied to projects and resource planning know as the Distributional Equity Analysis (DEA)
- Remain aligned with the other Pacific Northwest natural gas utilities



20

What else does Cascade need?

Cascade needs buy-in across the organization

Cascade needs all staff to begin considering equity as decisions are made and document those considerations

Cascade needs to continue to refine how it incorporates equity considerations



The integration of equity into Cascade's daily operations is necessary if we want positive regulatory outcomes.



BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
OREGON EQUITY ADVISORY GROUP CHARTER

EXHIBIT 202

November 2025

Cascade Natural Gas Corporation

Equity Advisory Group Charter

2025



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Definitions

Highly Impacted Community: Highly impacted communities in Oregon are those that meet specific criteria related to environmental health disparities, demographic factors, Socioeconomic indicators, Tribal or reservation status and Geographic vulnerability.

Vulnerable Populations: Communities that are more likely to be at higher risk for poor health outcomes in response to environmental harms, due to: (i) Adverse socioeconomic factors, such as unemployment, high housing and transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively affect health outcomes and increase vulnerability to the effects of environmental harms; and (ii) sensitivity factors, such as low birth weight and higher rates of hospitalization.

(b) "Vulnerable populations" includes, but is not limited to:

(i) Racial or ethnic minorities;

(ii) Low-income populations;

(iii) Populations disproportionately impacted by environmental harms; and

(iv) Populations of workers experiencing environmental harms.

Tribal Lands: "Indian country" as provided in 18 U.S.C. Sec. 1151, and also includes sacred sites, traditional cultural properties, burial grounds, and other tribal sites protected by federal or state law.

Environmental Justice Community: disadvantaged, underserved, or overburdened community, is a group within a certain geographic location that experiences disproportionate environmental harms and risks and may share certain socioeconomic conditions.

Equitable distribution: Fair and just, but not necessarily equal, allocation intended to mitigate disparities in benefits and burdens that are based on current conditions, including existing legacy and cumulative impacts, that are informed by cumulative environmental health impact analysis.

Environmental impacts: Environmental benefits or environmental harms, or the combination of environmental benefits and harms, resulting or expected to result from a proposed action.

Named Communities: Refers to Highly Impacted Community and Vulnerable Populations

Introduction

Cascade Natural Gas Corporation (Company or Cascade) a subsidiary of MDU Resources Group, Inc. firmly believes in contributing to the support of the communities we serve. Cascade customers span over 95 communities, 28 of them in Oregon where our commitment to support is represented in the form of conservation education, employee volunteerism, corporate giving, academic scholarships, matching funds for employee donations made to local non-profit organizations, environmental stewardship, and community environmental stewardships.

The Company is forming an Equity Advisory Group (EAG) that will provide a forum for individuals within the community and Community-Based Organizations (CBO) to inform the development of energy equity in some of the highest economically disadvantaged communities. Energy equity entails reducing barriers to highly impacted communities, increasing access to affordable energy for overburdened customers, and ensuring the energy future does not disproportionately impact marginalized populations and or communities.

Purpose

The EAG is designed to inform the development of the Company's energy equity processes and provide guidance on other company activities relevant, but not limited to, community engagement, energy efficiency, regulatory obligations, bill payment assistance programs, resource planning, decarbonization, expanding access and removal of barriers for underserved and overburdened customers.

The EAG will have representatives from multiple communities across Oregon working together to provide the Company with a deeper understanding of historically underrepresented individuals and communities with lived experience, different perspectives, and voices that have habitually been unheard.

The Company's commitment to its customers is foundational to its business. The development of the EAG will bring forward important discussions to improve equitable distribution of energy benefits for Cascade customers and in doing so reduce burdens to highly impacted communities and vulnerable populations. Throughout this process and from a place of acceptance and understanding the Cascade team welcomes feedback, recommendations, and advice from its EAG members.

Goals & Objectives

In year one of the EAG, Cascade seeks to establish a clear understanding of the goals, outcomes, and objectives of the EAG. The process will begin with understanding the members' goals and objectives in addition to building a working relationship. The process may include recommendations for community engagement with individuals in named communities, direct feedback and review on equity issues to mitigate barriers in customer participation, and

evaluations of recommended strategies to improve energy equity. Initial areas of focus for the EAG will be providing feedback on program planning, development, implementation and the Integrated Resource Plan.

Cascade will leverage existing advisory groups such as the Cascade Natural Gas Oregon Low-Income Advisory Group, and the Technical Advisory Group (TAG) for input on EAG topics and potential areas of interest for EAG members.

The EAG will operate within the Company's eight core values: Integrity, Safety, Respect, Excellence, Diversity, Inclusion, Innovation and Stewardship.

Cascade Natural Gas Commitments

The Company is committed to an inclusive environment that respects the differences and embraces the strengths of its diverse community to further its corporate vision. The Company views diversity through a broad lens. Diversity is who we are as individuals, including the differences that make each person unique.

If diversity is who we are, then inclusion is what we do. The Company respects individuals' differences and supports an inclusive culture where all feel valued and are treated equally.

Cascade makes the following commitments to its EAG Members:

- ❖ Foster an environment which respects and values diversity and inclusiveness
 - Utilize a third-party facilitator to establish the beginning of the charter, processes, methods of communication, and as needed for meeting facilitation, etc.
- ❖ Understand and acknowledge the history in which current systems such as energy regulation were formed
- ❖ Provide clear parameters regarding the decision-making power and/or role of the EAG throughout the formation and implementation process
- ❖ Provide resources to EAG members to enable understanding of topics as needed
- ❖ Commit to a continuous learning process
- ❖ Remain open to new ideas, and diverse experiences and opinions of all
- ❖ Respect and understand the role of the facilitator
- ❖ Be accountable for EAG feedback and recommendations
 - In each meeting, Cascade shall bring back to the EAG an update on actions items, deliverables that were discussed in the prior month and recommendations from the EAG members
- ❖ Welcome collaboration and joint efforts to create topics for discussion

Equity Advisory Group Members

Recruitment and Representation

Prioritizing traditionally underserved and highly impacted communities with lived experiences, the Company led multiple outreach conversations with partners, individuals, and CBO's with the intention of recruiting Equity Advisory Group members. In addition, the Company held an email campaign in both Spanish and English to target some of the most highly impacted communities, ensuring Cascade's EAG held proper representation in communities which have been underrepresented in the past.

The EAG members participating currently serve or identify as vulnerable population within Cascade service territory who do not currently have representation within the utility industry. EAG members are intended to represent a historically underrepresented community including, but not limited to

- ❖ Tribes;
- ❖ Representatives from highly impacted communities and vulnerable populations, that may include seniors, veterans, Black, Indigenous and People of Color (BIPOC), low-income and individuals living with disability;
- ❖ Public Health Advocates;
- ❖ Environmental Justice Advocates; represent diversity in race, ethnicity, age, and gender, urban and rural areas; and
- ❖ Additional individuals/organizations that may be identified by the group members

Cascade will begin recruitment for new EAG members in May of every year in preparation for any vacancies the EAG may have at the start of a new year.

Term of Service

Initial term for EAG members will run for a length of two (2) years with the option to continue beyond the said years. Participation is to run on a calendar term January to December. Recruitment for EAG members will take place as needed to ensure Cascade has members to replace any EAG who may drop off throughout the year.

Year 1: January 2027 - December 2027

Year 2: January 2028 - December 2028

The official kick-off of the initial EAG is contingent on the development of an Environmental Justice (EJ) tool to identify named communities. The Oregon Environmental Justice Council provides notice regarding the EJ tool developments delays and extension on the Office of Oregon Governor Tina Kotek. The EJ tool is scheduled for development December 31, 2027.

[Governor of Oregon : EJ Mapping Tool : Policies : State of Oregon](#)

Meetings

Meetings will be held in a virtual setting to accommodate all members across multiple counties in the State of Oregon. EAG meeting details are outlined below.

- ❖ EAG meets once (1) a month for twelve (12) months
- ❖ Time commitment two (2) hours per month
 - Thirty (30) minutes reserved for EAG meeting prep (i.e., review agenda items, recommendation, discussion topics and slide deck review.)
 - One and half (1.5) hours reserved for virtual EAG meeting

Meeting dates and times to be defined during the EAG introductory meeting in collaboration with its members and Cascade staff.

All meetings will be recorded and available to EAG members and Company representatives upon request.

Compensation

Individuals and CBOs who serve on the EAG are provided a stipend for their participation per meeting. The stipend is intended to reduce barriers that may otherwise keep individuals from joining Cascade's efforts to address energy equity issues surrounding vulnerable populations and highly impacted communities.

Stipend: \$200

Members must be in attendance to receive stipend for each meeting, Compensation will not be provided for missed meetings.

EAG meetings are held on Fridays, payment request for stipends will be processed the following business day, on Monday. To allow time for proper routing process, approvals and accounts payable final review, members should expect payment anywhere between 10 to 15 business days from the date of each EAG meeting.

Roles and Responsibilities

Participating members must commit to;

- ❖ Attend meetings
- ❖ Provide recommendations for community engagement with individuals in named communities
- ❖ Provide feedback and review on equity issues to mitigate barriers in customer participation

- ❖ Actively participate in discussions regarding the Company's programs, evaluations of recommended strategies to improve energy equity, and other topics related to the operations of the Company
- ❖ Provide advice, experience, lived experience, and perspectives from the communities of which members serve and/or live. This may include social, economic, racial, tribal, and environmental
- ❖ Assist in identifying best practices solutions for improving and expanding energy equity
- ❖ Understand the regulatory process and policy environment in which Cascade must operate
- ❖ Be committed to engaging in an ongoing learning process, have an openness to new ideas, and respect others' opinions and experiences

Company Representatives

Representation for the Company's internal group includes:

Facilitator: Noemi Ortiz

Cascade Department Advisors:

- ❖ Regulatory Affairs: Jennifer Gross
- ❖ Energy Efficiency: Kathy Wold
- ❖ Integrated Resource Planning: Brian Robertson
- ❖ Customer Experience: Daniel Tillis
- ❖ Other Guest: TBD

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
OREGON ENVIRONMENTAL JUSTICE
MAPPING TOOL EXTENSION

EXHIBIT 203

November 2025



Oregon Environmental Justice Mapping Tool Extension

Oregon Environmental Justice Mapping Tool Extension Rationale

Presented to the Oregon
Environmental Justice Council on
August 7, 2024.

AUGUST 7, 2024 RECORDING
LINK

Project Initiation Delayed

Key staff not hired
until a year after HB
4077 enrollment in
March 2022

EJC not regularly
meeting until June
2023

EJC was established
at the same time of
project initiation

Onboarding new EJC
members

Community Input Delayed

Statutory listening
sessions have not
commenced

- Additional
opportunities for
stakeholder and
public input being
considered

*EJC desires
community input to
contribute to
decision making*

Difficulty Hiring a Facilitator

Lack of participant
compensation for
listening sessions

Limited budget of
\$40,000

CNGC/203
Ortiz/2

Project Complexity

Participation from multiple
state agencies required

Increased complexity

- Decision Point 1
introduced an additional
subdomain: Built
Environment
- Decision Point 3
introduced six indices
rather than one statewide
index

Tribal communities are
environmental justice
communities and tribal
governments are sovereign

Executing listening sessions
with technical development
increases complexity

Proposals

Due Date December 31, 2026

- September 2025 Deliverable: Initial EJ Index Demonstration
- 2025 EJC Meetings: Potentially 10
- Potential funding from new biennium
- Ability to use \$50,000 from short session towards additional feedback
 - Surveys
 - Conferences
 - Community Events

Due Date December 31, 2027

- December 2025 Deliverable: Weighting Methodology Complete
- 2025 EJC Meetings: Potentially 6
- Potential funding from new biennium
- Ability to use \$50,000 from short session towards additional feedback
 - Surveys
 - Conferences
 - Community Events

EJ Mapping Tool Project Team Testimony – State

Melissa Foltz – Inventory Team

Eric Main – Methodology Team

Hoang-Van Nguyen – EJC Liaison
Team

Inventory

The data collection process is dependent on the EJC's initial (draft) selection of indicators for the EJ index. Following indicator selection, the data inventory workgroup will reach out to agencies to begin the data collection process. The data collection process is on the critical path prior to the sensitivity analysis to be performed by the methodology workgroup.

Data collection is expected to take a minimum of two months. Agencies will be asked to transform their data into census tract boundaries prior to delivering to methodology team. The Data Inventory workgroup will work with the Methodology workgroup to provide direction to agencies to successfully complete the transformation. Data submission is expected to take some agencies additional time to complete the process due to complex data sets or limited resources.

Methodology

Feedback during beta testing may require the Methodology Workgroup and Environmental Justice Council to revisit and revise 1 or more of the 10 decision points. Revisions to data and/or indicator weighting will require 1 to 2 months for data refinement and sensitivity analysis.

CNGC/203
Ortiz/4

EJC Liaisons

The liaison team will lead identify which personnel will be included in focus groups and guidance development.

Guidance development is contingent on the INR beta tool being available for focus group discussion.

Institute for Natural Resources

EJ Mapping Tool Project Team Testimony – Oregon State University

Janine Salwasser & Myrica McCune
– Oregon State University Institute
for Natural Resources

The process to develop a final EJ Mapping tool interface is dependent on PRC delivering to INR the final indices and documentation which is dependent on the Inventory group delivering final data to PRC which is dependent on completion of all the listening sessions focused on index selection and all the agencies delivering their data in a form that can be used by PRC.

For development of the EJ Mapping tool interface, INR will require at least six months to develop a beta version of the tool, followed by a 2-month user evaluation process performed online (focus groups with users and/or community listening sessions, one-on-one beta testing with 4-5 users, EJC member tool testing), followed by one to two months to make any refinements to EJ Mapping tool interface before EJC signs off on the final tool at an EJC meeting.

Population Research Center

At this stage PRC need to extend arise from dependencies in workflow with other agencies.

PRC Deliverables

PRC will deliver two main items:

- **Dataset with Socio-Demographic Variables from census.org**
- **Online Dashboard to Showcase and Customize the Initial Index**

Input Requirements:

1. Dataset Production:

- **Variables Inventory:** To produce the dataset, PRC needs to receive the list of variables from the inventory teams.
- **Timeline:** Once PRC receives the inventory (set to be delivered by March 2025), we will need a period of 1 to 2 months to produce the dataset.
- **Integration Period:** After the dataset is ready, we will need an additional 2 to 3 months to integrate it into our tool.
- **Completion Date:** If Data Inventory is available by March 2025, PRC will need until July 2025 to collect and integrate the demographic dataset.

2. Initial EJ Index Mockup Creation:

- **Weighting and Methodology:** To create the Initial EJ Index Mockup, PRC requires the final weighting and methodology provided by the methodology workgroup.
- **Replication Period:** Once the weighting methodology work is complete (set to be finalized by July 2025), PRC will need about 3 months to replicate the method in our tool.
- **Customization Feature:** The purpose of this replication is to allow customization of the weights and constituent indicators.
- **Completion Date:** If methodology work is finalized by July 2025, PRC will deliver the Initial EJ Index Mockup by November 2025.

EJ Mapping Tool
Project Team
Testimony – Portland
State University

Ethan Sharygin & Gilbert Moncho –
Portland State University
Population Research Center

Adopted Extension

Environmental Justice Mapping Tool
Due Date: **December 31, 2027**



BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
MBE TRACKING SUMMARY OF SOLICITED BIDDERS

EXHIBIT 204

November 2025

MBE TRACKING

Summary of Solicited Bidders

REQUIRED FOR CONTRACTS OVER \$150,000 PER OPS 7, SECTION 6.1.4

Company Name: SELECT

Purchase Order #: _____

DOCUMENTATION OF PURCHASES/SUBCONTRACTS OVER \$150,000

Purchase Order/Subcontract Awarded To: _____

Date: _____

COMPANY SOLICITED	DID THEY SUBMIT A BID	MBE CATEGORY info can be found in the JDE Address Book (or at https://dsbs.sba.gov/ search/dsp_dsbs.cfm)	REASON FOR SELECTION or NON- SELECTION Choose from options A through F below or provide explanation
	SELECT		
	SELECT		
	SELECT		
	SELECT		
	SELECT		
	SELECT		
IF A MINORITY BUSINESS WAS NOT SOLICITED PROVIDE REASON Choose from options 1 through 6 below or provide an explanation.			

If a minority business was not **solicited**, please provide reasoning: _____

Some examples of why a minority business may not be solicited:

- 1- Government/Customer Directed Sources
- 2- Follow-up work to previous P.O./contract (awarded to same supplier)
- 3- Company-wide Purchasing Agreement exists for this product/service
- 4- Sole Source (only approved supplier, proprietary item)
- 5- No known Small Businesses (checked US Small Business Administration, <https://www.sba.gov>, & other sources)
- 6- MINORITY BUSINESS NOT SOLICITED FOR OTHER REASON - EXPLAIN IN TABLE

Reasons for not selecting a minority business

- A- Company did not offer the lowest price
 B - Company was found to be not qualified
 C - Company was not the best offer for reasons other than price
 D - Company did not respond to the solicitation
 E - Company stated it was not interested in the work
 F - OTHER – EXPLAIN IN TABLE

MBE CATEGORIES:

1. Small Business (including ANC's and Indian Tribes)
2. Small disadvantaged businesses (including ANC's and Indian Tribes)
3. Women-Owned Small Businesses
4. HUBZone Small Business
5. Veteran-Owned Small Business
6. Service-Disabled Veteran Owned Small Businesses
7. Other than small business or other MBE category - fill in the description if other MBE.

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

**Cascade Natural Gas Corporation
DIRECT TESTIMONY OF DAN L. TILLIS**

EXHIBIT 300

November 2025

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I. INTRODUCTION

1 **Q. Please state your name and business address.**

2 A. My name is Dan L. Tillis. My business address is 555 South Cole Road, Boise,
3 Idaho 83709.

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

5 A. I am employed by the Montana-Dakota Utilities Company ("Montana-Dakota"), a
6 subsidiary of MDU Resources Group, Inc. ("MDU Resources") that provides
7 centralized utility services to MDU Resources' subsidiary utilities, including Cascade
8 Natural Gas Corporation ("Cascade" or "Company"). I am the Director of Customer
9 Services for Cascade, Intermountain Gas Company, Montana-Dakota, and Great
10 Plains Natural Gas Company.

11 **Q. How long have you been employed by Montana-Dakota?**

12 A. I have been employed by Montana-Dakota since January 2019.

13 **Q. What are your duties as Director of Customer Services?**

14 A. As the Director of Customer Services, I lead the Customer Experience Team ("CXT"),
15 which includes customer experience and journey management; digital experience on
16 self-service platforms; energy assistance programs and credit and collections
17 operations; partnerships with external advisory groups; and emergency and outage
18 event response. These groups are charged with enhancing the end-to-end customer
19 experience, expanding and improving digital customer service platforms, increasing
20 access to energy assistance programs equitably, and managing customer arrearages
21 and collections with the goal of keeping customers connected to their natural gas
22 service.

23 **Q. Briefly describe your educational and relevant employment experience.**

24 A. I am a 2001 graduate of Webster University with a Bachelor of Arts degree in Business
25 Administration. In 2008, I earned my Master of Business Administration degree from

1 Keller Graduate School of Management. In June 2022, I completed the Energy
2 Executive Course at University of Idaho. I joined Montana-Dakota as the Director of
3 Customer Services in January 2019. Prior to joining Montana-Dakota, I worked at
4 CenturyLink for 19 years with the majority of that time in customer service leadership
5 positions.

II. SCOPE AND SUMMARY OF TESTIMONY

6 **Q. What is the scope of your testimony in this proceeding?**

7 A. My testimony discusses Cascade's leadership in customer service and energy
8 assistance, and how the Company has responded proactively to regulatory changes
9 and the needs of Oregon's most vulnerable customers. Through innovative programs
10 and collaborative partnerships, Cascade has dramatically expanded its outreach,
11 improved affordability, and set a new standard for utility service in the region. An
12 overview of each topic I discuss is below:

- 13 • First, I describe Cascade's customer service efforts and detail Cascade's
14 record as a leader in providing good service and communication to its
15 customers.
- 16 • Second, I provide an overview of Cascade's programs and offerings that work
17 towards keeping natural gas bills affordable and in turn, keeping customers
18 connected to their natural gas service.
- 19 • Third, I provide a more in-depth look at Cascade's bill payment assistance
20 programs, including its Energy Discount Program ("EDP") and complementary
21 arrearage forgiveness program, the Oregon Low-Income Bill Assistance
22 ("OLIBA") program.
- 23 • Fourth, I discuss the financial need experienced by high-energy burdened
24 customers in Cascade's Oregon service territory and how Cascade meets that
25 need.

1 • Fifth, I discuss Cascade’s involvement in Public Utility Commission of Oregon
2 (“Commission”) docket UM 2211 and how it has shaped Cascade’s programs
3 and practices, as well as Cascade’s plans to contemplate changes to utility
4 rates within this docket.

5 • Finally, I provide an overview of Cascade’s ongoing and planned future work
6 for the purpose of bringing energy justice to Cascade’s income-qualified,
7 vulnerable, and hard-to-reach customers.

8 **Q. Do you sponsor any exhibits in support of your testimony?**

9 A. Yes, I sponsor the following exhibits in support of my testimony:

- 10 • Exhibit CNGC/301 – J.D. Power Summary for Cascade Natural Gas
11 Corporation
- 12 • Exhibit CNGC/302 – Oregon Low-Income Rate Analysis (“LIRA”)
- 13 • Exhibit CNGC/303 – Cascade’s Energy Burden Assessment (“EBA”) Report
14 and Summary
- 15 • Exhibit CNGC/304 – Tariff Schedules 32, 33, and 36
- 16 • Exhibit CNGC/305 – Oregon Low-Income Program Participation Propensity
17 Analysis
- 18 • Exhibit CNGC/306 – Oregon Language Access Plan

III. CUSTOMER SERVICE OVERVIEW

19 **Q. Please provide an overview of the customer service options available to**
20 **Cascade customers.**

21 A. Cascade’s CXT provides customers multiple options for communicating with and
22 requesting service from the Company. Cascade communicates with customers
23 through U.S. mail, email, telephone, smart phone, social media platforms, text, web-
24 based applications, and other online applications.

1 Cascade provides customers with toll-free access to customer service
2 representatives who handle utility service requests and service or billing inquiries. The
3 call center answers calls received from 7:30 a.m. to 6:30 p.m., Pacific time, Monday
4 through Friday. The Company is also staffed to handle emergency calls 24 hours per
5 day, seven days per week. A scheduling center, which is part of the CXT, transmits
6 electronic service orders to the mobile terminals placed in the Company's fleet of
7 service and construction vehicles. This network allows Cascade to respond quickly to
8 customer requests and emergency situations.

9 The Company's customer support team monitors email and responds to
10 customers' requests during regular business hours. Additionally, the CXT provides
11 online chat assistance through Cascade's online customer portal from 8:00 a.m. to
12 3:00 p.m., Pacific time, Monday through Friday, as well as 24/7/365 messaging
13 through Facebook and Instagram Messenger. The CXT also continues to increase and
14 improve online self-service options on its website. Customers can easily enroll and
15 manage their utility accounts through online account services found on the Company's
16 website.¹ The CXT provides customers with many means to make a payment, request
17 to start or stop service, set up electronic billing, review usage and payment history,
18 apply for bill payment assistance, transfer service, and enroll for account, outage,
19 energy efficiency, and industry or Company news email and text notifications.

20 **Q. How does Cascade's customer service compare with the customer service**
21 **provided by peer utilities?**

22 A. According to J.D. Power, Cascade is a top performer among its peers.² J.D. Power
23 assesses customer satisfaction of natural gas customers annually by surveying
24 residential customers on a number of key index factors including safety and reliability,

¹ See www.cngc.com.

² See CNGC/301, Tillis.

1 billing and payment, price, corporate citizenship, communications, and customer
2 care.³ In 2024, Cascade was ranked second in overall customer satisfaction in the
3 West Midsize segment in the J.D. Power Residential Natural Gas Customer
4 Satisfaction Study.⁴ In each of the last twelve years, Cascade placed either first or
5 second in the West Midsize segment, ranking first six times and second six times.⁵
6 Please see Exhibit CNGC/301 for a historical overview of Cascade's overall customer
7 satisfaction ranking as measured by J.D. Power.

IV. BILL MANAGEMENT OPTIONS

8 **Q. Does Cascade provide any bill management options for customers?**

9 A. Yes, Cascade offers the following bill management options that assist customers in
10 paying their natural gas bill:

- 11 • Budget Payment Plan. A residential customer on Cascade's Budget Payment
12 Plan receives a monthly bill in the amount of one-twelfth of their average annual
13 usage. This payment option allows residential customers to avoid extreme
14 fluctuations from month to month due to weather or usage changes. Budget
15 Payment Plans are offered to residential customers in accordance with the
16 Company's Rule 6, Billing.⁶
- 17 • Time-Payment Agreements. A residential customer who expresses difficulty in
18 paying a bill may enter into a time-payment agreement from 2 to 24 months,
19 extending the due date on any unpaid prior balance.
- 20 • Auto-Pay. Auto-pay automatically withdraws a customer's monthly payment for
21 natural gas usage from the customer's credit card, debit card, or bank account,

³ See *U.S. Gas Utility Residential Customer Satisfaction Study*, J.D. Power (Nov. 12, 2025), <https://www.jdpower.com/business/us-gas-utility-residential-customer-satisfaction-study>.

⁴ CNGC/301, Tillis/2.

⁵ CNGC/301, Tillis/2.

⁶ See *Cascade Nat. Gas. Corp.*, P.U.C. Or. No. 10, Rule 6, Sheet Nos. 6.2-6.3 (issued Feb. 28, 2017).

as authorized by the customer. This option allows customers to attend to their busy lives without the concern that they may miss making a payment for service received.

Q. What financial assistance programs does Cascade offer for income-qualified customers?

A. Cascade offers the following programs to income-qualified customers to help them stay connected to their natural gas service, reduce their household energy burden, and maintain a comfortable home environment:

- Energy Discount Program.⁷ On October 1, 2022, Cascade began offering EDP to customers with a household income less than or equal to 150 percent of the Federal Poverty Level (“FPL”) or less than or equal to 60 percent Oregon State Median Income (“SMI”). Income-qualified customers enrolled in EDP receive one of the four monthly bill discounts detailed in Table 1 below:

Table 1 – EDP Discount Tiers

Tier	Tier Levels	Energy Discount
1	0-25% FPL, 0-15% SMI	95%
2	26-50% FPL, 16-30% SMI	70%
3	51-100% FPL, 31-45% SMI	45%
4	101-150% FPL, 46-60% SMI	15%

- Oregon Low-Income Bill Assistance Program.⁸ When EDP was launched in 2022, the OLIBA program was revised from being a grant program to being an arrearage forgiveness program to complement EDP by providing additional financial relief during crises. Customers with a past-due balance who meet the income-qualifications for EDP may receive one arrearage relief grant per program year. Cascade management may authorize exceptions to this once-

⁷ The Company's Schedule 36, Energy Discount Program, is included as an exhibit to this testimony. See CNGC/304, Tillis/8-9.

⁸ The Company's Schedule 32, Oregon Low-Income Bill Assistance Program, is included as an exhibit to this testimony. See CNGC/304, Tillis/1-2.

per-year limit, if deemed necessary. The OLIBA grant is offered upfront, without stipulations upon the customer and is equal to a percentage of the customer's arrearage balance. Table 2 below shows the percentage of the past-due balance paid per household income level.

Table 2 - OLIBA Arrearage Forgiveness Grant Tiers

Tier	Tier Levels	Grant Percentage
1	0-25% FPL, 0-15% SMI	90%
2	26-50% FPL, 16-30% SMI	86%
3	51-100% FPL, 31-45% SMI	83%
4	101-150% FPL, 46-60% SMI	80%

- Winter Help. Winter Help, funded by customer donations and Cascade shareholders, provides assistance to income-constrained customers who are at risk of disconnection for non-payment. A Winter Help grant of up to \$300 is applied to a qualifying Oregon residential customer's account, when the customer is scheduled to be disconnected from service due to an unpaid past-due amount or is requesting to be reconnected after a disconnect for non-payment, and the Low-Income Home Energy Assistance Program ("LIHEAP") and/or OLIBA grants, which are applied first, are less than the amount required to prevent the disconnection or to cover the amount required for reconnection. A Winter Help grant is intended to keep qualifying customers connected to service and is available once per household per program year.
- Low-Income Home Energy Assistance Program. Cascade partners with Community Action Agencies ("CAAs") within its service territory to provide customers with access to federal grants that can be used to pay down a past-due balance or future billings for natural gas service. Due to the current presidential administration's focus and priorities, which may result in federal budget cuts to social programs, the accessibility to LIHEAP may be limited during the 2025-2026 heating season; as such, Cascade is aware that its

1 programs may need to “fill in the gap” for customers who are used to receiving
2 LIHEAP benefits. Cascade intends to track this so that mitigating proposals or
3 additional outreach for existing programs and assistance may be considered
4 to prevent customers from experiencing negative outcomes due to LIHEAP
5 cuts.

- 6 • Conservation. Through its partnership with the Energy Trust of Oregon
7 (“Energy Trust”), Cascade offers rebates to all Oregon-based core customers
8 for the installation of weatherization measures and high efficiency gas-fired
9 appliances. Other programs that Energy Trust administers on behalf of
10 Cascade include Savings Within Reach, which offers enhanced incentives for
11 income-qualified residential customers seeking to make their home more
12 energy efficient, and the Manufactured Home Replacement program, which
13 provides income-qualified customers living in a manufactured home with
14 funding of up to \$16,000 to be applied towards a newer, more energy efficient
15 manufactured home. The installation of conservation measures provides
16 customers with an enduring means to lower bills through reduced energy
17 consumption.

- 18 • Oregon Low-Income Energy Conservation Program (“OLIEC”).⁹ OLIEC is a
19 Cascade program administered by CAAs that offers income-qualified
20 customers the installation of energy efficiency measures at no direct cost.
21 Cascade supports conservation as the most enduring way to lower a
22 customer’s bill while improving the home’s comfort level.

⁹ The Company’s Schedule 33, Oregon Low-Income Energy Conservation Program, is included as an exhibit to this testimony. See CNGC/304, Tillis/3-7.

V. EDP AND OLIBA

1 **Q. Does Cascade believe EDP and OLIBA are effective programs?**

2 A. Yes. Cascade believes EDP and OLIBA are well-conceived programs, designed to
3 address both ongoing affordability concerns and unplanned crises without being overly
4 complex or difficult to communicate to customers. Cascade believes EDP and OLIBA
5 are the best bill payment assistance programs the Company has offered to Oregon
6 customers to date.

7 **Q. How are customers better served by EDP and OLIBA, as offered today, than they**
8 **were prior to the assistance redesign that occurred in 2022?**

9 A. While Cascade continues to be proud of its legacy OLIBA program that offered
10 financial grants to low-income customers regardless of whether the customer had a
11 past-due amount or not, EDP and the complementary arrearage relief grants provided
12 under the revised OLIBA program offer a broader range of assistance with program
13 enrollment numbers proving that the current programs have an improved reach over
14 the legacy offering. More customers are being served, meaning more of the need
15 within the Company's service territory is being met. Table 3 below shows bill
16 assistance enrollment from 2018 through 2025. In 2020 through 2022, Cascade
17 offered its legacy OLIBA grant program. Starting October 1, 2022 (enrollment results
18 are reflected in year 2023 in Table 3), Cascade began offering EDP and OLIBA
19 arrearage forgiveness grants. Table 3 shows how significantly improved the program
20 reach is with the new program design. From program year 2018 through November 12,
21 2025, the number of accounts receiving assistance from EDP/OLIBA increased by
22 5,967 percent, demonstrating the exponential growth experienced in the program
23 penetration of EDP and OLIBA.

**Table 3 – Cascade’s Bill Assistance Enrollment,
2018 through November 12, 2025**

Year	OLIBA	EDP	Total Customers Served
2018	114	n/a	114
2019	168	n/a	168
2020	126	n/a	126
2021	260	n/a	260
2022	317	n/a	317
2023	1,262	3,025	3,025 ¹⁰
2024	1,612	4,072	4,072
2025	1,530	6,916	6,916

1 **Q. How did the Company achieve the marked increase in reach it has experienced**
2 **with the post-2022 EDP and OLIBA programs?**

3 **A.** The significant increase in program penetration can largely be attributed to three
4 changes.

5 First, barriers to program entry have been removed. Namely, customers may
6 self-attest to their household income to qualify for the EDP and OLIBA programs. The
7 programs include no punitive claw backs if the income is inadvertently or otherwise
8 misrepresented.

9 Second, starting in 2022, the programs are co-administered by Cascade and
10 the CAAs within the Company's service territory. Prior to the program re-design,
11 OLIBA was exclusively administered by CAAs. Hundreds of customers call Cascade's
12 Customer Service phone number daily. Each touchpoint between a Cascade
13 Customer Service Representative and a customer is an opportunity to communicate
14 the availability of bill payment assistance and if applicable, enroll a customer.
15 Customers may also apply on the Company's website. The current programs now take
16 advantage of these Company touchpoints.

¹⁰ Note that a customer receiving OLIBA is also receiving EDP.

1 Third, program outreach is improved as Cascade has made concerted efforts
2 to extend its messaging to hard-to-reach customers by addressing language and
3 literacy barriers when communicating about EDP and OLIBA.

4 **Q. How does Cascade communicate its bill assistance programs to its customers?**

5 A. Cascade is communicating information about EDP and OLIBA using multiple media
6 channels, including:

- 7 • Information included on the Company's website on an ongoing basis;
- 8 • Bill inserts, included in at least two bill cycles each year;
- 9 • Bill onserts (information provided on customer bills) on every non-final
10 residential bill with a past-due balance greater than \$50 each month thereafter;
- 11 • Postcards to every customer who has a past-due balance greater than \$50 and
12 who is not enrolled in EDP, as well as to every customer not yet enrolled in
13 EDP, regardless of past-due balance, who resides in a premise designated as
14 likely to be low-income (deciles 1 and 2) as determined by Cascade's Low-
15 Income Propensity Model, which is a database created by an external
16 contractor for the purpose of connecting with income-qualified customers.¹¹
17 Cascade is transitioning from using its Low-Income Propensity Model to an
18 updated customer database provided by Empower Dataworks as part of its
19 work to provide the Company with the 2025 EBA ("2025 EBA Dashboard");
- 20 • Emails to customers who opted in to receive energy assistance emails and
21 who have a past-due balance greater than \$50 and who have not enrolled in
22 the EDP bill discount rate, as well as to every customer not yet enrolled in the
23 EDP bill discount rate, regardless of past-due balance, who resides in a
24 premise designated as likely to be low-income (deciles 1 and 2) as determined

¹¹ A presentation prepared by Forefront Economics summarizing Cascade's Low-Income Propensity Model is provided as Exhibit CNGC/305.

1 by Cascade's Low-Income Propensity Model.¹² As stated above, Cascade is
2 transitioning to using the 2025 EBA Dashboard to identify income-qualified
3 customers;

- 4 • Social media posts running periodically throughout the heating season;
- 5 • Google Ads, consisting of graphic, text, and video advertisements, displayed
6 across Google search results and websites running periodically throughout the
7 heating season for the demographic target market for energy assistance;
- 8 • Third-party website banner ads for the demographic target market for energy
9 assistance, including graphic and text advertisements, displayed beginning in
10 October each year and running throughout the heating season;
- 11 • Streaming audio and video advertisements played beginning in October each
12 year and running periodically throughout the heating season on streaming
13 services and programs likely utilized by the demographic target market for
14 energy assistance;
- 15 • Automated outbound and recurring monthly calls to customers who are not
16 enrolled in the EDP discount rate and who have a past-due balance greater
17 than \$50, as well as to every customer not yet enrolled in the EDP bill discount
18 rate, regardless of past-due balance, who resides in a premise designated as
19 likely to be low-income (deciles 1 and 2) as determined by Cascade's Low-
20 Income Propensity Model.¹³ As stated above, Cascade is transitioning to using
21 the 2025 EBA Dashboard to identify income-qualified customers;
- 22 • Personal outreach through door tags placed on customer doors for past-due
23 accounts not yet enrolled in the EDP bill discount rate and at premises is
24 designated as likely to be low-income (deciles 1 and 2) as determined by

¹² See CNGC/305, Tillis/17.

¹³ See CNGC/305, Tillis/17.

Cascade's Low-Income Propensity Model.¹⁴ As stated above, Cascade is transitioning to using the 2025 EBA Dashboard to identify income-qualified customers; and

- EDP/OLIBA door tags provided to customers or placed in a prominent location on a customer's premise when a Cascade Service Mechanic is on premise to complete a disconnection for non-payment.

Q. How does Cascade address the linguistic barriers experienced by its customers?

A. Cascade has made significant strides to address the language barriers within its service territory. Cascade offers inbound call, email, and chat support in both English and Spanish, as well as interpretive services for over 240 other languages utilizing Lionbridge. On July 21, 2025, Cascade implemented a new interactive voice response ("IVR") system which provides enhanced customer service options, including offering self-service IVR options in Spanish as well as allowing Spanish-speaking customers the ability to route directly to a bilingual Cascade call center agent. Written communications are generally provided in English and Spanish. Users can translate Cascade's website into Spanish, Chinese, Filipino, Punjabi, Hmong, Indonesian, Japanese, Korean, Vietnamese, Khmer, Romanian, Russian, Somali, Swahili, Ukrainian, and French. All bill inserts are provided in English and Spanish, including all EDP and OLIBA program communications. Cascade is also in the process of translating all PDFs posted on its website to Spanish; this includes all of Cascade's tariff. PDF documents can be translated into other languages upon customer request.

In 2025, Cascade also proactively engaged Empower Dataworks to develop a Language Access Plan which identifies the language needs and the literacy limitations

¹⁴ See CNGC/305, Tillis/17.

1 within Cascade's service territory and recommends actions to further address
2 language barriers. Overall, the plan found that Cascade has done a good job adapting
3 to its customers' non-English needs while providing recommendations for continued
4 refinement. This plan is provided as Exhibit CNGC/306.

5 The Language Access Plan was presented to Cascade's Energy Assistance
6 Advisory Group on October 23, 2025, which responded positively both to the contents
7 of the plan as well as Cascade's decision to explore linguistic barriers. The action
8 items in the plan include recommendations to translate critical communications to
9 Spanish, use consistent Spanish terms and universal icons and symbols in
10 communications, and create a dedicated language access website.¹⁵ Cascade has
11 met internally to discuss its ability to implement the action items. The Company will
12 collaborate with its Energy Assistance Advisory Group on the priority and schedule for
13 fulfilling the recommendations found in the plan.

14 **Q. What is the role of Cascade's Energy Assistance Advisory Group?**

15 A. Cascade's Energy Assistance Advisory Group, which is comprised of interested
16 parties and representatives from Commission Staff ("Staff"), the Oregon Citizens'
17 Utility Board, Community Action Partnership of Oregon, and CAAs within Cascade's
18 Oregon service territory, meets monthly to discuss all topics related to EDP, OLIBA,
19 income-qualified weatherization programs, and serving income-qualified customers.
20 The Company and the Energy Assistance Advisory Group's discussion topics include
21 programmatic changes, communication strategies, EDP and OLIBA tariff filings,
22 administrative issues, observations with program delivery, and docket UM 2211 status
23 updates. Cascade's continued collaboration with its Energy Assistance Advisory
24 Group provides a forum for learning, adapting, and evolving Company programs and

¹⁵ CNGC/306, Tillis/23.

1 outreach to successfully meet its most vulnerable customers' needs in reducing
2 energy burden.

VI. NATURAL GAS BILL AFFORDABILITY

3 **Q. How does Cascade identify the financial need customers are experiencing in its**
4 **service territory?**

5 A. Cascade has had two EBAs performed to provide analysis of the number of customers
6 experiencing an energy burden of 2.5 percent or higher, where energy burden is the
7 sum of annual natural gas bills divided by the gross annual household income. While
8 Cascade provides energy assistance to all low-income households in its service
9 territories, the EBA analysis identifies the financial need within Cascade's service
10 territory as the dollar amount needed to bring low-income, high energy-burdened
11 customers to an energy burden of 2.5 percent or lower.

12 **Q. Please provide a quick overview of the EBAs Cascade has performed to date.**

13 A. In 2022, Forefront Economics and H. Gil Peach & Associates, LLC prepared
14 Cascade's first LIRA, which Cascade used to develop its EDP and redesign OLIBA.¹⁶
15 In 2025, Cascade contracted Empower Dataworks to conduct an updated LIRA, now
16 referred to as an EBA.¹⁷

17 **Q. What does the 2025 EBA define as Cascade's low-income assistance need?**

18 A. The 2025 EBA identifies approximately 12,400 households that are low-income
19 (60 percent SMI or lower) and approximately 5,200 households that are both low-
20 income and high energy burdened¹⁸ The financial need to bring these low-income,
21 high energy burdened customers to a sustainable 2.5 percent energy burden is
22 estimated to be \$2.03 million.¹⁹

¹⁶ See CNGC/302, Tillis.

¹⁷ See CNGC/303, Tillis.

¹⁸ CNGC/303, Tillis/36.

¹⁹ CNGC/303, Tillis/38.

1 **Q. How close is Cascade to meeting the financial need of its low-income, high**
2 **energy-burdened customers?**

3 A. Based on data from Cascade's 2025 EBA, EDP currently serves approximately
4 40 percent of Cascade's low-income customers.²⁰ Table 4 below illustrates the
5 number of eligible households and the EDP participation rate per income tier.

Table 4 – Eligible Households and EDP Participation Rate per Income Tier

Income Tier	Estimated Number of Income-Qualified Households	EDP Participation Rate
0-15% SMI	1,490	64%
16-30% SMI	3,150	49%
31-45% SMI	3,180	41%
46-60% SMI	4,540	15%

6 **Q. How close is Cascade's bill assistance spending to meeting customers' overall**
7 **financial need?**

8 A. The 2025 EBA defines the financial need within Cascade's Oregon service territory as
9 \$2.03 million. Cascade is currently spending \$2.62 million.²¹ This "over-spending" can
10 be explained for two reasons. First, Cascade's bill assistance programs, EDP and
11 OLIBA, are available to all low-income customers, whereas the financial need within
12 Cascade's Oregon service territory, as defined in the 2025 EBA, is limited to the dollar
13 amount needed to bring low-income customers' gas bills to a 2.5 percent energy
14 burden. Cascade provides financial assistance to all low-income customers, not only
15 high-energy burdened low-income customers. Second, the 2025 EBA notes that while
16 the Company's rates for gas service are lower than its peer utilities,²² its EDP discount
17 percentages are higher.²³

²⁰ CNGC/303, Tillis/38.

²¹ CNGC/303, Tillis/38.

²² CNGC/303, Tillis/15, 35.

²³ CNGC/303, Tillis/47.

1 **Q. Does the 2025 EBA recommend the Company make any changes to its EDP**
2 **discount tiers?**

3 A. Yes. The 2025 EBA recommends that Cascade create a fifth tier (Tier 0 in Table 5
4 below) to address customers with the greatest financial need and reduce the discount
5 percentage provided in its remaining four tiers to continue to reduce customers' natural
6 gas energy burden to 2.5 percent or lower while also managing program costs over
7 time as program penetration increases. Table 5 below compares the current EDP
8 discounts with the proposed adjusted discount amounts.

Table 5 – 2025 EBA Recommended EDP Tiers²⁴

Income Tier	Current Discount	Adjusted Discount
Tier 0: 0-5% SMI	95%	95%
Tier 1: 6-15% SMI	95%	80%
Tier 2: 16-30% SMI	70%	40%
Tier 3: 31-45% SMI	45%	20%
Tier 4: 46-60% SMI	15%	10%

9 **Q. Is Cascade concerned that its bill assistance program spending exceeds the**
10 **financial need based on the 2025 EBA findings?**

11 A. No. As explained above, Cascade's programs are designed to meet a broader need
12 than the financial need identified in the 2025 EBA. However, to control program costs
13 for all customers over time, the Company expects it will make iterative modifications
14 to the program if the program does not change under the differential ratemaking
15 workstream in docket UM 2211, discussed in Section VII below.

16 **Q. How does Cascade intend to meet the need experienced by income-qualified**
17 **customers who are not enrolled in EDP?**

18 A. Cascade is concerned about the energy security of income-qualified customers who,
19 for whatever reason, do not choose to sign up for EDP or OLIBA. Cascade's outreach

²⁴ CNGC/303, Tillis/46.

1 efforts are extensive, as detailed above in my testimony. Since outreach efforts must
2 continually evolve to enroll hard-to-reach customers, Cascade submitted Advice
3 No. O25-10-01 on October 3, 2025, docketed as ADV 1791, to add a provision to
4 Schedule 36, Energy Discount Program, allowing Cascade to auto-enroll customers
5 identified as likely to meet EDP eligibility criteria.²⁵ The Commission approved this
6 filing at the October 28, 2025, public meeting with a November 3, 2025, effective
7 date.²⁶ Based on conversations with Cascade's Energy Assistance Advisory Group,
8 Cascade used the data from its 2025 EBA Dashboard to automatically enroll
9 2,218 income-qualified, high energy-burdened households into the lowest tier discount
10 of EDP. Communications were sent to customers advising to call the Company to self-
11 declare their income if they believe they qualify for a higher discount. This first phase
12 of auto-enrolling will prevent these customers from having to experience unmitigated
13 winter heating bills. Cascade is also planning to discuss with its Energy Assistance
14 Advisory Group auto-enrolling a tribal community identified in its 2025 EBA as largely
15 income-qualified and vulnerable. The November 2025 auto-enroll process increased
16 EDP program penetration from approximately 40 percent to 60 percent.

17 **Q. How is Cascade planning to address the affordability of its bills with its**
18 **proposed rate increase?**

19 A. Cascade is committed to maintaining affordable bills for its most vulnerable customers.
20 Cascade will continue offering EDP and OLIBA and improving its ability to match need
21 with assistance through its continuously evolving outreach efforts. The Company will
22 participate in the docket UM 2211 differential rate workstream. Cascade believes this
23 workstream may result in substantive changes to its current programs and therefore
24 makes no proposals for changes in this case so as not to be in conflict with the process

²⁵ See CNGC/304, Tillis/9.

²⁶ See CNGC/304, Tillis/9.

1 in docket UM 2211. If the UM 2211 differential rates workstream does not result in a
2 change to EDP and/or OLIBA, Cascade commits to analyzing EDP to ensure that
3 discount tiers are right-sized to prevent customers from experiencing an energy
4 burden above 2.5 percent. Cascade will work with its Energy Assistance Advisory
5 Group on reviewing and revising EDP and OLIBA based on the 2025 EBA
6 recommendations and the rates adopted in this case.

VII. DOCKET UM 2211

7 **Q. Please explain the genesis of docket UM 2211.**

8 A. The 2019-novel-Coronavirus pandemic and the ensuing lockdown starting in 2020
9 shuttered many businesses leaving many people, particularly those in service jobs,
10 without employment. This resulted in widespread financial hardship for numerous
11 lower- and middle-income households. To create new authority for the Commission to
12 consider differential energy burdens among utility customers, the Oregon legislature
13 passed House Bill ("HB") 2475 in the 2021 regular session.²⁷

14 HB 2475 expanded the Commission's jurisdiction to include consideration of
15 "differential energy burdens on low-income customers and other economic, social
16 equity or environmental justice factors that affect affordability for certain classes of
17 utility customers."²⁸ In August 2021, the Commission initiated docket UM 2211 for the
18 purpose of implementing HB 2475, namely to investigate differential rates; provide
19 intervenor funding for low-income and energy justice advocates; and address
20 customers' energy burden. UM 2211 is an on-going, multi-year, multi-workstream
21 docket where each thread has the common goal of keeping customers experiencing
22 high energy burdens connected to their utility service.

²⁷ See HB 2475, 81st Leg. Assemb., 2021 Reg. Sess. (Or. 2021), available at <https://olis.oregonlegislature.gov/liz/2021R1/Downloads/MeasureDocument/HB2475> [hereinafter HB 2475].

²⁸ HB 2475 at § 2 (amending ORS 757.230(1)).

1 **Q. Please summarize the changes Cascade has made as a result of docket**
2 **UM 2211.**

3 A. The list below highlights significant changes that Cascade has implemented to date
4 as a result of docket UM 2211's processes and multi-party collaboration.

- 5 • Cascade revised its practices regarding disconnections, deposits, energy
6 burden reporting, and customer notification in compliance with the revisions to
7 the Chapter 860, Division 21 administrative rules adopted in docket AR 653,
8 which was opened as a result of the UM 2211/HB 2475 requirement to improve
9 protections for low-income and energy burdened customers.
- 10 • Cascade contracted Forefront Economics Inc. and H. Gil Peach & Associates,
11 LLC to prepare a LIRA, provided as Exhibit CNGC/302 ("2022 LIRA"). This
12 2022 document identifies nearly 10,000 Cascade residential customers as
13 having incomes below 150 percent Federal Poverty Level ("FPL").²⁹
- 14 • Using the 2022 LIRA, Cascade and its Energy Assistance Advisory Group
15 designed a rate discount program filed in docket ADV 1409. In July 2022, the
16 Commission approved Cascade's current EDP as established in
17 Schedule 36.³⁰
- 18 • Cascade filed to revise OLIBA, transforming it from a traditional grant program
19 to an arrearage forgiveness program. OLIBA complements EDP by applying
20 cashless vouchers to a past-due account for income-qualified customers who
21 are experiencing temporary unplanned financial hardships.³¹
- 22 • Cascade complied with Commission Order No. 24-446 issued in docket
23 AR 667, which adopted temporary winter protections with the intent of keeping

²⁹ CNGC/302, Tillis/6.

³⁰ See CNGC/304, Tillis/8.

³¹ See CNGC/302, Tillis/1-2.

1 customers connected to natural gas service during the heating months.³²
2 AR 667 was opened in response to a workstream under docket UM 2211, and
3 once the temporary rules expired, AR 671 was opened to bring permanency to
4 the AR 667 protections as well as introduce new ones.³³

- 5 • The Company filed its inaugural Energy Burden Metrics Report (“EBMR”) in
6 docket RO-16.³⁴ Cascade’s EBMR contained data on the outcomes related to
7 financial difficulty in paying an energy bill, including data on arrearages,
8 disconnections for nonpayment, bill pay assistance participation, and
9 outcomes for customers with medical certificates. The EBMR reporting
10 requirements in OAR 860-021-0408, were adopted in Commission Order
11 No. 25-148 in docket AR 668, which was opened as a result of a workstream
12 in docket UM 2211.³⁵

13 **Q. What work does Staff have planned in docket UM 2211 for calendar year 2026?**

14 A. Staff has communicated to parties that it expects to conduct a differential rates
15 workstream in 2026, which will consist of Staff authoring a whitepaper that will be
16 posted in January 2026. Cascade understands that this whitepaper will likely propose
17 rate changes to each utility’s rate structures and/or bill assistance programs that will
18 be discussed and then implemented in 2026 under the differential rates workstream
19 scheduled under docket UM 2211.

³² *In re Rulemaking to Adopt Temp. Rules Related to Prots. Against Disconnections*, Docket No. AR 667, Order No. 24-446 at 1, App. A at 15 (Dec. 19, 2024).

³³ *In re Rulemaking Regarding Cust. Prots.*, Docket No AR 671, Order No. 25-411, App. A at 4 (Oct. 16, 2025).

³⁴ *See Elec. and Gas Utils. Energy Burden Metrics Report Pursuant to OAR 860-021-0408*, Docket No. RO-16, Cascade Nat. Gas Corp.’s 2024 Q1-Q4 and 2025 Q1-Q2 Energy Burden Metric Report (Aug. 14, 2025).

³⁵ *In re Rulemaking for Energy Burden Data Collection and Reporting*, Docket No. AR 668, Order No. 25-148 at 1, App. A at 2-5 (Apr. 17, 2025).

1 **Q. Is this potential workstream relevant to Cascade's rate case proceeding?**

2 A. Yes. Cascade cannot speculate on the results of the differential rates workstream, and
3 is hesitant to make any changes to EDP or OLIBA at this time, either as part of the
4 rate case or independently as a result of its 2025 EBA since the programs and/or the
5 impacts of Company's rate structures on income-qualified customers will be examined
6 and discussed as part of the docket UM 2211 process in 2026. As mentioned in
7 Section VI above, Cascade will participate in this workstream. If it does not result in
8 changes to EDP and/or OLIBA, Cascade commits to working with its Energy
9 Assistance Advisory Group on reviewing and revising EDP and OLIBA based on the
10 2025 EBA recommendations and the rates adopted in this case.

VIII. CONTINUED WORK ON ENERGY JUSTICE

11 **Q. Does Cascade have a clear plan on how to further the energy justice among its**
12 **customers?**

13 A. Yes. Below is an overview of some of Cascade's planned and developing efforts for
14 uncovering distributional inequities and implementing restorative justice.

- 15 • Data Collection. Cascade hired a data analyst who will analyze data, such as
16 the EBMR reports, to identify disparate outcomes for vulnerable populations.
17 This analyst, hired in 2025, will identify income-qualified customers for
18 outreach and identify meaningful trends and correlations.
- 19 • Improved Outreach. Cascade has engaged with a contractor for a data
20 analytics platform for finding, engaging, and enrolling hard-to-reach customers
21 into EDP.
- 22 • Categorical Eligibility. Cascade is also early in the process of engaging with a
23 contractor who provides lists of customers who are known to be eligible for
24 EDP because they are enrolled in a state or federal income-qualified program.

1 These lists will allow Cascade to auto-enroll these customers into EDP and
2 provide an OLIBA grant, if needed, to assist with a past-due balance.

- 3 • Auto-Enrollment. As mentioned above, Cascade filed in docket ADV 1791 for
4 authorization to auto-enroll customers who are likely income qualified.
5 Cascade's consideration of auto-enrolling a tribe is a shift in thinking about
6 individual customers to thinking holistically about impacted communities. Auto-
7 enrolling income-qualified communities is also a means to match resources
8 with customers who are hard-to-reach, or who are reluctant to contact or trust
9 a utility regardless of the utility's repeated outreach efforts.

- 10 • Collaboration. Cascade will continue to collaborate with its Energy Assistance
11 Advisory Group on the provision of bill payment assistance and weatherization
12 to its income-qualified customers. Further, Cascade plans to convene an equity
13 advisory group ("EAG") to broaden the number of community representative
14 voices that shape Cascade's programs, services, and outreach. For more
15 details on Cascade's planned EAG, see the Direct Testimony of Noemi Ortiz.³⁶
16 Cascade has a history of shaping program design, and improving
17 communications and website content for specific customer groups based on
18 the feedback received from collaboration with external stakeholders. This
19 feedback includes using less technical verbiage in customer-facing
20 communications or employing better, more culturally accurate, foreign
21 language translations. The Company has had a positive experience acting on
22 EAG feedback in Washington, and Cascade expects to have the same useful
23 collaborative experience in Oregon as well.

³⁶ See CNGC/200, Ortiz/9-13.

- 1 • Regulatory Processes. The Company will also continue actively participating
2 in docket UM 2211. This work will include helping to shape the conversation
3 and then adopting, implementing, or complying with any changes the
4 Commission deems best for Oregon customers.

5 Overall, Cascade's robust assistance programs and collaborative approach
6 have positioned the Company as a leader in energy affordability. The Company stands
7 ready to implement measured improvements and work with regulators and interested
8 parties to ensure all customers have access to safe, reliable, and affordable natural
9 gas service.

IX. CONCLUSION

10 **Q. Does this conclude your testimony?**

11 **A. Yes.**

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
J.D. POWER SUMMARY FOR
CASCADE NATURAL GAS CORPORATION

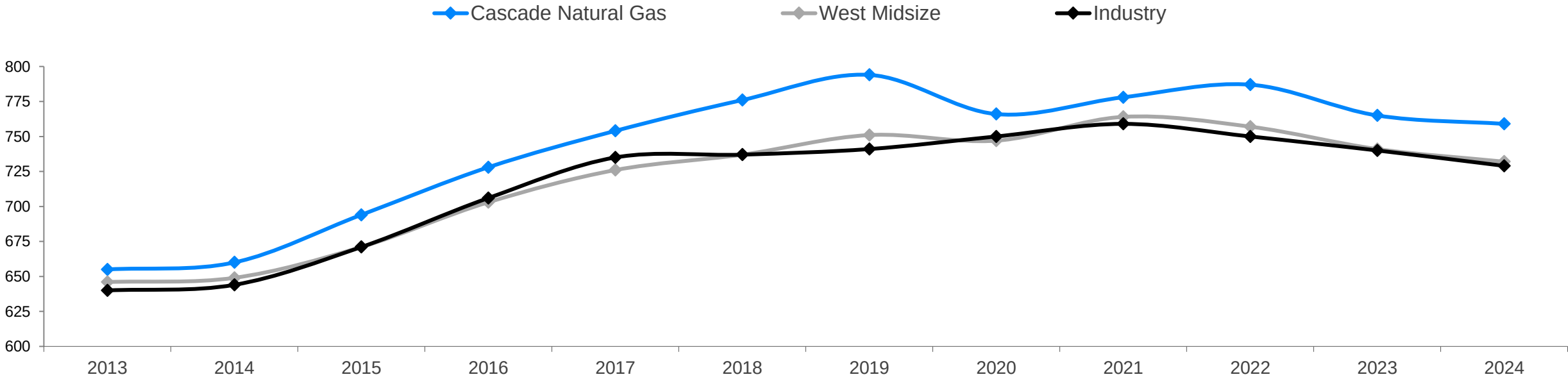
EXHIBIT 301

November 2025

Overall Customer Satisfaction Historical Trend



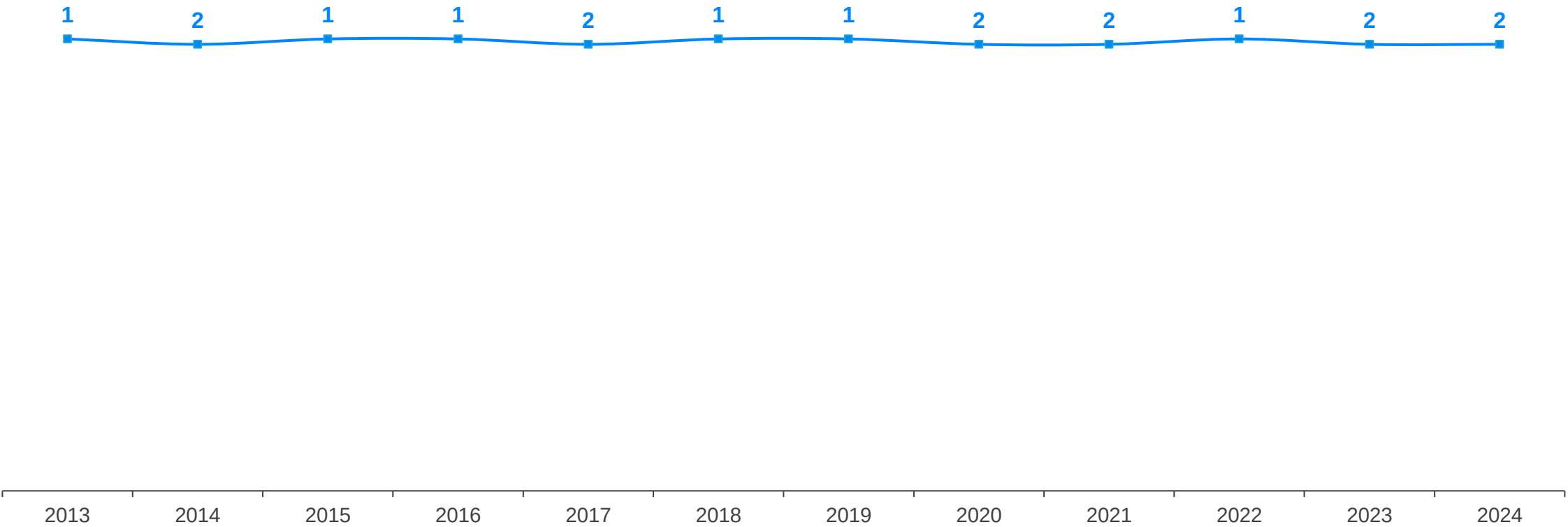
Overall Satisfaction Trend



Overall Satisfaction Ranking Within West Midsize Segment

CNGC/301
Tillis/2

Cascade Natural Gas - Overall Customer Satisfaction Rank



BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
OREGON LOW-INCOME RATE ANALYSIS

EXHIBIT 302

November 2025

Cascade Natural Gas Corporation: Low-Income Rate Analysis for Oregon

Prepared for:
Cascade Natural Gas Corporation

Prepared by:
Forefront Economics Inc
H. Gil Peach & Associates, LLC

with contributions from:
Mark E. Thompson
H. Gil Peach

May 31, 2022

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I. EXECUTIVE SUMMARY

With the transition toward a low carbon energy future comes a requirement for substantial investments in the energy supply infrastructure. Concern over energy affordability, especially for low-income households, is evidenced by recent legislation, including House Bill 2475 passed by the Oregon Legislature in 2021. Provisions of HB 2475 allow regulated utilities to consider ability to pay when designing rates.

Cascade Natural Gas Corporation (Cascade) selected Forefront Economics Inc and H. Gil Peach and Associates to conduct a study to better understand the current energy burden of their customer base and the likely impacts of a discounted rate program designed to lower the energy burden of low-income customers. This paper presents the approach and findings of our study.

Objectives

The overall objective is to describe the energy burden facing Cascade customers in sufficient detail that allows an understanding of the differences in energy burden by location, using refined measures of household income. More specifically, objectives include:

1. Develop county level estimates of the number of low-income customers and the energy burden facing these groups of customers.
2. Describe energy burden in sufficient detail to illuminate possible affordability issues in subgroups of the low-income customer base. For example, a discounted rate program that works to lower energy burden on income qualified customers as a whole may fail to achieve energy burden goals for the households with very low income.
3. Propose and analyze the impacts on low-income, and other customers, of a discounted rate program for low-income customers that:
 - a. Lowers total energy burden consistent with HB 2475.
 - b. Provides rate discounts in proportion to need.
 - c. Is proportional by fuel (same percentage bill discount for natural gas and electric bills).
 - d. Is not overly onerous to administer.

These objectives guided the analysis presented in this paper.

Summary of Approach and Findings

Unless otherwise stated, all of the results in this report pertain to the counties served by Cascade in the state of Oregon. These counties are listed in Table 2 and are collectively referred to as the Cascade Oregon service territory. Our analysis is based on data from Cascade, the Low-Income Energy Affordability Data (LEAD) tool, and Low-Income Home Energy Assistance Program (LIHEAP) applicant data. These sources are described in more detail in the Background and Approach section. All references to energy costs and energy burden are before reductions from bill assistance programs unless otherwise stated. A summary of major findings is listed below:

- Taken together, homes heated with natural gas and homes heated with electricity make up over eight of every ten homes in the service territory. Electricity is the predominant heating fuel in the

Cascade service territory, accounting for 47% of all households. Natural gas heated homes make up 34% of all households in the Cascade service territory.

- For households with less than 100% of Federal Poverty Level (FPL), electric heated homes outnumber gas homes by nearly a 2 to 1 margin. Income distribution for gas heated homes is skewed more toward higher incomes and less toward lower incomes, compared to electrically heated homes.
- There are nearly 10,000 Cascade residential customers with incomes below 150% of FPL. About half of these customers have incomes below 100% of FPL.
- Using LEAD data, the total energy burden for Cascade customers below 100% FPL is 15.5%, meaning annual household electric and natural gas bills are 15.5% of annual household income. About 38% of the annual energy costs in this income group are for natural gas bills and 62% for electricity. The fuel specific energy burdens are 5.8% for natural gas and 9.1% for electric.
- When LIHEAP data is used to refine the analysis of the 100% of FPL income group, wide variation in the energy burden is observed within sub-groups of low-income customers (see Figure 1). For example, the total energy burden for Cascade customers in the 0-25% of FPL income group is estimated at 128% (meaning that to pay the cost-of-service billing, the household would have to pay all of its income plus 28% more), the 25-50 FPL group at 21% and the 50-100 FPL group at 11%. In all of these groups natural gas costs contribute about 40% of the total energy costs with electric costs accounting for nearly 60%.
- Using energy bill discounts ranging from 95% for the 0-25% FPL group to 15% for the 100-150% FPL group and assuming 20% of the 10,000 eligible customers sign-up for a discounted bill program, the total cost of the program comes to 0.7% of retail revenue requirements. If all 10,000 customers below 150% of FPL enrolled in the discounted bill program, the total cost of the program would come to 3.4% of retail revenue requirements.
- At the 20% participation level, when program costs are spread across rate groups using the proportion of base revenue as the spreading criteria, average monthly customer bills increase no more than 1.3% in any customer class. The average monthly residential bills would increase \$0.37 (0.7%).
- Nearly 1,600 of the 10,000 customers below 150% FPL are in the less than 50% FPL income groups. Although bill discounts are largest for these customers, the relatively low number of customers in the lower than 50% FPL groups help to keep the total cost of a discounted bill program low.

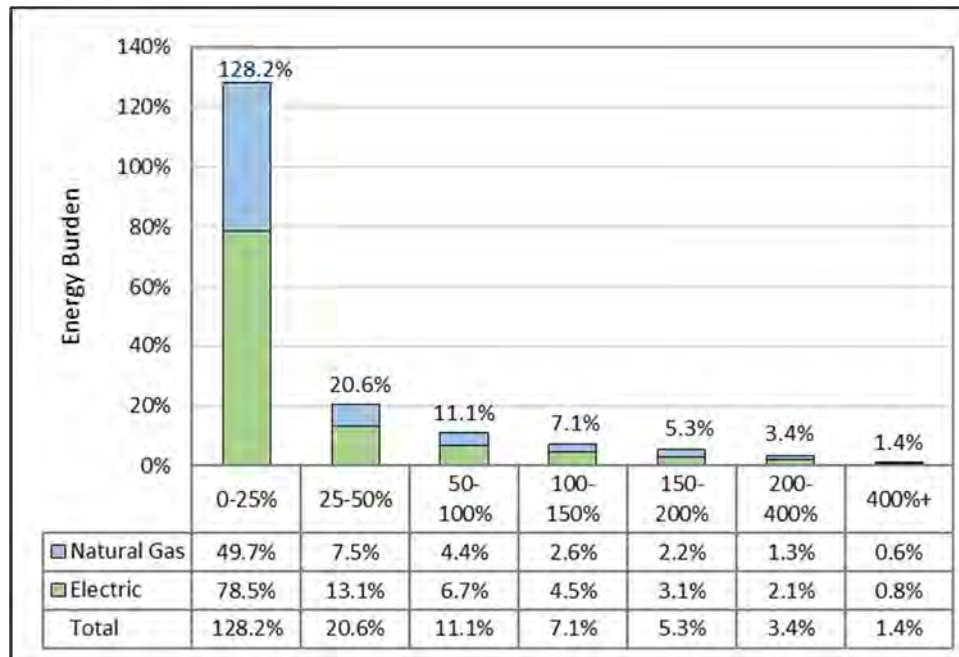


Figure 1. Energy Burden by FPL Group, Cascade Oregon Residential Customers

In the next section our approach is discussed in greater detail. Subsequent sections discuss the income status and energy burden of Cascade’s residential customer base and a tiered rate discount program for achieving energy burden targets.

II. BACKGROUND AND APPROACH

In 2021, the Oregon Legislature passed House Bill 2475 to address the inclusion of energy burden in rate design for natural gas and electric utilities regulated by the Oregon Public Utilities Commission (OPUC). Classification of service for each public utility, in addition to several other factors, is required to take into account “differential energy burdens on low-income customers and other economic, social equity or environmental justice factors that affect affordability for certain classes of utility customers, and any other reasonable consideration.” (Oregon HB 2475) This means that rate design must take ability to pay into account. Prior to this legislation, OPUC did not have clear direction from the legislature to require rates to be based, in part, on ability to pay. The new legislation provides direction to the OPUC and to the public utilities regulated by OPUC.

Beyond this direction to take into account “differential energy burden”, the legislation is not specific. However, the provision of direction in terms of energy burden suggests that energy burden would best serve as an explicit indicator of ability to pay. The legislation does not define energy burden. We can offer the definition that a customer’s “energy burden” is the percentage of household income that is required to pay for the household’s home energy usage. LEAD defines energy burden as “the average annual housing energy costs divided by the average annual household income.” These definitions are mathematically equivalent. Setting a maximum energy burden for customers at various poverty levels helps to ensure that energy costs are affordable and do not consume an outsized percentage of a low-income household’s income or cause permanent loss of heat/energy (and thus homelessness).

A residence heated with natural gas will have three kinds of energy burden. The “overall” energy burden is the percentage of household income required to pay for both electricity and natural gas. The electricity energy burden for electricity is considered separately. The gas energy burden for natural gas is considered separately. Generally, the higher the household income, the lower the energy burden. Conversely, the lower the household income, the larger the percent of household income required to pay energy bills. For example, energy burden is exceptionally low for upper-income households (often 1% or less), average for households in the middle of the income distribution, and quite high for households in the lower poverty ranges. Consider this as a mathematical problem of moving from the center to the bottom of a distribution. Here, as the bottom of the poverty range is approached, the energy burden accelerates dramatically and becomes quite extreme. Below about 25% of the federal poverty level (FPL) there is a “bottom effect.” Below this level, households are in extreme difficulty and energy burdens become exceptionally large.

Payment assistance programs likely compatible with the Oregon legislation take two forms: direct payment assistance (similar to Cascade's Oregon Low-Income Bill Assistance program (OLIBA) and the federal/state Low-Income Home Energy Assistance Program (LIHEAP) or lowering bills through rate design. Although two different approaches, these can be made equal in effects.

- (1) **Standard Billing with Structured Payment Assistance** - First, following the model used by the State of Nevada, cost-of-service rates would not be modified. In this approach, customers receive cost-of-service bills. However, subsequently, on a case-by-case basis, payment assistance equivalent to a rate reduction is provided. This support, combined with OLIBA and LIHEAP, brings the portion of the bill that remains the responsibility of the low-income household to the planned energy burden target. The energy burden target in Nevada is the median household energy burden for the state in the prior year (calculated each year).¹ From 2003 through 2022, the energy burden target has been approximately 2% overall energy burden. In Nevada, this single target is used for all program households from 0-150% of the federal poverty level (FPL). The part of the annual energy bill above the approximately 2% overall energy burden is paid from the state Universal Service fund. The fund is sustained by a small per therm adder and a small per kWh adder,² and collection is managed by the Public Utility Commission of Nevada (PUCN). After deducting its costs, PUCN sends the funds to be administered by the Nevada Division of Welfare and Supportive Services (DWSS). DWSS uses 75% of funds for payment assistance and transfers 25% of funds to be administered by the Nevada Housing Division (NHD) for low-income weatherization through its subgrantees.
- (2) **Tiered Rates** - A second approach, likely the approach envisioned in the Oregon legislation, is to lower the energy bills for low-income households using a rate design, subject to approval by the Oregon Public Utility Commission (OPUC). In this approach LIHEAP and OLIBA would continue to function as they do currently. The rate design, however, would lower the size of individual low-income household energy bills to be paid. Within this rate design approach there are two ways to proceed:
 - a. **Individualized PIPP** - The rate design can be structured as a full Percentage of Income Payment Plan (PIPP) in which the energy bill for each household is tailored to the individual household income.
 - b. **Grouped Tiers** - Alternatively, the rate design can be structured in the form of rate tiers (for example, 0-25%, 25-100%, 100-150%, and 151-200% of poverty), with each tier of households assigned a common energy burden target (for example the median of the range or the first quartile of the range).

Considerations

There are several considerations to take into account.

Bottom Effect in Lowest Rate Tier Limitation – The lowest poverty tier has a bottom effect where normal relations that can be expected for higher income poverty groups or non-poverty groups do not apply. In the lowest poverty category, for example, from 0-25% of poverty, all mathematically based logical rate structures break down. These are households with so little income that they simply cannot pay their bills, and a logically structured rate that works for the higher ranges of poverty incomes does not work in the bottom range. Some utilities have tried a

¹ There are some additional details in calculation, but this is the essence of the method.

² The Universal Service fund adder applies to all customers, except for certain large industrial customers. Nevada also has a variation within this program that provides for arrearage forgiveness. Complete arrearage forgiveness is only provided to a household once every five years. There are also emergency service provisions and a way for non-low-income households to temporarily qualify due to a sudden drop in income, for example, as happened due to COVID and COVID control rules that affected jobs, or due to sudden extensive medical bills, or similar major life events.

kind of “time out” and “hands off” for this group of households, with a time limited token payment coupled with referral to state social services and waiving of minimum payment rules and forgiveness of any penalties and fees.³

Moving from Cost-of-Service Rates – A problem in moving off cost-of-service rates is that the apparent energy bills (the actual “please pay” amounts for energy charged to low-income households) are lower than actual costs to the system. A side effect of using a rate subsidy is that from a LIHEAP perspective, initial bills (pre-LIHEAP) will be lower than actual costs. LIHEAP will not “see” true costs. This means that a portion of the subsidy derived from other customers will be offsetting an equivalent decrease in federal funding applied per individual household. This is a cost shift from the federal government to the state (utility customers within the state). It is likely that this cost shift will be negligible since LIHEAP funds cover a relatively small fraction of eligible households each year, while the rate change is likely to provide a subsidy to many more customers than the LIHEAP portion of eligible households. The intent of the rate reduction, of course, is to better serve customers and to serve more eligible households overall. To the extent more eligible households are served, LIHEAP dollars will be lower per household but will likely be distributed to many more households. If so, the potential loss of federal dollars can be made up by bringing LIHEAP dollars to more qualified households. To the extent this occurs, the loss of federal dollars will be negligible.⁴ To make this work, a vigorous effort is required to recruit qualified households to the new low-income rate.

Data Warehouse Limitation – Implementation of a full PIPP with individual bill tied directly to individual household income would require a database storing household incomes, number of persons in household, and related information. Currently, Cascade does not collect this type of information (though the CAP agencies operating under the Department of Commerce do collect and retain this information). Cascade would prefer not to collect and maintain this information on customers. If a full PIPP is desired, it is likely best structured using a non-profit agency to maintain the data necessary to operate a PIPP.

Billing System Limitation – Cascade’s current billing system is equipped to provide for five tiers using one standard residential rate plus up to four special rates. Beyond this (more tiers or a full PIPP) it would be very expensive to develop a more targeted approach. Costs of changing billing system software are high; a certain amount of flexibility is built-in to the software package; beyond that programming costs can be high. The best time to move from tiers to a PIPP is when billing software is being replaced for other reasons.

PIPP Advantage - A mathematical proof that the PIPP rate design yields the most efficient aggregate billing consistent with an affordable rate is as follows. Billings for any tier of a tiered rate design with a single rate per tier will include a portion of households within the tier that are over-billed and a portion within the tier comprised of

³ Gaz de France (now Gaz Réseau Distribution France) has used this approach. It requires careful structuring of the hand off to state social services, and adequate funding on the state social services side. PECO Energy in Philadelphia used a similar approach for a number of years for households without income due to a number of major life changing conditions such as loss of an income earner, severe accident or illness, and other forms of incapacitation. Another possible approach would be an inverted rate design for all residential customers with only a token charge for the first block.

⁴ Amount of federal funding and percent of federal funding within total assistance are reasonable performance metrics.

households that are under-billed. However, for rate designs that fully comply with the affordability criteria, the number of over-billed households is zero and the number of under-billed households is zero. This most efficient rate design, with no over-billing and no under-billing, is the rate tailored to each household, the PIPP. Best efficiency is reached by increasing the number of tiers until each tier is a single household, which is the PIPP.

Approach

Our approach to modeling the impact of special rates designed to lower the energy burden of low-income customers is basically a simulation exercise using algorithms that reflect empirical measurements and assumptions.

Measurements are the result of summary data that inform the simulation about key customer metrics such as customer counts, energy bills and household income and the distributions of these variables. Program design elements are reflected in assumptions used by the algorithms to estimate customer impacts.

Because we are interested in simulating impacts geographically and with enough detail to gain insights to small subsets of customers within the overall low-income population, multiple data sources are brought together in the analysis. The data sources used in this report are presented in this section followed by a discussion of the assumptions used to define the rate designs presented in this report.

Data Sources

Internal (Cascade) data and external data sources were used in our analysis of low-income rates. Each source is listed and discussed below.

Cascade Natural Gas (Internal): Cascade data forming the basis of our analysis includes county level data on number of customers, dollars billed, LIHEAP customers, LIHEAP benefits applied and the benefits from bill assistance programs other than LIHEAP.

Low-Income Energy Affordability Data (LEAD) (External): The LEAD Tool was designed by the United States Department of Energy and U.S. Census to "... help states, communities and other stakeholders create better energy strategies and programs by improving their understanding of low-income housing and energy characteristics." ([LEAD Tool website](#)). LEAD provides three different household income models for viewing and accessing results: Area Median Income (AMI), Federal Poverty Level (FPL) and State Median Income (SMI).⁵ We used data from LEAD to determine the customer distribution between each level represented in the FPL and SMI income models and as the source for energy burden estimates within each income category.

Low-Income Home Energy Assistance Program (LIHEAP) (External): LIHEAP data for Cascade customers was obtained from the state. These household specific data included the county of residence, household income,

⁵ Documentation of LEAD can be found at: Ma, Ookie, Krystal Laymon, Megan Day, Ricardo Oliveira, Jon Weers, and Aaron Vimont. 2019. *Low-Income Energy Affordability Data (LEAD) Tool Methodology*. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-74249. <https://www.nrel.gov/docs/fy19osti/74249.pdf>. We will refer to this document as the LEAD Tool Methodology hereafter in this report.

household size and electric and natural gas fuel cost. We used this information to develop greater detail in the income categories of low-income customers than is available from the LEAD Tool.

Assumptions and Calculations

The concept of energy burden is straightforward and measures the percentage of annual income a household spends for energy used within the dwelling. Because our focus is Cascade’s customer base, we assume we are essentially dealing with households whose primary heating fuel is natural gas. While a small number of Cascade customers may actually heat with some fuel other than utility delivered natural gas, we assume that number is small and insignificant to our analysis. Accordingly, our formula for energy burden considers the annual energy costs for two fuels as follows:

$$\text{Total Energy Burden} = (\text{Annual Natural Gas Cost} + \text{Annual Electricity Cost}) / \text{Annual Household Income}$$

$$\text{Natural Gas Energy Burden} = \text{Annual Natural Gas Cost} / \text{Annual Household Income}$$

$$\text{Electric Energy Burden} = \text{Annual Electricity Cost} / \text{Annual Household Income}$$

Empirical analysis shows that the cost of fuels other than natural gas and electricity in homes that heat with natural gas to be low.⁶ Home charging of electric vehicles has the potential to overstate the level of electricity usage in the home. However, given the current low level of EV penetration, especially in low-income households, we do not expect home charging for transportation usage to be a factor in our analysis of low-income energy burden and discount rates.

⁶ LEAD data show other fuels account for less than one half of one percent of total energy costs in homes heated with natural gas in the Cascade service area.

III. LOW-INCOME CUSTOMERS AND ENERGY BURDEN

Cascade's low-income customer base is described in this section of the report. Energy burden is also presented and discussed.

Number and Location of Low-Income Customers

It is useful to begin our analysis of the distribution of Cascade customers across income groups with a higher-level look at the distribution of all households within the Cascade Oregon service territory by primary heating fuel and income group. This distribution calculated from the LEAD data is presented in Table 1 and represents all customer and non-customer households within the Cascade Oregon service area.

Table 1. Income Distribution by Main Heating Fuel in Cascade Counties

Primary Heating Fuel	Federal Poverty Level					Total	Percent of All Households
	0-100%	100-150%	150-200%	200-400%	400%+		
Bottled Gas	8%	10%	8%	32%	42%	100%	4%
Electricity	15%	11%	11%	32%	31%	100%	47%
Fuel Oil	6%	13%	16%	34%	30%	100%	2%
Other	9%	11%	16%	27%	37%	100%	1%
Utility Gas	8%	8%	8%	32%	43%	100%	34%
Wood	11%	9%	11%	37%	32%	100%	12%
Total	12%	10%	10%	33%	35%	100%	100%

The last column of Table 1 shows the distribution of households across primary heating fuel. Most households within the Cascade service territory heat with electricity (47%) followed by natural gas (34%). Together, electricity and natural gas heating account for over 80% of all households. Bottled gas (propane) and wood each make up most of the remaining households along with a small number of fuel oil and other heating fuels.

Comparing electricity and natural gas heated households, it is clear from Table 1 that income is distributed differently between the two primary heating fuels. There are almost twice the percentage of electric heated homes in the lowest income group (0-100% FPL) compared to the percentage of gas heated homes in that income group. Likewise, at the top end of the income distribution, we see the same pattern with over 400% FPL accounting for 43% of natural gas heated households compared to only 31% of electrically heated households.

When it comes to income, natural gas heated households are more affluent than electrically heated households. There are likely many reasons for this discrepancy in household incomes including the cost of construction in smaller, low-cost units and the historically low cost of electricity in the Pacific Northwest. Dwellings that tend to be the most affordable for low-income families are often less expensive construction where the first-cost of building a housing unit is more important than the annual cost of heating. For smaller units, construction costs are typically minimized by providing zonal electric heating as the primary heat source.

Natural gas service is also an optional addition to the utility services available to a dwelling which may help explain why natural gas heated households tend to be more affluent than electrically heated households. Because overall there are roughly 40% more households that heat with electricity than there are households heating with natural gas and electrically heated homes are skewed more heavily toward low-income groups than natural gas heated households, a relatively small portion of the energy burden challenge can be addressed through discounted natural gas prices.

We now focus on the 34% of households in the Cascade service area that heat with natural gas. The percentage distribution of natural gas heated households by income category and county from LEAD was multiplied by the actual county level residential customers counts to arrive at the distribution of Cascade customers by income group. The resulting percentage distribution by income group for each county in the Cascade Oregon service territory is shown in Table 2.

Table 2. Percentage Distribution of Cascade Residential Customers by Income Category and County

County	Federal Poverty Level					Total
	0-100%	100-150%	150-200%	200-400%	400%+	
Baker	9%	12%	11%	36%	32%	100%
Crook	10%	9%	11%	37%	34%	100%
Deschutes	5%	6%	7%	31%	52%	100%
Jefferson	14%	9%	11%	35%	32%	100%
Klamath	14%	11%	10%	32%	33%	100%
Malheur	16%	11%	10%	32%	30%	100%
Morrow	9%	7%	8%	42%	34%	100%
Umatilla	10%	9%	9%	34%	38%	100%
Total	7%	7%	8%	32%	46%	100%

The total percentage distribution of Cascade customers by income group shown in Table 2 differs slightly from the percentages for utility gas heated homes shown in Table 1. This is because the actual Cascade residential customer counts by county differs slightly from the distribution of utility gas heated households by county in LEAD data.⁷

The number of Cascade customers by income group is shown in Table 3.

⁷ LEAD data reflect all households, including households served by natural gas utilities other than Cascade. Utility gas service is provided by both Cascade and Avista Utilities in Jefferson and Klamath counties.

Table 3. Cascade Natural Gas Residential Customers by Income Category and County

County	Federal Poverty Level						Percent of All Residential
	0-100%	100-150%	150-200%	200-400%	400%+	Total	
Baker	322	427	392	1,266	1,146	3,553	5%
Crook	302	274	348	1,141	1,060	3,125	4%
Deschutes	2,181	2,706	3,297	14,176	23,864	46,224	66%
Jefferson	196	122	153	487	441	1,399	2%
Klamath	30	24	21	70	71	216	0%
Malheur	629	432	407	1,250	1,163	3,881	6%
Morrow	43	34	38	193	157	465	1%
Umatilla	1,150	1,083	1,004	3,915	4,335	11,487	16%
Total	4,853	5,102	5,660	22,498	32,237	70,350	100%

Nearly 10,000 of Cascade’s residential customers are under 150% of FPL guidelines. Reducing the energy burden of these customers is the objective of discount rates of low-income customers. In the next section, the energy burden of Cascade residential customers across income groups is examined.

Description of Current Energy Burden

LEAD provides estimates of energy burden based on household income and the annual cost of energy used in the dwelling. LEAD defines energy burden as “the average annual housing energy costs divided by the average annual household income”.⁸ We use the same definition of energy burden throughout this report.

Before presenting energy burden estimates we first provide statistics on the components of energy burden. Average household income and energy cost by fuel are shown in Table 4.

Table 4. Components of Energy Burden, Households Heating with Natural Gas, Cascade Counties

County	Number of ACS Responses	Average Annual			Energy Burden		
		Household Income	Electric Bill	Natural Gas Bill	Electric	Natural Gas	Total Energy
Baker	399	\$60,128	\$1,385	\$728	2.3%	1.2%	3.6%
Crook	164	\$69,444	\$831	\$704	1.2%	1.0%	2.3%
Deschutes	562	\$95,647	\$964	\$684	1.0%	0.7%	1.8%
Jefferson	160	\$64,917	\$964	\$639	1.5%	1.0%	2.8%
Klamath	474	\$59,821	\$1,124	\$788	1.9%	1.3%	3.3%
Malheur	383	\$57,807	\$1,189	\$634	2.1%	1.1%	3.2%
Morrow	93	\$80,212	\$1,082	\$852	1.3%	1.1%	2.5%
Umatilla	486	\$70,981	\$1,072	\$728	1.5%	1.0%	2.6%
Total	2,721	\$79,659	\$1,040	\$712	1.3%	0.9%	2.3%

⁸ LEAD Tool Methodology (Page 1, footnote 3).

The number of American Community Survey (ACS) responses show the number of responses to the household income and energy cost questions from the ACS for each county. When questions have different number of responses, the lowest number is shown in the table. Dollar values are based in the same time period that the 2018 ACS 5-year data were collected (2014-2018). Total energy burden shown in Table 4 may not equal the sum of electric and natural gas burden due to the cost of other household fuel (not shown) and rounding.

The overall energy burden for gas heated homes in Cascade served Oregon counties is 2.3%. Electric and Gas costs contribute roughly 60% and 40%, respectively, to household total energy burden. The total energy burden across income groups for households heating with natural gas is shown for each county in the Cascade service area in Table 5.

Table 5. Total Energy Burden by Income Group, Households Heating with Natural Gas, Cascade Counties

County	Federal Poverty Level				
	0-100%	100-150%	150-200%	200-400%	400%+
Baker	16.9%	10.6%	7.1%	4.3%	2.2%
Crook	12.2%	6.0%	5.7%	3.4%	1.3%
Deschutes	14.3%	6.5%	4.8%	3.2%	1.2%
Jefferson	11.1%	6.7%	6.1%	4.0%	1.5%
Klamath	18.4%	7.8%	5.9%	3.6%	1.9%
Malheur	15.5%	6.5%	5.6%	3.3%	1.9%
Morrow	12.8%	8.4%	5.4%	3.3%	1.5%
Umatilla	12.6%	7.5%	5.7%	3.4%	1.6%
Overall	15.5%	7.3%	5.4%	3.4%	1.4%

The total energy burden over all counties in the Cascade service area ranges from over 15% for the lowest income group to just over 1% for households in the highest income group. For households at or below the FPL, total energy burden ranges from a high of over 18% in Klamath County to a low of just over 11% in Jefferson County.

The natural gas energy burden across income groups for households heating with natural gas is shown for each county in the Cascade service area in Table 6.

Table 6. Natural Gas Energy Burden by Income Group, Households Heating with Natural Gas, Cascade Counties

County	Federal Poverty Level				
	0-100%	100-150%	150-200%	200-400%	400%+
Baker	5.7%	3.2%	2.4%	1.5%	0.7%
Crook	4.3%	2.5%	2.6%	1.4%	0.6%
Deschutes	6.1%	2.5%	2.0%	1.3%	0.5%
Jefferson	4.2%	2.2%	2.2%	1.3%	0.6%
Klamath	6.9%	2.9%	2.4%	1.5%	0.8%
Malheur	4.2%	1.9%	2.0%	1.2%	0.7%
Morrow	3.6%	3.6%	2.4%	1.4%	0.7%
Umatilla	4.9%	2.7%	2.3%	1.4%	0.6%
Overall	5.8%	2.6%	2.2%	1.3%	0.6%

The natural gas energy burden over all counties in the Cascade service area ranges from 5.8% for the lowest income group to 0.6% for households in the highest income group. For households below the FPL, natural gas burden ranges from a high of 6.9% in Klamath County to a low of 3.6% in Morrow County.

Because LEAD data trues up ACS data on energy costs to actual amounts reported to FERC, the energy burden results presented in this section of the report can best be thought of as reflecting the cost of energy before bill assistance programs.⁹ Bill assistance programs available to Cascade customers are briefly discussed below. Further discussion of the impact of these programs on energy burden is presented in the section of the report dealing with rate design impacts.

⁹ Email communications with U.S. Department of Energy staff responsible for LEAD development support this interpretation of the data.

Bill Assistance Programs

There are three regular bill assistance programs for Cascade customers in Oregon, and in response to the COVID pandemic (and Commission direction), Cascade provided a major one-time program to help with loss of income due to the pandemic. The three regular programs are the federal/state Low-Income Home Energy Assistance Program (LIHEAP), Cascade's Oregon Low Income Bill Assistance (OLIBA) program, and Cascade's Oregon Winter Help program. The special program during the pandemic is Big Heart.

LIHEAP - The federal/state Low-Income Home Energy Assistance Program is the major source of utility payment assistance funding in Oregon. Federal guidelines permit states to set LIHEAP eligibility from 110% to 150% of the federal poverty level (FPL) or 60% of state median income (SMI). Income eligibility for LIHEAP in Oregon is at 60% SMI. The dollar values corresponding to 60% SMI, by household size, are shown in Table 7.

Table 7. Income Eligibility by Household Size (2017-2021)

Program Year	Household Size (Number of Persons)						
	1	2	3	4	5	6	Each Additional
2017	22,626	29,587	36,549	43,511	50,473	57,435	1,306
2018	23,095	30,201	37,308	44,414	51,520	58,626	1,332
2019	24,550	32,103	39,657	47,210	54,764	62,317	1,416
2020	25,983	33,978	41,973	49,967	57,962	65,957	1,499
2021	27,806	36,361	44,917	53,472	62,028	70,584	1,604
2022	29,344	38,373	47,402	56,430	65,459	74,488	1,692

Oregon customers must apply for LIHEAP to receive it, and Cascade encourages customers to apply. LIHEAP cannot be used for customers who do not apply, but the Community Action Agencies (CAAs) that administer LIHEAP can make customers aware of the program and assist with applications. LIHEAP grant amounts go to the individual customers who apply and are approved, following federal/state guidelines.¹⁰ The CAAs can meld other payment assistance dollars with LIHEAP grants to try to develop affordable bills for payment-troubled customers who meet program income eligibility requirements.¹¹

OLIBA – Cascade Natural Gas's Oregon Low Income Bill Assistance program was implemented in May 2006 and is funded by a Public Purpose Charge on customer bills. The OLIBA program was designed to supplement LIHEAP by providing additional dollars of financial assistance to income-eligible households in Cascade's Oregon

¹⁰ Cascade does not have access to LIHEAP funding independent of amounts approved to be credited to individual customers and does not process LIHEAP applications to determine if customers qualify. Cascade signs an annual vendor agreement with Community Action Agencies in Cascade territory. The agreement states that Cascade will comply with the LIHEAP program rules, which are administered by the agencies.

¹¹ Note that LIHEAP participation is limited to household members who are U.S. citizens or who are approved non-U.S. citizens. Cascade does not require U.S. citizenship for service. A mixed U.S. citizen/non-U.S. citizen household may still receive LIHEAP but excluded household members affect the household size calculation and result in a lower LIHEAP benefit amount for the household.

service territory. OLIBA provides payment assistance following verification of low-income status. OLIBA is administered by the Community Action Agencies. Agencies may choose eligibility based on categorical eligibility for public assistance or other state or federal programs. There is no cap for OLIBA grants. Grants must be appropriate to individual account activity and history or will be adjusted.

Winter Help – Winter Help is a customer contribution fund which is made available each year by Cascade for payment assistance. Though called Winter Help, the program is available throughout the year. It is funded by customer donations, plus an annual company contribution. Any unused funds roll over into the next program year. Eligibility for Winter Help is at 200% FPL. Winter Help grants by the CAA are subject to adjustment by the company, based on account history and current activity. Winter Help Crisis was also implemented as a pandemic response.

LIHEAP, OLIBA, and Winter Help are administered by Community Action Agencies that serve as subgrantees of the Oregon Housing and Community Services Department, in accord with a program implementation manual. Payment assistance to a household can be provided separately or together from these programs, depending on CAA analysis of need and program guidelines

Big Heart – Big Heart (Schedule 35, Temporary COVID-19 Residential Bill Assistance Program) implements a temporary residential bill assistance program to help with financial hardship due to the COVID pandemic, in accordance with Commission Order No. 20-401. Funding comes from 1.5% of revenue from Cascade's Oregon core customers.¹² Eligible customers are households receiving natural gas service for domestic purposes (general residential service) that earn no more than 300% of the Federal Poverty Level. Individual customers can receive multiple grants up to \$2,500 in additional bill assistance, with bill assistance from the three standard programs (LIHEAP, OLIBA and Winter Help). Big Heart is first applied to debt, then other grants are applied. Customers who received energy assistance within the previous 24 months automatically receive a grant to forgive account balances due, up to the \$2,500 limit. The Big Heart Grant Program is in addition to all other grants, and does not disqualify customers from receiving further assistance, or assistance from other organizations. In Oregon, Big Heart is administered through Cascade Customer Services and through CAAs. Big Heart is intended to prevent bad debt accumulation on customer accounts by identifying, waiving, and managing customer arrearages.

In Oregon, funds are directed to pay the oldest debt first. Payment assistance can cover arrearage and current charges, and, in some cases, can create a credit for future bills.

¹² This is at the budget level. Program expenses are currently being deferred. Cascade is currently requesting the increase from 1% to 1.5% of revenue in a revision to Schedule 35.

Elements Related to Bill Assistance Programs

For understanding context, certain other programs and program considerations can be relevant to bill assistance:

Arrearage Management Program – Cascade does not currently have an arrearage management program (AMP program); however, an AMP program is in development. AMP programs often include both a customer responsibility element to encourage customer payment of arrearage and a provision to enable arrearage forgiveness when payment is not possible given the economic situation of a household.

Payment Agreement – If a customer is having trouble making payments, Cascade will assist by setting up payment arrangements up to eighteen months, with no up-front payment required. Two broken/renege payment agreements are allowed. These provisions are sensible in providing options for households experiencing payment problems.

CARES Program – Cascade does not have a CARES-type program, a social work/referral approach for customers who are unable to pay due to major life events, such as severe injury, life-threatening sickness, and approach of death. CARES programs provide referral service for customers experiencing temporary hardships, such as family emergencies, divorce, unemployment, and medical emergencies. CARES may provide support, direction, and resources to help customers address their hardship situations and make it easier to pay their utility bills. CARES programs are not common, and those we are aware of were created by commission order. A regular CARES program would require some additional staffing. Though Cascade does not have a CARES-type program with dedicated social workers or community liaison workers, in practice there are some referrals.

Waiver of Terminations – During COVID, Cascade waived terminations to help payment troubled households during the pandemic. There is a current docket in Oregon on fees, deposits, notices, and consumer protection rules. Waiver of termination policies are especially important for households at or below 50% FPL.

Waiver of Fees and Penalties – During COVID, Cascade has waived fees and penalties. There is a new open docket in Oregon on fees, deposits, notices, and consumer protection rules.

Program Control Tools – Bill payment assistance programs are typically designed to provide a program logic, such as a target energy burden (as in this report). However, certain program control tools are typical for bill assistance programs, such as a minimum payment rule and a maximum subsidy rule. Such program control tools are useful. However, care must be taken to ensure that they apply in workable ways. For example, suppose there is a minimum payment of \$40 per month, and failure to pay leads to either termination from the bill assistance program or entry into a process for termination of service. This rule might work well for the upper parts of the program eligible income tiers. But it cannot work for the 0-25% tier, where constant economic crisis and fear exist and there is no prospect of coming up with the \$40 payment, much less the larger amounts currently due and the even larger amount in arrears. In structuring low-income rates, program control tools should carefully consider the impacts on the lowest income customers, particularly customers in the range of 0-50% of federal poverty level.

Performance Metrics – Bill assistance programs should have accompanying performance metrics. For example, LIHEAP internally has a set of measures for assessing program outcomes. One of these is energy burden. For example, for LIHEAP a household with a \$10,000 income and a \$1,000 annual overall energy cost (natural gas plus electricity) has a pre-LIHEAP energy burden of 10%. If LIHEAP pays \$250 for this household, the energy burden after LIHEAP is 7.5%. From a utility perspective, continuity of service (and payment) is the prime objective and performance metrics should indicate how well bill assistance programs are meeting this objective, and the other objectives of the program (such as attaining the energy burden target). Because of the multifaceted nature of low-income rates, performance metrics should cover performance of the arrearage management system, the performance of the low-income rates, and the capture of federal dollars for assistance to customers.

Gap Jumping – There is typically a notable gap between customers served by bill assistance programs, and people who design, manage, and carry out the programs. It is not unusual for this gap, which may (but not always) include income, education, opportunity, degree of freedom and of freedom from fear, lifespan, and racial and ethnic identification to make it difficult for programs to be effective, particularly so for the 0-25% of poverty group. A useful test that program designers, managers, and staff can use is to always ask if any aspect of a program makes practical sense from the perspective of the program participant. The point is to maintain continuity of service by providing actual “please pay” bill amounts customers in different difficult situations can actually feel able to pay. Programs have to be able to work from within the life worlds of customers. So, it is important to listen and incorporate participant perspective in program design and in operations.

Qualifying Customers not in the Bill Assistance Problem – Initiation of a new utility bill assistance program generally creates five customer categories: (1) Customers who are in the program, (2) customers who qualify for the program but are not in the program, (3) customers who do not qualify for the program but whose income is insufficient and who are in many cases in essentially the same income and payment situation as the top tier of customers who qualify for the program, (4) all other residential customers, and (5) all other core revenue customers. Households in Categories 2-5 are assessed an additional charge to provide subsidy amounts for households in the bill assistance program. Customers who qualify but are not in the program are assessed the additional charge to provide subsidy amounts for customers in the program. Assessing this additional charge to customers who qualify but are not in the program is counter-productive to the goal of maintaining continuity of service (and of affordable payment). This means there should be a substantial effort to identify and bring these customers (Category 2) into the program. We know from aggregate census data the approximate number of qualifying households and will know the number of households in the program, which can be used to construct a performance metric.

The ALICE Problem – Category 3 customers are characterized by insufficient income but have income over the eligibility range for the program. These are customers above the poverty line, and above the eligibility limit for the program but who are also income insufficient. These households are in the top ranges of the “ALICE” group – households that are Asset Limited, Income Constrained, Employed (ALICE), though, of course, some members of this group are not employed but are receiving income from social services or social insurance (such as Social

Security). Assessing a subsidy charge to customers who do not qualify for the program but are also income insufficient is counter-productive to the goal of maintaining overall continuity of service (and of affordable payment). This means ALICE customers should not be assessed the subsidy cost for the program. We know from aggregate census data and the ALICE studies the approximate number of ALICE households at the state level. Households that do not earn enough to afford basic necessities are almost 45% of Oregon households.¹³ This ALICE problem exists for all low-income programs, and it is substantial.

The Middle-Income Exclusion Problem – Generally, income eligibility for low-income bill assistance programs is rigorously observed using twelve-months of income data. However, during COVID, because middle-income and even some upper-income households could suffer sudden drop of income to within program eligibility level within a month, income limits were interpreted as actual income or income limits were temporarily suspended for many utility payment assistance programs. From experience in other states, it can be reasonable to create program rules to accommodate households above the general income limits for the program to qualify households due to an immediate emergency situation (for example, accident, death, unusual medical expense, inability to continue working, COVID business shutdown). This provision for special cases and temporary adjustment makes programs more equitable, providing assurance regardless of income. In the design of social welfare programs there are two initial directions: means testing and universal benefit. Means testing makes sense because otherwise households that do not need the program benefit receive it. Universal benefit makes sense because it simplifies the program and makes the benefit available to all households (similar to funding fire and police services). Low-income rates in the U.S. are means tested. However, all other customers pay the subsidies that enable low-income rates. It would seem equitable to permit customers who pay for the subsidies to temporarily qualify for low-income rates when they experience an immediate emergency that reduces their current income for the previous month to a level that qualifies as low-income. These customers are non-low-income when measured by income in the past twelve months, but are low-income as measured in the current month.

¹³ United Ways of the Pacific Northwest, ALICE in Oregon: A Financial Hardship Study (ALICE 2020).
<https://unitedforalice.org/state-overview/Oregon>

IV. RATE DESIGN IMPACTS

In this section we present a low-income rate design to achieve specific objectives. Features of the proposed rate design not only reflect objectives, but also various assumptions and constraints. Objectives, assumptions, and constraints are presented and discussed below. A low-income rate design is then presented along with an estimate of the impact on energy burden. While LEAD data provide a good basis for estimating the size of the low-income customer population, they do not provide sufficient income detail to understand the energy burden facing the lowest income households. In this section, we show a more detailed income breakdown of low-income customers and the associated energy burden.

Objectives, Assumptions and Constraints

While there are seemingly countless variations on a discount rate for low-income customers, the possibilities are narrowed by specific objectives, assumptions, and constraints.

Objectives

- Lower total energy burden to 6%.
- Refine analysis to shed light on very low levels of income where household energy burden may be obfuscated when averaged in with a larger group of low-income customers.

Assumptions

- Bill discounts are shared between natural gas and electric in proportion to each fuel's share of total energy burden. Or, more simply, the same percentage discount is applied to the total natural gas bill and electric bill.

Constraints

- Avoid designs that require Cascade to collect and store household income.
- Avoid rate designs that are overly complex and a burden to administer. For tiered rate discounts, attempt to limit the number of rate discount tiers to no more than four to limit system setup and implementation costs.

Impacts on Energy Burden

To meet the objective of examining very low levels of household income, it was necessary to refine the analysis by breaking the lowest FPL bin in the LEAD data into subgroups. As shown in prior tables, the lowest level of household income broken out in the LEAD data is 100% FPL and under. Forefront Economics obtained detailed data from Oregon Housing and Community Services on all LIHEAP applications from Cascade customers for the 2018 through 2021 program years. These data included size of household, household income, annual electric bill, and annual natural gas bill and provided the empirical basis for breaking the 0-100% FPL from LEAD into smaller subgroups. The results of the refined analysis are shown in Table 8.

Table 8. Refined Energy Burden Calculations, Cascade Customers

FPL %					Energy Burden		
	Customers	Household Income	Electric Bill	Natural Gas Bill	Electric	Natural Gas	Total
0-25%	893	\$1,329	\$1,044	\$661	78.5%	49.7%	128.2%
25-50%	681	\$8,907	\$1,165	\$667	13.1%	7.5%	20.6%
50-100%	3,279	\$13,747	\$924	\$611	6.7%	4.4%	11.2%
100-150%	5,102	\$21,981	\$981	\$580	4.5%	2.6%	7.1%
150-200%	5,660	\$32,082	\$1,006	\$697	3.1%	2.2%	5.3%
200%+	54,735	\$99,174	\$1,057	\$737	1.1%	0.7%	1.8%
Total	70,350	\$79,659	\$1,040	\$712	1.3%	0.9%	2.2%

The FPL bins in Table 8 are the LEAD bins with the lowest LEAD bin (0-100% FPL) broken out to show detail for 0-25%, 25-50% and 50-100% FPL bins. Table 8 also groups the two highest income bins from LEAD into a single 200%+ group. The customer counts for the three lowest income bins were derived by spreading the customer count from the LEAD 0-100% group (4,853 from Table 3) by the distribution of customers between the lowest FPL bins found in the LIHEAP data. Likewise, household income, annual electric bill, and annual gas bill for the lowest three FPL bins in Table 8 represent LEAD data spread to the more detailed income bins based on the distributions of these variables found in the LIHEAP data.

A few relationships from the data in Table 8 are listed below:

- There are a relatively small number of total customers in the smallest income bins. Part of the reason is that we are dealing with households who use natural gas as their primary heating fuel. LEAD data presented in Table 1 shows that the income distribution of homes heated with natural gas is skewed more heavily toward the higher income bins than are homes heated with electricity. Part of the reason for this is that smaller, low-construction-cost dwellings are typically heated with electricity to keep initial construction cost low.
- Although these are homes that heat with natural gas, annual natural gas costs make up less than half (41%) of the total annual cost of natural gas and electric service. For households below 100% of the FPL the natural gas portion of total energy bills is 38%.

The lowest income group of 0-25% FPL is showing an energy burden well in excess of 100%, meaning household energy costs exceed annual income. This bin has relatively few customers but their total energy burden is extreme. This compares to an energy burden of 21% in the next highest income group, 25-50% of FPL. A tiered discounted rate design with discounts set at each income bin to bring the income group to the targeted energy burden is presented in Table 9.

Table 9. Tiered Discounted Rates by Income Group

FPL %	Energy Burden Targets			Bill Multiplier to Achieve Goal	
	Electric	Natural Gas	Total	Electric	Natural Gas
0-25%	3.7%	2.3%	6.0%	0.047	0.047
25-50%	3.8%	2.2%	6.0%	0.292	0.292
50-100%	3.6%	2.4%	6.0%	0.537	0.537
100-150%	3.8%	2.2%	6.0%	0.845	0.845

The energy burden for each fuel in Table 9 reflects the proportion that each fuel makes up of the total energy cost for that income group. A bill multiplier to achieve the energy burden target is also shown in Table 9 and is the same for each fuel. The multiplier of 0.047 for the lowest income group means that if customers are asked to pay 4.7% of their natural gas bill and 4.7% of their electric bill, their natural gas, electric and total energy burden would be reduced to the targets of 2.3%, 3.7% and 6.0%, respectively. For the highest income group shown in Table 9, a discount of 15.5% (0.845 bill multiplier) is sufficient to achieve energy burden targets.

The cost of providing discounts at the levels shown in Table 9 is shown in Table 10 for two levels of low-income customer participation.

Table 10. Cost of Low-Income Discounted Natural Gas Rates

FPL %	Annual Gas Revenue @ Full Participation			Annual Gas Revenue @ 20% Participation	
	Current	Discounted	Impact	Discounted	Impact
0-25%	\$589,755	\$27,595	-\$562,160	\$477,323	-\$112,432
25-50%	\$453,934	\$132,411	-\$321,524	\$389,630	-\$64,305
50-100%	\$2,004,729	\$1,077,329	-\$927,400	\$1,819,249	-\$185,480
100-150%	\$2,957,816	\$2,498,725	-\$459,091	\$2,865,998	-\$91,818
	Total Rate Subsidy		-\$2,270,175		-\$454,035
	Administration		-\$136,211		-\$27,242
	Total Cost		-\$2,406,386		-\$481,277
	Retail Percent Increase		3.4%		0.7%
	Base Percent Increase		6.3%		1.3%

The “Current” column shows the full amount of the bill for each income group. Discounted and Impact columns show the amount of revenue after the low-income tiered discount and the difference from current revenue, respectively. Discounted and Impact columns are shown for two levels of participation, all low-income customers and 20% of low-income customers. Although unrealistic, the full participation scenario shows the upper limit of the revenue impact from the discounted low-income rate program specified in Table 9. Likewise, 20% participation may be a stretch considering LIHEAP participation has been somewhat less than 10% of our estimate of Cascade

customers under 150% of FPL. At full and partial (20%) levels of participation, the cost of the discounts including 6% administration expenses amount to 3.4% and 0.7% of retail revenue requirements, respectively.¹⁴

The bill impacts of partial participation (20%) of low-income customers are shown in Table 11 by customer class.

Table 11. Annual Impact of Low-Income Rates by Cascade Customer Class, Partial Participation

	Customer Class / Rate Schedule					
	Residential Sch. 101	Commercial Sch. 104	Industrial Sch. 105	Large Industrial Sch. 111	Transportation Sch. 163	Interruptible Sch. 170
Total Cost	\$300,304	\$125,140	\$10,579	\$6,571	\$35,506	\$3,178
Base % Inc	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
Avg. Bills	\$50.77	\$174.06	\$1,141.60	\$7,717.41	\$7,041.09	\$20,689.21
Avg. Therms	58	250	1,764	13,845	100,305	39,950
Avg Bill Impact	\$0.37	\$1.01	\$5.84	\$30.17	\$94.57	\$66.21
Pct Impact	0.7%	0.6%	0.5%	0.4%	1.3%	0.3%

Costs are spread across customer classes proportional to base revenue, the amount of revenue from the fixed and volumetric charge associated with the rate schedule, excluding any additional tariffs or riders. For example, fuel cost adjustments are not included in base revenue. For residential customers, bills would increase an average of 37 cents a month (0.7%) in order to fund the discounted rate program. Schedule 170 customers would experience a 0.3% increase in their natural gas bill.

¹⁴ The assumption of 6% administrative expenses is judgmental in nature and not based on empirical program expenses. This planning value should be replaced as experience is gained with actual program costs.

V. APPENDIX A

Tables in this section are the same tables in the body of the report that deal with service territory and residential customer characteristics by income group except that Appendix tables are expressed in terms of State Median Income (SMI) groups whereas the tables in the body of the report are expressed in terms of Federal Poverty Level (FPL). Table A-1 through Table A-6 are based on LEAD and Cascade data while Table A-7 through Table A-10 add additional detail derived from LIHEAP Data.

Table A-1. Income Distribution by Main Heating Fuel in Cascade Counties

Primary Heating Fuel	State Median Income						Percent of All Households
	0-30%	30-60%	60-80%	80-100%	100%+	Total	
Bottled Gas	7%	17%	10%	11%	55%	100%	4%
Electricity	13%	20%	12%	11%	44%	100%	47%
Fuel Oil	5%	25%	15%	12%	43%	100%	2%
Other	8%	23%	15%	7%	48%	100%	1%
Utility Gas	7%	15%	11%	10%	56%	100%	34%
Wood	10%	17%	13%	12%	48%	100%	12%
Total	10%	18%	12%	11%	49%	100%	100%

Table A-2. Percentage Distribution of Cascade Residential Customers by Income Category and County

County	State Median Income					
	0-30%	30-60%	60-80%	80-100%	100%+	Total
Baker	8%	21%	13%	12%	46%	100%
Crook	9%	17%	14%	13%	47%	100%
Deschutes	4%	11%	10%	10%	65%	100%
Jefferson	14%	17%	13%	11%	46%	100%
Klamath	12%	20%	11%	10%	47%	100%
Malheur	14%	20%	12%	10%	44%	100%
Morrow	8%	14%	13%	15%	51%	100%
Umatilla	8%	17%	11%	11%	53%	100%
Total	6%	13%	11%	10%	60%	100%

Table A-3. Cascade Natural Gas Residential Customers by Income Category and County

County	State Median Income						Percent of All Residential
	0-30%	30-60%	60-80%	80-100%	100%+	Total	
Baker	272	754	460	433	1,633	3,552	0%
Crook	279	528	441	398	1,479	3,125	4%
Deschutes	1,954	5,065	4,628	4,611	29,965	46,223	66%
Jefferson	190	232	178	155	645	1,400	2%
Klamath	26	43	24	22	101	216	0%
Malheur	545	777	455	384	1,720	3,881	6%
Morrow	36	63	59	68	238	464	1%
Umatilla	962	1,926	1,241	1,270	6,087	11,486	16%
Total	4,264	9,388	7,486	7,341	41,868	70,347	100%

Table A-4. Components of Energy Burden, Households Heating with Natural Gas, Cascade Counties

County	Number of ACS Responses	Average Annual			Energy Burden		
		Household Income	Electric Bill	Natural Gas Bill	Electric	Natural Gas	Total Energy
Baker	399	\$60,453	\$1,383	\$730	2.3%	1.2%	3.6%
Crook	164	\$69,377	\$827	\$701	1.2%	1.0%	2.3%
Deschutes	562	\$95,760	\$965	\$685	1.0%	0.7%	1.8%
Jefferson	160	\$65,377	\$971	\$642	1.5%	1.0%	2.8%
Klamath	474	\$59,899	\$1,129	\$790	1.9%	1.3%	3.3%
Malheur	383	\$57,774	\$1,190	\$634	2.1%	1.1%	3.2%
Morrow	93	\$80,523	\$1,092	\$859	1.4%	1.1%	2.6%
Umatilla	486	\$71,093	\$1,074	\$730	1.5%	1.0%	2.6%
Total	2,721	\$79,767	\$1,041	\$713	1.3%	0.9%	2.3%

Table A-5. Total Energy Burden by Income Group, Households Heating with Natural Gas, Cascade Counties

County	State Median Income				
	0-30%	30-60%	60-80%	80-100%	100%+
Baker	19.2%	9.0%	5.5%	4.6%	2.4%
Crook	14.1%	6.1%	4.0%	3.3%	1.7%
Deschutes	15.4%	5.8%	4.3%	3.6%	1.4%
Jefferson	11.9%	6.7%	4.6%	3.6%	2.0%
Klamath	22.0%	7.4%	4.8%	3.9%	2.2%
Malheur	18.3%	6.5%	4.6%	3.4%	2.1%
Morrow	15.3%	7.3%	4.0%	3.5%	1.8%
Umatilla	14.7%	6.8%	4.8%	3.7%	1.8%
Overall	17.9%	6.7%	4.6%	3.7%	1.6%

Table A-6. Natural Gas Energy Burden by Income Group, Households Heating with Natural Gas, Cascade Counties

County	State Median Income				
	0-30%	30-60%	60-80%	80-100%	100%+
Baker	6.7%	2.8%	1.9%	1.6%	0.8%
Crook	5.2%	2.6%	1.6%	1.4%	0.7%
Deschutes	6.7%	2.3%	1.8%	1.5%	0.5%
Jefferson	4.7%	2.3%	1.5%	1.2%	0.7%
Klamath	8.3%	2.8%	1.9%	1.5%	0.9%
Malheur	5.1%	2.0%	1.6%	1.2%	0.8%
Morrow	4.5%	3.0%	1.6%	1.4%	0.8%
Umatilla	5.9%	2.5%	2.0%	1.6%	0.7%
Overall	6.8%	2.5%	1.8%	1.5%	0.6%

Table A-7. Refined Energy Burden Calculations, Cascade Customers

SMI %					Energy Burden		
	Customers	Household Income	Electric Bill	Natural Gas Bill	Electric	Natural Gas	Total
0-15%	1,387	\$3,833	\$1,070	\$668	27.9%	17.4%	45.4%
15-30%	2,877	\$11,939	\$906	\$621	7.6%	5.2%	12.8%
30-45%	6,637	\$22,102	\$996	\$613	4.5%	2.8%	7.3%
45-60%	2,751	\$31,741	\$1,003	\$658	3.2%	2.1%	5.2%
60-80%	7,486	\$38,455	\$998	\$700	2.6%	1.8%	4.4%
80% +	49,209	\$106,399	\$1,066	\$743	1.0%	0.7%	1.7%
Total	70,347	\$79,767	\$1,041	\$713	1.3%	0.9%	2.2%

Table A-8. Tiered Discounted Rates by Income Group

SMI %	Energy Burden Targets			Bill Multiplier to Achieve Goal	
	Electric	Natural Gas	Total	Electric	Natural Gas
0-15%	3.7%	2.3%	6.0%	0.132	0.132
15-30%	3.6%	2.4%	6.0%	0.469	0.469
30-45%	3.7%	2.3%	6.0%	0.824	0.824
45-60%	3.6%	2.4%	6.0%	N/A	N/A

Table A-9. Cost of Low-Income Discounted Natural Gas Rates

SMI %	Annual Gas Revenue @ Full Participation			Annual Gas Revenue @ 20% Participation	
	Current	Discounted	Impact	Discounted	Impact
0-15%	\$927,281	\$122,661	-\$804,620	\$766,357	-\$160,924
15-30%	\$1,785,198	\$837,822	-\$947,376	\$1,595,723	-\$189,475
30-45%	\$4,069,170	\$3,353,933	-\$715,237	\$3,926,122	-\$143,047
45-60%	\$1,808,782	\$1,808,782	\$0	\$1,808,782	\$0
	Total Rate Subsidy		-\$2,467,233		-\$493,447
	Administration		-\$148,034		-\$29,607
	Total Cost		-\$2,615,267		-\$523,054
	Retail Percent Increase		3.7%		0.7%
	Base Percent Increase		6.9%		1.4%

Table A-10. Annual Impact of Low-Income Rates by Cascade Customer Class, Partial Participation

	Customer Class / Rate Schedule					
	Residential Sch. 101	Commercial Sch. 104	Industrial Sch. 105	Large Industrial Sch. 111	Transportation Sch. 163	Interruptible Sch. 170
Total Cost	\$326,372	\$136,002	\$11,497	\$7,141	\$38,588	\$3,454
Base % Inc	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
Avg. Bills	\$50.77	\$174.06	\$1,141.60	\$7,717.41	\$7,041.09	\$20,689.21
Avg. Therms	58	250	1,764	13,845	100,305	39,950
Avg Bill Impact	\$0.40	\$1.10	\$6.34	\$32.79	\$102.78	\$71.96
Pct Impact	0.8%	0.6%	0.6%	0.4%	1.5%	0.3%

VI. APPENDIX B

This appendix contains a four-part crossover table for comparing federal poverty level (FPL) and state median income (SMI). Part A shows annual household incomes at various FPL cutoffs and household size. FPL cutoffs are expressed as percentages of federal poverty guidelines. An FPL of 50%, for example, means the income level that equates to 50% of the federal poverty guidelines and varies by household size. Part B shows annual household incomes at various SMI cutoffs and household size. SMI cutoffs are expressed as decimal values of state median income. An SMI of 0.6, means the income level that equates to 0.6 of the state median income and varies by household size.

Part C shows the corresponding SMI decimal value at various FPL cutoffs. Likewise, Part D shows the corresponding FPL percentage value at various SMI cutoffs. Values from Part C and Part D can be calculated directly from values in Part A and Part B. For example, as shown in Part D an SMI of 0.30 for a family of four corresponds to an FPL of 67%. This result is calculated from dividing the annual incomes for a family of four at 0.6 SMI by the FPL (at 100%) for a family of four ($\$26,736/\$39,750=67\%$ FPL).

Table B-1. Oregon FPL and SMI Crossover Tables 2021 Program Year

Household Size	Part A. Household Income at Various FPL Cutoffs and Household Size					
	25%	50%	75%	100%	125%	150%
1	\$4,830	\$9,660	\$14,490	\$19,320	\$24,150	\$28,980
2	\$6,533	\$13,065	\$19,598	\$26,130	\$32,663	\$39,195
3	\$8,235	\$16,470	\$24,705	\$32,940	\$41,175	\$49,410
4	\$9,938	\$19,875	\$29,813	\$39,750	\$49,688	\$59,625
5	\$11,640	\$23,280	\$34,920	\$46,560	\$58,200	\$69,840
6	\$13,343	\$26,685	\$40,028	\$53,370	\$66,713	\$80,055
7	\$15,045	\$30,090	\$45,135	\$60,180	\$75,225	\$90,270
8	\$16,748	\$33,495	\$50,243	\$66,990	\$83,738	\$100,485
Household Size	Part B. Household Income at Various SMI Cutoffs and Household Size					
	0.15	0.30	0.45	0.60	0.80	1.00
1	\$6,952	\$13,903	\$20,855	\$27,806	\$37,075	\$46,343
2	\$9,090	\$18,181	\$27,271	\$36,361	\$48,481	\$60,602
3	\$11,229	\$22,459	\$33,688	\$44,917	\$59,889	\$74,862
4	\$13,368	\$26,736	\$40,104	\$53,472	\$71,296	\$89,120
5	\$15,507	\$31,014	\$46,521	\$62,028	\$82,704	\$103,380
6	\$17,646	\$35,292	\$52,938	\$70,584	\$94,112	\$117,640
7	\$18,047	\$36,094	\$54,141	\$72,188	\$96,251	\$120,313
8	\$18,448	\$36,896	\$55,344	\$73,792	\$98,389	\$122,987
Household Size	Part C. Equivalent SMI Cutoff by FPL Cutoff and Household Size					
	25%	50%	75%	100%	125%	150%
1	0.104	0.208	0.313	0.417	0.521	0.625
2	0.108	0.216	0.323	0.431	0.539	0.647
3	0.110	0.220	0.330	0.440	0.550	0.660
4	0.112	0.223	0.335	0.446	0.558	0.669
5	0.113	0.225	0.338	0.450	0.563	0.676
6	0.113	0.227	0.340	0.454	0.567	0.681
7	0.125	0.250	0.375	0.500	0.625	0.750
8	0.136	0.272	0.409	0.545	0.681	0.817
Household Size	Part D. Equivalent FPL Cutoff by SMI Cutoff and Household Size					
	0.15	0.30	0.45	0.60	0.80	1.00
1	36%	72%	108%	144%	192%	240%
2	35%	70%	104%	139%	186%	232%
3	34%	68%	102%	136%	182%	227%
4	34%	67%	101%	135%	179%	224%
5	33%	67%	100%	133%	178%	222%
6	33%	66%	99%	132%	176%	220%
7	30%	60%	90%	120%	160%	200%
8	28%	55%	83%	110%	147%	184%

VII. APPENDIX C

Tables in this section are the same tables in the body of the report that deal with service territory and residential customer characteristics by income group except that Appendix tables are expressed in terms of Area Median Income (AMI) groups whereas the tables in the body of the report are expressed in terms of Federal Poverty Level (FPL). AMI based data in these tables are from the LEAD Tool data.

Area median income is similar to State Median Income (SMI), and in the USDOE Low-Income Energy Affordability Data (LEAD) tool, they have the same verbal definition:¹⁵

- **Area Median Income (AMI)**

The Area Median Income is the midpoint of a region’s income distribution – half of families in a region earn more than the median and half earn less than the median.

- **State Median Income (SMI)**

The State Median Income is the midpoint of a region’s income distribution – half of families in a region earn more than the median and half earn less than the median.

The practical difference between these two definitions is the specification of the “region.” For SMI, it is the state and for AMI the definition of region can vary from County to smaller geographic areas such as Census Tracts. The US Department of Health and Human Services (HHS) publishes official SMI and FPL income estimates by household size for each program year for optional use with LIHEAP administration. There is no similar publication of AMI data for LIHEAP administration. An official source for annual AMI estimates is needed if AMI is to be used by implementers of energy bill assistance programs.

Table C-1. Income Distribution by Main Heating Fuel in Cascade Counties

Primary Heating Fuel	Area Median Income						Percent of All Households
	0-30%	30-60%	60-80%	80-100%	100%+	Total	
Bottled Gas	8%	14%	9%	9%	60%	100%	4%
Electricity	16%	16%	12%	10%	47%	100%	47%
Fuel Oil	7%	19%	14%	12%	48%	100%	2%
Other	10%	16%	17%	7%	51%	100%	1%
Utility Gas	9%	12%	10%	9%	59%	100%	34%
Wood	11%	12%	12%	11%	53%	100%	12%
Total	12%	14%	11%	10%	52%	100%	100%

¹⁵ The LEAD tool is structured to provide energy burden analysis in terms of Federal Poverty Level (FPL), State Median Income (SMI), and Area Median Income (AMI). For AMI, analysis can be at the county level or lower. (<https://www.energy.gov/eere/slsc/maps/lead-tool>)

Table C-2. Percentage Distribution of Cascade Residential Customers by Income Category and County

County	Area Median Income					Total
	0-30%	30-60%	60-80%	80-100%	100%+	
Baker	9%	15%	11%	12%	53%	100%
Crook	10%	12%	13%	10%	56%	100%
Deschutes	6%	13%	11%	9%	61%	100%
Jefferson	14%	12%	11%	8%	55%	100%
Klamath	14%	13%	10%	9%	55%	100%
Malheur	16%	12%	10%	9%	53%	100%
Morrow	9%	9%	8%	9%	65%	100%
Umatilla	10%	11%	9%	10%	61%	100%
Total	7%	12%	11%	10%	60%	100%

Table C-3. Cascade Natural Gas Residential Customers by Income Category and County

County	Area Median Income					Total	Percent of All Residential
	0-30%	30-60%	60-80%	80-100%	100%+		
Baker	317	532	395	414	1,894	3,552	5%
Crook	298	362	392	324	1,749	3,125	4%
Deschutes	2,610	5,876	5,082	4,389	28,268	46,225	66%
Jefferson	196	168	150	113	772	1,399	2%
Klamath	30	28	21	20	119	218	0%
Malheur	622	458	402	331	2,067	3,880	6%
Morrow	43	41	39	41	302	466	1%
Umatilla	1,120	1,224	989	1,099	7,053	11,485	16%
Total	5,236	8,689	7,470	6,731	42,224	70,350	100%

Table C-4. Components of Energy Burden, Households Heating with Natural Gas, Cascade Counties

County	Number of ACS Responses	Average Annual			Energy Burden		
		Household Income	Electric Bill	Natural Gas Bill	Electric	Natural Gas	Total Energy
Baker	399	\$60,462	\$1,386	\$730	2.3%	1.2%	3.6%
Crook	164	\$69,501	\$821	\$700	1.2%	1.0%	2.3%
Deschutes	562	\$95,838	\$966	\$686	1.0%	0.7%	1.8%
Jefferson	160	\$66,522	\$983	\$649	1.5%	1.0%	2.8%
Klamath	474	\$59,968	\$1,124	\$789	1.9%	1.3%	3.3%
Malheur	383	\$57,934	\$1,189	\$634	2.1%	1.1%	3.2%
Morrow	93	\$81,602	\$1,087	\$859	1.3%	1.1%	2.5%
Umatilla	486	\$71,138	\$1,073	\$731	1.5%	1.0%	2.6%
Total	2,721	\$79,861	\$1,040	\$713	1.3%	0.9%	2.3%

Table C-5. Total Energy Burden by Income Group, Households Heating with Natural Gas, Cascade Counties

County	Area Median Income				
	0-30%	30-60%	60-80%	80-100%	100%+
Baker	17.3%	10.1%	6.7%	5.2%	2.6%
Crook	12.4%	6.3%	5.3%	3.7%	1.8%
Deschutes	13.3%	5.5%	4.2%	3.2%	1.3%
Jefferson	11.1%	6.9%	6.1%	4.5%	2.1%
Klamath	18.7%	8.3%	5.8%	4.3%	2.3%
Malheur	15.7%	7.3%	5.6%	4.2%	2.3%
Morrow	12.8%	7.5%	6.4%	4.0%	2.0%
Umatilla	13.1%	8.1%	5.5%	4.6%	2.0%
Overall	15.4%	6.6%	4.8%	3.8%	1.7%

Table C-6. Natural Gas Energy Burden by Income Group, Households Heating with Natural Gas, Cascade Counties

County	Area Median Income				
	0-30%	30-60%	60-80%	80-100%	100%+
Baker	5.8%	3.1%	2.2%	1.8%	0.9%
Crook	4.6%	2.7%	2.0%	1.6%	0.8%
Deschutes	5.7%	2.2%	1.7%	1.3%	0.5%
Jefferson	4.3%	2.3%	1.9%	1.6%	0.8%
Klamath	7.0%	3.3%	2.2%	1.8%	0.9%
Malheur	4.3%	2.3%	1.9%	1.5%	0.8%
Morrow	3.6%	3.1%	2.8%	1.6%	0.9%
Umatilla	5.1%	2.9%	2.2%	2.0%	0.8%
Overall	5.8%	2.6%	1.9%	1.5%	0.7%

Table C-7. Energy Burden Calculations, Cascade Customers

AMI %					Energy Burden		
	Customers	Household Income	Electric Bill	Natural Gas Bill	Electric	Natural Gas	Total
0-30%	5,236	\$10,657	\$953	\$621	8.9%	5.8%	14.8%
30-60%	8,689	\$23,210	\$900	\$595	3.9%	2.6%	6.4%
60-80%	7,470	\$35,297	\$986	\$671	2.8%	1.9%	4.7%
80-100%	6,731	\$46,953	\$1,005	\$722	2.1%	1.5%	3.7%
100%+	42,224	\$115,404	\$1,098	\$758	1.0%	0.7%	1.6%
Total	70,350	\$79,861	\$1,040	\$713	1.3%	0.9%	2.2%

Table C-8. Tiered Discounted Rates by Income Group

AMI %	Energy Burden Targets			Bill Multiplier to Achieve Goal	
	Electric	Natural Gas	Total	Electric	Natural Gas
0-30%	3.6%	2.4%	6.0%	0.406	0.406
30-60%	3.6%	2.4%	6.0%	0.931	0.931
60-80%	3.6%	2.4%	6.0%	N/A	N/A

Table C-9. Cost of Low-Income Discounted Natural Gas Rates

AMI %	Annual Gas Revenue @ Full Participation			Annual Gas Revenue @ 20% Participation	
	Current	Discounted	Impact	Discounted	Impact
0-30%	\$3,252,387	\$1,321,414	-\$1,930,973	\$2,866,192	-\$386,195
30-60%	\$5,170,881	\$4,815,399	-\$355,481	\$5,099,784	-\$71,096
60-80%	\$5,010,983	\$5,010,983	\$0	\$5,010,983	\$0
	Total Rate Subsidy		-\$2,286,454		-\$457,291
	Administration		-\$137,187		-\$27,437
	Total Cost		-\$2,423,641		-\$484,728
	Retail Percent Increase		3.4%		0.7%
	Base Percent Increase		6.4%		1.3%

Table C-10. Annual Impact of Low-Income Rates by Cascade Customer Class, Partial Participation

	Customer Class / Rate Schedule					
	Residential Sch. 101	Commercial Sch. 104	Industrial Sch. 105	Large Industrial Sch. 111	Transportation Sch. 163	Interruptible Sch. 170
Total Cost	\$302,458	\$126,037	\$10,655	\$6,618	\$35,760	\$3,201
Base % Inc	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
Avg. Bills	\$50.77	\$174.06	\$1,141.60	\$7,717.41	\$7,041.09	\$20,689.21
Avg. Therms	58	250	1,764	13,845	100,305	39,950
Avg Bill Impact	\$0.37	\$1.02	\$5.88	\$30.38	\$95.25	\$66.69
Pct Impact	0.7%	0.6%	0.5%	0.4%	1.4%	0.3%

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
CASCADE'S ENERGY BURDEN ASSESSMENT
REPORT AND SUMMARY

EXHIBIT 303

November 2025



2025 OREGON ENERGY BURDEN ASSESSMENT

empower
dataworks

2025 OREGON ENERGY BURDEN ASSESSMENT

SEPTEMBER 2025

PREPARED FOR

Daniel Tillis

Cascade Natural Gas Corporation



PREPARED BY

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Empower Dataworks



INTRODUCTION

This brief report presents the methodology and high-level findings from Cascade Natural Gas Corporation (CNGC)’s 2025 energy burden assessment for Oregon. The accompanying “Findings” slide deck includes more details and recommendations.

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1. METHODOLOGY

1.1 GENERAL APPROACH

This energy burden assessment relies on collecting customer-level data, modeling missing attributes, then aggregating key metrics by geographic, demographic or building variables for analysis. Prior to this project, Empower Dataworks performed energy burden assessments in over 20 utility service areas (both gas and electric) using this approach. The methodology is also updated occasionally to align with energy assistance best practices. The energy burden assessment results are typically used to guide program design, evaluate the performance of energy assistance programs and develop targeted marketing and outreach strategies.

The customer data (including estimated household income) comes from various sources as described in the rest of Section 1. Some demographic attributes were modeled or inferred using statistical techniques due to lack of primary data in the Customer Information System (CC&B) or other sources. American Community Survey data was mainly used to sanity check aggregate statistics of customer-level data at the census tract level.

Three types of metrics were calculated:

- Metrics related to energy burden based on demographic and geographic characteristics
- Participation and funding in Energy Assistance Programs
- Customer energy use characteristics

The final dataset and results were provided to CNGC staff.

1.2 DATA SOURCES

The data sources leveraged for the analysis are described in this section.

DATA PROVIDED BY CNGC

CNGC provided various customer-level datasets to Empower Dataworks to enable this analysis. Data sharing was governed by a confidentiality agreement between Empower Dataworks and CNGC. Empower Dataworks was also subject to various cybersecurity requirements to safeguard customer data.

Customer Information System (CIS): This data included monthly gas bills for 27 months between January 2023 and March 2025, account numbers and service addresses. A separate data extract included the dates and customer accounts that received late payment and disconnection notices, allowing us to calculate the on-time payment rate for different customer segments.

Direct Assistance Program Data: We received a list of participating accounts in the Energy Discount Program (EDP), other CNGC low-income programs (OLIBA,

Winter Help, OLIEC), and LIHEAP between January 2023 and March 2025, along with discount amounts and dates. This allowed us to calculate the total assistance funding at the household level.

Demographic Data: Demographic data was procured from a third-party data compiler that aggregates data from a variety of sources. This data was mapped to the CIS dataset using customer addresses and included estimated household income, and homeownership status for most residential households. Demographic attributes for some customers were modeled due to lack of primary data in CIS or other sources. The modeling approaches are described in the next section.

DATA OBTAINED FROM OTHER SOURCES

Geocoding: We mapped the latitude/longitude of customer premises to census tracts, block groups and blocks in order to pull additional aggregate statistics.

County Assessor Data: We obtained publicly available assessor data from all counties in CNGC's service area. The data from most assessors included appraised values for homes, square footage, building year built, land use codes (residential, mobile homes, commercial and industrial), and other minor data points that were useful for performing general QA.

The addresses in this dataset were standardized to US Postal Service format, then matched with addresses in the CIS data. Some addresses existed in the CIS data but not in the assessor data (typically happens when multiple buildings occupy the same land parcel).

American Community Survey (ACS): ACS data (2019-23 5 year averages) was primarily used for QA to ensure that aggregate counts for various demographic attributes match the expected distributions from ACS.

1.3 FINAL ATTRIBUTES AND METRICS

The calculation methods for the metrics and attributes used in this report are described in this section. For all attributes, we also captured metadata related to the source of data and the confidence in the value (for example, data from primary sources has a high confidence, while modeled data has lower confidence). All of the data is robust for aggregate analysis, while high confidence data is better suited to customer-level marketing and program targeting.

Household Income: Estimated household income ranges were obtained using three methods: (i) self-attested incomes for program participants, (ii) third-party purchased and calibrated demographic data, and (iii) modeled income for households with missing data. Self-attested household income ranges was available for about 4,000 households that had participated in the EDP. Third-party estimated income data is sourced from public or commercially available data sources. Since household income from data vendors can become outdated quickly, we adjusted the unverified household incomes by a constant percent, so that the median

household income in each county matched the median household income from the [DOE LEAD tool](#) and the Federal Reserve's [FRED tool](#). For households with missing income data, an estimated income was calculated as the average of the incomes of the five geographically closest households.

Poverty Status: The number of people living in a household cannot be easily obtained from any public data sources. This makes it difficult to identify a household's poverty status compared to the State Median Income, which is defined by household size. According to the Census Bureau, the median household size in the CNGC counties is between 2 and 3. In general, we used the income limits for two person households in this analysis as they produced the best estimates of state median income tiers compared to the DOE LEAD tool.

Building type: Meters were classified into one of five building types: single family, mobile homes, multifamily apartments, commercial or master metered and unoccupied. Commercial meters were those tagged with a specific commercial use by the county assessor or that

were on a commercial rate class. Additionally, we filtered out meters using in excess of 3,600 Therms per year as those are likely associated with commercial uses or are master metered. Meters that showed energy consumption less than 60 Therms/year were flagged as potentially unoccupied or vacation homes.

Overall, the number of residential meters was 75,000. When excluding high-use and low-use outliers (suspected seasonal, unoccupied or master-metered), the final number of occupied households for the analysis was approximately 72,000. CNGC provided internal data to identify single family and multifamily building types – this was used in conjunction with county assessor land use codes to categorize building types. Note that the building types in CNGC’s data may not very accurate.

The aggregate housing type counts (90% single family) are very similar to data from the DOE LEAD tool for gas-heated homes in CNGC’s service area.

Homeownership Status: Some homeownership data (rent vs. own) was available from the third party demographic dataset. For the remainder, households in multifamily apartments were tagged as “Likely Renters”, and

households without any account changes during the two year analysis period were tagged as “Likely Homeowners”.

Energy Burden and Energy Efficiency Potential thresholds: These thresholds were set as follows:

- High-burden threshold: Greater than 2% in marine climate counties and greater than 2.5% in cold climate counties – using climate zones defined by DOE. All of CNGC’s service area in Oregon is in cold climate counties.
- High efficiency potential threshold: Greater than 0.6 therms/sq.ft.

Gas Burden: Gas energy burden for a household is calculated simply by dividing annual gas expenses by gross household income.

$$\text{Gas Burden } [\%] = \frac{\text{Annual Gas Expenses } [\$]}{\text{Annual Household Income } [\$]}$$

Excess Burden: Excess burden is the portion of a household’s gas burden in excess of the high burden threshold.

$$\begin{aligned}
 & \text{Excess Burden } [\$] \\
 &= \max(0, \text{Energy Burden } [\%] \\
 &\quad - \text{High Burden Threshold} [\%]) \\
 &\quad \times \text{Annual Household Income} [\$]
 \end{aligned}$$

On-Time Payment Rate: This is the proportion of all energy bills that did not require a late payment or disconnect notice to be sent out.

Energy Assistance Funding: The dollar amount of funding flowing through energy assistance programs (including discount, donation and weatherization programs) through discounts or rebates.

Customer Bill Reductions (Avoided Burden): The total bill impact (in dollars) from energy assistance programs.

Avoided Need: The total bill impact (in dollars) from energy assistance programs, specifically for program

participants flagged as “high-burden”. Bill impact is equal to the amount of assistance grants or discounts for direct assistance programs and is equal to measure savings (therms/year) multiplied by the residential therms rate (\$/therms) for energy efficiency programs.

Census Tract Statistics: Since each customer has been mapped to a census tract and block group, we are also able to match customers to census tract average statistics (e.g. presence of seniors, non-English speakers, education level, housing burden etc.).

Energy Assistance Need: This is the sum of excess burden across all customers.

1.4 SOURCES OF UNCERTAINTY

- **Household income** is a dynamic piece of data as residents move in and out of homes and income data can become outdated within a year or two.

- **Poverty status.** Since household size cannot be reliably captured through any available data source, household poverty status is subject to uncertainty. The State Median Income uses household size as a scaling factor. In this analysis, we have used income thresholds for 2-person households for consistency and clarity, but they may under-estimate or over-estimate the actual income eligibility depending on the actual sizes of low-income households in this service area.

- **Individual vs. aggregate data usage.** The underlying dataset has customer-level flags for data quality – data from primary sources is considered high quality while modeled data is considered medium or low quality, depending on the availability of supporting sources of information (example, home values and location). Higher quality data can be used for individual program targeting, lower quality data can be used for program design and aggregate reporting.

- **Building types.** There is some uncertainty in the classification of building types as described in Section 1.3. This could result in misclassifying non-residential meters as occupied households or single family/mobile homes as multifamily.

- **Achievable reductions in energy assistance need.** This analysis presents a *technical* energy assistance need based on energy burden. However, in our experience with energy assistance programs in general, many customers may not participate in programs, regardless of program design or available benefits due to a variety of barriers like access to information, application process difficulties, stigma and lack of trust. Understanding the *economically achievable* reduction in energy assistance need through utility programs would require a qualitative research of non-participants in a utility's service area.

2. CNGC'S ENERGY BURDEN BASELINE - OREGON

The background image is a photograph of a large concrete dam with several spillways. Water is flowing over the spillways, creating white foam. In the background, there are mountains under a sky with soft, warm light, suggesting a sunset or sunrise. The overall tone is somewhat muted and atmospheric.

2.1 CNGC RESIDENTIAL SECTOR PROFILE - OREGON

CNGC's service territory in Oregon was composed of approximately **72,000 occupied households** in 2025 (exceeding a minimal level of 60 therms/year of energy use and not exceeding 3,600 therms/year).

Ethnicity: According to the U.S. Census Bureau, approximately 69% of residents in CNGC's largest counties are non-Hispanic white.

Household Income: The median household income for gas-heated households in CNGC's service area was approximately \$103,000 in 2025, which is slightly higher than the state median. This reflects the fact that gas-heated households are typically higher income than the average household. Approximately **17%** of residents would fall under 60% of the State Median Income (see table on following page for SMI values). An additional 18% of households earn between 60-100% of the state median income. These "borderline" customers would be ineligible for almost all energy assistance programs, but may still bear a relatively high level of energy burden. Designs for programs that are ratepayer-funded should

take into account the degree of additional burden that would be imposed on these customers.

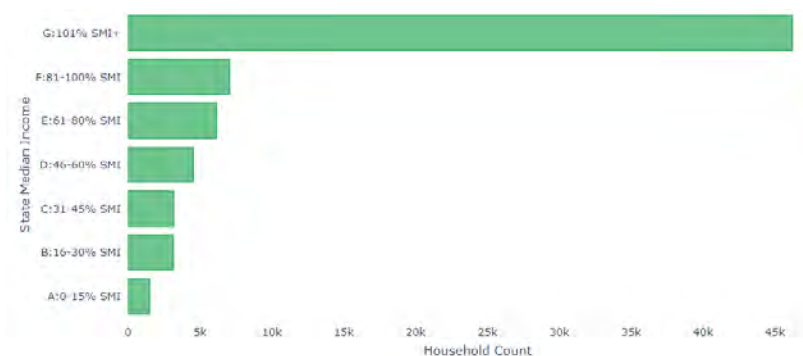


Figure 1. Distribution of households by household income as a percent of state median income for CNGC residential customers

Household Size	60% of Annual State Median Income (SMI)	
	2024	2025
1	\$33,427	\$36,811
2	\$43,712	\$48,138
3	\$53,997	\$59,464
4	\$64,282	\$70,790
5	\$74,567	\$82,117
6	\$84,852	\$93,443
Each additional member	\$1,929	\$2,124

Energy Bills: CNGC’s residential volumetric gas rates in 2025 were lower than average for the region, and the basic charge is relatively low. Annual gas bills average **approximately \$870/year (2025 projection) with an average annual consumption of 700 therms**. Figure 2 shows the distribution of annual gas bills.

Home Vintage: Of the homes with a known age, approximately 69% were built after 1980, 22% were built between 1940 and 1980, with the remainder built prior to 1940. The housing stock is thus relatively newer, although there are still plenty of energy savings opportunities in older homes.

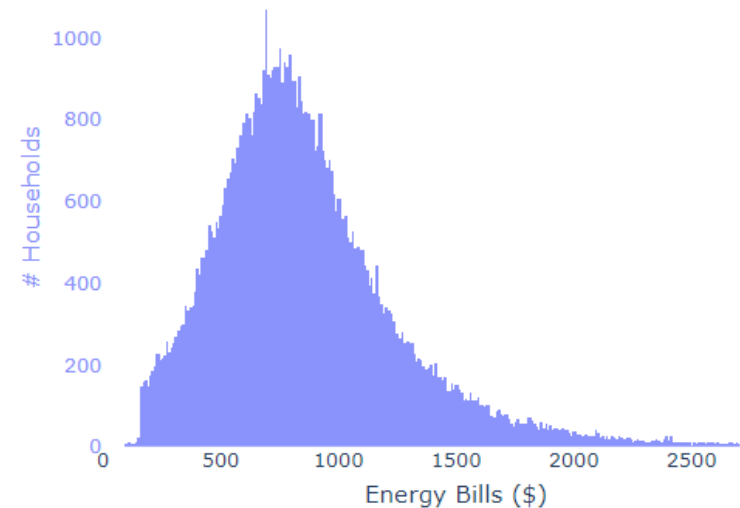


Figure 2. 2025 Household gas bill distribution for CNGC residential customers in Oregon

2.2 ENERGY BURDEN

CNGC customers in Oregon have an **average and median gas energy burden of 1.3% and 0.8%**, respectively. Figure 3 compares CNGC's median total energy burden (including an estimate of electricity burden) to values published in other jurisdictions. The median burden is relatively low and similar to metropolitan regions in the Pacific Northwest.

The average household will pay \$870/year in gas bills in 2025. Of 72,000 identified households, **5,500 were deemed to have a high energy burden**, of which an estimated 5,200 would fall under 60% State Median income - meaning that annual gas bills exceeded 2.5% of their income. Low-income high-burden customers paid an average of \$930 in annual gas bills – close to the overall average; indicating that the high burden is driven by low incomes rather than high gas usage. The **total energy assistance need for CNGC customers in Oregon is approximately \$2.16M across all incomes and \$2.03M in households that earn under 60% SMI**—this is the total reduction that would bring all customer gas bills below the high burden threshold.

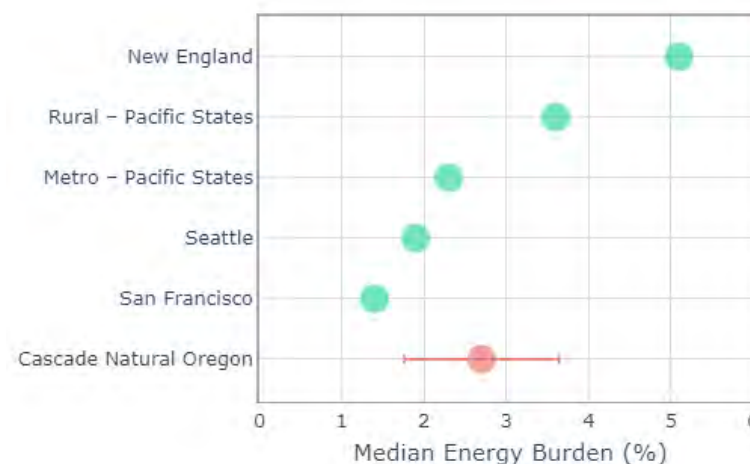


Figure 3. Energy burden benchmarking vs. other regions. Data for other regions is the median across each region, not specific to any utility.

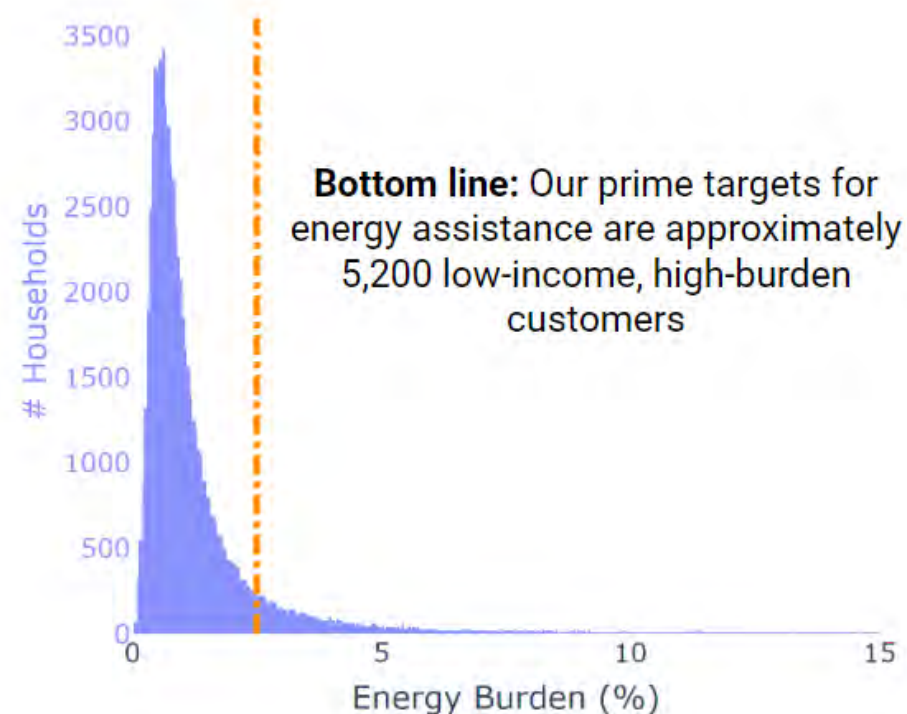
CNGC's energy charge in its 2025 residential retail rate is approximately \$1/therm, which is lower than other gas utilities in the region and much lower than the national average of \$1.45/therm. Low incomes appear to be the most significant drivers of high energy burden in the area for a minority of customers.

Although averages and medians give a general indication of energy burden across a service territory, the reality is that **energy burden is a customer-level metric** and its distribution is a better indicator of the burden that

customers experience. The distribution of energy burden among CNGC customers is shown in Figure 4.

The goal of an effective energy assistance portfolio should be to prioritize the customers who most need the assistance, i.e. the customers exceeding the high burden thresholds. These customer segments can be investigated in more detail in the data dashboard.

Number of Occupied Households ~72,000
Low Income Households Under 60% SMI: ~12,400 ± 10%
High Burden Households* ~5,500 (all) ~5,200 (LI)
Median Gas Burden ~0.8% (all) ~2.2% (LI)



*Energy bills and burden are calculated without factoring in any forms of energy assistance

Figure 4. Distribution of energy burden among CNGC customers in Oregon.
Figure shows all homes, dashed line indicating 2.5% high energy burden threshold.

2.3 ENERGY EFFICIENCY VS DIRECT ASSISTANCE

Figure 5 shows the distribution of energy burden and energy efficiency potential (defined through Energy Use Intensity thresholds) across all low-income residential customers. In a perfect world, the energy assistance portfolio would match these customer segments. For example:

- Energy efficiency and weatherization programs should primarily serve **high burden, high potential** households
- Direct assistance programs should primarily serve **high burden, low potential** households
- Crisis/emergency programs should primarily serve **low burden, low potential** households
- Traditional energy efficiency programs with financing should serve **low burden, high potential** households

Aligning targeted customers with program strengths results are the most cost-effective pathway to energy burden reduction.

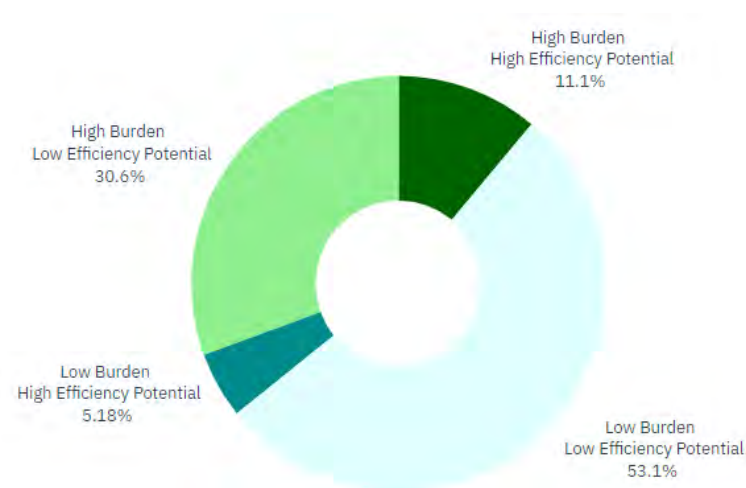


Figure 5. CNGC low-income customer segments by energy burden and energy efficiency potential.

Approximately 53% of CNGC's low-income customers are low-burden and low-efficiency potential. These customers' energy bills may not be a huge expense relative to housing, medical and education expenses, and they should not be prioritized in the more intensive programs, such as weatherization.

Almost 27% of high burden customers also have a high efficiency potential indicating that the energy assistance program mix should prioritize immediate relief through bill discounts. While energy efficiency is a more sustained form of energy burden reduction, we should recognize that scaling up low-income weatherization faces a host of barriers. Energy efficiency and direct assistance are not mutually exclusive and there is still a large group of households who would benefit most from energy efficiency to alleviate their high gas burden.

3. KEY CUSTOMER SEGMENTS

A11

A12

HOUSE

3.1 OVERVIEW

This section presents statistics and profiles related to some key customer segments in CNGC's service area. These customer segments were selected for a combination of reasons:

1. Flagged in this assessment as having high overall burden or high prevalence of energy burden
2. Identified as having low access to existing programs
3. Identified as vulnerable through stakeholder feedback

This analysis is primarily geographic, focusing on specific neighborhoods. The maps in the following sections display the level of energy assistance need in these areas as well as locations of social services for potential outreach (green dots).

These customer segments represent only a portion of the high energy burden among CNGC's customers, but they are intended to serve as an example of the targeting analysis that CNGC can perform for their programs or outreach initiatives in the future.

3.2 ONTARIO AND SURROUNDINGS (MALHEUR COUNTY)

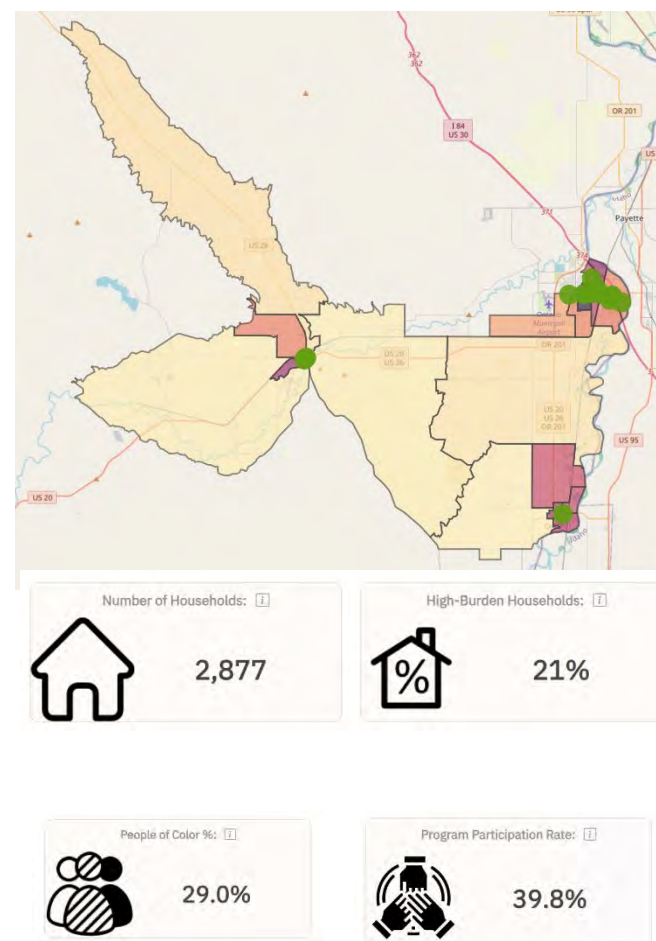
Census tracts: **41045970300, 41045970400, 41045970500, 41045970600**

Total Assistance Need: **\$205k (9.5% of total need)**

Total Assistance Funding: **\$310k (11.8% of total funding)**

PROFILE: Ontario, OR and the surrounding area has a high poverty rate, with higher past due and disconnection rates than average. The area is quite rural – more intensive outreach efforts might be required. On the other hand, it appears to be well served by existing assistance programs.

RECOMMENDATIONS: About 40% of eligible households have participated in some form of energy assistance, and the energy assistance funding more than covers their need. The energy assistance programs should be focused on increasing their reach to help more customers. Ontario itself is a compact town and may be amenable to targeted marketing campaigns in local resource centers, movie theaters, restaurants etc.



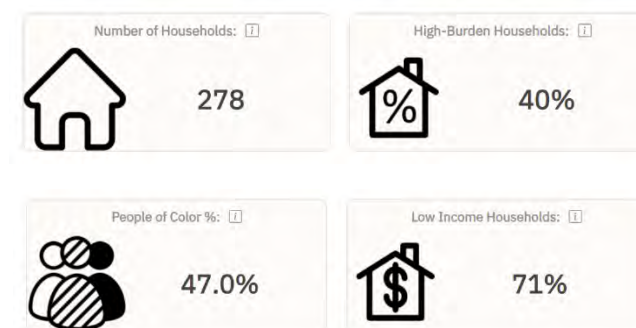
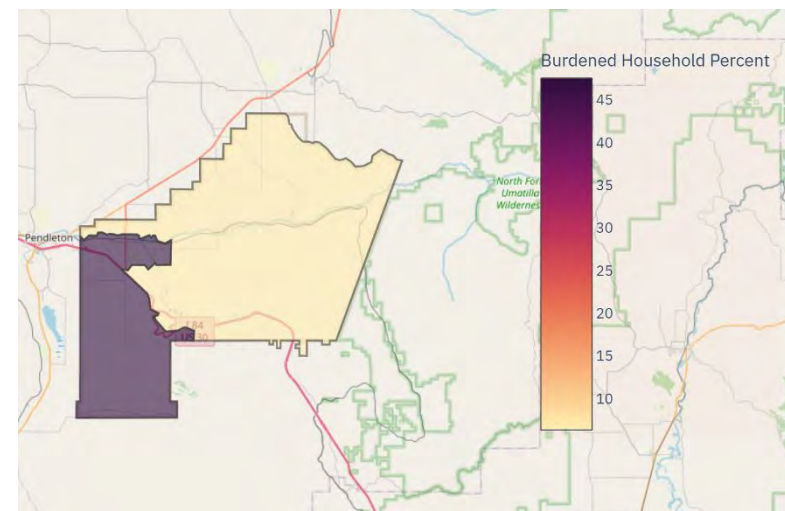
3.3 CENSUS-DESIGNATED TRIBAL AREAS

Total Assistance Need: **\$36k (1.6% of total need)**

Total Assistance Funding: **\$44k (1.7% of total funding)**

PROFILE: The tribal areas in and around the Umatilla reservation in Umatilla county have the highest burden and disconnection rates in CNGC's Oregon service area. Almost half of households have seniors and the program participation rate is about 40% (in line with other areas).

RECOMMENDATIONS: Consider outreach to Umatilla tribal administration – set a target of 80%+ participation among eligible households. Potentially explore auto-enrolling all households in this area in EDP or use the energy burden data as a rough indicator of program eligibility.



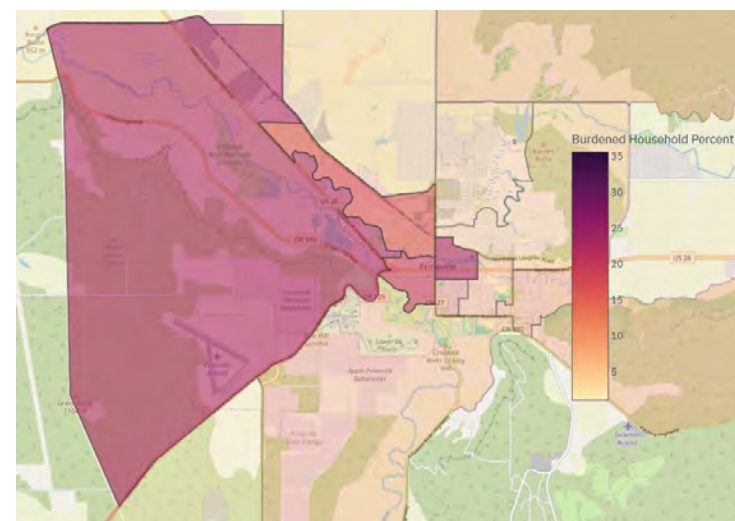
3.4 PRINEVILLE AREA (CROOK COUNTY)

Block Groups: 410139502003, 410139502004,
410139503021, 410139503022

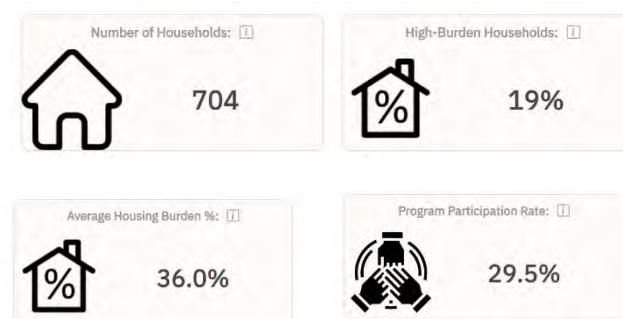
Total Assistance Need: **\$48k (2.2% of total need)**

Total Assistance Funding: **\$52k (2 % of total funding)**

PROFILE: Eastern Prineville has a large senior population and the program participation rate is lower than average for service area. Housing burden also appears to be quite high.



RECOMMENDATIONS: This is a small town community so consider outreach to local community centers and social services, such as the Soroptimist Senior Center in Prineville.



CNGC/303
Tillis/26

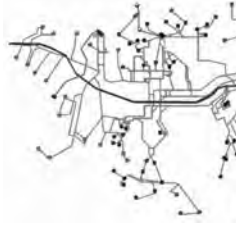


2025 Energy Burden Assessment

Summary

empower
dataworks

What is an Energy Burden Assessment?



Data analysis (not a survey) that uses utility and third-party customer data.



Primary purpose is to estimate the energy assistance need based on customer-level geographic, demographic and building data.

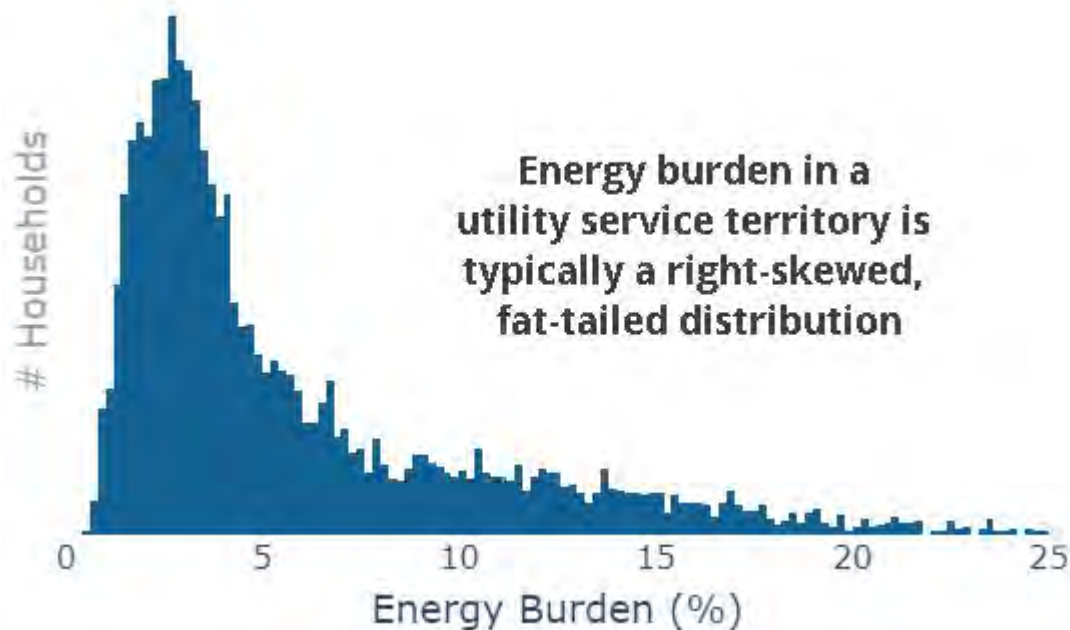


Comparing the need to actual program performance gives us an **actionable** path to improving our energy assistance programs

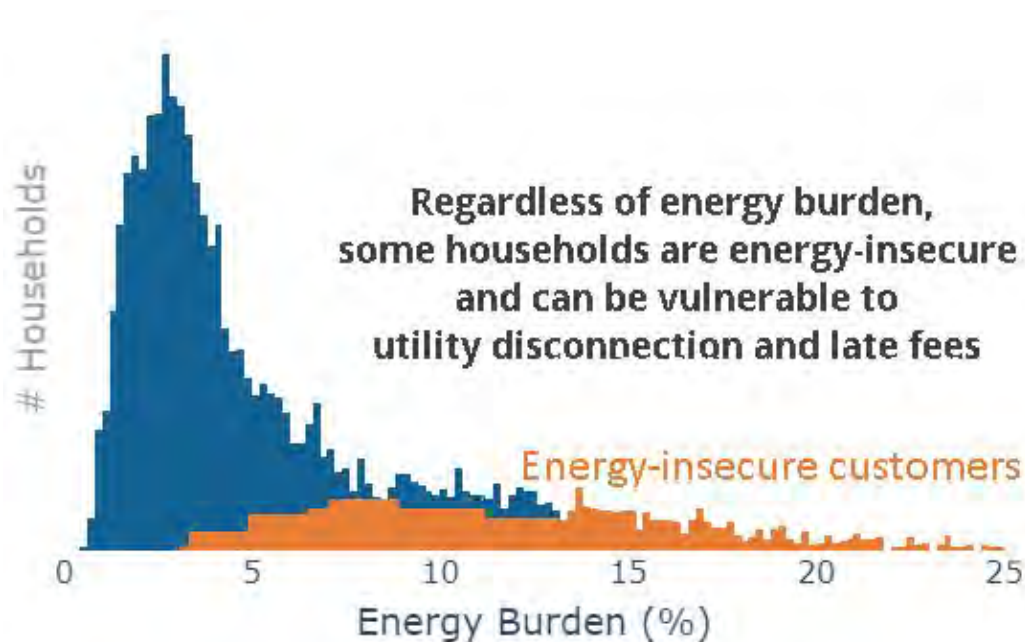
Energy Burden

The primary metric of success is
reduction in energy insecurity
(disconnections and late payments)

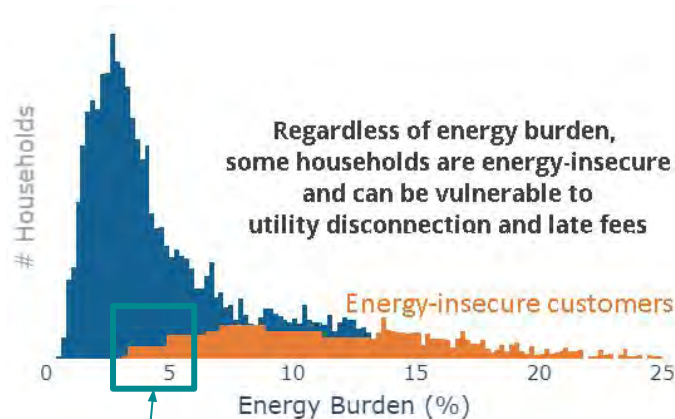
Energy Burden is a Distribution



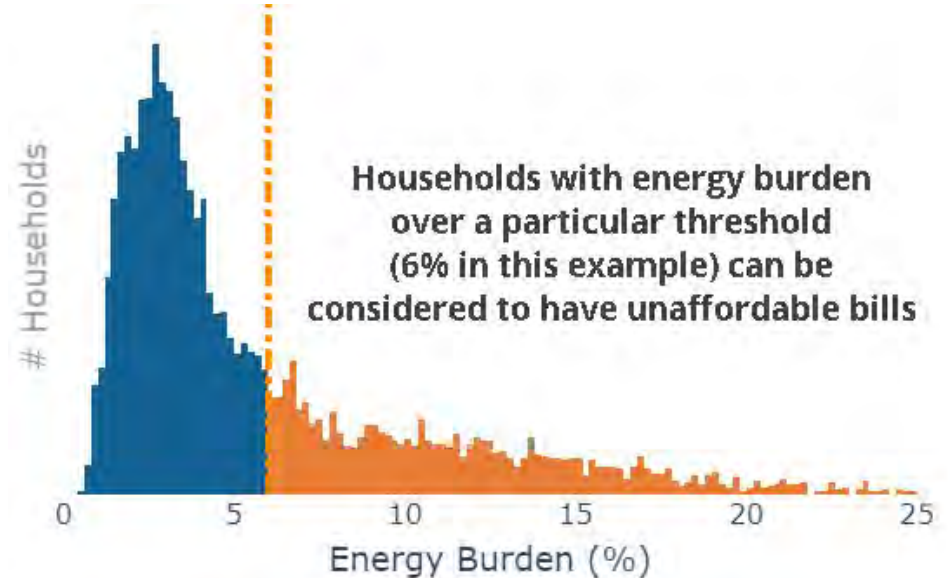
Energy Insecurity is Harder to Measure



Energy Burden is a Proxy for Energy Insecurity



Low burden but
energy -insecure



Definitions

Low-income (Oregon):

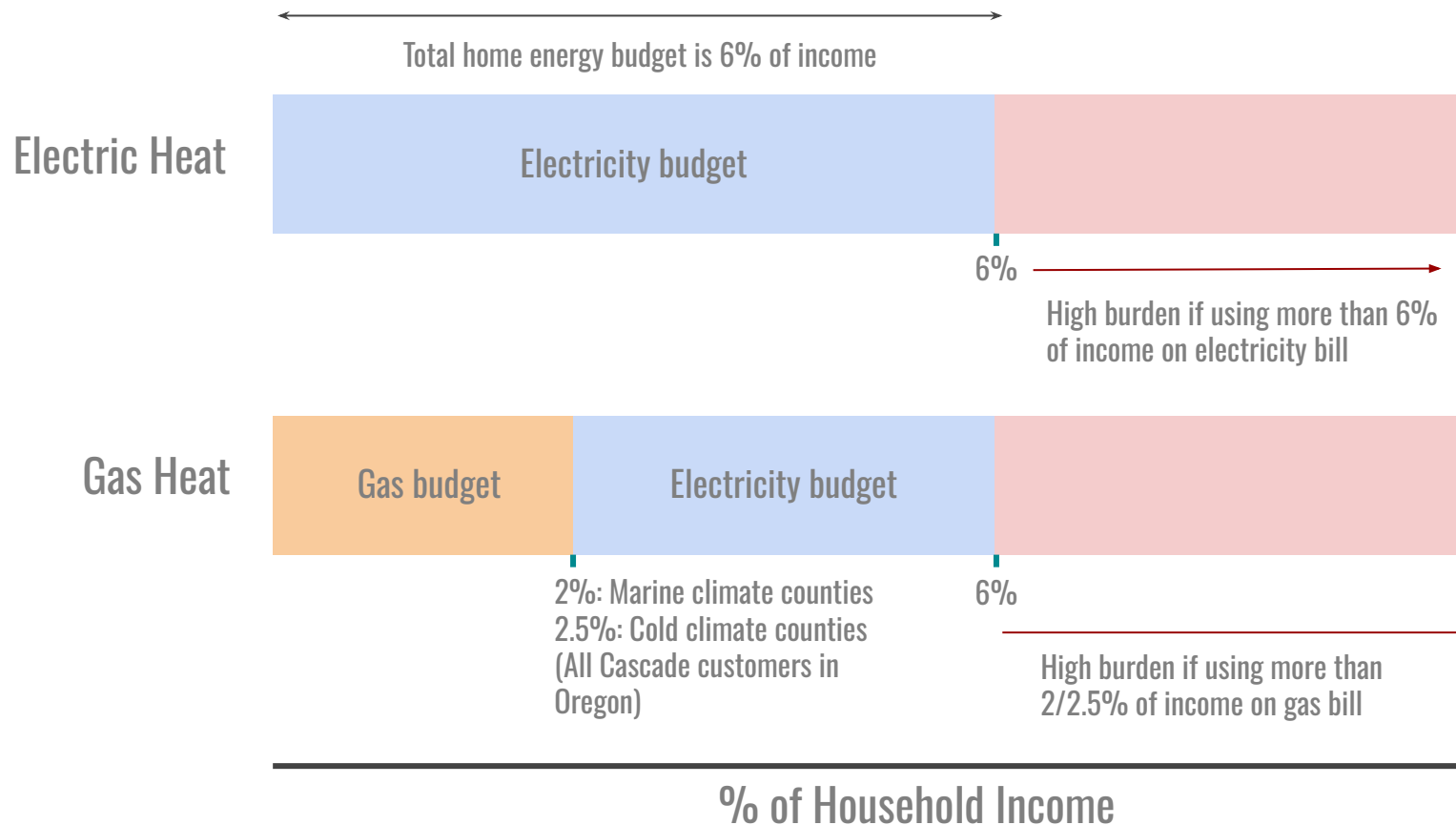
Households earning under 60% of the state median income (SMI)

Household Unit Size	Annual Gross Income
1	\$33,427
2	\$43,712
3	\$53,997
4	\$64,282
5	\$74,567
6	\$84,852

\$3-4k/month after taxes for rent, groceries, transportation, childcare, healthcare and utilities

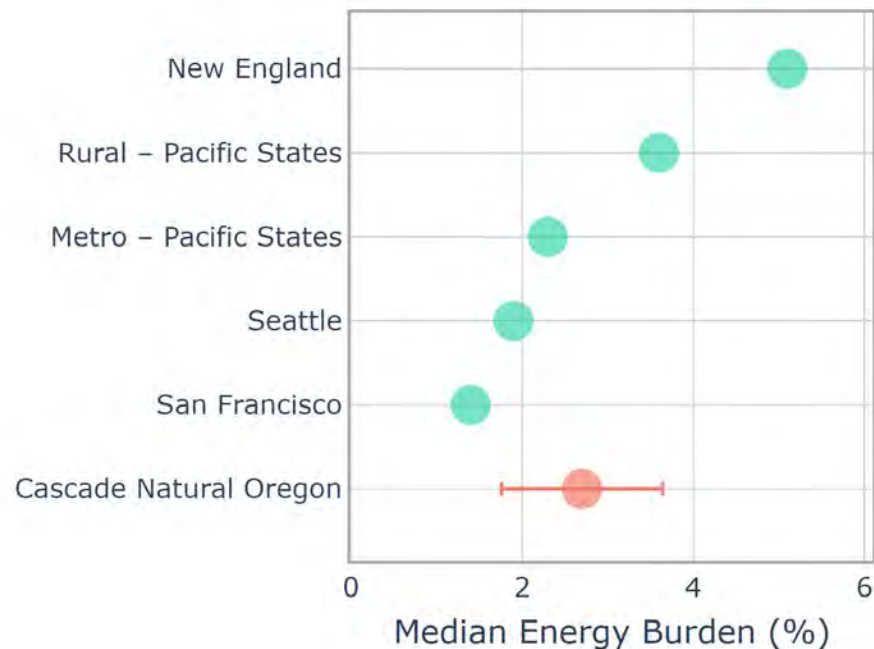
**Most data is reported for the 2024 calendar year. EDP participation as of July 2025*

High burden thresholds for multiple fuel homes



Insights: **Energy Burden**

- Median total energy burden (~2.7%) is comparable to other areas in the Pacific Northwest.
- Rates are below average for the region and Cascade customers have relatively higher incomes than the general population. Homes in the service area are relatively newer and more energy efficient resulting in lower gas usage.



Insights: Energy Burden (Oregon)

Number of Occupied
Households

~72,000

Low Income Households
Under 60% SMI:

~12,400 ± 10%

High Burden Households*

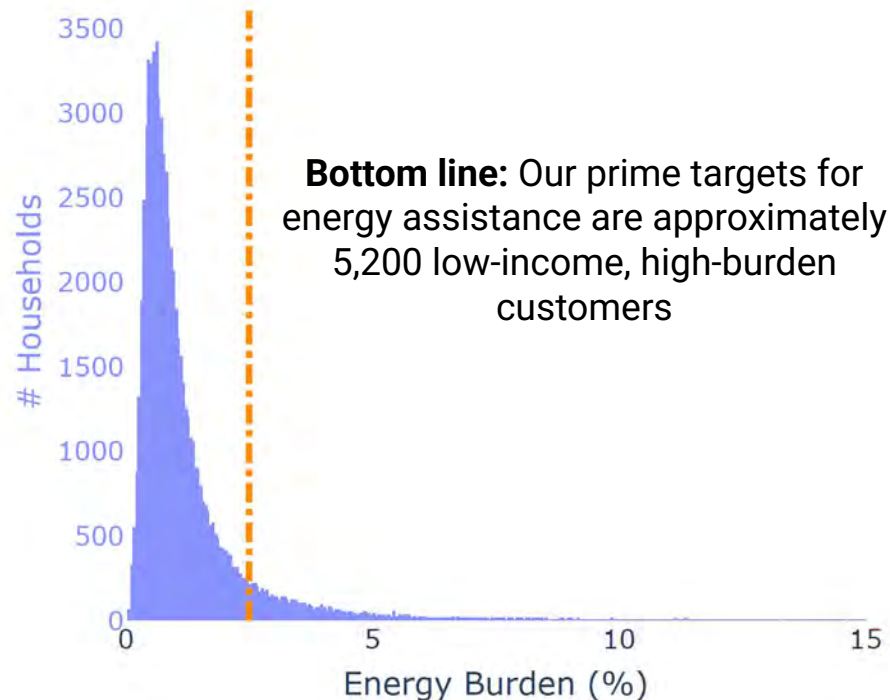
~5,500 (all)

~5,200 (LI)

Median Gas Burden

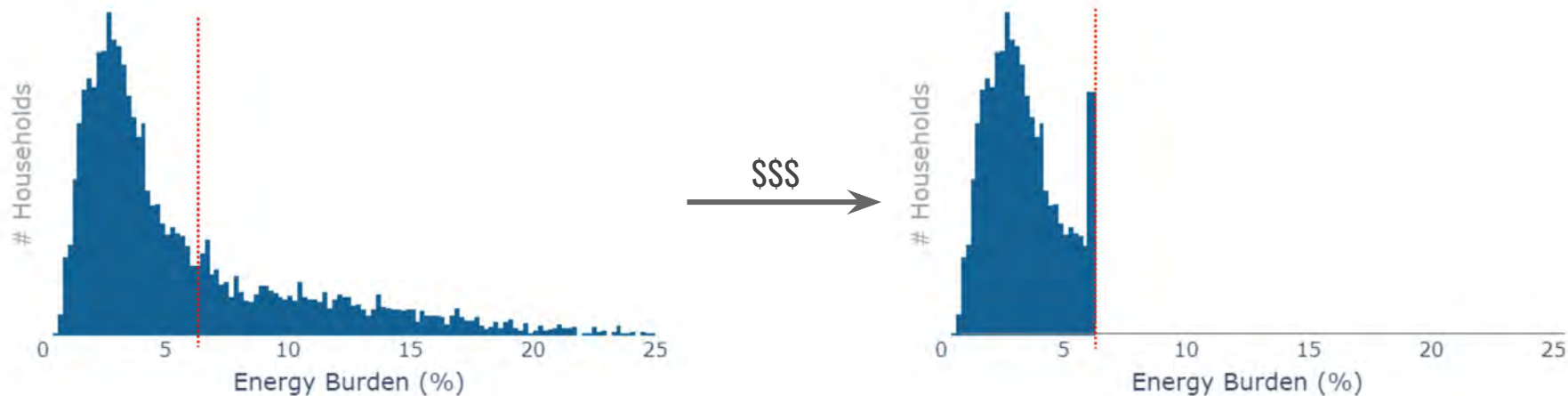
~0.8% (all)

~2.2% (LI)



*Energy bills and burden are calculated without factoring in any forms of energy assistance

Energy Assistance Need



Insights: High-level Assistance Gap (Oregon)

Low-Income, High Burden
Households

~5,200



Income-eligible only



2025 Projection not including additional
program participation.

~\$1.8M EDP, \$0.8M other

- At program maturity (year 5+), best practice is to target at least 60-70% of the need available as program funding. Once this target is reached, participation usually slows down and focus shifts to program optimization and targeted outreach.
- Currently, CNGC's programs appear to be over-serving participants (meeting 129% of total assistance need with only 40% program saturation)

Rate Increase Impact

2025:

Low-Income, High
Burden Households

~5,200



Existing assistance
covers 129% of need

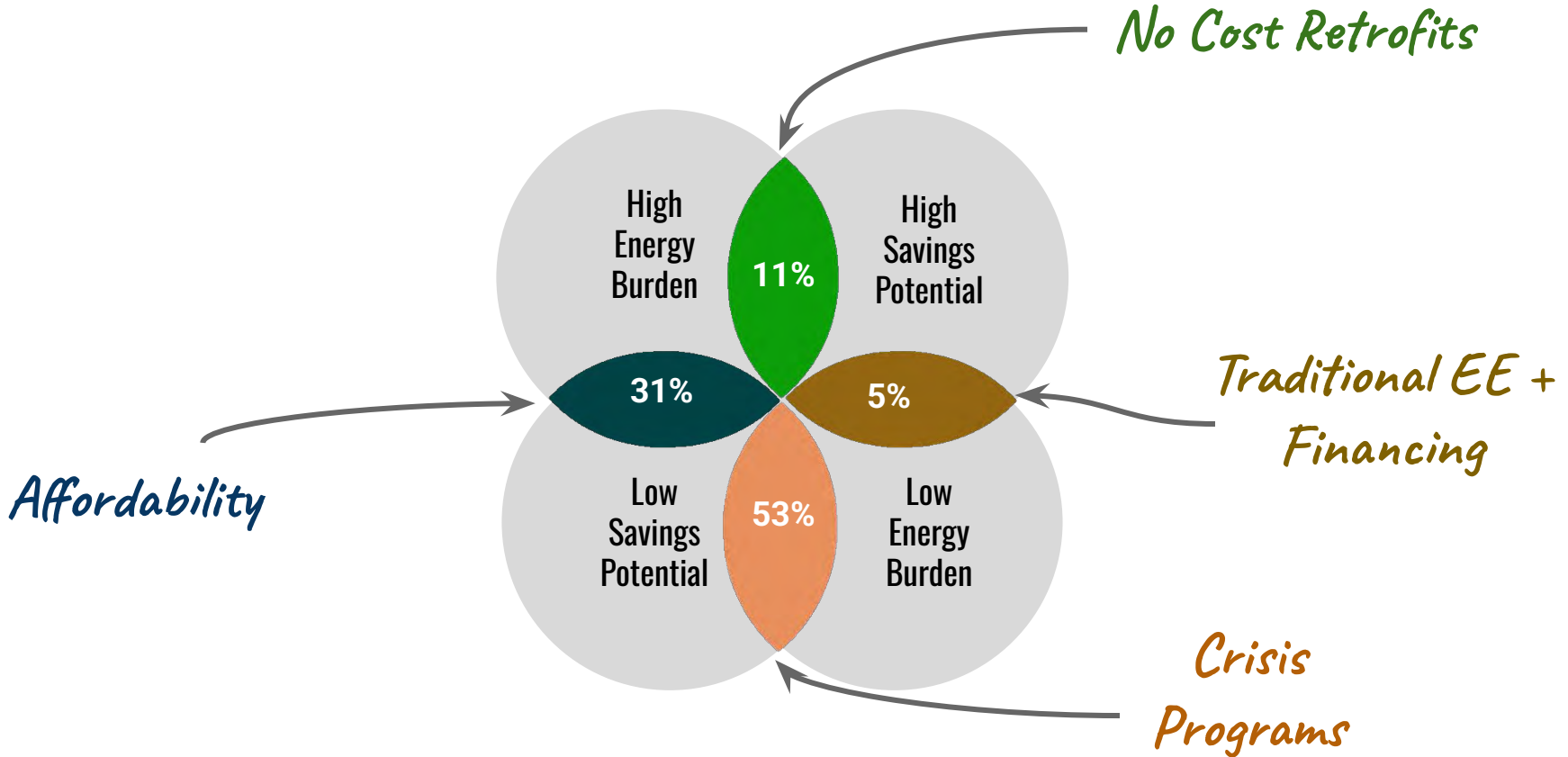
Rate Increase	Low-income, high-burden households	Energy Assistance Need	Existing assistance as percent of need	Estimated EDP Spending
5%	5.3k (+2.3%)	\$2.19M (+8%)	124%	\$1.92M
10%	5.6k (+8.8%)	\$2.44M (+20%)	115%	\$2.01M
15%	5.9k (+15%)	\$2.71M (+33%)	107%	\$2.10M

*Assumes 3% average annual household income increase
and no change in program participation

Program Potential

CNGC/303

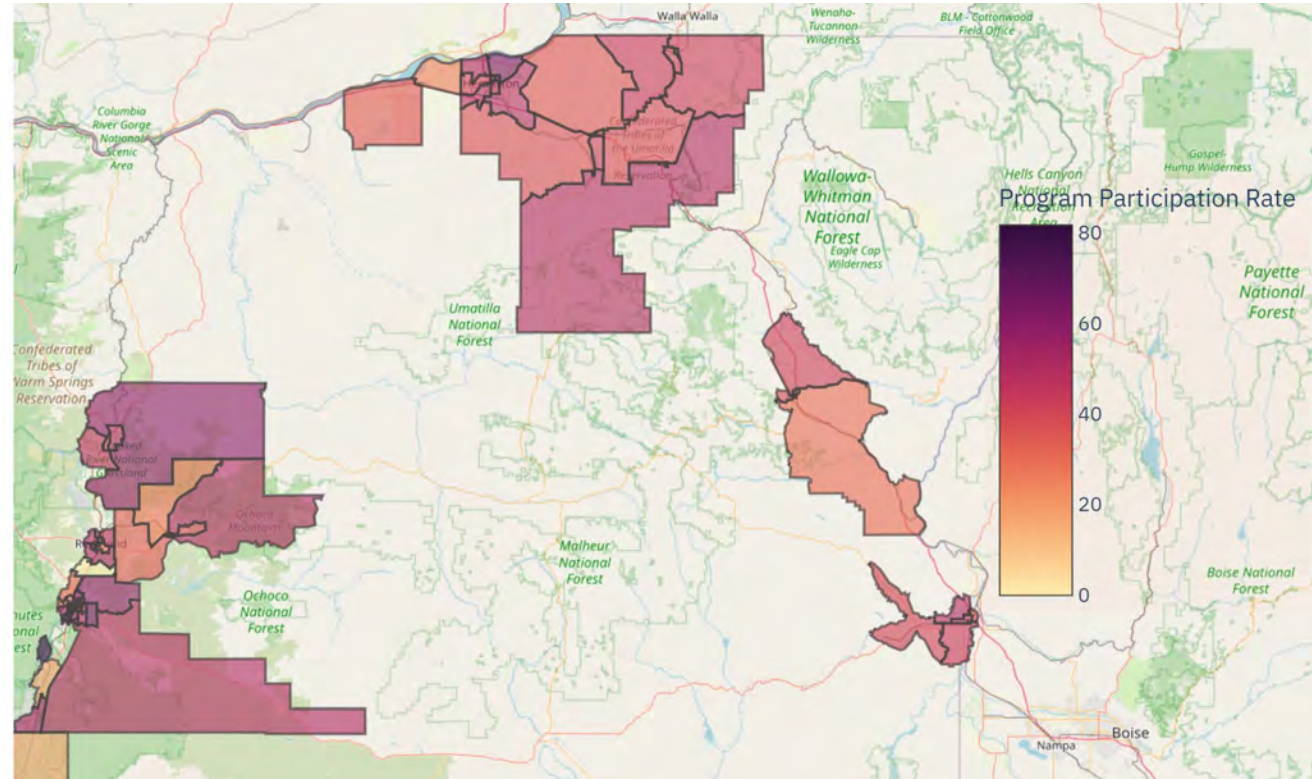
Tillis/40



Energy Discount Program

Program Participation Rate

Recommendation: Overall participation rate is approximately 36%. Good participation in Central Oregon. Focus outreach on outlying areas and NE Oregon.



Program Participation Rate by Tier

Income tier	Estimated number of households	% High-burden	Participation rate
0-15% SMI	1,490	97%	64%
16-30% SMI	3,150	72%	49%
31-45% SMI	3,180	30%	41%
46-60% SMI	4,540	11%	15%

Maintain focused outreach efforts on these groups. Target 80% participation by 2027.

Discount Tier Analysis

Recommendation: Discount levels appear to be high relative to the customers' needs in each income tier - especially considering the absence of post-enrolment verification and 2 year recertification period. Consider revisiting discount design for long-term sustainability of the program.

Income tier	Discount Level	Average assistance need as a percent of bill (not including taxes/PPC)
Tier 1: 0-15% SMI	95%	81%
Tier 2: 16-30% SMI	70%	36%
Tier 3: 31-45% SMI	45%	12%
Tier 4: 46-60% SMI	15%	5%

Reduce Tiers 2 and 3 to 40% and 20% respectively.

Update to 10%

Reduce Tier 1 discount to 80%.
Maintain a 95% discount for 0-5% SMI.

Can potentially help an additional 2,400 customers (+54% program growth) for the same budget.

Tier Adjustments

Income tier (FPL)	Current SMI tier	Closest SMI tier
0-25% FPL	0-15% SMI	0-7% SMI
26-50% FPL	16-30% SMI	8-15% SMI
51-100% FPL	31-45% SMI	16-30% SMI
101-150% FPL	46-60% SMI	31-45% SMI
151 - 200% FPL	-	46-60% SMI

Recommendation: Discount levels designed by FPL were applied to very high/wide SMI tiers. In general, that means that EDP participants receive much higher discounts than their energy burden would suggest.

In general, FPL to SMI relationship changes over time and we recommend removing the FPL thresholds in the EDP design and tariff. Using SMI alone is consistent with LIHEAP and other energy assistance programs and it will make the program simpler to administer and audit.

Adjusted Discount Tiers

Income tier	Current Discount	Adjusted Discount (does not apply to taxes/PPC)
Tier 0: 0-5% SMI	95%	95%
Tier 1: 6-15% SMI	95%	80%
Tier 2: 16-30% SMI	70%	40%
Tier 3: 31-45% SMI	45%	20%
Tier 4: 46-60% SMI	15%	10%

Recommendation: Status Quo discount levels will eventually lead to higher and higher program costs and a potentially unsustainable ratepayer impact.

Discount Tiers: Oregon Gas Utilities Comparison

Income tier	EDP Current Discounts	EDP Proposal	Northwest Natural BDP	Income tier	Avista LIRAP
Tier 0: 0-5% SMI	95%	95%	85%	Tier 1: 0-5% SMI	90%
Tier 1: 6-15% SMI	95%	80%	85%	Tier 2: 6-20% SMI	60%
Tier 2: 16-30% SMI	70%	40%	50%	Tier 3: 21-40% SMI	25%
Tier 3: 31-45% SMI	45%	20%	30%	Tier 4: 41-60% SMI	15%
Tier 4: 46-60% SMI	15%	10%	15%		

Arrearages / OLIBA

Disconnected customers

- Cascade Oregon generally has a very low service disconnection rate over 12 months (~0.6%) for unique households (some households may get disconnected multiple times a year)
- Only 160 disconnected households in past year - mainly in NE Oregon - were likely eligible for energy assistance but didn't participate.
Communication about EDP/OLIBA to customers at risk of disconnection is generally working well for at-risk customers.
- **Service technicians have recently been retrained on communicating about EDP/OLIBA with customers being disconnected.**

OLIBA review

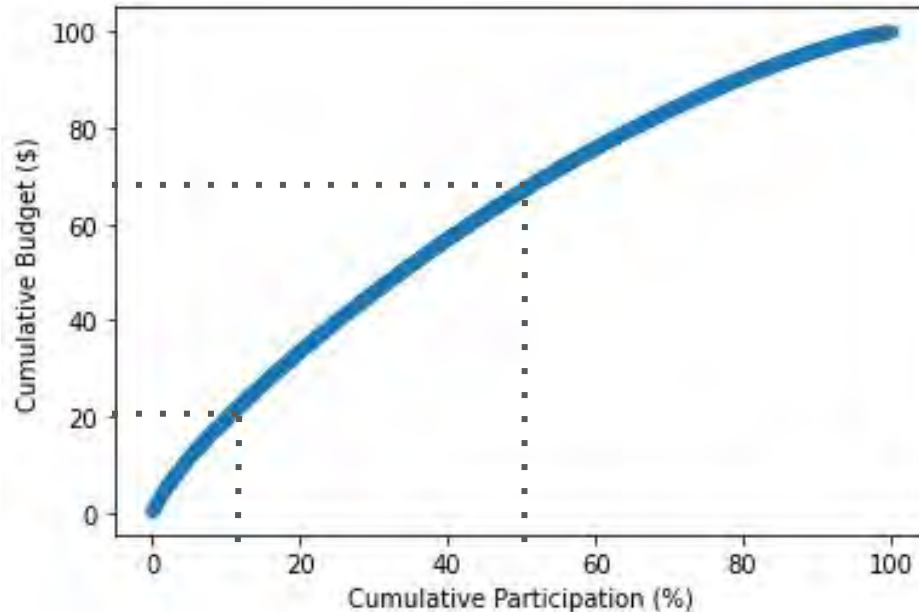
OLIBA program is well-designed - simple, easy to administer and explain to customers.

Minor recommendations to consider:

- Relief levels appear to be very generous for the higher income tiers (e.g. 80% for 45-60% SMI) with no pre- or post-enrollment income verification. There appear to be several hundred repeat participants of OLIBA. **Recommendation:** Monitor repeat users of OLIBA using a standard report to understand whether customers are using it to handle bill affordability or for managing temporary hardships. If usage by repeat customers exceeds 50%, we recommend a qualitative evaluation of the program to determine whether it's serving its intended purpose.
- Consider eliminating the use of FPL income tiers (use SMI only) - SMI calculation will always be the more generous in the current design.
- Consider expanding OLIBA eligibility to the 61-80% SMI tier with a 60% arrearage relief level. This group does not have a high level of energy assistance need but could be vulnerable to crisis situations where paying their bill on time becomes challenging.

Energy Efficiency

Bill Discount Program utilization



Within each income/discount tier:

Top 10% of participants by energy use utilize 20% of budget. Their average energy use is 86% higher than the overall average energy use (1290 therms/yr).

Top 50% of participants by energy use utilize 67% of budget. Their average energy use is 21% more than the overall average energy use (850 therms/yr).

Top 10 energy users will receive \$2,000+ each in 2025

Energy Efficiency Potential (2,000 high potential, low-income households)

CNGC/303

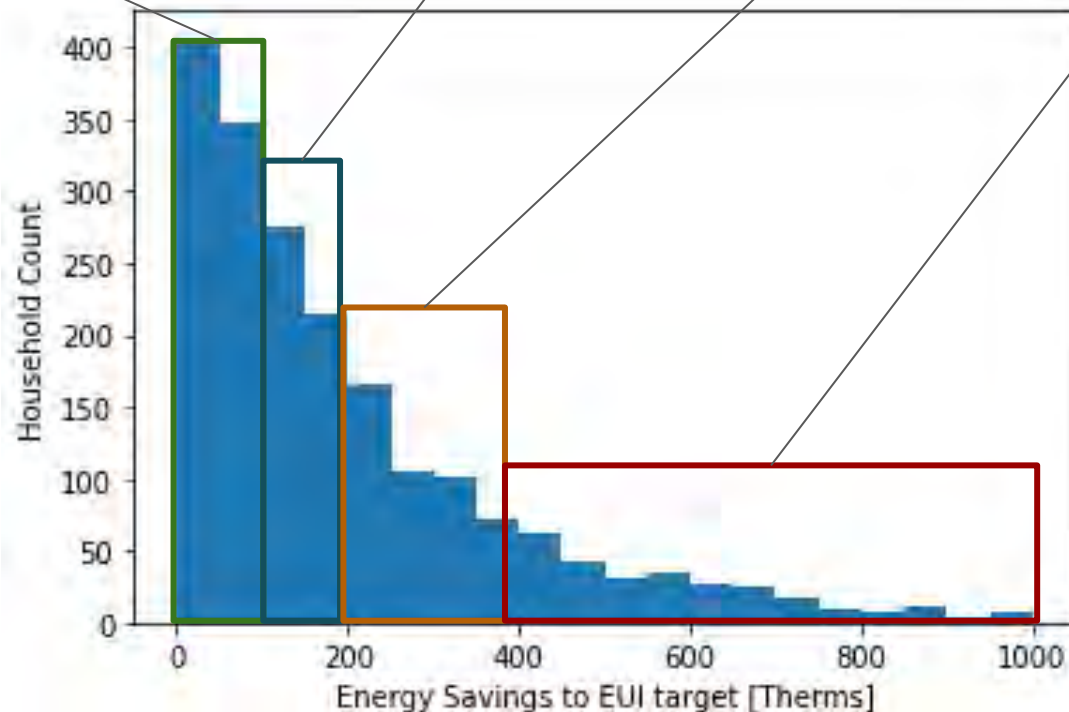
Tillis/53

37% Smart thermostats,
pipe insulation, furnace
tuneups

24% HE water
heater/furnace

22%
Weatherization

17% Custom /
Energy Audits



EUJ target = 0.6 Therms/sq.ft

Energy Efficiency Potential

Challenge:

High energy users overutilize program funds while the root cause of their high energy burden remains unaddressed. There are 2,000 low-income customers (840 EDP participants) who would potentially be good candidates for energy efficiency measures, but existing low-income EE programs serve relatively few households.

Recommendations:

First step towards integrating energy efficiency with EDP is to identify and understand the high use participants.

Consider requiring that high-use EDP participants to get an energy audit (focused on gas usage) when they re-apply for the program after year 2. Cascade can reimburse the customer for the cost of the audit or work with an implementer (e.g. Energy Trust) who performs the energy audits. Consider how to incentivize customers to get an energy audit - for example, gift cards, or bill credits.

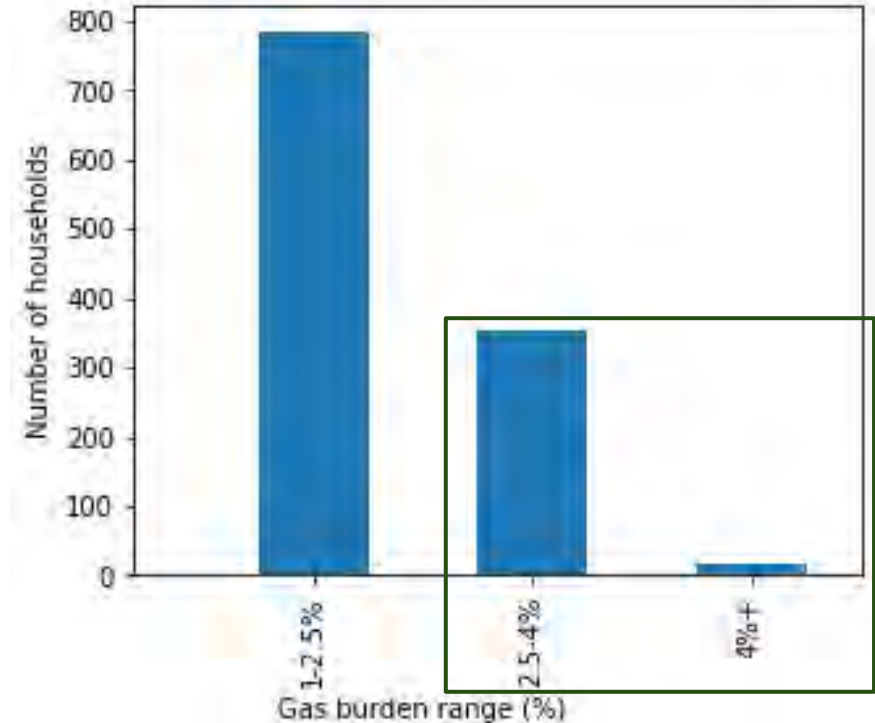
The Energy Assistance Hole

The Energy Assistance Hole

~350 **non-low-income households** with a high energy burden >2.5%

Moderate income, high gas users (1,870 Therms/yr on average)

Overall, this does not seem to be a major issue in Cascade's Oregon service area. No recommendations other than potential OLIBA adjustment mentioned previously.



Marketing and Outreach

Marketing Overview

Cascade currently has a very holistic broadcast marketing strategy, including emails, bill inserts, digital and streaming ads and more.

According to participant survey data, each of these channels has made a contribution to increasing program enrollments.

No general recommendations at this time. But further analysis and review of the marketing materials will be conducted as part of the Language Access Plan.

Outreach Challenges

Challenge:

Cascade's Oregon service area is geographically expansive and customers have a variety of economic backgrounds, urban and rural households and more.

Working with local agencies is the best solution to reach customers who may be missed by current marketing efforts. But agencies in Cascade's service area are stretched thin and cannot take on additional outreach efforts on a piecemeal basis.

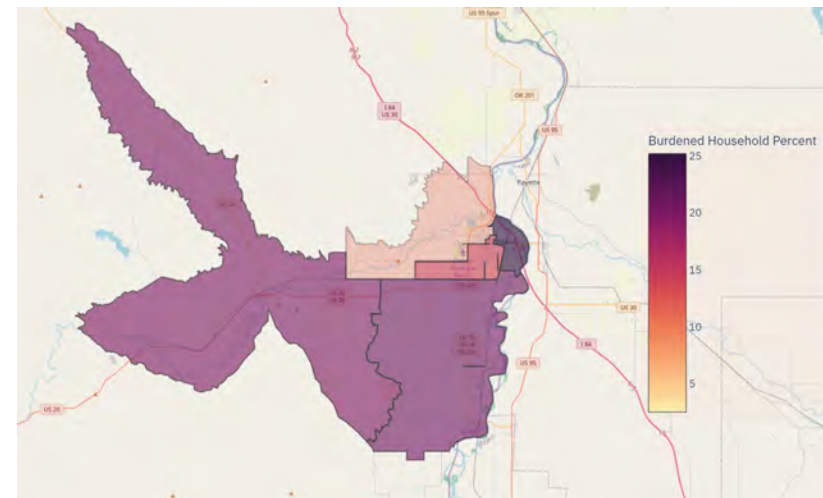
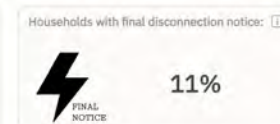
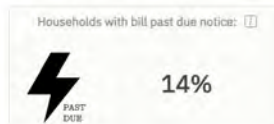
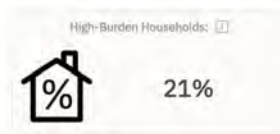
There needs to be a dedicated boots on the ground person/people who is responsible for initiating customer conversations and assisting customers with applying to Cascade's programs.

Recommendation: Establish a Low Income Outreach Specialist role. This job description would include outreach and tabling events, canvassing in low-income neighborhoods, connecting with community centers, senior centers and religious organizations, assisting customers with submitting EDP/OLIBA applications. This role could either be within Cascade, with agencies or with third party CBOs. The choice would depend on the appetite for having this position and relative costs.

Community Profiles

Ontario and surroundings (Malheur county)

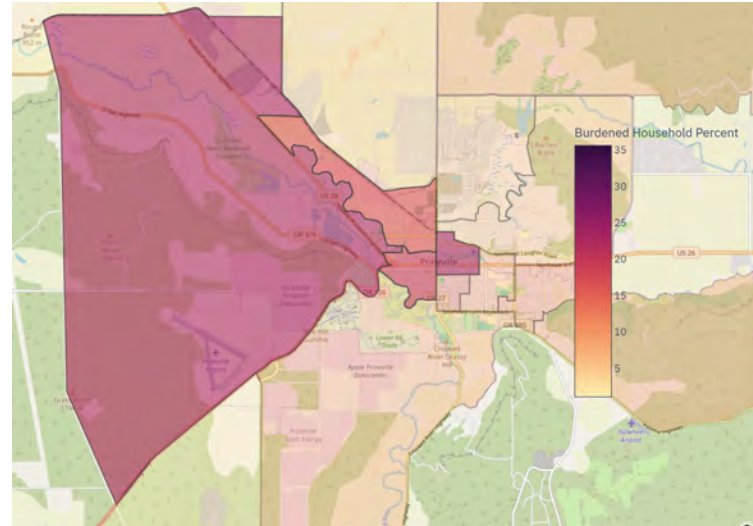
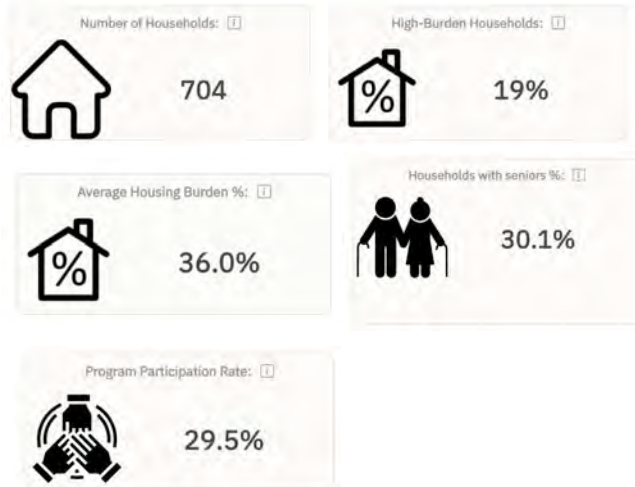
41045970300, 41045970400, 41045970500,
41045970600



- Rural community - large Latino population
- Moderate participation rates
- Ontario itself is a compact town and may be amenable to targeted marketing campaigns in local resource centers, movie theaters, restaurants etc.

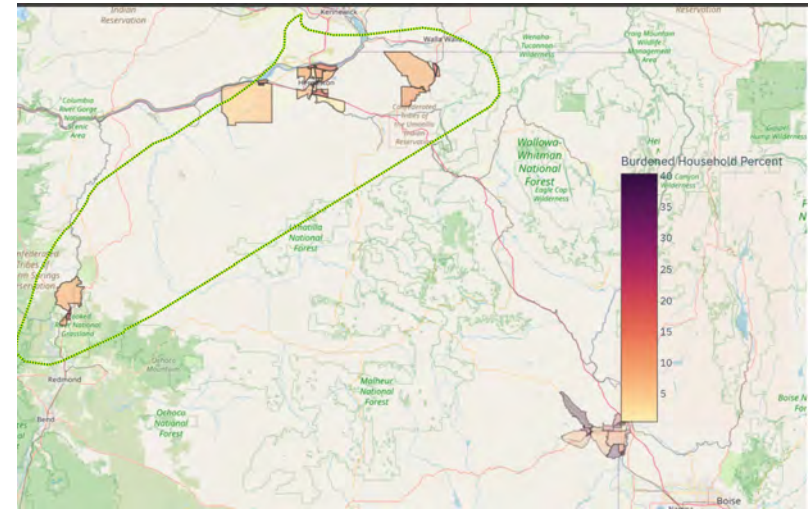
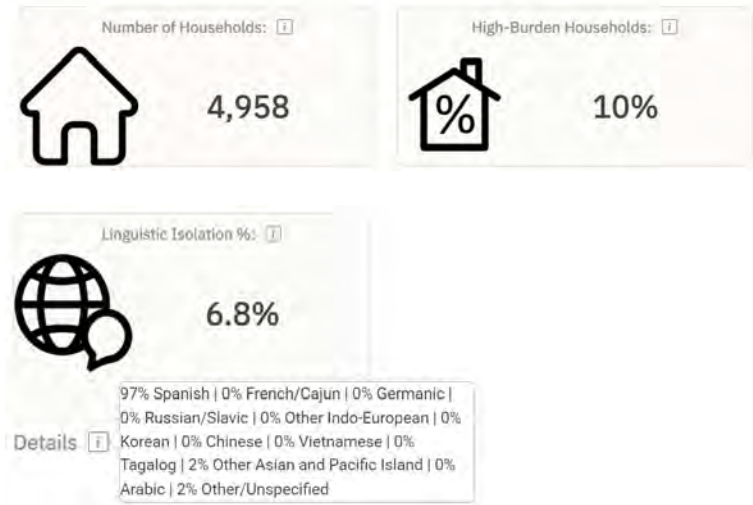
Prineville (Crook County)

410139502003, 410139502004, 410139503021,
410139503022



- Small town community
- Large senior population
- Participation rate lower than average for service area
- Consider outreach to Soroptimist Senior Center in Prineville.

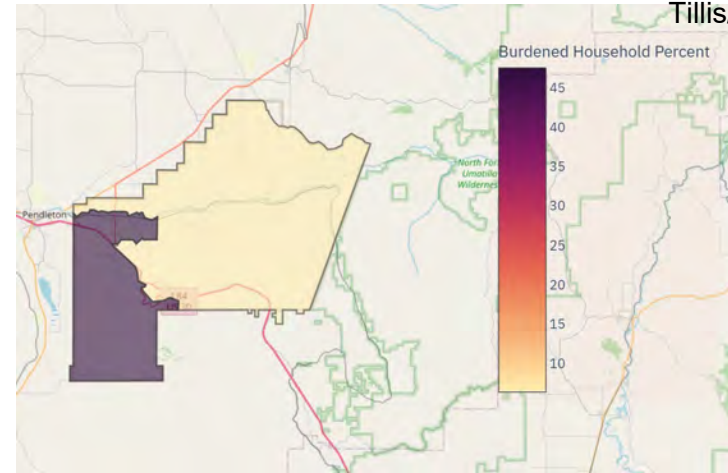
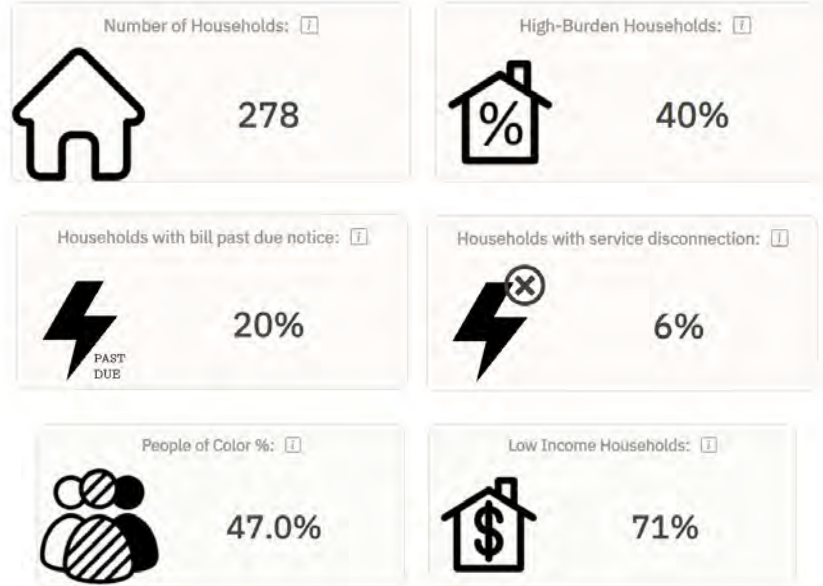
Areas with large farmworker populations



Data excludes Ontario area which was covered on previous slide

- Likely many customers with seasonal income - lowest monthly incomes coincide with highest gas bills
- High level of linguistic isolation - mainly Spanish
- Appears well-served by programs in general, but potential for collaboration with local farmworker advocacy groups (e.g. Raíces in Hermiston)

Census-designated tribal areas



- In and around Umatilla reservation in Umatilla county
- Highest burden and disconnection rates in Oregon service area
- 40% participation (in line with other areas). But consider outreach to Umatilla tribal administration - could target 80%+ participation among eligible households.
- Potentially explore auto-enrolling all households in this area or use the energy burden data as a rough indicator of program eligibility

Other Recommendations

Post-enrolment verification

Challenge:

EDP was designed with self-declared income and does not include any post-enrollment verification.

Recommendations:

Targeted verifications: Discuss the best PEV approaches with other gas utilities in the region. Consider targeted verifications based on annual discounts received.

For example, as of July 2025, 211 customers (5%) receive over \$1,000 annually from EDP

Other Minor Issues

Rebrand: Cascade's customer service representatives are already trained to evaluate and listen to customer's needs before enrolling them in all programs/services that they are eligible for. It would be beneficial to combine EDP and OLIBA (and potentially OLIEC) under one branding umbrella - similar to the CARES program in Washington to reduce customer confusion and streamline Cascade's marketing operations.

Reduce need for reapplication: If post-enrollment verification is implemented, there is a stronger case for allowing fixed income customers to reapply every 4-5 years instead of every two.

Enrolment target: Track energy assistance need in addition to enrolment as a program metric. Participation rates alone do not reflect whether the program is alleviating energy burden. Set program targets in relation to energy assistance need (similar to Washington state) as opposed to enrolment % targets - this incentivizes targeting the highest need customers vs. just a higher number of participants. Cascade currently has energy assistance funding that covers 141% of the need with a 40% participation rate - targeting a funding level between 80-100% of the need, with 50-70% participation rate offers a balance between serving customers and financial sustainability of the program.

Main Takeaways - Energy Burden Assessment

- Cascade's Oregon customers are relatively higher income with moderate gas usage. This is reflected in a generally low gas burden. Approximately **8% of Cascade's Oregon customers suffer from a high gas burden** (gas bills exceed 2.5% of household income)
- The Energy Discount Program (EDP) has been ramping up successfully and along with other assistance programs, will meet **129% of the energy assistance need** for Cascade's customers in 2025.
- High level recommendations in this assessment:
 - **EDP:** Revisit discount levels to better align with customer need
 - **Arrearages/Disconnections:** Monitor OLIBA usage and investigate how to enroll income-eligible non-participants who get disconnected
 - **Energy Efficiency:** Leverage energy audits to identify the root cause of high gas burden
 - **Energy assistance hole:** Potentially expand OLIBA to higher incomes in case of hardships
 - **Other:** Target outreach to specific populations and improved collaboration with agencies

Metric	Value	CNGC/303 Tillis/69
Number of occupied households (#)	71,821	
Number of low-income households (#)	12,371	
Number of low-income, high burden households (#)	5,155	
Average residential energy bill (\$/year)	\$873/year	
Average residential energy usage (therm/year)	706 therms	
Average energy usage for low-income households (therm/year)	586 therms	
Total energy assistance need/ bill spending in excess of high energy burden (\$/year)	\$2.03M	
Total utility energy assistance funding (\$/year)	\$2.62M (2025 estimate)	
Median gas burden among all residential households (%)	0.8%	
Median gas burden among low-income households (%)	2.2%	
Unique households receiving past due notice in past year (%)	7%	
Number of eligible bill discount customers, by tier	Next slide	
Average usage of bill discount program participants, by tier	CNGC or next slide	
Average bill of bill discount program participants, by tier	CNGC or next slide	
Arrearage balance of bill discount program participants, by tier	CNGC	
Disconnections of bill discount program participants, by tier	CNGC	
Number of households participating in bill discount program with propensity for EE upgrades	844	

Income tier	Estimated number of eligible households	Avg. bill of EDP participants	Avg. annual usage of EDP participants
0-15% SMI	1,490	\$769	612
16-30% SMI	3,150	\$755	599
31-45% SMI	3,180	\$798	638
46-60% SMI	4,540	\$830	667

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
TARIFF SCHEDULES 32, 33, AND 36

EXHIBIT 304

November 2025

CASCADE NATURAL GAS CORPORATION

Second Revision of Sheet No. 32.1

Canceling

P.U.C. OR. No. 10

First Revision of Sheet 32.1

SCHEDULE 32
OREGON LOW-INCOME BILL ASSISTANCE PROGRAM (OLIBA)

PURPOSE

This schedule establishes the program parameters for providing grants to be applied towards the past due balances of qualifying low-income residential customers.

APPLICABLE

This schedule applies to residential customers or household members of a dwelling served on Schedule 101, General Residential Service Rate, who have self-declared their household is low income.

LOW-INCOME DEFINITION

A customer is considered low-income if their gross cumulative household income is less than or equal to 150% Federal Poverty Level (FPL) or less than or equal to 60% State Median Income (SMI) for the number of residents living in the household.

GRANTS

Four tiers of grants are offered based on the customer's FPL or SMI, whichever is more advantageous to the customer. A qualifying customer may receive one cashless voucher per program year for the percentage of their past due amount as established in the tier for which they qualify:

(T)
(T)

Tier	Income Level	Arrearage Paid
T1	0-25% FPL, 0-15% SMI	90%
T2	26-50% FPL, 16-30% SMI	86%
T3	51-100% FPL, 31-45% SMI	83%
T4	101-150% FPL, 46-60% SMI	80%

Cascade management may authorize exceptions to the limitations for grants established herein when Cascade management deems it is warranted.

(N)
(N)

PROGRAM ADMINISTRATION

OLIBA is administered by the Company and the Community Action agencies (Agencies) listed in the table below that also administer Low Income Home Energy Assistance Program (LIHEAP) and have executed service agreements for low-income bill pay assistance program delivery with the Company.

AGENCIES
Community Connection of NE Oregon (CCNO)
NeighborImpact (NIMPACT)
Klamath Lake Community Action Services (KLCAS)
Community in Action (CINA)
Community Action Program of East Central Oregon (CAPECO)

(continued)

CASCADE NATURAL GAS CORPORATION

Second Revision of Sheet No. 32.2

Canceling

P.U.C. OR. No. 10

First Revision of Sheet 32.2

SCHEDULE 32
OREGON LOW-INCOME BILL ASSISTANCE PROGRAM (OLIBA)

INCOME VERIFICATION

The Agencies may perform any income verification which will generally follow the established protocols for verifying income for LIHEAP except that citizenship and a name per each household member shall not be required. (C)

AGENCY ADMINISTRATIVE FEES

Each Agency will be reimbursed \$100 for each Company-approved OLIBA grant submission. (C)

PROGRAM FUNDING

Program funding is provided per Schedule 31, Public Purpose Charge. Any amounts not disbursed in the program year will carry over to the next program year.

REPORTING

The Company will provide an annual summary evaluation report on the progress of the program for review by the Commission by December 1 following the end of each program year.

CASCADE NATURAL GAS CORPORATION

First Revision of Sheet No. 33.1

Canceling

P.U.C. OR. No. 10

Original Sheet 33.1

SCHEDULE 33
OREGON LOW-INCOME ENERGY CONSERVATION PROGRAM

PURPOSE

The purpose of this provision is to define the terms and conditions under which that portion of the funds designated for use for low-income weatherization programs under Schedule 31, Public Purpose Charge will be administered and delivered to eligible customers.

AVAILABLE

This program is available to residential customers who meet the definition of low-income as defined by the Federal Low Income Home Energy Assistance Program (LIHEAP) and who reside in dwellings where the primary heating equipment is fueled by natural gas.

(T)
|
(T)

PROGRAM DESCRIPTION

The Oregon Low-Income Energy Conservation (OLIEC) Program is a program designed to make qualifying low-income households within Cascade's service territory more energy efficient by providing rebates for the installation of certain weatherization and conservation measures following the completion of a home energy evaluation performed by qualifying low-income Community Action Agencies, 501(c)3 non-profit agencies, or Community Based Organizations (CBOs) (referred to collectively as Agencies).

(T)
|
(T)
(C)
(C)

ENERGY EFFICIENCY MEASURES

The following energy efficiency measures qualify for rebates under this program:

Existing Low-Income Residential Dwellings

Qualifying measures include but are not limited to the following weatherization measures and high efficiency, natural gas-fired appliances:

(T)
(N)
(N)

- | | |
|---------------------------|--|
| • Ceiling insulation | • Low-flow faucet aerators |
| • Wall insulation | • Low-flow showerheads |
| • Floor insulation | • Natural gas furnaces |
| • Water heater insulation | • Furnace tune-up and filter replacement |
| • Duct sealing | • Direct vent space heater |
| • Duct insulation | • Natural gas water heaters (including tankless) |
| • Infiltration reduction | |

(T)

New Low-Income Residential Construction

The following energy efficiency measures qualify for rebate when installed in new construction designated primarily for the habitation of low-income individuals for at least a thirty-year period. Qualified measures include but are not limited to the following:

- Energy Star® Qualified Homes
- High-efficiency furnace installations where cost effective
- High-efficiency water heater

(T)

CASCADE NATURAL GAS CORPORATION

First Revision of Sheet No. 33.2

Canceling

P.U.C. OR. No. 10

Original Sheet 33.2

**SCHEDULE 33
OREGON LOW-INCOME ENERGY CONSERVATION PROGRAM**

PROGRAM YEAR

(D)

The OLIEC Program year will extend from October 1 through September 30.

(D)

CUSTOMER QUALIFICATIONS

All funds collected under this program will be distributed only to qualifying income-eligible residential customers of Cascade. In the event the Company receives a rebate request for a single customer from two or more Agencies, the Company will process only one rebate request.

FUNDING AVAILABILITY

(T)

1. The Company will distribute funds to Agencies on a first-come, first-serve basis.

(C)

2. Any amounts not disbursed in the program year will carry over to the next program year.

(D)

(T)

3. The program will be managed such that expenditures will not exceed the annual budget of 0.625% of the Company's gross revenues. If program funding is insufficient for program demand, the program offerings may not be available for a portion of the year.

(M)(T)

|

(M)

(continued)

(M) refers to text previously on Sheet No. 33.3

(N)

CASCADE NATURAL GAS CORPORATION

Second Revision of Sheet No. 33.3

Canceling

P.U.C. OR. No. 10

First Revision of Sheet 33.3

**SCHEDULE 33
OREGON LOW-INCOME ENERGY CONSERVATION PROGRAM**

AGENCY QUALIFICATIONS AND RESPONSIBILITIES

1. For the purpose of this Schedule, an Agency is a Community Action Agency, a 501(c)3, or a CBO that meets the following qualifications. In order to participate in the program, an Agency must be a legal entity, contracting or subcontracting with OHCS, as an administrator of LIHEAP. An agency shall also qualify to participate in the program if it is a state-recognized Low-Income Agency, 501(c)3 nonprofit, or CBO engaged in the construction or retrofit of affordable housing designated primarily for the habitation of low-income individuals. Each participating Agency must also have an up to date, signed Memorandum of Understanding with Cascade Natural Gas.
2. Each participating Agency will have sole responsibility to screen and approve applicants for eligibility. Each Agency shall follow the established protocols for the qualification of and disbursement to eligible participants in accordance with the guidelines promulgated by OHCS. Agencies operating the Weatherization Assistance Program shall complete their work in accordance with the Low-Income Energy Assistance Act of 1981 and subsequent amendments, as outlined in the OHCS Omnibus Contract. The Company reserves the right to verify installation and compliance with all state codes and standards prior to payment of any rebates.
3. Each participating Agency shall be responsible to complete and return to the Company all required paperwork and other documentation as may be necessary for the Company to process the rebate request. The Company will provide the documentation forms to each participating Agency in electronic or hardcopy form, whichever is requested. At a minimum, the documentation must include the Agency name; customer name; the landlord name and address, if applicable; the address of the qualifying households; the square footage of the home; a list of the measures installed; documentation that the measure qualifies (per REM Rate documentation, DOE Priority List, or Deemed Measures Priority List) as established in the Rebate Payments section of this schedule; the rebate amount per measure; total rebate per household; and a statement on whether or not all eligible measures were installed at the dwelling.

(K)
(C)
(C)
(T)
|
(T)

(C)
(C)

REBATE PAYMENTS

1. The Company will reimburse participating Agencies for the installation of qualifying measures installed in each eligible household.
2. In no event will any rebate amount be greater than the actual installed cost of the measure.

(continued)

(K) refers to text that is moved to Sheet No. 33.2.

(N)

CASCADE NATURAL GAS CORPORATION

Second Revision of Sheet No. 33.4

Canceling

P.U.C. OR. No. 10

First Revision of Sheet 33.4

SCHEDULE 33
OREGON LOW-INCOME ENERGY CONSERVATION PROGRAM

REBATE PAYMENTS (continued)

3. Qualified measures are eligible for rebates in the amount 100% of the installed cost of the measure. (C)
4. These measures will qualify for a rebate payment to the Agencies when at least one of the following criterion is met: (a) the measures are identified as cost effective under the Department of Energy (DOE) Priority List; (b) the measures are identified as cost effective under the Deemed Measure Priority List (DMPL); or (c) each measure is identified as having a savings-to-investment ratio (SIR) of 1.0 or higher according to the Agency energy audit of the dwelling in which the measure is being installed. Participating Agencies may use REM-Rate energy modeling software when conducting audits to demonstrate an SIR of 1.0 or higher for each individual measure. Agencies must provide a copy of the DOE Priority List, DMPL or REM-Rate report along with its complete rebate application and other supporting documents as specified on the Company's current rebate application form in order to qualify for incentives. (C)
(D)

PROGRAM ADMINISTRATION AND DELIVERY COSTS

1. Agencies will be provided reimbursement for actual project costs for homes served under the OLIEC Program. Expenses associated with project coordination will be funded up to maximum program average of 20 percent of the total project cost as billed to the Company. An additional agency indirect rate associated with the delivery of low-income conservation measures will be provided in the amount of 10 percent of the total project cost as billed to the Company. Funds will be reimbursed from the Low-Income Weatherization account. Reimbursement for project coordination and indirect rate is not to exceed 30 percent of the total project cost as billed to the Company. The Company will process rebates and Agency payments within thirty days from the date the Company receives all completed documentation in support of such rebate requests. (C)

CASCADE NATURAL GAS CORPORATION

Second Revision of Sheet No. 33.5

Canceling

P.U.C. OR. No. 10

First Revision of Sheet 33.5

**SCHEDULE 33
OREGON LOW-INCOME ENERGY CONSERVATION PROGRAM**

PROGRAM ADMINISTRATION AND DELIVERY COSTS (continued)

(D)

2. The Company will be reimbursed each month for actual program administration costs incurred, except that such reimbursement will not exceed 5% of the total available funds collected during each program year.

ADVISORY GROUP

An Advisory Group will assist the Company in low-income weatherization development, implementation, and evaluation. The Advisory Group will consist of at least one member each from the Company, Commission staff, Community Action Partnership of Oregon (CAPO) and two or more participating Agencies.

ANNUAL REPORT

By December 1 of each year, the Company will submit an annual report to the Commission containing the following information:

- General: 1) Program successes and barriers (if any) to implementation; 2) Associated Program outreach activities.
- Economic: 1) Revenue balance from previous year; 2) Program revenue; 3) Accrued interest; 4) Total available funds; 5) Total expenditure of OLIEC funds; 6) Total OLIEC costs allocated by measure; 7) the Company's administrative costs; 8) Funding allocations or changes within the program year; 9) Payments to Agencies for weatherization measures, administration, and program delivery; 10) Average rebate allocated per home served;
- Agency Performance: 1) percentage of homes served per Agency for the program year; 2) Total number of homes served;
- Program Results: 1) Total deemed therm savings attributable to the OLIEC program by year; 2) Total number of measures installed in all homes served during the program year; 3) Average number of measures installed per home; 4) Number of measures installed by type; 5) Number of each allowable measure installed in total during the program year; 6) Total therm savings by measure; 7) Number of multifamily dwellings treated and observations made about multifamily projects.
- General: 1) A breakdown of the number of homes served by town and agency. The Company will identify factors that account for the volume of homes served by region; 2) The Company will monitor rebate turn-around time

(D)

CASCADE NATURAL GAS CORPORATION

First Revision of Sheet 36.1

Canceling

P.U.C. OR. No. 10

Original Sheet 36.1

**SCHEDULE 36
ENERGY DISCOUNT PROGRAM****PURPOSE**

The purpose of this schedule is to define the mechanism for providing low-income billing assistance to qualifying residential customers under the Company's Energy Discount Program (EDP).

(N)
(K)(T)
(T)**APPLICABILITY**

This schedule is for qualifying residential customers served on Schedule 101 or household members of a dwelling served on Schedule 101. An applicant for service under this schedule must demonstrate their household income is less than or equal to 150% of the Federal Poverty Level (FPL) or less than or equal to 60% Oregon State Median Income (SMI). Qualifications under EDP.

(N)

ENERGY DISCOUNT PROGRAM TIERS

Customers enrolled in EDP will have their monthly natural gas bill discounted by the percentage as listed in the table below for the tier that corresponds with their percentage of FPL or SMI for their household.

(M)
(T)

(M)

(T)(M)

Tier	Tier Levels	Energy Discount
1	0-25% FPL, 0-15% SMI	95%
2	26-50% FPL, 16-30% SMI	70%
3	51-100% FPL, 31-45% SMI	45%
4	101-150% FPL, 46-60% SMI	15%

PROGRAM ENROLLMENT

Customers may enroll in EDP by calling Cascade's customer service number at (888) 522-1130 (Monday - Friday, 7:30 A.M. - 6:30 P.M.) or completing an online application found on cngc.com. Customers may also apply for EDP energy assistance by calling a local Community Action Agency (Agency). The customer will verbally provide their monthly income and the number of household residents to enroll in the EDP within the qualifying tier.

(N)

(T)

(T)**INCOME VERIFICATION**

Customers who qualify for service under this schedule by self-declaring their income may be subject to a post-enrollment income verification. Cascade may choose to income verify up to three (3) percent of customers who qualified for service on this schedule by self-declaring their income. Customers found to be ineligible for the rate discount they are receiving will be prospectively removed from the program or adjusted to the correct tier.

(N)
(T)

(T)

(continued)

(K) Refers to language previously on Sheet 36.1 that is now on Sheet 36.2

(N)

(M) Refers to content previously found on Sheet 36.2.

(N)

CNG/024-05-01

Effective for Service on and after
July 24, 2024

Issued May 20, 2024

CASCADE NATURAL GAS CORPORATION

Third Revision of Sheet 36.2

Canceling

P.U.C. OR. No. 10

Second Revision of Sheet 36.2

**SCHEDULE 36
ENERGY DISCOUNT PROGRAM**

PROGRAM ADMINISTRATION

EDP is administered by the Company and by Agencies that have executed a contract with Cascade establishing roles and responsibilities consistent with this Schedule. Failure to comply with requirements in the contract may result in the Agency's termination from the role of program administrator.

TERM

A qualifying customer is enrolled in EDP for twenty-four (24) months. The twenty-four-month term restarts upon any application of LIHEAP, OLIBA, or Winter Help.

PROGRAM YEAR

The annual program year begins October 1.

PROGRAM FUNDING

Program costs incurred for this program and outreach will be recovered through tariff rates presented on Schedule 37, Low-Income Assistance Cost Recovery.

LOW-INCOME ADVISORY GROUP

A low-income advisory group comprised of key stakeholders, including but not limited to, Company, Oregon Public Utilities Commission, Oregon Citizens' Utility Board, and Agency representatives shall discuss and advise Cascade on program related matters such as the evaluation, program specifics, performance obligations, regulatory filings, rate impacts, and program outreach efforts. This advisory group will meet at least twice annually.

GENERAL TERMS AND CONDITIONS

1. A customer who is enrolled in EDP and who moves or re-establishes service within the Company's service territory within twenty (20) business days may have the program transferred to the new account for the service address.
2. Customers who qualify for LIHEAP, OLIBA, or Winter Help will be auto-enrolled in EDP based on their qualifying income percentage eligibility.
3. Cascade may auto enroll customers into the Energy Discount Program who are presumed to have a high likelihood of being income eligible for service on this schedule based on available data. (N)
4. Service under this schedule is subject to the rules and regulations contained in the Company's tariff. (N)

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
OREGON LOW-INCOME PROGRAM
PARTICIPATION PROPENSITY ANALYSIS

EXHIBIT 305

November 2025

Cascade Oregon: Low Income Program Participation Propensity Analysis

Cascade Natural Gas – DRAFT July 5, 2023

Mark E. Thompson



Forefront
Economics Inc



Review Meeting Agenda

- Introductions
- Project Overview
 - Objectives & Approach
 - Results
 - Deliverables and Uses
- Wrap-up and Next Steps Discussion



Summary of Project Objectives and Approach

■ Project Objectives

- Develop premise level residential database for better understanding characteristics of low-income program participants
- Use the enhanced residential database to identify residential prospects for low-income programs
- Use results to target best prospects as a means of cost effectively driving low-income program participation rates higher

■ Approach

- Combine Cascade Natural Gas (Cascade) customer information with secondary data
- Profile and contrast low-income participants with other residential customers
- Model low-income program participation as a function of customer attributes
- Apply model to “score” customers for program targeting



Developing the Data

- Combine Cascade CIS Data with Secondary Data
- CIS Data
 - Billing (usage, dollars)
 - L-I program participation
 - Payment data
 - Late payments
 - Arrearage balances
- Secondary Data – Household Level
 - Household income
 - Premise size, age and market value
- Secondary Data – Census Tract
 - Energy burden data
 - Concentration (percentage) of low-income households in Census Tract

CIS Data

- Energy Use
- Low-Income Program Participation
- Late Payment and Arrearage History

Secondary Data

- Premise Level
 - HH Income
 - Size of Home
 - Age of Home
- Census Tract
 - Energy Burden



Types of Cascade Data

- Premise Records
 - Service address and related location information
 - Serves as the basic unit of analysis
- Energy Bill Assistance Program History
 - The basis of dependent variable in propensity models
- Billing Records
 - Annual therms and dollars billed
- Payment history
 - Number of late payments
 - Arrearage balance
 - Non-payment related disconnects



Energy Bill Assistance Program Data (Cascade)

- Energy bill assistance program participation history obtained for the past five years.
- Participant counts jumped over the last two years from special pandemic relief assistance (Big Heart).
- This history is the basis for establishing dependent variable in low-income program participation propensity models.

--- Oregon ---					
Program Name	2018	2019	2020	2021	2022
LIHEAP Oregon	1,071	864	995	952	1,088
OR Big Heart Grant	0	0	0	2,442	2,048
Public Purpose Fund	133	170	159	323	451
Winter Help	139	169	438	284	211
Total	1,343	1,203	1,592	4,001	3,798



- **Geocode Cascade and Secondary Addresses**
 - Standardizes addresses for improved match rates
 - Appends Census Tract numbers (2010 and 2020)
 - Appends latitude & longitude for GIS applications
- **Match Cascade Records to Secondary Household Data**
 - Run data enhancement routines, data cleaning, and reduction:
 - Calculate therms per square foot
 - Combine common fields (e.g. address fields)
- **Match Cascade Records to US DOE Energy Burden Estimates**
 - Source: Low-Income Energy Assistance Data (LEAD)
 - Census Tract level data
- **Result**
 - An information rich and site-specific data set for residential customers



Geocode and Match Results

- High percentage of records geocoded in both datasets
 - Indicates accurate street addresses

--- Oregon ---			
	Records	Geocoded	Percent Geocoded
CNG Premises	75,682	71,707	95%
Household Data (Secondary)	83,878	82,386	98%

- Nearly 28,000 premises (39% of geocoded premises) matched to household data
- Household data restricted due to business rules designed to prevent mismatch between occupant and attribute data
 - Example: If site record shows occupant moved and record has not been updated for a new occupant, the record was omitted.
- Plenty of matched premises for statistical modeling



Comparing Attributes

- Combined data allow for comparison of premises receiving energy bill assistance (EBA) with those that did not

- Have lower gas bills
- Higher Cascade account turnover
- Much higher arrearage balances
- Lower household incomes
- Live in smaller, older, less valuable homes
- Use significantly more gas per square foot.
- In Census Tracts with higher concentration of low income households and higher energy burden

--- Oregon ---	EBA Participant	
	No	Yes
Cascade Data	N=63,456	N=4,817
Annual bill (2022)	\$826	\$687
Annual therm usage (2022)	766	628
Account turnover at premise	11%	19%
Avg monthly arrearage balance (2018-2022)	\$5	\$41
Avg annual late payments (2018-2022)	0.0	0.2
Secondary Household Data	N=32,500	N=1,425
Household income	\$118,784	\$75,358
Age of home (years)	35	52
Market value of home	\$503,377	\$281,233
Size of home (square feet)	2,357	1,757
Therms/Sq ft (CNG & household data)	0.357	0.433
Low-income Energy Assistance Data (LEAD)	N=70,247	N=5,381
Mean household income	\$85,968	\$72,396
Pct of gas heated homes < 150% FPL	14%	19%
Energy burden - Total	2.2%	2.6%
Energy burden - Natural Gas	0.9%	1.0%
Energy burden - Electric	1.3%	1.6%



Propensity Models

- Statistical models used to explain and predict the probability of a given event or outcome
 - Models relate the “outcome” (e.g. participation in low-income programs) to explanatory variables (“drivers”)
- Propensity models used extensively in:
 - Medical Research
 - What is the probability that a patient will develop lung cancer?
 - Driver variables: years smoking, years since last cigarette, sex, age, income
 - Social Research
 - What is the probability a student will graduate from college?
 - Driver variables: income, parents education, parents occupation, SAT/ACT scores
 - Economic Research
 - What is the probability a consumer will purchase a product or service?
 - Driver variables: price, price of competing and complimentary products, income



Propensity Models (cont'd)

- Results of logistic regression models are evaluated using many criteria
 - Experience table: number of “true” positives vs. false positives/negatives
 - “Lift” (preferred for model selection)
 - Actual experience using model (experience is the best teacher)
- Model results used to “score” other data beyond the sample used to estimate the model
 - Score: the estimated probability of event (e.g., low-income program participation) for a single observation (e.g., Cascade premise)
 - Sorting by estimated probability shows relative probability
 - Decile assignments based on sort ordered
 - More meaningful than absolute probability
 - A model with a poor experience table may still provide useful relative probability estimates



Sample of Premises for Propensity Modeling

- Select random sample of 5,000 premises that have been occupied by a low-income bill assistance program participant within the last 5 years (2018-2022)
- Select random sample 5,000 premises that have not been occupied by a low-income bill assistance program participant within the last 5 years (2018-2022)

--- Oregon ---	
Program Participation Status	Premises
Billing Assistance Program Participant	5,000
Non-Participants	5,000
Total Number of Premises in Sample	10,000



Model Estimation

$$prob = (b_1 \bullet X_1) + (b_2 \bullet X_2) + \dots$$



Propensity Model Results

- Models using all Cascade variables, Census variables and variables from purchased household data
- Models using only variables from Cascade and Census

- Statistically significant and correctly signed
- Overall model performance deteriorates significantly if variable is removed

- Area under ROC varies from 0.5 to 1.0
 - No set rules but values between 0.8 and 0.9 are generally considered excellent
- ROC curves show
 - both models have excellent prediction accuracy
 - neither model stands out from the other as a better predictor.

--- Oregon ---		
Model	Premises	ROC
Best All Variables Model	3,616	0.854
Best CNG and Census Variables Mod	9,007	0.856



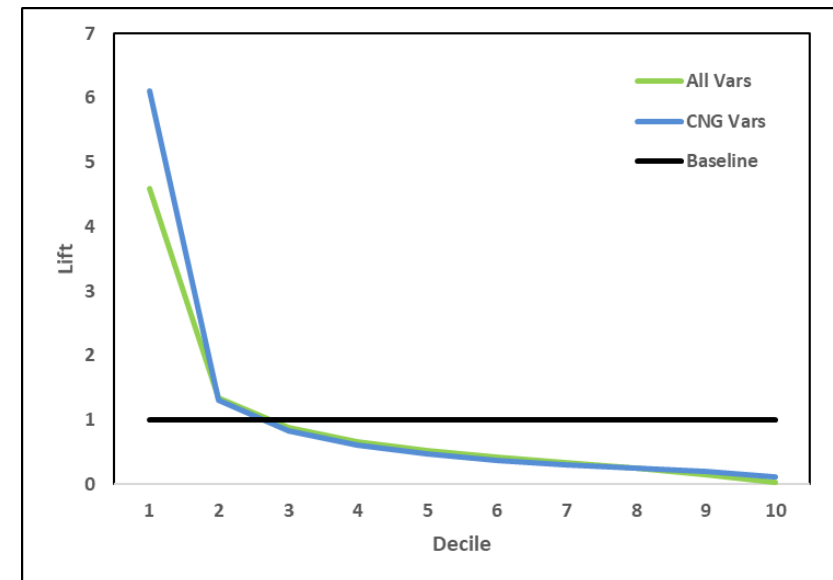
Variables in Final Models

--- Oregon ---						
Variable	Best Model - All Data Sources			Best Model - CNG and Census Only		
	Impact on Probability	Statistical Significance	Influence	Impact on Probability	Statistical Significance	Influence
Household Income	-	High	High			
Market Value of Home	-	High	High			
Age of Home	+	High	High			
Therms per Square Foot	+	High	High			
Average Monthly Arrearage	+	High	High	+	High	High
Account turnover	+	High	High	+	High	High
Premise Type - Multifamily	+	High	Moderate	+	High	High
Energy Burden - Total	+	Moderate	Moderate	+	High	Moderate
Percent homes < 150 % FPL				+	High	Moderate
Annual Therms Usage				-	High	High
Late Payments - Moratorium				+	High	High
Non-Payment Disconnect				+	High	High



Model Results - Lift

- Lift – how well a model identifies high likelihood prospects relative to average participation rate
 - Allows comparison of models ability to identify likely program prospects
- Lift shows the ratio of model predicted probability to average probability
 - Higher lift means better low-income program prospects
 - Lift of 1.0 means model no better than average of current participation
- Results in chart sorted from most likely to participate in low income programs (decile 1) to least likely (decile 10)
- In terms of ability to predict program participation, the best models from each category are not meaningfully different.
- Both provide excellent in first decile (10% of the premises predicted by model).
- Model using only Cascade and Census variables (CNG Vars)
 - Has better coverage (almost all Cascade premises can be predicted with model)
 - Does a somewhat better job of identifying premises with the highest probability of program participation (Decile 1)





Customer Profiles by Decile

- Shows how decile groups compare across variables in the analysis
 - Use to contrast top prospects for program participation (decile 1 and decile 2) to other customers.
 - Top three deciles shown separately and remaining deciles grouped to better illustrate differences in analysis variables between groups of customers.

--- Oregon ---					
Variable	Variable Means by Decile				
	1	2	3	4-5-6	7-8-9-10
Household Income	\$81,871	\$83,743	\$92,774	\$101,381	\$140,996
Market Value of Home	\$284,727	\$260,962	\$285,116	\$377,846	\$669,362
Age of Home	53	55	50	40	25
Home Square Footage	1,761	1,747	1,838	2,068	2,767
Therms per Square Foot	0.413	0.341	0.355	0.346	0.365
Energy Burden - Total	2.8%	2.8%	2.7%	2.3%	1.8%
Percent homes < 150 % FPL	22%	21%	19%	14%	9%
Annual Therm Usage	592	497	549	638	1,001
Annual CNG Bill - Dollars	\$663	\$573	\$625	\$707	\$1,045
Average Monthly Arrearage	\$49	\$7	\$4	\$2	\$1
Late Payments	0.3	0.0	0.0	0.0	0.0
Late Payments - Moratorium	7.8	0.4	0.2	0.1	0.1
Account turnover	0.3	0.3	0.2	0.2	0.1
Non-Payment Disconnect	4.0%	0.4%	0.2%	0.1%	0.0%
Premise Type - Multifamily	24%	25%	19%	12%	2%

Scoring All Customer Premises



- Scoring refers to using model to predict low-income program participation probability for Cascade customers
- Final model based on Cascade and Census variables used to “score” all premises



Interpreting Results

- Uses (relative probability)
 - Identifies premises with high probability of program participation relative to other premises
 - Identifies Census Tracts with high number of premises with high probability of program participation relative to other premises
- Limitations (absolute probability)
 - Can not use probability estimates as absolute estimates.
Examples of absolute probability uses include:
 - Which premises will participate in low-income programs next year
 - How many premises will participate in low-income programs next year



Application of Results

- Drive program participation higher through targeted outreach
 - Example: Contact top 20%-25% of prospects
 - Example: Neighborhood events (top 10 Census Tracts shown in table)
- Other Possible Uses
 - Targeting of other customer service (e.g. DSM programs and services)

Service County	Census Tract (2020)	Number of Decile 1 and 2 Premises
Malheur	970400	692
Malheur	970500	646
Baker	950200	592
Umatilla	950601	543
Baker	950300	538
Jefferson	960202	478
Umatilla	951000	468
Umatilla	950800	438
Malheur	970300	408
Deschutes	000901	382

Wrap-Up and Discussion of Next Steps





Deliverables

- Document Files
 - PowerPoint documenting approach and findings
 - Technical notes
 - Variable list, labels and coded values
- Data files
 - Excel workbooks with premise data and propensity model scores
 - Excel workbook with study data and propensity results for all premises
 - Excel workbook with decile 1 and 2 premise counts by Census Tract.
- Score Code (Excel with instructions in Word)
 - Provides for easy updating of scores as underlying data changes
 - Consult with us before using to avoid misapplication

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
OREGON LANGUAGE ACCESS PLAN

EXHIBIT 306

November 2025

Cascade Natural Gas

Oregon Language Access Plan

Introduction and Objectives

As part of its ongoing efforts to assist limited English and limited-literacy customers, Cascade Natural Gas wished to assess the need for language services in its service areas, compile an inventory of services that it offers and identify any gaps in language access. This effort would take shape through a Language Access Plan for its Oregon service area.

The initial plan:

- (i) Cascade's evaluation of language barriers to accessing low-income programs
- (ii) the Low Income Advisory Group's feedback on the plan
- (iii) a list of action items

Cascade plans to maintain and revise the language access plan as needed, with feedback from the Low Income Advisory Group.

The goal of the **Language Access Plan** is to improve communication with limited English and limited literacy customers, especially to improve their access to low-income programs.

This document is divided into three main sections:

1. **Landscape Assessment:** What are the main languages spoken among limited English households and what is the prevalence of low literacy levels?
2. **Language Service Evaluation:** How well does Cascade communicate with its limited English and limited literacy customers?
3. **Action Plan:** Proposed steps to improve language services.

Acknowledgments and Feedback on the Plan

This plan was a collaborative effort between Cascade Natural Gas staff, community action agencies, community-based organizations, the Low Income advisory group and Empower Dataworks. Through the course of this work, many staff members of these organizations provided feedback on Cascade's existing language services, as well as ideas to improve them. This plan incorporates all of that feedback and we acknowledge the input of these partners.

Section 1. Landscape Assessment

Note: This section was developed by Empower Dataworks. Data is from the Census Bureau's 2019-2023 5-year American Community Survey (ACS). All household and person counts in this assessment are for gas-heated households only. Census regions do not align perfectly with Cascade's service area and the heating fuel is self-reported by ACS respondents, so the results may not be a perfect representation of Cascade's actual customers.

Service Area Overview

Cascade transports natural gas to over 75,000 customers in 28 communities across Oregon. The bulk of its customers are in the Central (e.g. Deschutes and Crook counties) and Eastern (e.g. Malheur, Baker and Umatilla counties) parts of the state.

According to the 2023 ACS, only about 1% of people living in gas-heated households in the service area have limited English proficiency (LEP), with the vast majority born in Mexico, Oregon, Ukraine, and China as shown in Table 1.

Table 1. Place of birth in Cascade's Oregon service area among gas-heated customers - number of persons not households

Place of Birth (top 10)	Proficient English Speakers (# persons)	Limited English Speakers (# persons)
Mexico	4,123	1147
Oregon/OR	75,466	589
China	440	197
Ukraine	35	101
California/CA	30,114	62
Florida/FL	788	31
Russia	66	31
Belarus	0	31
Colorado/CO	1,971	28
Guatemala	190	28

Distribution of Limited English Speakers

According to the Census Bureau, a “limited English proficiency” (LEP) household is defined as one where no one in the household over 14 years of age speaks English ‘very well’. If anyone in the household over age 14 speaks English very well, then it is considered an “English-proficient household”.

Limited English Proficiency households are the focus of language access initiatives, since they don’t have easily available avenues for understanding and communicating with the utility. The proportion of households who speak a second language at home may also be important in sufficient numbers, even if they have a member who speaks English very well, since it could be a minor or not the head of household.

Five languages were identified in the ACS as being spoken by at least 25 LEP households (Table 2). Spanish is the most widely spoken language among LEP households. Chinese, Russian and Ukrainian are the next three most common languages, with fewer than 100 households each.

Table 2. Languages spoken at home among gas-heated households in Cascade’s service area.

Language spoken at home	Limited English Proficiency (# households)	% LEP of all households	English-Proficient (# households)	% Speak language at home
Spanish	586	0.8	4,895	7.6
Chinese	98	0.1	203	0.4
Russian	45	0.1	86	0.2
Ukrainian	29	0	107	0.2
German	25	0	556	0.8

In terms of geographic distribution, most Spanish-speaking households are concentrated in Malheur County and Central Oregon (Figure 1 and Table 3). Non-Spanish LEP households follow a different pattern - the majority live in the Bend area, with minimal numbers elsewhere (Figure 2 and Table 3).

Figure 1. Geographic distribution of gas-heated Spanish-speaking households.

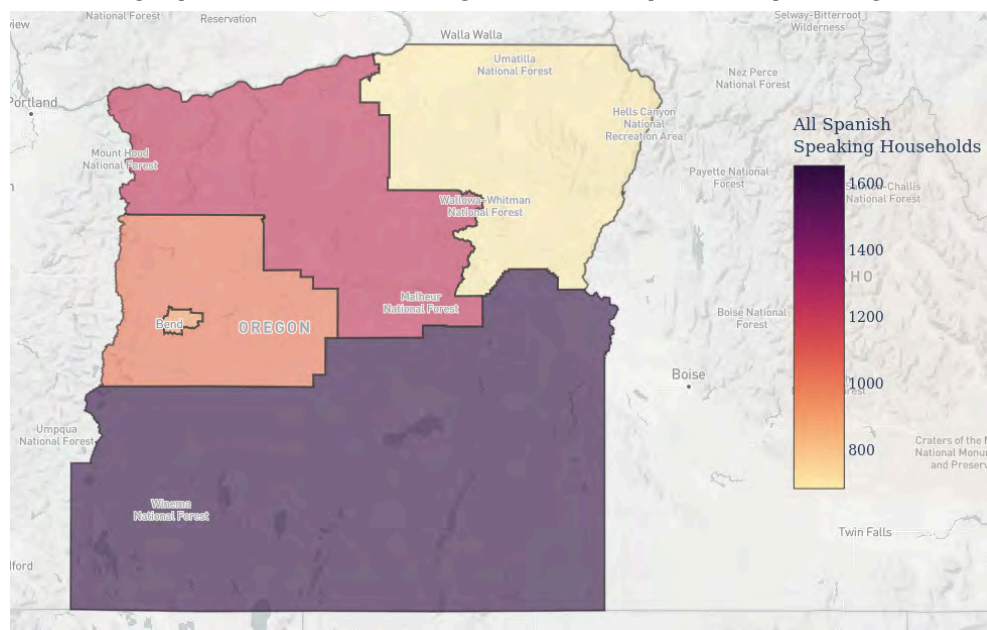


Figure 2. Geographic distribution of gas-heated non-Spanish LEP households.

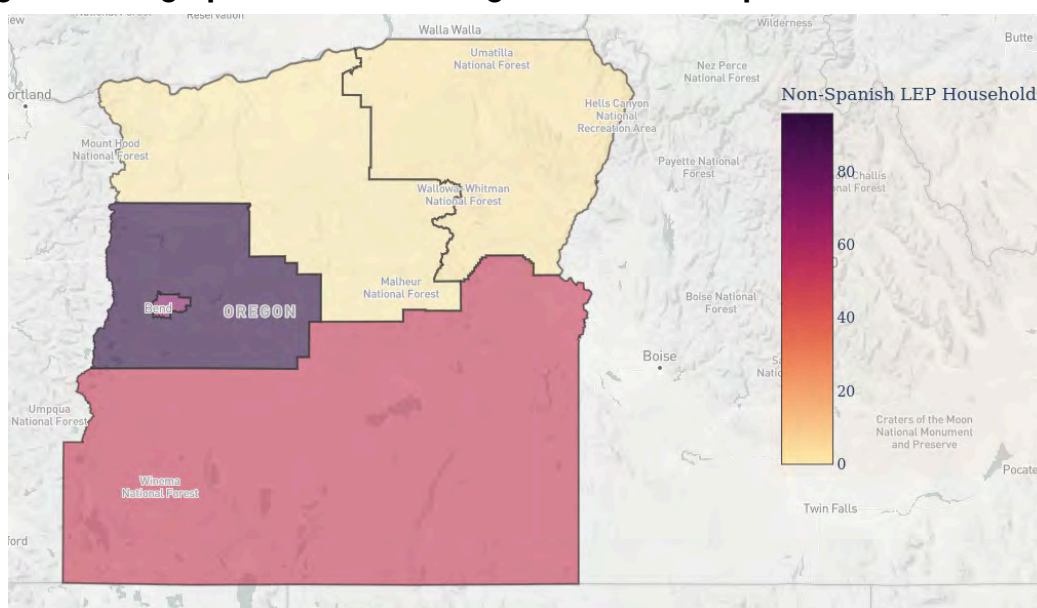


Table 3. Gas-heated LEP households by region in Cascade's service area.

Region	Spanish LEP households	Non-Spanish LEP households
Klamath, Malheur, Lake & Harney Counties	184	51
Umatilla (Northwest) & Grant Counties, Columbia Gorge & Columbia Basin	137	0
Deschutes County (Central)--Bend City	103	72
Crook & Jefferson & Deschutes (Outside Bend) Counties--Redmond & Prineville Cities	81	96
Umatilla (East & South), Union, Baker & Wallowa Counties	81	1

Distribution of Low-Educational Attainment

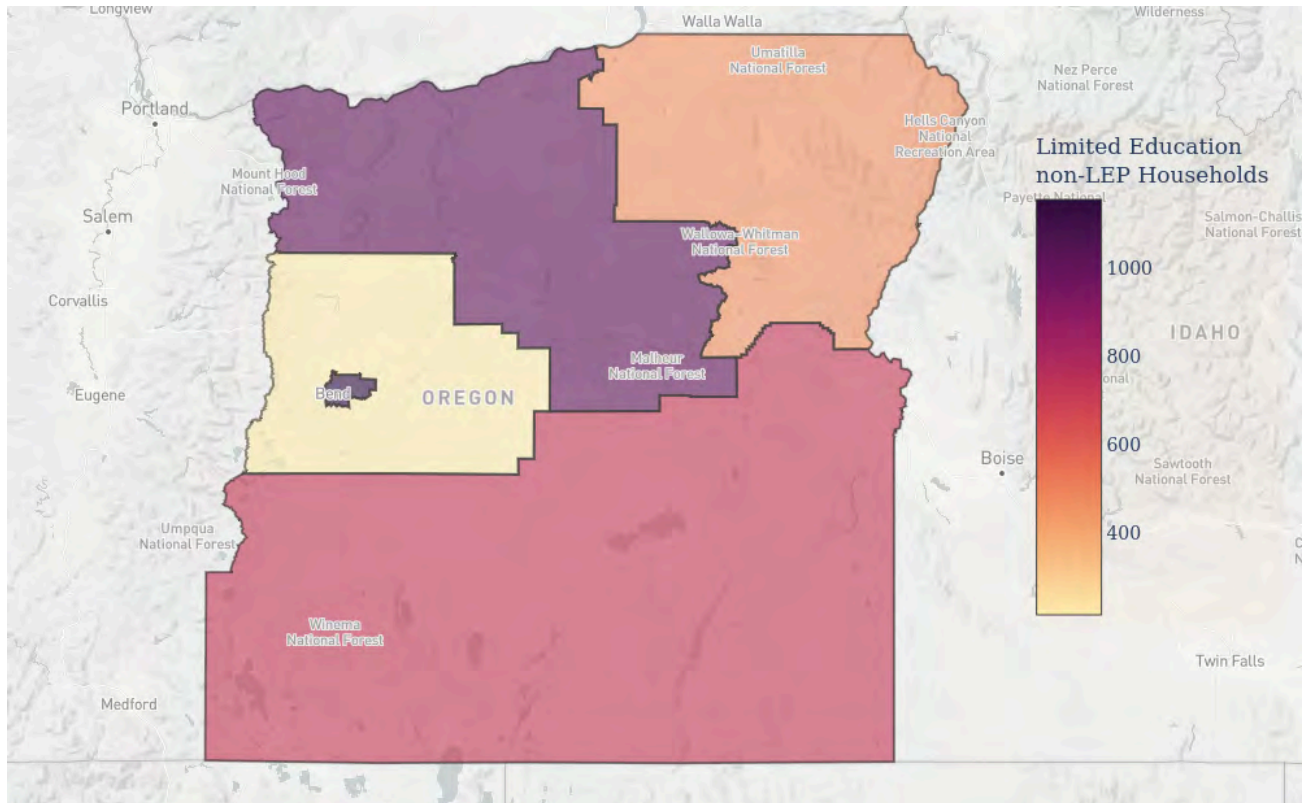
For the purpose of this assessment, we define “limited education households” as English-speaking households where no one has completed grade 9 or above. This data is also available from the 2023 ACS for individuals. The household estimate is obtained by dividing the number of individuals by the average household size. While educational attainment is not a perfect representation of English comprehension level and literacy, it will be used here as a proxy metric to understand whether Cascade’s customers can understand the vocabulary used in Cascade’s written materials.

Table 4 shows the distribution of English-speaking households by educational attainment. Approximately 3,000 households (~4% of the customer base) meet the definition of limited-education households. As shown in Figure 3, every region in the service area has a fair number of these households.

Table 4. Educational attainment among gas-heated households in Cascade’s service area.

Highest Educational Attainment	Estimated number of households	Percent of all households (%)
Grade 8 or below (Limited Education)	3,010	4.2
Grade 9	376	0.5
Grade 10	739	1
Grade 11	785	1.1
High School	17,012	24
College	22,324	31.5
Bachelors Degree	18,366	25.9
Postgraduate Degree	8,339	11.8

Figure 3. Geographic distribution of gas-heated Limited Education non-LEP households.



Utilization of Interpretation Services

Cascade offers inbound call support in both English and Spanish as well as interpretive services for over 240 other languages utilizing LionBridge. Figure 4 shows the utilization of Cascade's interpretation service over the course of one calendar year (7/1/2024 - 6/30/2025). Note that this report is for Montana Dakota Utilities' entire service area including Cascade Oregon. But it does support that Spanish is the dominant non-English language for Cascade, representing over 92% of interpretation requests.

Cascade's customer service agents are required to ask customers if they have a preferred language other than English. Table 5 shows customers' language preference in Oregon. 97% of customers who have requested non-English communication have selected Spanish as the primary language of communication.

Figure 4. Utilization of Cascade's phone interpretation service (across all Montana Dakota Utilities, not just Oregon).

Site Report - Language, Duration and Cost					
For Montana Dakota Utilities Cases Between July 01,2024 and June 30,2025					
Site	Service Type	Language	# of Bookings	% of Total	Duration
Montana Dakota Utilities	UTI	Arabic	9	0.51%	123
	UTI	Burmese	2	0.11%	26
	UTI	Creole	3	0.17%	104
	UTI	Dari/Farsi	1	0.06%	34
	UTI	French	6	0.34%	160
	UTI	Japanese	5	0.29%	95
	UTI	Karen Segaw	2	0.11%	17
	UTI	Kinyarwanda	1	0.06%	18
	UTI	Korean	4	0.23%	58
	UTI	Mandarin	29	1.66%	796
	UTI	Pashto	2	0.11%	36
	UTI	Portuguese	3	0.17%	53
	UTI	Russian	7	0.40%	124
	UTI	Somali	1	0.06%	30
	UTI	Spanish	1,610	92.11%	20,949
	UTI	Swahili	23	1.32%	504
	UTI	Turkish	12	0.69%	290
	UTI	Ukrainian	21	1.20%	300
	UTI	Vietnamese	7	0.40%	77
	Total	19	1,748		23,794
Grand Total			1,748		23794

Table 5. Customer language preferences in Cascade’s customer information system.

Language	# of Accounts
Spanish	167
Vietnamese	2
Ukrainian	1
Indonesian	1
Somali	1

Landscape Assessment Overview

The assessment in this section shows that Cascade’s service area has a relatively low level of diversity in terms of language - English (~89%) and Spanish (~8%) are the dominant languages spoken at home. Only 1% of households have limited English proficiency and out of those, the majority are Spanish speakers - although approximately 8% of households speak Spanish at home. This is also evident from the utilization of Cascade’s interpretation service and customers’ communication preferences.

Among English speakers, approximately 4% of households have limited education, which could be used as a proxy for comprehension levels. This indicates that outgoing English language communications should always be assessed for readability and understandability.

When should we offer services in languages other than English?

Empower Dataworks has performed a literature review of relevant laws and guidelines that establish thresholds for providing translations or other language services. The following is their recommended framework that is adapted to the needs of utility companies: the *Utility Language Priority Matrix*.

A universal baseline for all utilities is the **availability of high-quality interpretation in all languages** through the utility call center. This ensures that no customer is unable to communicate as long as they call in to the utility.

In addition, we need a **consistent method** to determine when additional language services are justified for a particular language. This allows utilities to optimize their language access efforts where they are needed the most and provides an **objective standard** to measure gaps in language services. This does not preclude the utility from providing

additional translation or language assistance based on demand from customers or community organizations.

The ideal way to determine when to provide additional language services beyond interpretation in a specific language is using a prioritization matrix. A standard prioritization matrix looks at tasks in terms of urgency and importance. Urgent, important tasks are the highest priority and vice versa.

For the provision of language services by a utility, we can look at the urgency of the communication compared to the number of limited English proficiency customers affected by it.

There are three levels of communication urgency:

- a. Critical (outages, emergencies, safety, disconnections)
- b. Important (assistance programs, weatherization, bill communications)
- c. Low (general information, account setup, regulatory documents, job postings)

We will also use three categories of LEP language prevalence. (These thresholds apply to a mid-sized utility service area. Much smaller or larger service areas will have different thresholds):

- a. Prevalent (more than 5% of customer base speak language at home or more than 1% of customers are LEP households¹) - For Cascade in Oregon: **Spanish**
- b. Common (more than 2% of customer base speak language at home or more than 0.5% of customers are LEP households) - For Cascade in Oregon: **None**
- c. Rare (more than 100 LEP households but not meeting other criteria) - For Cascade in Oregon: **None**

Using the two parameters of communication urgency and language prevalence, we can determine when to provide additional services in a specific language, as shown below.

¹ Based on the Federal Transportation Authority's [interpretation](#) of Title VI of the Civil Rights Act of 1964.

Utility Language Priority Matrix

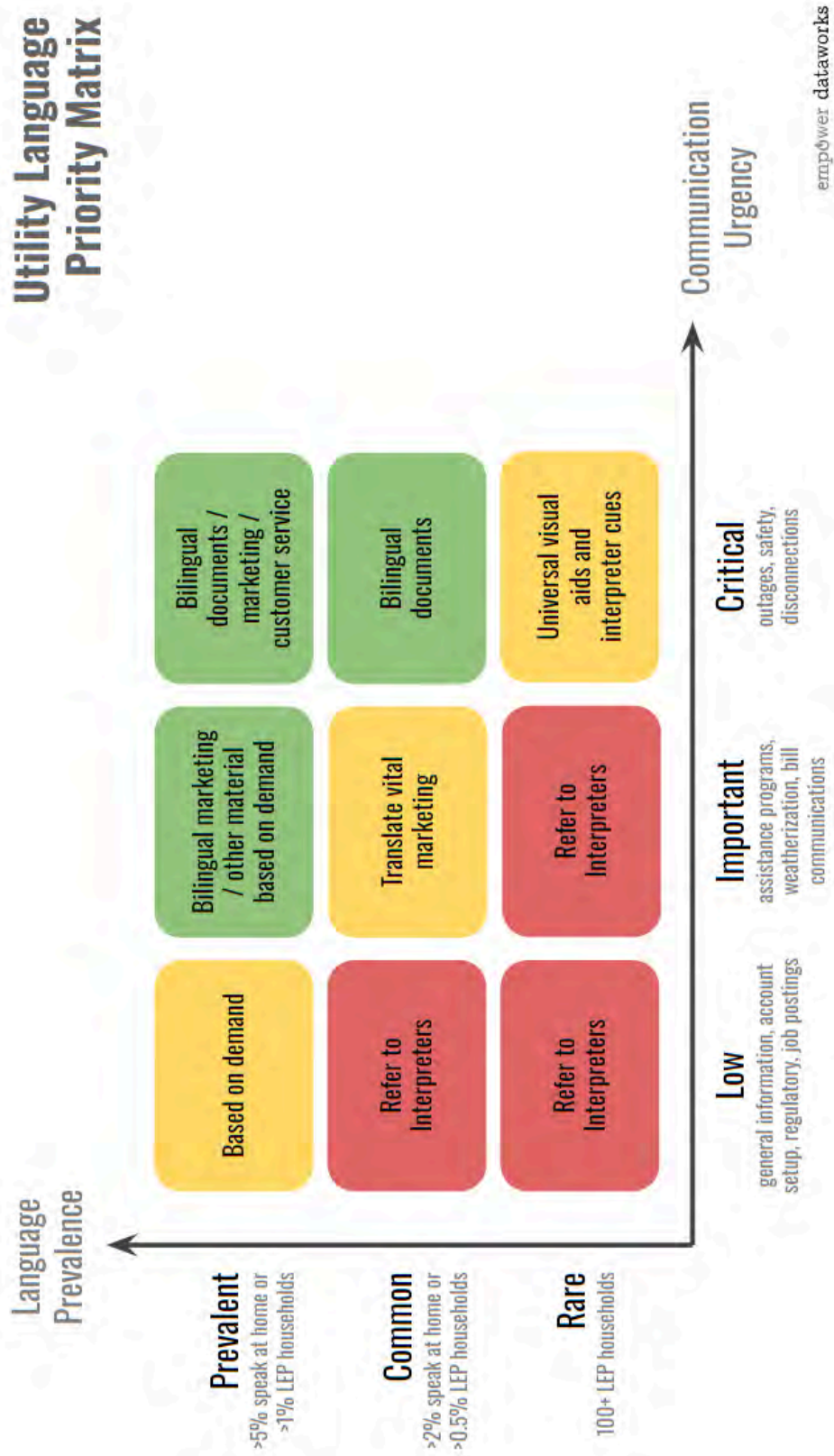


Table 6. Utility Language Priority Matrix

Language Prevalence among LEP households	Communication Urgency	Additional Language Services
Prevalent <i>>5% speak at home or >1% LEP</i> Spanish	Critical	Bilingual documents/marketing/customer service. Hire bilingual customer service agents and translate most critical documents. If there are limitations on space, translate the vital information (What? When? How?)
	Important	Bilingual marketing. Translate other material (e.g. application forms) if there is a need or based on feedback from community partners
	Low	Based on demand. Only translate if there is a clear need from customers.
Common <i>>2% speak at home or >0.5% LEP</i> None in Oregon	Critical	Bilingual documents. If there are limitations on space, translate the vital information (What? When? How?) for the top X languages.
	Important	Translate vital marketing. Translate one or two key visual assets (e.g. videos/social media posts)
	Low	Refer to interpreters. Use visual cues or link to language access webpage.
Rare <i>100+ LEP households</i> None in Oregon	Critical	- Visual cues and messaging - Link to language access webpage or document and include a translated reference to customer service interpretation - Interpretation message on Interactive Voice Response (IVR) system
	Important	Refer to interpreters. Use visual cues or link to language access webpage.
	Low	Refer to interpreters. Use visual cues or link to language access webpage.

Section 2. Language Service Evaluation

Note: This section is an independent evaluation of Cascade's language services conducted by Empower Dataworks and integrates feedback from Cascade staff and community organizations.

Overview

To address linguistically isolated customers, Cascade's Customer Service team offers

- Inbound call support in both English and Spanish
- Interpretation services for over 240 other languages utilizing LionBridge
- Users can translate Cascade's website into Spanish, Chinese, Hmong, Indonesian, Japanese, Korean, Vietnamese, Romanian, Russian, Somali, Swahili, Ukrainian, and French.
- All EDP program communications are provided in English and Spanish

Table 7. Existing coverage of Cascade language services (background color indicates preferred status based on language prevalence: green - should be implemented, yellow: visual communication or based on demand, red: no need for implementation)

Language	Interpretation	Emergency/ Safety	Disconnects	EDP	Energy Efficiency	Regulatory
Spanish	✓	✗	✓	✓	Some	✗
All other languages	✓	✗	Some	✗	✗	✗

If we were to apply the Utility Language Priority Matrix, then we notice gaps in Spanish - especially with emergency and energy efficiency communications. Other languages do not have a sufficient number of households to justify document translations. However, Cascade's emergency and disconnect notices could benefit from more visual cues that communicate the content of the notice and calls to action. Oregon Division 21 rules ([OAR 860-021-0011](#)) require that utility disconnect notices include language in Spanish, Vietnamese, Cambodian, Laotian, and Russian. This appears unnecessary in Cascade's service area for the four languages other than Spanish. A visual redesign of the notices could be more effective for Cascade's Oregon customers.

Customer Service

Cascade's call center (technically housed under Montana Dakota Utilities) employs several bilingual (English/Spanish) customer service representatives. Previously, customers calling

in and requesting Spanish would be forwarded to a Spanish voicemail where they would leave a message and get a call back from a Spanish-speaking representative. As of July 2025, the call center Interactive Voice Response (IVR) system now includes a Spanish option, so customers can directly speak with a Spanish-speaking representative. This is a major improvement that reduces friction and uncertainty over when a call back would be received and allows customers to be helped immediately. Customers can now also use the self-service options in the IVR in Spanish.

But the first obstacle for customers is the hesitation to call Cascade if they do not speak English well or if they perceive Cascade in a negative light (as a utility/official entity). This barrier can be overcome in two ways:

- Marketing messages that emphasize that Cascade is here to help - potentially highlighting the caring people who work in customer service
- Visual cues in all customer-facing materials showing that free interpretation services are available

Customer Awareness of Available Language Services

Cascade's customer service team (phone line) is the best solution to helping customers quickly and efficiently.

The current onboarding process for new customer service representatives includes training on using LionBridge interpretation services. The training appears comprehensive.

LionBridge offers an option to contact an operator if Cascade's representative needs help identifying the customer's language.

If a Spanish-speaking LEP customer calls Cascade, they will be able to reach a Spanish-speaking customer service representative, and will receive the help they need.

If a non-Spanish LEP customer calls Cascade, they may be trying to speak English as a second language in a stressful or unfamiliar situation. In that case, the pathway to reaching Cascade's interpretation services could be made clearer.

We recommend that customer service representatives receive selected training resources on assessing the need for an interpreter. This includes noticing situational or verbal cues such as a customer who pauses a lot or appears to have difficulty understanding or is

relying on family/friends to translate. Examples of these resources are included in the footnote².

Additionally, it should always be stressed that interpretation services are a customer's right and are available free of charge - as there may be a perception that customers have to pay for the service. New immigrants frequently have to pay to translate various vital documents when they move to the US and there may be the assumption that all translation/interpretation costs are their responsibility. This could be implemented through marketing, outreach or as an option on Cascade's IVR system.

2

https://www.ceh.org.au/wp-content/uploads/2022/04/LS2_Assessing-the-need-for-an-interpreter-2022APR.pdf
<https://niwaplibrary.wcl.american.edu/wp-content/uploads/LANG-Qref-InterpWhenNeeded.pdf>
https://nada.org.au/wp-content/uploads/2021/01/10_Assessing_need_interpreter.pdf

Spanish Language Services Review

The following evaluation was provided by Empower Dataworks based on a detailed review of Cascade's Spanish language communications and documents performed by Lacy Stockton (Empower Dataworks - bilingual) and Gabriela Delgado (independent community outreach specialist - limited English, native Spanish speaker).

General Feedback

Ms. Delgado thanked Cascade for trying to improve its communication with the Hispanic community. Many assets are well translated and did not use Spanglish. Some assets require minor tweaks to vocabulary or sentence structure. The call center IVR system is very well done in Spanish.

She noted the following potential areas of improvement.

Translation vs creation of Spanish communications: In general, there was a lack of clarity in some of the Spanish language assets, which made understanding program offerings and next steps difficult. The messages in those assets appeared to be translated from English language versions by a variety of translators or auto-translated instead of created for a Spanish speaking audience. When English expressions are translated word for word, the intended meaning can be lost and sentences can become unreadable. When communications are created for a Spanish speaking audience, cultural elements, visual cues, and preferred modes of communication for this subgroup are considered in addition to the language to reach the communication goal.

Lack of consistency across collateral: Program naming and acronyms, portions of logos and tables, tone, and who to call first (CNG or Community Action) are inconsistent in some assets. This can create confusion and a lack of awareness that these communications refer to the same program.

Lack of clarity of process for assistance programs: The general process from first contact to receiving a discount (or being declined) as well as the documentation required is unclear, potentially contributing to a hesitancy to call. In particular, undocumented clients can be reluctant to pursue programs that could be seen as public benefits (being a "public charge" can impede immigration applications).

General recommendations

1. More consistency across all collateral including:
 - a. Spanish terms that should be used consistently in all communications:

Program names/acronyms	Discount	Limited income
Program taglines	Home	Community Action
Energy efficiency	Past due bill	Assistance
Rebate	Disconnect	Natural gas bill

- b. “Cascade Natural Gas” should remain in English, as it is a proper name. Remove any Spanish translations.
 - c. Each program should have a Spanish logo (with a well-worded Spanish tagline)
 - d. Change “Agencia de Acción Comunitaria local” to “Agencia de Acción Comunitaria (Community Action)” or simply “Community Action” throughout. The English name can be more identifiable than the translation.
 - e. Many members of this community rent. Use “hogar” (home) instead of “casa” (house) and create tips and resources with renters in mind.
 - f. Adjust the tone to be friendlier, simpler, and more positive. Word of mouth is the best way to advertise in this community, so leverage a social proof style that includes testimonials and a casual chat tone as though it’s coming from a friendly neighbor.
 - g. Use the informal “tú” instead of “usted”
 - h. Use familiar words, colloquialisms, short sentences, idiomatic expressions, rather than technical terms or formal, complicated sentences. English idiomatic expressions do not translate well to Spanish.
 - i. Ensure all voice overs and phone messages have a Mexican or Central American accent
2. There may be hesitation to call because people don’t believe they qualify or are unsure of documentation requirements.
 - a. Specifying a dollar amount could clarify the range to spur people to inquire. (For example, “If your family of four earns less than \$64,000 a year, give us a call. We offer many programs that can help lower your bill that you may

qualify for.”)

- b. The first step of the application process may be confusing (call Cascade to get another phone number or go to a website). Consider using a single direct resource like <https://fortress.wa.gov/com/liheappublic/map.aspx>.

3. Keep in mind that many Spanish speakers who are new immigrants may have limited literacy skills, and written text is typically not a preferred form of communication. According to the Center for Migration Studies, half of undocumented Hispanic immigrants have less than a high school education. To improve comprehension:

- a. Create non-text-based communications (videos work best, even with low production quality or a simple facing-camera explanation video, or radio advertisements/interviews)
- b. Use shorter, simpler sentences
- c. Break text into visual elements (for example, timelines or steps of a process with icons)
- d. Use headings to highlight main points
- e. Make calls to action visually clear
- f. Refer to visual resources (for example, include a link to a video explaining the same points as the text, and make it clear in the text that the link provides the same information in a video format) or audio resources (such as a link to a friendly reading of the same text)

4. Many monolingual Spanish speakers are older and may not be proficient with navigating the Internet.

- a. Always have a phone (or in-person) option and include it on all communications
- b. Wherever possible, remove the requirement to log in or have an email address to participate. Many people do not have email. (They might create an email account to set up other services, like Facebook or a smart phone, but will never use the email account again.)

5. Consider prioritizing certain channels of communication differently than for English-language communications. Social media posts, videos, phone contact points, and in-person events are typically more effective than text-heavy options such as email, trifold, and letters. Flyers can be a useful tool if they are light on text, speak to familiar benefits, and have a clear call to action. Consider adding Spanish SMS messages for past due/disconnects if a customer has indicated Spanish language preference.

Detailed Spanish asset review and recommendations are included in Appendix A.

English Language Readability

The readability of selected English communications was evaluated using several standardized tests³.

General Feedback

1. Most English documents were understandable and clear to native English speakers.
2. Some documents were very text-heavy. Their readability can be improved by reducing sentence length and removing unnecessary information. Generally, communications should target a 10th grade level or below on the Flesch-Kincaid test.
3. Formatting and icons can be better used to highlight important information.
4. The main message is often hidden in the text - it should be brought out in the heading and placed front and center. Lead every notice with 3 short sentences with clear visual formatting- What is this for? What should I do about it? What happens if I don't act? The current disconnect notice does this well.

Detailed English asset review and recommendations are included in Appendix B.

³ https://www.online-utility.org/english/readability_test_and_improve.jsp

Summary evaluation of language barriers to accessing low-income programs

Cascade's efforts. Cascade has been doing a great job through its various language services. Staff are enthusiastic about helping improve language access services and are always soliciting feedback from customers and community organizations about ways to improve those services. Cascade has a comprehensive, free interpretation line for 240 languages through its call center. It has also done plenty of additional work on document translations and hiring bilingual customer service representatives. All of the recommendations in this evaluation relate to Cascade optimizing its efforts through improving some Spanish and visual communications.

Language distribution. Spanish is the prevalent non-English language in Cascade's Oregon service area. No other languages are spoken by more than 100 LEP households.

Hesitation to call barrier. Non-Spanish speakers should be encouraged to contact the call center by communicating that free interpretation services are available. A dedicated language access webpage could help overcome this barrier. Ideally, Cascade should be presented in customer-facing marketing as a friendly, neighborly entity that is ready to help.

Informational barrier. Some program collateral could be improved - especially clarity of program process, requirements and who to call. This applies to both English and translated material. Most Spanish language materials are well done but word choices can be tweaked or small changes can be made to make them more culturally relevant. Ideally, a bilingual Cascade staff member would be identified as a point person for reviewing Spanish translations for readability and cultural relevance. Readability of English language communications is generally good. Visual elements could be added to reach limited literacy and non-Spanish LEP customers.

Program application barrier. Spanish application materials should be ideally made bilingual (English and Spanish on same form). Document translations into non-Spanish languages are not a high priority, unless requested. Instead, critical information should be communicated visually with a clear pathway/call to action to call Cascade. For EDP, this includes - expiry notifications, grant confirmation etc.

Section 3. Action Plan

Language Service Improvements

1. Adopt the Utility Language Prioritization Matrix framework. Annually update the household counts and the list of languages by prevalence for the translation of vital documents and essential web content.
2. Focus on adding translations of critical communications in Spanish - especially outages/emergencies through social media and safety information.
3. Work toward incorporating more consistent Spanish terminology and universal icons and symbols that are understandable for LEP households.
4. Develop a dedicated language access webpage: this should include information on the free language access services available to individuals with limited English proficiency, especially interpretation services. The page should also include a language identification section, containing the following statement translated into the LEP languages identified in Table 2 of the Language Access Plan with a language flag. "If you do not speak English, Cascade's customer service team can get an interpreter who speaks your language. This service is free of charge. Call Cascade at 1-888-522-1130". The webpage (or a QR code) can be used on customer facing materials next to the global language icon (Appendix D).
5. Review and implement feasible recommendations in Appendix A: Detailed Spanish Asset review for vital documents
6. Review and implement feasible recommendations in Appendix B: Detailed English Asset review for vital documents
7. Website improvements: Essential website content is information that is critical for public access and understanding of programs, services, and resources. Do not rely on automated translation widget for prevalent languages (As of 2025, Spanish is the only language that meets this threshold). Instead, create dedicated webpages for these resources - including:
 - a. Emergency information
 - b. Energy assistance page
 - c. Start/Stop/Transfer Service
 - d. Contact Us page
8. For all notices and letters, including ones in English:

- a. The heading should summarize the content, rather than just “Important Notice about Your Account”
- b. Lead with 3 sentences with clear visual formatting - What is this for? What should I do about it? What happens if I don’t act?
- c. Use widely recognized icons/symbols to communicate the urgency

9. Work toward incorporating more universal icons and symbols that are understandable for limited literacy and non-Spanish LEP households. This includes standardized icons, font colors (depending on the urgency of the message), formatting and links to the Language Access webpage.

Informing Customers about availability of language services

10. Investigate options for communicating to customers who don’t speak English well that Cascade offers interpreter services, free of charge.
11. Consider a marketing campaign highlighting the call center - friendly staff always willing to help, bilingual customer service representatives (Spanish/English) and free interpretation services.
12. Move translation widget on website to header, consistent with most website designs.
13. Compile a set of resources for customer service reps to learn about when and how to offer interpretation services when speaking with a customer
14. Develop a dedicated flyer that highlights interpretation services and distribute at all outreach and presentations at schools, faith-based groups, and other community organizations.

Staff, processes and performance measurement

15. Identify a Cascade staff member who can serve as a point person for Spanish materials - their role would be to QC all Spanish-language assets in accordance with the style guide, identify gaps in language services, and make priorities for new translations or improvements of existing ones.
16. Circulate the final language access plan, including its objectives and action plan among customer service staff. This will ensure that all staff members understand Cascade's commitment to providing language assistance services to LEP individuals.

17. On all future customer representative job postings: Include that “Bilingual (English/Spanish) candidates are encouraged to apply” and “Pay bonus for bilingual representatives pending a language assessment”.

A sample progress report on these action items is included in Appendix C.

Examples of some of the recommendations are included in Appendix D.

Appendix A: Detailed Spanish Asset Review

Asset	Recommendations
EDP Enrolment Confirmation letter	- All text on the page should be Spanish including heading and logos - Lead with the benefit for clarity, “Calificas para una subvención por la cantidad de \$XX.XX para bajar tu saldo vencido. Recientemente aplicaste por asistencia....” - Concepts of SMI/FPL are not common; instead consider replacing it with a table of household incomes (\$) for clarity.
EDP expiration letter	- For EDP, this is the first (only) reference for “PDE” instead of “EDP,” which is confusing. Logo on top is for EDP. - Table in English and concepts of SMI/FPL are not understood; consider using household income levels (\$) instead of percentages or omit entirely - Name of Cascade changes – pick one and use across all Spanish communications (English is okay, because it is a proper name) - Spanish page should be fully in Spanish (logo, headings, table) - Heading should be “Discount expiring soon”/”Descuento de factura terminará pronto” - Unclear what “tarifa estándar” refers to; more basic language could help comprehension - refer to the discount going away, instead of separate rates
Winter Help booklet	- Not clear that this is a donation program (formal donations are not as common as helping friends, family, or church members) - Be careful of translating “making warm neighbors” or related content; there are many jokes that could be made in Spanish if not done carefully; “Ayudándonos entre vecinos” could work
Disconnection &	- Spanish section should be more obvious (visually

Past Due notices	differentiated) - Add purpose of the notice and phone number to Spanish section; the urgency is not conveyed - Use clearer visual icons to assist non-English, non-Spanish recipients
EDP video	- Well made - Should include Latino/a actors and visual references - The tone of voice should be slower, friendlier (neighborly)
EDP door tag	- This translation is good - Not obvious that this is about the same EDP program as other communications because of inconsistencies in wording/program naming - There may be too much information for folks to easily understand what they need to do <i>now</i> ("Important information" but call to action or purpose is embedded in text instead of obvious) - English website reference
EDP Post card	- Call to action is visually clear but the starting point for applying for the program is unclear: call Cascade to get a number for your Community Action agency; consider making a single number for the program - Logos are in English (top) and Spanish (below) – everything on the Spanish side should be in Spanish - Remove QR code for simplicity (not widely used)
EDP Banner ad	- Received the lowest rating of all for clarity - The visual is of a woman talking on the phone and staring at a tablet, which doesn't align with the CTA (click); if the phone image is used, include the phone number to call as the CTA - Swap to Spanish logo and subs

	- “La ayuda con su factura está a un solo clic de distancia” is a translation of an English expression, “just a click away.” However, in Spanish, “distancia” is exclusively used to convey physical distance – not time, ease or quickness. An alternative that could convey the same meaning would be, “Recibe ayuda con tu factura con una llamada rápida.” (It uses the informal tense tú and refers to a phone call, a preferred communication method.) - This illustration is confusing (phone and tablet, while the CTA is to click the banner ad – align image with CTA action)
ETO Audits/Rebates	- “Energy efficient” is not widely understood or considered a benefit on its own. Instead reference other non-energy benefits (lower bills, more comfortable, less drafty, healthier for your family, etc.) - Should specify that the program is available for renters (and have a section of the website specific to their needs, since most of the program offerings are applicable only to owners); the majority of Spanish speaking customers rent their homes - Include a phone option - No need for QR code - This program is essentially inaccessible to Spanish speakers: - Website is fully in English (including video and its subtitles) with no translation option - The first step on the website is to create an account, which requires an email – a big barrier for participation - As noted at the bottom of the flyer, energy audits are only available in English - It can be frustrating to be marketed a service that is not possible for you to use. Either provide the service in Spanish or consider not marketing it in Spanish.
Air quality flyer	- Reads very formally; use tu instead - Poorly translated for comprehension - Too text heavy – What could be removed or simplified?

	Could it reference video(s) for additional details instead? No need to reference ANSI standards. - Unclear that it is a helpful tips document; consider changing the heading to, “Protege la salud de tu familia” and subhead, “con estos consejos sencillos para mejorar la calidad de aire en tu hogar” (in general, references to family or community perform better than impersonal references) - Similarly, “Siguiendo estos sencillos pasos, podrás proteger <u>tu hogar</u> de la mala calidad del aire” refers to protecting your home instead what matters: protecting you and your family. Instead, use, “...protege <u>a tu familia</u> de la mala calidad del aire.” - And “Mejorar la salud de tu casa” should be “Mejora la calidad del aire para tu familia” - Include a phone number for questions (CTA currently directs to email external affairs)
Website	- For essential webpages, use content specifically written for Spanish speakers instead of translating English webpages - All vital English language webpages would have a separate webpage in Spanish, with appropriate URLs. Linking via urls takes customers to the English webpage, where they then need to figure out how to get the translation. - The translation widget is difficult to find - the first instinct was to look in the page header for link to Spanish language version of the webpage - The translation widget translates poorly, excludes media (images, tables, and videos remain in English), and results in incomprehensible text especially when program names are referenced. It is adequate for navigating the website but not for understanding detailed content.
Call Center IVR	- Ensure Spanish phone tree uses terms familiar to those from Central America (currently uses terms typically used in Spain such as “prensa española”, “al modilla”). Other than that, the flow of the call works very well.

Appendix B: Detailed English Asset Review

The Flesch Kincaid Grade Level is an approximate representation of the U.S. grade level needed to comprehend the text on the first reading.

The Flesch Reading Ease score is a readability test that uses a 1-to-100 scale to determine how easy a text is to understand, with higher scores indicating greater ease of reading. The score is calculated based on the average sentence length and the average number of syllables per word. A Flesch Reading Ease score of 60-70 is often considered ideal for general audiences, while scores below 30 are more suited for college-level or professional material.

The following table summarizes the recommendations and test scores for different assets.

	<i>Flesch Kincaid Grade</i>	Flesch Reading Ease	Average number of words per sentence
EDP Confirmation letter	8.9	52	12
- Readability is good - Heading should be clearer: "Approval for grant on past due balance" instead of "Important notice about your account" - Add alert and phone icons for non-Spanish, non-English speakers			
EDP Expiration letter	9.8	49	13.4
- Readability is good - Heading should be clearer: "Renew your bill discount" instead of "Important notice about your account" - Income limit table is unnecessary in this notice - Add alert and phone icons for non-Spanish, non-English speakers			
EDP Postcard	13.3	32	18
- Sentences are very long and formal in tone. - Call to action is nice and clear			
EDP Door tag	10	45	12.8
- This is well done and very readable - Add phone/contact icon for non-Spanish, non-English speakers			
Customer protections bill insert	13.2	34	18.6

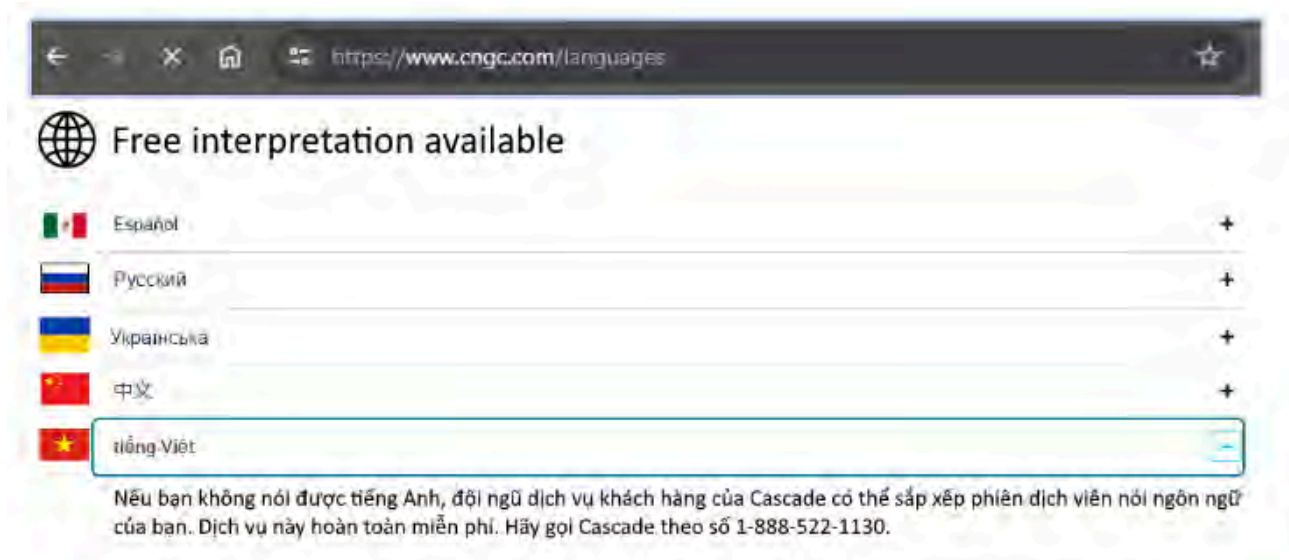
- Long document - consider simplifying to bullet points of the main headings			
Disconnect Notice	10.2	50	16
- Front page is pretty clear for English speakers. - Good use of formatting to highlight important information - In the heading, the word “discontinuance” is a legal term - consider changing to a clearer term “Gas Service Shutoff” or “Gas Service Disconnection” - Some visual elements can be added for non-English speakers - alert icon, red font on heading - Back page has too much text - consider replacing with bill insert version of customer protections - Review multilingual section based on language prevalence.			
Energy assistance webpage	13.2	34	18.6
- The page has a lot of information about the programs, but is unlikely to be read in full by customers - Consider adding the EDP video at the top and reorganizing the page with accordions and anchors (similar to the energy efficiency rebate page) - Consider adding a short quiz to match customers to programs - based on income range and number of people in household - The “Assistance Programs” link goes to the Washington programs by default. And the tab to switch to Oregon might be difficult to spot because of the location/colors. Consider adding a separate Oregon page or make the state selector clearer.			

Appendix C: Cascade Natural Gas - Oregon Language Access Plan - Progress Report

Date:	
Action Item	Status
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Appendix D: Examples

Language Access Webpage



QR Codes to lead customers to language access webpage



Icons To Be Used in Communications



Employee Spotlight Marketing (example from
<https://www.instagram.com/p/DHdl0IVzDhJ/>)



2025 Oregon Language Access Plan

Overview

empower
dataworks

High-level Goals

- The goal of the **Language Access Plan** is to improve communication with limited English and limited literacy customers, especially to improve their access to low-income programs.

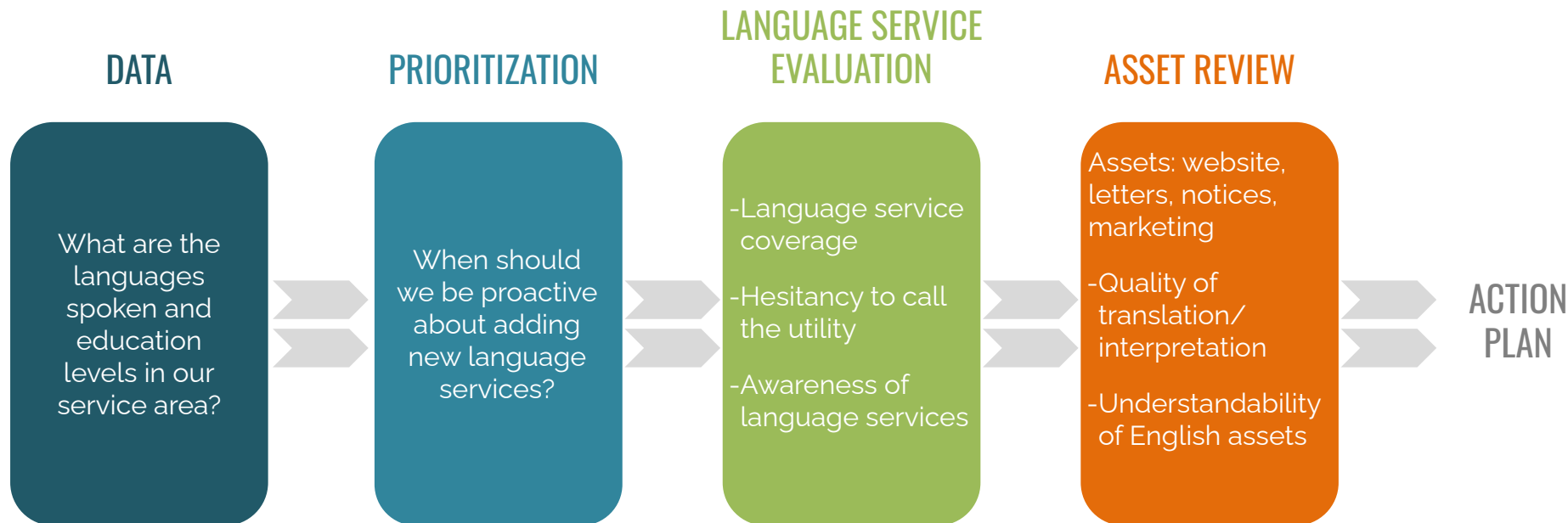
Definitions:

LEP: Limited English Proficiency

ACS: American Community Survey

Limited Education: Completed grade 8 or below

Language Access Plan **Approach**



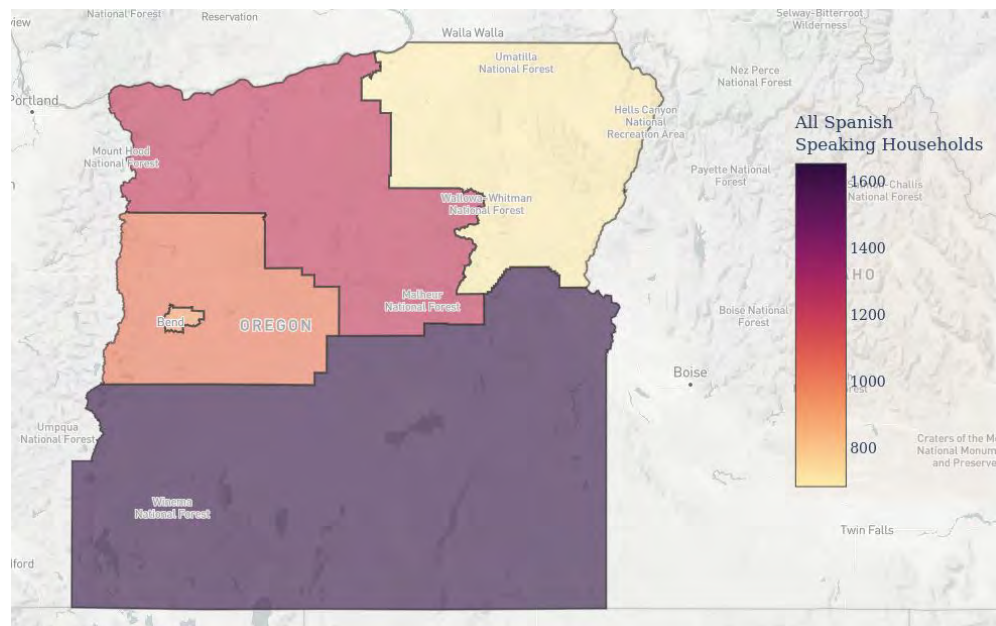
Languages in Cascade's Oregon Service Area

Language spoken at home	Limited English Proficiency (# households)	% LEP of all households	English-Proficient (# households)	% Speak language at home
Spanish	586	0.8	4,895	7.6
Chinese	98	0.1	203	0.4
Russian	45	0.1	86	0.2
Ukrainian	29	0	107	0.2
German	25	0	556	0.8

Key metrics describing language prevalence

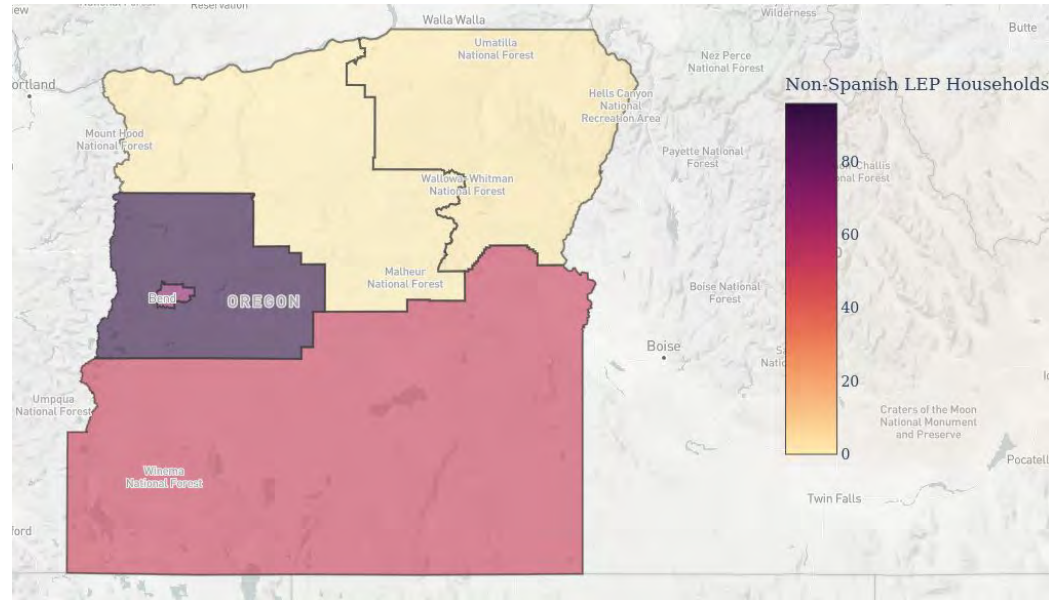
Data Source: Data is from the Census Bureau's 2019-2023 5-year American Community Survey (ACS). All household and person counts in this assessment are for gas-heated households only. Census regions do not align perfectly with Cascade's service area and the heating fuel is self-reported by ACS respondents, so the results may not be a perfect representation of Cascade's actual customers.

Geographic distribution of Spanish-speaking households



Most Spanish speakers reside in Central Oregon

Geographic distribution of non-Spanish LEP households



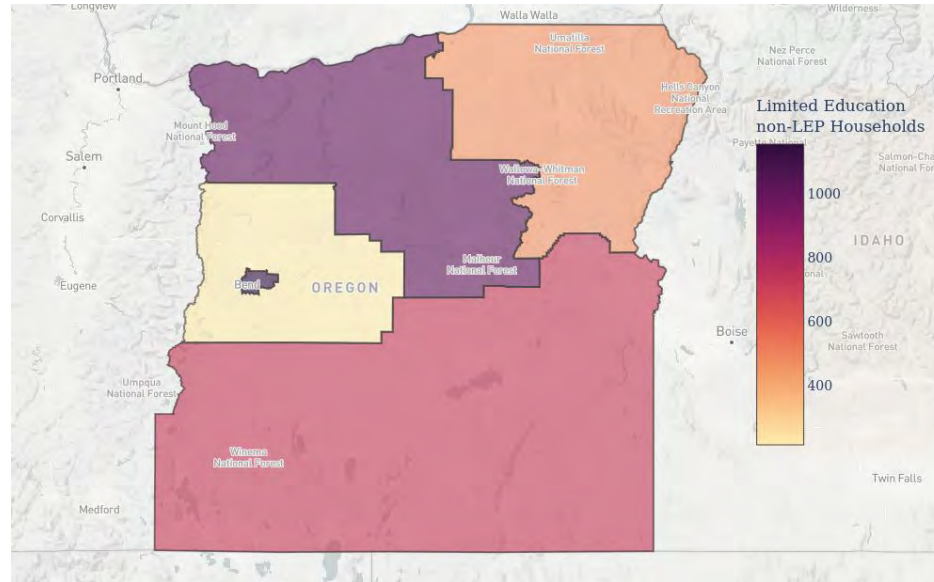
Most non-Spanish LEP households reside in Bend area

Educational Attainment in Oregon Service Area

Highest Educational Attainment	Estimated number of households	Percent of all households (%)
Grade 8 or below (Limited Education)	3,010	4.2
Grade 9	376	0.5
Grade 10	739	1
Grade 11	785	1.1
High School	17,012	24
College	22,324	31.5
Bachelors Degree	18,366	25.9
Postgraduate Degree	8,339	11.8

About 4% of the service area has a limited education (about average)

Geographic distribution of Limited Education non-LEP households



Limited education customers distributed throughout service area

Utilization of Interpretation Services

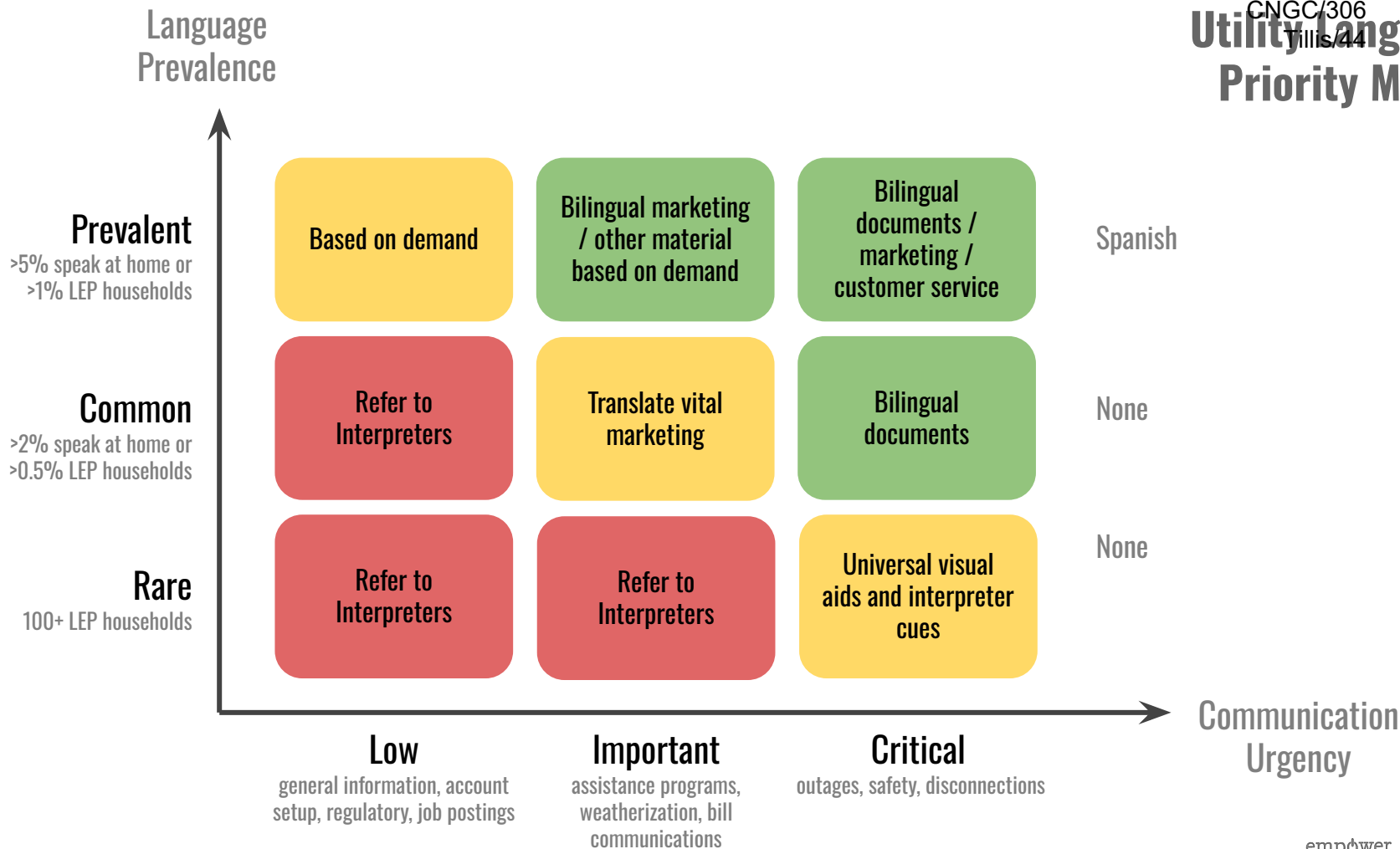
Site Report - Language, Duration and Cost					
Lionbridge		For Montana Dakota Utilities Cases Between July 01, 2024 and June 30, 2025			
Site	Service Type	Language	# of Bookings	% of Total	Duration
Montana Dakota Utilities	UTI	Arabic	9	0.51%	123
	UTI	Burmese	2	0.11%	26
	UTI	Creole	3	0.17%	104
	UTI	Dari/Farsi	1	0.06%	34
	UTI	French	6	0.34%	160
	UTI	Japanese	5	0.29%	95
	UTI	Karen Segaw	2	0.11%	17
	UTI	Kinyarwanda	1	0.06%	18
	UTI	Korean	4	0.23%	58
	UTI	Mandarin	29	1.66%	796
	UTI	Pashto	2	0.11%	36
	UTI	Portuguese	3	0.17%	53
	UTI	Russian	7	0.40%	124
	UTI	Somali	1	0.06%	30
	UTI	Spanish	1,610	92.11%	20,949
	UTI	Swahili	23	1.32%	504
	UTI	Turkish	12	0.69%	290
	UTI	Ukrainian	21	1.20%	300
	UTI	Vietnamese	7	0.40%	77
	Total	19	1,748		23,794
Grand Total			1,748		23,794

Table 5. Customer language preferences in Cascade's customer information system.

Language	# of Accounts
Spanish	167
Vietnamese	2
Ukrainian	1
Indonesian	1
Somali	1

Spanish is the main language utilized through Cascade's interpretation services

Utility Language Priority Matrix



Language Service Review

Overall Evaluation of Cascade's Language Services

- Cascade has been doing a great job through its various language services.
- Staff are enthusiastic about helping improve language access services and are always soliciting feedback from customers, advisory groups and community organizations about ways to improve those services.
- Cascade has a comprehensive, free interpretation line for 240 languages through its call center.
- It has also done plenty of additional work on document translations and hiring bilingual customer service representatives.
- Recommendations in this evaluation relate to Cascade **optimizing its language service efforts** through improving some Spanish and visual communication.

Existing Coverage of Language Services

Table 7. Existing coverage of Cascade language services (background color indicates preferred status based on language prevalence: green - should be implemented, yellow: visual communication or based on demand, red: no need for implementation)

Language	Interpretation	Emergency/ Safety	Disconnects	EDP	Energy Efficiency	Regulatory
Spanish	✓	✗	✓	✓	Some	✗
All other languages	✓	✗	Some	✗	✗	✗

High priority:

- Emergency and safety information in Spanish.
- Visual icons used in emergency and disconnect communications

Other communications have good coverage already.

Customer Service

What's Working Well:

- As of July 2025, the call center Interactive Voice Response (IVR) system now includes a Spanish option (including self-service), so customers can directly speak with a Spanish-speaking representative. This is a major improvement that reduces friction and uncertainty over when a call back would be received and allows customers to be helped immediately.

Customer Hesitation to Call

What's Working Well:

- Cascade's customer service team (phone line) is a quick and efficient solution to helping customers.

Customers may be hesitant to call because they are uncomfortable in English or because they don't have a good perception of Cascade as a utility company.

Recommendations:

- Highlight that interpretation services are available **free of charge** and are a customer's right - potentially through dedicated flyers.
- Marketing messages that emphasize that Cascade is here to help - potentially highlighting the caring people who work in customer service (e.g. employee spotlight marketing campaign) - both bilingual and English-speaking



Informing Customers about Availability of Language Services

What's Working Well:

- The current onboarding process for new customer service representatives includes training on using LionBridge interpretation services. The training appears comprehensive.
- LionBridge offers an option to contact an operator if Cascade's representative needs help identifying the customer's language.

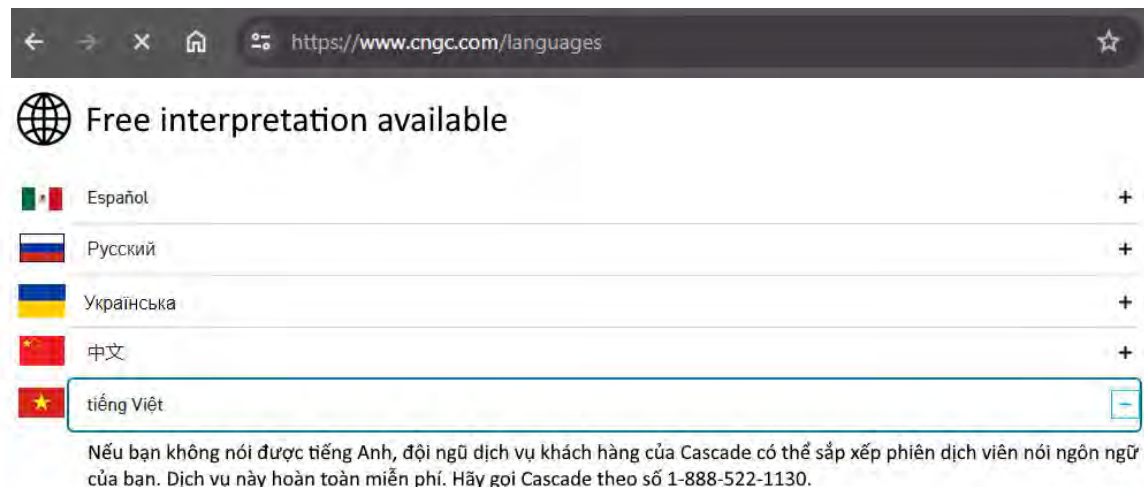


Recommendations:

- Additional training resources on identifying the need for an interpreter ([example](#))
- Liberal use of global language icon or interpreter icons in all customer-facing material
- Consider developing a dedicated language access webpage

Language Access Webpage

- Dedicated webpage that includes a message translated to all common languages: “If you do not speak English, Cascade’s customer service team can get an interpreter who speaks your language. This service is free of charge. Call Cascade at 1-888-522-1130”
- Can also serve as a central resource for translated documents



Website Review

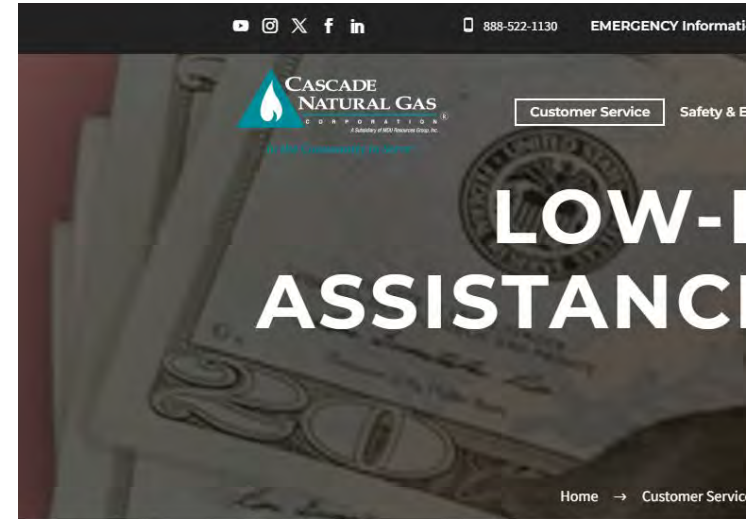
Translation Widget

What's Working Well:

- Translation widget is a low-cost measure that provides language accessibility for 16 languages.

Recommendations:

- Widget location is non-standard. Consider moving the widget to website header, so users know where to find it.
- Vital translations for prevalent languages (Spanish) by the website widget could be improved. The following webpages should have dedicated Spanish versions with QCed translations:
 - Emergency information
 - Energy assistance page
 - Start/Stop/Transfer Service
 - Contact Us page



Cascade respects your privacy and is committed to protecting your personal information. We will not share your data with immigration authorities.

WASHINGTON

OREGON

ENERGY ASSISTANCE FOR INCOME
HOUSEHOLDS

English

Spanish Asset Review

Gaby Delgado, NCW Community Outreach Specialist

CNGC/306
Tillis/55



[Link](#)

Gabriela Delgado

Main Takeaways - Spanish Assets

What's Working Well:

1. Many assets are well translated - no Spanglish. Some require minor tweaks to vocabulary.
2. Call center IVR system is very well done in Spanish

Recommendations:

1. More consistency in terminology across collateral and visual cues that are understandable to LEP households
2. Make headings clearer - avoid "Important Notice Regarding your Account"
3. Always include a clear call to action with a phone number and a phone icon
4. Review detailed feedback on Spanish assets in language access plan

English Asset Review

Readability of English Materials

What's Working Well:

- Most vital documents have good readability

Recommendations:

- Use descriptive headings and bring the main message front and center.
- Review detailed feedback on English assets in language access plan

	Flesch Kincaid Grade	Flesch Reading Ease	Average number of words per sentence
CARES Application Form	14.5	30	21.6
CARES Income Verification letter	10.1	45	12.3
CARES expiration letter	9.7	47	12.3
CARES/Weatherization Trifold	14.4	29	21
CARES postcard	10.1	41	12
Disconnect Notice	10.2	50	16
Energy assistance webpage	13.2	34	18.6

Improved Visual Communication

- Use icons liberally - helps readers hone in on vital content
- Use formatting and white space to help readers quickly scan dense content
- Work toward incorporating more universal icons and symbols that are understandable for limited literacy and non-Spanish LEP households

Dear Customer:

CNGC/306

Tillis/59

We have not received payment on your Past Due Account. To avoid discontinuance of service, payment must be received, or arrangements for payment made with us prior to 5 p.m. on May 21, 2025.

Payments may be made at local Convenience Pay[®] locations. Please contact Cascade Natural Gas Corporation at 1-888-522-1130 or visit www.cngc.com for payment locations. **Please let us know if payment is made at a Convenience Pay[®] location.**

To make a debit, credit card or check-by-phone payment, simply call our customer service number and follow the prompts to be connected with our independent service provider. A convenience fee for each transaction will apply. **Please let us know if payment is made by credit card.**

If service has been disconnected and payment is received after 12 p.m., service may not be restored until the following business day.

Payment on past due balances with a returned check may result in discontinuance of service without further notice.

If you are experiencing a financial hardship, contact us for individualized payment plan options. Cascade Natural Gas Corporation offers the following no-strings attached services directly, or is able to get you in contact with local Community Action Agencies for additional assistance to help get your account current (the following can be used in combination):

VS.

Our records indicate that we have not received payments for the amount of your past due gas bill for which a "Past Due Notice" was recently mailed to you.

Cascade Natural Gas Corporation must receive \$318.68

**If payment is not received by 5:00 p.m., May 21, 2025,
your service may be disconnected.**

If you are unable to pay your bill in full at this time, contact Customer Service at 1-888-522-1130 between 7:30 a.m. - 6:30 p.m., Monday through Friday and discuss debt relief programs or payment arrangements to avoid disconnection of your service.



Questions?

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
DIRECT TESTIMONY OF TAMMY J. NYGARD

EXHIBIT 400

November 2025

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I. INTRODUCTION

1 **Q. Would you please state your name, business address, and position?**

2 A. My name is Tammy J. Nygard and my business address is 1200 West Century
3 Avenue, Bismarck, North Dakota 58503. I am the Controller for MDU Resources
4 Group, Inc. ("MDU Resources" or "MDUR"), which includes Cascade Natural Gas
5 Corporation ("Cascade" or "Company"), a wholly owned subsidiary company of MDU
6 Resources.

7 **Q. Would you please describe your duties?**

8 A. As Controller, I am responsible for providing leadership and management of the
9 accounting and the financial forecasting and planning functions, including analysis and
10 reporting of all financial transactions.

11 **Q. Would you please outline your educational and professional background?**

12 A. I graduated from the University of Mary with a Bachelor of Science degree in
13 Accounting and Computer Information Systems. I have over 23 years of experience in
14 the utility industry. During my tenure with the MDU Resources family of companies, I
15 have held positions of increasing responsibility, including Financial Analyst for
16 Montana-Dakota Utilities Co., Director of Accounting and Finance for Cascade,
17 Controller for our MDU Utilities Group ("MDUG") companies, and now Controller for
18 MDU Resources.

19 **Q. What is the purpose of your testimony in this proceeding?**

20 A. My testimony supports the Company's overall cost of capital recommendation in this
21 case. To that end, I explain and support the Company's recommended cost of debt,
22 capital structure, and rate of return. In addition, my testimony provides an overview of
23 Cascade's allocation of payroll costs from MDUR and its MDUG companies. Finally, I
24 briefly introduce an exhibit in which I describe minor capital additions I am sponsoring
25 in this case.

1 **Q. Are you sponsoring any exhibits to your direct testimony?**

2 A. Yes, I am sponsoring the following exhibits:

- 3 • Exhibit CNGC/401 – Capital Structure
- 4 • Exhibit CNGC/402 – 2024 Cost Allocation Manual
- 5 • Exhibit CNGC/403 – 2025 Cost Allocation Manual
- 6 • Exhibit CNGC/404 – Corporate Overhead Allocation Factors
- 7 • Exhibit CNGC/405 – Minor Capital Additions

II. COST OF DEBT, CAPITAL STRUCTURE, AND RATE OF RETURN

8 **Q. What is the Company's overall recommended cost of capital for this case?**

9 A. Cascade proposes an overall rate of return ("ROR") of 7.866 percent, which provides
10 a reasonable return for Cascade's investors at a fair cost to Cascade's customers. The
11 recommended ROR is based on a 50 percent common equity ratio with a return on
12 equity of 10.4 percent and a debt cost of 5.332 percent.

13 **Q. Please explain Exhibit CNGC/401.**

14 A. Exhibit CNGC/401 shows the utility capital structure of Cascade for the periods ended
15 December 31, 2022, 2023, and 2024, and the projected capital structures at
16 December 31, 2025, October 31, 2026, and October 31, 2027. Exhibit CNGC/401
17 includes the associated costs of debt and common equity. The proposed capital
18 structure is calculated excluding short-term debt. This capital structure and the
19 associated costs serve as the basis for the overall rate of return requested by Cascade
20 in this rate filing of 7.866 percent. The basis for the requested 10.4 percent return on
21 common equity contained within the overall requested rate of return is supported by
22 the Direct Testimony of Ann Bulkley.¹

¹ See CNGC/500, Bulkley.

1 The components of the overall cost of capital, which are used to calculate the
2 revenue requirement, as described in the Direct Testimony of Matthew Larkin,² are:

3 **Table 1 – Proposed Cost of Capital**

	Ratio	Cost	Weighted Cost of Capital
Debt	50.000%	5.332%	2.666%
Equity	<u>50.000%</u>	10.400%	<u>5.200%</u>
Rate of Return	100.000%		7.866%

4 **Q. The Company is proposing a capital structure of 50 percent equity and**
5 **50 percent debt. Why is a 50 percent equity ratio appropriate for the Company?**

6 A. As shown on page 1 of Exhibit CNGC/401, the Company's actual and projected capital
7 structure is at or above 50 percent equity.³ Importantly, the Company's target capital
8 structure is close to 50 percent equity in the test year proposed in this case (i.e. the
9 twelve months ended October 31, 2027), which supports the Company's request.
10 Additionally, the Company's proposal for a 50-50 equity ratio aligns with the capital
11 structure the Public Utility Commission of Oregon ("Commission") has recently
12 approved in other recent Oregon rate cases.⁴

² See CNGC/700, Larkin.

³ CNGC/401, Nygard/1.

⁴ *In re Cascade Nat. Gas Corp., Appl. for a Gen. Rate Revision*, Docket No. UG 390, Order No. 21-001 at 3 (Jan. 6, 2021) (finding a 50/50 capital structure to be "an appropriate balance between debt and equity"); *In re Idaho Power Co., Appl. for a Gen. Rate Revision*, Docket No. UE 426, Order No. 24-311 at 12, App. A at 3 (Sept. 23, 2024); *In re PacifiCorp dba Pacific Power, Request for a Gen. Rate Revision, et al.*, Docket No. UE 433, Order No. 24-447 at 7-8 (Dec. 19, 2024) (approving a 50/50 hypothetical capital structure for ratemaking, as it "provides a consistent regulatory signal that a balanced structure supports the long-term best interests of utility ratepayers"); *In re Portland Gen. Elec. Co., Request for a Gen. Rate Revision*, Docket No. UE 435, Order No. 24-454 at 13-14 (Dec. 20, 2024) (finding "that a 50/50 capital structure strikes a reasonable balance between PGE's current position and its intentions"); *In re Avista Corp., dba Avista Util., Request for a Gen. Rate Revision*, Docket No. UG 519, Order No. 25-198 at 3, 6, App. A at 4 (May 23, 2025); *In re Nw. Nat. Gas Co., dba NW Natural, Request for a Gen. Rate Revision*, Docket No. UG 520, Order No. 25-420 at 4, 7 (Oct. 24, 2025).

1 **Q. How does the Company finance its natural gas utility operations and determine**
2 **the amount of common equity and debt to be included in its capital structure?**

3 A. As a regulated public utility, the Company has a duty and obligation to provide safe
4 and reliable service to its customers across its service territory while prudently
5 balancing cost and risk. In order to fulfill its service obligations, the Company has made
6 significant capital expenditures for new plant investment throughout its service
7 territory. These new investments also have associated operating and maintenance
8 costs. Through its financial planning process, the Company determines the amounts
9 of necessary financing required to support these activities. Cascade finances its
10 operations with a target of 50 percent common equity. Capital expenditure investments
11 are financed through a mix of internally generated funds, the utilization of additional
12 debt and common equity financing as required to maintain targeted capital ratios and
13 finance the combined utility operations.

14 Cascade obtained \$55 million of additional common equity in 2024, which
15 supports the Company's ability to maintain its target equity percentage. The Company
16 redeemed \$25 million of senior notes upon maturity in August 2025.

17 **Q. What does Exhibit CNGC/401, Nygard/2-7 show?**

18 A. Pages 2, 3 and 4 of Exhibit CNGC/401 show the cost and debt balance by issue at
19 December 31, 2022, 2023, and 2024, respectively.⁵ Page 5 shows the projected cost
20 and the debt balance by issue at December 31, 2025, which includes removing the
21 \$25 million senior notes that matured in August 2025, as previously discussed.⁶ Page
22 6 shows the projected cost and the debt balance by issue at October 31, 2026, which
23 includes issuing \$120 million of long-term debt.⁷ Page 7 shows the projected cost and

⁵ CNGC/401, Nygard/2-4.

⁶ CNGC/401, Nygard/5.

⁷ CNGC/401, Nygard/6.

1 the debt balance by issue at October 31, 2027, which includes issuing an additional
2 \$55 million of long-term debt, partially to replace \$20 million of senior notes that
3 mature in September 2027.⁸

4 **Q. How did you derive the projected cost of debt for 2025, 2026, and 2027?**

5 A. The projected cost of debt is based upon the yield-to-maturity of each debt issue
6 outstanding and projected to be issued.

7 **Q. How was the cost of debt calculated in the proposed capital structure?**

8 A. The cost of debt of 5.332 percent is calculated based on the projected cost of debt for
9 2027 based upon the yield-to-maturity of each debt issue outstanding and projected
10 to be issued.

11 **Q. What does Exhibit CNGC/401, Nygard/8 show?**

12 A. The schedule presents the common equity balance at December 31, 2022, 2023, and
13 2024, and the projected balance for December 31, 2025, October 31, 2026, and
14 October 31, 2027, reflecting the projected issuance activity in the balance.⁹ This
15 includes obtaining \$35 million and \$25 million of additional common equity in 2026 and
16 2027, respectively, to maintain the Company's targeted capital structure.

III. OVERVIEW OF INTERCOMPANY PAYROLL ALLOCATIONS

17 **Q. Please describe the methodologies used to allocate payroll expenses to the**
18 **Company from the Company's parent company.**

19 A. Cascade's parent company, MDUR, provides shared services departments (payroll,
20 human resources, and enterprise information technology) and administrative and
21 general departments that provide services to MDUR's subsidiary gas and electric
22 operating companies ("MDUR Operating Companies"), including Cascade.¹⁰ MDUR's

⁸ CNGC/401, Nygard/7.

⁹ CNGC/401, Nygard/8.

¹⁰ See CNGC/403, Nygard/5 for a list of the Operating Companies

1 policy is to directly assign costs to the applicable MDUR Operating Companies where
2 possible. Each shared service department has developed a pricing methodology
3 based on services performed to allocate costs to each of the MDUR Operating
4 Companies that utilize their services. Please see Exhibit CNGC/402 and CNGC/403
5 for a description of each MDUR shared service pricing methodology for 2024¹¹ and
6 2025,¹² respectively.

7 All administrative and general department costs which are not directly assigned
8 will be allocated to the MDUR Operating Companies using the MDUR corporate
9 overhead allocation factor. For 2024, the methodology used to apportion MDUR's
10 administrative and general department costs is a capitalization factor which is based
11 on 12-month average capitalization on March 31, effective July 1, and on
12 September 30, effective January 1, each year. Due to the spin-off of Everus completed
13 October 31, 2024, there was an additional capitalization factor in the year 2024,
14 effective November 1. The MDUR Corporate Overhead Allocation Factors for 2024
15 are shown in Exhibit CNGC/404.

16 Commissions typically recommend and are supportive of a 3-factor formula,
17 blending three different allocations to come up with an overall allocation to use. Now
18 that all of our remaining businesses in the organization are regulated, in 2025 the
19 Company moved to a 3-factor formula. For 2025, the methodology used to apportion
20 MDUR's administrative and general department costs is a 3-factor Modified
21 Massachusetts formula which uses gross plant, net revenues, and labor costs. The
22 MDUR Corporate Overhead Allocation Factors for 2025 are shown in Exhibit
23 CNGC/404.

¹¹ CNGC/402, Nygard/21-25.

¹² CNGC/403, Nygard/19-22.

1 **Q. Please describe the methodologies used to allocate payroll expenses to the**
2 **Company from any other affiliate.**

3 A. MDUG companies have departments that provide services to all four utility
4 companies.¹³ These departments include the leadership group, Customer Experience
5 Team, Engineering and Operations, Information Technology and Communications,
6 Environmental, Safety and Technical Training, Gas Supply and Control, Utility Group
7 Controller, Utility Group Human Resources.

8 These operational groups determined the proper allocation to use to allocate
9 the costs to the MDUG companies based on services performed for each utility
10 company. Please see Exhibit CNGC/402 for a description of each MDUG pricing
11 methodology for 2024¹⁴ and Exhibit CNGC/403 for a description of each MDUG pricing
12 methodology for 2025.¹⁵ Some costs may be determined within these MDUG group
13 departments to be specific to one company and are allocated directly to that company
14 and will not go through an allocation process.

IV. MINOR CAPITAL ADDITIONS

15 **Q. Are you describing any capital projects in this case?**

16 A. Yes, in Exhibit CNGC/405, I provide detail on two capital additions to plant in service
17 related to accounting software projects that are over \$150,000 and under \$1 million.¹⁶
18 For each of the projects I provide: a project description; an explanation of how
19 customers will benefit from the project (i.e., justification or rationale); a description of
20 any demand study or analysis that was performed, if applicable; a description of any
21 alternatives considered, if applicable; and the estimated project costs.

¹³ See CNGC/403, Nygard/7 for a list of the utility companies.

¹⁴ CNGC/402, Nygard/26-33.

¹⁵ CNGC/403, Nygard/23-29.

¹⁶ See CNGC/405, Nygard.

V. CONCLUSION

1 Q. Does this conclude your direct testimony?

2 A. Yes, it does.

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
CAPITAL STRUCTURE

EXHIBIT 401

November 2025

**CASCADE NATURAL GAS CORPORATION
AVERAGE AND PROJECTED UTILITY CAPITAL STRUCTURE
TWELVE MONTHS ENDING DECEMBER 31
PROJECTED 2025-2027**

	Balance	Ratio	Cost	Required Return
<u>Per Books 2022</u>				
Long-Term Debt 1/	\$375,000,000	47.082%	4.507%	2.122%
Common Equity 2/	421,484,304	52.918%	10.400%	5.503%
Total	<u>\$796,484,304</u>	<u>100.000%</u>		<u>7.625%</u>
<u>Per Books 2023</u>				
Long-Term Debt 3/	\$475,000,000	49.893%	4.907%	2.448%
Common Equity 2/	477,031,416	50.107%	10.400%	5.211%
Total	<u>\$952,031,416</u>	<u>100.000%</u>		<u>7.659%</u>
<u>Per Books 2024</u>				
Long-Term Debt 4/	\$475,000,000	46.888%	4.925%	2.309%
Common Equity 2/	538,048,583	53.112%	10.400%	5.524%
Total	<u>\$1,013,048,583</u>	<u>100.000%</u>		<u>7.833%</u>
<u>Projected 2025</u>				
Long-Term Debt 5/	\$450,000,000	45.252%	4.970%	2.249%
Common Equity 2/	544,435,758	54.748%	10.400%	5.694%
Total	<u>\$994,435,758</u>	<u>100.000%</u>		<u>7.943%</u>
<u>Projected 2026</u>				
Long-Term Debt 6/	\$570,000,000	49.838%	5.292%	2.637%
Common Equity 2/	573,704,781	50.162%	10.400%	5.217%
Total	<u>\$1,143,704,781</u>	<u>100.000%</u>		<u>7.854%</u>
<u>Projected 2027</u>				
Long-Term Debt 7/	\$605,000,000	49.798%	5.332%	2.655%
Common Equity 2/	609,901,748	50.202%	10.400%	5.221%
Total	<u>\$1,214,901,748</u>	<u>100.000%</u>		<u>7.876%</u>
<u>Proposed Capital Structure</u>				
Long-Term Debt		50.000%	5.332%	2.666%
Common Equity		50.000%	10.400%	5.200%
Total		<u>100.000%</u>		<u>7.866%</u>

- 1/ Exhibit CNGC 401, page 2.
2/ Exhibit CNGC 401, page 8.
3/ Exhibit CNGC 401, page 3.
4/ Exhibit CNGC 401, page 4.
5/ Exhibit CNGC 401, page 5.
6/ Exhibit CNGC 401, page 6.
7/ Exhibit CNGC 401, page 7.

CASCADE NATURAL GAS CORPORATION
LONG-TERM DEBT CAPITAL
DECEMBER 31, 2022

<u>Description</u>	<u>Date of Maturity</u>	<u>Interest Rate</u>	<u>Principal Amount of Issue</u>	<u>Annual Interest Expense</u>	
<u>Unsecured Long-Term Debt</u>					
7.48% - Medium-Term Note	09/15/27	7.480%	\$20,000,000	\$1,496,000	
7.10% - Medium-Term Note	03/16/29	7.100%	15,000,000	1,065,000	
5.79% - Medium-Term Note	03/08/37	5.790%	40,000,000	2,316,000	
4.11% - Senior Note	08/23/25	4.110%	25,000,000	1,027,500	
4.36% - Senior Note	08/23/28	4.360%	25,000,000	1,090,000	
4.09% - Senior Note	11/24/44	4.090%	12,500,000	511,250	
4.24% - Senior Note	11/24/54	4.240%	12,500,000	530,000	
4.09% - Senior Note	01/15/45	4.090%	12,500,000	511,250	
4.24% - Senior Note	01/15/55	4.240%	12,500,000	530,000	
3.62% - Senior Note	06/13/29	3.620%	25,000,000	905,000	
3.82% - Senior Note	06/13/34	3.820%	20,000,000	764,000	
4.26% - Senior Note	06/13/49	4.260%	30,000,000	1,278,000	
3.58% - Senior Note	06/15/50	3.580%	30,000,000	1,074,000	
3.78% - Senior Note	06/15/60	3.780%	20,000,000	756,000	
3.34% - Senior Note	10/30/60	3.340%	25,000,000	835,000	
4.26% - Senior Note	06/15/32	4.260%	15,000,000	639,000	
4.60% - Senior Note	06/15/52	3.820%	35,000,000	1,337,000	
Debt Amortization				236,392	
Total Long-Term Debt Capital			<u>\$375,000,000</u>	<u>\$16,901,392</u>	<u>4.507%</u>

CASCADE NATURAL GAS CORPORATION
LONG-TERM DEBT CAPITAL
DECEMBER 31, 2023

<u>Description</u>	<u>Date of Maturity</u>	<u>Interest Rate</u>	<u>Principal Amount of Issue</u>	<u>Annual Interest Expense</u>	
<u>Unsecured Long-Term Debt</u>					
7.48% - Medium-Term Note	09/15/27	7.480%	\$20,000,000	\$1,496,000	
7.10% - Medium-Term Note	03/16/29	7.100%	15,000,000	1,065,000	
5.79% - Medium-Term Note	03/08/37	5.790%	40,000,000	2,316,000	
4.11% - Senior Note	08/23/25	4.110%	25,000,000	1,027,500	
4.36% - Senior Note	08/23/28	4.360%	25,000,000	1,090,000	
4.09% - Senior Note	11/24/44	4.090%	12,500,000	511,250	
4.24% - Senior Note	11/24/54	4.240%	12,500,000	530,000	
4.09% - Senior Note	01/15/45	4.090%	12,500,000	511,250	
4.24% - Senior Note	01/15/55	4.240%	12,500,000	530,000	
3.62% - Senior Note	06/13/29	3.620%	25,000,000	905,000	
3.82% - Senior Note	06/13/34	3.820%	20,000,000	764,000	
4.26% - Senior Note	06/13/49	4.260%	30,000,000	1,278,000	
3.58% - Senior Note	06/15/50	3.580%	30,000,000	1,074,000	
3.78% - Senior Note	06/15/60	3.780%	20,000,000	756,000	
3.34% - Senior Note	10/30/60	3.340%	25,000,000	835,000	
4.26% - Senior Note	06/15/32	4.260%	15,000,000	639,000	
4.60% - Senior Note	06/15/52	3.820%	35,000,000	1,337,000	
6.39% - Senior Note	11/30/33	6.390%	100,000,000	6,390,000	
Debt Amortization				250,961	
Total Long-Term Debt Capital			<u>\$475,000,000</u>	<u>\$23,305,961</u>	<u>4.907%</u>

CASCADE NATURAL GAS CORPORATION
LONG-TERM DEBT CAPITAL
DECEMBER 31, 2024

<u>Description</u>	<u>Date of Maturity</u>	<u>Interest Rate</u>	<u>Principal Amount of Issue</u>	<u>Annual Interest Expense</u>	
<u>Unsecured Long-Term Debt</u>					
7.48% - Medium-Term Note	09/15/27	7.480%	\$20,000,000	\$1,496,000	
7.10% - Medium-Term Note	03/16/29	7.100%	15,000,000	1,065,000	
5.79% - Medium-Term Note	03/08/37	5.790%	40,000,000	2,316,000	
4.11% - Senior Note	08/23/25	4.110%	25,000,000	1,027,500	
4.36% - Senior Note	08/23/28	4.360%	25,000,000	1,090,000	
4.09% - Senior Note	11/24/44	4.090%	12,500,000	511,250	
4.24% - Senior Note	11/24/54	4.240%	12,500,000	530,000	
4.09% - Senior Note	01/15/45	4.090%	12,500,000	511,250	
4.24% - Senior Note	01/15/55	4.240%	12,500,000	530,000	
3.62% - Senior Note	06/13/29	3.620%	25,000,000	905,000	
3.82% - Senior Note	06/13/34	3.820%	20,000,000	764,000	
4.26% - Senior Note	06/13/49	4.260%	30,000,000	1,278,000	
3.58% - Senior Note	06/15/50	3.580%	30,000,000	1,074,000	
3.78% - Senior Note	06/15/60	3.780%	20,000,000	756,000	
3.34% - Senior Note	10/30/60	3.340%	25,000,000	835,000	
4.26% - Senior Note	06/15/32	4.260%	15,000,000	639,000	
4.60% - Senior Note	06/15/52	3.820%	35,000,000	1,337,000	
6.39% - Senior Note	11/30/33	6.390%	100,000,000	6,390,000	
Debt Amortization				341,001	
Total Long-Term Debt Capital			<u>\$475,000,000</u>	<u>\$23,396,001</u>	<u>4.925%</u>

**CASCADE NATURAL GAS CORPORATION
LONG-TERM DEBT CAPITAL
PROJECTED DECEMBER 31, 2025**

<u>Description</u>	<u>Date of Maturity</u>	<u>Interest Rate</u>	<u>Principal Amount of Issue</u>	<u>Annual Interest Expense</u>	
<u>Unsecured Long-Term Debt</u>					
7.48% - Medium-Term Note	09/15/27	7.480%	\$20,000,000	\$1,496,000	
7.10% - Medium-Term Note	03/16/29	7.100%	15,000,000	1,065,000	
5.79% - Medium-Term Note	03/08/37	5.790%	40,000,000	2,316,000	
4.36% - Senior Note	08/23/28	4.360%	25,000,000	1,090,000	
4.09% - Senior Note	11/24/44	4.090%	12,500,000	511,250	
4.24% - Senior Note	11/24/54	4.240%	12,500,000	530,000	
4.09% - Senior Note	01/15/45	4.090%	12,500,000	511,250	
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3.62% - Senior Note	06/13/29	3.620%	25,000,000	905,000	
3.82% - Senior Note	06/13/34	3.820%	20,000,000	764,000	
4.26% - Senior Note	06/13/49	4.260%	30,000,000	1,278,000	
3.58% - Senior Note	06/15/50	3.580%	30,000,000	1,074,000	
3.78% - Senior Note	06/15/60	3.780%	20,000,000	756,000	
3.34% - Senior Note	10/30/60	3.340%	25,000,000	835,000	
4.26% - Senior Note	06/15/32	4.260%	15,000,000	639,000	
4.60% - Senior Note	06/15/52	3.820%	35,000,000	1,337,000	
6.39% - Senior Note	11/30/33	6.390%	100,000,000	6,390,000	
Debt Amortization				337,645	
Total Long-Term Debt Capital			<u>\$450,000,000</u>	<u>\$22,365,145</u>	<u>4.970%</u>

**CASCADE NATURAL GAS CORPORATION
LONG-TERM DEBT CAPITAL
PROJECTED OCTOBER 31, 2026**

<u>Description</u>	<u>Date of Maturity</u>	<u>Interest Rate</u>	<u>Principal Amount of Issue</u>	<u>Annual Interest Expense</u>	
<u>Unsecured Long-Term Debt</u>					
7.48% - Medium-Term Note	09/15/27	7.480%	\$20,000,000	\$1,496,000	
7.10% - Medium-Term Note	03/16/29	7.100%	15,000,000	1,065,000	
5.79% - Medium-Term Note	03/08/37	5.790%	40,000,000	2,316,000	
4.36% - Senior Note	08/23/28	4.360%	25,000,000	1,090,000	
4.09% - Senior Note	11/24/44	4.090%	12,500,000	511,250	
4.24% - Senior Note	11/24/54	4.240%	12,500,000	530,000	
4.09% - Senior Note	01/15/45	4.090%	12,500,000	511,250	
4.24% - Senior Note	01/15/55	4.240%	12,500,000	530,000	
3.62% - Senior Note	06/13/29	3.620%	25,000,000	905,000	
3.82% - Senior Note	06/13/34	3.820%	20,000,000	764,000	
4.26% - Senior Note	06/13/49	4.260%	30,000,000	1,278,000	
3.58% - Senior Note	06/15/50	3.580%	30,000,000	1,074,000	
3.78% - Senior Note	06/15/60	3.780%	20,000,000	756,000	
3.34% - Senior Note	10/30/60	3.340%	25,000,000	835,000	
4.26% - Senior Note	06/15/32	4.260%	15,000,000	639,000	
4.60% - Senior Note	06/15/52	3.820%	35,000,000	1,337,000	
6.39% - Senior Note	11/30/33	6.390%	100,000,000	6,390,000	
6.45% - Senior Note	07/30/36	6.450%	120,000,000	7,740,000	
Debt Amortization				394,795	
Total Long-Term Debt Capital			<u>\$570,000,000</u>	<u>\$30,162,295</u>	<u>5.292%</u>

**CASCADE NATURAL GAS CORPORATION
LONG-TERM DEBT CAPITAL
PROJECTED OCTOBER 31, 2027**

<u>Description</u>	<u>Date of Maturity</u>	<u>Interest Rate</u>	<u>Principal Amount of Issue</u>	<u>Annual Interest Expense</u>	
<u>Unsecured Long-Term Debt</u>					
7.10% - Medium-Term Note	03/16/29	7.100%	15,000,000	1,065,000	
5.79% - Medium-Term Note	03/08/37	5.790%	40,000,000	2,316,000	
4.36% - Senior Note	08/23/28	4.360%	25,000,000	1,090,000	
4.09% - Senior Note	11/24/44	4.090%	12,500,000	511,250	
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3.78% - Senior Note	06/15/60	3.780%	20,000,000	756,000	
3.34% - Senior Note	10/30/60	3.340%	25,000,000	835,000	
4.26% - Senior Note	06/15/32	4.260%	15,000,000	639,000	
4.60% - Senior Note	06/15/52	3.820%	35,000,000	1,337,000	
6.39% - Senior Note	11/30/33	6.390%	100,000,000	6,390,000	
6.45% - Senior Note	07/31/36	6.450%	120,000,000	7,740,000	
6.50% - Senior Note	08/31/37	6.500%	55,000,000	3,575,000	
Debt Amortization				411,593	
Total Long-Term Debt Capital			<u>\$605,000,000</u>	<u>\$32,258,093</u>	<u>5.332%</u>

CASCADE NATURAL GAS CORPORATION
COMMON EQUITY
TWELVE MONTHS ENDING DECEMBER 31, 2022, 2023, 2024
PROJECTED 2025-2027

<u>Description</u>	<u>Amount</u>
Common Equity - 12/31/2022	\$421,484,304
Common Equity - 12/31/2023	\$477,031,416
Common Equity - 12/31/2024	\$538,048,583
Common Equity - 12/31/2025	\$544,435,758
Common Equity - 10/31/2026	\$573,704,781
Common Equity - 10/31/2027	\$609,901,748

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

**Cascade Natural Gas Corporation
2024 COST ALLOCATION MANUAL**

EXHIBIT 402

November 2025



In the Community to Serve®

Cost Allocation Manual

2024

2024 Cost Allocation Manual

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Overview

Cascade Natural Gas Corporation (CNG), a gas distribution company operating in the states of Washington and Oregon, is a subsidiary of MDU Resources Group, Inc. Cascade Natural Gas Corporation has its' own set of financial records. The operations of Cascade Natural Gas Corporation are under the direction of one Utility Group (UG) executive leadership team.

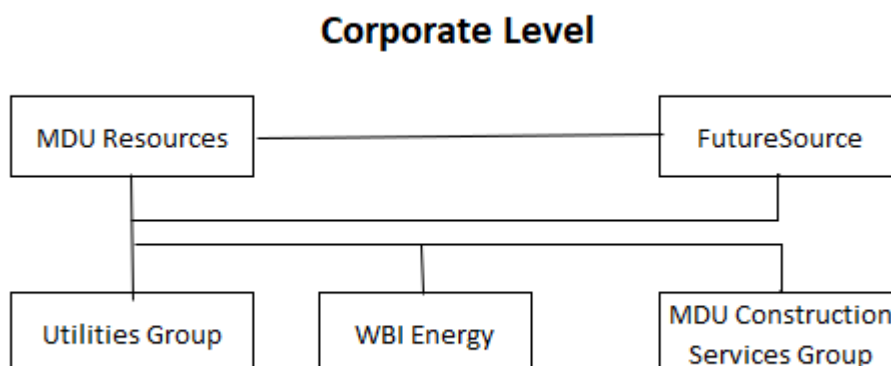
Montana-Dakota Utilities Co. (Montana-Dakota) and Great Plains Natural Gas Company (Great Plains), both subsidiaries of MDU Resources Group, Inc. (MDUR), conduct business in five states with two regulated utility segments 1) electric operations (comprised of generation, transmission, and distribution operations) and 2) gas distribution operations.

Montana-Dakota and Great Plains are one legal entity and have one set of financial records. However, utility related rate base and income statement items, whether directly assigned or allocated, are captured in a unique financial ledger to provide for regulatory reporting. The operations of both Montana-Dakota and Great Plains are under the direction of one Utility Group (UG) executive leadership team.

FutureSource Capital Corporation (FutureSource) is a separate legal entity that owns the corporate campus facilities that house the MDUR corporate staff and other property utilized in providing services to the operating companies within MDUR.

Below is an overview of the operational structure for the purpose of assigning costs. The diagram presented is intended to provide an overview for cost allocation only and is not intended to represent the legal structure of the Corporation. Note that costs from MDUR and FutureSource are directly assigned or allocated and charged to the operating companies (i.e. Utilities Group, WBI Energy, etc.)

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This document is intended to provide an overview of the different types of allocations and the processes employed to direct costs to the proper utility or business segment (electric or gas) and state jurisdiction for Montana-Dakota and Great Plains.

This document will discuss the allocations to/from:

- MDUR and FutureSource to Montana-Dakota/Great Plains
- Montana-Dakota to other companies within MDUR
- Montana-Dakota/Great Plains to Cascade Natural Gas Company (CNGC) and Intermountain Gas Corporation (IGC)
- Montana-Dakota to a utility segment (electric or gas)
- Utility segment to state jurisdictions

Overall, the approach to allocating costs at each level is to directly assign costs when applicable and to allocate costs based on the function or driver of the cost.

MDU Resources Group, Inc. (MDUR) Allocations

The MDUR corporate staff consists of shared services departments (payroll, human resources, business services and enterprise information technology), and administrative and general departments.

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Shared Services

MDU Resources Group, Inc. has several departments that provide specific services to the operating companies. These departments have developed a pricing methodology which is updated annually for the allocation of costs to the MDUR operating companies that utilize their services. (See Exhibit IV) These departments include:

Payroll Shared Services

Payroll Shared Services department provides comprehensive payroll services for MDUR companies and employees. It processes payroll in compliance with appropriate federal, state, and local tax laws and regulations. Payroll Shared Services is also responsible for preparation, filing and payment of all payroll related federal, state, and local tax returns. It also maintains and facilitates payments and accurate reporting to payroll vendors for employee benefits and other payroll deductions. For Montana-Dakota and Great Plains, the payroll shared services department is also responsible for the accumulation of time entry records and maintenance of employee records. Montana-Dakota and Great Plains do not have any departments that provide these payroll related services.

Human Resources

Human Resources operates as “One HR” across the regulated business units of MDU Resources Group including Montana-Dakota, Great Plains, Cascade Natural Gas, Intermountain Gas, and WBI Energy. There are employees in the HR departments at each of the business units that focus on the operational function of human resources: employee relations, labor relations, staffing, and leave management. At MDU Resources, shared HR functions are performed for all the regulated businesses: compensation management, benefits administration, policy development, human resource information systems, organizational development, as well as providing support and backup for the business unit functions.

Business Services

Business Services provides support services for facilities and administrative services (including bill printing), supply chain (purchasing and inventory), fleet, travel, and accounts payable (including unclaimed

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property). Business Services also creates and maintains the Corporation's national accounts for the purchase of products, goods and services. National accounts take advantage of the combined purchasing power of all the Corporation's operating companies. Business Services is committed to serving its customers by providing timely, standardized, cost-effective goods and services that support business strategies and goals.

Enterprise Information Technology

Enterprise Information Technology (EIT) provides policy guidance, infrastructure related IT functions and security-focused governance. EIT seeks to increase the return on investment in technology through consolidation of common IT systems and services, while eliminating waste and duplication. EIT works to increase the quality and consistency of technology, increase functionality and service to the enterprise, provide governance for managing and controlling risk and reduce costs through economies of scale.

The EIT services get allocated to Montana Dakota using agreed upon formulas based on utilization of the services.

Administrative and General Services

Administrative and general functions performed by MDUR for the benefit of the operating companies include the following departments:

- Corporate governance, accounting & planning
- Communications & public affairs
- Human resources
- Internal audit
- Investor relations
- Legal
- Risk management
- Tax and compliance
- Treasury services

Cascade Natural Gas receives an allocation of these corporate costs. Corporate Policy No. 50.10 states "*It is the policy of the Company to allocate MDU Resources Group, Inc.'s (MDU) administrative costs and general expenses to the MDU's business units*". Business units described in the policy have been referred to as operating companies in this

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document. The policy states that costs that directly relate to a business unit will be directly assigned to the applicable business unit and only the remaining unassigned expenses will be allocated to the operating companies using the corporate allocation methodology. The allocation factor developed to apportion MDUR's unassigned administrative costs is a capitalization factor which is based on 12-month average capitalization at March 31, effective July 1 and at September 30, effective January 1 each year. MDUR has a mix of regulated and non-regulated companies. The non-regulated companies are cyclical in nature and could be impacted significantly with a downturn in the economy. It is unlikely during that same downturn their share of corporate costs would be materially different. Due to the volatility of non-regulated companies, and inconsistency between periods of other potential allocation factors, capitalization is the most appropriate allocation factor for MDUR. Capitalization includes total equity and current and non-current long-term debt (including capital lease obligations). The Corporate Overhead Allocation Factors are shown in Exhibit I.

Montana-Dakota's gas (including Great Plains) and electric business segments are reflected in the Corporate Overhead Allocation Factors in Exhibit I. Operating companies that receive allocated costs on a monthly basis from MDUR include:

- Montana Dakota – Electric utility segment
- Montana Dakota/Great Plains – Gas utility segment
- Cascade Natural Gas Corporation (CNGC)
- Intermountain Gas Company (IGC)
- WBI Energy Transmission
- WBI Midstream
- MDU Construction Services Group, Inc. (CSG)

The corporate costs allocated to the electric and gas segments at Montana-Dakota/Great Plains are subsequently allocated to the state jurisdictions Montana Dakota and Great Plains serve. Corporate costs are recorded in the administrative and general (A&G) function for Montana-Dakota/Great Plains. (See state jurisdictional allocation discussion on page 11.)

FutureSource

FutureSource, a separate legal entity, owns the facilities at the corporate campus that house the MDUR corporate staff and other property utilized in

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providing services to all the operating companies within MDUR. These include the corporate office, computers, telephones, furniture, fixtures, and aircraft. Montana-Dakota/Great Plains acquired an interest in a portion of the land, building, hangar and aircraft with a cash contribution to FutureSource and placed these assets into rate base. The purchase of a portion of the assets (based on the net book value) was determined to be beneficial to the rate payer rather than paying a higher rate of return for the investment in the cost-of-service calculation billed by FutureSource. The investment in these assets is fluid in nature and does change over time depending on the total investment held by FutureSource. This investment is monitored annually and compared to its proximity to the Corporate Overhead Allocation Factor. The level of investment is targeted to remain relatively close to the Utility Group's Corporate Overhead Allocation Factor. Montana-Dakota/Great Plains receives a cost-of-service return from IGC and CNGC for their proportionate share of the contribution made by Montana-Dakota. The revenue received by Montana-Dakota for this cost of service is recorded in miscellaneous revenue.

Annually FutureSource calculates a cost of service for any unfunded portion of these corporate assets and bills the operating companies monthly. Components included in the cost of service for these facilities and other property include operation and maintenance expense, depreciation, property taxes, income taxes and a pretax return on the investment. The annual calculation is maintained by FutureSource and the most recent copy may be requested from the MDU Resources Corporate Planning Department. Each month Montana-Dakota /Great Plains allocates these costs to the electric and gas utility segment based on the Montana-Dakota corporate overhead factor, Exhibit II.

FutureSource also owns and operates a corporate aircraft and a hangar. Fixed costs for the aircraft are allocated to the MDUR operating companies on the MDUR corporate overhead factor referenced above (Exhibit I). The variable costs are charged to the appropriate business unit as a direct charge on an hourly flight rate. These charges will at times exceed or be below the actual variable cost. A year-end true-up includes an adjustment to the excess or shortfall in such hourly billing. Flights for employees of Montana-Dakota/Great Plains are directly assigned to the appropriate utility segment and state jurisdiction based on the purpose of the trip. For trips that are not directly applicable to a utility segment/jurisdiction, costs are allocated on the employee's standard payroll allocation and subsequently allocated to the jurisdictions. Standard labor distribution allocations are discussed on page 9.

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Cascade Natural Gas Corporation Allocation of Costs to/from Others

Allocations to/from other MDUR Companies

Certain Montana-Dakota/Great Plains owned assets, such as the General Office/Annex facility, located at the utility headquarters in Bismarck, and the assets associated with the contribution made for FutureSource assets, are also used for the benefit of other MDUR operating companies. To cover the cost of ownership and operating costs associated with these owned assets, a revenue requirement (asset return plus annual operating expenses) is computed for the shared assets. The expense component included in the return is composed of operating and maintenance costs, depreciation, income tax and property tax expenses. The resulting revenue requirement is billed to the other MDUR operating companies, including CNGC and IGC, as a monthly fee.

Intermountain Gas owns the Customer Service Center located in Meridian, ID. To cover the cost of ownership associated with that owned asset, a revenue requirement (asset return) is computed similarly to Montana-Dakota owned assets. The expense component included in the return is composed of depreciation, income tax and property tax expenses. The resulting revenue requirement is billed to the Montana-Dakota/Great Plains and Cascade as a monthly fee. The costs are allocated based on the number of customers served by each utility.

Allocations to other Utility Companies

Montana-Dakota/Great Plains has several departments that provide services to all four utility operating companies (Montana-Dakota, Great Plains, Cascade Natural Gas Co., and Intermountain Gas Company). These departments include:

- Leadership Group - composed of the Executive Group and Directors that oversee shared utility specific functions
- Customer Services - (Call Center, Scheduling and Online Services)
- Operations & Engineering Services Group – composed of shared utility group operations department functions
- Process Improvement and Operations Technology departments – composed of shared utility group department functions

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- Information Technology and Communications- (Enterprise Network & Telecommunications, Enterprise Management, Enterprise Development and Integration, Field Automation, Enterprise GIS)
- Environmental
- Safety & Technical Training
- Business Development
- Gas Supply & Control
- Utility Group Controller
- Utility Group Human Resources

These operational groups have calculated the proper allocation to use to allocate the costs to the utility companies based on services performed for each utility company. Some costs may be determined within these utility group departments to be specific to one company and are allocated directly to that company. Payroll allocations and other costs will follow the proper allocations determined for the departments when the costs are to be split to each utility company. The allocation methodology is included in Exhibit V. Costs specific to a brand will be charged directly to that brand and will not go through an allocation process.

Cascade Natural Gas Corporation Allocations to Utility Segment

Revenues

All sales and transportation revenues are directly assigned to the utility segment and state jurisdiction. Miscellaneous service revenue, rent and other revenue is directly assigned to the utility segment where possible and common derived revenue is allocated to the utility segment based on the reason for which the revenue was received.

O&M Expense

As operation and maintenance costs are incurred, the expense is directly assigned to a utility segment in the general ledger where possible. Expenses incurred that are common to both segments, such as administrative and general costs, are split between utility segments based on the function and/or driver of the cost. Common facility expenses and labor/reimbursable expenses are discussed below.

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Facility Expense Allocations

Costs for operations and maintenance of facilities are charged directly to the applicable utility segment when the facility is for the benefit of one utility segment. For example, costs applicable to the maintenance of gas mains are charged directly to the gas segment, whereas costs for maintenance at an electric generation or transmission facility are charged directly to the electric utility segment.

For expenses associated with distribution operation facilities, such as a region office that serves more than one utility segment, the costs are allocated to the utility segment based on the number of customers served by that facility. See the list of Customer Allocation factors in Exhibit III. General office facility costs are allocated to the electric and gas utility segments based on the Montana-Dakota corporate overhead factor percentage which is based on an average of the Employee and Plant factors and shown on Exhibit II.

Labor / Reimbursable expense allocations

The development of standard labor distributions for Montana-Dakota/Great Plains employees is described below based on the type of employee. Standard labor distributions are used for all employees to account for certain expenses as detailed below.

Labor, benefit costs and reimbursable expenses are directly assigned to a utility segment where possible. If the expense is not direct, the appropriate utility segment is charged as follows:

Union Employees

Time tickets are required for productive time. The employee specifies the proper utility segment, location and FERC account based on work performed. To account for non-productive time, standard payroll labor distributions are established for all employees. These standard labor distributions are calculated for union employees based on the historical actual charges by utility segment for the last 12 months.

Non-Union Employees

Non-union employees are not required to submit detailed time tickets with applicable general ledger accounts specified. Rather each

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employee has a “standard” set of general ledger accounts that split the labor costs to utility segment based on an expected ratio of work between segments. This split can be unique and is based on the employee’s position. Costs are distributed based on this standard labor distribution for each employee, and the allocations are reviewed annually. Time studies are completed at least every five years.

- Payroll allocations for operations supervisors are a function of their direct reports or may be determined by time studies conducted.
- Payroll allocations for staff engineers are determined by time studies.
- Payroll allocations for General Office support staff are reviewed by the applicable department head based on the type of work performed.

Reimbursable employee expenses are directly assigned to a utility segment and FERC account when possible. For employee expenses that are applicable to more than one utility segment, such as training that is not specific to a utility segment, the employee’s standard labor distribution percentages for each segment are used.

Taxes Other than Income

Ad valorem taxes are reviewed by function and all functions are directly assigned except for common ad valorem taxes, which follow plant. Payroll related taxes follow the allocation of labor and revenue, and electric production taxes are directly assigned. Common taxes other than income, such as the Highway Use tax or Secretary of State filing tax are allocated on the appropriate factor to the segments.

Income Taxes

Income taxes, both current and deferred, are allocated to the utility segment based on the underlying revenue or expense that generated the deferred taxes.

If the underlying income item is specific to a particular segment, the related taxes are assigned directly to that segment. If the underlying income item is common to both segments, the related taxes are allocated with factors used to allocate the underlying revenue or expense.

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Plant in service / work in progress / reserve / depreciation

Plant in service, work in progress, reserve and depreciation expense accounts are assigned to a utility segment based on the function of property. For property that benefits both utility segments an allocation process is used.

The allocation process is based on the combination of the location of the asset and the FERC account (function) that is used to allocate the project, asset, reserve, and depreciation. See Exhibit VI for a list of the allocation factors.

Prepayments

Prepaid demand and commodity charges are directly assigned to the applicable utility segment. Prepaid insurance is directly assigned where possible and common policies are allocated based on the type of policy.

Customer Advances

Customer advances are directly assigned to the applicable segment.

Other rate base items

Where possible, these items are directly assigned to the applicable utility segment. Common items are allocated based on the cost driver for each item.

Cascade Natural Gas Corporation's Allocations to State Jurisdictions

Cascade Natural Gas Corporation utilizes an automated allocation process each month to record the income statement and rate base account activity to the financial ledger (state jurisdiction) to facilitate regulatory reporting. This process is based on the general ledger account structure used in the financial software (JD Edwards). As with other items, costs are directly assigned to a jurisdiction when possible. Costs common to more than one state jurisdiction are allocated between jurisdictions. The primary driver of the allocation is the Business Unit component of the general ledger account; however, the FERC account associated with the charge is also used to determine the proper allocation method. Since operation and maintenance costs are assigned to the utility segment as incurred, this process only

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allocates costs between state jurisdictions. The allocation process creates a Journal Entry to the JD Edwards jurisdictional ledgers established by state and utility segment.

The allocation methodology is as follows:

The JD Edwards (JDE) software is used by Cascade Natural Gas Corporation for recording financial transactions as well as the jurisdictional allocation process for all accounts except those related to fixed assets.

The account structure within JDE consists of the following components:

Business Unit - The Business Unit is one of the primary components used for identifying the regulatory allocation of costs. It usually defines a location such as an operating region, operating district or facility (i.e. power generating facility, substation, gas regulator station), or department (i.e. human resources, engineering).

Object - The object for operations and maintenance (O&M) expense accounts represents the resource consumed (i.e. payroll or materials). For balance sheet accounts, the object represents the FERC account.

Subsidiary - The subsidiary portion of the account for O&M accounts identifies the utility segment and the FERC account. For balance sheet accounts the subsidiary represents a further breakdown of the account such as which bank for a cash account.

Revenue Accounts - Revenues are directly assigned to the jurisdiction when possible. The applicable FERC account is part of the account structure and in the case of utility billed revenue the utility segment is included. It is the combination of the business unit, utility segment and FERC that drive the allocation factor used. An example of revenue that is allocated to the jurisdictions is revenue from the Cost-of-Service calculation which is assigned an allocable location (Business Unit).

Operation and Maintenance (O&M) accounts - As costs are incurred, the approver of the expense assigns the general ledger account structure.

It is the combination of the location (Business Unit), utility segment and FERC that drive the allocation factor utilized. Locations are assigned a factor based on the geographic area for which they serve, and the FERC function assigned. For example, location (Business Unit) 230 represents the

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geographic location of the Sheridan, WY District. The Sheridan District serves both electric and gas and is therefore directly assigned to Wyoming for all FERC accounts. Another example is location 12900, representing the Credit and Collections Department. The Credit and Collections Department services both the electric and gas customers. The allocation of costs is based on the FERC range of accounts. The location may also be a responsibility, or department.

Location	Location Description	Sub 1	Sub 2	Utility Segment	Utility Alloc Code	Utility Allocation Description	Utility Allocation Rate	Juris Alloc Code	Juris Allocation Description	Juris Allocation Rate	Combined Effective Rate
230	Wyoming District	1560	15709999	1 Electric	00001	ELECTRIC ONLY	100.0000%	00005	WYOMING ONLY	100.000000%	100.000000%
230	Wyoming District	1580	19359999	1 Electric	00001	ELECTRIC ONLY	100.0000%	00005	WYOMING ONLY	100.000000%	100.000000%
12900	Credit & Collections	1920	19359999	1 Electric	00001	ELECTRIC ONLY	100.0000%	00026	O&M EXCLUDING FUEL & PURCHASED POWER & A&G	8.336614%	8.336614%
12900	Credit & Collections	1901	19169999	1 Electric	00001	ELECTRIC ONLY	100.0000%	00085	TOTAL COMPANY ELECTRIC CUSTOMER COUNT	11.315965%	11.315965%
12900	Credit & Collections	1580	15989999	1 Electric	00001	ELECTRIC ONLY	100.0000%	00118	ELECTRIC DISTRIBUTION PLANT	14.798583%	14.798583%

*Co	*Location	*Obj Acct	*FERC Sub 1	*FERC Sub 2	*Start Date	Stop Date	Description	Utility Alloc Code	Utility 01	Allocation Code 01
00001	230		1560	15709999	199703	203512	Wyoming District	00001	1	00005
00001	230		1580	19359999	199501	203512	Wyoming District	00001	1	00005
00001	230		28120	28120	199703	203512	Wyoming District	00002	2	00005
00001	230		2870	29359999	199501	203512	Wyoming District	00002	2	00005
!!!										

00001 code = 100 %
Electric

00002 code = 100 %
Gas

Code 00005 =
100% allocated
to WY

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*Co	*Location	*Obj Acct	*FERC Sub 1	*FERC Sub 2	*Start Date	Stop Date	Description	Utility Alloc Code	Utility 01	Allocation Code 01
00001	12900		1580	15989999	200910	203512	Credit & Collections	00001	1	00118
00001	12900		1901	19169999	200501	203512	Credit & Collections	00001	1	00085
00001	12900		1920	19359999	200501	203512	Credit & Collections	00001	1	00026
00001	12900		2870	28949999	200910	203512	Credit & Collections	00002	2	00119
00001	12900		2901	29169999	200501	201508	Credit & Collections	00002	2	00086
00001	12900		2901	29169999	201509	203512	Credit & Collections	00002	2	00087
00001	12900		2920	29359999	200501	203512	Credit & Collections	00002	2	00027

Utility Allocation Code
Represents the code used to allocate costs to a business segment
00001 = Electric segment
00002 = Gas segment

Allocation code 01
Represents the code used to allocate costs to a Jurisdiction
00118 = Electric distribution plant
00085 = Total company electric customer count
00026 = O&M excluding fuel & purchased power and A&G
00119 = Gas distribution plant
00087 = Total company gas sales customer count
00027 = O&M excluding cost of gas and A&G

Taxes Other Than Income

Taxes other than income taxes are directly assigned when possible. Ad valorem taxes are allocated based on the subsidiary, which indicates the jurisdiction and function. Payroll related taxes follow the allocation of labor, revenue taxes are directly assigned, and generation and other taxes are allocated on the applicable factor.

Income Taxes

Federal taxes that are allocated or directly assigned to the utility segment are allocated to the segment's jurisdictions based on the factors used to allocate the underlying revenue or expense among the jurisdictions within that segment.

State taxes that are allocated or directly assigned to a utility segment, are allocated to the jurisdictions that have state income tax based on their respective state apportionments.

Plant in Service/Work in Progress/Reserve/Depreciation Accounts

Plant in service, work in progress, reserve and depreciation expense accounts are allocated in through a similar process in the PowerPlan software based on attributes associated with the work order and asset.

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It is the combination of the utility segment, location of the asset and the FERC account that is used to allocate the project, asset, reserve, and depreciation. The tables that are maintained in JDE for jurisdictional allocations are interfaced into PowerPlan and are used to allocate these accounts.

Allocation Factors

The allocation factors are computed annually by the Regulatory Affairs and General Accounting departments and assigned to the proper Business Unit (location) effective in January each year. See Exhibit VI for a list of the allocation factors.

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Exhibit I- MDUR Corporate Overhead factor

MDU Resources Group, Inc.
Corporate Overhead Allocation Factor
January - June 2024

	MDU	MDU/GP			WBI Energy		
	Electric	Gas	CNGC	IGC	Transmission	Midstream	CSG
MDUR Corporate Factor	20.1%	17.4%	21.7%	12.3%	14.8%	0.1%	13.6%

Exhibit II- Montana-Dakota/Great Plains Overhead factor

Montana-Dakota Utilities Co.
Corporate Overhead Allocation Factors
January - June 2024

	Electric	Gas
Montana-Dakota Corporate Factor	53.6%	46.4%
Employee Factor	34.8%	65.2%
Plant Factor	72.5%	27.5%
Customer Factor	31.9%	68.1%

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Exhibit III- Montana-Dakota / Great Plains Customer Allocation Factors

Montana-Dakota Utilities Co 2024 Customer Allocation Factors				Montana-Dakota Utilities Co Customer Count Splits for Regions and Districts				Customer Allocations by State			
Montana				Rocky Mountain Region		Badlands/Black Hills Region		GAS			
	Customers	% Factor	State % Factor					MT Gas	88,220	30.8%	
Gas	88,220	0.78	0.20	MT Gas	64%	ND Elec	24%	ND Gas	113,165	39.5%	
Electric	25,491	0.22	0.06	WY Elec	17%	ND Gas	16%	SD Gas	64,928	22.7%	
	113,711	1.00	0.26	WY Gas	19%	MT Elec	15%	WY Gas	20,080	7.0%	
North Dakota				<i>Billings District</i>				286,393			
	Customers	% Factor		All Gas	100%	SD Elec	1%				
Gas	113,165	0.55	0.26	<i>Sheridan Dist (#63)</i>		SD Gas	32%				
Electric	93,879	0.45	0.22	Electric	46%	<i>Region Split (#65)</i>		ELECTRIC			
	207,044	1.00	0.48	Gas	54%	Electric	40%	MT Elec	25,491	17.6%	
South Dakota						Gas	60%	ND Elec	93,879	64.8%	
	Customers	% Factor		<i>Dakota Heartland Region</i>				SD Elec	8,460	5.8%	
Gas	64,928	0.88	0.15	ND Elec	34%	<i>Dickinson Dist</i>		WY Elec	17,065	11.8%	
Electric	8,460	0.12	0.02	ND Gas	55%	Electric	58%	144,895			
	73,388	1.00	0.17	SD Elec	5%	Gas	42%				
Wyoming				SD Gas	6%	<i>Glendive Dist</i>					
	Customers	% Factor		<i>Region Split (#64)</i>		Electric	56%				
Gas	20,080	0.54	0.05	Electric	38%	Gas	44%				
Electric	17,065	0.46	0.04	Gas	62%	<i>Williston Dist (#69)</i>					
	37,145	1.00	0.09	<i>Bismarck Dist (#86)</i>		Electric	65%				
Total Customers				Electric	51%	Gas	35%				
431,288				Gas	49%	<i>Wolf Point Dist (#68)</i>					
Great Plains				<i>Mobridge Dist (#14)</i>		Electric	50%				
Jurisdictional Customer Allocation Factor				Electric	56%	Gas	50%				
North Dakota GPNG	2,359	0.10		Gas	44%	<i>Rapid City District</i>					
Minnesota - GPNG	22,202	0.90		<i>Jamestown District</i>		All Gas	100%				
	24,561	1.00		All Gas	100%	<i>Spearfish District</i>					
Jurisdictional Customer Allocation Factor				<i>Minot District</i>		All Gas	100%				
				All Gas	100%						

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Exhibit IV- MDUR Shared Services Pricing Methodology

MDU Resources Shared Services

Pricing Methodology - Effective for 2024

Note: Any shared services amount allocated to MDU Resources are charged out to the business units on the corporate allocation factor.

761 – Payroll Shared Services:

Payroll Shared Services costs are invoiced based on the number of employees paid and stated as a cost per check. The word check, for this purpose, generically refers to paper paychecks, direct deposits and pay card transactions.

Checks are charged on a tiered structure, intended to recognize the fixed or baseline effort associated with maintaining a payroll cycle and associated reporting, regardless of number of people paid. It is also intended to reward consolidation of multiple pay groups and companies where possible and to align charges with the additional effort required to maintain multiple pay groups and pay cycles.

The monthly volume for this step pricing is accumulated individually for each pay cycle processed.

Checks for weekly pay cycles, cost per check based on the number of checks written per month:

- \$ 7.00 per check for the first 500 checks
- \$ 5.00 per check for the next 500 checks
- \$ 4.00 per check for each additional check

Checks for non-weekly pay cycles, cost per check based on the number of checks written per month:

- \$ 7.00 per check for the first 1500 checks
- \$ 5.00 per check for the next 500 checks
- \$ 4.00 per check for each additional check

Additionally, there is a \$10.00 charge for each tax payment and \$325.00 charge for each quarterly tax filing and \$7.00 (CSG) / \$7.00 (UKG companies) charge for each W2/1099/1096.

There is a \$500 per month minimum charge for each operating company.

There is a premium charge of \$50 per transaction for specific off cycle checks and back-pay calculations. Examples of transactions included in the premium charge schedule are missing hours, refunded deductions, length of service awards submitted too late for inclusion in a scheduled payroll process, and back pay calculation because an increase was submitted after the pay period that includes the effective date. Examples of transactions excluded from the premium charge calculation are bonus payments, final paychecks, certified wage settlements, or any payment required as a result of a Shared Service or system error.

766 –Time Entry Shared Services:

Service provided 100% to the MDU Utility Group.

	MDUR	MDU/GP	CNG	IGC	WBIE	CSG*	Total
Average Number of Employees	275	1,028	335	240			1,878
Total weighted allocation factor	14.64%	54.74%	17.84%	12.78%			100%

* Time Entry Shared Services manually keys time entry for Desert Fire. Payroll Shared Services and Desert Fire agree to use two times the amount of the cost per check rather than separate a time entry charge. The two methods are comparable.

970 – Human Resources – Shared Services:

Human Resources costs for the MDU Resources HR team are based on employees served. The average number of employees at each company for 12 months ending June 30 is calculated, then further broken down to whether they are on the Corporate-held benefit plans and/or retirement plans.

An allocation for each individual HR team member is calculated based on which group(s) of employees they serve. For example, an HR Generalist whose functions serve the Regulated companies would have an allocation to MDUR, MDUG, and WBI. A Benefits Analyst who is responsible for the Health & Welfare plans would have an allocation to the regulated companies as well as CSG companies who participate in the Corporate plans.

These individual allocations are all combined into one aggregate allocation to be used by all MDUR shared service HR employees. The reason for this method is that the same work would need to be absorbed should a vacancy occur. Human Resources has three individuals that are not considered shared services and are allocated on the corporate overhead allocation factor.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
Allocation %	7.72%	28.95%	9.68 %	6.86%		15.99%	2.68%	28.12%	100%

762 –Business Services:

This allocation factor is derived from the results of the following four responsibilities. Due to organizational structure changes, the Travel team, based on the corporate factor, is now part of 762. After allocating the projected (budget) costs for the following four responsibilities to each business unit, based on the weighted allocation factor of each of these responsibilities, each business unit total is summed and divided by the total cost resulting in the following allocation percentages. Individuals in this responsibility provide oversight and support for the following four responsibilities.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
Allocation %	14.09%	32.85%	17.17%	13.69%	2.69%	7.20%	1.22%	11.09%	100%

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763 – Fleet:

Fleet Departments costs are invoiced based on four weighted factors from the previous year:

- Managed Units
- National Account Spend
- Construction Equipment Acquisitions
- Fleet Acquisitions

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
# Managed Units		98	298	225				176	797
% of Managed Units		12.30%	37.39%	28.23%				22.08%	100%
National Account Spend	\$3,271,941	\$26,250,923	\$9,436,614	\$7,701,230		\$9,734,871	\$2,039,825	\$78,088,114	\$136,523,718
% of National Account Spend	2.40%	19.23%	6.91%	5.64%		7.13%	1.49%	57.20%	100%
# Construction Equip Acquisitions		65	17	12		9		63	166
% of Construction Equip Acquisitions		39.16%	10.24%	7.23%		5.42%		37.95%	100%
# Fleet Acquisitions		43	45	24		30		185	327
% of Fleet Acquisitions		13.15%	13.76%	7.34%		9.18%		56.57%	100%
Weighted Allocation Factors:									
# Managed Units	15.00%	The percent of time spent on managed units.							
National Acct Spend	25.00%	The percent of time spent on national accounts.							
Construction Equip Acquis	30.00%	The percent of time spent on the acquisition of construction equipment assets.							
Fleet Acquis	30.00%	The percent of time spent on the acquisition of vehicle assets.							
	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
Total weighted allocation factor	0.60%	22.34%	14.54%	10.02%	0%	6.16%	0.37%	45.97%	100%

764 – Supply Chain:

There are several individuals that are primarily focused on the Utility Group and some that have multiple business unit responsibilities.

Allocations are based on two weighted factors from previous year:

- Purchase Order Dollars Count
- Purchase Order Line Count

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
Purchase Order Dollar Count	3,043,218	400,354,715	150,776,468	69,253,574					623,427,975
% of Purchase Orders Dollar Count	0.49%	64.22%	24.18%	11.11%					100%
Purchase Order Line Count	210	26,966	11,192	6,775					45,143
% of Purchase Order Line Count	0.47%	59.73%	24.79%	15.01%					100%
Weighted Allocation Factors:									
PO Dollar Count	95.00%	The percent of dollars processed through purchase orders processed by Company.							
PO Line Count	5.00%	The percent of lines on purchase orders processed by Company.							
	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
Total weighted allocation factor	0.49%	63.99%	24.22%	11.30%					100%

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767 – Accounts Payable:

Costs are invoiced based on three weighted factors from previous year:

- Number of Payments
- Number of Vouchers
- Number of Unclaimed Property reports

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
# of Payments - 8/1/2022 through 7/31/2023	3,282	27,497	15,380	16,729		7,865	1,607	856	73,216
% of Payments	4.48%	37.56%	21.01%	22.85%		10.74%	2.19%	1.17%	100%
# of Vouchers - 8/1/2022 through 7/31/2023	4,146	41,485	27,247	23,317		11,702	1,979	1,476	111,352
% of Vouchers	3.72%	37.25%	24.47%	20.94%		10.51%	1.78%	1.33%	100%
# of States Filed In – 2022	12	40	30	34		11	10	15	152
% of UP	7.89%	26.31%	19.74%	22.37%		7.24%	6.58%	9.87%	100%
Weighted Allocation Factors:									
# of Payments	25.00%	The percent of time spent on processing payments, setting up address book records, 1099s, etc.							
# of Vouchers	60.00%	The percent of time spent on vouchering and reviewing invoices							
# of UP	15.00%	The percent of time spent filing unclaimed property reports.							
	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
Total weighted allocation factor	4.50%	35.70%	22.90%	21.60%		10.10%	2.60%	2.60%	100%

770 – Buildings and Grounds: 20

This allocation is based on Jira tickets and labor hours spent by location from the previous year

	MDUR	MDU/GP	CNG	IGC	WBIE	CSG	Total
Jira Tickets logged %	72.46%	10.95%	0.55%	0.70%	14.65%	0.69%	100%
Hours spent	51.87%	26.83%	3.14%	4.09%	13.28	0.79%	100%
Total weighted allocation factor	62.16%	18.89%	1.85%	2.40%	13.96%	0.74%	100%

Enterprise Information Technology (EIT):

There are several EIT departments, and each is billed out based on its own criteria. They are as follows:

Application Services (765) – The allocations are based on time tracked history for the 12 months of the prior year. The MDUG portion is further divided by meter count and the WBI portion is further divided by the WBI corporate factor.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
12-month workload	14,554	6,104	4,147	5,432		5,533	39	344	36,153
% of 12-month workload	40.26%	16.88%	11.47%	15.03%		15.30%	0.11%	0.95 %	100%

Definition of 765: This team is made up of software developers providing integrations to systems and software changes.

Operational Technology (768) – The allocations are based on projected workload. This department is 100% direct allocated based on the projects assigned.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
12-month workload	1,040	3,606	262	465		867			6,240
% of 12-month workload	16.11%	53.88%	5.12%	7.98%		16.91%			100%

Definition of 768: This team is made up of security and infrastructure technicians.

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Customer Relations (965) – Enterprise charges for the customer relations group are invoiced using three weighted allocation factors. The factors are as follows:

1. Direct charge for employees working for a specific business, work is only completed for businesses identified in methodology below.
2. Number of computing devices supported by the help desk (85%)
3. Number of mobile devices supported by the help desk (15%)

The metric used to determine device counts is devices that have checked into LANDesk at allocation time (August) and active devices in MobileIron.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
Direct Charges			53.23%	46.77%					100%
Factor- 5.71%			3.04%	2.67%					5.71%
Computing Device Counts	399	904	461	451	33	316	26	2,244	4,834
% of Device Count	8.25%	18.70%	9.54%	9.33%	0.68%	6.54%	0.54%	46.42%	100%
% of Device Factor- 80.15% (94.29% x 85%)	6.61%	14.99%	7.65%	7.48%	0.54%	5.24%	0.44%	37.20%	80.15%
Mobile Device Counts	195	741	304	194	16	187	37	4,092	5,766
% of Device Count	3.38%	12.85%	5.27%	3.37%	0.28%	3.24%	0.64%	70.97%	100%
% of Device Factor- 14.14% (94.29% x 15%)	0.48%	1.82%	0.74%	0.47%	0.04%	0.46%	0.09%	10.04%	14.14%
Total weighted allocation factor	7.09%	16.81%	11.43%	10.62%	0.59%	5.70%	0.52%	47.24%	100%

Definition of 965: This team is made up of help desk agents who support company owned devices and software.

Communications (971) – Enterprise charges for the communications group are invoiced using four weighted allocation factors. The factors are as follows:

1. Direct charge for employee hours working for a specific business (MDUG portion is split by meter count).
2. Wide Area Network/Local Area Network/Metropolitan Area Network- Number of business unit locations
3. Internet/Firewall Access – Number of computing devices
4. IP Telephony

The costs are invoiced based on the following percentages:

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
Direct Charges		38.92%	26.44%	34.64%					100.00%
Factor- 9.03%		3.51%	2.39%	3.13%					9.03%
WAN/LAN/MAN	7	73	115	23	1	200	1	101	521
% of Business Unit Locations	1.34%	14.01%	22.07%	4.42%	0.19%	38.39%	0.19%	19.39%	100.00%
Factor- 36.39%	0.49%	5.10%	8.03%	1.61%	0.07%	13.97%	0.07%	7.05%	36.39%
Internet Access/Firewall Computing Devices	399	904	461	451	33	316	28	2,244	4,836
% of Computing Device Counts	8.25%	18.69%	9.53%	9.33%	0.68%	6.54%	0.58%	46.40%	100.00%
Factor- 36.39%	3.00%	6.80%	3.47%	3.39%	0.25%	2.38%	0.21%	16.89%	36.39%
IP Telephone	181	623	307	320	79	158	16	277	1,961
% of Handsets	9.23%	31.77%	15.65%	16.32%	4.03%	8.06%	0.82%	14.12%	100.00%
Factor- 18.19%	1.68%	5.78%	2.85%	2.97%	0.73%	1.46%	0.15%	2.57%	18.19%
Total weighted allocation factor	5.17%	21.19%	16.74%	11.10%	1.05%	17.81%	0.43%	26.51%	100%

Definition of 971: This team supports the wide area network and phones. This includes switches, routers and firewalls.

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Operations (972) – Enterprise charges for the operations group are invoiced using three separate factors

(1) 11.77% are direct charges that are costs directly related to the AS/400 computer and are invoiced upon the AS/400 allocation as agreed to by MDU and WBI and CCB Oracle support costs and are allocated by meter counts for MDUG.

The remaining 88.23% of the costs are based upon the number of servers that are supported for each business unit. These servers are then broken out between full service servers and shared service servers. Full service servers have a greater weighting factor since they require more dedicated time and cost more.

(2) Full Service Servers – 66.17% (88.23% x 75%)

(3) Shared Service Servers 22.06% (88.23% x 25%).

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
Direct Charges	3.29%	40.70%	23.02%	27.72%	5.01%	0.00%	0.00%	0.26%	100.00%
Factor- 11.77%	0.39%	4.79%	2.71%	3.26%	0.59%	0.00%	0.00%	0.03%	11.77%
Full Service Servers	389	179			34	3	1	20	626
% of Full Service Servers	62.14%	28.60%	0.00%	0.00%	5.43%	0.48%	0.16%	3.19%	100.00%
Factor- 66.17%	41.12%	18.92%	0.00%	0.00%	3.59%	0.32%	0.11%	2.11%	66.17%
Shared Service Servers	46	99	34	74	7	8	1	120	389
% of Full Service Servers	11.83%	25.45%	8.74%	19.02%	1.80%	2.06%	0.26%	30.84%	100.00%
Factor- 22.06%	2.61%	5.61%	1.93%	4.20%	0.40%	0.45%	0.06%	6.80%	22.06%
Total weight allocation factor	44.12%	29.32%	4.64%	7.46%	4.58%	0.77%	0.16%	8.95%	100%

Definition of 972: This team is responsible for administration of the enterprise servers.

Security (977) – Enterprise charges for the security group are distributed via the number of computing devices (90.00%) and mobile devices (10.00%). Costs are invoiced based on the following percentages:

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
Computing Device Counts	399	904	461	451	33	316	26	2,244	4,834
% of Device Factor- 90%	7.43%	16.83%	8.58%	8.40%	0.61%	5.88%	0.49%	41.78%	90.0%
Mobile Device Counts	195	741	304	194	16	187	37	4,092	5,766
% of Device Factor- 10%	0.34%	1.28%	0.53%	0.34%	0.03%	0.32%	0.06%	7.10%	10.0%
Total weighted allocation factor	7.77%	18.12%	9.11%	8.73%	0.64%	6.21%	0.55%	48.87%	100%

Definition of 977: This team supports the cyber security initiatives.

ERP (956) – The allocations are based on time tracked history for the 12 months of the prior year. The MDUG portion is further divided by employee count by brand and the WBI portion is further divided by the WBI corporate factor:

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
12-month work load	2,811	2,685.25	1,824.03	2,389.72	0	1,372.33	9.67	885	11,977
% of 12 month work load	23.47%	22.42%	15.23%	19.95%	0.00%	11.46%	0.08%	7.39%	100%

Definition of 956: This team supports the accounting/HR, enterprise asset management and enterprise document management systems.

Scada (968) – The allocations are based on time tracked history for the 12 months of the prior year. The MDUG portion is further divided by gas meter count and the WBI portion is allocated to WBI Transmission as the systems supported are related directly to Transmission.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
12-month work load	64	1,030	1,036	1,358	0	2,245	0	0	5,733
% of 12 month work load	1.12%	17.96%	18.08%	23.68%	0.00%	39.16%	0.00%	0.00%	100%

Definition of 968: This team supports the gas SCADA and measurement accounting systems.

Finance & Compliance (982) – Costs for the EIT finance and compliance group are invoiced based on a weighting of the combined methodologies of the nine previous EIT responsibilities.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	CSG	Total
2024 % of Total Governance & Administration	19.47%	21.91%	11.67%	12.25%	1.08%	11.95%	0.29%	21.38%	100%

Definition of 982: This team supports EIT software licensing, vendor management, budgeting, compliance, EIT Governance, Project Management Office, IT Asset Management, and mobile related items.

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Exhibit V- Utility Operations Support Allocation Methodology

Leadership Group:

President & CEO (985) – The payroll allocations will be based on average Utility Group customer and employee counts for the President & CEO and Executive Assistant.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Customer Counts	119,540	257,803	316,402	418,485	1,112,230
% of Factor - 50%	5.40%	11.60%	14.20%	18.80%	50%
Utility Group Employee Counts	337	633	327	228	1525
% of Factor - 50%	11.05%	20.75%	10.70%	7.50%	50%
Total weighted allocation factor	16.4%	32.4%	24.9%	26.3%	100.0%

Vice President of Regulatory Affairs and Customer Service 985– The payroll allocation will be 50% for IGC & CNG Regulatory Affairs and then based on Utility Group customer and employee counts.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Customer & Employee Factor split	8.20%	16.20%	12.45%	13.15%	50.00%
Regulatory IGC and CNGC - 50%			25.00%	25.00%	50.00%
Total weighted allocation factor	8.20%	16.20%	37.45%	38.15%	100.00%

Executive Vice President of Business Development & Gas Supply (701) – The payroll allocations will be based on Utility Group customer counts.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Customer Counts	10.80%	23.20%	28.40%	37.60%	100%

Vice President of Safety, Process Improvement & Operations Systems (707) – The payroll allocations will be based on Utility Group meter counts.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Meter Counts	12.50%	26.20%	26.40%	34.90%	100%

Vice President of Operations & Engineering Service (960) – The payroll allocations will be based on Utility Group customer counts.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Customer Counts	10.80%	23.20%	28.40%	37.60%	100%

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Vice President of Field Operations (725) – The payroll allocations will be based on Utility Group customer counts.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Customer Counts	10.80%	23.20%	28.4%	37.60%	100%

Customer Experience Team (129, 711, 712, 714):

The Customer Experience Team is made up of four distinct areas and provides service to all four brands within the MDU Utility Group. Those areas are Credit and Collections, Scheduling, Customer Service, and Customer Programs and Support. In addition to these departments, the Customer Service group has a management team, Consumer Specialists, and other administrative positions. Customer Service payroll costs are allocated using five (5) different methodologies: Customer Count, Customer Call Time, Cleared Order Count, Credit To-Dos, and Emails and Web Requests. Costs other than payroll will be allocated based on customer count if they provide benefit for all brands. Costs specific to a brand will be charged directly to that brand and will not go through an allocation process.

Customer Count

- Based on the average customer count of each utility brand from December to November.
- Uses a customer weighting of 1 for each natural gas or electric only customer and 1.25 for each electric/natural gas combination customer.
- The following positions will be allocated based on customer count **with nonutility**:
 - Customer Service Director
 - Manager, Customer Service
 - Supervisor, Customer Service
 - Customer Service Trainer
 - Customer Service Team Lead (Support)
 - Customer Project Analyst
- The following positions will be allocated based on customer count **without nonutility**:
 - Administrative Assistant
 - Manager, Credit, Support, Program Dev
 - Supervisor, Customer Support Service
 - Customer Service Team Lead (Credit)
 - Customer Communications Coordinator
 - Customer Project Analyst I and II
 - Business Analysts I and II
 - Supervisor, Credit & Collections
 - Customer Service Team Lead
 - Manager, Scheduling
 - Scheduling Analyst
 - Scheduling Lead

Customer Call Time

- Based on the total time that Customer Service Agents are handling a call.
 - Includes total talk time and after call work
 - Does not include idle time or auxiliary time
- Uses data for the preceding December to November of each year.

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- The following positions will be allocated based on customer call time:
 - Customer Service Rep I, II, III, IV, and IV PT

Cleared Order Count

- Based on the number of work orders cleared through the work assignment management system for each brand.
- Uses data for the preceding December to November of each year.
- The following positions will be allocated based on cleared order count:
 - Scheduler

Credit To-Do's

- Based on three types of completed To-Do's.
 - accounts up for severance
 - closed accounts pending write-off
 - broken payment plans
- Uses data for the preceding December to November of each year.
- The following positions will be allocated based on credit to-do's:
 - Credit & Collections Rep I, II, and III
 - Credit Support Rep
 - Credit Specialist

E-mails and web requests

Based on e-mails that include direct inquiries from customers, follow up requests from a CSR phone call, or e-mails generated by the web applications requiring account maintenance.

- Uses data for the preceding December to November of each year.
- The following positions will be allocated based on e-mails
 - Customer Support Rep I, II, and III

	MDU Elect	MDU/GP Gas	MDU Nonutility	CNG	IGC	Total
Customer Counts	10.98%	23.57%	.70%	27.94%	36.81%	100%
Customer Counts without NU	11.21%	24.04%	-	27.94%	36.81%	100%
Customer Call Time	13.01%	27.41%	-	20.55%	39.03%	100%
Cleared Order Count	15.13%	27.73%	-	23.30%	33.84%	100%
Credit To-Dos	11.74%	24.73%	-	32.19%	31.34%	100%
Emails	10.35%	21.8%	-	28.78%	39.07%	100%

Operations & Engineering Services Group:

Process Improvement & Operations Tech (Dept 703)

The payroll allocations will be based on the Utility Group employee counts.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Employee Counts	22.1%	41.5%	21.4%	15.0%	100%

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Quality Control (Dept 730)

The Quality Control department provides oversight and post work review of both maintenance and construction work that is performed by both utility group employees and our contractors. The payroll allocations will be based on time studies.

Engineering Services (Dept 769)

The Engineering Services department duties include gas modeling, working with district personnel, engineering design of capital projects, creation of cost estimates, creation of design and work plans, budget planning, etc. The payroll allocations will be based on time studies.

Construction Services (Dept 863)

The Construction Services (CS) department provides construction management and inspection for large and high-pressure projects, as well as for projects generated by TIMP, DIMP, and MAOP Validation Plans. CS creates and manages programs and procedures for welding and fusion programs. Fabrication standards and a majority of fabrication are done by CS. The payroll allocations will be based on time studies.

Operation Systems (Dept 864)

This department supports Operations compliance systems as well as supporting other systems that Operations and Engineering utilize. The group not only supports these efforts but also works as a liaison group between the business and enterprise information technology (EIT). The payroll allocations are based on the Utility Group meter counts.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Meter Counts	12.50%	26.20%	26.40%	34.90%	100%

Operations GIS (Dept 867)

This department supports the Operations and Engineering GIS system. The group not only supports these efforts but also works as a liaison group between the business and enterprise information technology (EIT). The payroll allocations will be based on time studies. Costs specific to a brand will be charged directly to that brand and will not go through an allocation process.

System Integrity (Dept 865)

The System Integrity department is responsible for the Utilities Distribution and Transmission Integrity Management Programs, Integrity Projects, Cascade's MAOP Validation Project, and Corrosion Control. The payroll allocations will be based on time studies.

Safety Management System & Quality Assurance (Dept 866)

The Safety Management System and Quality Assurance (SMS/QA) department is responsible for the implementation of the utility group's safety management system. The team is responsible for reviewing, documenting, and developing processes to ensure compliance with the industry recommend practice 1173. Key objectives of our current plan include the development of an operational risk management program, SMS/QA program oversight and metrics, and completion of risk-based process audits. The payroll allocations will be based on Utility Group Meter Counts for gas and electric.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
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Utility Group Meter Counts	12.50%	26.20%	26.40%	34.90%	100%
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Operations Policies & Procedures (Dept 923)

This department is responsible for aligning new Utility Group procedures as well as maintaining all previous company specific procedures. Each company was and is required to have and maintain these procedures per federal code 192. The payroll allocations will be based on time studies.

Operation Services (Dept 958)

The Operation Services department provides compliance, damage prevention, and public awareness across the Utility Group. The payroll allocations will be based on time studies.

Information Technology and Communications Group:

Enterprise Management, Enterprise Development and Integration, Field Automation (Dept 926)

These teams support business and technical functions that are common to all brands. Provides support to the business through data requests and augments the system by developing programs and technical solutions to accommodate business and field needs as well as regulatory requirements. The payroll allocations will be based on Utility Group meter counts.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Meter Counts	12.50%	26.20%	26.40%	34.90%	100%

Enterprise GIS (Dept 951)

This department provides gas, electric and fiber pipeline and facilities mapping services for the Utility Group. The payroll allocations will be based on Utility Group meter counts.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Meter Counts	12.50%	26.20%	26.40%	34.90%	100%

Environmental (Dept 889)

The Environmental Department provides environmental regulatory compliance guidance and assistance to MDU Utilities Group facilities and operations in accordance with the company environmental policy: The Company will operate efficiently to meet the needs of the present without compromising the ability of future generations to meet their own needs. Our environmental goals are:

- To minimize waste and maximize resources.
- To support environmental laws and regulations that are based on sound science and cost-effective technology; and
- To comply with or exceed all applicable environmental laws, regulations and permit requirements.

The payroll allocations will be based on time studies.

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Safety & Technical Training (Dept 720, 901)

The Safety and Technical Training department provides oversight for all things safety and technical training for the entire utility group. The payroll allocations will be based on Utility Group employee counts or time studies, depending on the employee's job functions.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Employee Counts	22.1%	41.5%	21.4%	15.0%	100%

Human Resources (Dept 963)

The Human Resources payroll allocations will be based on average Utility Group customer and employee counts.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Customer Counts	119,540	257,803	316,402	418,485	1,112,230
% of Factor - 50%	5.40%	11.60%	14.20%	18.80%	50%
Utility Group Employee Counts	337	633	327	228	1525
% of Factor - 50%	11.05%	20.75%	10.70%	7.50%	50%
Total weighted allocation factor	16.5%	32.4%	24.9%	26.3%	100.00%

Gas Supply and Gas Control (Depts 931, 933, 928)

The payroll allocations will be based on two methodologies: Utility Group employees will be based on time studies. If there are employees focused on Montana-Dakota Utilities functions, which will be allocated 100% to Montana-Dakota Utilities gas segment.

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Meter Counts	-	38.7%	26.40%	34.9%	100%

Utility Group Controller (Dept 941)

The Controller Department provides various accounting services to the Utility Group: Fixed Assets Accounting, Revenue Accounting, Internal Controls Coordination, and Management. The payroll allocations are based on these methodologies: Utility Group customer count, Utility Group meter count, number of employees, Montana-Dakota customer factor, Utility Group corporate factor, Montana-Dakota corporate factor, and specific shared services methodologies.

- **Utility Group customer count**
 - The following positions will be allocated based on Utility Group customer count based on job duties/functions:
 - Business Analyst I and II (Revenue Accounting)
- **Utility Group meter count**
 - The following positions will be allocated based on Utility Group meter count based on job duties/functions:
 - Business Analyst II and Sr. (Customer Accounting)
- **Number of employees**
 - The following positions will be allocated based on number of employees under their supervision:
 - Controller – Utility Group

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- Director, Finance
- Manager, Revenue Administration
- **Montana-Dakota customer factor**
 - The following positions will be allocated based on MDU customer factor
 - Financial Analyst I, II (Revenue Accounting)
 - Financial Specialist (Revenue Accounting)
 - Financial Technician (Revenue Accounting)
 - Manager, Revenue Accounting
- **Utility Group corporate factor**
 - The following position will be allocated based on Utility Group corporate factor
 - Internal Controls Coordinator
- **Montana-Dakota corporate factor**
 - The following positions will be allocated based on MDU corporate factor
 - Financial Analyst I, II, III, IV (Gen Acctg, Reporting & Planning)
 - Financial Systems Analyst (Gen Acctg)
 - Financial Technician (Gen Acctg)
 - Manager, Accounting & Finance
 - Supv, Accounting & Finance
 - Manager, General Accounting

	MDU Elect	MDU/GP Gas	CNG	IGC	Total
Utility Group Customer Counts	10.80%	23.20%	28.40%	37.60%	100%
Utility Group Meter Counts	12.50%	26.20%	26.40%	34.9%	100%
Number of Employees: Controller*	27.3%	23.6%	27.1%	22.0%	100%
Number of Employees: Director, Finance*	30.1%	26.1%	25.0%	18.8%	100%
Number of Employees: Manager, Revenue Administration**	14.2%	30.3%	29.6%	25.9%	100%
Montana-Dakota Customer Factor	31.9%	68.1%	-	-	100%
Utility Group Corporate Factor	28.09%	24.31%	30.4%	17.2%	100%
Montana-Dakota Corporate Factor	53.6	46.4%	-	-	100%

* MDU electric/gas split is based on the MDU Corporate Factor.

** MDU electric/gas split is based on the MDU Customer Factor.

- **Utility Group Fixed Assets Accounting methodology -**
 - The following positions will be allocated based on 3-Year Averages reviewed annually:
 - Financial Analyst I, II, III, IV (Fixed Assets Accounting)
 - Supervisor, Fixed Assets Accounting
 - Manager, Fixed Assets Accounting

Costs for the Financial Analysts in the MDU Utility Group Fixed Asset Accounting group are based upon three separate methodologies based on the three major types of work performed in the department. The three major work types of work are:

1. Capital Expenditure Support (16.7% of workload)-Allocated to capital overhead (ES/GA) accounts based on 3-year average of capital expenditures.
2. Fixed Asset Life Cycle Support (68.3% of workload)-Allocated to capital overhead (ES/GA) accounts based on 3-year average of capital work orders weighted by a difficulty factor.

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3. All Other Fixed Asset Accounting (15.0% of workload)-Allocated to expense (O&M) accounts based on estimate of time spent on non-project related tasks (Depreciation, ARO, Data Requests, etc.).

	MDUR*	MDU	WBIE**	KRC**	CSG**	CNG	IGC	Total
Total Allocated to ES/GA		57.78%				17.57%	9.65	85.00%
Total Allocated to O&M		10.42%				2.29%	2.29%	15.00%

* Time devoted to CHCC companies deemed immaterial and is included in MDU amounts.

** No service provided to WBIE, CSG or CSG

Costs for the Manager of the Utility Group Fixed Asset Accounting group are based upon the company workload split of the "Other Fixed Asset Accounting" time spent by the Lead Financial Analyst in charge of depreciation, ARO's, data requests, etc. No portion of these costs is allocated to capital overhead (ES/GA) as they are deemed to be non-direct construction support costs.

	MDUR*	MDU	WBIE**	KRC**	CSG**	CNG	IGC	Total
% Allocation of UGFA Manager Costs		75.00%				12.5%	12.5%	100.00%

* Time devoted to CHCC companies deemed immaterial and is included in MDU amounts.

** No service provided to WBIE, CSG or CSG

- **Utility Group Payment Processing methodology**
 - Payment Processor (Revenue Accounting)
 - Payment Processor, Lead (Revenue Accounting)

Payment Processing has been allocated by utility brand based on the number of customer payments posted to utility accounts in the 12-month period ending June 30, 2022.

	MDU/GPNG	CNG	IGC	Total
# of Payments Processed	1,302,580	665,810	779,221	2,747,611
% of Payments Processed by Brand	47.40%	24.20%	28.40%	100.00%

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Exhibit VI- Cascade Natural Gas Corporation Allocation Factors

State Allocations 2024				
Line No	Description	WA	OR	Total
	A	B	C	D
1	<u>State Allocaters</u>			
2	Employees	73.60%	26.40%	100.00%
3	Gross Plant	77.94%	22.06%	100.00%
4	Customers	73.60%	26.40%	100.00%
5	3-Factor Formula	75.05%	24.95%	100.00%
6				
7	Rate Base Ratio	79.23%	20.77%	100.00%

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

**Cascade Natural Gas Corporation
2025 COST ALLOCATION MANUAL**

EXHIBIT 403

November 2025



In the Community to Serve®

Cost Allocation Manual

2025

2025 Cost Allocation Manual

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2025 Cost Allocation Manual

Overview

Cascade Natural Gas Corporation (CNG), a gas distribution company operating in the states of Washington and Oregon, is a subsidiary of MDU Resources Group, Inc. Cascade Natural Gas Corporation has its' own set of financial records. The operations of Cascade Natural Gas Corporation are under the direction of one Utility Group (UG) executive leadership team.

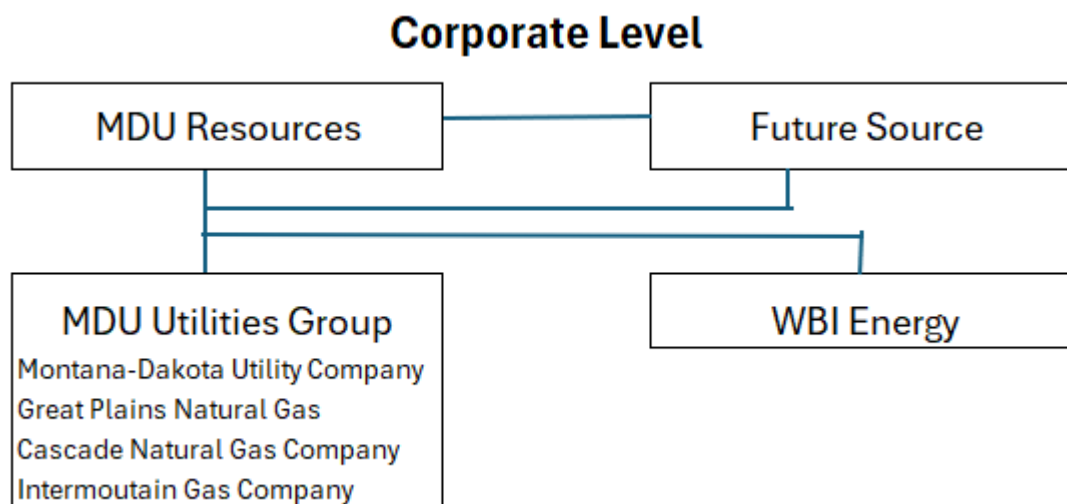
Montana-Dakota Utilities Co. (Montana-Dakota) and Great Plains Natural Gas Company (Great Plains), both subsidiaries of MDU Resources Group, Inc. (MDUR), conduct business in five states with two regulated utility segments 1) electric operations (comprised of generation, transmission, and distribution operations) and 2) gas distribution operations.

Montana-Dakota and Great Plains are one legal entity and have one set of financial records. However, utility related rate base and income statement items, whether directly assigned or allocated, are captured in a unique financial ledger to provide for regulatory reporting. The operations of both Montana-Dakota and Great Plains are under the direction of one Utility Group (UG) executive leadership team.

FutureSource Capital Corporation (FutureSource) is a separate legal entity that owns an airplane utilized in providing services to the operating companies within MDUR.

Below is an overview of the operational structure for the purpose of assigning costs. The diagram presented is intended to provide an overview for cost allocation only and is not intended to represent the legal structure of the Corporation. Note that costs from MDUR and FutureSource are directly assigned or allocated and charged to the operating companies (i.e. Utilities Group, WBI Energy, etc.)

2025 Cost Allocation Manual



This document is intended to provide an overview of the different types of allocations and the processes employed to direct costs to the proper utility or business segment (electric or gas) and state jurisdiction for Montana-Dakota and Great Plains.

This document will discuss the allocations to/from:

- MDUR and FutureSource to Montana-Dakota/Great Plains
- Montana-Dakota to other companies within MDUR
- Montana-Dakota/Great Plains to Cascade Natural Gas Company (CNGC) and Intermountain Gas Corporation (IGC)
- Montana-Dakota to a utility segment (electric or gas)
- Utility segment to state jurisdictions

Overall, the approach to allocating costs at each level is to directly assign costs when applicable and to allocate costs based on the function or driver of the cost.

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MDU Resources Group, Inc. (MDUR) Allocations

The MDUR corporate staff consists of shared services departments (payroll, human resources, and enterprise information technology), and administrative and general departments.

Shared Services

MDU Resources Group, Inc. has several departments that provide specific services to the operating companies. These departments have developed a pricing methodology which is updated annually for the allocation of costs to the MDUR operating companies that utilize their services. (See Exhibit IV) These departments include:

Payroll Shared Services

Payroll Shared Services department provides comprehensive payroll services for MDUR companies and employees. It processes payroll in compliance with appropriate federal, state, and local tax laws and regulations. Payroll Shared Services is also responsible for preparation, filing and payment of all payroll related federal, state, and local tax returns. It also maintains and facilitates payments and accurate reporting to payroll vendors for employee benefits and other payroll deductions. For Montana-Dakota and Great Plains, the payroll shared services department is also responsible for the accumulation of time entry records and maintenance of employee records. Montana-Dakota and Great Plains do not have any departments that provide these payroll related services.

Human Resources

Human Resources operates as “One HR” across the regulated business units of MDU Resources Group including Montana-Dakota, Great Plains, Cascade Natural Gas, Intermountain Gas, and WBI Energy. There are employees in the HR departments at each of the business units that focus on the operational function of human resources: employee relations, labor relations, staffing, and leave management. At MDU Resources, shared HR functions are performed for all the regulated businesses: compensation management, benefits administration, policy development, human resource information systems, organizational development, as well as providing support and backup for the business unit functions.

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Enterprise Information Technology

Enterprise Information Technology (EIT) provides policy guidance, infrastructure related IT functions and security-focused governance. EIT seeks to increase the return on investment in technology through consolidation of common IT systems and services, while eliminating waste and duplication. EIT works to increase the quality and consistency of technology, increase functionality and service to the enterprise, provide governance for managing and controlling risk and reduce costs through economies of scale.

The EIT services get allocated to Montana Dakota using agreed upon formulas based on utilization of the services.

Administrative and General Services

Administrative and general functions performed by MDUR for the benefit of the operating companies include the following departments:

- MDUR Executive Staff
- Corporate Governance, Accounting & Planning
- Communications & Public Affairs
- Internal Audit
- Investor Relations
- Legal
- Risk Management
- Tax and Compliance
- Treasury Services
- Building & Grounds

Montana-Dakota and Great Plains receive an allocation of these corporate costs. Corporate Policy No. 50.10 states "*It is the policy of the Company to allocate MDU Resources Group, Inc.'s (MDU) administrative costs and general expenses to the MDU's business units*". Business units described in the policy have been referred to as operating companies in this document. The policy states that costs that directly relate to a business unit will be directly assigned to the applicable business unit and only the remaining unassigned expenses will be allocated to the operating companies using the corporate allocation methodology. The allocation factor developed to apportion MDUR's unassigned administrative costs is

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a 3-factor Modified Massachusetts formula which used gross plant, net revenues, and labor costs. The Corporate Overhead Allocation Factors are shown in Exhibit I.

Montana-Dakota's gas (including Great Plains) and electric business segments are reflected in the Corporate Overhead Allocation Factors in Exhibit I. Operating companies that receive allocated costs on a monthly basis from MDUR include:

- Montana Dakota – Electric utility segment
- Montana Dakota/Great Plains – Gas utility segment
- Cascade Natural Gas Corporation (CNGC)
- Intermountain Gas Company (IGC)
- WBI Energy Transmission
- WBI Midstream

The corporate costs allocated to the electric and gas segments at Montana-Dakota/Great Plains are subsequently allocated to the state jurisdictions Montana Dakota and Great Plains serve. Corporate costs are recorded in the administrative and general (A&G) function for Montana-Dakota/Great Plains. (See state jurisdictional allocation discussion on page 11.)

FutureSource

FutureSource, a separate legal entity, owns the airplane used by all the operating companies within MDUR. Montana-Dakota/Great Plains acquired an interest in the aircraft with a cash contribution to FutureSource and placed this asset into rate base. The purchase of a portion of the airplane (based on the net book value) was determined to be beneficial to the rate payer rather than paying a higher rate of return for the investment in the cost-of-service calculation billed by FutureSource. The investment in this asset is fluid in nature and does change over time depending on the total investment held by FutureSource. This investment is monitored annually and compared to its proximity to the Corporate Overhead Allocation Factor. The level of investment is targeted to remain relatively close to the Utility Group's Corporate Overhead Allocation Factor. Montana-Dakota/Great Plains receives a cost-of-service return from IGC and CNGC for their proportionate share of the contribution made by Montana-Dakota. The revenue received by Montana-Dakota for this cost of service is recorded in miscellaneous revenue.

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Fixed costs for the aircraft are allocated to the MDUR operating companies on the MDUR corporate overhead factor referenced above (Exhibit I). The variable costs are charged to the appropriate business unit as a direct charge on an hourly flight rate. These charges will at times exceed or be below the actual variable cost. A year-end true-up includes an adjustment to the excess or shortfall in such hourly billing. Flights for employees of Montana-Dakota/Great Plains are directly assigned to the appropriate utility segment and state jurisdiction based on the purpose of the trip. For trips that are not directly applicable to a utility segment/jurisdiction, costs are allocated on the employee's standard payroll allocation and subsequently allocated to the jurisdictions. Standard labor distribution allocations are discussed on pages 9-10.

Cascade Natural Gas Corporation Allocation of Cost to/from Others

Allocations to/from other MDUR Companies

Certain Montana-Dakota/Great Plains owned assets, such as the General Office/Annex facility, located at the utility headquarters in Bismarck, are also used for the benefit of other MDUR operating companies. To cover the cost of ownership and operating costs associated with these owned assets, a revenue requirement (asset return plus annual operating expenses) is computed for the shared assets. The expense component included in the return is composed of operating and maintenance costs, depreciation, income tax and property tax expenses. The resulting revenue requirement is billed to the other MDUR operating companies, including CNGC and IGC, as a monthly fee.

Intermountain Gas owns the Customer Service Center located in Meridian, ID. To cover the cost of ownership associated with that owned asset, a revenue requirement (asset return) is computed similarly to Montana-Dakota owned assets. The expense component included in the return is composed of depreciation, income tax and property tax expenses. The resulting revenue requirement is billed to the Montana-Dakota/Great Plains and Cascade as a monthly fee. The costs are allocated based on the number of customers served by each utility.

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Allocations to other Utility Companies

Montana-Dakota/Great Plains has several departments that provide services to all four utility operating companies (Montana-Dakota, Great Plains, Cascade Natural Gas Co., and Intermountain Gas Company). These departments include:

- Leadership Group - composed of the Executive Group and Directors that oversee shared utility specific functions
- Customer Services - (Call Center, Scheduling and Online Services)
- Engineering and Operations Services and Compliance Groups – composed of shared utility group operations department functions
- Process Improvement and Operations Technology departments – composed of shared utility group department functions
- Information Technology and Communications- (Enterprise Network & Telecommunications, Enterprise Management, Enterprise Development and Integration, Field Automation, Enterprise GIS)
- Environmental
- Safety & Technical Training
- Gas Supply & Control
- Utility Group Controller
- Utility Group Human Resources
- Fleet

These operational groups have calculated the proper allocation to use to allocate the costs to the utility companies based on services performed for each utility company. Some costs may be determined within these utility group departments to be specific to one company and are allocated directly to that company. Payroll allocations and other costs will follow the proper allocations determined for the departments when the costs are to be split to each utility company. The allocation methodology is included in Exhibit V. Costs specific to a brand will be charged directly to that brand and will not go through an allocation process.

Cascade Natural Gas Corporation Allocations to Utility Segment

Revenues

All sales and transportation revenues are directly assigned to the utility segment and state jurisdiction. Miscellaneous service revenue, rent and other revenue is directly assigned to the utility segment where possible and

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common derived revenue is allocated to the utility segment based on the reason for which the revenue was received. As an example, revenue derived from the cost of service billed to other MDUR operating companies is allocated between the electric and gas segments based on the Montana-Dakota corporate overhead factor. This is based on Montana-Dakota's Modified Massachusetts 3 Factor, as shown in Exhibit I. Whereas miscellaneous revenue derived from patronage dividends received in a combination district would be split based on the customer count percentage for the applicable district where the dividend was received. These allocations between segments are computed manually. Customer Allocation factors are found in Exhibit II.

O&M Expense

As operation and maintenance costs are incurred, the expense is directly assigned to a utility segment in the general ledger where possible. Expenses incurred that are common to both segments, such as administrative and general costs, are split between utility segments based on the function and/or driver of the cost. Common facility expenses and labor/reimbursable expenses are discussed below.

Facility Expense Allocations

Costs for operations and maintenance of facilities are charged directly to the applicable utility segment when the facility is for the benefit of one utility segment. For example, costs applicable to the maintenance of gas mains are charged directly to the gas segment, whereas costs for maintenance at an electric generation or transmission facility are charged directly to the electric utility segment.

For expenses associated with distribution operation facilities, such as a region office that serves more than one utility segment, the costs are allocated to the utility segment based on the number of customers served by that facility. See the list of Customer Allocation factors in Exhibit II. General office facility costs are allocated to the electric and gas utility segments based on the Montana-Dakota corporate overhead factor percentage which is based on Montana-Dakota's Modified Massachusetts 3 factor formula, Exhibit I.

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Labor / Reimbursable expense allocations

The development of standard labor distributions for Montana-Dakota/Great Plains employees is described below based on the type of employee. Standard labor distributions are used for all employees to account for certain expenses as detailed below.

Labor, benefit costs and reimbursable expenses are directly assigned to a utility segment where possible. If the expense is not direct, the appropriate utility segment is charged as follows:

Union Employees

Time tickets are required for productive time. The employee specifies the proper utility segment, location and FERC account based on work performed. To account for non-productive time, standard payroll labor distributions are established for all employees. These standard labor distributions are calculated for union employees based on the historical actual charges by utility segment for the last 12 months.

Non-Union Employees

Non-union employees are not required to submit detailed time tickets with applicable general ledger accounts specified. Rather each employee has a “standard” set of general ledger accounts that split the labor costs to utility segment based on an expected ratio of work between segments. This split can be unique and is based on the employee’s position. Costs are distributed based on this standard labor distribution for each employee, and the allocations are reviewed annually. Time studies are completed at least every five years.

- Payroll allocations for operations supervisors are a function of their direct reports or may be determined by time studies conducted.
- Payroll allocations for staff engineers are determined by time studies.
- Payroll allocations for General Office support staff are reviewed by the applicable department head based on the type of work performed.

Reimbursable employee expenses are directly assigned to a utility segment and FERC account when possible. For employee expenses

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that are applicable to more than one utility segment, such as training that is not specific to a utility segment, the employee's standard labor distribution percentages for each segment are used.

Taxes Other than Income

Ad valorem taxes are reviewed by function and all functions are directly assigned except for common ad valorem taxes, which follow plant. Payroll related taxes follow the allocation of labor and revenue, and electric production taxes are directly assigned. Common taxes other than income, such as the Highway Use tax or Secretary of State filing tax are allocated on the appropriate factor to the segments.

Income Taxes

Income taxes, both current and deferred, are allocated to the utility segment based on the underlying revenue or expense that generated the deferred taxes.

If the underlying income item is specific to a particular segment, the related taxes are assigned directly to that segment. If the underlying income item is common to both segments, the related taxes are allocated with factors used to allocate the underlying revenue or expense.

Plant in service / work in progress / reserve / depreciation

Plant in service, work in progress, reserve and depreciation expense accounts are assigned to a utility segment based on the function of property. For property that benefits both utility segments an allocation process is used.

The allocation process is based on the combination of the location of the asset and the FERC account (function) that is used to allocate the project, asset, reserve, and depreciation. See Exhibit V for a list of the allocation factors.

Prepayments

Prepaid demand and commodity charges are directly assigned to the applicable utility segment. Prepaid insurance is directly assigned where possible and common policies are allocated based on the type of policy.

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Customer Advances

Customer advances are directly assigned to the applicable segment.

Other rate base items

Where possible, these items are directly assigned to the applicable utility segment. Common items are allocated based on the cost driver for each item.

Cascade Natural Gas Corporation's Allocations to State Jurisdictions

Cascade Natural Gas Corporation utilizes an automated allocation process each month to record the income statement and rate base account activity to the financial ledger (state jurisdiction) to facilitate regulatory reporting. This process is based on the general ledger account structure used in the financial software (JD Edwards). As with other items, costs are directly assigned to a jurisdiction when possible. Costs common to more than one state jurisdiction are allocated between jurisdictions. The primary driver of the allocation is the Business Unit component of the general ledger account; however, the FERC account associated with the charge is also used to determine the proper allocation method. Since operation and maintenance costs are assigned to the utility segment as incurred, this process only allocates costs between state jurisdictions. The allocation process creates a Journal Entry to the JD Edwards jurisdictional ledgers established by state and utility segment.

The allocation methodology is as follows:

The JD Edwards (JDE) software is used by Cascade Natural Gas Corporation for recording financial transactions as well as the jurisdictional allocation process for all accounts except those related to fixed assets.

The account structure within JDE consists of the following components:

Business Unit - The Business Unit is one of the primary components used for identifying the regulatory allocation of costs. It usually defines a location such as an operating region, operating district or facility (i.e. power generating facility, substation, gas regulator station), or department (i.e. human resources, engineering).

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Object – The object for operations and maintenance (O&M) expense accounts represents the resource consumed (i.e. payroll or materials). For balance sheet accounts, the object represents the FERC account.

Subsidiary – The subsidiary portion of the account for O&M accounts identifies the utility segment and the FERC account. For balance sheet accounts the subsidiary represents a further breakdown of the account such as which bank for a cash account.

Revenue Accounts – Revenues are directly assigned to the jurisdiction when possible. The applicable FERC account is part of the account structure and in the case of utility billed revenue the utility segment is included. It is the combination of the business unit, utility segment and FERC that drive the allocation factor used. An example of revenue that is allocated to the jurisdictions is revenue from the Cost-of-Service calculation which is assigned an allocable location (Business Unit).

Operation and Maintenance (O&M) accounts – As costs are incurred, the approver of the expense assigns the general ledger account structure.

It is the combination of the location (Business Unit), utility segment and FERC that drive the allocation factor utilized. Locations are assigned a factor based on the geographic area for which they serve, and the FERC function assigned. For example, location (Business Unit) 230 represents the geographic location of the Sheridan, WY District. The Sheridan District serves both electric and gas and is therefore directly assigned to Wyoming for all FERC accounts. Another example is location 12900, representing the Credit and Collections Department. The Credit and Collections Department services both the electric and gas customers. The allocation of costs is based on the FERC range of accounts. The location may also be a responsibility, or department.

Location	Location Description	Sub 1	Sub 2	Utility Segment	Utility Alloc Code	Utility Allocation Description	Utility Allocation Rate	Juris Alloc Code	Juris Allocation Description	Juris Allocation Rate	Combined Effective Rate
230	Wyoming District	1560	15709999	1 Electric	00001	ELECTRIC ONLY	100.0000%	00005	WYOMING ONLY	100.000000%	100.000000%
230	Wyoming District	1580	19359999	1 Electric	00001	ELECTRIC ONLY	100.0000%	00005	WYOMING ONLY	100.000000%	100.000000%
12900	Credit & Collections	1920	19359999	1 Electric	00001	ELECTRIC ONLY	100.0000%	00026	O&M EXCLUDING FUEL & PURCHASED POWER & A&G	8.336614%	8.336614%
12900	Credit & Collections	1901	19169999	1 Electric	00001	ELECTRIC ONLY	100.0000%	00085	TOTAL COMPANY ELECTRIC CUSTOMER COUNT	11.315965%	11.315965%
12900	Credit & Collections	1580	15989999	1 Electric	00001	ELECTRIC ONLY	100.0000%	00118	ELECTRIC DISTRIBUTION PLANT	14.798583%	14.798583%

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*Co	*Location	*Obj Acct	*FERC Sub 1	*FERC Sub 2	*Start Date	Stop Date	Description	Utility Alloc Code	Utility 01	Allocation Code 01
00001	230		1560	15709999	199703	203512	Wyoming District	00001	1	00005
00001	230		1580	19359999	199501	203512	Wyoming District	00001	1	00005
00001	230		28120	28120	199703	203512	Wyoming District	00002	2	00005
00001	230		2870	29359999	199501	203512	Wyoming District	00002	2	00005
!!!										
00001 code = 100 % Electric 00002 code = 100 % Gas Code 00005 = 100% allocated to WY										
*Co	*Location	*Obj Acct	*FERC Sub 1	*FERC Sub 2	*Start Date	Stop Date	Description	Utility Alloc Code	Utility 01	Allocation Code 01
00001	12900		1580	15989999	200910	203512	Credit & Collections	00001	1	00118
00001	12900		1901	19169999	200501	203512	Credit & Collections	00001	1	00085
00001	12900		1920	19359999	200501	203512	Credit & Collections	00001	1	00026
00001	12900		2870	28949999	200910	203512	Credit & Collections	00002	2	00119
00001	12900		2901	29169999	201509	203512	Credit & Collections	00002	2	00087
00001	12900		2920	29359999	200501	203512	Credit & Collections	00002	2	00027
Utility Allocation Code Represents the code used to allocate costs to a business segment 00001 - Electric segment 00002 - Gas segment Allocation Code 01 Represents the code used to allocate costs to a Jurisdiction 00118 = Electric Distribution Plant 00085 = Total Company Electric Meter Count 00026 = O&M Excluding Fuel, Purchased Power and A&G 00119 = Gas Distribution Plant 00087 = Total Company Gas Sales and Transportation Meter Customers										

Taxes Other Than Income

Taxes other than income taxes are directly assigned when possible. Ad valorem taxes are allocated based on the subsidiary, which indicates the jurisdiction and function. Payroll related taxes follow the allocation of labor, revenue taxes are directly assigned, and generation and other taxes are allocated on the applicable factor.

Income Taxes

Federal taxes that are allocated or directly assigned to the utility segment are allocated to the segment's jurisdictions based on the factors used to

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allocate the underlying revenue or expense among the jurisdictions within that segment.

State taxes that are allocated or directly assigned to a utility segment, are allocated to the jurisdictions that have state income tax based on their respective state apportionments.

Plant in Service/Work in Progress/Reserve/Depreciation Accounts

Plant in service, work in progress, reserve and depreciation expense accounts are allocated in through a similar process in the PowerPlan software based on attributes associated with the work order and asset.

It is the combination of the utility segment, location of the asset and the FERC account that is used to allocate the project, asset, reserve, and depreciation. The tables that are maintained in JDE for jurisdictional allocations are interfaced into PowerPlan and are used to allocate these accounts.

Allocation Factors

The allocation factors are computed annually by the Regulatory Affairs and General Accounting departments and assigned to the proper Business Unit (location) effective in January each year. See Exhibit V for a list of the allocation factors.

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Exhibit I- MDUR Corporate Overhead factor and Montana-Dakota /Great Plains Overhead factors

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Montana-Dakota Utilities Co.
CORPORATE OVERHEAD ALLOCATION FACTORS
January - June 2025

	.1	.2	.68	.61	.60	.64	
MDUR	MONTANA-DAKOTA ELECTRIC	GAS DIST	CNG	IGC	TOTAL UTILITY	WBI	WBI NON- REGULATED
Corporate 3 factor	28.84	17.12	20.92	14.11	80.99	17.98	1.03 100.00
Montana-Dakota corporate 3 factor	62.75	37.25					100.00
1. MDU Plant factor	71.08	28.92					100.00
2. MDU Rev less COS and taxes other	67.32	32.68					100.00
3. MDU Payroll	49.85	50.15					100.00
Meter factor	34.10	65.90					100.00

MDUR Corporate 3-Factor is updated bi-annually. January – June and July – December.

MDU Corporate 3-Factor and other factors list these are only updated on an annual basis.

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Exhibit II- Montana-Dakota/Great Plains Customer Allocation Factors

Montana-Dakota Utilities Co 2025 Customer Allocation Factors				
Montana			State	
	Customers	% Factor		
Gas	89,140	0.78	0.20	
Electric	25,485	0.22	0.06	
	114,625	1.00	0.26	
North Dakota				
	Customers	% Factor		
Gas	116,261	0.55	0.26	
Electric	94,116	0.45	0.22	
	210,377	1.00	0.48	
South Dakota				
	Customers	% Factor		
Gas	65,910	0.89	0.15	
Electric	8,461	0.11	0.02	
	74,371	1.00	0.17	
Wyoming				
	Customers	% Factor		
Gas	20,365	0.54	0.05	
Electric	17,416	0.46	0.04	
	37,781	1.00	0.09	
Total Customers			437,154	
Great Plains				
	Customers	% Factor		
Minnesota - GPNG	22,251	1.00		

Montana-Dakota Utilities Co Customer Splits for Regions and Districts				
Rocky Mountain Region			Badlands/Black Hills Region	
MT Gas	64%		ND Elec	23%
WY Elec	17%		ND Gas	16%
WY Gas	19%		MT Elec	15%
Dakota Heartland Region			MT Gas	12%
ND Elec	33%		SD Elec	1%
ND Gas	56%		SD Gas	33%
SD Elec	5%			
SD Gas	6%			

Meter Splits for Regions and Districts				
Rocky Mountain Region			Badlands/Black Hills Region	
Billings District			Region Split (#65)	
All Gas	100%		Electric	40%
Sheridan Dist (#63)			Gas	60%
Electric	47%		Dickinson Dist	
Gas	53%		Electric	59%
			Gas	41%
Dakota Heartland Region			Glendive Dist	
Region Split (#64)			Electric	56%
Electric	39%		Gas	44%
Gas	61%		Williston Dist (#69)	
Bismarck Dist (#86)			Electric	65%
Electric	51%		Gas	35%
Gas	49%		Wolf Point Dist (#68)	
Mobridge Dist (#14)			Electric	50%
Electric	58%		Gas	50%
Gas	42%		Rapid City/Spearfish District	
Minot/Jamestown District			All Gas	100%
All Gas	100%			

Customer Allocations by State		
GAS		
MT Gas	89,140	30.6%
ND Gas	116,261	39.8%
SD Gas	65,910	22.6%
WY Gas	20,365	7.0%
	291,676	
ELECTRIC		
MT Elec	25,485	17.5%
ND Elec	94,116	64.7%
SD Elec	8,461	5.8%
WY Elec	17,416	12.0%
	145,478	

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Enterprise Information Technology (EIT):

There are several EIT departments, and each is billed out based on its own criteria. They are as follows:

Application Services (765) – The allocations are based on time tracked history for the 12 months of the prior year. The MDUG portion is further divided by meter count and the WBI portion is further divided by the WBI corporate factor.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	Total
12-month workload	8,878	5,089	3,462	4,582	0	5,462	38	27,511
% of 12 non workload	32.27%	18.50%	12.58%	16.66%	0%	19.85%	0.14%	100%

Definition of 765: This team is made up of software developers providing integrations to systems and software changes.

Operational Technology (768) – The allocations are based on projected workload. This department is 100% direct allocated based on the projects assigned.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	Total
12-month workload	936	3,633	272	498	0	901	0	6,240
% of 12 non workload	15.00%	58.22%	4.36%	7.98%	0.00%	14.44%	0.00%	100%

Definition of 768: This team is made up of security and infrastructure technicians.

Customer Relations (965) – Enterprise charges for the customer relations group are invoiced using three weighted allocation factors. The factors are as follows:

1. Direct charge for employees working for a specific business, work is only completed for businesses identified in methodology below.
2. Number of computing devices supported by the help desk (85%)
3. Number of mobile devices supported by the help desk (15%)

The metric used to determine device counts is devices that have checked into LANDesk at allocation time (August) and active devices in MobileIron.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	Total
Direct Charges			53.02%	46.98%				100%
Factor- 5.95%			3.15%	2.80%				5.95%
Computing Device Counts	366	967	456	333	29	304	26	2,481
% of Device Count	14.75%	38.98%	18.38%	13.42%	1.17%	12.25%	1.05%	100%
% of Device Factor- 79.94% (94.05% x 85%)	11.79%	31.16%	14.69%	10.73%	0.94%	9.79%	0.84%	79.94%
Mobile Device Counts	126	707	302	168	18	215	44	1,580
% of Device Count	7.97%	44.75%	19.11%	10.63%	1.14%	13.61%	2.79%	100%
% of Device Factor- 14.11% (94.05% x 15%)	1.13%	6.31%	2.70%	1.50%	0.16%	1.92%	0.39%	14.11%
Total weighted allocation factor	12.92%	37.47%	20.54%	15.03%	1.10%	11.71%	1.23%	100%

Definition of 965: This team is made up of help desk agents who support company owned devices and software.

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Communications (971)

Enterprise charges for the communications group are invoiced using four weighted allocation factors. The factors are as follows:

1. Direct charge for employee hours working for a specific business (MDUG portion is split by meter count).
2. Wide Area Network/Local Area Network/Metropolitan Area Network- Number of business unit locations
3. Internet/Firewall Access – Number of computing devices
4. IP Telephony

The costs are invoiced based on the following percentages:

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	Total
Direct Charges								
Factor- 0.00%								
WAN/LAN/MAN	6	79	93	24	1	209	1	413
% of Business Unit Locations	1.45%	19.13%	22.52%	5.81%	0.24%	50.61%	0.24%	100.00%
Factor- 40.00%	0.58%	7.65%	9.01%	2.32%	0.10%	20.24%	0.10%	40%
Internet Access/Firewall Computing Devices	366	967	456	333	29	304	31	2,486
% of Computing Device Counts	14.72%	38.90%	18.34%	13.40%	1.16%	12.23%	1.25%	100.00%
Factor- 40.00%	5.89%	15.56%	7.34%	5.36%	0.46%	4.89%	0.50%	40%
IP Telephone	162	594	281	286	77	152	16	1,568
% of Handsets	10.33%	37.88%	17.92%	18.24%	4.91%	9.70%	1.02%	100.00%
Factor- 20.00%	2.07%	7.58%	3.58%	3.65%	0.98%	1.94%	0.20%	20%
Total weighted allocation factor	8.54%	30.79%	19.93%	11.33%	1.54%	27.07%	0.80%	100%

Definition of 971: This team supports the wide area network and phones. This includes switches, routers and firewalls.

Operations (972) – Enterprise charges for the operations group are invoiced using three separate factors.

(1) 10.93% are direct charges that are costs directly related to the AS/400 computer and are invoiced upon the AS/400 allocation as agreed to by MDU and WBI and CCB Oracle support costs and are allocated by meter counts for MDUG.

The remaining 90.18% of the costs are based upon the number of servers that are supported for each business unit. These servers are then broken out between full-service servers and shared service servers. Full-service servers have a greater weighting factor since they require more dedication. . cost more.

(2) Full-Service Servers – 66.80% (89.07% x 75%)

(3) Shared Service Servers 22.27% (89.07% x 25%).

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	Total
Direct Charges	0%	38.75%	26.36%	34.89%	0%	0.00%	0.00%	100.00%
Factor- 10.93%	0%	4.24%	2.88%	3.81%	0%	0.00%	0.00%	10.93%
Full-Service Servers	461	235	0	0	30	3	1	730
% of Full-Service Servers	63.15%	32.19%	0.00%	0.00%	4.11%	0.41%	0.14%	100.00%
Factor- 66.80%	42.19%	21.50%	0.00%	0.00%	2.75%	0.27%	0.09%	66.80%
Shared Service Servers	25	116	39	78	5	7	1	271
% of Full-Service Servers	9.23%	42.80%	14.39%	28.78%	1.85%	2.58%	0.37%	100.0%
Factor- 22.27%	2.06%	9.53%	3.20%	6.41%	0.41%	0.58%	0.08%	22.27%
Total weight allocation factor	44.25%	35.27%	6.08%	10.22%	3.16%	0.85%	0.17%	100%

Definition of 972: This team is responsible for administration of the enterprise servers.

Security (977) – Enterprise charges for the security group are distributed via the number of computing devices (90.00%) and mobile devices (10.00%). Costs are invoiced based on the following percentages:

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	Total
Computing Device Counts	366	967	456	333	29	304	26	2,481
% of Device Factor- 90%	13.27%	35.08%	16.54%	12.08%	1.05%	11.03%	0.95%	90%
Mobile Device Counts	126	707	302	168	18	215	44	1,580
% of Device Factor- 10%	0.80%	4.48%	1.91%	1.06%	0.11%	1.36%	0.28%	10.0%
Total weighted allocation factor	14.07%	39.56%	18.45%	13.14%	1.16%	12.39%	1.23%	100%

Definition of 977: This team supports the cyber security initiatives.

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ERP (956) – The allocations are based on time tracked history for the 12 months of the prior year. The MDUG portion is further divided by meter count by brand and the WBI portion is further divided by the WBI corporate factor:

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	Total
12-month workload	2,326	2,561	1,742	2,305	0	1,339	9	10,282
% of 12 non workload	22.62%	24.91%	16.94%	22.42%	0.00%	13.02%	0.09%	100%

Definition of 956: This team supports the accounting/HR, enterprise asset management and enterprise document management systems.

Scada (968) – The allocations are based on time tracked history for the 12 months of the prior year. The MDUG portion is further divided by gas meter count and the WBI portion is allocated to WBI Transmission as the systems supported are related directly to Transmission.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	Total
12-month workload	4	526	529	701	0	1,496	0	3,256
% of 12 non workload	0.12%	16.15%	16.26%	21.52%	0.00%	45.95%	0.00%	100%

Definition of 968: This team supports the gas SCADA and measurement accounting systems.

Finance & Compliance (982) –. Costs for the EIT finance and compliance group are invoiced based on a weighting of the combined methodologies of the nine previous EIT responsibilities.

	MDUR	MDU/GP	CNG	IGC	WBIE	WBIT	WBIM	Total
% of Total Governance & Administration	20.01%	30.61%	15.64%	14.69%	1.00%	17.49%	0.56%	100%

Definition of 982: This team supports EIT software licensing, vendor management, budgeting, compliance, EIT Governance, Project Management Office, IT Asset Management, and mobile related items.

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Exhibit IV- Utility Operations Support Allocation Methodology

Modified Massachusetts 3 factor Formula as of 9/30/24					
	<u>MDU</u>	<u>CNG</u>	<u>IGC</u>	<u>Total</u>	
Utility Group Allocation (corporate 3 factor)	56.75%	25.83%	17.42%	100.00%	
MONTANA-DAKOTA					
	<u>ELECTRIC</u>	<u>GAS DIST</u>	<u>CNG</u>	<u>IGC</u>	<u>Total</u>
Utility Group Allocation (corporate 3 factor)	35.61%	21.14%	25.83%	17.42%	100.00%
Utility Group Allocation (payroll factor)	28.29%	28.46%	25.83%	17.42%	100.00%
Gas segment split (corporate 3 factor)		32.84%	40.11%	27.05%	100.00%

Leadership Group:

The following leadership group's payroll allocations will be based on the Utility Group Allocation (corporate 3 factor)

- **Chief Utilities Officer (985)**
- **Vice President of Business Development & External Affairs (707)**
- **Vice President of Engineering, Operation Services & Compliance (960)**
- **Vice President of Field Operations and Customer Experience (725)**
- **Vice President of Energy Supply (890)**
-

Customer Experience Team (129, 711, 712, 714):

The Customer Experience Team is made up of four distinct areas and provides service to all four brands within the MDU Utility Group. Those areas are Credit and Collections, Scheduling, Customer Service, and Customer Programs and Support. In addition to these departments, the Customer Service group has a management team, Consumer Specialists, and other administrative positions. Customer Service payroll costs are allocated using five (5) different methodologies: Customer Count, Customer Call Time, Cleared Order Count, Credit To-Dos, and Emails and Web Requests. Costs other than payroll will be allocated based on customer count if they provide benefit for all brands. Costs specific to a brand will be charged directly to that brand and will not go through an allocation process.

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Customer Count

- Based on the average customer count of each utility brand from December to November.
- Uses a customer weighting of 1 for each natural gas or electric only customer and 1.25 for each electric/natural gas combination customer.
- The following positions will be allocated based on customer count **with nonutility**:
 - Customer Service Director
 - Manager, Customer Service
 - Supervisor, Customer Service
 - Customer Service Trainer
 - Customer Service Team Lead (Support)
 - Customer Project Analyst
- The following positions will be allocated based on customer count **without nonutility**:
 - Administrative Assistant
 - Manager, Credit, Support, Program Dev
 - Supervisor, Customer Support Service
 - Customer Service Team Lead (Credit)
 - Customer Communications Coordinator
 - Customer Project Analyst I and II
 - Business Analysts I and II
 - Supervisor, Credit & Collections
 - Customer Service Team Lead
 - Manager, Scheduling
 - Scheduling Analyst
 - Scheduling Lead

Customer Call Time

- Based on the total time that Customer Service Agents are handling a call.
 - Includes total talk time and after call work
 - Does not include idle time or auxiliary time
- Uses data for the preceding December to November of each year.
- The following positions will be allocated based on customer call time:
 - Customer Service Rep I, II, III, IV, and IV PT

Cleared Order Count

- Based on the number of work orders cleared through the work assignment management system for each brand.
- Uses data for the preceding December to November of each year.
- The following positions will be allocated based on cleared order count:
 - Scheduler

Credit To-Do's

- Based on three types of completed To-Do's.
 - accounts up for severance
 - closed accounts pending write-off
 - broken payment plans
- Uses data for the preceding December to November of each year.
- The following positions will be allocated based on credit to-do's:
 - Credit & Collections Rep I, II, and III
 - Credit Support Rep
 - Credit Specialist

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E-mails and web requests

Based on e-mails that include direct inquiries from customers, follow up requests from a CSR phone call, or e-mails generated by the web applications requiring account maintenance.

- Uses data for the preceding December to November of each year.
- The following positions will be allocated based on e-mails
 - Customer Support Rep I, II, and III

	MDU Elect	MDU/GP Gas	MDU Nonutility	CNG	IGC	Total
Customer Counts	10.09%	22.28%	2.47%	27.87%	37.29	100%
Customer Counts without NU	10.86%	23.98%	-	27.87%	37.29%	100%
Customer Call Time	12.97%	27.31%	-	21.88%	37.84%	100%
Cleared Order Count	14.58%	28.22%	-	20.68%	36.52%	100%
Credit To-Dos	12.52%	26.37%	-	30.35%	30.76%	100%
Emails	10.34%	21.78%	-	29.50%	38.38%	100%

Fleet (Dept 961) – The payroll allocations will be based on the weighted allocations of the managed units, vehicle and work equipment acquisitions.

	MDU	CNG	IGC	Total
Weighted average for Fleet	49.76%	30.11%	20.13%	100%

Engineering, Operation Services & Compliance Groups:

Quality Control (Dept 730) The Quality Control department provides oversight of the company's quality inspection plan which includes inspection and audit of maintenance and construction work performed by both utility group employees and our contractors. The department is also responsible for inspecting documentation and planning tasks associated with the construction of the utility system. The payroll allocations will be based on time studies.

Engineering Services (Dept 769) The Engineering Services department duties include Synergi gas system modeling, technical and engineering support to Field Operations, engineering design of capital projects, Engineering and Operations procedures reviews, engineering support of Company owned facilities (compressors, RNG, LNG and propane facilities), general engineering analysis, reviews & support to Regulatory (rate cases, data requests, IRP analysis) and general Company engineering evaluations/calculations/analysis/support. The payroll allocations will be based on time studies.

Construction Services (Dept 863) The Construction Services (CS) department provides construction management and inspection for large and high-pressure projects, as well as for projects generated by TIMP, DIMP, and MAOP Validation Plans. CS creates and manages programs and procedures for welding and fusion programs. Fabrication standards and a majority of fabrication are done by CS. The payroll allocations will be based on time studies.

System Integrity (Dept 865) The System Integrity department is responsible for the Utilities Distribution and Transmission Integrity Management Programs, Integrity Projects, Cascade's MAOP Validation Project, and Corrosion Control. The payroll allocations will be based on time studies.

Safety Management System & Quality Assurance (Dept 866) The Safety Management System and Wildfire Management department is responsible for implementing and managing the utility group's safety

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management system and wildfire prevention planning. The team is responsible for reviewing, documenting, and developing processes to ensure compliance with the industry-recommended practice 1173 and drafting and reviewing the Company's wildfire prevention plan. Key objectives of our current plan include the development of an operational risk management program, SMS/QA program oversight and metrics, and completion of risk-based process audits. The payroll allocations will be based on time studies.

Operations Policies & Procedures (Dept 923) This department is responsible for reviewing, updating, and implementing the Company's operational procedures and materials standards. The Company is required by state and federal law to have and maintain these procedures. Additional responsibilities include preparing and presenting Company documents and records for pipeline safety audits and responding to any pipeline safety audit findings. The payroll allocations will be based on time studies.

Operation Services (Dept 958) The Operation Services department provides support for operation programs – Leak survey, emergency response, physical security, damage prevention, and public awareness across the Utility Group.

Project Management (788) Project Management (PM) is responsible for the execution of large capital projects assumes overall ownership of the projects after initiation and until project closeout. PM prepares construction plans, acquires easements and permits, creates work plans, guides projects through the bidding process, coordinates construction and construction management with Construction Services, and reviews final project documentation. The PM group also includes the Drafting department. The payroll allocations will be based on time studies.

Gas Measurement-Pressure Control (955) The Gas Measurement – Pressure control department is responsible for operation and maintenance of town border stations, district regulator stations, high pressure service sets, farm taps and odorization equipment. This department is responsible for maintenance of large volume meter sets. The payroll allocations will be based on time studies or gas utility corporate 3-factor split.

Gas Measurement -Meter Shop & Instrumentation (728) The Gas Measurement – Meter shop and instrumentation department is responsible for inventory of meters, meter bars, regulators and erts. The department is also responsible for testing and rebuilding of meters. The department oversees the instrumentation and equipment on RNG facilities. The payroll allocations will be based on time studies or gas utility corporate 3-factor split

Procurement (724) The Procurement department is responsible for sourcing and purchasing contracts and materials needed for the construction and maintenance of the utility system. This includes assisting in drafting terms and conditions related to service contracts, as well as negotiating and sourcing the best price and best availability of tools and materials. The department works closely with the Company's accounting department to ensure all regulatory rules are followed, and with the departments responsible for materials standards to ensure materials being placed on the system will maintain the safety and reliability of the Company's services. The department payroll allocations for the manager and supervisors is based on the MDUG Corporate 3-factor. The payroll allocations for all Agents and Contract Admins it based the weighted average of the previous year purchase order dollar counts and purchase order line count.

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Information Technology and Communications Group:

Enterprise Management, Enterprise Development and Integration, Field Automation (Dept 926)

These teams support business and technical functions that are common to all brands. Provides support to the business through data requests and augments the system by developing programs and technical solutions to accommodate business and field needs as well as regulatory requirements. The payroll allocations will be based on the Utility Group Allocation (corporate 3 factor).

Enterprise GIS (Dept 951)

This department provides gas, electric and fiber pipeline and facilities mapping services for the Utility Group. The payroll allocations will be based on Utility Group meter counts. The payroll allocations will be based on the Utility Group Allocation (corporate 3 factor).

Process Improvement & Operations Tech (Dept 703)

The payroll allocations will be based on the Utility Group Allocation (corporate 3 factor).

Operation Systems (Dept 864)

This department supports Operations compliance systems as well as supporting other systems that Operations and Engineering utilize. The group not only supports these efforts but also works as a liaison group between the business and enterprise information technology (EIT). The payroll allocations will be based on the Utility Group Allocation (corporate 3 factor).

Operations GIS (Dept 867)

This department supports the Operations and Engineering GIS system. The group not only supports these efforts but also works as a liaison group between the business and enterprise information technology (EIT). Costs specific to a brand will be charged directly to that brand and will not go through an allocation process. The payroll allocations will be based on time studies.

Energy Supply Groups:

Environmental (Dept 889)

The Environmental Department provides environmental regulatory compliance guidance and assistance to MDU Utilities Group facilities and operations in accordance with the company environmental policy: The Company will operate efficiently to meet the needs of the present without compromising the ability of future generations to meet their own needs. Our environmental goals are:

- To minimize waste and maximize resources.
- To support environmental laws and regulations that are based on sound science and cost-effective technology; and
- To comply with or exceed all applicable environmental laws, regulations and permit requirements.

The payroll allocations will be based on time studies.

Gas Supply and Gas Control (Depts 931, 933, 928)

The payroll allocations will be based on two methodologies: Utility Group employees will be based on time studies. If there are employees focused on Montana-Dakota Utilities functions, which will be allocated 100% to Montana-Dakota Utilities gas segment.

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Human Resources and Safety Groups:

Safety (Dept 901)

The Safety department provides oversight for all things safety related for the entire utility group. The payroll allocations will be based on Utility Group Allocation (corporate 3 factor) or time studies, depending on the employee's job functions.

Technical Training (Dept 720)

The Technical Training department provides oversight for technical training for the entire utility group. The payroll allocations will be based on Utility Group Allocation (corporate 3 factor) or time studies, depending on the employee's job functions.

Human Resources (Dept 963)

The Human Resources payroll allocations will be based on the Utility Group Allocation (corporate 3 factor).

Accounting Group:

Utility Group Controller (Dept 941)

The Controller Department provides various accounting services to the Utility Group: Fixed Assets Accounting, Revenue Accounting, Internal Controls Coordination, and Management. The payroll allocations are based on these methodologies: Utility Group Allocation (corporate 3 factor), Montana-Dakota corporate overhead 3 factor, and specific shared services methodologies.

- ***Utility Group Allocation (corporate 3 factor)***
 - The following position will be allocated based on Utility Group corporate 3-factor
 - Manager, Revenue Administration
 - Financial Analyst II (Accounts Payable)
 - Accounts Payable Spec
 - Supv Accounts Payable
 - Accounts Payable Tech
 - Business Analyst I and II (Revenue Accounting)
 - Business Analyst II and Sr. (Customer Accounting)
 - Director Fin & Accounting Systems
- ***Montana-Dakota corporate 3 factor***
 - The following positions will be allocated based on MDU corporate 3-factor
 - Financial Specialist (Gen Acctg, Revenue Accounting)
 - Manager, Revenue Accounting
 - Financial Analyst I, II, III, IV (Gen Acctg, Revenue, Reporting & Planning)
 - Financial Systems Analyst
 - Financial Technician (Gen Acctg Revenue Accounting)
 - Manager, Accounting & Finance
 - Supv, Accounting & Finance
 - Manager, General Accounting
- ***Utility Group Fixed Assets Accounting methodology -***

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- The following positions will be allocated based on 3-Year Averages reviewed annually:
 - Financial Analyst I, II, III, IV (Fixed Assets Accounting)
 - Supervisor, Fixed Assets Accounting
 - Manager, Fixed Assets Accounting

Costs for the Financial Analysts in the MDU Utility Group Fixed Asset Accounting group and the Supervisor Fixed Asset Accounting are based upon three separate methodologies based on the three major types of work performed in the department. The three major work types of work are:

- Capital Expenditure Support (16.7% of workload)-Allocated to capital overhead (ES/GA) accounts based on 3-year average of capital expenditures.
- Fixed Asset Life Cycle Support (68.3% of workload)-Allocated to capital overhead (ES/GA) accounts based on 3-year average of capital work orders weighted by a difficulty factor.
- All Other Fixed Asset Accounting (15.0% of workload)-Allocated to expense (O&M) accounts based on estimate of time spent on non-project related tasks (Depreciation, ARO, Data Requests, etc.).

	MDUR*	MDU	WBIE**	KRC**	CSG**	CNG	IGC	Total
Total Allocated to ES/GA		56.94%				17.61%	10.45%	85.00%
Total Allocated to O&M		6.66%				4.17%	4.17%	15.00%

* Time devoted to CHCC companies deemed immaterial and is included in MDU amounts.

** No service provided to WBIE, CSG or CSG

Costs for the Manager of the Utility Group Fixed Asset & Tax Accounting group are based upon the company workload split of the "Other Fixed Asset Accounting" time spent by the Lead Financial Analyst in charge of depreciation, ARO's, data requests, etc. No portion of these costs is allocated to capital overhead (ES/GA) as they are deemed to be non-direct construction support costs.

	MDUR*	MDU	WBIE**	KRC**	CSG**	CNG	IGC	Total
% Allocation of UGFA Manager Costs		50.00%				25%	25%	100.00%

* Time devoted to CHCC companies deemed immaterial and is included in MDU amounts.

** No service provided to WBIE, CSG or CSG

- Utility Group Payment Processing methodology**
 - Payment Processor (Revenue Accounting)
 - Payment Processor, Lead (Revenue Accounting)

Payment Processing has been allocated by utility brand based on the number of customer payments posted to utility accounts in a 12-month period.

	MDU/GPNG	CNG	IGC	Total
# of Payments Processed	1,212,938	608,803	730,853	2,552,594
% of Payments Processed by Brand	47.5%	23.9%	28.6%	100.00%

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Exhibit V- Cascade Natural Gas Allocation Factors

State Allocations				
Line No	Description	WA	OR	Total
	A	B	C	D
1	<u>State Allocationers</u>			
2	Employees	74.21%	25.79%	100.00%
3	Gross Plant	77.29%	22.71%	100.00%
4	Customers	73.41%	26.59%	100.00%
5	3-Factor Formula	74.97%	25.03%	100.00%
6				
7	Rate Base Ratio	77.59%	22.41%	100.00%

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
CORPORATE OVERHEAD ALLOCATION FACTORS

EXHIBIT 404

November 2025

MDUR Corporate Overhead Allocation Factors									
	Montana-Dakota		CNG	IGC	Total	WBI	WBI		MDUR
	Electric	Gas Dist			MDUG		Non-Reg	CSG	
Jan-Jun 2024	20.1	17.4	21.7	12.3	71.5	14.8	0.1	13.6	100
Jul-Oct 2024	20.2	17.4	21.8	12.3	71.7	15.2	0.1	13.0	100
Nov-Dec 2024	23.1	20.0	25.0	14.1	82.2	17.7	0.1		100
Jan - Jun 2025	28.84	17.12	20.92	14.11	80.99	17.98	1.03		100

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UG 525

Cascade Natural Gas Corporation
MINOR CAPITAL ADDITIONS

EXHIBIT 405

November 2025

Funding Project Number	Summary	Cost	Justification	Demand/Study Analysis	Alternatives	Rationale (for choice between alternatives)
FP-322685	UG - UIPlanner Upgrade – The UI Planner software is an essential tool for facilitating the financial planning process at Cascade. Support for the current version is being phased out by the vendor. To ensure continued support for the software, we must upgrade to the latest version, which includes enhancements designed to improve the efficiency and detail of the financial planning process.	The total project costs expected for 2025 are \$190,839 with the project expected to be in-service in December 2025.	To ensure continued support for the financial planning software.	Not applicable as this is a software project.	Not applicable as this is an upgrade to an existing software.	Not applicable as this is an upgrade to an existing software.
FP-326273	CNCG Share of FS Software Purchase – FutureSource is a separate company from MDU Resources that has owned certain corporate shared assets. It was decided the bulk of FutureSource's assets, should be held by the individual operating companies that use those assets. That process required that the three individual utilities “buy” the assets from FutureSource. The costs included in that transaction for Cascade were to purchase software related costs that had previously been allocated to Cascade. That activity needed to be processed as any other purchase, so capital funding projects and associated workorders	The total project costs incurred in 2025 were \$210,515.	The costs included in that transaction for Cascade were to purchase software-related costs that had previously been allocated to Cascade. That activity needed to be processed as any other purchase, so capital funding projects and associated	Not applicable as this is to purchase software related assets.	Not applicable as this is to purchase software related assets.	Not applicable as this is to purchase software related assets.

Funding Project Number	Summary	Cost	Justification	Demand/Study Analysis	Alternatives	Rationale (for choice between alternatives)
	were required in PowerPlan. FP-326273 is the Cascade project to achieve that purpose.		work orders were required in PowerPlan.			