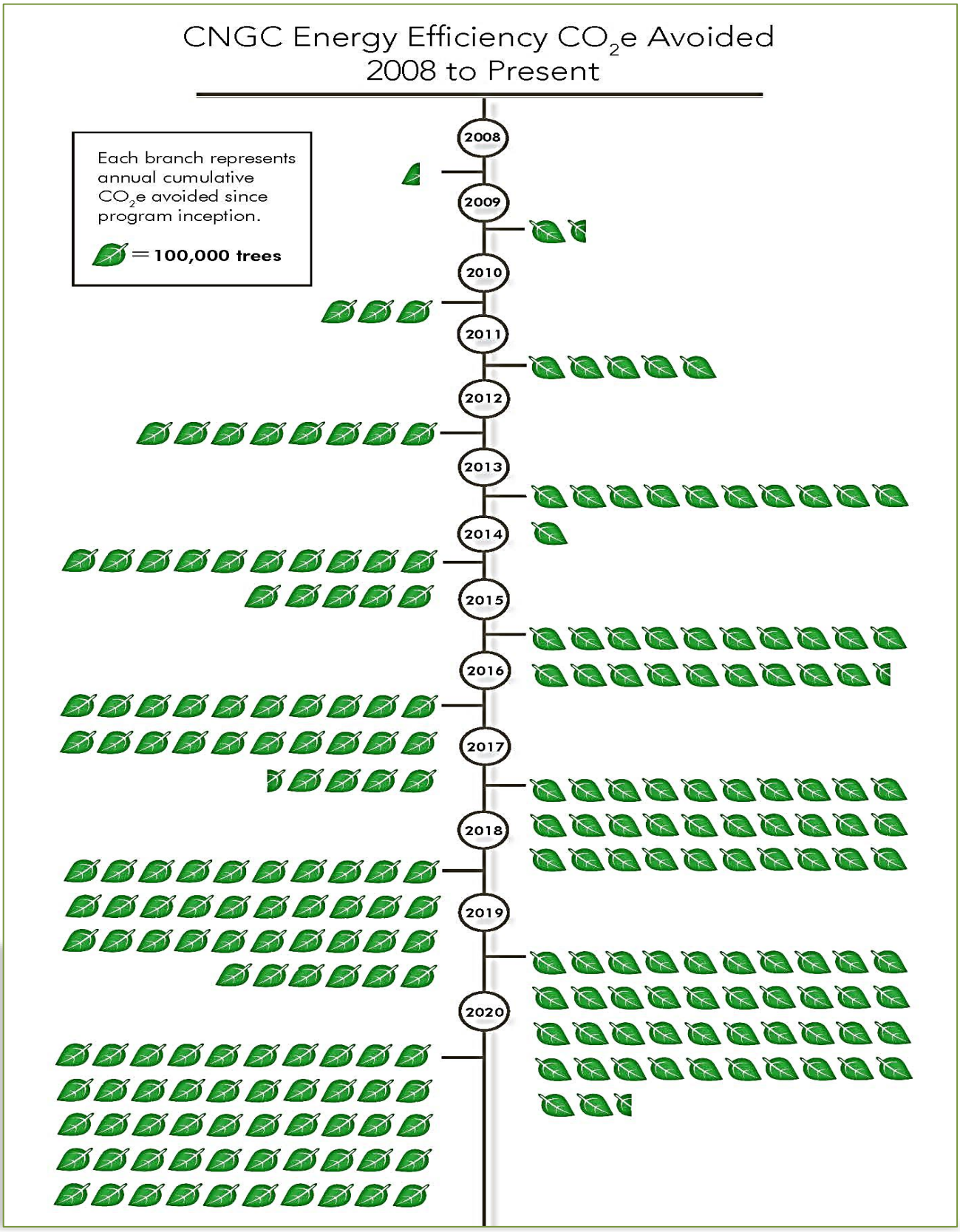

Cascade Natural Gas Corporation Annual Conservation Achievement CY 2020

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ANNUAL REPORT ACRONYMS

AEG	Applied Energy Group
BPI	Building Performance Institute
CY	Calendar Year
CO_2e	Carbon Dioxide Equivalent
CNGC	Cascade Natural Gas Corporation
C/I	Commercial/ Industrial
CAG	Conservation Advisory Group
CPA	Conservation Potential Assessment
DCV	Demand Control Ventilation
DSM	Demand Side Management
DOE	Department of Energy
DBtC	Direct Benefit to Customer
HE	High Efficiency
EE	Energy Efficiency
EEIP	Energy Efficiency Incentive Program
ESK	Energy Saver Kit
EWIP	Enhanced Weatherization Incentive Program
EM&V	evaluation Measurement & Verification
FWB	Feasibility Workbook
HVAC	Heating, Ventilation and Air Conditioning
IRP	Integrated Resource Plan
MI	Missing Information
NEEA	Northwest Energy Efficiency Alliance
NEI	Non-Energy Impact
PIV	Post Installation Verification
PUX	Public User Experience
PY	Program Year
SIR	Savings to Investment Ratio
TAC	Trade Ally Connect interface
TRC	Total Resource Cost Test
UCT	Utility Cost Test
WUTC	WA Utilities and Transportation Commission
WAP	Weatherization Assistance Program
WIP	Weatherization Incentive Program

Cascade Natural Gas Corporation Annual Conservation Achievement Report Calendar Year 2020

Background

The Annual Conservation Achievement Report is a synopsis of Cascade's Energy Efficiency (EE) achievements and activities in the previous calendar year. As of 2016, per Docket UG-152286, the Company committed to submitting the Annual Conservation Report to the Washington Utilities and Transportation Commission (WUTC) by June 1 each year, with advanced 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 from CY 2020

Forecasting of savings potential is available for review within the Demand Side Management (DSM) section of the Company's Integrated Resource Plan (IRP). Additionally, as of CY 2015 the Company submits an Annual Conservation Plan by December 1st, which includes the EE targets for the following year by program and customer class. The Conservation Plan also addresses program development, measure portfolios, projected budgets, an estimate of program cost effectiveness, and a list of measures and updates for the following year.

Cost-Effectiveness Inputs

Variations to Avoided Costs impact program cost effectiveness, so Avoided Costs for calculating annual achievements coincide with the tariffs in effect at time of program participation. For this Calendar Year (CY) Residential and Commercial/Industrial (C/I) cost effectiveness is c based on the 2018 IRP Avoided Costs. The Company filed a tariff change mid-year for the Low-Income program to transition the cost-effectiveness metrics for the LI program to use the most recently approved

Avoided Costs. This change is represented in *UG-190957, CNGC 2020 Conservation ARpt WP-4, 5.31.21.xlsx* spreadsheet. As noted, cost effectiveness in this work paper is calculated for a portion of the year on the Avoided Costs in the 2016 IRP and the latter portion per 2018's Avoided Costs.

DSM calculations are updated to include a 4.43% long-term discount rate and an inflation rate of 2.00% for the Avoided Costs from the 2018 IRP. For the Low-Income program a 3.52% long-term discount rate and an inflation rate of 1.00% for the Avoided Costs are also applied from the 2016 IRP.

Discrete non-energy benefits are calculated per measure for the Residential and C/I programs. The Low-Income program utilizes a flat 10% of costs to represent non-energy benefits. These non-energy benefits traditionally have the greatest impact on the Total Resource Cost test (TRC), included in this report. However, for the purposes of program evaluation Cascade utilizes the Utility Cost Test (UCT) or Program Administrator Cost test as allowed under UG-121207 in coordination with its CAG. The UCT is the Company's primary metric of program success and cost-effectiveness. Cascade is currently evaluating and non-energy benefits for the TRC as part of Phase 2 of its Conservation Potential Assessment (CPA). Further information on program NEIs can be referenced in UG-180990 Cascade Natural Gas 2019 Annual Conservation Plan.

Applied Energy Group (AEG) performed a CPA for Cascade in Q2 2018. This CPA and its forecasting tool (LoadMAP) are used for program planning, goal setting and cost effectiveness calculations. It allows the Company to explore alterations to the portfolio including additions of new measures, changes to incentive offerings and updates to deemed therm savings. The LoadMAP tool was first available during the 2019 planning cycle, and for the first year both goals and achievements are weighed against LoadMAP. In compliance with HB-1257 the Company started Phase 1 of its CPA update in the summer of 2020 and will finalize Phase 2 by mid-June 2021 to include an updated LoadMAP model for planning and evaluating savings potential for the 2022 and 2023 biennium.

Summary of 2020 Program Achievements

The 2020 CY required the Company's Energy Efficiency Incentive Programs (EEIP) to fully embrace adaptive management to maintain program momentum and customer support amid the COVID-19 pandemic. Economic repercussions from COVID-19 impacts have yet to be fully realized, however they are expected to have a significant effect on trends across EE programs into the foreseeable future. The Residential program intake did not lag as anticipated despite new construction (which was not considered an Essential Business in Washington) halting for three months. Residential customers spent more time focusing on do-it-yourself home improvements and natural gas upgrades to increase comfort while isolating at home. Additionally, staff took a careful look at program requirements and potential hurdles to approvals during the pandemic and developed protocols to accommodate customers installing qualified upgrades.

C/I programs were disproportionately impacted by COVID-19 during CY 2020 resulting in underperformance of savings goals, however EE programs did remain cost-effective throughout the year.

Table A represents the Company's 2020 EEIP achievements.

Table A: 2020 Program Achievements

	Residential	Commercial	RES & C/I Total		Low-Income Achievements
2020 Targets	**327,801**	**387,824**	**715,625**		**11,000**
Therms Achieved	**383,018**	**266,945**	**649,963**		**9,213**
Savings % of Goal	**117%**	**69%**	**91%**		**84%**
Measures Installed	**6,767**	**645**	**7,412**		**169**
Carbon Offset*	**2066**	**1440**	**3505**		**50**
NEEA Savings**	**14,654**				

*Metric tons of CO_2e avoided, based on carbon offset of 10.78671 pounds per therm from 2020 IRP which includes end use & upstream emissions **Low-income and NEEA savings figures are excluded from the portfolio total of 649,963 therms. Savings attributed to these efforts are noted separately in Table A

In CY 2020, the Company achieved a deemed therm savings of **383,018** for its **Residential** program. This represents 117% of the projected goal set in the 2020 Conservation Plan and 19,654 more therms than those reported for the 2019 program year. This increase over 2019's achievements is significant considering the added complexities involved in delivering the program for three quarters of the year during the pandemic.

Cascade achieved savings of **266,945** therms through its **C/I** program. This is 69% of the Company's projected savings goal for CY 2020, and 117,231 fewer therms than was achieved in the prior year. This significant shortfall is attributable to the economic impacts associated with the pandemic to businesses, paired with the delay of a large custom project to CY 2021 (also related to COVID-19 supply delays).

At a portfolio level the savings for Residential, C/I and Low-Income equated to **659,176** therms for CY 2020, falling short of the portfolio goal of **726,625 by 9%**. While Residential met its goal, both the C/I program and the LI program did not.

Despite significant economic and industry disruptions linked to COVID-19 Residential program uptake remained stable throughout 2020. The program accomplishments and savings in this volatile year may be linked to an increased interest in home comfort and upgrades. See the Quality Systems Management section for more details on how the program evolved to serve customers.

Program cost effectiveness is shown in Table B. On an individual basis, the Residential program proved cost effective at a UCT benefit cost ratio of **1.78**. The C/I program was also cost effective at a **1.35** UCT benefit cost ratio. At a portfolio level, the combined program is cost effective at a non-weighted UCT of **1.60.** The Residential program calculates at a **1.36** TRC, the C/I at a **1.37**, and a combined **1.36** at a portfolio level. See *UG-190957, CNGC 2020 Conservation ARpt WP-1, 5.31.21.xlsx* for the full portfolio cost-effectiveness calculations.

Table B: 2020 Program Cost Effectiveness

*Cost Effectiveness**	**UCT**	**TRC**
Residential	1.78	1.36
Commercial	1.35	1.37
Portfolio	**1.60**	**1.36**

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

Although the Company gauges cost-effectiveness primarily based on the UCT, the TRC test is also included. Note the CPA from 2018 provided recommendations and some guidance for the Company to incorporate TRC calculations' cost-effectiveness to better balance the metric. The 2020/2021 CPA is further reviewing and exploring Non-Energy Impacts (NEIs) with AEG to improve the valuation through the TRC test. In the calculation of Net Installed Cost (incremental cost after accounting for NEIs over the life of the unit) for each measure the Company attempts to quantify the value of the quantifiable Societal and Participant NEIs. While Cascade made every effort to be conservative in the magnitude of these benefits, especially in the C/I program, there will be some measures where the value of the NEIs exceed the incremental cost of the measure. In those instances, the Company has provided a net zero value for the installed cost given that a negative value for these large projects for installed cost is counterintuitive and would result in a biased TRC Benefit to Cost Ratio. Further information on program NEIs is available in UG-180990 Cascade Natural Gas 2019 Annual Conservation Plan.

The C/I sector occasionally delivers intermittent deep therm-savings Custom projects. In 2018, the Company's energy efficiency team and TRC Companies sought to increase prescriptive projects to build a more predictable baseline of therm savings over the more fluid custom project cadence. In 2019 the Company also started tracking program achievements on a quarterly basis, allowing for

real time corrective action to keep the program on track to goal. This revised approach allows for a steadier trajectory for forecasting, while providing a more consistent and dependable basis for program planning. Unfortunately, COVID-19 put a hold on many planned prescriptive projects and upgrades as businesses were forced to prioritize day-to-day operations over investing in EE.

It is also common for C/I projects to stretch beyond the year they were initiated. In such cases, the Company builds a queue, or pipeline of projected energy savings potential in future years. Thus, it is beneficial to gauge C/I program accomplishments both as a single year accomplishment and through a two-year lens.

Table C 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 incentives were approximately $1 million less than anticipated, and the administrative costs were approximately $500,000 under budget. This variance is attributable to the underperformance of the C/I sector (18% lower incentive payments and 30% lower program delivery costs than anticipated) combined with an overestimate of rebate dollars for the Residential sector. These 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 C: 2020 Programmatic Expenses and Paid Rebates

	Incentive Budget Estimates	Actual Incentives Paid	Administrative Budget Estimates	Actual Administrative Expenditures	Actual Totals	Actual % of Budget
Residential	$3,017,205	$2,315,585	$1,036,849	$887,872	$3,203,457	79%
Commercial	$1,216,930	$992,806	$1,209,203	$844,236	$1,837,042	76%
Low-Income	$700,000	$639,469	$56,900	$29,850	$669,319	88%
Totals	**$4,934,135**	**$3,947,860**	**$2,302,952**	**$1,761,958**	**$5,709,817**	**79%**

	Direct Benefit to Customers (DBtC)*	Program Delivery	Total Program Costs
Program Expense Comparison	$3,982,609.74	$1,727,207.57	**$5,709,817**
Program Expenditure Ratio	**70%**	**30%**	

NEEA Gas Market Transformation & Regional Technical Forum	$ 323,397

**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. NEEA costs are NOT included in the $5.7 million in Table C

Costs associated with the Northwest Energy Efficiency Alliance (NEEA) Gas Market Transformation efforts and Regional Technical Forum (RTF) 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 calculation in *UG-190957, CNGC 2020 Conservation ARpt WP-1, 5.31.21.xlsx* is available to assess cost-effectiveness of the program portfolio including the NEEA and RTF expenses. Note this is the 6th 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.

For the second year NEEA is reporting savings estimates for their New Homes program. These savings are shown in Table A and are represented outside other program accomplishments, see *UG-190957, CNGC 2020 NEEA ARpt for CNGC WP-6, 5.31.21.* for details on NEEA's efforts in 2020.

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 2020 Conservation Plan were 70% of total program costs. The year met this goal at a 70% DBtC ratio. Bundled measure add-on rebates allowed customers to offset initial installation costs and increased Trade Ally Bonus Coupon redemptions helped to remove cost barriers.

Current Year Highlights

CY 2020 highlights follow for the Residential and C/I programs.

Residential

The CY 2020 results represent a total participant decline of nearly 15% in attic insulation from the previous year, however the square footage and therms were about 7% less per install. The average square footage per application decreased from 1240 to 1157 square feet of insulation. Non-equipment measures, such as, duct sealing, duct insulation, and windows comprised 2.8% of prescriptive therm savings, a near 65% increase in program capture. The bundle measures helped drive weatherization installs throughout the year and represent positive adoption by many of the Company's insulation Trade Allies.

Furnaces remain the most prevalent residential measure, comprising 45% of therm savings. Last year fireplace therm levels were significant contributors to the savings for Residential program equipment installs and have been eclipsed by high efficiency (HE) tankless water heaters. The Company changed the standard for HE tankless water heaters from 87% efficient to 93% in February's tariff update resulting in a combined water heater prescriptive therm savings of over 10%. This makes it the second most popular residential measure. See Table D for residential highlights and comparisons between Program Year (PY) 2019 and 2020. The HE combination domestic hot water and hydronic space heating measure saw fewer installs in 2020, resulting in a 61% decrease in savings year over year, likely due to a restatement of savings from the Company's 2018 CPA.

In Q1 of 2020, the EE department launched a bill insert ad campaign to remind customers about available Energy Saving Kits (ESKs) resulting in a significant increase over the previous year's accomplishments. During CY 2019, 135 participants achieved 4,781 therms in annual savings. In CY 2020, 555 participants achieved a total of 16,276 therms.

Table D: Residential Program Highlights

New and Existing Residential Equipment & Weatherization Measures					
Existing Home Weatherization	**Participants**		**Therms**		
Insulation (in sq. ft.)	2020	Change from Previous Year	2020	Change from Previous Year	% of Therms Saved
Ceiling or Attic Insulation: **385,828**	356	-15%	26,236	-20%	7%
Floor Insulation: **465,642**	338	15%	26,076	18%	7%
Wall Insulation: **73,938**	112	-21%	5,250	-22%	1%
Duct Insulation: **16,486**	52	108%	1,038	82%	0.3%
Windows 0.27: **7,735**	35	103%	4,873	72%	1%
Other Weatherization					
Duct Sealing	124	38%	3,447	37%	0.9%
Whole Home Air Sealing	24	-29%	1,800	-30%	0.5%
Weatherization Bundle A	142	-14%	N/A	N/A	N/A
Weatherization Bundle B	16	-33%	N/A	N/A	N/A
Subtotals	1,264	5%	68,720	-2.4%	17%
*New Home Measures**					
Built Green Certified	52	-52%	11,851	-48%	3%
ENERGY STAR® Certified	35	84%	7,140	84%	2%
Subtotals	87	-31%	18,721	-31%	5%
New & Existing Equipment Measures*					
HE Tankless Water Heater Tier 1	157	-53%	9,418	-49%	3%
HE Tankless Water Heater Tier 2	649	137%	44,021	138%	12%
Condensing HE Tankless Water Heater	15	150%	810	309%	0.2%
Energy Savings Kits	555	311%	16,276	327%	4%
HE Combination Domestic Hot Water & Hydronic Space Heating	50	-15%	7,957	-61%	2%
HE Boiler	16	78%	1,320	72%	0.3%
HE Exterior Door	213	85%	2,964	98%	0.8%
HE Natural Gas Furnace	2,013	17%	172,198	2%	45%
HE Natural Gas Hearth	144	-20%	8,886	-11%	2%
Programmable Thermostat	1,619	32%	34,756	51%	9%
Subtotals	5,431	34%	298,606	12%	78%
Residential Totals	**6,782****	26%	386,047	6%	100%

*New Home (or Builder) program includes all portfolio measures except weatherization

**Customers frequently install multiple measures so measure level participants varies from program level participant totals which are listed in *UG-190957, CNGC 2020 Conservation ARpt WP-3, 5.31.21.xlsx*

The Builder program remains a core component of Cascade's residential rebate offerings throughout 2020. Builders were hit hard by the pandemic, having to cease work in Washington State from the end of March through the beginning of May. Residential building activity was limited throughout the year as builders practiced social distancing protocols. In the face of this hardship, Cascade provided an extended deadline for builder applications for any homes built in 2019 or 2020 that missed the standard application deadline at the end of Q1 2020 (right as COVID-19 closures began). Cascade informed the builder cohort of this extension on May 15th which offset administrative barriers to submitting paperwork for qualifying projects.

CY 2020 saw decreased program participation among builders, with a 31% decrease in the number of builders submitting rebate applications (from 29 builders in 2019 to 22 builders in 2020). Despite this downturn in participation, builders still participated in the EEIP program. As a result, builders submitted a total of 1123 applications in 2020, roughly 168,000 therms (which are accounted for in Table D under both the New Home certification totals and the New & Existing Homes equipment sections). This uptick in therms saved marks an increase of 52% year over year and was partially attributable to a new program participant, Hayden Homes, who reached out in early 2020 to inquire about rebates. Through a cross departmental effort, the EE department with support of the Energy Service Representatives, on boarded Hayden Homes and worked with them to submit roughly 400 applications in the fall of 2020. This kind of effort has the potential to continue bringing in builders as the Energy Service Representatives can inform builders about rebates before and during plat development.

It is unclear how the updated Washington State Energy Code will impact program potential for new builders in 2021. The builder program coordinator is working with the builder cohort to understand the challenges of meeting the new code. In addition, he is providing builders with resources to understand how to offer high efficiency natural gas in new construction homes, and how this high-efficiency fuel choice may impact their cost to build. The EE department continues to work closely with builders and offer what support to help meet the new energy code requirements.

Commercial/Industrial

Measure and program data

The program finished 2020 saving C/I customers 266,945 therms. While C/I programs nationwide were deeply impacted by COVID-19 (discussions with industry peers indicated programs reached between 70 and 80% of goal[1]), Washington faced some unique challenges, as construction was not considered essential[2], unless work had already begun and was being completed on an "essential" business. As such, contractors were able to complete work on schools and other essential businesses more expeditiously, but other upgrades and construction was delayed.

[1] While program accomplishments for the 2020 CY are not widely available to cross reference Cascade's accomplishments against, Cascade's C/I vendor indicated the Energy Trust of Oregon's existing buildings program achieved 87% of the Cascade OR goal in 2020.

[2] While construction was not considered essential in Washington during the initial phases of the pandemic it did continue in neighboring states like Oregon and Idaho.

Despite the lower than expected results, standard or prescriptive participation increased in 2020 as compared with results in 2019. In 2020, the C/I program achieved about a three percent increase over 2019's prescriptive therms savings. Some standard measure areas had significant growth, other areas dropped in 2020.

As anticipated in the 2020 Annual Conservation Plan, radiant heating nearly doubled in 2020, and was the only measure among the Heating Ventilation and Air Conditioning (HVAC) category to see significant growth. Moving forward, this measure is likely to continue to thrive as its efficiency and incentive level remain compelling. Overall, HVAC therms dropped nearly 20% in 2020.

Another area identified in 2019 for expected growth was ESKs. Through targeted outreach, and a promotion as a response to COVID-19, therms achieved from ESKs were up almost 50% in 2020. With the ESK B, showerheads and aerators, no longer offered, ESKs are expected to shrink in 2021 with only the Commercial pre-rinse spray valve available through the program after February 2021.

As expected COVID-19 impacted the lodging and restaurant industry and specifically foodservice equipment upgrades, as C/I customers received fewer incentives in 2020 than in 2019. Therm savings for foodservice equipment was down 14%. Boilers were also down significantly in 2020, experiencing a 23% drop in therms saved as compared to 2019. On the C/I Custom program front, the team recognized an opportunity to expedite projects for those businesses deemed essential and financially able to move forward with EE investments. This was especially true for school projects while the builders were vacant. Interestingly, there were 38 boiler measures in both 2019 and 2020, however the projects in 2020 represented smaller-sized boilers.

The last area which deeply impacted the results in 2020 was custom projects and therms achieved by these types of projects. The program achieved 30,285 therms for 2020, down from 153,377 therms in 2019. One large project, which was expected to close in 2020, was pushed to 2021, and represented more than the entire 2020 goal at 510,000 therms. This project took longer than expected due to COVID-19 restrictions on-site and will complete in 2021. Because custom projects typically require that larger investment, it was not surprising to see the custom numbers dip dramatically in 2020 as uncertainty around the future of both the economy and the pandemic played a role in businesses delaying or postponing larger investments.

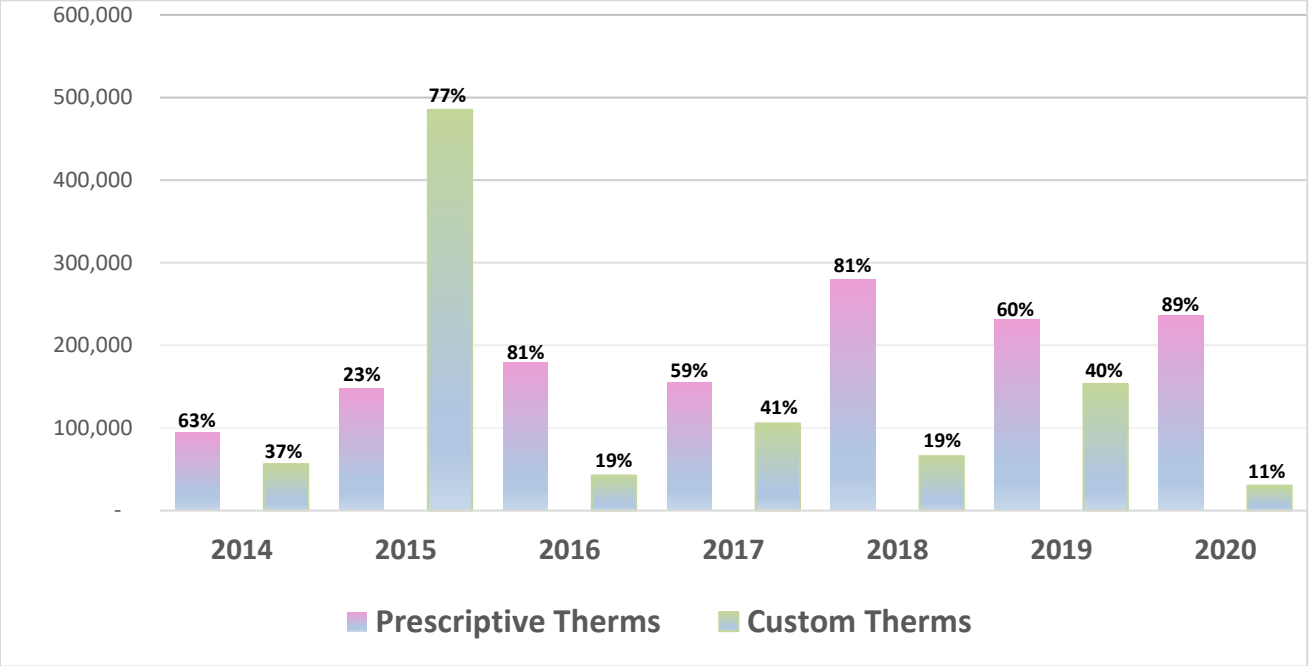
Adjusting to the changing C/I market and the impacts of COVID-19 in 2020 was a moving target. The program focused on ESKs as a no-cost solution directed toward the industries most impacted by COVID-19, Assisted or Senior Living Centers and Food Service. In addition, program staff adjusted outreach to phone and e-mail as in-person outreach proved challenging, if not impossible after the first three months of 2020. The program plans to continue to evolve its outreach in 2021 to adapt to the market post-COVID-19.

One other strategy adopted in 2020 that is tangentially related to COVID-19 was the program launch of a Midstream offering, specifically promoting tankless water heaters to distributors. As of the end of the year two distributors were enrolled, while a few others were reviewing options to

participate in Cascade's program, although because this is narrowly focused on C/I customers in the tankless water heater space, the number of potential participants is not large.

See Figure A and Table E for therm savings comparison between custom and prescriptive measure installs.

Figure A: Prescriptive vs Custom C/I Therms Savings 2014-2020



See Table E for further C/I program highlights.

Table E: Commercial Program Highlights

Prescriptive Commercial Equipment & Weatherization Measure						
Weatherization		**Participants**			**Therms**	
Insulation Measures (in sq. ft.)		2020	Change from Previous Year	2020	Change from Previous Year	% of Therms Saved
Attic Insulation (Tier 1):	**53,909**	5	-50%	16,712	37%	5%
Attic Insulation (Tier 2):	**16,610**	6	0%	5,315	1007%	0.2%
Wall Insulation (Tier 1):	**15,012**	3	0%	2,402	234%	0.3%
Wall Insulation (Tier 2):	**16,750**	6	20%	3,183	-40%	2%
Roof Insulation (Tier 1):	**11,968**	1	0%	4,189	725%	0.2%
Roof Insulation (Tier 2):	**96,020**	5	67%	34,567	1%	15%
Floor Insulation:	**2,280**	1	N/A	128	N/A	0.1%
Windows:	**1,988**	14	56%	2,187	543%	0.1%
Subtotals		41	11%	68,682	28%	23%
Food Service Measures						
Gas Conveyor Oven		2	0%	308	100%	0.1%
Gas Convection Oven		5	150%	3,034	134%	1%
Gas Fryer		23	-28%	23,975	3%	10%
Door Type Dishwasher Low Temp Gas - New Tariff		2	-71%	896	-75%	0.4%
Connectionless 6-Pan Steamer		0	-100%	0	-100%	0.0%
Connectionless 3-Pan Steamer		0	-100%	0	-100%	0.0%
Griddles		1	-50%	273	-50%	0.1%
Double Rack Oven		0	-100%	0	-100%	0.0%
Subtotals		33	-33%	28,486	-14%	12%
Space & Water Heat Measures						
Demand Control Ventilation		20	122%	1,723	-27%	0.7%
Boiler		38	0%	61,901	-23%	35%
Motion Control Faucet		2	-33%	11,288	-28%	5%
DHW Tankless Water Heater		34	48%	10,580	28%	5%
Domestic Hot Water Tanks		39	5%	6,576	0%	3%
Energy Savings Kits		348	1732%	33,514	48%	15%
Warm Air Furnace		66	22%	5,654	2%	2%
Radiant Heating		14	40%	6,192	97%	3%
Subtotals		561	191%	137,426	59.3%	67%
Prescriptive Program Totals**		**635**	128%	234,595	94.9%	*103%

*Represents inclusion of floor insulation not present in 2019 **Custom totals are not included in this table, however they can be referenced in *UG-190957, CNGC 2020 Conservation ARpt WP-2, 5.31.21.xlsx*

Cumulative Savings – Overview of the larger impact

Cascade calculates the annual deemed therm savings of all measures and multiplies the savings by the measures' lifetime making sure to discontinue counting a measure's deemed therms when its useful life has expired. This resulted in a total of 53,903,535 therms saved since Cascade's program inception in 2008. This sum of therm savings is then multiplied by a tons of CO_2e/therm factor provided by Cascade's Resource Planning Team (in this case it is 0.0005393 Tons CO_2e/therm) which produces 290,721 tons of CO_2e reduction. The emissions reduction is then converted into an equivalent carbon offset, in this case the offset is equivalent to 17.28 trees per ton of CO_2e[3]. In other words, in order to achieve the same emissions reduction provided by Cascade's EE incentive program, a total of 5,024,905 saplings would be planted and at the end of 20 years they will have taken the same amount of CO_2e out of the atmosphere as Cascade's programs have.

Reporting Details

Prior to 2016, the Company tracked savings based on install date, which required ongoing reconciliation of accomplishments after the Annual Report was filed to fully capture savings from the previous year. The Cascade EEIP now records its annual performance based on the year the incentive is paid. This alteration in reporting removed the need to revisit the previous year's report and allows Cascade to better gauge program accomplishments in real time to pivot efforts as needed.

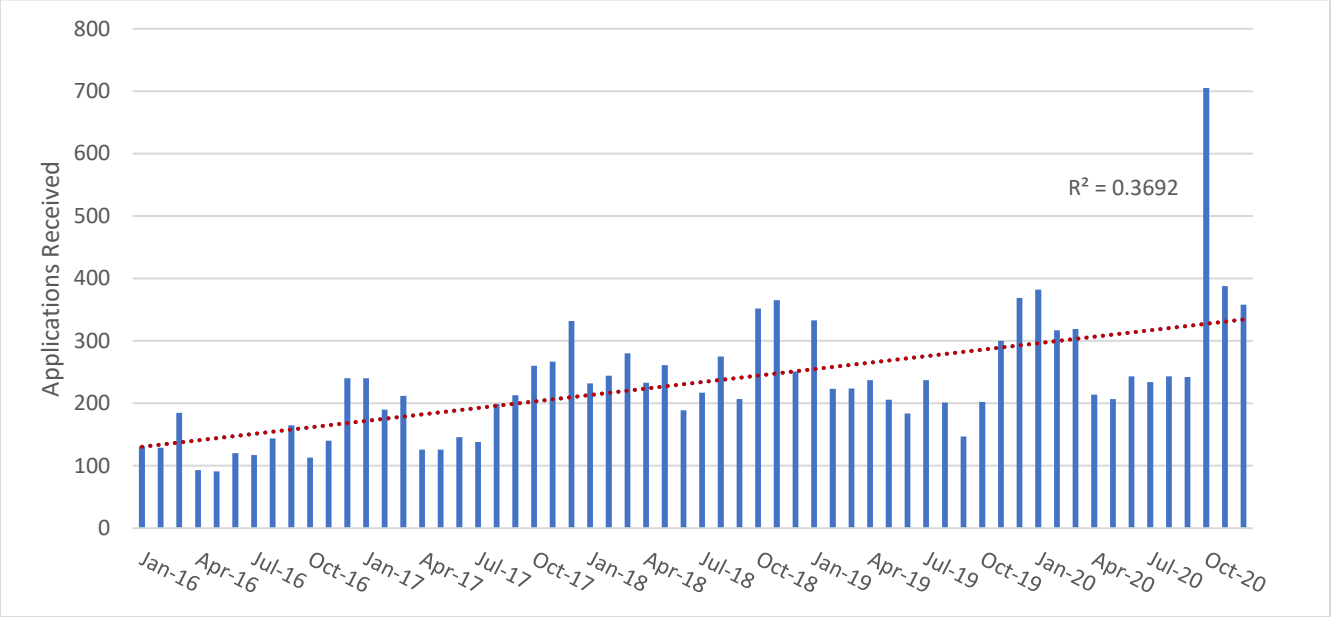
Cascade absorbed residential rebate processing from an external vendor in April 2016 and has since carefully tracked the rebate queue to predict the ebbs and flows and address potential delays. See Figure B for queue levels per month during this timeframe. See Figure C for monthly rebate submissions since 2016. To remain within the 8-12-week processing target the Company tries to maintain a queue of fewer than 400 applications, allowing for standard processing within 10 weeks of submission.

[3] Data referenced from: https://trees.org/app/uploads/2021/04/Carbon-Brief-External.pdf

Figure B: Residential Monthly Queue 2016-2021

As demonstrated in both Figure B and C the Company has historically experienced an uptick in Residential submittals in a cyclical pattern from late November, through March. Figure B displays the increased performance over time with the red trend line smoothing the variability to represent Residential rebate applications more than doubling over the past four years. Note CY 2020 saw a drastic uptick in the fall due to submittal of a large batch of builder rebates in Q4.

Figure C: Residential Monthly Intake 2016-2020



The R-squared for this figure is the same R-squared used to assess how well a line of best fit can describe a relationship between variables. In this case it is looking at how well the trend line on that graph explains the relationship with intake and the age of the program.

Low-Income

Since 2008 Cascade has administered Rate Schedule 301, the Low-Income Weatherization Incentive Program (WIP) in Washington State. The WIP offers rebates to qualified agencies delivering whole-home energy improvements through the Weatherization Assistance Program (WAP) to income eligible gas customers in Cascade's service territory. Weatherization reduces the customer's energy burden by improving efficiency through upgrades to the building envelope and home-heating equipment. Whereas bill assistance addresses the immediate crisis, weatherization addresses the household's long-term energy demand by reducing the amount of energy needed to heat the home. Cascade commits to ensuring as many low-income natural gas homes receive weatherization services as possible within the Company's service area.

On August 1, 2018, revisions to the Company's WIP took effect. This program expansion was designed to remove remaining barriers to serving natural gas homes in Cascade's service area. The expanded program, referred to as the Enhanced Weatherization Incentive Program (EWIP), removed the $10k per-project cap and added a 15% project coordination fee and 10% indirect rate. In addition to these changes, the Company removed the $500 cap for health and safety funding. Agencies may now submit a request for the total costs associated with health and safety work directly tied to a qualified weatherization measure.

In 2020, Cascade updated the avoided cost of gas based on its most recently acknowledged IRP. This changed the WIP portion of rebate payout but did not impact the total reimbursement per project due to the EWIP bridging the gap between the avoided cost and total installed cost of a

project. The avoided cost update took place in July 2020, and is reflected in UG-190957, *CNGC 2020 Conservation ARpt WP-4, 5.31.21.xlsx*. For this Program year from January 1, 2020 through July 21, 2020, the Avoided Cost was $22.06 for a 30-year measure based on the 2016 IRP. The Avoided Cost was updated in the 2018 IRP to $19.46 for a 30-year measure. Cascade subsequently updated Rate Schedule 301 to remove reference to a specific Avoided Cost value and instead align the Avoided Cost per therm with the Company's most recently acknowledged IRP. Because the change took place halfway through the program year, the Company has provided *UG-190957, CNGC 2020 Conservation ARpt WP-4, 5.31.21.xlsx* which delineates the Avoided Cost in effect at the time specific projects were paid under the tariff.

Cascade notes there is a marked increase in program participation and engagement since the EWIP expansion took effect. However, success was dampened by the challenges of COVID-19, which significantly limited the agencies' ability to perform in-person work in customer homes. The fact that 2020 yielded the second highest number of Cascade homes served since 2012 attests to weatherization agencies' dedication to serving customers once able and authorized to resume work. The Company is appreciative of the agencies' continued commitment to helping alleviate energy burden for vulnerable households during these difficult times and Cascade will continue to work closely with its weatherization providers to address the unique challenges to weatherize homes during a pandemic.

In December 2020, Cascade held its third annual meeting of the weatherization agencies serving low-income gas customers. During the virtual discussion, the agencies expressed overall satisfaction with the EWIP program and its ability to cover the costs associated with program delivery. The agencies noted an 8-10% adder to costs during COVID-19, associated with increased safety protocols. This includes customer and contractor education and safety measures. Several agencies also noted utility funding during the current challenges is helping them stay afloat.

The ability to reach natural gas homes, or perform weatherization services more generally, varied from agency to agency. While several agencies were able to get back to work in late summer through fall of 2020, others have significant numbers of projects on hold since the onset of COVID-19. The Company anticipates several of these paused projects will resume in 2021.

Agencies indicated that they would continue to develop and acquire climate education tools, Personal Protective Equipment, and other materials necessary to keeping clients safe. WIP funds can support these efforts as they pertain to work performed in the course of a completed weatherization project. Cascade has also identified an avenue to support trainings performed outside of a specific weatherization project through its admin funds. During a "typical" program year, Cascade sets aside a $20,000 budget for customer-facing marketing or outreach for the agencies' weatherization services. This includes bill inserts, yard signs, social media, and radio messaging. In light of COVID-19 challenges, Cascade agreed to allow use of these funds for COVID-19 related trainings when the expense is necessary but would fall outside costs associated with weatherization work performed inside the home. Under most circumstances, however, total costs

will generally fall under the EWIP tariff, and agencies have added cost allocations for COVID-19 similar to management projects that require lead abatement.

Despite myriad challenges, agencies are optimistic that completion levels will begin to normalize in 2021. Cascade will continue to work with the agencies to optimize outreach and support strategies based on regional need. The Company is also pleased that Snohomish County has finalized an MOU with Cascade to begin serving qualified low-income customers in the shared service area for the first time.

Per the guidance of Commission Staff and Cascade's CAG, the Company develops therm savings targets, and an associated budget for its WIP/EWIP. This target is drafted as part of Cascade's Conservation Plan. Estimated therm savings and participation targets are developed based on anticipated homes served, historical program participation, externalities, and direct estimates from the agencies delivering weatherization services to Cascade customers. Cascade multiplies the anticipated number of homes served by the most recent average therm savings per home to develop a general estimate of how much energy could be saved if the target was met. The number of homes served is multiplied by the anticipated average cost-per-project to develop an annual incentive budget. Administrative budgets are based from a general allocation of Company staff time dedicated to rebate processing and program support, as well as funding for meetings and outreach.

Cascade develops these estimates to better understand anticipated therm savings and expenditures. However, the incentive and homes-served targets should not be seen as a performance metric for the agencies delivering the WIP/EWIP. Cascade instead determines the health of the program based on the overall ability of the agencies to easily access WIP/EWIP monies as needed to fully fund gas weatherization projects in Cascade's service area; continued robust communication between Cascade and the agencies; and continued program momentum commensurate with community need and on-the-ground realities (such as the COVID-19 crisis). It's also important to note, while an incentive budget is developed on best estimates of program participation and per-project costs, the WIP/EWIP is able to fund qualified agency work throughout the year without a cap on the total dollars expended by the agencies. Cascade strongly encourages robust program participation. As long as eligible agencies submit qualified projects, rebate checks are issued.

Cascade's 2020 Conservation Plan initially estimated 11,000 therms would be saved through the WIP/EWIP. However, as noted above, there are many challenges associated with serving highly vulnerable populations in the height of a pandemic. With COVID-19's continuation through 2020, agencies were unable to serve homes until Q3 or Q4 and many contractors remain backlogged. However, the Company anticipates as Washingtonians gain access to the COVID-19 vaccine, and projects continue, the EWIP program will begin to see therm savings and participation levels similar to 2019. The Company appreciates the agencies' resilience in continuing to serve homes and save energy despite the unprecedented challenges they faced in CY 2020. In the homes that were served in 2020, quality of work remained at the forefront, with the average number of measures and therm savings per home continuing to increase.

Tables F and G show results for Program Years (PY) 2008 through PY 2020 and indicate program costs.

Table F: Weatherization Incentive Program Participation Levels and Savings by Year

Year	Homes Served	Measures Installed	Average Therms Saved per Household	Total Therms Saved	Carbon Offset*
11	46	125	304	13,985	75
2009	54	168	273	14,733	79
2010	112	354	275	30,809	166
2011	84	259	287	24,130	130
2012	64	227	341	21,824	118
2013	38	144	394	14,960	81
2014	21	66	349	7,338	40
2015	19	64	617	11,724	63
2016	24	87	489	11,743	63
2017	27	108	206	5,564	30
2018	28	91	185	5,181	28
2019	66	253	203	13,416	72
2020	43	169	242	9,213	50

**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*

Table G: 2020 Low-Income Programmatic Costs

*Total Costs**	**Low-Income**
Total WIP Incentives	$186,311
Total EWIP Incentives	$327,060
15% Project Coordination	$75,659
10% Indirect Rate	$50,439
Total Project Costs with Agency Admin	$639,469
Cascade Admin (Including Program Outreach) **	$29,850

**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-190957, CNGC 2020 Conservation ARpt WP-4, 5.31.21.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.*

As demonstrated in Table F, the Company served **43** homes in 2020. Total therm savings for the PY was **9,213**. This was an expected decrease from the **13,416** therms achieved in 2019, but still a successful outcome in light of the challenges faced by the agencies.

In their Memorandums of Understanding with the Company, the agencies preliminarily committed to serving **44** homes through the WIP/EWIP program in 2021. This figure represents the agencies that have offered an estimate, as uncertainty remains regarding when normalcy will return to WAP program operations.

Cascade will continue to work with the agencies to support their success in 2021 through partnerships in funding trainings and outreach, and continued communication and flexibility.

Goal Setting

Although the Company's Conservation Plan is the primary platform for goal setting this Annual Report provides an opportunity to delve into factors affecting whether Cascade can accomplish the goals set through its modeling software. Portfolios are periodically reevaluated and updated to balance cost-effectiveness (in keeping with current Avoided Costs), participation outcomes and updated building codes. The Company also confers with its CAG when alterations to the program portfolios are necessary.

The Company uses the LoadMAP forecasting tool as the end use planning software for the DSM section of the IRP and program planning. One of the primary benefits of the tool is its ability to run the forecast based on a methodology consistent with the Northwest Power and Conservation Council's Seventh Conservation and Electric Power Plan[4]. "This includes estimated technical, achievable technical, then achievable economic potential using the Council's ramp rates as the starting point for all achievability assumptions."[5]. The Company is currently working with AEG to update the 2016 baseline CPA (released in 2018) to align with requirements as set forth in HB-1257 and looks forward to incorporating the updated model into future program planning once completed and filed with the Commission in June 2021.

Goal setting is an estimate only, as the achievable level of potential savings identified by a model is unable to fully account for all possible reasons a customer would not apply (the recent pandemic as a prime example), or qualify for, a 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, late submission or a misunderstanding of program requirements. As part of the Company's efforts to increase customer participation and satisfaction, Cascade continues to remove barriers to successful rebate submittal and increase customer satisfaction through process improvements, tariff upgrades and program clarifications. In

[4] "Seventh Northwest Conservation and Electric Power Plan." Northwest Power & Conservation Council, February 10, 2016. http://www.nwcouncil.org/energy/powerplan/7/plan/

[5] "2017 Cascade Natural Gas Conservation Potential Assessment" AEG, Applied Energy Group, March 16, 2018.

the February 2019 tariff update, new measures were added to the portfolio for residential windows, duct insulation and duct sealing. The C/I program experienced some revisions as well including addition of floor insulation and windows upgrades. This Annual Report captures customer uptake of these measures and helps the Company evaluate ways to improve the measure offerings and program requirements to increase customer accessibility to these home and business improvement incentives.

Quality Systems Management – Program Review, Quality Control and Evaluation

The COVID-19 pandemic and WA's legislation for Clean Buildings created unique challenges for the EE Quality Management System in 2020. The Residential and Commercial programs responded very differently to the COVID-19 shutdown. Residential applications surged and Commercial participation evaporated in Q2 with recovery in the remaining quarters of 2020. The Clean Buildings Act and Residential Building Code rollouts required EE to begin the planning process in Q3 &Q4 for a February 2021 tariff change, software implementation and additional outreach to the New Home builder community to learn more about their near- and long-term fuel and equipment choice strategies in response to the new regulations.

The Nexant iEnergy rebate processing software for the residential, Low-Income and Trade Ally programs was renewed in 2020. The Company worked with Nexant to design a new Public User Experience (PUX) platform for 2021 to enhance the online application process for residential customers, as well as managing the transition to a new Trade Ally Software platform to improve TA coordination and reporting. The evaluation Measurement and Verification (eM&V) program within Nexant's iEnergy will be available for the Company's use in 2021 which will enable Cascade to perform more internal eM&V[6]; During the process of running the pilot in 2020 to customize the software, Cascade identified data quality issues with the calculations and these are currently being rectified. The eM&V process will allow the Company to analyze actual program participation savings compared to deemed savings. As EE gathers a significant dataset to work from, including customer survey results, the viability of a full EM&V study from a third-party vendor will be explored with the CAG.

The COVID-19 pandemic presented special challenges when handling incomplete residential rebates applications. Many contractors operated at reduced staffing or closed for weeks. To continue to serve customers and recognize the economic impact of the incentives, the EE team proactively

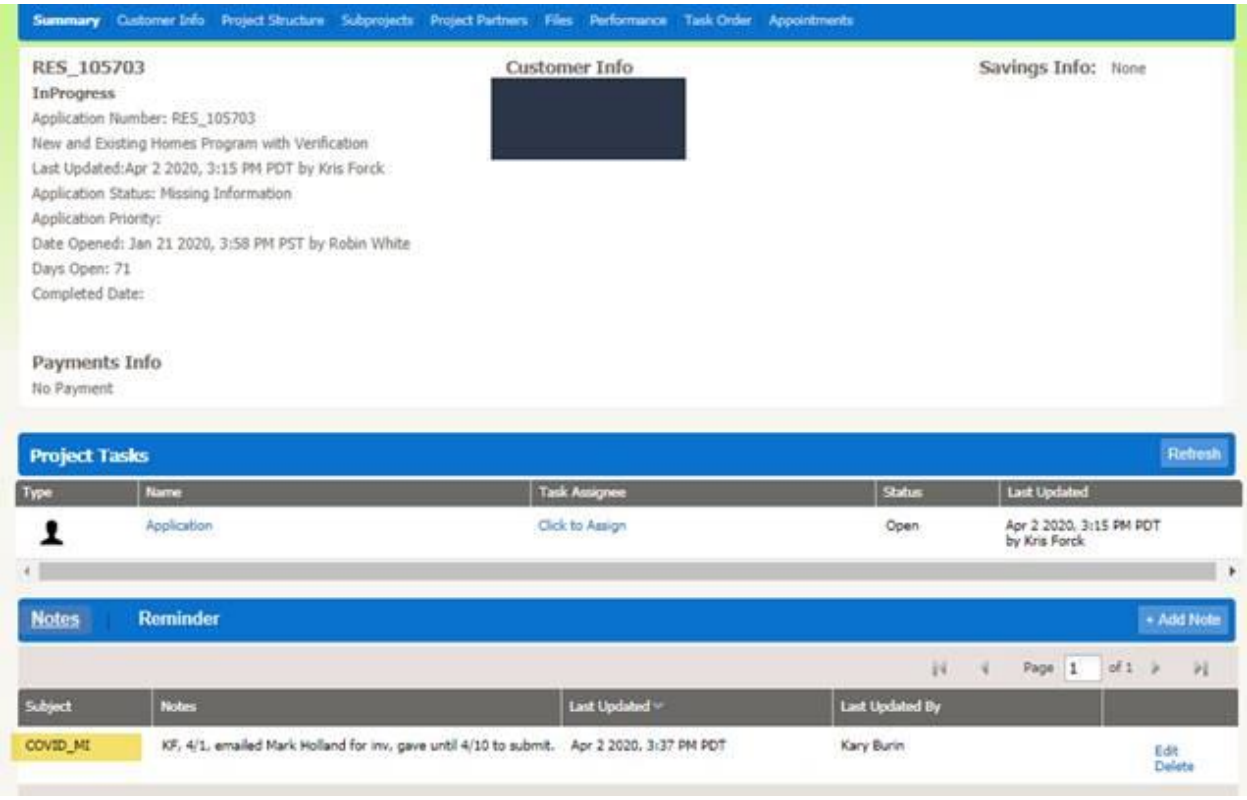
[6] Cascade had third party EM&V performed within its Assessment of Achievable Potential & Program Evaluation Study in 2014 performed by Nexant, Inc. The goal of the measure savings review was to provide a high-level assessment of Cascade's process for collecting, organizing program participant data and estimating the associated savings for four key measures in the time period June 1, 2011 – May 31, 2012. This was broken up into three tasks: 1) a desk review of program applications, 2) a telephone call to program participants to verify measure installation and key savings metrics, and 3) a billing analysis of a statistical sample of installed furnace, boiler and water heater installed measures.

reviewed the guidelines for submission and pared them down to the essentials. The result is a process that makes an initial effort to collect non-essential, but valuable, information from the customer but does not hold up rebate processing unduly if the information is not forthcoming in a timely manner. See below for an example of the data process:

To Process Missing Information (MI) projects during the COVID-19 period:

- The thermostat measure is unique, if the invoice or sales receipt notes “Smart” or “Programmable” thermostat, process without a model #, typically required
- Do not hold up processing for any of the three missing questions relating to verification of space and water heat as these can be determined from the Customer Billing system
- Customer signature is still required and can be obtained through email
- For other MI projects that have an invoice and a signed application:
  1. If it is a TA, first call is to the TA
     a. If they are closed, then call the customer
     b. If the customer isn’t able to provide the information, then process
        i. Make a Note, see screenshot below, with the Subject: MI_COVID-19, then describe the issue(s) being waived
  2. If it is a non-TA, first call is to the contractor
     a. If they are closed, second call to the customer saying we need the information in order to process the rebate

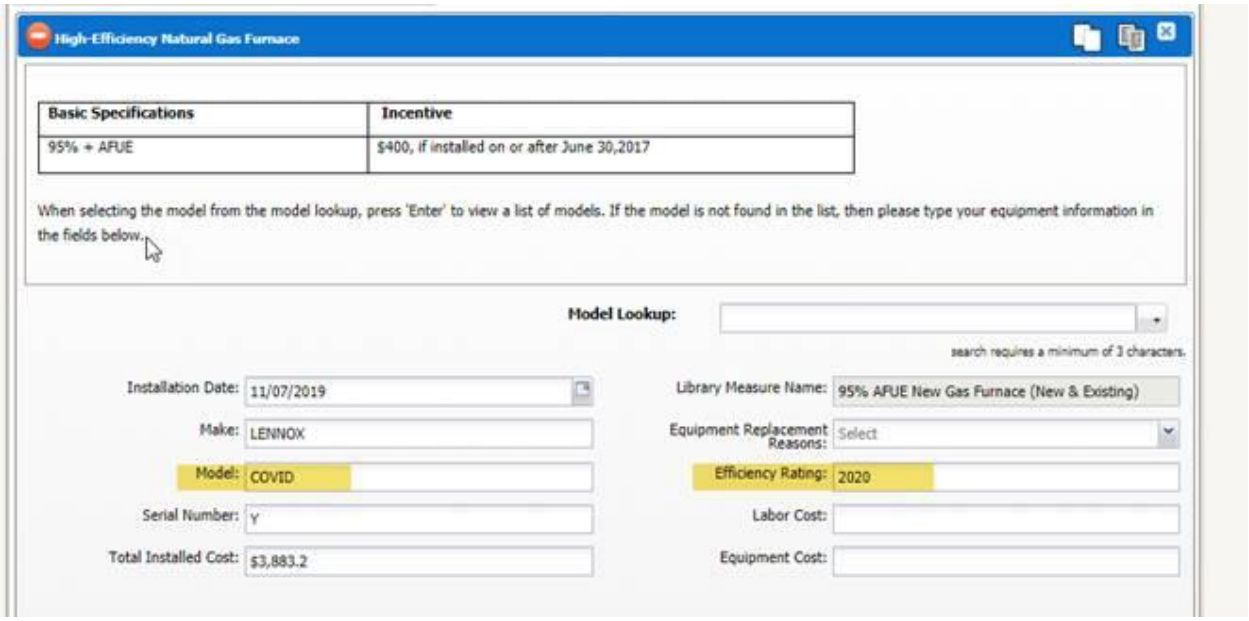
Figure D: MI Customer Process



Conditions to waive after TA and customer have been contacted and data is still missing:

- For weatherization, as long as the square footage is available and an invoice or estimate from a TA is available send them through with MI waiver notation
    - Floor and ceiling: if customer can verify the square footage, confirm on assessor site, accept and process
    - Process missing "fill to cavity"
    - Walls: must have documentation
    - Windows: if customer can verify the square footage and U value in writing, accept and process
- For equipment as long as there is an invoice with an eligible efficiency listed, process it with the following convention
    - Model = COVID-19; Efficiency Rating = 2020

Figure E: Equipment Eligibility



The EE department recognizes New Homes construction and new gas customer connections represent an optimal point for energy efficiency investment, and so in 2020 the EE department continued to collaborate with the Energy Services group to target new gas customers for EE outreach. The teams meet quarterly for operational updates and opportunity reviews. The close collaboration enables a seamless customer touch through a consistent platform.

Continual Process Improvements

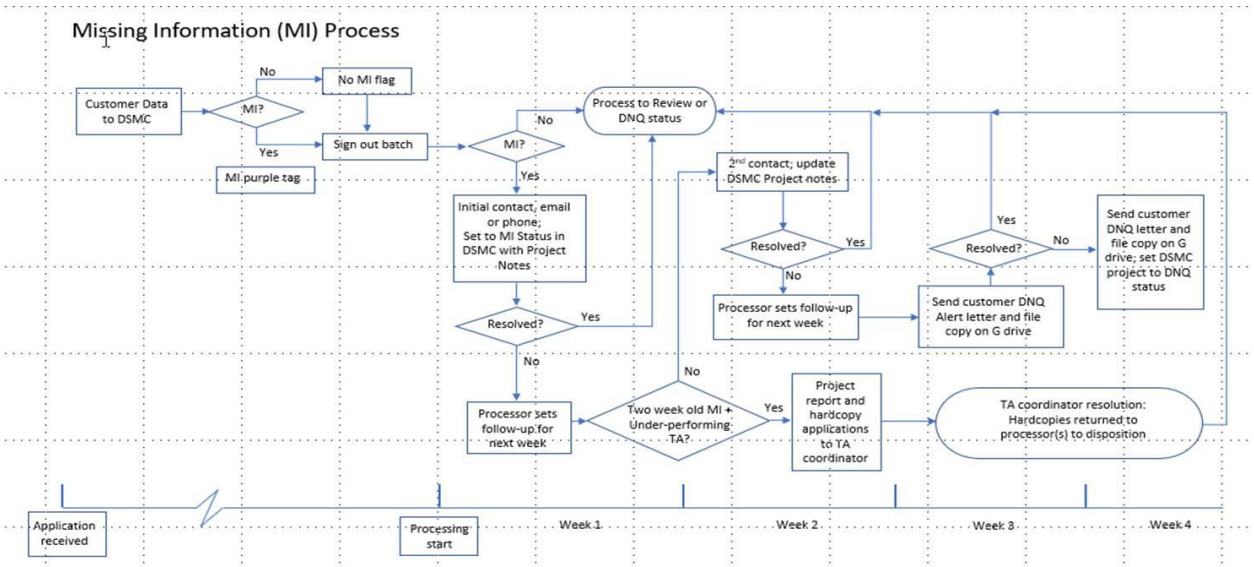
In 2020 Cascade engaged in the following continual process improvement activities to maintain program momentum and build interest in the incentives:

- eM&V
- Point of Sale Residential Trade Ally program expanded to 14 TAs with 11 active in 2020

- Interested, qualifying TAs are able to offer customers a total cost minus the rebate, upfront, and the TA submits the application for remuneration

- Extension of the submission window in response to COVID-19 difficulties in obtaining and submitting paperwork for New Homes, Residential and Bonus Coupons
- Missing Information Analysis and Missing Information and Does not Qualify (DNQ) process improvements
  - Reduction in Missing Information projects and average age of these projects
    - Cascade created a weekly report to track aging missing information projects and identify those associated with under-performing TAs; an escalation process was developed with the TA coordinator for the timely disposition or DNQ of these projects

Figure F: Eligibility Process



- Additional messaging on Web portal regarding 95% AFUE for furnaces to reduce the number of standard-efficiency applications for the most popular measure in the program

- Increased builder outreach in conjunction with Energy Services Representative Business Development team
- Work in the later part of the year to support a February 2021 Residential and Commercial tariff filing incorporating appliance code impacts to program offerings
  - Opportunistically added one window tier and collapsed tankless to one tier
  - Collaborate with sister utilities including Intermountain Gas Company, Montana-Dakota Utilities and Great Plains Energy Efficiency groups to leverage internal resources and company participation in industry groups
  - Researched and worked toward standard online energy savings estimator for all Montana Dakota Utilities EE websites
- Commercial Program - The following adaptive management campaigns were explored, vetted and developed in late 2020 for implementation in 2021's program year once the economy begins to regroup from the pandemic

- Re-COV-ery initiatives under review or in pilot phase
- Developed a mid-stream program for tankless water heaters
- Developed a customer drawing to receive a high-efficiency fryer through program promotion in 2021
- Enacted 10% bonus to C/I customers installing three energy efficiency measures as part of adapting to post COVID-19 business needs

Software Customization

- PUX (Public User experience online application) implementation
- Batch Review process development and implementation
- Trade Ally Connect (TAC) interface implementation
  - Automated Bonus Coupon tracking
- Planning and budget for implementation of ENERGY STAR® Portfolio Manager to support the Washington Clean Buildings Act Early Adopters program by 7/1/21
- Automatic email notification of application receipt

Potential improvements that proved unfeasible

- Used kitchen equipment incentives – No viable way to track ID numbers for previous rebates and unverifiable efficiency deemed savings
- Residential furnace filter replacement – Research and modeling returned negligible savings potential

Resource management

- A second Support Specialist position was filled by the current Admin
- In anticipation of the winter increase in residential rebate applications, a temp was hired to process with a view to builder batch processing

Miscellaneous

The EE Department uses weekly reporting of program accomplishments, and other notable events to stay on track towards program goals and customer satisfaction. In 2020 the formula used to estimate year end achievement was updated to incorporate weekly rebate intake and weekly processing levels. Using these two figures allowed the program to bound the total possible therms savings in the current program year by how fast the program can pay rebates, and by how many rebate applications the program anticipated to receive through year's end.

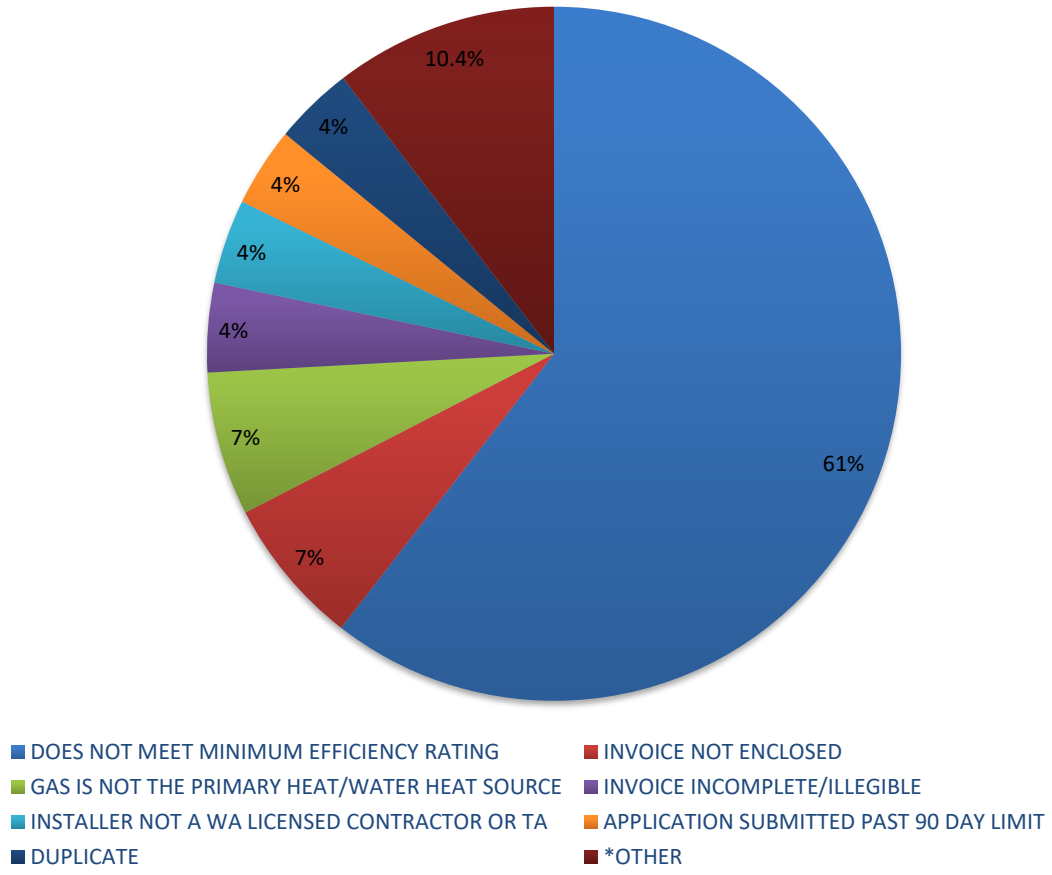
In addition to weekly reporting on program accomplishments Cascade implemented a weekly report detailing missing information projects. This tracking allowed the team to lower the amount of time projects spent in missing information status. Furthermore, this report incorporated weekly updates on denied projects. This allows the EE department to keep tabs on which projects are denied most often and perform root cause analysis to reduce denials. This report was instrumental to messaging put on the EE website regarding high efficiency gas furnace rebate eligibility requirements as six months after the messaging went live, gas furnace denials decreased by 31%.

Disqualified Measure Applications

The Company denied 518 measures across 391 project applications in the program year; 149 of these were fully denied applications, with the remaining representing partial denials. The denied measures represent 7.5% of all measures processed in 2020, compared to a denial rate of 7.7% in 2019.

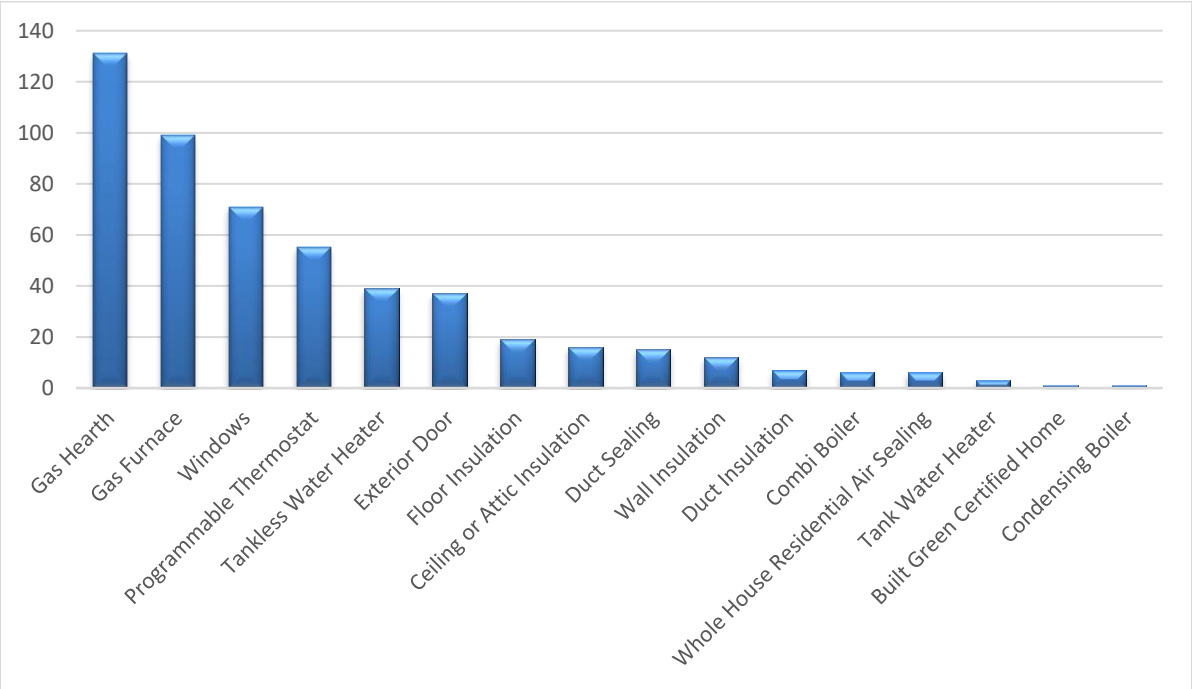
Most denials occurred because measure efficiency fell short of the program's efficiency requirements (61% of all denials). See Figure G for residential program denial reason percentages and Figure H for residential denials by measure type.

Figure G: Residential Denials by Measure Type



*OTHER includes: incomplete application; multiple; pre/post r missing or falls outside qualifying limit; discontinued rebate offering; account is invalid/not active; insulation installer not a trade ally; measure only valid for existing home; assignment of funds needed; install date not; provided; measure only valid for new home; rate schedule invalid because not 502 or 503

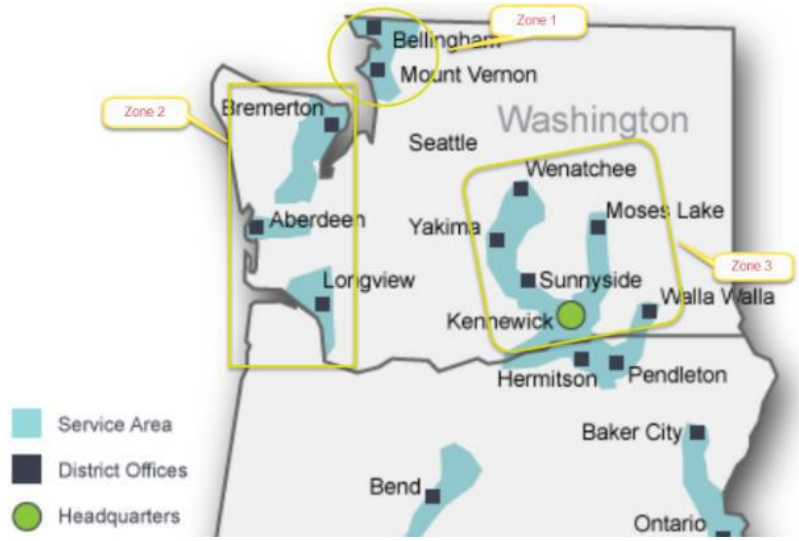
Figure H: Residential Denials by Measure Type



Quality Control Inspections

Cascade's EE program tracks customer installations by Climate Zone, see Figure I for key towns located within Cascade's three Climate Zones. Within these Climate Zones, Cascade performs Quality Control Inspections through both the C/I and Residential programs.

Figure I: Map of CNGC Customer Zones



Residential Sector

Historically, up to 5% of applications in the Residential rebate program are assigned quality control inspections; in 2020 this number fell sharply in response to social distancing measures put in place to reduce customer and employee exposure to COVID-19. See Table H for totals. In 2020's Residential program, 4 inspections were performed in Climate Zone 1 (Northwest portion of the Company's service territory), 0 in Zone 2 (Western/Coastal region) and 4 in Zone 3 (East of the Cascade Mountains). These projects consisted of randomly selected and flagged Residential submissions.

Table H: Residential Program 2020 Inspection Summary

Climate Zone	QC performed
Zone 1	**4**
Zone 2*	**0**
Zone 3	**4**
Total	**8**

*Due to economic barriers, Zone 2 experiences less program uptake and aligns with QC inspections relative to the other WA zones.

Residential inspections are geared to confirm the submitted applications match the installed measures, the 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 quality control inspections to confirm the quality of installations performed by Trade Ally contractors and vet contractors seeking admittance.

In past program years Residential program inspections were performed through a combination of internal staff review and third party contracting from the Sustainable Living Center located out of Walla Walla, Washington. In 2020 the EE department had to adjust its standard practice due to COVID-19. Inspections were paused for 6 months, from March to September in order to maintain social distancing. In September the EE department sought a remote solution to continue performing inspections and agreed to work with Energy Solutions Group to implement Vimotely, a video calling service that works in the browser of any smart device equipped with a camera and microphone. Before implementing this solution, the EE department performed 5 inspections through Apple's Facetime application. The success of these inspections gave the department the confidence to move forward with Vimotely. The implementation of this remote tool was not complete until 2021, and it has allowed the EE department to expand project inspections. Although the tool does not equal the value of an in-person inspection, Cascade is able to confirm model numbers and basic installation practices so the Company can confidently proceed with payment processing of eligible rebates. Once public safety permits, the Company plans on using a combination of remote and in person inspections to increase project review.

Commercial/Industrial Sector

The Post-Installation Verification (PIV) process for the C/I program was also impacted by COVID-19 in 2020. Typically, a trigger for a PIV is determined by the dollar amount of the project and which measures were installed. 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 undergo PIV. Most Custom projects receive PIV, with few exceptions. Every C/I self-install insulation project requires inspection as well.

All commercial 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 start up reports and invoices, and often include photos of the installed equipment for verification. The reviewer then confirms his or her approval and signs and dates the form.

In most years, all projects which qualify for a PIV would receive one. In 2020 slightly more than two-thirds of qualified projects received a PIV. See Table I for total inspections by zone.

Table I: C/I Inspections by Zone

Climate Zone	Projects Eligible for QC	Received QC
Zone 1	7	6
Zone 2	4	3
Zone 3	16	10
Total	**27**	**19**

Participation Summary

A full breakdown of therm savings, Utility Costs and Total Resource Costs by all measures and programs for the 2020 program year are available within the following documents filed in addition to this report with the commission:

- *UG-190957, CNGC 2020 Conservation ARpt WP-1, 5.31.21.xlsx* – This first work paper provides the cost effectiveness calculations for the entire portfolio.
- *UG-190957, CNGC 2020 Conservation ARpt WP-2, 5.31.21.xlsx* – This second work paper provides the cost effectiveness calculation for the Commercial program.
- *UG-190957, CNGC 2020 Conservation ARpt WP-3, 5.31.21.xlsx* – This third work paper provides the cost effectiveness calculation for the Residential program.
- *UG-190957, CNGC 2020 Conservation ARpt WP-4, 5.31.21.xlsx* – This fourth work paper provides the cost effectiveness calculation for the Low-Income Weatherization program.
- *UG-190957, CNGC 2020 Community Outreach ARpt WP-5, 5.31.21.pdf* – This fifth work paper outlines the community outreach efforts of the EE program.
- *UG-190957, CNGC 2020 NEEA ARpt for CNGC WP-6, 5.31.21.*pdf – This sixth work paper 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.