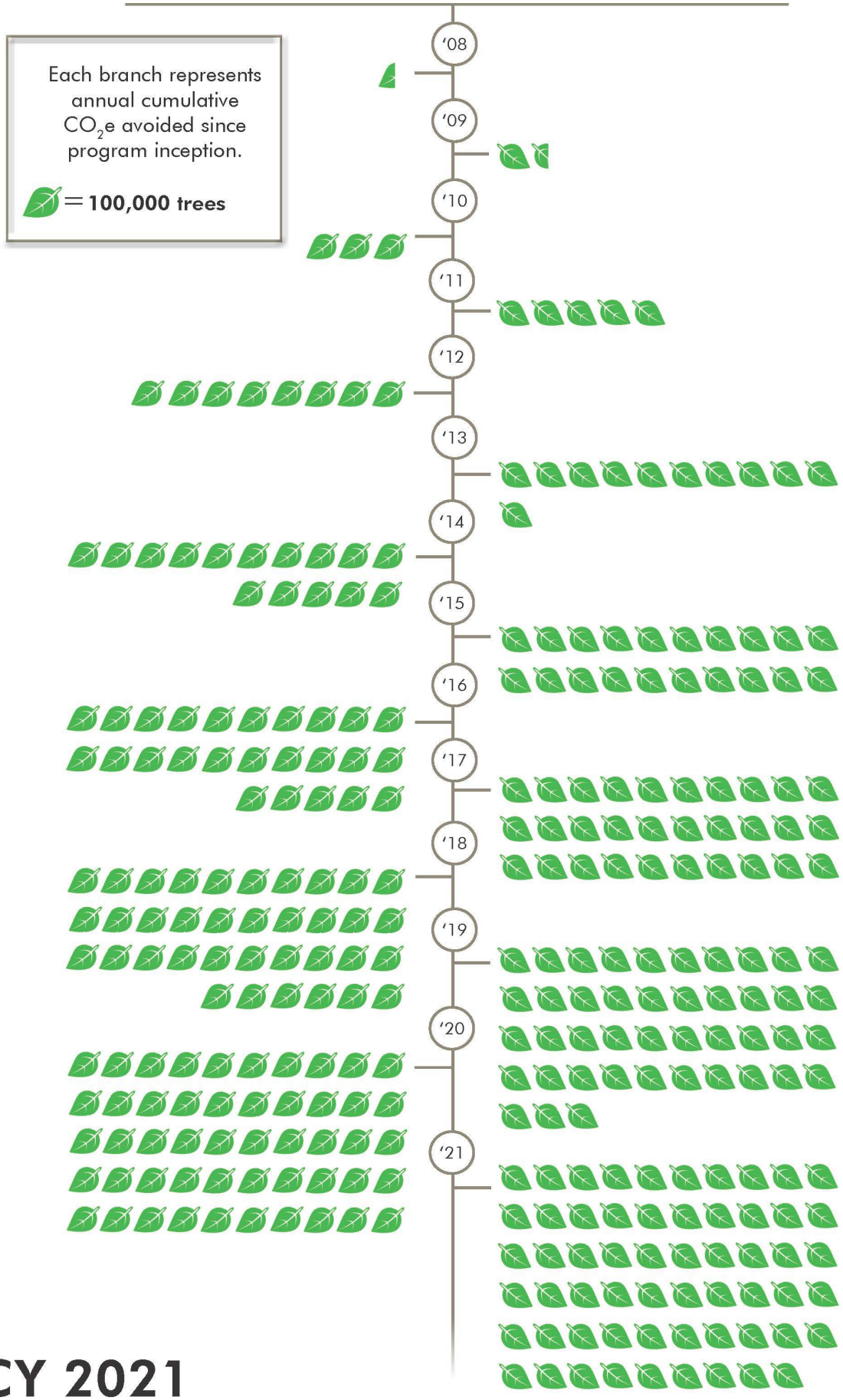
2008 to Present CO_2e Avoided



CY 2021

Cascade Natural Gas Corporation

Energy Efficiency Achievement Report

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Background

Cascade Natural Gas Corporation's (CNGC or the Company) Energy Efficiency Department presents this Annual Conservation Achievement Report of 2021 Energy Efficiency Program accomplishments and activities, satisfying the commitment made by the Company in Docket UG-152286. Per the commitment made by CNGC this report shall be submitted to the Washington Utilities and Transportation Commission (WUTC) by June 1 each year, with advance copies provided to the Company's Conservation Advisory Group (CAG) 30 days prior to Commission filing. The report contains the following:

- The year's conservation achievement by Program and customer type
- Total expenditures for the year by Program and customer class
- Cost-Effectiveness calculations
- Program evaluations completed during the calendar year
- Program outreach in Calendar Year 2021 (CY21)

Cost-Effectiveness Inputs

Avoided Costs for calculating annual achievements coincide with the tariffs in effect at the time of Program participation. For CY21 the Residential and Commercial/Industrial (C/I) cost-effectiveness is calculated based on the Avoided Costs in the 2020 Integrated Resource Plan (IRP). As directed by the WUTC this set of Avoided Costs now includes the Social Cost of Carbon (SCC).

Demand Side Management (DSM) inputs are updated to include a 3.4% long-term discount rate and an

ANNUAL REPORT ACRONYMS	
AEG	Applied Energy Group
BCP	Biennial Conservation Plan
C/I	Commercial/ Industrial
CAG	Conservation Advisory Group
CNGC	Cascade Natural Gas Corporation
CO_2e	Carbon Dioxide Equivalent
CPA	Conservation Potential Assessment
CY20	Calendar Year 2020
CY21	Calendar Year 2021
DBtC	Direct Benefit to Customer
DHW	Domestic Hot Water
DSM	Demand Side Management
EE	Energy Efficiency
EEIP	Energy Efficiency Incentive Program
EM&V	Evaluation Measurement & Verification
ESK	Energy Saving Kit
EUI	Energy Use Intensity
EWIP	Enhanced Weatherization Incentive Program
HB	House Bill
HE	High Efficiency
HVAC	Heating, Ventilation and Air Conditioning
IRP	Integrated Resource Plan
MOU	Memorandum of Understanding
NEEA	Northwest Energy Efficiency Alliance
NEI	Non-Energy Impact
PIV	Post Installation Verification
POS	Point of Sale
PUX	Public User Experience
PY	Program Year
QC	Quality Control
SCC	Social Cost of Carbon
TRC	Total Resource Cost Test
UCT	Utility Cost Test
UEF	Uniform Energy Factor
WAP	Weatherization Assistance Program
WIP	Weatherization Incentive Program
WSEC	Washington State Energy Code
WUTC	Washington Utilities and Transportation Commission

inflation rate of 2.0% for the Avoided Costs from the 2020 IRP; this change applies to the Residential, C/I, and Low-Income Programs.

Discrete non-energy impacts (NEI) are calculated per measure for the Residential and C/I Programs. Cascade revised the NEIs included in its cost-effectiveness calculations for the Residential and C/I Programs as part of Phase Two of its most recent Conservation Potential Assessment (CPA). Further information on Program NEIs can be referenced in UG-210838 CNGC 2022-2023 Biennial Conservation Plan (BCP)[1]. The Low-Income Program uses a flat 10% of costs to represent the benefits of non-energy impacts. These non-energy impacts traditionally have the greatest influence on the Total Resource Cost test (TRC) which is included in this report. However, for the purposes of Program evaluation Cascade continues to apply the Utility Cost Test (UCT) or Program Administrator Cost test as allowed under UG-121207 in coordination with the CAG[2].

In compliance with House Bill (HB)-1257 the Company completed Phase two of its CPA update in the first half of 2021; Phase One was completed in the summer of 2020. This CPA, performed by Applied Energy Group (AEG), used the Avoided Costs from the Company's 2020 IRP. The findings of this CPA were used in the 2022-2023 BCP submitted by the Company in Q4 of 2021.

Goal Setting

The Company's Energy Efficiency (EE) portfolios are periodically reevaluated and updated to balance cost-effectiveness (using current Avoided Costs), participation outcomes and updated building codes. The Company confers with its CAG when alterations to the Program portfolios are necessary.

The Company has used the LoadMAP forecasting tool as the end use planning software for the DSM section of the IRP and Program planning since Q2 2018. One of the primary benefits of the tool is its ability to run the forecast based on a methodology consistent with the National Action Plan for Energy Efficiency *Guide for Conducting Energy Efficiency Potential Studies*[3]. In alignment with the EPA guide, "Three types of potential were developed as part of this effort: technical potential, achievable technical potential, and achievable economic potential"[4]. During Phase Two of the 2020 CPA, AEG adapted the 2021 ramp rates from the Northwest Power and Conservation Council for use with each measure included in the CPA[5].

As goal setting is only an estimate, the achievable economic level of potential savings identified by a model is unable to fully account for all possible reasons a customer would not apply or qualify for a

[1] Docket UG-210838-CNGC-2022-2023-BCP-Plan-11-01-21.pdf pgs. 31-33 November 3, 2021. | UTC (wa.gov)
[2] Docket UG-121207 Nat Gas Cons Policy Statement.pdf pg. 13 paragraph 34 October 9, 2013 | UTC (wa.gov)
[3] Guide for Conducting Energy Efficiency Potential Studies | Climate and Energy Resources for State, Local, and Tribal Governments | US EPA
[4] "2020 Cascade Natural Gas Conservation Potential Assessment" pg. 15 AEG, Applied Energy Group, June 16, 2021.
[5] "2020 Cascade Natural Gas Conservation Potential Assessment" pg. 16 AEG, Applied Energy Group, June 16, 2021.

rebate. For instance, some customers install higher efficiency upgrades and choose not to notify the Company of the install. Alternatively, some who do apply do not qualify for a rebate due to lack of documentation or a late submission. Moreover, industry changes not included in the model can also have a large impact on Program performance, such as the implementation of the 2018 Washington State Energy Code (WSEC). For more information on how the Company adapts to these challenges please reference the Quality Management System section of this report.

Summary of 2021 Program Achievements

CY21 required the Company's Energy Efficiency Incentive Programs (EEIP) to once again fully embrace adaptive management practices to maintain Program momentum and customer support amid the COVID-19 pandemic. As a result of the global pandemic, supply chain issues created shortages of heating, ventilation, and air conditioning (HVAC) equipment which delayed the installation of new furnaces for many Residential customers. In addition to the impacts from COVID-19, there were significant updates to the WSEC and Appliance Standards. These updates impacted two key areas of Residential energy savings for the Company: energy saving kits (ESK) and new home gas equipment installations. The Residential Program maintained cost-effectiveness in the face of this adversity, however these hurdles did impact the Residential therm savings achievements.

The C/I Programs were disproportionately impacted by COVID-19 early in the pandemic; specifically, a downturn in the restaurant industry resulted in a loss of potential high efficiency food-service related energy saving measures. This spurred the development of a plan, coined the Re-COV-ery initiative, aimed at making up for the disruption from the pandemic. For more information on this initiative please reference the Re-COV-ery section from the C/I Highlights.

Table 1 represents the Company's 2021 EEIP achievements.

Table 1: 2021 Program Achievements

	Residential	Commercial	Total		Low-Income
2021 Targets	**471,164**	**578,483**	**1,049,647**		**12,180**
Therms Achieved	**436,103**	**798,874**	**1,234,977**		**8,245**
Measures Installed	**7,542**	**316**	**7,858**		**162**
Carbon Offset*	**2,352**	**4,309**	**6,661**		**40**
NEEA Savings**	**26,538**	**1,377**	**27,915**		**N/A**

*Tons of Carbon Dioxide Equivalent (CO_2e) avoided, based on carbon offset of 10.78671 pounds per therm from 2020 IRP which includes end use & upstream emissions
**Savings reported by NEEA not included in portfolio

In CY21, the Company achieved a deemed therm savings of **436,103** for its **Residential** Program. This represents 93% of the projected goal set in the 2021 Conservation Plan and 53,085 more therms than those reported for the 2020 Program year. CY21 saw the greatest Residential Program year therm savings achievement, beating the previous high-water mark by 15,464 therms. This increase over 2020's achievements is remarkable, especially considering the added complexities involved in

delivering the Program during a year in which the department faced the pandemic, supply chain issues, and major energy code updates. The Program accomplishments and savings in this volatile year may be partially attributed to an increased interest in home comfort and upgrades as the result of an increase in customers that work from home. See the Quality Management System section for more details on how the Program evolved to serve customers.

Cascade achieved savings of **798,874** therms through its **C/I** Program. This is 138% of the Company's projected savings goal for CY21, and 531,929 more therms than were achieved in the 2020 Program year. The persistence of TRC Company (CNGC's C/I vendor) to drive savings for CNGC's C/I customers, saw the C/I Program incentivize the single largest project in Program history. While originally slated to complete in 2020, the installation of a Regenerative Thermal Oxidizer used to burn volatile organic compounds for the customer was delayed until 2021. Through persistent follow up and customer support the C/I Program followed this project through to completion, delivering a momentous achievement for CNGC.

At a portfolio level the savings for Residential, C/I and Low-Income equated to **1,243,222** therms for CY21, exceeding the portfolio goal of **1,061,827 by 17%**. While the Residential and the Low-Income Weatherization Programs fell short of their individual goals, the C/I Program far exceeded its goal. The variability in Program outcomes represents the challenges arising from the pandemic, and the company's adaptation in responding to these impacts.

Program cost-effectiveness is shown in Table 2. On an individual basis, the Residential Program proved cost-effective at a UCT benefit cost ratio of **2.78**. The C/I Program was also cost-effective at a **3.89** UCT benefit cost ratio. At a portfolio level, the combined Program is cost-effective at a UCT of **3.26.** The Residential Program calculates at a **1.47** TRC, the C/I at a **3.45**, and a combined **2.14** at a portfolio level. Originally developed under Avoided Costs that did not include the SCC, the UCT Ratio goals laid out in the 2021 BCP for the Residential and C/I Programs were 1.6 and 2.26 respectively[6]. Although the results in Table 2 could be considered extreme cost-effectiveness, it is important to note that the cost-effectiveness levels are the result of dramatically increased Avoided Costs in the Company's 2020 IRP. Specifically, the inclusion of the SCC in the Avoided Cost significantly increased the cost-effectiveness for CY21. See *UG-210838-CNGC-2021-Conservation-Arpt-WP-1-06.1.22.xlsx* for the full portfolio cost-effectiveness calculations.

Table 2: 2021 Program Cost-effectiveness

*Cost-effectiveness**	UCT	TRC
Residential	2.78	1.47
C/I	3.89	3.45
Portfolio	**3.26**	**2.14**

**Cost-effectiveness excludes Northwest Energy Efficiency Alliance and Regional Technical Forum membership*

[6] Docket UG-200961-CNGC-2021 Conservation Plan-11-30-20.pdf pg. 18 | UTC (wa.gov)

The Company uses the UCT as its primary cost test to gauge cost-effectiveness, while the TRC cost test is provided for reference. The 2020/2021 CPA presented an opportunity to revise the NEIs used for the TRC benefit cost ratio. As recommended by AEG, the Company removed all societal NEIs as the SCC included in the 2020 Avoided Cost already accounted for this set of NEIs. Moreover, the property value benefit was removed from the participant NEI calculation for all measures. Reduced maintenance costs and reduced sewer and water use remained in the participant NEI calculation. Finally, the Company is using a 10% factor to account for all other non-quantifiable NEIs.

Programmatic Spending

Table 3 represents the total Program expenditures for incentives, Programmatic delivery and administrative costs associated with implementation of the Company's Washington EE Programs compared to estimated budgets. Note at a portfolio level, paid incentives were approximately $500,000 less than anticipated. The underperformance of the Residential and Low-Income Programs is the main reason for this variance. Programmatic administrative costs were within $10,000 of the estimated administrative budget. CNGC's aim is to budget as closely as possible to what actual spending will be. Rebate estimates are based on historic uptake of measures, and it is not unusual for actuals to vary from year to year based on measure uptake.

Table 3: 2021 Programmatic Expenses and Paid Rebates

	Incentive Budget Estimates	Actual Incentives Paid	Administrative Budget Estimates	Actual Administrative Expenditures	Total Program Costs
Residential	$2,897,659	$2,786,510	$1,066,042	$931,292	$3,717,802
C/I	1,961,057	1,757,838	1,436,858	1,600,292	3,358,130
Low-Income	840,000	663,762	59,900	23,513	687,275
Program Totals	$5,698,716	$5,208,110	$2,562,800	$2,555,096	**$7,763,206**

	Direct Benefit to Customers (DBtC)*	Program Delivery	Total Program Costs
Expenses	$5,277,097	$2,486,109	**$7,763,206**
Ratio	**68%**	**32%**	
NEEA Gas Market Transformation & Regional Technical Forum			$158,263

*Note DBtC includes all rebates paid through the Residential, Commercial/Industrial and Low-Income Program in addition to some expenses recorded under the "Programmatic expenditures category" like bonus coupon payments to customers, Quality Control Inspections and partnership agreements with community organizations working directly with customers to assist with rebate eligibility and installation.

Costs associated with the Northwest Energy Efficiency Alliance (NEEA) Gas Market Transformation efforts and Regional Technical Forum participation are separated from general Programmatic expenditures for the purposes of assessing Program cost-effectiveness. Market transformation investments create conditions for future energy savings. NEEA estimates cost-effectiveness on a longer time horizon for its initiatives, in lieu of annualized cost-effectiveness calculations. A second set of UCT and TRC benefit cost ratios in *UG-210838-CNGC-2021-Conservation-Arpt-WP-1 06.1.22.xlsx* are available to assess cost-effectiveness of the Program portfolio including the NEEA and Regional Technical Forum expenses. Note this is the 7th year of Cascade's participation with NEEA and membership dues are reduced quarterly to accommodate a credit from Cycle 5 until the credit is expended which will occur in 2022. This credit was the result of NEEA using less of the budget from Cycle 5 than anticipated.

For the second year NEEA is reporting savings estimates for their New Homes Program. They estimate that **27,914 therms** will be saved from Residential and Commercial code updates. This savings is a fraction of the total amount NEEA believes will be saved through their code update efforts and is proportional to the funding provided by the Company to NEEA in support of code updates and market transformation efforts. These savings are shown in Table 1 and are represented outside other Program accomplishments, see *UG-210838-CNGC-2021-NEEA-Arpt-for-CNGC-WP-6- 06.1.22.pdf* for details on NEEA's efforts in 2021.

The Company includes a Direct Benefit to Customer (DBtC) ratio per Docket UG-161253 with a target of 60% expenses attributed as a direct customer benefit. Initial estimates of DBtC in the 2021 Conservation Plan were 70% of total Program costs. The portfolio of Programs in CY21 exceeded the target by 8%, achieving a DBtC of 68%.

Current Year Highlights

Residential

The CY21 results represent a total participant increase of 11% versus Calendar Year 2020 (CY20). This increase in participation can be accounted for by a greater number of participants applying and qualifying for weatherization and a handful of equipment-based measures. This participation increase resulted in 14% more therm savings over 2020.

Existing Home Weatherization saw the largest increases in Window and Duct insulation measures. Updates to windows in 2021 included two offerings: one at the previous qualifying U-factor of 0.27 and a second lower tier at 0.30 U-factor which aligned with the ENERGY STAR® Northern Climate Zone efficiency. This approach increased participation by 125% and increased therm savings attributed to windows by 71% over the previous year. Duct insulation saw a 35% increase in the number of participants, however the average amount of duct insulation installations decreased resulting in nearly identical therm savings amounts between 2020 and 2021.

Equipment measures saw the largest increase in participation from High Efficiency (HE) Boilers and HE Natural Gas Furnaces with increases of 75% and 27% respectively; this is also reflected in the increase in therm savings totals. These measures drove a major increase in participation resulting in the highest therm savings amount achieved by the Residential Program to date. The Residential Program revised the two-tier approach for condensing tankless water heaters to a single measure offering. Overall, tankless water heater installations increased from 821 to 986. HE Exterior Doors were another leading measure which saw an increase of 53% in participation and a 47% increase in therm savings.

HE Natural Gas Furnaces remain the most popular measure offering, continuing the trend from 2020. The most notable decrease was for ESKs. This low-cost measure had 555 participants in 2020, and in 2021 the Company provided only 15 kits. An Appliance Standard update made the low flow showerheads and aerators included in ESKs the standard in Washington which precludes the Company from claiming savings for the install of ESKs. The 15 kits that were provided to customers were ordered in 2020 and fulfilled in 2021. Another notable decrease occurred from Built Green home certification rebates. This measure, which is exclusive to new homes, (defined as homes built in the current or previous CY), saw participation decrease to one third of the 2020 rate. Offsetting the Built Green rebate reduction was a 43% increase in ENERGY STAR home certification rebates. See Table 4 for further Residential Program highlights

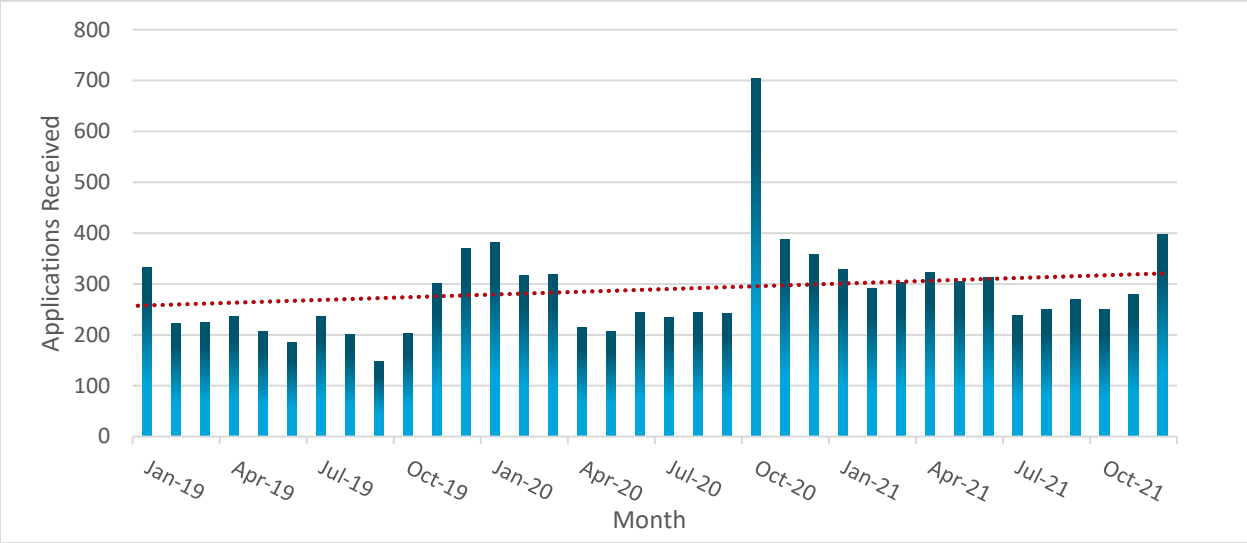
Table 4: Residential Program Highlights

New and Existing Residential Equipment & Weatherization Measures							
Measures		**Participants**		**Therms**			
Existing Home Weatherization *Insulation (in sq. ft.)*		2021	Change from Previous Year	2021	Change from Previous Year	% of Total Therms Saved
Ceiling or Attic Insulation:	**408,767**	343	13%	30,383	16%	7%
Floor Insulation:	**527,557**	440	13%	29,467	13%	7%
Wall Insulation:	**85,805**	96	9%	6,135	17%	1%
Duct Insulation:	**16,551**	146	35%	1,042	0%	<1%
Windows:	**18,547**	160	125%	8,314	71%	2%
Other Weatherization						
Duct Sealing:		164	32%	4,546	32%	1%
Whole Home Air Sealing:		22	-8%	1,646	-9%	<1%
Weatherization Bundle A*:		150	6%	N/A	N/A	N/A
Weatherization Bundle B*:		13	-19%	N/A	N/A	N/A
Subtotals		1534	8%	81,533	19%	19%
New Home Measures**						
Built Green Certified:		37	-29%	8,473	-29%	2%
ENERGY STAR® Certified:		50	43%	10,222	43%	2%
Subtotals		87	0%	18,695	-2%	4%
New & Existing Equipment Measures**						
HE Tankless Water Heater (0.87+ UEF):		85	-46%	5,100	-46%	1%
HE Tankless Water Heater (0.93+ UEF):		737	14%	49,704	13%	11%
HE Tankless Water Heater (0.91+ UEF):		159	N/A	9,545	N/A	2%
Condensing HE Tankless Water Heater:		5	-67%	270	-67%	<1%
Energy Saving Kits:		15	-97%	0	-100%	0%
HE Combination Domestic Hot Water & Hydronic Space Heating:		39	-22%	6,204	-22%	1%
HE Boiler:		28	75%	2,207	67%	1%
HE Exterior Door:		326	53%	4,355	47%	1%
HE Natural Gas Furnace:		2,557	27%	214,750	25%	49%
HE Natural Gas Hearth:		165	15%	9,661	9%	2%
Programmable Thermostat:		1,759	9%	34,079	8%	8%
Subtotals		5,875	8%	335,875	14%	77%
Residential Totals		**7,496*** **	11%	436,103	14%	100%

*Weatherization Bundle Measures are non-energy saving measures. These bundles encourage multi-measure weatherization projects.
**New Home (or Builder) Program excludes all weatherization measures except for High Efficiency (HE) Exterior Doors
***Customers frequently install multiple measures so measure level participants varies from Program level participant totals which are listed in UG-210838-CNGC-2021-Conservation-Arpt-WP-3-06.1.22.xlsx

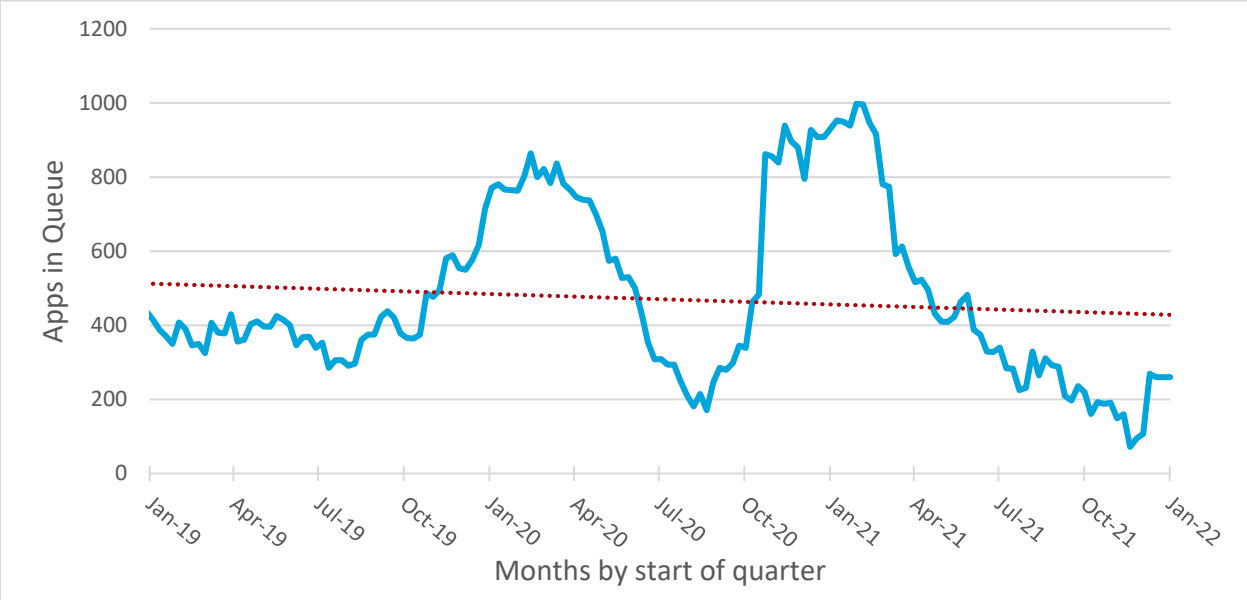
The Company has historically experienced an uptick in Residential rebate submittals in a cyclical pattern from late November through March as demonstrated in Figure 1.

Figure 1: Residential Monthly Intake 2018-2021



As Figure 2 illustrates this seasonal increase in monthly intake results in a larger application queue. In 2021 the EE department made the decision to focus resources on rebate application processing in Q4. This reduced the average queue size and helped avoid the winter queue spike; this is beneficial for customers as larger queue size is highly correlated with increased waiting periods between application submission and receipt of the rebate payment.

Figure 2: Residential Monthly Queue 2019-2021



In addition to these achievements, the Residential Program maintained its relationship with home builders within its service territory. In CY21, a total of 21 builders submitted rebate applications, which is down one participant from 2020. The small decrease in participants masks a challenge for the Residential Program. In 2021 builders submitted 661 applications which is 471 applications less

than 2020, marking a 41% decrease in applications. This downturn was an expected result from the adoption of the 2018 WSEC. Many builders, especially large builders, are turning to electric appliances in new homes to meet the updated Energy Efficiency Credit requirement from section R406 of the WSEC. As builders install fewer gas appliances, the savings available in the new home market is trending downwards for natural gas energy efficiency Programs. Please see Quality Management System for further details on the Company's work to understand how the code update affected 2021 energy savings.

Commercial/Industrial

Continued challenges related to COVID-19 and the supply chain issues impacted the Program throughout 2021, however the Program saw increases over 2020 in numerous areas, including custom projects. In addition to the dramatic increase in therms achieved through custom projects, prescriptive therm achievements also grew in 2021.

Custom project growth was largely due to one project, the largest in Program history, accounting for **510,000 therms** in CY21. As a result of the therm savings through this project, the Program delivered a check for $685,000 to the customer, also the largest single project reimbursement for CNGC. The savings for this project are the result of replacing an old Recuperative Catalytic Oxidizer, used to burn volatile organic compounds, with a new high efficiency Regenerative Thermal Oxidizer. This system provides 99%+ volatile organic compound destruction efficiency while also providing 95-97% thermal recovery effectiveness.

While most of the growth for the Program in 2021 can be attributed to custom therms, prescriptive therms also saw a modest increase. Standard therms achieved through these measures were **254,794** in 2021, up 8% from the 236,660 achieved in 2020 as illustrated in Table 5. The most notable increase in uptake came from boiler projects, with a 21% increase in participation compared to 2020, and a total of 117,957 therms achieved. The increase in boiler participation provided the largest absolute increase in therm savings for all prescriptive measures. In contrast to this increase in prescriptive therms, prescriptive measure participants decreased by 52%. The decrease is accounted for by the removal of all C/I ESKs, excluding pre-rinse spray valves, in response to Appliance Standard updates. In 2020 this measure accounted for 50% of all prescriptive measure participants in the C/I program, while only accounting for 15% of therm savings that year. For this reason, the decrease in prescriptive measure participants appears drastically different than the increase in therm savings would indicate. One other standard measure with significant uptick was Radiant heating. Radiant heating will remain a focus in 2022, with two initiatives focused on increasing uptake for C/I customers.

Overall, foodservice equipment rebounded strongly in 2021 with a 49% increase in therm savings compared to 2020. With this industry deeply impacted by COVID-19, growth was welcomed in 2021. Gas Fryers were responsible for most of the growth with therms for this measure up 46%, to a total of 34,935 therms. The impacts of the pandemic, as well as the changes in foodservice standards, galvanized the Program promoted fryers throughout the year, including a drawing in each of the three

climate zones for a fryer. Outreach for this drawing promoted fryers specifically and the Program in general and included postcards to more than 900 customers. Most of these customers were small businesses, predominantly restaurants, and resulted in numerous conversations with business owners interested in efficiency upgrades. While this measure will no longer be available in 2022 due to changes in the Washington Appliance Standards the Company maintains the list of customers and can highlight alternative, HE equipment opportunities. See Table 5 on the next page for further C/I Program highlights.

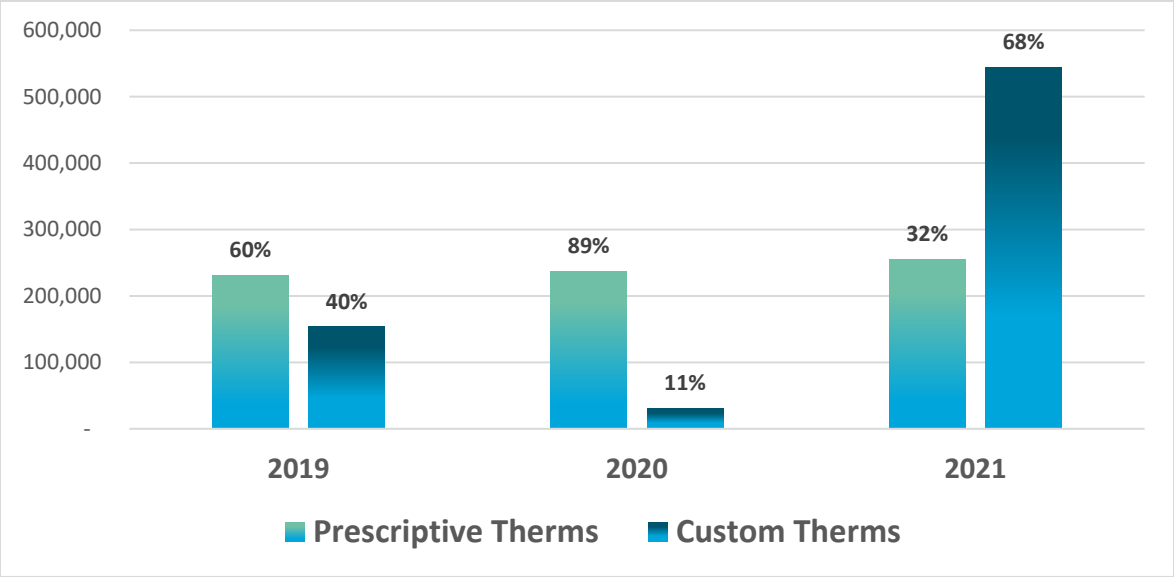
Table 5: C/I Program Prescriptive Measure Highlights

C/I Equipment & Weatherization Measures						
Measures		**Participants**		**Therms**		
Weatherization *Insulation Measures (in sq. ft.)*		2021	Change from Previous Year	2021	Change from Previous Year	% of Therms Saved
Attic Insulation (Tier 1):	**23,975**	2	-60%	7,432	-56%	3%
Attic Insulation (Tier 2):	**35,804**	8	33%	11,457	116%	4%
Wall Insulation (Tier 1):	**5,571**	3	0%	891	-63%	<1%
Wall Insulation (Tier 2):	**16,539**	4	-33%	3,142	-1%	1%
Roof Insulation (Tier 1):	**8,888**	3	200%	3,111	-26%	1%
Roof Insulation (Tier 2):	**47,884**	2	-60%	17,238	-50%	7%
Floor Insulation:	**16,231**	4	300%	909	610%	<1%
Windows:	**785**	17	21%	863	-61%	<1%
Subtotals		43	5%	45,044	-34%	18%
Food Service Measures						
Gas Conveyor Oven		0	-100%	0	-100%	0%
Gas Convection Oven		4	-20%	3,894	28%	2%
Gas Fryer		30	30%	34,935	46%	14%
Low Temp Door Dishwasher		4	100%	1,792	100%	1%
Double Rack Oven		1	N/A	1806	N/A	1%
Subtotals		39	18%	42,427	49%	17%
Space & Water Heat Measures						
Demand Control Ventilation		8	-60%	715	-59%	<1%
Boiler		46	21%	117,957	91%	46%
Motion Control Faucet		5	150%	4,624	-59%	2%
DHW Tankless Water Heater		22	-35%	5,719	-46%	2%
DHW Tanks		31	-21%	6,493	-1%	3%
Energy Saving Kits		1	-100%	178	-99%	<1%
Warm Air Furnace		38	-42%	5,689	1%	2%
HVAC Unit Heater - Condensing		26	N/A	4,472	N/A	2%
Radiant Heating		48	243%	21,477	247%	8%
Subtotals		225	-60%	167,323	22%	66%
Prescriptive Program Totals		307	-52%*	254,794	8%	100%

* Please note the drastic decrease in participation is the result of discontinued Energy Saving Kit (ESK) measures. ESKs made up more than half of Program participants in 2020 yet contributed only 15% of the total 2020 prescriptive therm savings.

Figure 3 provides therm savings comparisons between custom and prescriptive measure installs from pre-pandemic levels through 2021.

Figure 3: Prescriptive vs Custom C/I Therms Savings 2019-2021



Re-COV-ery

Market changes related to an evolving financial and social status quo required the Program to adjust to these new conditions. Preemptively, the Program developed a new initiative, called Re-COV-ery, for C/I customers' buildings smaller than 50,000 square feet going into 2021 (the Company was seeking to fill the gap in customers identified through the Clean Buildings Act). The Re-COV-ery initiative focused on direct contact with C/I customers to ensure they felt supported through the challenges businesses faced in the COVID-era. Additionally, the initiative used targeted advertising regarding incentives for C/I energy savings. For more information on this advertising campaign please refer to *UG-210838-CNGC-2021-Conservation-Arpt-WP-5-06.1.22.xlsx.* On top of increased outreach, this initiative gave C/I customers the opportunity to receive an additional 10% in incentives when more than three measures were installed. This offer resulted in 17 different customers receiving a total of $8,277.54 in additional incentives.

Hard-to-Reach Communities

The Program identified two hard to reach communities in 2021: The southern part of zone 2 and the Spanish-speaking market.

The southern part of zone 2, which includes Longview, Kelso, Woodland, Kalama and Castle Rock, has traditionally been an area with low program uptake and a lack of investment. To address these challenges, the Program brought in a part-time business development staff member to spend more time in the territory and focus on C/I customers and contractors. The increased awareness of the Program led to more projects from this area than in 2020 and helped build a firm foundation for future growth.

The cities with the greatest population of Spanish-speakers in the state are in CNGC territory and this market is vital for continued growth. For the first time, the Program used a variety of traditional advertising channels to promote Program participation. For more details, please reference *UG-210838-CNGC-2021-Conservation-Arpt-WP-5-06.1.22.*

Schools

The education market has been a constant for the C/I Program, with new schools and large retrofits providing both prescriptive and custom projects. In order to continue these relationships, the C/I Program attended the Washington Association of Maintenance and Operation Administrators (WAMOA) conference in October. The conference offered an opportunity to speak directly with facilities and maintenance managers. In addition to the large projects that schools offer, the time spent speaking with facilities and maintenance managers should facilitate smaller projects, where a school is replacing one piece of equipment or making more minor retrofits. The C/I team has also attended (both virtually and in-person) regional meetings for WAMOA.

Low-Income

The Company has offered its Schedule 301, Low Income Weatherization Incentive Program (WIP), since 2008. The WIP offers rebates for weatherization measures to qualified Agencies delivering whole-home energy improvements through the Weatherization Assistance Program (WAP) to income-eligible customers in the CNGC service territory. In addition to the rebate offering in the WIP, the Company also offers an Enhanced Weatherization Incentive Program (EWIP) aimed at removing barriers for the Agencies delivering home improvements through the WAP. The expanded Program removed a $10k per-project cap and added a 15% project coordination fee and 10% indirect rate to help cover Agency expenses. The project coordination fee and indirect rate are periodically revisited to reduce financial barriers to Agencies when performing whole-home energy improvements. The Company supports weatherization as it reduces the customer energy burden, improves indoor air quality, and increases building durability. CNGC is committed to ensuring as many low-income natural gas homes receive weatherization services as possible and believes it can achieve this through the WIP and EWIP.

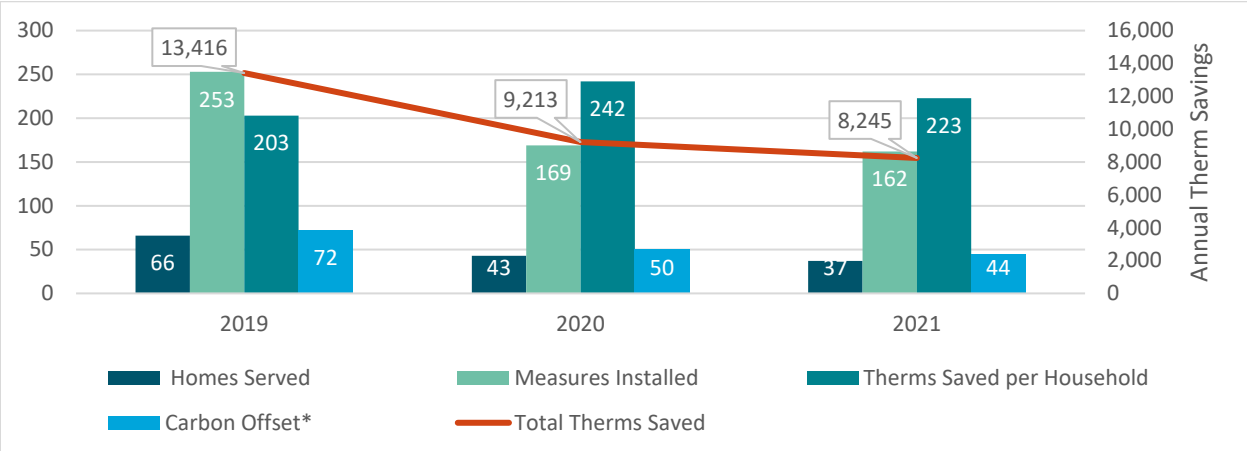
As seen in Table 6 CNGC works with twelve Agencies across Washington, of which ten Agencies actively participate. For the first time in 2021 Chelan-Douglas Community Action Council participated in Cascade's Programs. In 2021 the Company did not receive projects from the following Agencies: Community Action Council of Lewis, Mason, and Thurston Counties and the Snohomish Office of Energy and Sustainability.

Table 6: Community Action Agencies

Agency Name	County Served
Blue Mountain Action Council	Walla Walla
Chelan-Douglas Community Action Council	Chelan
Coastal Community Action Program	Grays Harbor, and Pacific
Community Action Council Benton, Franklin	Benton, and Franklin
Community Action Council of Lewis, Mason, Thurston	Lewis, Mason, Thurston
Housing Authority of Skagit County	Skagit
Kitsap Community Resources	Kitsap
Lower Columbia Community Action Program	Cowlitz
Opportunities Industrialization Center of Washington	Adams, Grant, Yakima N of Union Gap
Opportunity Council	Island, Whatcom
Snohomish Office of Energy and Sustainability	Snohomish
Yakima Valley Farm Workers Clinic DBA NWCAC	Yakima, South of Union Gap

CNGC requires a Memorandum of Understanding (MOU) for Agencies to access the EWIP. The MOU describes Program qualifications, the obligations of the Agency and CNGC, as well as spelling out insurance requirements, indemnification, and confidentiality/non-disclosure. The MOU also serves as an opportunity for the Agency to provide an estimated number of project completions in the coming year. Without an MOU, Agencies are eligible for only the WIP portion of the rebate. In 2021 all participating Agencies delivered their MOU. In their MOUs with the Company, the Agencies preliminarily committed to serving **75** homes through the WIP/EWIP Program in 2021. This count represents an estimate, as there was uncertainty of when normalcy would return to WAP operations. As demonstrated in Figure 4, The Company served **37** homes in 2021, six fewer than the previous year resulting in reductions to all measurements as shown in Figure 4. Total therm savings for the Program Year (PY) were **8,245 therms**.

Figure 4: Weatherization Incentive Program Participation Levels since 2019



**Based on carbon offset of 10.78671 pounds per therm from 2020 IRP which includes end use and upstream emissions, calculated as metric tons of CO_2e avoided*

The Company's 2021 Conservation Plan initially estimated 12,180 therms would be saved through the WIP & EWIP. However, there are many challenges associated with serving highly vulnerable populations in the height of a pandemic. Supply chain problems and inflation increased project costs during 2021. Additionally, Agencies experienced contractor retention issues due to the stringent specification requirements for Whole-Home Weatherization, as required by the Washington State Department of Commerce. In other words, qualified Contractors sought opportunities outside of Weatherizing homes with the Agencies. This put a strain on Agency accomplishments as, without experienced labor, the Agencies are limited in the projects they can complete. Despite the challenges from the pandemic and its ripple effects on the economy, many Agencies maintained a steady workflow throughout 2021. The Company appreciates the Agencies' resilience in continuing to serve homes and save energy despite the challenges they faced in 2021.

Table 7 shows the total spending for the WIP & EWIP in 2021. The incentive spending of $663,762 was 79% of the forecasted budget. As the Agencies relayed to the Company, project costs in 2021 were greater than expected. The budget forecasted in the 2021 BCP of $840,000[7] assumed a per therm cost of $69, whereas the actual spending in 2021 saw a per therm cost of $80. This represents a 16% increase above expected project costs which is most likely driven by inflation and supply chain issues.

Table 7: 2021 Low-Income Programmatic Costs

*Total Costs**	**Low-Income**
Total WIP Incentives	$142,091
Total EWIP Incentives	$388,919
15% Project Coordination	$79,651
10% Indirect Rate	$53,101
Total Project Costs with Agency Admin	$663,762
Cascade Admin**	$23,513

**Totals rounded to the nearest dollar. The Low-Income Program does not fall under the same cost-effectiveness criteria as the rest of the portfolio, and while both the UCT and TRC are provided in UG-210838-CNGC-2021-Conservation-Arpt-WP-4-06.1.22.xlsx, they are not included in the full portfolio cost-effectiveness calculation.*

*** Reflects Cascade staff time and funding for weatherization outreach support. Does not include the Project Coordination and Indirect rate, which are funded as part of the tariffed EWIP rebate and accounted for in a separate line item for the purposes of Program reporting.*

Table 8 outlines more WIP & EWIP highlights.

[7] Docket UG-200961-CNGC-2021 Conservation Plan-11-30-20.pdf pg. 10 | UTC (wa.gov)

Table 8: WIP & EWIP Measure Highlights

Low Income Weatherization Program Measures					
Measures	**Participants**		**Therms**		
Weatherization *Insulation*	2021	Change from Previous Year	2021	Change from Previous Year	% of Therms Saved
Ceiling or Attic Insulation:	24	-27%	2,333	-31%	28%
Floor Insulation:	26	0%	1,461	-4%	18%
Wall Insulation:	9	-31%	395	-57%	5%
Duct Insulation:	21	75%	535	425%	6%
Other Weatherization					
Duct Sealing:	17	42%	1,309	42%	16%
Infiltration Reduction:	31	-11%	403	-11%	5%
Subtotals	128	-2%	6,436	-12%	78%
Equipment Upgrades					
95%+ Furnace	12	0%	1,332	9%	16%
Furnace Tune Up	5	-29%	105	-29%	1%
90%+ Direct Vent Space Heater	0	-100%	0	-100%	0%
91+ UEF Tankless Water Heater	4	-43%	216	-43%	3%
64+ UEF Storage Water Heater	3	50%	99	50%	1%
Water Heater Insulation	4	33%	26	35%	<1%
Low Flow Faucet Aerator	4	-20%	20	-50%	<1%
Low Flow Showerhead	2	100%	10	100%	<1%
Subtotals	34	-11%	1,808	-6%	22%
Residential Totals	**162**	-4%	8,244	-11%	100%

Cumulative Savings – Overview of the larger impact

Cascade calculates the annual deemed therm savings of all measures and multiplies the savings by the measure's lifetime making sure to discontinue counting a measure's deemed therms when its useful life has expired. This resulted in a total of **63,060,623** therms saved since Cascade's Program started in 2008. This sum of therm savings is then multiplied by a ton of CO_2e/therm factor that includes an estimate of the Company's upstream emissions. This factor, provided by the Company's Resource Planning Team, is 0.0053956 tons CO_2e/therm which results in **340,251** tons of CO_2e reduction attributable to the energy efficiency programs. The emissions reduction is then converted into an equivalent carbon offset; in this case the offset is equivalent to roughly 17.284 trees per ton of CO_2e[8]. In other words, to achieve the same emissions reduction provided by Cascade's EEIP, a total of 5,880,989 saplings would need to be planted and at the end of 20 years they would take the same amount of CO_2e out of the atmosphere as Cascade's Programs.

[8] Data referenced from: Carbon Brief - External (trees.org)

Quality Management System – Program Review, Quality Control and Evaluation

2021 presented many opportunities for the Company's EEIP. With Washington's implementation of the 2018 WSEC, the passing of the Clean Building Performance Standard (HB-1257), a bill related to energy efficiency in C/I buildings, and continued pressures of the COVID-19 pandemic, unique challenges provided opportunities to strengthen and improve the EE Quality Management System.

In response to the 2018 WSEC, the Company performed a survey to understand the potential short and long term impacts the new code requirements would have on Program participation. The survey provided insights on which builders would continue applying for rebates. Additionally, it helped inform research into emerging technologies for new homes. See Impacts from the Implementation of the 2018 WSEC for more details.

Continued pressures from COVID-19 presented the Company with the prospect of developing remote solutions to drive the installation and verification of energy saving measures. This included finding new avenues for outreach and Quality Control (QC); specifically, the EE Department developed a 30 second ad to run on a video streaming platform and implemented Vimotely, a virtual verification software for confirming installation of high efficiency gas equipment. See Continual Process Improvements and Quality Control Inspections for more details. In addition to developing remote solutions, the Company explored what high efficiency gas options exist for C/I building owners looking to use gas and achieve net-zero emissions. This effort was advanced in partnership with RMC Architects, DCW Cost Management, and Wood-Harbinger Engineering (collectively referred to as the Consulting Group) and will guide the Company as it helps C/I building owners understand HB-1257. See Identifying Energy Use Intensity Reductions for C/I Buildings for more details.

Impacts from the Implementation of the 2018 WSEC

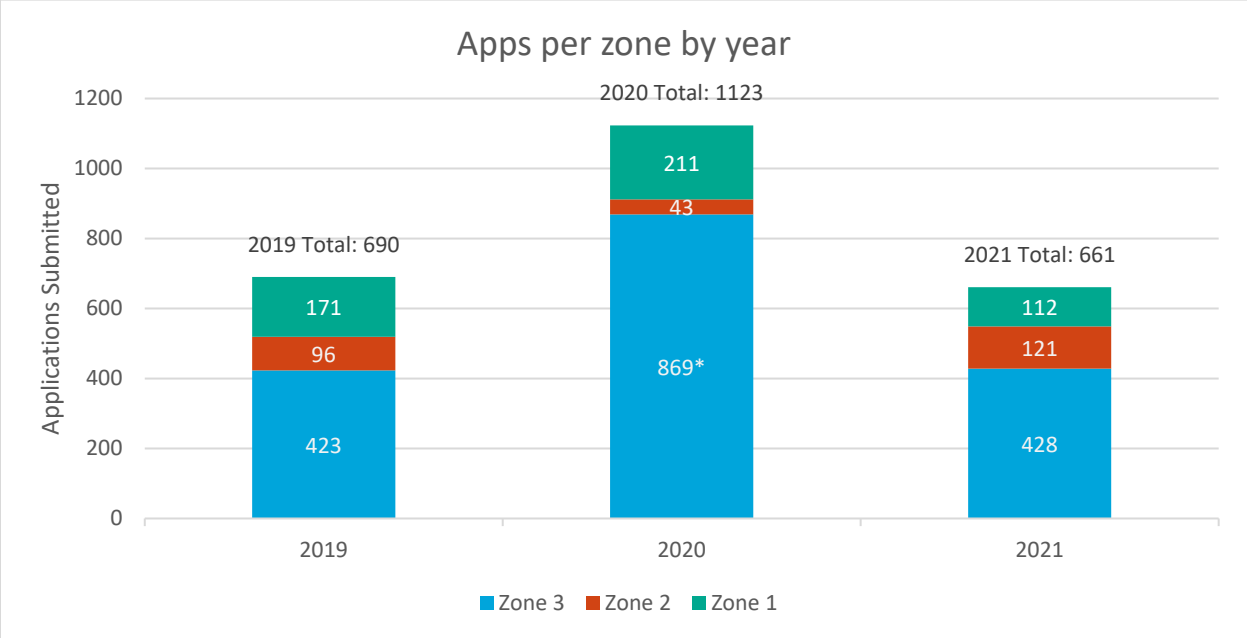
The 2018 WSEC included an energy efficiency point system, setting efficiency requirements for newly constructed small, medium, and large Residential homes. Builders must meet the requirements of the point system to receive a certificate of occupancy. Builders will attempt to meet this requirement by going after the points which are most cost-effective as this allows them to reduce costs and prioritize profits. The point system favors electric heat pumps for space and/or water heat over furnaces because of the heat pump's ability to reach efficiencies far greater than a 100% Coefficient of Performance. As such, the heat pumps are allocated more points. Installing a natural gas furnace would require a builder to find other avenues in the home to reach the same efficiency credits. This resulted in heat pumps becoming the lowest cost pathway for many builders to meet the new code.

The Company surveyed its builder cohort following the implementation of the 2018 WSEC (February 1, 2021) to understand what impacts this update may have on its Programs. The survey produced responses from builders representing 50% of new home applications received by the Residential Program in a year. The responses indicated that 70% of builders participating in the EEIP would

continue installing gas equipment in new homes and 30% would be switching to all electric construction. Of the respondents that would continue using gas in new homes, 62% indicated it would be for lifestyle appliances (i.e., hearths, BBQs, ranges, etc.). The survey suggested that only 26% of all respondents would be installing appliances that historically produced the vast majority of new home savings: tankless water heaters and natural gas furnaces. The findings of this survey indicated the cohort of builders participating in the Program at the time of the survey would reduce participation by up to 90% for gas furnace applications, and 84% for tankless water heater applications.

In retrospect, Cascade did experience a decrease in builder participation in 2021 from the 2020 Program year, and even fell short of the 2019 Program year as seen in Figure 5. This marks a 41% and 4% decrease, respectively. While some of this decrease can be attributed to the COVID-19 pandemic, Cascade's discussions with high volume builders and survey results indicate this decrease is in large part a result of the new energy code. It is not yet clear if this decrease will continue, or if builders will find new ways to build efficient homes with gas as the primary fuel source for space and water heating. The company will continue working with home builders to understand the long term impact of implementing the 2018 WSEC.

Figure 5: Applications per climate zone by year



* In 2020 zone 3 experienced a boost in applications from a large builder, that subsequently transitioned to all electric new construction after the implementation of the 2018 WSEC

The findings of the builder cohort survey are further supported by NEEA's findings through the true-up to their 2021 savings estimates. When the savings available through high efficiency gas appliances in new construction were initially forecasted by NEEA in 2021, they assumed 83% of new homes would continue to use natural gas appliances. NEEA has since found that gas fueled homes permitted under the 2018 WSEC could be as low as 12% of new homes. This adjustment marks an 86% decrease in the estimated number of homes using natural gas as the primary fuel source and aligns with the

anticipated decrease in Program participation the Company found through its builder cohort survey. These findings are early results of NEEA's Post Code Adoption study which uses permitting data to understand the portion of new homes using different fuel types. Cascade is working diligently to provide incentives for those builders choosing to use natural gas as the primary fuel source for space and water heat in new homes. To read more about this true-up to NEEA's savings estimate please reference *UG-210838-CNGC-2021-NEEA-Arpt-for-CNGC-WP-6-06.1.22.pdf.*

The findings of this survey allow the EE Department to understand how much new home rebates will account for as a proportion of total annual savings moving forward. This informed discussions Cascade had with AEG, the third party that completed phase 2 of the 2020 CPA in 2021. Additionally, it informed the Residential Program builder coordinator on considerations for emerging technology that could bridge the energy credit gap for builders choosing high efficiency gas as the primary fuel in the homes they build. Specifically, this drove the inclusion of shell measures and drain water heat recovery for new homes in the 2022-2023 BCP that was filed in the fall of 2021.

Evaluation, Measurement & Verification

The Company continued developing its internal Evaluation, Measurement and Verification (EM&V) Program. In partnership with Resource Innovations, formerly known as Nexant, CNGC reviewed and revised the iEnergy software used for rebate processing to support EM&V efforts. These updates included, but were not limited to, updating formulas used to evaluate statistical significance; reviewing the source for heating degree days; reviewing, and updating logic used to determine project eligibility for EM&V; developing a survey to eliminate ineligible projects; and developing a report based on the iEnergy backend database. This report can be used to extract the EM&V data for further analysis. The Company's internal evaluation will continue and will be used to inform the full-scale third-party EM&V required for the 2022/2023 Biennium.

Identifying Energy Use Intensity Reductions for C/I Buildings.

In 2021 the EE Department explored opportunities to reduce energy use intensity (EUI) for C/I buildings. This was in response to the Clean Buildings Performance Standard (HB-1257) requiring C/I buildings to meet a pre-determined EUI level based on the type(s) of Commercial activity taking place in the building. One such opportunity arose when the Company reviewed options for remodeling or replacing the Bellingham District Office. The Company sought outside consultants to provide options on the best way for the District Office to be renovated or alternatively replaced with a more efficient building. The Consulting Group worked with Cascade to identify pathways to reduced EUI. Moreover, the Company was interested in what technology and building practices would allow the Bellingham District Office to achieve near net-zero emissions while employing high efficiency natural gas equipment solutions. At the end of this project the Consulting Group proposed the use of a gas-powered Variable Refrigerant Flow heat pump. The analysis included in the study will go on to inform the Company's approach to using gas in its C/I buildings. More importantly, the study informed the EE department on future technology pathways to explore for incentives, and what possibilities lay ahead in guiding C/I customers towards wiser and more efficient choices in their natural gas solutions.

Continual Process Improvements

In 2021 Cascade engaged in the following continual process improvement activities to maintain Program momentum and build interest in the incentives:

- The Point of Sale (POS) Program continued working with current participants to increase rebate submissions.
    - Application submissions increased from 197 in CY20 to 294 in CY21 and rebates paid through the POS Program increased nearly 50% from $194,615 in 2020 to $286,017
- The EE Department implemented a tariff change in February, which involved updating rebates based on phase one of the 2020-2021 CPA.
    - Window rebates were expanded to include two efficiency levels. This aligned the Company's incentive with the ENERGY STAR northern zone U-factor of 0.3, in addition to a more efficient 0.27 U-factor
    - Tankless water heater incentives were revised from a two-level approach (87 and 93 UEF units) to a single efficiency (91 UEF) to drive customers towards a more efficient option
- Outreach for the Residential and C/I Program leveraged digital resources to increase participation. This included:
    - A video streaming campaign in which the Company ran a 30 second animated commercial for the Residential Program
    - Expanded magazine advertising to include online publications
    - A video case study for a large custom project incentivized the previous year with the C/I Program
    - For more detailed information regarding outreach efforts in 2021 please reference *UG-210838-CNGC-2021-Conservation-Arpt-WP-5-06.1.22.xlsx*
- In response to COVID-19 and to support the Trade Ally cohort, the Company issued Bonus Coupons to Trade Allies four months early and reissued a second set in July

Software Customization

In CY21 the PUX (Public User eXperience) online application was developed in conjunction with third party, Resource Innovations, and completed in December 2021 subsequently launching in January 2022. This new version of CNGC's customer facing rebate application software, previously known as the Public User Interface, streamlines the online application process. In the updated version customers can enter applications as a guest user or by signing up and signing in through their CNGC Bill Account Number.

In November 2021, CNGC prepared to offer an online portal to all Community Action Agencies for the submission of WIP & EWIP applications. This portal was completed shortly after the close of the Program year and in January 2022 the portal became available. This portal will provide a streamlined application process for the Agencies, freeing up resources to address the ramifications of COVID-19.

In addition to updating the Company's customer facing online application the EE Department implemented QC Virtual Verification software. See the Quality Control Inspections section for further details on this improvement to the Company's QC Inspection process.

Resource management

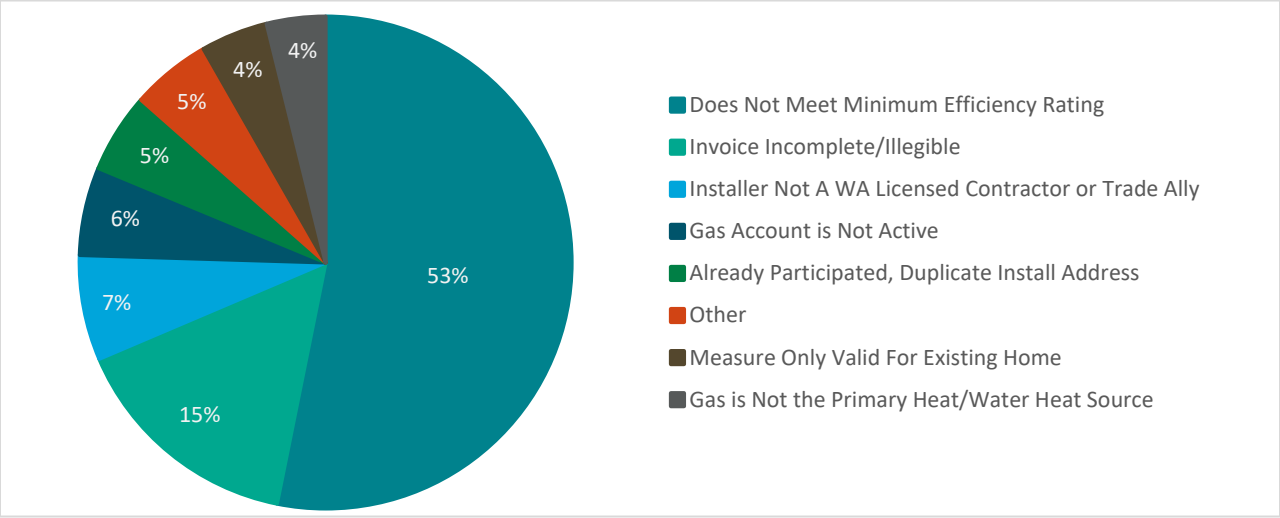
The EE Department encountered staffing challenges including the loss of an Economic Analyst and a Support Specialist. In response to this decrease of internal resources the EE Department onboarded a replacement for the support specialist position in addition to resourcing a seasonal data entry clerk ahead of the winter application spike. This allowed the EE Department to focus on processing rebate applications through the final quarter of the year. For more information on the impact of this resource decision please go to Figure 1: Residential Monthly Intake 2018-2021.

On top of the newly onboarded resources the CNGC EE department integrated with its sister department at Intermountain Gas. This integration will create efficiencies of service and operations as a Western EE department under Montana Dakota Utilities.

Disqualified Measure Applications

The Company denied 532 measures across 399 project applications in the Program year; 166 of these were fully denied applications, with the remaining being partial denials. Fully denied projects accounted for 3.9% of all applications processed in 2021. The denied measures represent 7.2% of all measures processed in 2021 down 0.3% from the 7.5% denial rate in 2020. As Figure 6 illustrates, most measures were denied because they fell short of the Program's efficiency requirements (53% of all denials).

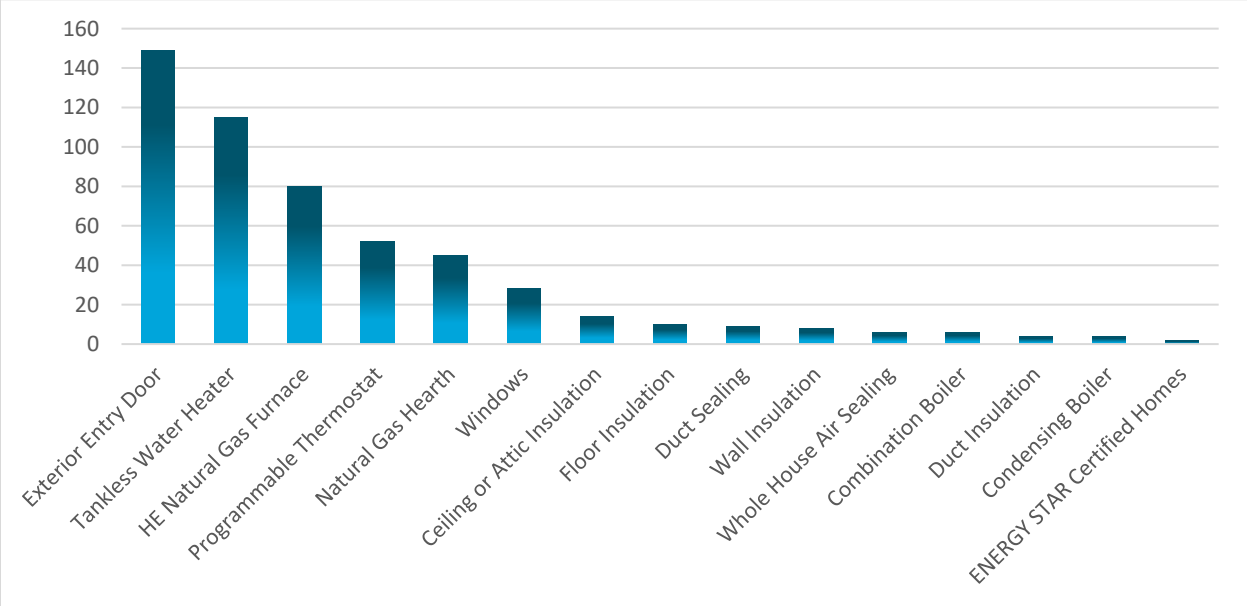
Figure 6: Residential Denials by Measure Type



*OTHER includes: Application Submitted past 90 days, multiple denial reasons for one measure, incomplete application, assignment of funds not provided, insulation installer is not a CNGC Trade Ally.

Figure 7 provides a breakdown of denied measures in order of most frequently to least frequently denied.

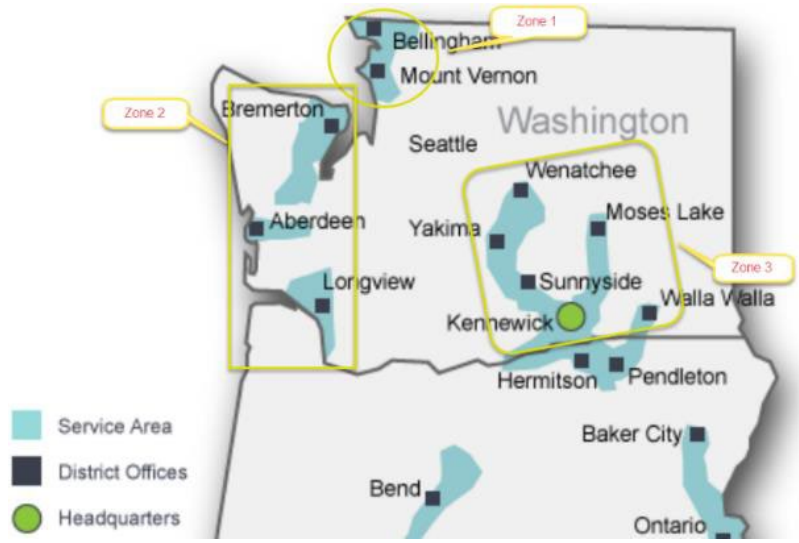
Figure 7: Residential Denials by Measure Type



Quality Control Inspections

Cascade's EE Program tracks customer installations by Climate Zone. See Figure 8 for key towns located within Cascade's three Climate Zones. Within these Climate Zones, Cascade performs QC activities through both the C/I and Residential Programs.

Figure 8: Map of CNGC Customer Zones



Residential Sector

In 2021 the number of QC activities increased sharply from the first year of the pandemic due to the use of a remote tool implemented by Cascade in partnership with Energy Solutions Group. See Table 9 for QC activity totals. These projects consisted of randomly selected and flagged Residential submissions. Due to safety considerations for both staff and customers QC of these projects was completed almost entirely through Virtual Verifications. Please note that Zone 2 accounted for 11% of Program savings in CY21 and made up 5% of QC activities. The EE Department will leverage the Virtual Verification tool to perform more QC activities in this zone.

Table 9: Residential Program 2021 Inspection Summary

Climate Zone	QC performed
Zone 1	**18**
Zone 2	**2**
Zone 3	**23**
Total	**43**

Residential Inspections are intended to confirm that submitted applications match the installed measures, that measures meet Program minimum efficiency requirements, that all health and safety requirements are addressed, and that industry best practices are demonstrated. The inspector verifies efficiency of the equipment as well as the R-values and U-factors on weatherization projects to confirm deemed savings are viable for those projects. If an issue is noted as part of an Inspection the customer and contractor are notified of the issue, and the contractor is given an opportunity to remediate. Cascade also uses QC Inspections to confirm the quality of installations performed by Trade Ally contractors and to vet contractors seeking admittance to the Program.

QC activities performed through the remote tool are designated as Virtual Verifications, which differ in scope from standard in-person QC Inspections. Virtual Verifications are primarily used to: confirm the installation address and model number, check for a handful of best practices such as confirming the installation of ventilation and condensate drains, and review the customer's experience. Certain measures are not suited to a Virtual Verification, such as insulation measures that would require customers to enter potentially hazardous areas of their home to complete the verification. Although Virtual Verifications cannot be as thorough as an in-person Inspection, they offer several advantages that in-person Inspections do not. This includes reduced travel time, customer convenience, increased access to underserved areas of the Company's service territory, and recorded videos of the calls that can be used for training purposes.

When safety permits in person visits, the Company will be utilizing QC Inspections and Virtual Verifications to expand the coverage and frequency of QC activities.

Commercial/Industrial Sector

The Post-Installation Verification (PIV) process for the C/I Program was also impacted by COVID-19 in 2021. This impact on PIVs was slighter in magnitude compared to 2020 where nearly one-third of measures that qualified for QC could not be inspected. Typically, a trigger for a PIV is determined by the dollar amount of the project and what measures were completed. For example, Radiant Heating, Boilers, Domestic Hot Water Tankless and all Insulation measures over $10,000 receive PIV. All other measures that exceed $5,000 in the C/I sector, most Custom projects, and every C/I self-install insulation project requires Inspection as well.

All C/I Inspections are performed by the Company's C/I vendor as part of their Program delivery. The C/I Inspection includes one of four elements: pre-installation, post-installation, study review, and/or general project review. The reviewer verifies all measures listed on the application were installed, are operational, meet the Program requirements, include startup reports and invoices, and often includes photos of the installed equipment for verification. The reviewer then confirms their approval and signs and dates the form.

In most years, all projects that qualify for a PIV would receive one. In 2021, nine out of ten qualifying projects received a PIV. See Table 10 for total Inspections by zone.

Table 10: C/I Inspections by Zone

Climate Zone	Projects Eligible for QC	Received QC
Zone 1	15	13
Zone 2	2	2
Zone 3	28	26
Total	**45**	**41**

Participation Summary

A full breakdown of therm savings, Utility Costs, and Total Resource Costs by all measures and Programs for the 2021 Program year can be found within the following documents filed in addition to this report with the WUTC:

- *UG-210838-CNGC-2021-Conservation-Arpt-WP-1-06.1.22.xlsx* – Cost-effectiveness calculations for the entire portfolio.
- *UG-210838-CNGC-2021-Conservation-Arpt-WP-2-06.1.22.xlsx* – Cost-effectiveness calculation for the C/I Program.
- *UG-210838-CNGC-2021-Conservation-Arpt-WP-3-06.1.22.xlsx* – Cost-effectiveness calculation for the Residential Program.
- *UG-210838-CNGC-2021-Conservation-Arpt-WP-4-06.1.22.xlsx* – Cost-effectiveness calculation for the Low-Income Weatherization Program.
- *UG-210838-CNGC-2021-Conservation-Arpt-WP-5-06.1.22.xlsx*– Outlines the community outreach efforts of the EE Program.
- *UG-210838-CNGC-2021-NEEA-Arpt-for-CNGC-WP-6-06.1.22.pdf* – Outlines NEEA's efforts on behalf of CNGC.

Updates to CY20 Program Achievements

No 2020 True-up is provided as no material additional expenditures or rebates were submitted after the report was filed.