

2023 Annual Report

NW Natural Washington



ENERGY TRUST OF OREGON

JUNE 1, 2024

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I. Introduction, background, oversight and goals

A. Introduction

This annual report covers all of NW Natural's energy efficiency activities in Washington for 2023. The completion of the program year marks the 14th year that Energy Trust of Oregon has provided services and incentives to residential and commercial customers of NW Natural in Washington. This report addresses progress toward annual and biennial goals, information on expenditures, gas savings, projects completed, incentives paid during the year and highlights of program activity.

B. Background

At the request of NW Natural and following approval granted by the Washington Utilities and Transportation Commission (WUTC), Energy Trust began implementing NW Natural's demand-side management programs in Southwest Washington on October 1, 2009. The first year was viewed as a pilot. In 2011, the WUTC approved NW Natural's use of Energy Trust as implementer of Commercial and Residential conservation programs for NW Natural in Washington. With the passage of HB1257, reporting has shifted to biennial planning. This annual report marks the progress made within the second year of the 2022-2023 Biennial Energy Efficiency Plan.

C. Oversight

The Energy Efficiency Advisory Group (EEAG) was created at the direction of the WUTC to provide advice and oversight for NW Natural and Energy Trust energy-efficiency offerings in Washington. The advisory group is comprised of representatives from NW Natural, Energy Trust, WUTC, Washington Public Counsel, Energy Project, Association of Western Energy Consumers and the Northwest Energy Coalition.

D. Goals

In 2021, NW Natural, in accordance with HB1257, conducted a Conservation Potential Assessment with a third-party to establish conservation goals for the 2022-2023 biennium. NW Natural in collaboration with the EEAG, established performance metrics for 2023. This report presents Energy Trust's performance against those goals, and progress made toward the biennial plan. The total savings goal for the incentive program was 281,908 therms. This goal is comprised of 112,663 therms for residential and 169,245 therms for commercial.

E. Portfolio summary

Program	2023 Savings (therms)	Biennial Savings	Percent of Biennial Goal Achieved
Commercial Incentive Program	183,197	428,038	122%
Residential Incentive Program	89,740	240,612	94%
Low-Income Weatherization	1,471	4,052	30%
NEEA Market Transformation	29,647	66,992	N/A
Total	304,054	739,694	119%

II. Annual report highlights

A. General

- **In 2023, Energy Trust achieved 97% of the annual portfolio goal.**
- Gas efficiency projects installed in 2023 by NW Natural's Washington customers saved 272,936 annual therms of natural gas—183,197 therms in the commercial sector and 89,740 therms in the residential sector.

B. Commercial sector highlights

- **The commercial sector achieved 108% of its annual goal.**
- Top performing measures were custom building controls, boilers and custom operations and maintenance.
- The program continued to hear from customer facing budget constraints and labor cutbacks, leading to delays for projects that customers had planned to complete in 2023. Among these were a handful of boiler replacement projects delayed until 2024.
- The program recognized several large projects in 2023 including:
 - Vancouver Innovation Center controls installation for 69,132 therms saved
 - Clark College controls upgrade for 44,443 therms saved
 - Upgrades at Vancouver and Evergreen school districts for a combined 43,745 therms saved
 - A Walmart store heat reclaim project for 10,128 therms saved
- The program provided and promoted bonuses for several measures including boilers, HVAC equipment, kitchen equipment, and insulation starting in quarter four.
- Energy Trust staff worked with Clark Public Utilities and NW Natural to improve the customer lead sharing process and make it easier for customers to claim all available incentives.
- Staff collaborated with the Southwest Washington Contractors Association to connect with more of its members. In 2023, the program was a sponsor and displayed program material at its trade show.
- In 2023 Strategic Energy Management (SEM) major activities included:
 - Adding a new participant to the roster and getting them up to speed.
 - Transitioning data into the Energy Performance Platform (EPP), then creating and sharing gas models with participants.
 - Delivering three Treasure Hunt webinars.
 - Performing in-person Treasure Hunts, virtual building automation system (BAS) reviews and orienting customers to Opportunity Registers hosted in the new EPP.
 - Supporting participants through 1:1 site visits and meetings.
 - Working to align delivery with Clark and Stillwater Energy when possible.
 - Identifying a list of potential new enrollees.
- Staff conducted an assessment of multifamily affordable housing to understand opportunities in this sector. The program will develop a strategy to serve this sector in 2024.

C. Residential sector highlights

- **The residential sector achieved 80% of its annual goal.**
- Top performing measures were gas furnaces, smart thermostats, gas fireplaces, windows and EPS™ new construction.
- Nearly every category of the residential portfolio saw a downturn in savings in 2023 from 2022; the only exception was weatherization measures. Windows outperformed expectations by 7%, wall insulation by 162% and floor insulation by 99%. This was due to increased windows incentives and targeted outreach to insulation contractors throughout 2023.
- Underperformance of smart thermostats contributed to the largest savings variance across the portfolio. Thermostats achieved roughly half the savings that were expected, predominately a result of

a decreased incentive starting in quarter one; market saturation may have also contributed to a decline.

- Gas furnace savings were down 26% from 2022 due to a decline in market rate single-family installations. An increase in installations in single-family rental properties that qualify for a higher incentive minimized the impact.
- EPS new construction savings fell short of goal by 26%. The market delivered fewer homes that were smaller than forecasted and achieved fewer savings per home than expected.
- Staff identified high- and low-volume trade allies in Southwest Washington and provided in-person trainings for managers, salespeople and administrative staff on Energy Trust offers. With low-volume trade allies, especially weatherization contractors, the focus was on awareness of incentives and how to connect their customers with Energy Trust offers.
- Staff delivered a multi-layered marketing campaign including paid social, paid search, direct mail and print advertising to customers in Skamania and Klickitat counties in the first half of the year. These counties have historically low participation rates for key incentive offers including gas furnaces, attic insulation and smart thermostats. The marketing led to measurable growth in multiple measures, especially gas furnaces.
- Staff collaborated with the Clark County Rental Association to engage its members, predominately rental property owners and management companies. Energy Trust ran advertisements focused on gas furnaces and smart thermostats bonuses in the association's newsletter and plans to do so on an annual basis.

D. Trade Ally Network highlights

- **By the end of 2023, 416 trade allies served Washington**, up from 390 in 2022. This includes 181 trade allies based in Washington.

E. Program evaluations

- **In quarter one**, Energy Trust finalized the 2020 Existing Buildings Impact Evaluation: https://www.energytrust.org/wp-content/uploads/2023/01/EB2020Impact_Final_wSR.pdf
- **In quarter two**, Energy Trust finalized the Impact Evaluation of the New Homes Program 2012-2019: <https://www.energytrust.org/wp-content/uploads/2023/04/Energy-Trust-New-Homes-Impact-Evaluation-2012-2019-Final-wSR.pdf>
- **In quarter two**, Energy Trust finalized the 2022 Customer Awareness and Participation Study: https://www.energytrust.org/wp-content/uploads/2023/04/Energy-Trust-of-Oregon_CAP-Study-Report-2022_Final-wSR.pdf
- **In quarter three**, Energy Trust finalized and posted the 2022-2023 New Buildings Program Process Evaluation: https://www.energytrust.org/wp-content/uploads/2023/07/Process-Evaluation-of-Energy-Trust-2022-2023-New-Buildings-Program-FINAL_wSR.pdf
- **In quarter three**, Energy Trust finalized and posted the Geographically Targeted Energy Efficiency (GeoTEE) Phase Three Process Evaluation: https://www.energytrust.org/wp-content/uploads/2023/07/GeoTEE-Phase-3-Evaluation-Report_REVISED_2023.06.05_Final.pdf
- **In quarter three**, Energy Trust finalized and posted the 2022 Fast Feedback Annual Report: <https://www.energytrust.org/wp-content/uploads/2023/09/Energy-Trust-2022-Fast-Feedback-End-of-Year-Report.pdf>
- **In quarter four**, Energy Trust finalized Existing Buildings 2021 Impact Evaluation: <https://www.energytrust.org/wp-content/uploads/2023/11/Existing-Buildings-2021-Impact-Evaluation-Final-Report-w-SR.pdf>

F. Washington Utilities and Transportation Commission performance metrics

The tables below compare quarterly results to 2023 goals, as established in NW Natural's Energy Efficiency Plan for Washington.

2023 Results compared to goals

Metric	Goal	Annual	Q1 results	Q2 results	Q3 results	Q4 results
Therms Saved	281,908	272,936	48,300	24,423	85,961	114,253
Total Program Expenditures	\$ 3,253,106	\$ 2,972,269	\$ 722,326	\$ 600,463	\$ 693,056	\$ 956,425
Average Levelized Cost Per Therm	Less than \$0.90	\$ 0.85	\$ 1.18	\$ 1.57	\$ 0.64	\$ 0.68
Utility Cost of Energy Trust Programs*	Greater than 1.00	\$ 2.79	Reported annually	Reported annually	Reported annually	Reported annually

* does not include NEEA or WA_LIEE expenses

2022 Results compared to goals (for reference)

Metric	Goal	Annual	Q1 results	Q2 results	Q3 results	Q4 results
Therms Saved	318,722	395,714	37,505	39,986	77,433	240,789
Total Program Expenditures	\$ 2,979,668	\$ 3,315,452	\$ 551,364	\$ 608,195	\$ 893,594	\$ 1,262,298
Average Levelized Cost Per Therm	Less than \$0.65	\$ 0.64	\$ 0.83	\$ 1.04	\$ 0.88	\$ 0.43
Utility Cost at Portfolio Level	Greater than 1.00	\$ 2.31	Reported annually	Reported annually	Reported annually	Reported annually

2023 Utility Cost Test and Total Resource Cost Test benefit/cost ratios by program

Program	Utility Cost Test Benefit/Cost Ratio	Total Resource Cost Test Benefit/Cost Ratio
Commercial Programs	3.47	2.28
Residential Programs	2.17	1.61
Total NW Natural Washington Energy Trust Programs*	2.79	1.95
NW Natural Low Income Program (only)	1.41	1.36
<i>Total NW Natural Washington Programs</i>	2.78	1.95
<i>Total Washington Portfolio**</i>	2.87	2.09

* does not include NEEA or WA_LIEE expenses

** includes costs associated with NEEA's gas market transformation efforts.

2022 Utility Cost Test and Total Resource Cost Test benefit/cost ratios by program (for reference)

Program	Utility Cost Test Benefit/Cost Ratio	Total Resource Cost Test Benefit/Cost Ratio
Commercial Programs	3.35	2.00
Residential Programs	3.02	2.23
Total NW Natural Washington Energy Trust Programs*	3.17	2.09
NW Natural Low Income Program (only)	1.96	1.83
Total NW Natural Washington Programs	3.15	2.09
Total Washington Portfolio**	3.58	2.34

III. Annual results

A. Activity highlights—sites served

	Q1	Q2	Q3	Q4	Total
Commercial					
Food Service	-	-	-	-	-
HVAC	1	2	4	2	9
Operations & Maintenance	10	3	-	3	16
Process cooling	-	-	-	-	-
Process heating	-	-	-	2	2
Refrigeration	-	-	-	-	-
Study	1	-	-	-	1
Water Heating	-	1	-	1	2
Weatherization	-	-	1	-	1

	Q1	Q2	Q3	Q4	Total
Residential					
EPS new construction	100	25	8	10	143
New manufactured homes	-	1	-	-	1
HVAC	122	153	134	143	552
HVAC Controls	127	49	32	193	401
Water Heating	5	2	3	12	22
Weatherization	54	64	56	65	239

B. Revenue

Source	Annual actual revenue	Annual budgeted revenue
NW Natural \$	3,160,185 \$	3,160,185

C. Expenditures

		Annual actual expenditures	Annual budgeted expenditures	Budget variance
Commercial	Commercial \$	1,347,498	1,487,479	\$ -139,982
	Commercial administration \$	80,759	94,644	\$ -13,884
	Commercial Total \$	1,428,257	1,582,123	\$ -153,866
Residential	Residential \$	1,456,708	1,571,024	\$ -114,316
	Residential administration \$	87,304	99,959	\$ -12,655
	Residential Total \$	1,544,012	1,670,983	\$ -126,971
Total expenditures \$		2,972,269	3,253,106	\$ -280,837

D. Incentives paid

	Annual actual incentives		Annual actual expenditures		Percent incentives/expenditures
Commercial	\$	557,907	\$	1,428,257	39%
Residential	\$	760,286	\$	1,544,012	49%
Total Incentives	\$	1,318,194	\$	2,972,269	44%

- Incentives paid account for approximately 52% of annual program expenses when total program expenses are adjusted down by 15% to account for costs that a utility-delivered program would recover through rates.

E. Savings

		Annual savings therms	Annual goal therms	Percent achieved	Levelized cost/therm
Commercial	Existing Buildings - custom	155,134	88,452	175%	
	Existing Buildings - standard	1,382	43,018	3%	
	New Buildings - custom	-	4,794	-	
	New Buildings - standard	4,610	14,100	33%	
	Strategic Energy Management	22,071	18,881	117%	
Commercial total		183,197	169,245	108%	\$ 0.95
Residential	Home retrofit	76,128	92,960	82%	
	Midstream and retail	6,958	11,355	61%	
	New manufactured homes	106	-	N/A	
	Small multifamily	1,672	1,754	95%	
	EPS new construction	4,875	6,594	74%	
Residential total		89,740	112,663	80%	\$ 1.65
Total		272,936	281,908	97%	\$ 1.19

Appendix 1: Energy efficiency measure counts and savings

Table 1: Residential sector measures¹

Category	Measure	Measures installed	Total therms saved
EPS new construction		143	4,875
	EPS new construction total	143	4,875
New manufactured homes		1	106
	New manufactured homes total	1	106
HVAC	Furnace	538	49,210
	Gas fireplace	959	7,953
	HVAC total	1,497	57,163
HVAC controls	Thermostat	401	13,288
	Thermostat Optimization	7	2,179
	HVAC controls total	408	15,467
Water heating	Tank water heater	-	-
	Tankless water heater	22	1,335
	Other total	22	1,335
Weatherization	Ceiling insulation	28	3,609
	Floor Insulation	11	1,182
	Wall insulation	4	390
	Windows	286	5,613
	Weatherization total	329	10,794
Grand total		2,400	89,740

¹ Totals may not match Table E due to rounding.

Table 2: Commercial sector measures^{2,3}

Category	Measure	Measures installed	Total therms saved
Foodservice	Fryer	-	-
	Oven	-	-
Foodservice total		-	-
HVAC	Boiler	3	3,864
	Building controls	6	138,495
	Variable Air Volume	1	326
	Demand Control Ventilation	14	1,181
	Gas furnace	1	56
	Radiant heating	-	-
HVAC total		25	143,923
Operations & maintenance	Building Operator Certification	-	-
	Custom Operations & Maintenance	30	22,071
Operations & maintenance total		30	22,071
Process cooling	Custom chiller	-	-
Process cooling total		-	-
Process heating	Custom heat recovery	2	16,313
Process heating total		2	16,313
Refrigeration	Refrigeration	-	-
Refrigeration total		-	-
Study	Study	1	-
Study total		1	-
Water heating	Aerator	-	-
	Tank water heater	2	746
	Tankless water heater	-	-
Water heating total		2	746
Weatherization	Ceiling insulation	1	144
	Wall insulation	-	-
Weatherization total		1	144
Grand Total		61	183,197

² Totals may not match Table E due to rounding.

³ Since a single fryer may have multiple vats, the fryer figure is the number of vats installed.

Appendix 2: Customer satisfaction

Energy Trust conducted short web and phone surveys of NW Natural customers in Washington who participated in Energy Trust programs in 2023 to determine their satisfaction with Energy Trust. Results from 165 residential customers indicate a generally high level of customer satisfaction. Most residential customers were satisfied with their overall program experience, but a small proportion were neutral or dissatisfied with the turnaround time to receive their incentive and the incentive application form. These numbers are generally consistent with previous program years.

Table 1: NW Natural Washington residential customer satisfaction 2022

Residential (n=165)	Dissatisfied	Neutral	Satisfied
Overall experience	5%	1%	93%
Incentive application form	3%	3%	94%
Turnaround time to receive incentive	8%	8%	84%

No commercial customers in Washington who participated in Energy Trust programs in 2023 were surveyed. Only three customers qualified to participate in the survey and none of those chose to participate. (Of the 27 commercial projects in 2023, all but three were Strategic Energy Management or New Buildings projects that are not eligible for this survey or were still being processed at the time of the survey.)