

2024-2025 BIENNIAL CONSERVATION PLAN



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Acronym Key

AEG- Applied Energy Group	RBSA- Residential Building Stock Assessment
BCP – Biennial Conservation Plan	RFP- Request for Proposal
C/I- Commercial/Industrial	RNG- Renewable Natural Gas
CAG- Conservation Advisory Group	RTF- Regional Technical Forum
CBSA- Commercial Building Stock Assessment	RVT- Resource Value Test
CNGC- Cascade Natural Gas Corporation	SBCC- State Building Code Council
CPA- Conservation Potential Assessment	SEM- Strategic Energy Management
CY- Calendar Year	SIR – Savings to Investment Ratio
DBtC- Direct Benefit to Customers	SPIF- Sales Performance Incentive Fund
DES- Department of Enterprise Services	TA- Trade Ally
DOE- Department of Energy	TAC – Trade Ally Connect
DSM- Demand Side Management	TAG- Technical Advisory Group
EAG- Equity Advisory Group	TRC- Total Resource Cost
EE- Energy Efficiency	TRC Companies – Third party C/I Business Development
ECOS- Energy Community Online System	TREAT- Targeted Residential Energy Analysis Tool
EEIP- Energy Efficiency Incentive Programs	UCT- Utility Cost Test
EM&V- Third Party Evaluation Measurement and Verification	WIP- Low-Income Weatherization Incentive Program
EPRI- Electric Power Research Institute	WSEC- Washington State Energy Code
ERA – Enterprise Rebate Application	WUTC- Washington Utilities and Transportation Commission
ESCO- Energy Service Companies	
ESR- Energy Service Representatives	
EWIP- Enhanced Low-Income Weatherization Program	
GTI- Gas Technology Institute	
HB- House Bill	
HTR- Hard to Reach	
HVAC- Heating, Ventilation, Air Conditioning	
IRP- Integrated Resource Plan	
LoadMAP- Load Management Analysis and Planning	
MDUG- Montana Dakota Utilities Group	
MOU- Memorandum of Understanding	
NEEA- Northwest Energy Efficiency Alliance	
NEI- Non-Energy Impacts	
NGAC- Natural Gas Advisory Committee	
NWPCC- Northwest Power and Conservation Council	
OLIEC- Oregon Low-Income Energy Conservation Program	
PII- Personal Identifiable Information	
POS- Point of Sale	
PUX- Public User Experience	
QC- Quality Control	



1. Introduction

Cascade Natural Gas Corporation (Company, Cascade, or CNGC) submits its 2024-2025 Biennial Conservation Plan (BCP) in consultation with its Conservation Advisory Group (CAG) as an outline to the 2024 and 2025 Energy Efficiency (EE) Program strategy. This plan aligns with requirements established as part of House Bill (HB)-1257 within RCW [80.28.380](#) which include:

1. Gas companies must identify and acquire all conservation measures that are available and cost effective
2. In addition, each company must establish an acquisition target every two years and must demonstrate the target will result in the acquisition of all resources identified as available and cost-effective
3. The cost-effectiveness analysis required by this section must include the costs of greenhouse gas emissions established in RCW 80.28.395
4. These targets must also be based on a Conservation Potential Assessment (CPA) prepared by an independent third party and approved by the Commission to become effective as of 2024

This BCP is a companion document to the Demand Side Management (DSM) chapter and appendices within the Company's 2023 Integrated Resource Plan (IRP)¹.

The DSM Chapter of the IRP includes an executive summary of the energy savings potential for the Company's EE efforts through the 2050 forecast horizon. It incorporates the 2023 CPA², performed by Applied Energy Group (AEG), and outlines the Company's EE efforts as a resource toward meeting future demand in the context of environmental and legislative externalities.

In the BCP the Company focuses on near-term conservation and energy-efficiency program development as it addresses items noted in the 2023 IRP. Cascade identifies and acquires conservation opportunities through the CPA filed with the Washington Utilities and Transportation Commission (WUTC or Commission) on June 1st, 2023, and approved by the WUTC on 9/14/23. This CPA used the Avoided Costs as calculated through the 2023 IRP, which increased by 49% in 2024 and 23% in 2025 on average across the state of Washington compared to the 2020 IRP.

¹ Cascade Natural Gas Corporation 2023 Integrated Resource Plan: Docket UG-220131 Chapter 7 – Demand Side Management & Appendix D [UTC Case Docket Document Sets | UTC \(wa.gov\)](#)

² Cascade Natural Gas Corporation 2023 Conservation Potential Assessment [UG-230434](#)



The BCP also contains program implementation considerations, Washington state energy and building code impacts, an evolution in the program's point of sale incentive offering, and outreach plans. Additionally, results of savings potential are presented for the Company's Washington (WA) service territory through 2043 via its Load Management Analysis and Planning (LoadMAP) model tool developed by AEG.

The 2022-2023 biennium involved significant review of Washington state energy code, building requirements, and outlook on the future of energy efficiency in the Pacific Northwest. Cascade committed to staying abreast of environmental headwinds, building standards, and codes which disincentivize natural gas use as a focus of decarbonization efforts. The position of building code specialist was created and filled within the external affairs department to provide the Company with the vital resource of a dedicated code expert. The Cascade EE department maintains a close relationship with the external affairs team to remain nimble in program delivery.

Economic repercussions from COVID-19's impacts have begun to subside as both residential and business customers find easier access to labor and equipment moving into 2024. Supply chain shortages and building material costs will continue to be monitored as they play a significant role for customers and contractors in deciding whether to install higher-efficiency equipment as availability and affordability are paramount.

In Q1 of 2022 the Company formed a new EE West Department, capitalizing on the integration with Montana Dakota Utility Group's (MDUG) Intermountain Gas Company. The EE West Department has continued to evolve over the past Biennium, being led by a Manager of Energy Efficiency Strategies overseeing both programs. This has led to new efficiencies in program delivery, commission relationships, and customer support which will continue to develop over the 2024-2025 biennium.

1.1 Overview

Cascade is a natural gas provider serving 314,500 customers in 95 communities concentrated in western and central Washington and central and eastern Oregon. Cascade covers more than 32,000 square miles and is a subsidiary of MDUG, a multidimensional natural resources enterprise with sister utility Companies Intermountain Gas Company, Great Planes Natural Gas and Montana Dakota Utilities. As a utility Company, Cascade focuses on DSM to meet future gas load requirements. DSM refers to resources acquired through the reduction of natural gas consumption due to increases in efficiency of energy use and/or load management. Unlike supply side resources, which are purchased directly from a supplier, demand side resources are purchased from individual customers in the form of reduced demand for energy from energy-efficiency upgrades.



The WUTC requires gas utilities to consider all cost-effective DSM resources in their energy portfolio on an equal and comparable basis with supply side resources. In the gas industry, DSM resources are energy-efficiency measures that include insulation, higher efficiency natural gas appliances, insulated doors, ventilation heat recovery systems and other Residential and Commercial/Industrial (C/I) equipment upgrades. By incentivizing rate payers to reduce their individual demand for gas, Cascade can avoid the need to purchase additional supplies; displace or delay contracting for incremental pipeline capacity; and possibly negate or delay the need for reinforcements on the Company’s distribution system. Ultimately it is the consumer’s choice to manage energy use and the Company’s DSM efforts help inform and influence those decisions.

There are two basic types of demand side resources: base load resources and heat sensitive resources. Base load resources offset gas supply requirements throughout the year, regardless of outdoor weather. Base load DSM resources include measures like high-efficiency water heaters, cooking equipment and ozone injection laundry systems. Heat sensitive DSM resources are measures whose therm savings increase during cold weather. For example, a high-efficiency furnace will lower therm usage in the winter months when the furnace is utilized the most and will provide little, if any, savings in the summer months. Examples of heat sensitive DSM measures include ceiling, floor, and wall insulation measures, high-efficiency gas furnaces, and improvements to ductwork and air sealing. These types of heat sensitive measures offset increased amounts of the more expensive peaking and seasonal gas supply resources.

1.2 Program Goals & Budgets at a glance

Table 1: EEIP Biennial Goals

	Calendar Year 2024				Calendar Year 2025				Biennial Totals
	Residential	C/I	Low Income	1st year Total	Residential	C/I	Low Income	2nd year Totals	
Cascade Admin Budget¹	\$1,708,246	\$1,351,913	\$459,191	\$3,519,350	\$1,742,411	\$1,453,405	\$517,391	\$3,713,207	\$7,232,557
Therm Targets²	426,621	368,700	19,522	814,843	502,044	443,760	21,565	967,369	1,782,212
NEEA Natural Gas Market Transformation				\$348,908				\$651,234	\$1,000,142
Regional Technical Forum				\$31,300				\$58,421	\$89,721
Evaluation, Measurement & Verification				\$183,660				\$94,340	\$278,000
Conservation Potential Assessment								\$160,000	\$160,000

¹ Budgets in this table are estimates and refer to administrative costs for program implementation, not rebates

² Therm targets have been developed with LoadMAP through the 2023 CPA Phase

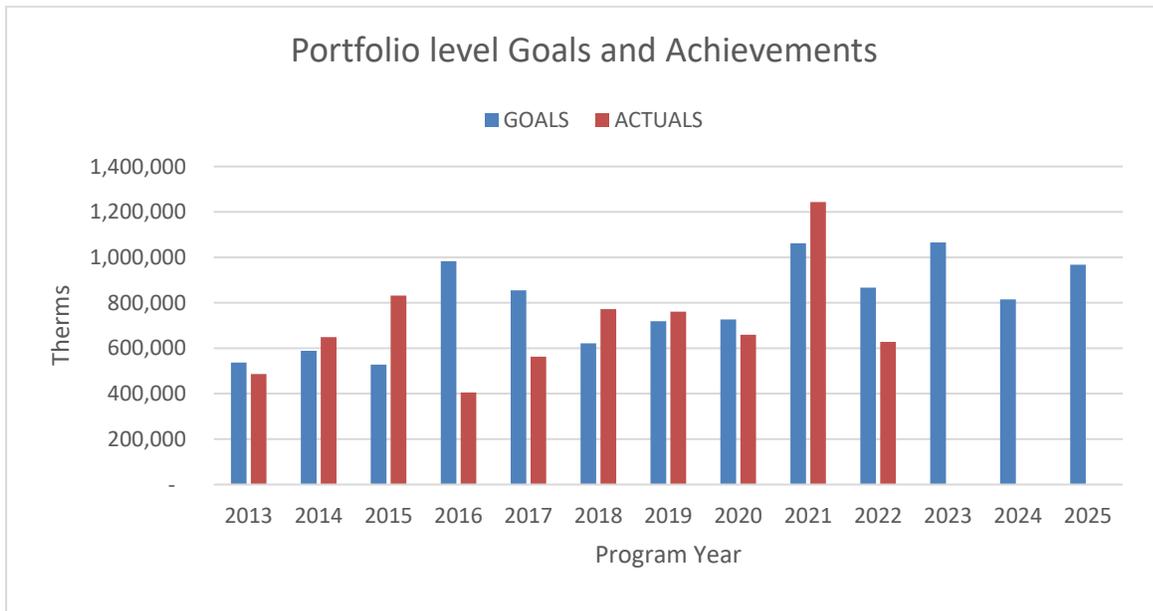


Cascade notes an updated methodology for calculating Low-Income administrative budgets in the above table compared to the current biennium, reflecting estimated administrative expenses for both CNGC and indirect administrative expenses incurred by the Agencies facilitating projects. Importantly, this approach now provides consistency in admin budget calculation across the portfolio and a truer direct benefit to consumer calculation. The 2022 and 2023 forecasts for this section would equate to \$413,707 and \$464,653 respectively if calculated in this manner. The growth in budget year over year reflects inflationary pressures and an enhanced focus on equity with a Low-Income program manager and senior conservation analyst now dedicated to the program.

1.3 Performance Comparison

Figure 1 notes Company annual therm savings compared to IRP goals. Official totals for 2023 are not available until the annual report is filed in June 2024, but as of August 2023 the residential program achieved 406,110 therms and the commercial program achieved 246,720 therms, which is tracking just shy of portfolio level annual goal achievement. Therm savings goals have remained aggressive over the planning period, reflecting an aggressive desire to capture all available therm savings despite code and environmental headwinds in the state.

Figure 1: Portfolio Level Goals and Achievements



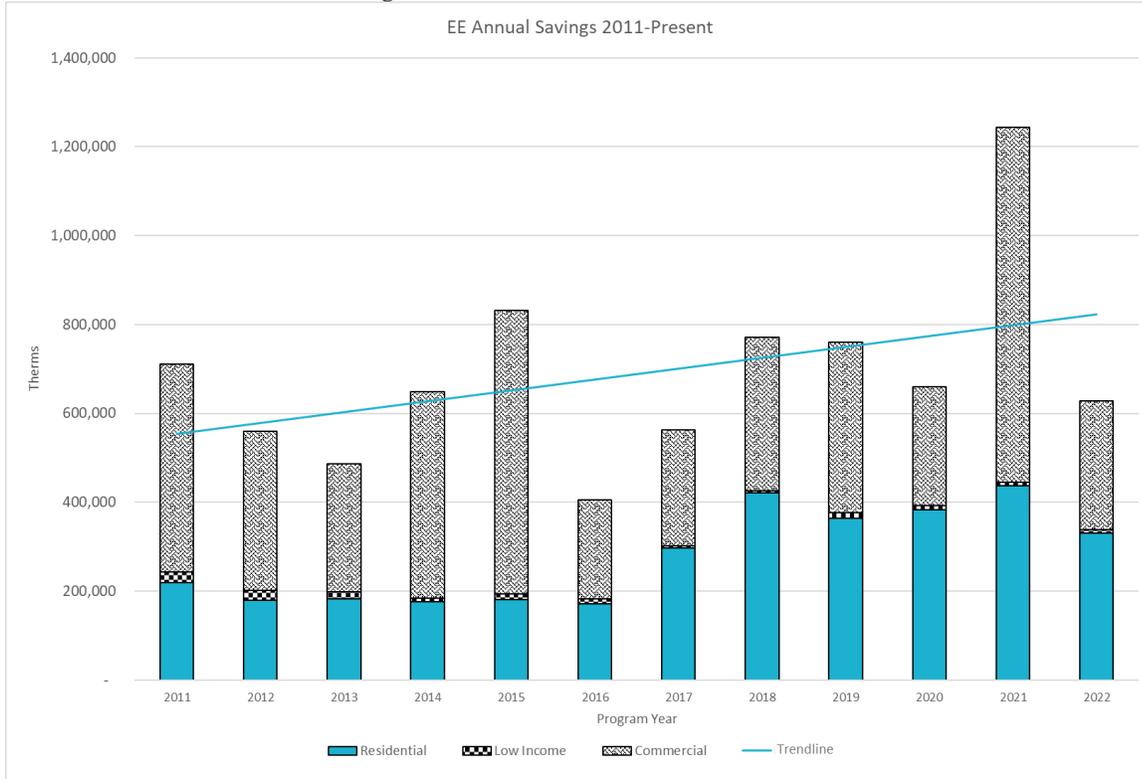
*2014 IRP goals were not acknowledged by the WUTC

Figure 2 displays the gradual growth in savings goals and achievements for each subset of the program portfolio since 2011. A gradual growth of savings potential is



inherent in the LoadMAP model due to ramp rate increases consistent with council methodology, which as defined in the Power Plan, can include market effects beyond utility programs.³

Figure 2: Portfolio Subset Goals and Achievements



1.4 Budgeting for 2024 & 2025 biennium

The Company provides the biennial budget highlights in Table 2 and includes a more detailed version in Exhibit 1 to clarify elements included as Direct Benefits to Customers (DBtC) versus costs incurred as administrative expenses.

³2020 Cascade Natural Gas Conservation Potential Assessment Phase 2 Final Report – Applied Energy Group Volume pg. 40



Table 2: Biennial Program Budgets

Program Budgets			
Incentive Estimates			
Program	CY 2024	CY 2025	BIENNIUM
Residential	\$4,965,868	\$5,843,792	\$10,809,661
Commercial/Industrial	\$1,758,699	\$2,116,735	\$3,875,434
Low Income	\$1,377,574	\$1,552,173	\$2,929,747
Total Incentives	\$8,102,141	\$9,512,700	\$17,614,842
Non-Incentive/CNGC Program Implementation Expenses			
Program	CY 2024	CY 2025	BIENNIUM
Residential	\$1,708,246	\$1,742,411	\$3,450,657
Commercial/Industrial	\$1,351,913	\$1,453,405	\$2,805,318
Low Income	\$459,191	\$517,391	\$976,582
Portfolio Admin Total	\$3,519,350	\$3,713,207	\$7,232,557
Total Incentives (from above)	\$8,102,141	\$9,512,700	\$17,614,842
<i>Regional Collaboration</i>	\$380,208	\$709,655	\$1,089,863
<i>Evaluation, Measurement & Verification</i>	\$183,660	\$94,340	\$278,000
<i>Conservation Potential Assessment (CY 2026/2027)</i>	n/a	\$160,000	\$160,000
Total Portfolio Expense	\$12,185,360	\$14,189,902	\$26,375,262

*Detailed program budget table is available in Exhibit 1 and indicates DBtC categories

Cascade sets an administrative budget to plan and operate programs under the Avoided Costs shown in Appendix H of the 2023 IRP. This budget must ensure an acceptable ratio of costs balanced with therm savings achievements. Since therm savings offset the costs of administrative investment, the greater the achievements, the more cost-effective the program. If the budget or therm savings upon which the portfolio is built are unachievable, the Company risks developing a scale-dependent portfolio unable to maintain cost effectiveness.

For the rebate budget in 2024 and 2025 Cascade is using per therm spending from the first half of 2023 as a reference. To deliver the therm savings in 2023, Cascade spent roughly \$11.64/Therm for the Residential program and \$4.77/therm for the C/I program. To determine the incentive budget for the Residential and Commercial programs, these rates are multiplied by the annual goal for each year in the CPA.

It should be noted this traditional approach of estimating incentive budgets using current therm per dollar spending has potential for inaccuracy. External factors including the state and local economy, weather, consumer sentiment, and legislative activity have significant impact on the total volume of incentives distributed. Additionally, the proposed increase in incentive values for some of the historically popular measures in the Company's residential portfolio such as insulation, water heat, and HE furnaces could



lead the program to exceed annual incentive budget by a million or more dollars if demand for these measures are elastically impacted by enhanced incentive levels.

The Company believes these enhanced offerings are critical to maximizing the amount of cost-effective therm savings in the service territory. The Company will continue to inform the Advisory Group of program performance and incentive budgets throughout the biennium as consumer behavior unfolds.

Various benefit-cost ratios are modeled as part of the planning process to maintain a reasonable administrative budget and protect the EEIP's cost-effectiveness. The Company explores options at the portfolio level to determine which types of fiscal measures can be taken in the event an unexpected cost is incurred, economic conditions significantly vary from assumptions (like the recent pandemic) or participation levels do not meet ramp rate estimates. Should the programs meet goals for the biennium the portfolio budget will have adequate room to support administrative expenses for activities that do not tie directly to therm savings, but support program uptake, which is necessary to meet continually elevated goals. The anticipated cost-effectiveness buffer allows the Company to increase select incentives (where cost-effective), offer C/I promotions, expand outreach, and invest in resources to support goal acquisition.

While cost-effectiveness may be maintained as programs operate within the above budget parameters, the DBtC would be impacted based on the proportion of funds spent between rebates and administrative costs. To that end, the Company will continue to carefully balance cost-effectiveness to achieve or exceed the 60/40 DBtC target.

Additionally, Cascade recognizes WUTC staff have directed the Company to achieve its targets and it will make every effort to meet the goals set forth in this BCP.

1.5 Direct Benefit to Customer Ratios

In January of 2017 Staff from WUTC engaged in a supplemental analysis of natural gas utility budgeting as a method of measuring program success. As part of this analysis the Company categorized its program expenditures under a ratio of DBtC compared to administrative program expenses.

Per WUTC direction DBtC ratios are to include customer incentives, payments to Community Action Agencies, and upstream incentives to energy program partners and Trade Allies (TA)s. Based on this guidance Cascade EEIP expenses are allocated as noted in Table 3:



Table 3: Direct Benefit to Customer Expenses

Cascade Natural Gas – 2023 DBtC Category Clarifications		
	Direct Benefit	Program Delivery (Not included in DBtC)
Residential	<ul style="list-style-type: none"> ✓ Rebate payments ✓ Bonus coupons to customers for using qualified Trade Allies (TAs) ✓ QC Inspections ✓ Local energy program partnerships promoting the EEIP by assisting customers with rebates ✓ Customer service resolution ✓ Bundled measure promotions 	<ul style="list-style-type: none"> ✓ Labor ✓ TA program materials ✓ Cooperative marketing & training ✓ TA outreach ✓ Residential EEIP ad placement ✓ Software access fees ✓ Industry appropriate organizational dues ✓ Travel expenses for program delivery ✓ Seminar and training attendance ✓ Miscellaneous operating expenses ✓ Admin costs for Pilots
Commercial & Industrial	<ul style="list-style-type: none"> ✓ Rebate Payments ✓ Partnerships with local energy programs promoting the EEIP through customer engagement ✓ Bundled measure promotions 	<ul style="list-style-type: none"> ✓ Third party program management inclusive of commercial marketing efforts ✓ Internal staffing & oversight from CNGC ✓ Industry specific Trade organization dues ✓ Travel expenses for program delivery ✓ Seminar and training attendance ✓ Promotional giveaways ✓ Miscellaneous operating expenses ✓ Admin costs for Pilots
Low income	<ul style="list-style-type: none"> ✓ Rebates for weatherization ✓ Agency customer outreach ✓ Agency indirect rates and administration fee 	<ul style="list-style-type: none"> ✓ CNGC labor for program administration ✓ Travel expenses for program delivery

The Company will aim for a minimum 60/40 DBtC ratio for the biennium. Per the budgets and goals, the upcoming Biennial DBtC is estimated at 72/28 as shown in Table 4. The following should be kept in mind when determining program DBtC ratios:

- The customer rebate budgets are forecasts which are highly dependent on customer uptake and individual consumer decisions. The Company can encourage participation through incentivization and outreach but cannot ultimately force participation in the efficiency efforts.
- The programs have specific fixed costs associated with administering incentives to customers. These costs are minimally elastic to rebate submission volume.
- Cascade’s territory is primarily rural and geographically spread out, typically requiring increased administrative effort and funds to effectively service.
- The Company is not a dual fuel provider.



Table 4: Biennial – DBtC

DBtC - Cascade Natural Gas 2024 Conservation Budget			
	Direct Benefit to Customer	Other Costs	Total Utility Costs
Residential	\$ 5,029,868	\$1,644,246	\$6,674,114
Non-residential	\$1,758,699	\$1,351,913	\$3,110,612
Low income	\$1,397,574	\$439,191	\$1,836,765
			\$11,621,491
Portfolio Ratio	70%	30%	
NEEA / RTF			\$380,208
EM&V			\$183,660
Total 2024 Program Expense			\$12,185,360
DBtC - Cascade Natural Gas 2025 Conservation Budget			
	Direct Benefit to Customer	Other Costs	Total Utility Costs
Residential	\$ 5,909,072	\$1,677,131	\$7,586,203
Non-residential	\$2,116,735	\$1,453,405	\$3,570,140
Low income	\$1,572,573	\$496,991	\$2,069,564
			\$13,225,907
Portfolio Ratio	73%	27%	
NEEA / RTF			\$709,655
EM&V			\$94,340
CPA			\$160,000
Total 2025 Program Expense			\$14,189,902
Biennial Totals:	72%	28%	

1.6 Applied Energy Group CPAs

AEG’s modeling framework tool, LoadMAP, was developed as an end-use load forecasting model to allow estimation of conservation potential. It is built in Microsoft Excel and is tailored to meet the needs of the client. The scalable nature of the model allows utilities to analyze potential for a combination of market sectors, segments, climate zones, end uses, technologies and measures. Cascade first worked with AEG in CY 2017/2018 to develop its service territory specific CPA using the Northwest Power and Conservation Council’s (NWPPCC) methodology to determine the Company’s conservation potential.

With the support of the Advisory Group, Cascade continued the partnership with AEG to conduct the 2023 CPA modeling and reporting. The 2023 CPA capitalized upon research and data gathered to build previous iterations of the CPA while focusing modeling efforts on impacts to the program due to code and city ordinances, equipment supply, and past measure uptake. AEG then gathered this information to develop an independent estimate of achievable, cost-effective energy efficiency potential within Cascade’s



Washington service territory between 2023 and 2042.

The primary goals for AEG in this assessment included:

- Conduct a natural gas CPA to identify all available and cost-effective potential to satisfy requirements of RCW 80.28.380
- Adapt the methodology utilized in NWPPCs 2021 Power Plan (2021 Electric Plan) for use in natural gas EE planning
- Customize 2021 Electric Plan ramp rates for use in a natural gas CPA by incorporating historic Cascade program accomplishments
- Focus on equity in offerings within the residential market characterization and potential, leveraging income level and home-type analysis to better inform Low-Income programs. This analysis involved customer segmentation by income group tranches and a geographic mapping of customers by income level and home type across the service territory. Low and Moderate-income homes are estimated to comprise 59% of Cascade’s customer base and are likely to benefit the most from the Low-Income and point of sale offering in the upcoming biennium. Further details can be found on page 25 and 26 of the 2023 Conservation Potential Assessment
- Develop independent and credible estimates of energy efficiency potential available within Cascade’s Washington service territory using accepted regional inputs and methodologies
- Deliver a fully configured end-use model for Cascade to use in future energy efficiency planning initiatives
- Support the design of programs to be implemented by Cascade during the upcoming years
- Provide energy efficiency inputs into Cascade’s Integrated Resource Planning (IRP) process

Through a robust process of review with Cascade’s Energy Efficiency team, Cascade’s building code expert, and TRC Companies, AEG developed a 20-year incremental savings potential for the program. Further details on the process and data evaluated can be found in docket [UG-230434](#).



2. Development of Portfolios

Cascade’s current Avoided Costs are housed within Appendix H of the 2023 IRP. The Company’s EEIP offerings are highly sensitive to fluctuations in fossil fuel prices, distribution system costs, and environmental expenses reflected in those Avoided Costs. Per Climate Zone Avoided Costs are a primary input in the CPA and can be averaged or extracted over all climate zones within Cascade’s service territory.

Table 5: Service Territory Climate Zones

Washington Conservation Climate Zones by District		
<u>Zone 1</u>	<u>Zone 2</u>	<u>Zone 3</u>
<ul style="list-style-type: none"> • Bellingham 	<ul style="list-style-type: none"> • Aberdeen 	<ul style="list-style-type: none"> • Sunnyside
<ul style="list-style-type: none"> • Mount Vernon 	<ul style="list-style-type: none"> • Bremerton 	<ul style="list-style-type: none"> • Tri-Cities
	<ul style="list-style-type: none"> • Longview 	<ul style="list-style-type: none"> • Walla Walla
		<ul style="list-style-type: none"> • Wenatchee
		<ul style="list-style-type: none"> • Yakima



The 2023 IRP Avoided Costs reflect an increase in per therm projected savings and provides the opportunity to enhance incentives for select measure offerings across the portfolio. Avoided Costs from therm savings for the state of Washington increased by 49% and 23% in 2024 and 2025 respectively compared to the 2020 IRP.

This change is in large part due to an enhanced calculation for distribution system costs. Effects such as the long-term discount rate have increased, which decreases avoided costs over time, however this impact is very minimal due to a lack of time for compounding for the 2024-2025 planning years. The Company’s Resource Planning Team is continually evolving methodology for calculating Avoided Costs, which plays a significant role in both the CPA and program plan.



The Company is committed to offering meaningful Conservation and EE programs to help drive customer decisions toward higher efficiency appliances. To accomplish this Cascade works with the CAG to evaluate its programs through the lens of the Utility Cost Test (UCT) and the Total Resource Cost (TRC) in its Conservation Plan and Annual Report and continues to report achievements under both parameters. Further information on TRC valuation and calculations within the LoadMAP model can be reviewed in the Company's 2023 CPA.

2.1 Docket U-121207 Cost-Effectiveness of Natural Gas Conservation Programs

The Company's approach to calculating cost-effectiveness reflects docket U-121207 which offers guidance regarding valuation of natural gas conservation efforts in the State of Washington. It addresses best practices for measuring cost-effectiveness: "[W]e are unwilling to allow utilities to end natural gas conservation programs as a result of an unbalanced or incomplete TRC analysis. Any TRC analysis without these values [conservation's risk reduction value, the downward price pressure from reduced demand, and non-energy benefits] is potentially biased against conservation programs. Accordingly, the UCT is an acceptable option when a properly balanced TRC is not available."⁴

The UCT remains the Company's preferred valuation (per consultation with the CAG) as a straightforward calculation of the utility's investment in DSM that does not penalize customers for weighing the cost-benefit of an upgrade. The UCT allows the natural gas efficiency programs to leverage positive market change through the installation of measures with long-lived deeper energy saving. Most notably, this includes weatherization measures which play a pivotal role in this BCP.

2.2 Cost-Effectiveness Testing and Program Design

Under the UCT, rebate thresholds are set to achieve an optimal balance between driving program participation through persuasive incentive offerings while maintaining cost-effectiveness and ensuring a broad menu of offerings. The current incentive levels are effective as of April 1, 2022 for the Residential and C/I program and April 7, 2022 for the LI program.

Industry standard cost effectiveness tests are performed to gauge the economic merits

⁴ Washington Utilities and Transportation Docket U-121207 – Policy Statement on the Evaluation of the Cost-Effectiveness of Natural Gas Conservation Programs pg. 14-15



of the portfolio within the Company's LoadMAP model. AEG incorporated both the UCT and TRC calculations per staff recommendations to allow future valuation under regionally evolving metrics. These definitions remain consistent since the 2017 CPA AEG first developed.

2.3 Incentive Level

The Company seeks to develop a customized approach to setting incentive levels through its LoadMAP tool with an intention to adjust incentives to maximize individual measure uptake while remaining cost effective at a program portfolio level. Following the 2023 CPA, Cascade worked closely with AEG's Program Planning team to identify measures whose cost effectiveness either warrants increasing rebates and/or reducing rebates to fall within the thresholds set through the updated Avoided Costs. The Advisory Group has been consulted to provide input and suggestions for consideration in the upcoming program plan. Current rebate offerings and proposed updates for 2024 and 2025 can be found in each program's respective work paper.

2.4 Emerging Technologies, Appliance Standards & Codes

Cascade, like other Energy Efficiency programs, experiences a continual cycle of high-efficiency measures that were once above code transition into standard code requirement. To stay ahead of this trend, CNGC collaborates with Regional and Technical partners, including the Gas Technology Institute (GTI), NEEA, and the RTF to ensure Cascade's portfolio of energy efficient options remains current and relevant.

2.4.1 Emerging technology through market transformation

The Company constantly scans for new savings opportunities and a handful of emerging technologies and practices have arisen recently with the potential to surpass building code requirements and increase natural gas energy savings.

2.4.2 Home Energy Reports

In December 2022, CNGC EE executed a contract with EnergyX for a residential customer pilot Behavioral Home Energy report. Planning, design specifications and implementation, with diligent IT security protocols in place, were completed in 2023. The first wave of Home Energy reports were sent to residential customers, via US mail or email, in September 2023. The Home Energy report pilot subscription is one year with an optional second year renewal. Nine thousand (9,000) customers will receive six personalized Home Energy reports over the course of twelve consecutive months. Another four thousand (4,000) customers will act as a control group. CNGC has a focus on serving rural communities and EnergyX expects to reach these customers through a mix of both paper and digital reports. It is important to note that digital reports



may not be the best option for all residential customer segments and paper reports can help to engage customers with poor internet connections, limited smart phone access and customers in energy poverty situations. Indeed, for certain customer segments where costly and/or complex building upgrades are not an option, behavioral change, and no-cost improvements may be the only reasonable means of reducing energy usage.

Delivery of savings progress will be assessed quarterly through Q3Y24, with estimated savings expected to be 2% -3%. The post launch phase of the pilot will last no longer than fourteen (14) months and will include a summary report and results. In 2024-25, Cascade will evaluate and verify the pilot outcomes for cost-effective savings to support a decision to expand the Home Energy report customer base or discontinue the service.

2.4.3 Advanced Air Sealing

AeroBarrier® is a proprietary technology produced by AeroSeal® which uses aerosolized sealant in conjunction with a blower door. The blower door forces air into the home and pushes the aerosolized sealant into all gaps in construction materials that are ½” or less in size. The technology can provide air tightness that will meet code (5 ACH50) and can be as tight as the passive house standard of 0.6 ACH50. Cascade begun consulting with regional utilities and builders in 2022 to further investigate this offering. A pilot was deployed in 2022 aiming to garner attention from one or more active builder participants in each climate zone. As of July 2023, two AeroBarrier® installations have been completed. Builder uptake on this pilot has been extremely limited, primarily attributed to energy code restrictions and a divestment in natural gas furnaces in new homes. Cascade anticipates sunsetting this pilot by the end of 2023.

2.4.4 Gas Fired Heat Pumps

Gas fired heat pumps use a small, natural gas-powered engine to run the compressor and pump system on a heat pump. They offer up to 50% more efficiency than high efficiency furnaces. In conjunction with the California Energy Commission, GTI found gas fired heat pump water heaters could provide 60-65% savings over gas storage tanks, and savings of 30-35% over Tankless Water Heaters. Through the partnership with NEEA, Cascade has continued to provide funding and backing for research and development in this technology. Notably, Cascade has also evaluated gas fired heat pumps as secondary units within the most recent CPA. No cost-effective savings were found for these units due to high incremental costs and a lack of installation availability, which predisposes including this measure in the coming biennium portfolio.



3. Biennial Strategic Plan

The following section provides a synopsis of current program offerings and context on strategic planning efforts for the biennium in addition to proposed rebate updates in the Residential and Commercial work papers. These updates are intended to meet their savings goals, contribute to CO₂ emissions avoidance, and engage the communities within Cascade's WA territory to make optimal, efficient near-term and mid-term energy services decisions as part of legislation and customer-focused continual improvement cycles.

3.1 Current Portfolio of Measures

The Company offers a robust set of rebates to its customers as a means to acquire all available and cost-effective energy efficiency opportunities. A comprehensive list of program offerings, existing rebate amounts and proposed changes for the biennium is available in the work papers, however the following synopsis is provided as an outline of the program at the start of CY 2024.

3.1.1 Residential Program Offerings

Customers receiving service from Cascade on a 503 rate schedule are eligible for the Company's Residential EEIP. Energy Efficiency incentives available through this program are dependent on existing equipment and building efficiencies requiring certain conditions be met to receive a rebate as these rebates are based on appliance standard requirements and estimates of savings above code. Additional requirements and restrictions apply for both the Residential and C/I program and are available for review on the Company's website under EE Terms and Conditions. Existing residential offerings are also available at www.cngc.com/energy-efficiency/residential-rebate-offerings/.

New and Existing home rebates are offered for furnace upgrades, fireplaces, combination radiant heat systems, tankless water heaters and condensing boilers assuming the installations meet the minimum qualifying efficiency.

Residential incentives offered solely to existing homes include programmable thermostats and insulation upgrades including floor, wall, attic, ceiling, and duct insulation. Home eligibility for weatherization updates is dependent on the premise falling below a maximum preexisting condition and reaching a minimum improvement level post install. This program also offers rebates for windows and duct sealing as well as whole house air sealing. Cascade offers two additional incentives to customers to encourage a whole-home approach to home improvements. These bundles, or add on rebates, are provided in addition to the standard incentive and are available when the following criteria is met:



- Bundle A: A \$250 bonus which requires a minimum of 1,000 square feet of insulation installed and any two of the following measures being upgraded simultaneously (floor, wall, ceiling, attic insulation or air sealing)
- Bundle B: The same conditions apply as for Bundle A, however, to qualify for this \$1000 incentive air sealing and two insulation measures must be installed simultaneously

These bundle offerings are examples of offerings which do not drive any therm savings independently but are offered to increase forecasted participation utilizing the buffer in projected portfolio UCT calculations.

3.1.2 C/I Program Offerings

Customers served by Cascade on rate schedules 504, 505, 511 and 570 are eligible to participate in the Company's Commercial and Industrial EEIP. This C/I program has two savings pathways available to customers. One is through the prescriptive rebate offerings composed of a preapproved list of upgrades and rebate levels based on deemed energy savings. The second pathway is offered as a custom engineering calculation where multiple factors are incorporated into estimating the savings based on property characteristics and energy usage.

The prescriptive C/I EEIP offers four subcategories of rebates: Heating, Food Service Kitchen Equipment, Weatherization and Water. Each category includes multiple options and eligibility is determined under similar parameters as the Residential program; meaning equipment must meet minimum efficiencies, weatherization upgrades are available for retrofit installs only and the customer must heat their water and/or space with natural gas. As with the Residential program baseline, assumptions play a key role in determining rebates, so the program holds strictly to its terms and conditions and efficiency requirements. The C/I prescriptive program uses rebate calculations that differ slightly from the Residential program and are noted online at www.cngc.com/energy-efficiency/commercial-rebate-offerings/.

Heating incentives available through the standard program include warm air furnaces, HVAC unit heaters, boiler steam traps, demand control ventilation and condensing boilers. Kitchen equipment includes gas griddles and ovens. Weatherization measures include windows, attic insulation, roof insulation, wall insulation, floor insulation and hot water pipe insulation. Water heating and water saving rebates include domestic hot water tankless water heaters, domestic hot water recirculation controls, domestic hot water tanks and ozone injection laundry systems. Additionally, a self-install Energy Savings Kit containing a Pre-Rinse Spray Valve may be requested by C/I customers.



Bundle and save options are also available to C/I customers if two insulation measures are installed and a minimum 1000 square feet of insulation is reached (\$500). Also, if a customer installs two pieces of qualifying kitchen equipment an additional \$300 is available, and \$500 if three pieces are upgraded simultaneously.

As mentioned, the C/I program also offers a custom pathway for efficiency. If a customer has a project that saves natural gas but does not fall within the scope of one of the prescriptive offerings, a custom incentive may be available. The Company's C/I implementation vendor, TRC Companies, works with each individual customer to determine eligibility, determine the incremental cost and savings associated with the project, provide a custom offer, and verify installation and operation prior to incentivization. Natural gas savings are calculated using standard engineering practices. Cascade reviews the natural gas savings calculations and reserves the right to modify energy savings estimates. These energy savings estimates are informed by both established industry knowledge pieces and independent EM&V which was conducted on the program in 2023.

3.2 Key Strategies for the Biennium

Cascade has identified key strategies to build upon and improve the EE programs this biennium, capitalizing upon internal reorganization, a deep dive into compliance with code standards and changes, data security, renewable natural gas, an expanded TA network and rapidly growing point of sale incentive offering.

3.2.1 Internal Reorganization

The Company's EE programs will have a twin focus on customer education and energy services optimization in light of a recent integration with MDU Group's Intermountain Gas Company (IGC) to form MDU's Western EE Department. This internal integration supports leveraging and increases available resources for Cascade's EE programs by expanding available staff and providing context on regional and national EE.

In 2023, Intermountain Gas Company officially deployed the Enterprise Rebate Application (ERA) for rebate processing. This software solution was designed and programmed through a collaborative effort with MDU's Enterprise Information Technology team and IGC's EE team. Cascade intends to migrate over to the ERA for residential rebate processing by the first quarter of 2025.

3.2.2 Washington State Energy Code Compliance

Cascade closely follows legislative activity surrounding state energy and building codes which could impact the program. In Washington State, the code development and adoption process for energy codes is administered by the Washington State Building



Code Council (SBCC), a division of the Department of Enterprise Services (DES). The process begins with the publication of the latest national model codes, originating from non-governmental agencies. For the 2021 code cycle, the model codes were reviewed and amended by Technical Advisory Groups (TAGs), Standing Committees, and ultimately the Council (SBCC) from January 2021 through November 2022.

On November 18, 2022, the Council formally completed the code development and adoption process via a final vote on the proposed amendments. SBCC staff were thereby instructed to file the amendments with the State Code Reviser. The revised codes, as specified in the State Code Reviser filings and as published in the Washington State Register, set to take effect on July 1, 2023.

Within the 2021 WSEC, the Council voted to approve limitations on the use of natural gas in both residential and commercial buildings across Washington State by generally prohibiting the use of combustion driven equipment for space or water heating.

On May 24, 2023, the SBCC voted to delay the effective date of the 2021 code cycle for 120 days, setting the new effective date as October 29, 2023. During the May 24 meeting, the council provided additional direction for "... SBCC staff to convene two Technical Advisory Groups to consider stakeholder proposals to modify sections in the commercial and residential energy codes. The modification would be intended to address legal uncertainty stemming from the decision in *California Restaurant Association v. City of Berkeley* recently issued by the Ninth Circuit Court of Appeals."

The full council then, during the September 15, 2023, meeting, voted to file the proposed package of amendments with several corrections via a CR-102 Proposed Rule-Making Order. During the same September 15, 2023, meeting, the SBCC again voted to delay the effective date of the 2021 code cycle. This second delay, intended to provide sufficient time to complete the rulemaking, set the implementation date as March 15, 2024. Cascade has been monitoring this activity throughout the rule making process, preparing to make changes to the program ahead of each implementation date. Cascade has structured the 2024-2025 program plan to be in compliance with code changes ahead of the current implementation date in March 2024.

Cascade recognizes the importance of energy efficient use of natural gas in the state of Washington and will stay abreast of code changes which are anticipated to impact the 10-year program trajectory. With regards to the future development of energy codes in Washington, the SBCC has two primary legislative directives that provide the Council directive on how to proceed with development of the residential and commercial energy codes.

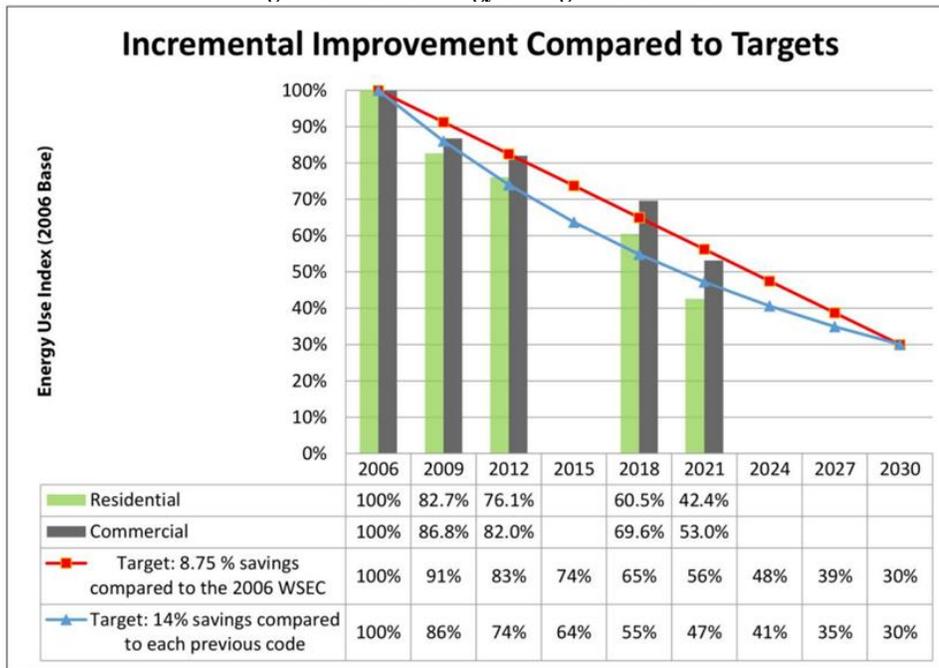
- RCW 19.27A.020(2)(a) instructs the SBCC to "Construct increasingly energy efficient homes and buildings that help achieve the broader goal of building zero fossil-fuel greenhouse gas emission homes and buildings by the year 2031."



- RCW 19.27A.160 identifies that “...residential and nonresidential construction permitted under the 2031 state energy code must achieve a seventy percent reduction in annual net energy consumption, using the adopted 2006 Washington state energy code as a baseline.”

RCW 19.27A.160 provides a measurable directive focused on net energy consumption and RCW 19.27A.020(2)(a) establishes a broad goal indicating a focus on energy efficiency in homes and buildings; both targeting achievement by the year 2031. Of the mandated 70% reduction in annual net energy consumption, the 2021 WSEC are targeted to achieve a reduction of 57.6% for residential buildings and 47.0% for commercial – meaning a remainder of 42.4% for residential and 53.0% for commercial. These results place Washington State on-track to comply with the legislative directive of RCW 19.27A.160, as shown by the trend lines provided in Figure 3⁵

Figure 3: WSEC Energy Savings Trend Lines



3.2.3 Expanded TA Network & Point of Sale Offering

Cascade saw challenges on the ground to be successful in the current and upcoming biennium driven by environmental headwinds, product and skilled labor availability, and misinformation on the future of natural gas in the state of Washington. Cascade took the opportunity to combat these factors by heavily investing in and pivoting towards a

⁵ Pacific Northwest National Laboratory Final Cost-Benefit Analysis of the 2021 WSEC Residential Provisions, February 2023



Point of Sale (POS) model for Trade Allies. The POS rebate program is an enhanced offering for Trade Allies who are in good standing and have participated in the Trade Ally program for a period of 6 or more months.

A POS rebate, from the end customer's perspective, provides an instant discount equating to the full value of the rebate for the installed energy efficiency measure. The Trade Allies then submit a rebate application for reimbursement of this discount, which Cascade aims to process within a 20-day period to establish a positive connection with the contractor and encourage further work within the program.

Data for Trade Allies and the POS program is warehoused in the Trade Ally Connect (TAC) portal, hosted by Salesforce. This software provides continually updated:

- List of Trade Allies
- List of POS Vendors
- License and insurance documents
- Typical territory and service locations
- Services and energy efficient measures provided
- Contact information with full network communication capabilities
- Total therms saved and incentives received per vendor
- Rebate application and payment status
- Bonus Coupon redemption
- Training material

Public facing information such as contractor website, social media, and business type are automatically populated onto the list of Trade Allies housed on CNGC's website. This resource is used to help pair customers looking to make an energy efficient upgrade with certified contractors in their area.

Cascade has invested significant resources in providing training to Trade Allies and POS vendors. Through a process of streamlining contractor invoicing, Cascade minimizes the quantity of applications received requiring additional labor hours in follow up, equipment clarification, or additional residence data to complete each rebate. Administrative staff for trade companies have been prone to high turnover in the current biennium, leading to multiple training sessions required per contractor on occasion. This is a large commitment for CNGC but is crucial for time efficiency in processing and also instills trust in the relationship for POS vendors. Because POS vendors are required to float the value of the rebate during the 20-day processing period, which can amount to hundreds of thousands of dollars, confidence in CNGC's administrative processes are paramount.

CNGC is starting a small-scale pilot with a large POS vendor to try and further streamline the POS application submission process. A pocket-sized tear off sheet, shown in Figure 4 will be carried by each installer to serve as a "checklist" for the



rebate process. This checklist includes requirements for photos of pre and post install, physical address of the project, name and contact information of the CNGC account holder, and a confirmation that CNGC natural gas is the primary source of space heating in the building.

Figure 4: POS Tear Off Sheet



Point-of-Sale Trade Ally Contractor Signature Sheet

Trade Ally contractors who propose to upgrade ATTIC and/or FLOOR INSULATION in homes built in 2014 or newer must provide images to verify PRE-R value. CNGC Trade Ally uses an approved method to provide:

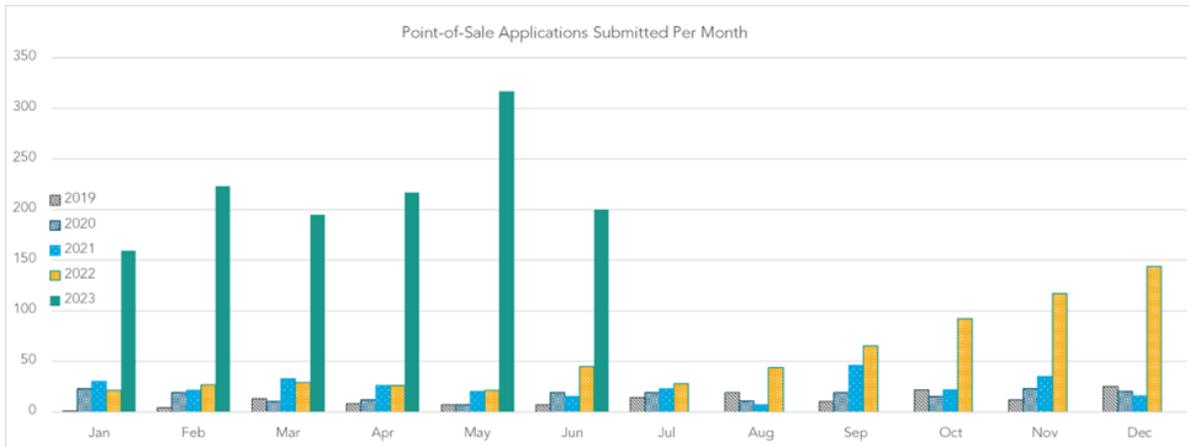
- Images of PRE-R condition
- Physical address of the proposed upgrade

Account Holder: <input style="width: 90%;" type="text"/>		Installation Address: <input style="width: 90%;" type="text"/>	
Email: <input style="width: 60%;" type="text"/>	Phone: <input style="width: 20%;" type="text"/>	City/State: <input style="width: 20%;" type="text"/>	Zip: <input style="width: 10%;" type="text"/>
ACCEPTANCE OF TERMS AND CONDITIONS & ASSIGNMENT OF FUNDS TO TRADE ALLY CONTRACTOR			
<p>Natural gas is my primary source of space heating: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Assignment of Incentive Payment Authorization allows the account holder to transfer the incentive to a third party such as the Trade Ally contractor. To release the incentive payment to the Trade Ally contractor and accept the Terms and Conditions of the program please print, sign, and date below.</p> <p>Ts & Cs: https://www.cngc.com/energy-efficiency/residential-rebate-offerings/residential-terms-and-conditions/</p>			
Authorization: <input style="width: 150px;" type="text"/> <div style="text-align: center; font-size: small;">Print Name</div>		<input style="width: 250px; height: 25px;" type="text"/> <div style="text-align: center; font-size: small;">Signature</div>	
		<input style="width: 80px;" type="text"/> <div style="text-align: center; font-size: small;">Date</div>	

The impact of cultivating the program and the in-depth training the Trade Ally contractors receive can be seen in the consistent overperformance of the application submission rates compared to the 3-year average. The POS program has experienced tremendous growth in the current biennium, shown in Figure 5. In 2021, 291 applications were received. This number more than doubled in 2022 to 735 applications. A total of 1646 Point of Sale applications were received in the first 7 months of 2023, equating to approximately 61% of all applications received in the residential program year to date. This tremendous growth is a result of hard work in continually improving the POS offering and is expected to be a mainstay of savings in the coming biennium.



Figure 5: POS Historical Performance



CNGC performs quality checks throughout the process to ensure the work is of high quality and energy savings estimates should be realized. These checks are facilitated through an established relationship with Community Action Agencies to inspect a subset of projects from each POS vendor to review the quality of the work being performed.

Additional large contractors in the State of Washington are anticipated to join the program before the end of 2023, indicating a path for further growth in the program. Cascade will continue to embrace this business model pivot to maximize the quantity of cost-effective energy savings provided in the service territory.

3.2.4 Commercial/Industrial Updates

The 2022 & 2023 Calendar Years required Cascade’s C/I Program to embrace adaptive, real-time management to maintain program momentum amid an unprecedented pandemic and a challenging economic environment. Economic repercussions from COVID-19’s impacts continued to affect business customers in 2022 & 2023, with rising material and labor costs, supply chain slowdowns, labor shortages, and general economic uncertainty hampering facility upgrades and investment.

Slowly recovering from the pandemic, the C/I Program faced additional hurdles, including environmental goals and proposed new energy codes which disincentivize natural gas use as a focus of decarbonization efforts. Additionally, popular incentives for fryers, steamers, and dishwashers were removed from the program in 2022 to align with WSEC and Appliance Standard updates. These headwinds and changing market dynamics affected both Prescriptive and Custom projects in both 2022 and 2023. Although impacts are difficult to precisely quantify due to the multitude of variables



present, Cascade believes approximately 35,000 therms of gas would have been saved per year for these measures given trends in the previous biennium.

In the face of these challenges, the C&I team adapted to more in-person outreach and having conversations more directly with customers so they could understand their energy usage and future needs, as well as be assured of their ability to use high efficiency natural gas equipment going forward. The team reinstated key account management approaches in the final quarter of 2022. These customers were identified as most likely to expand their efficient gas use and/or complete a custom project to increase their efficiency. This outreach has already delivered additional projects in 2023 and is expected to be a primary source for both prescriptive and custom projects in the coming years.

In an effort to engage C/I customers more fully, in 2023 the Program launched a Strategic Energy Management (SEM) Pilot offering. SEM is recognized as a pathway to deeper energy efficiency within Commercial and Industrial programs and is a foundation for more enduring customer relationships. As part of the SEM offering the team provides C/I facilities with a no-cost walkthrough audit to assist customers in identifying prescriptive and custom savings opportunities. Approximately 10 walkthrough audits have been conducted through October 2023 with 3 leading to custom projects. No savings are claimed for the SEM pilot itself, but quantifiable savings are anticipated to be claimed for projects which result from this pilot. Outreach efforts for this service have escalated in the fourth quarter of 2023 in hopes of continually growing this offering.

Additional C&I Program Pilots launched in 2023 include a focus on Hard-to-Reach (HTR) areas in the southern part of Zone 2 and the offering of a targeted Sales Performance Incentive Fund (SPIF) for HVAC contractors in Zone 3.

Going forward, there will be many opportunities to work with Energy Service Companies (ESCOs) and other Energy Service Providers who are helping Cascade customers comply with the State of Washington Clean Building Performance Standards. For buildings in excess of 50,000 sq feet of floor area (defined as Tier 1 buildings) the C/I Program will work with the Building Owner, Building Manager, Building Operator, Energy Manager, and/or Qualified Energy Auditor/Person to help them qualify for eligible C/I Program incentives as they look to ensure their buildings comply with ASHRAE Standard 100 and Amendment WAC 194-50 rules. Where appropriate, the Program will look to assist these parties in meeting the requirements of the operations and maintenance program and the energy management plan. For buildings between 20,000 and 50,000 square feet of floor area (defined as Tier 2 buildings) the Program will review the published rules, expected by December 31, 2023, and look to provide C/I Program support as appropriate.



3.2.5 Data Security

The importance of data security has only escalated in the current biennium. As Cascade continues to partner with third party vendors for services to elevate the program, the process of keeping customer personal identifiable information (PII) secure has become more stringent. MDU's Enterprise Information Technology Team has established processes for tracking all 3rd party data request internally and performing security reviews on all external vendors receiving data. This also creates visibility internally as to the amount of data being shared which provides a high-level risk profile which is tracked by the Company. Automations are being established within the Company to trigger annual reviews for business users involved in each data transfer to ensure legal requirements are met, agreements with vendors remain confidential, and data storage/retention requirements are met. Cascade employees are required to remain up to date on cyber security training, pass random phishing tests, and be stewards of all customer information that exits and enters the company.

3.2.6 Renewable Natural Gas

Energy Efficiency is only one portion of Cascade's IRP. Cascade has been pursuing renewable natural gas (RNG) opportunities for several years. Prior to 2022, the company was working to develop projects through the Industrial Services Managers as a part of their work with large volume customers. However, the work involved with development of these projects is much more time extensive than normal large volume projects. In response to growing RNG opportunities and decarbonization projects, Cascade added a third industrial Services Manager in early 2022 to focus directly on RNG project development and early hydrogen work. This has been a successful effort to date with the Company executing contracts for 5 RNG interconnect facilities between spring of 2022 to 2023. RNG production is anticipated to be flowing on Cascade's system by late 2023 with a second tier of larger facilities coming on-line in late 2024 through mid-2025.

It has been Cascade's primary intention to focus on directly decarbonizing our pipeline system through the development of on-system projects. Cascade currently has partnered to develop RNG Projects with:

- City of Richland, WA, Horn Rapids Landfill – Cascade is building interconnect and pipeline facilities to transport RNG generated from the landfill gas to the Company's Richland distribution system
- Lamb Weston, Richland, WA - Cascade is building interconnect and pipeline facilities to transport RNG generated from digested potato waste to offset natural gas on the Company's Richland distribution system
- Deschutes County, Knotts Landfill, Bend, OR - Cascade was awarded the contract to assume the gas collection system operation, build the biogas processing facilities, and pipeline facilities to transport RNG generated from landfill gas to offset natural gas on the Company's Bend distribution system



- City of Pasco Process Water Reuse Facility, Pasco, WA - Cascade is building interconnect and pipeline facilities to transport RNG generated from this industrial wastewater facility to offset natural gas on the Company's Pasco distribution system
- Divert, Inc., Longview, WA – Cascade is building interconnect and pipeline facilities to transport RNG generated from digested food waste aggregated from approximately 100 grocery outlets between Salem, OR and Olympia, WA onto the Company's Longview distribution system

Cascade is continuing to advance new on-system projects. The company is consistently working on 20 projects between those under contract, in new contract negotiations, and early to mid-development. Cascade is also in early evaluation of both system hydrogen blending and direct 100% hydrogen delivery opportunities for large volume customers. The Company is a part of a project being evaluated by the Pacific Northwest Hydrogen Association's competitive Hydrogen Hub bid and also in discussions with private hydrogen developers.

3.2.7 Program Delivery Opportunities

Cascade will evaluate all options to improve and enhance program delivery methods in the coming biennium. Considerations currently include:

- Migrating the residential program software to the ERA for rebate processing
- Further investigating transportation customer energy savings opportunities
- Distributing an RFP for Commercial/Industrial Program implementation
- Bringing the Commercial/Industrial Program fully or partially in-house

The CAG has been involved with evaluating the implementation and performance of the commercial/industrial program over the current biennium. The Company intends to continue partnering with TRC for program implementation through 2024. Cascade is currently evaluating the factors in distributing an RFP for this service for the 2025-2026 program years. The level of response to this RFP will be crucial in determining the viability and level of risk associated with bringing this program in-house in future biennia. Cascade will weigh factors including market conditions, internal and external staffing expertise, bandwidth, regional best practices, and leveraged opportunities within the EE West partnership umbrella in this decision.

3.3 Planning and Evaluation, Measurement & Verification (EM&V)

Process evaluation plays an important role in the overall context of a program evaluation. The primary purpose of EM&V is to empirically evaluate energy savings from installed measures and develop accountable recommendations for program design and operational changes that can cost-effectively improve program delivery.



In August of 2022, Cascade distributed a Request for Proposal (RFP) for third-party measure level Evaluation, Measurement, and Verification (EM&V) of the program to build on historic internal evaluation efforts as outlined in section 9c of the condition's documents for docket UG-21083813:

“Cascade must perform EM&V annually on a maximum four-year schedule of selected programs such that, over the EM&V cycle, all major programs are covered. The EM&V function includes impact, process, market, and cost test analyses. The results must verify the level at which claimed energy savings have occurred, evaluate the existing internal review processes, and suggest improvements to the program and ongoing EM&V processes.”

Cascade intends to follow the below EM&V schedule:

Spring 2023: Commercial Program Impact EM&V

Spring 2024: Residential Equipment Impact EM&V, Full Program Process EM&V

Spring 2025: Residential Envelope Impact EM&V

Spring 2026: Low-Income & Industrial Impact EM&V, Full Program Process EM&V

An impact review for commercial program offerings kicked off the first-year schedule of EM&V activities. Research areas for the commercial program included space heating, water heating, building envelope, food service, and custom projects. The work involved:

- Pre and post-billing data statistical analysis
- Baseload estimation
- Impacts from code and standard changes
- Quantification of custom project energy savings
- Review of project implementation and documentation
- Improvement opportunities

A final report was delivered and filed under docket UG-210838 on 9/15/2023. The study found a realization rate of 95% across the portfolio of evaluation, which indicates no statistical significance of deviation from claimed to realized energy savings. The portfolio of food service, space heating, water heating, and custom measures offered aligned with similar natural gas measure findings offered in the Pacific Northwest region. 93% of all respondents were satisfied or very satisfied with the program overall, and 95.5% were satisfied with Cascade as their natural gas provider.

Some suggestions for improvement to the program were proposed by ADM. These include:

- Including comparison against metered usage baseline for custom projects
- Incorporating newly calculated saving assumptions for radiant heaters, furnaces, and boilers



- Greater clarity in recording building type, size, and number of units such as rooms in a hotel or students in a school
- Possibilities to re-incorporate measures which have been phased out of the program
- Best practices for project documentation and organization for future EM&V

Cascade has made progress with those suggestions which can be readily implemented and is in discussion with the commercial implementor, TRC Companies, to continue incorporating these improvements into the program in the upcoming biennium.

3.4 Washington Low-Income Program

Cascade partners with Washington's Low-Income Weatherization providers to deliver the Low-Income Weatherization Incentive Program (WIP). The WIP provides rebates to low-income agencies delivering home energy improvements to eligible Cascade customers. The traditional WIP covers the installation of certain energy-efficiency measures following the completion of an energy audit performed by a qualifying Community Action Agency or Low-Income Agency. Calculations for rebates are based on the projected annual therm savings of the measure(s) x 100% of the Avoided Cost per therm and are revised according to the most recent Integrated Resource Plan.

The WIP is supplemented by the Enhanced Low-Income Weatherization Incentive Program (EWIP) which took effect on February 1, 2017. The WIP provides funds to agencies based on the Avoided Cost of tariff-eligible weatherization measures installed in a customer's home. Under EWIP, participating Agencies are also eligible to receive a rebate designed to bridge the gap between the Avoided Cost payment and the total installed cost of the approved weatherization measure. Installed cost includes incidental repair work necessary to the installation of a qualified measure, Incidental cost is a major contributor to Agencies project deferral. EWIP has been instrumental in the agency's ability to continue to serve households who would otherwise go unserved in those highly impacted communities.

On an annual basis a Memorandum of Understanding (MOU) is required for each Agency interested in participating in the in the WIP/EWIP program, each Agency provides an estimate of projects to complete for current year.

On March 1, 2022, revisions to the WIP/EWIP program took effect, increasing per-project coordination payment by 5% "a maximum program average of 20 percent of the total project cost as billed to the Company." In addition to the project coordination increase, the Company allowed for exemption to Savings to Investment Ratio (SIR)



“exemptions to the 1.0 SIR requirement for individual measures, if such exemptions are consistent with provisions in the Department of Commerce Weatherization Manual, and the total weatherization project remains cost-effective. Such exemptions must be approved on an individual basis by the Company and its Conservation Advisory Group. Only Agencies with a demonstrated 12-month history of projects whose final costs have not exceeded 120% of anticipated costs shall be eligible for this exemption”. The Company historically adjusts its offerings via Tariff 301.

Overall, the WIP/EWIP program is operating as intended, with increased engagement by the agencies that deliver weatherization services in Cascade’s service territory. Though Agencies continue to face supply chain issues and labor shortages, we have seen a steady increase post COVID-19.

3.4.1 Deemed Measure

Cascade is committed to increasing participation from Community Action Agencies to serve more customers through the Company’s combined Weatherization Incentive Program (WIP) and Enhanced Weatherization Incentive Program (E-WIP).

There are a couple of important factors to take into consideration as we seek to align processes in 2024. First, our Agencies delivering the program will no longer use TREAT to base all energy modeling and cost-effectiveness calculations for single family units. This releases the Agencies from the Savings to Investment Ratio (SIR) requirement in single family unit projects. Agencies will be transitioning to a new software named Energy Community Online System (ECOS). This database will support the use of two separate lists of measures which have been preapproved as cost effective and energy efficient by the Department of Energy (DOE):

- DOE Priority List
- Department of Commerce Deemed Measure Priority List

ECOS does not support multi-family projects, therefore Agencies will continue the use of TREAT in these projects. Agencies will work through a hybrid process based on the type of project they are working on.

Second, the Department of Commerce Weatherization measure life is significantly lower than the Company’s measure life. The Company will be working with the Agencies and the Conservation Advisory Group to compare the two program inputs in order to further align with the Weatherization measure life, weighing the benefits and disadvantages. However, now that agencies are required to adopt the DOE Priority List



and Deemed Measure Priority List which are a list of preapproved measures, the measure life topic will be an important focus for the Low-Income Weatherization Program.

The Company continues to work with the agencies, the Department of Commerce and its Conservation Advisory Group to review current program reporting requirements in an attempt to streamline the process and encourage additional uptake.

3.4.2 Equity Advisory Group

Cascade firmly believes in contributing to the support of the communities we serve. Cascade customers span over 95 communities, 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 has established an Equity Advisory Group (EAG) that will provide a forum for community members and community-based organizations to inform the development of energy equity in some of the communities found to be most economically disadvantaged. 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.

Our commitment to our customers is a priority, the development of EAG will improve equitable distribution of energy benefits for Cascade customers and in doing so reduce burdens to energy justice communities. The EAG will cover a number of topics such as community engagement, policy and regulatory procedures, rate cases, and energy efficiency.

The EAG kick-off meeting was held September 27, 2023, where the Charter, member expectations and meeting schedule was discussed/reviewed. Scheduled meetings will continue throughout the coming biennium to further develop this group and mission.

We will continue to provide EAG members with company history, program education, regulatory process, and procedural knowledge in the first year of implementing the EAG. We will focus on the core tenets of energy justice as stated below and in *Final Order 09 Docket UG-210755*.

- Distributional justice, which refers to the distribution of benefits and burdens across populations. This objective aims to ensure that marginalized and vulnerable populations do not receive an inordinate share of the burdens or are denied access to benefits.



- Procedural justice, which focuses on inclusive decision-making processes and seeks to ensure that proceedings are fair, equitable, and inclusive for participants, recognizing that marginalized and vulnerable populations have been excluded from decision-making processes historically.
- Recognition justice, which requires an understanding of historic and ongoing inequalities and prescribes efforts that seek to reconcile these inequalities.
- Restorative justice, which is using regulatory government organizations or other interventions to disrupt and address distributional, recognition, or procedural injustices, and to correct them through laws, rules, policies, orders, and practices.

3.4.3 Community Action Agencies: Inspections

Cascade performs Quality Control (QC) Inspections on up to 5% of residential energy efficiency projects receiving incentives on an annual basis through its Energy Efficiency Incentive Program.

As of July 2023, Cascade leveraged relationships with Community Action Agencies delivering the Low-Income Weatherization Program and their Inspectors to conduct QC Inspections for the EEIP, providing needed quality assurance checks for residential program measures completed across the service territory. Agencies have building science experts that hold certification in quality control and energy audits, all varying in length of service and experience.

Agencies ensure work performed under the EEIP is done correctly and meets all technical requirements necessary to qualify for incentives. Each Agency typically covers their assigned geographic area according to individual agreements held with Cascade.

3.4.4 Oregon Low-Income Energy Conservation Program

Cascade is committed to its Low-Income Programs and working to mitigate energy burden through multiple tools and views changes to programs such as Oregon Low-Income Energy Conservation Program (OLIEC) as a proactive effort to improve equitable access to services and reduce energy burden for low-income households.

The Company recently restructured its OLIEC program to remove barriers faced by Agencies serving low-income Cascade customers. Work was centered around an increase in funding and flexibility in incidental costs to ensure Agencies can perform the appropriate measures in eligible homes. By allowing this flexibility, it is expected to see less deferred homes and ensure homes are up to weatherization specifications before installing energy efficiency measures, therefore preserving affordable housing.



The OLIEC program provides services to qualifying low-income households within Cascade’s service territory. OLIEC makes the homes more energy efficient by providing rebates for the installation of certain weatherization and conservation measures.

Participation for each program year can be found in Table 6. The Company included the Avoided Costs used for 30-year measures in each program year, the total funds paid out to the Agencies per year, and the average rebate per home.

Table 6: Weatherization Incentive Program Participation & Savings by Year

Year	Number of Homes Served	Therm Savings	Total Funds Paid Out to Agencies	Average Rebate Per Home	Avoided Cost Per Therm Paid for 30-Year Measures
2008	46	13,985	\$101,631	\$2,209	\$13.06
2009	55	14,733	\$168,378	\$3,061	\$13.06
2010	112	30,809	\$358,316	\$3,199	\$13.06
2011	85	24,130	\$251,248	\$2,991	\$11.66
2012	64	21,824	\$233,162	\$3,643	\$11.66
2013	38	14,960	\$132,882	\$3,497	\$8.09
2014	21	7,338	\$54,374	\$2,589	\$8.09
2015	19	11,724	\$89,508	\$4,711	\$8.09
2016	24	11,743	\$87,065	\$3,628	\$8.09
2017	27	5,564	\$165,935	\$6,146	\$8.09
2018	28	5181	\$234,667	\$8,381	\$18.77
2019	66	13,416	\$910,314	\$13,793	\$30.98
2020*	38	8,125	\$552,684	\$14,544	\$30.98
2020*	5	1,088	\$86,785	\$17,357	\$24.85
2021	37	8,265	\$663,762	\$17,940	\$24.85
2022*	22	4,524	\$318,782	\$14,490	\$24.85
2022*	14	3,163	\$204,396	\$14,600	\$30.98

*Avoided Costs were updated in 2020 and 2022 to align with tariff updates. Split years are represented demonstrating program participation under each Avoided cost.

Cascade anticipates a total savings potential of approximately 19,522 therms for 2024 and 21,565 for 2025. This is based on the 2023 savings average YTD of 227 therms per project multiplied by an estimate of 86 homes served in 2024 and 95 in 2025. Projected homes served is based on historical MOUs from weatherization agencies in



Cascade's service area and conversations had in 2023 towards completions of MOUs for the upcoming biennium.

As always, the Company appreciates its weatherization partners and is committed to working with the agencies and the Energy Project to ensure weatherization services are available to those who qualify.

4. Targets Developed through LoadMAP™

Cascade is providing targets for its conservation potential based on the inputs from the 2023 IRP and outputs from the 2023 CPA. The administrative costs have been updated based on 2024 and 2025's estimated budgets and expected contracts. Savings targets were pulled from the CPA filed with the WUTC on June 15, 2023.

Projected achievements, or targets, are based on the Company's best estimates of its UCT Achievable Economic potential. Performance deviations from projections are subject to evolving efficiency technologies, economic impacts, customer interest and program participation levels, and most notably external influences from regional and regulatory bodies.

4.1 Biennial Targets

The Company continues to explore the cost-effectiveness of measures included in the CPA for both those measures that are and are not currently offered in its portfolio. A joint review of the CPA compared to program portfolios is reflected in the work papers which represents recommended program updates including addition of measures, reduction and increase to rebates and removal of offerings that have become code or no longer exhibit cost effective savings potential.

The conservation potential for this Plan calculated through the AEG LoadMAP model is separated into three customer classes for individual savings assumptions, market segmentations, and end uses (heat-sensitive resources have different savings potential by Climate Zone and income level for the Residential section).

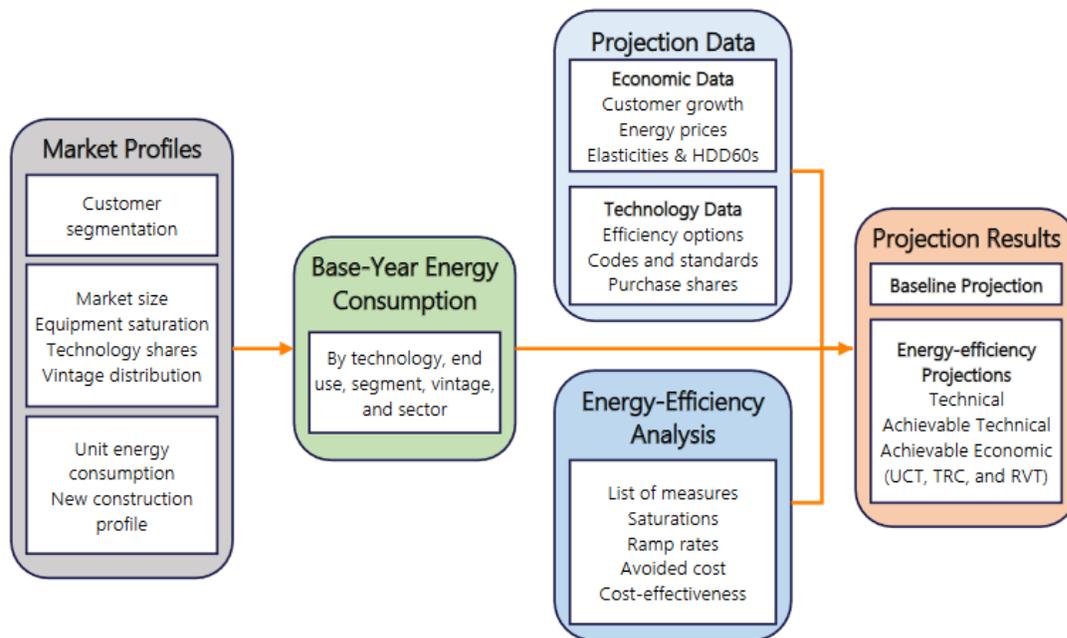
LoadMAP generated targets for the CPA are acknowledged in the BCP and the Company will aggressively strive towards these targets. Regardless of goal achievement, the programs are structured to ensure cost-effectiveness can be maintained, even if participation levels fall short or admin costs run higher than anticipated.

For this analysis, AEG used LoadMAP version 5.0 to develop both the baseline projection and the estimates of potential. AEG developed LoadMAP in 2007 and has



enhanced it over time, using it for the Electric Power Research Institute (EPRI) National Potential Study and numerous utility-specific forecasting and potential studies since. The LoadMAP framework is built in Microsoft Excel and is broken out consistent with the segmentation scheme and the market profiles described in Figure 6. The LoadMAP model provides projections of baseline energy use by sector, segment, end use, and technology for existing and new buildings. It also provides forecasts of total energy use and energy-efficiency savings associated with the various types of potential.

Figure 6: LoadMAP Analysis Framework



This modeling tool was built on a platform that provides the ability to run multiple scenarios and re-calculate potential savings based on variable inputs. Inputs include customer and demand forecasts, IRP long term discount rate, transmission loss rate and Avoided Costs as well as 2022 program performance and measure data collected through energy efficiency applications to establish incremental costs reflective of the service territory. This model provides transparent assumptions and calculations for estimating market potential. A full list of assumptions and inputs are provided in the 2023 CPA.

While Technical and Achievable Technical potential are both theoretical limits to efficiency savings, Achievable Economic potential embodies a set of assumptions about the decisions consumers make regarding the efficiency of the equipment they purchase.



Cascade’s EE program adopted the Achievable Economic UCT potential to set goals under an array of possible future conditions in collaboration with the CAG.

The CPA also provided guidance and best practices on how market adoption rates (or ramp rates) are calculated at a regional level in alignment with Northwest Power and Conservation Council’s 2021 Plan which were adapted to develop achievability factors for each measure in Cascade’s CPA. Additional details on ramp rates are available in the 2023 CPA.

4.2 Savings Potential

LoadMAP provides the Company with sector specific Technical, Achievable, Achievable Economic UCT and Achievable Economic TRC potential throughout the forecasting horizon. Cumulative savings potential for the upcoming biennium and throughout the planning horizon are outlined in the following section. Further details and narrative around these potential calculations are housed in Chapter 5: Overall Energy Efficiency Potential in the 2023 CPA.

4.2.1 Combined Residential and C/I Portfolio Potential

Figure 7 shows the cumulative DSM forecast by Technical, Achievable Technical and both UCT/TRC Achievable Economic Potentials. The company aims to meet or exceed the Achievable Economic UCT Potential of 1.782 million therms in the coming biennium.

Figure 7: DSM Forecast by Potential Calculation

Scenario	2024	2025	2028	2033	2038	2043
Baseline Projection (thousand therms)	229,381	225,522	213,715	195,878	181,440	169,938
Cumulative Savings (thousand therms)						
Achievable Economic UCT Potential	815	1,782	5,544	13,241	19,672	23,777
Achievable Economic TRC Potential	669	1,475	4,648	10,899	15,660	18,490
Achievable Technical Potential	1,685	3,540	9,674	20,333	28,372	32,828
Technical Potential	4,621	9,288	23,102	42,998	55,754	62,474
Cumulative Savings (% of Baseline)						
Achievable Economic UCT Potential	0.4%	0.8%	2.6%	6.8%	10.8%	14.0%
Achievable Economic TRC Potential	0.3%	0.7%	2.2%	5.6%	8.6%	10.9%
Achievable Technical Potential	0.7%	1.6%	4.5%	10.4%	15.6%	19.3%
Technical Potential	2.0%	4.1%	10.8%	22.0%	30.7%	36.8%



Figure 8 shows the Cumulative UCT Achievable Economic Potential by Sector. This cost test will remain the primary metric tracked and reported by the Company throughout the upcoming Biennium.

Figure 8: Cumulative UCT Achievable Economic Potential by Sector

Sector	2024	2025	2028	2033	2038	2043
Residential	446,143	969,752	3,047,823	7,883,583	12,712,372	16,243,729
Commercial	300,711	670,319	2,084,348	4,457,378	5,722,243	6,104,298
Industrial	67,989	142,141	411,523	899,907	1,237,704	1,428,639
Total	814,843	1,782,211	5,543,693	13,240,867	19,672,319	23,776,666

The savings potential in the coming biennium represents an aggressive but achievable target for the Company. Cascade intends to meet or exceed these targets through outreach, program delivery efficiencies, enhancements to the program plan, and collaboration with service providers and community influencers in the service territory.

4.3 Long Term Energy Savings Potential

When projecting long term energy savings potential, external considerations must also be addressed. This includes product availability to utility customers and an adequate network of contractors, retailers, and TAs to support a program. As new measures or expanded programs are developed and added to the current program mix, internal and external resources and capabilities need to grow accordingly and progress through a “learning curve.” Additionally, revised projections regarding the cost of natural gas and other external factors will lead to revisions to the Company’s programs and will result in additional impacts on the company’s projected participation levels.

Specifically, building codes play a significant role in Residential and Commercial therm savings potential. These assumptions will need to be continually updated as the impact to home builders and homeowners becomes more apparent as time progresses. The Company will seek ways to make up the gap in savings from this potential transition away from high-efficiency natural gas in new homes. As new homes trend away from using natural gas this reduces the total potential available for the Company to incentivize. New building code is set to dramatically reduce or eliminate opportunities to incentivize natural gas equipment in new construction. Code restrictions from WSEC 2021 were included in the 2023 CPA as understood in the spring of 2023. These assumptions may be continually updated through alternative scenario analysis as code is finalized and impacts to the program become more tangible.



5. Regional Collaboration

Cascade engages with partners throughout the Pacific Northwest to increase availability of energy efficient appliances, develop industry accepted guidelines for program delivery and leverage efforts to maximize ratepayer value. These efforts currently involve membership in NEEA, the RTF and joint utility program efforts and messaging.

5.1 Regional Technical Forum (RTF)

The RTF is a technical advisory committee to the Northwest Power and Conservation Council established in 1999 to develop standards to verify and evaluate energy efficiency savings. The RTF is funded by regional utility groups including Cascade. A five-year funding period is established to provide consistency with long-term goals, it also provides flexibility to meet regional needs on an annual basis. RTF develops a work plan for each calendar year that lays out the generalities based on anticipated needs.

A Natural Gas Subcommittee formed in November 2022 to vet materials before they go to the RTF. The focus for the upcoming biennium is Packaged Heat Pumps for Multi-Family and Commercial Lodging. Analysis and evaluation of efficient gas rooftop units is well underway. The RTF is focusing on simplifying the testing process for these units, as complications in approval can arise for units designed for both residential and commercial use. Pre-condition, direct-install capability, heating savings and cooling savings, different installation costs and other issues are being evaluated.

Additional information on the Regional Technical Forum can be found at <https://rtf.nwcouncil.org/>.

5.2 NEEA Natural Gas Regional Market Transformation

Market Transformation efforts are a key element to increasing accessibility of new technologies to the region's natural gas consumers. NEEA's purpose, per their Strategic Plan for 2020-2024 states:

“NEEA is an alliance of utilities that pool resources and share risks to transform the market for energy efficiency to the benefit of consumers in the Northwest.”

As mentioned, the Company's participation in the alliance has proven beneficial in a number of ways, not the least of which is increasing Company familiarity with its regional counterparts and their EE efforts through “long-term value-creating relationships including access to knowledge, new ideas, expertise, improved market power, shared expenses and



shared risk.”⁶ Additionally, NEEA serves an integral role in evaluating feasibility and accessibility to a number of natural gas products that seemed more viable than is currently available in the market. While proving a negative seems counterproductive, these discoveries from the alliance help steer efforts towards the more practicable opportunities for improvement and expansion.

NEEA’s natural gas funders meet on a regular basis to discuss results and next steps of its efforts to move toward these goals. It is important to recognize savings from market transformation efforts are not realized immediately. Deemed savings are achieved in future years once the market can support the higher-efficiency options and that increased customer demand results in more advanced technological improvements. Cascade is committed to the alliance partnership throughout Cycle 7.

In Cycle 7, NEEA’s gas portfolio will be managed with two related goals:

1. Maximizing near-to-medium term energy savings
2. Maintaining flexibility to advance products with the highest likelihood for achieving significant savings

NEEA will operate a portfolio of Market Transformation programs that concentrates efforts in three focus areas: gas heat pumps, dual-fuel and fuel-neutral products, and gas equipment.

Gas Heat Pumps: Gas heat pumps offer enormous savings potential in both space- and water-heating for the region, with the potential to improve efficiency by up to 50% over existing equipment. NEEA’s gas heat pump work builds on investments made during the previous two business cycles. NEEA will build on this foundation and expand into new technology categories to build in flexibility for Cycle 7.

Dual-fuel and Fuel-neutral Products: This focus area will advance technologies that contribute to both electric and natural gas energy savings (i.e., fuel-neutral) or use both gas and electric fuel (i.e., dual-fuel). This includes the current High-performance Windows program, which is funded by both natural gas and electric Funders. NEEA will also build upon learnings from Cycle 6 emerging technology scanning activities to launch an entirely new area of programmatic work around dual-fuel HVAC. In particular, dual-fuel products and systems have significant non-energy benefits that potentially include decarbonization and winter-peak reduction.

Gas Equipment: The gas equipment category includes the current Efficient RTU program, as well as potential new programs advancing efficient gas technologies that do

⁶ NEEA Strategic Plan 2020-24, pg. 2



not include gas heat pumps or use both electric and gas as fuels (e.g., commercial dryers or hearths).

The Company’s involvement and partnership with NEEA strategically invests in these technologies and opens the door to additional opportunities to evaluate GHG reduction potential outside of standard EE opportunities.

5.2.1 Funding & Cost Effectiveness

Cascade’s funding for the NEEA Cycle 6 funding, 2020-2024 was \$1,744,540. After the close of 2024 and the full cycle of funds received are reconciled, Cascade will receive a credit for any funds advanced in excess of actual cycle expenditures. CNGC lists NEEA participation in the Annual Conservation Report and will represent the program’s cost-effectiveness primarily without the NEEA efforts, due to the absence of significant initial therm savings inherent in market transformation. The Company will also calculate its cost-effectiveness with the NEEA membership dues included in the analysis to demonstrate its effect on portfolio cost-effectiveness. Table 7 shows the Cycle 6 cost allocation for Cascade’s participation. NEEA funding commitments are currently underway. Table 7 also reflects Cascade’s estimated Cycle 7 (2025-2029) allocations.

Table 7: NEEA Annual Cost Commitment

Year	CNGC Washington Commitment
2020	\$348,908
2021	\$348,908
2022	\$348,908
2023	\$348,908
2024	\$348,908
Cycle 6 Total	\$1,744,540
2025	\$651,234
2026	\$651,234
2027	\$651,234
2028	\$651,234
2029	\$651,234
Cycle 7 Total	\$3,256,170

Cascade’s participation with the Alliance will continue, with efforts specifically centered on the Natural Gas Advisory Committee (NGAC), the Natural Gas Committee of the Board and the Board of Directors workshops and quarterly meetings. Cascade staff will also engage as needed in subcommittee discussions to leverage the membership.



5.2.2 Housing Stock Assessment Review from NEEA

Cascade continues to participate with NEEA on Regional Building Stock Assessment reports. These assessments characterize the existing building stock to account for regional differences such as climate, building practices and fuel choices and are frequently referenced in CPAs. The current NEEA Business Plan is the first cycle where gas funding is supporting these regional stock assessments.

Cascade has also been actively contributing to the Commercial Building Stock Assessment (CBSA) for the 2024 publishing, the Residential Building Stock Assessment (RBSA), and is actively working with NEEA members in the execution of these projects.

6. Outreach & Messaging Campaigns

The Company frequently reaches out to the public to notify rate payers of available incentives to drive uptake of the EEIP. Cascade approaches its customer-facing energy-efficiency messaging through an integrated communication strategy and ideally multiple outreach methods and avenues are used to deliver a cohesive message to the consumer.

Cascade recognizes the power of graphics, audio, and visual aids to inform rate payers and will continue to develop the expertise to design Infographics for customer and stakeholder communication.

This method utilizes a consistent, frequently reinforced message to increase brand awareness of the EEIP to Cascade customers. In addition to the integrated outreach approach, the Company also employs a cross channel practice where the customer chooses their medium and can use their preferred method to interact with Cascade's programs. Cascade focuses on communication channels that take advantage of messaging venues and synergies with those traditionally employed by leveraging existing partnerships and channels and adding new opportunities as they arise. Ultimately, Cascade tries to keep its energy efficiency message useful and impactful to its audience. For instance, the Company provides messaging about rebate changes through bill inserts, through magazine and radio advertisements, and features on the Company's main website.

Cascade will continue to use traditional, and increasingly, social media and streaming sources to communicate with the public. Working with its corporate customer communication department and external vendors, the EE Department informs customers of upcoming events and accomplishments in real time increasing the breath and relevance of the message to the viewer.



Customers regularly obtain information and interact with the program through the program's website, www.cngc.com/energy-efficiency, the Department's dedicated customer service phone line, and through the dedicated email inbox conserve@cngc.com. Other sources of information come from local TA contactors, staff attended outreach events, social media posts, third-party outreach companies, local newspapers and publications, and its third-party program implementation contractor for the C/I program. Electronic residential rebate submission and interaction is primarily through the Public User Experience (PUX) online application portal or Trade Ally Connect (TAC) which have rapidly grown in popularity in 2023.

The Company delivers program messaging using bill inserts, radio ads, events, community engagement and program material placement in external publications. Cascade recognizes legislative requirements and increasing savings goals require more outreach to targeted audiences which requires additional funding commitment and a creative approach to outreach.

Messaging campaigns include consistent brand specific elements that focus on the EEIP's rebates, the direct benefit to customers of working with TAs familiar with program requirements and low-cost/no-cost options for energy use reduction. The Company wants to assist customers by reducing both perceived, and actual barriers to purchasing higher-performance appliances and weatherization measures by offsetting costs, improving accessibility and providing in-house expertise and recommendations on efficiency choices.

It's important for Cascade to consistently tailor its outreach and message to its intended audience, whether that's a residential customer, commercial business, contractor network, or other. Outreach to areas of low participation require a more local or specific feel to make the message more impactful to that demographic. Conversely, a message about a general upgrade appropriate for residential or commercial placement can be widespread. This is readily apparent when the Company evaluates which print media to use, when to place messages and what specific message to convey.

6.1 Community Engagement

Year over year, program recognition and participation increase due to community engagement and outreach efforts. As the efficiency climate of the Northwest develops further, it's becoming more important to locally engage with customers and unify efforts with other energy programs and utilities.



6.1.1 Radio Engagement

Besides in person interaction, Trade Ally partnered radio ads continue to be successful and desired by contractors. The Company is continuing to offer this outreach as a cooperative marketing tool and will examine similar campaigns in streaming or video format to further promote Trade Ally contractors that install high efficiency equipment in 2024. Trade Allies are provided an annual training and marketing matching fund stipend from the Company to improve customer interest, and through this opportunity they also have the option to forgo the stipend to participate in a series of radio ads jointly promoting the EE programs and the Trade Ally's services. Advertisements are provided in both English and Spanish where available. The company recognizes the value of having trusted TAs inform Cascade's diverse customer base about energy-efficient upgrades.

6.1.2 Print Engagement

Bill inserts and mailers continue to serve as an effective outreach tool highlighting rebate measures and frequently asked questions. Additionally, Cascade understands a reoccurring rebate reminder arriving monthly with a customer's bill (both in the mail and through online account access) aids program recognition and brings new opportunities to the customer's attention as their needs change throughout the year.

Cascade continues advertising in magazines, newspapers, and print materials to reach its less digitally engaged customers to promote equity. Even with the expansion of digital and virtual engagement, some level of print advertising will remain to ensure the broadest customer touch.

Incorporating promotional and QR codes onto static media such as print magazines or digital ads also helps with the reoccurring messaging across platforms. Cascade is able to connect customers directly to pertinent incentive information or the rebate application at the time the customer sees the advertisement. Staff will increase use of these codes to encourage customers to *act now* and engage when attention is on the subject.

6.1.3 Streaming and Digital Engagement

The company has continued to invest in streaming advertisements through third-party service providers. Using streaming services allowed Cascade to only advertise to the targeted customers in certain zip codes, ensuring the appropriate demographic for each advertisement is reached. Cascade will be creating targeted audio and video outreach content for both residential and commercial customers in the state of Washington in the coming biennium. This content will be played in both English and Spanish, being both educational and informational in nature. This content will encourage listeners to consider making efficient home and business upgrades, reduce their carbon footprint, and engage with Cascades incentives through the online application portal.



6.2 Residential Focus

Cascade relies heavily on coordination with local area contractors to encourage uptake of its conservation programs. Training and outreach to TA's continues throughout the biennium to improve understanding of the EEIP, update contractors on program changes and confirm accurate messaging and ease customer application processing.

The Trade Ally program offers benefits and advantages to TAs in addition to POS options and training/advertising reimbursements. TAs also receive advertising on the company website and referrals as vetted contractors.

6.2.1 Home Builder Associations

Although engagement with the home builder program has historically been a strong contributor of energy savings for the program, this relationship has been largely impacted by changes in Washington State energy code. Very few opportunities for energy savings are anticipated in new construction in the coming biennium, limited to lifestyle items such as fireplaces and high efficiency furnaces installed as backup to electric heat pumps. These units typically use minimal quantities of gas throughout the year, and therefore have limited opportunities to save energy and receive sizeable, cost-effective incentives. As a sign of resiliency, Cascade has committed to advertisements in 2024 across several Home Builder media channels including the Kitsap and Skagit-Island Builder Association Membership Directories and Home Builder Association materials in the Tri-cities area. The impact of these placements will be analyzed as conversations with home builders continue in areas where natural gas remains a viable option in the face of environmental headwinds pricing gas appliances out of competition for new home energy certification.

6.3 Commercial Outreach Focus

In 2023, the Company successfully increased website traffic to the commercial rebates page through a multi-channel advertising campaign. The Company ran a digital ad campaign through LocalIQ that targeted business owners and decision-makers in the service territory. The campaign was responsible for increasing website traffic to the commercial rebates page from 430 page views in Q1 2023 to 8,600 in Q2 2023. Program awareness was also increased through advertisements in the Tri Cities Area Journal of Business, GoSkagit.com, and the Yakima Herald, and an audio streaming ad campaign that had 238,400 completed listens. Messaging across the ad campaigns focused on optimizing existing equipment to operate more efficiently and promoting no-cost on-site walkthroughs.

The Company also leveraged direct mail campaigns, bill inserts, and email marketing blasts to advertise Program offerings to targeted customers. To showcase successful



customer stories, a check presentation for a large school district project was held followed by a case study and email blast to widely promote the customer story. New collateral was also developed by the Commercial program implementor to help customers better understand program offerings and how to participate.

In 2024, the Company plans to continue leveraging successful advertising channels to increase program awareness and drive traffic to the Cascade website. This includes plans to run digital ad campaigns through LocalIQ and continue audio streaming ads through 2024, in addition to placing print and online ads in local publications.

The Company will also implement direct mail and email marketing campaigns to share key messaging directly with target audiences. This will aim to drive participation by promoting energy efficiency benefits for C/I customers, the ease of program participation, and no-cost on-site walkthroughs. TRC and the Company will continue to adapt to market conditions and customize strategy and messaging to ensure the Program resonates with C/I customers throughout the coming biennium.

6.4 Social Media

EE messaging is communicated several times a month across Cascade social media channels. EE saving tips, low-cost, no-cost upgrades, and specific CNGC incentive messaging will be created in collaboration with the corporate communications coordinator to address trends in feedback the Department is receiving from customers. It's important to note bandwidth is limited and needs to be shared between Company outreach topics (EE, general safety, 811, customer service, low-income and more) as the Company posts no more than twice a week to prevent contact fatigue. This strategy is in place to prevent customers from encountering Cascade messages in their newsfeeds too frequently, which could result in customers overlooking the post or removing themselves from the page.

Having a prominent presence on social media with TAs will also be more important in the upcoming biennium. The Company will work with contractors to post ads or articles to their social media pages to broaden the EEIP's reach demographically by exposing existing and potential customers to rebate opportunities.

6.5 Public User Interface

In the beginning of the 2022-2023 Biennium, Cascade rolled out the Public User Experience (PUX) application submission tool, providing customers a streamlined experience to submit a digital rebate form. PUX application submission rates continue to rise as improvements are made to the online rebate entry tool. In the PUX, customers can see their application traverse through review, approval, and all the way up until a request for payment has been submitted. This information minimizes status calls encumbering the program, allowing the EE specialist team to focus time on working



through the application queue.

6.6 Business Development Collaboration

Energy Services Representatives (ESRs) provide customers in the field the opportunity to learn about energy efficiency (EE) before purchase and installation of equipment. These customers fall into two categories as a residential/commercial/industrial conversion customer or a residential/commercial/industrial new construction builder.

6.6.1: Residential/Commercial/Industrial conversion customer

The ESR team is a first point of contact for any potential customer looking to replace or upgrade their current heating, hot water, or other energy systems. This first contact is extremely beneficial for the EE department as the ESR's take time to educate the customer about energy efficiency and potential for rebates for not only appliances but other EE offerings such as windows and insulation. This distinct opportunity helps drive not only higher efficiency appliance installation but more importantly the building envelope improvements themselves.

6.6.2: Residential/Commercial/Industrial new construction builder

The ESR team is very connected to the communities in which Cascade serves. They have established relationships with builders, developers, architects, designers, government officials and more that make their ability to get in on projects at inception an advantage for the business. These contacts help drive conversations that support EE measures within the building and for the building design itself. The ESR's advanced notice of projects allow them to ensure proper contacts within CNG's EE department or third-party vendors are made, which can help support better energy efficient decisions for the customer.

6.6.3: ESR/EE Collaboration

Cascade's EE department recognizes the value in collaborating with the ESR team to help influence new customers to make energy efficient decisions. EE participates in quarterly meetings with the ESR department to brainstorm how to support one another, while keeping both groups apprised of program successes, opportunities to promote the incentives or updates to program offerings. As part of that collaboration EE provides tools for the ESR team including targeted rebate offering handouts to these representatives as they engage in pivotal pre-install conversations. The ESR's give back as well to the EE department by keeping them informed of energy code changes. This team approach to serve Cascade customers with the highest quality product possible is imperative.

