2015 Annual Report NW Natural Washington

ENERGY TRUST OF OREGON APRIL 22, 2016





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I INTRODUCTION, BACKGROUND, OVERSIGHT AND GOALS

A. Introduction

This report covers 2015, the sixth full year that Energy Trust of Oregon provided services and incentives to residential and commercial customers of NW Natural in Washington.

It addresses progress toward annual goals, information on revenues and expenditures, number of completed measures, 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 administering NW Natural's demand-side management programs in Southwest Washington on October 1, 2009. The first year was viewed as a pilot. Satisfied with results from the pilot year, in 2011 the WUTC approved Energy Trust's continued administration of conservation programs for NW Natural in Washington.

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, Northwest Industrial Gas Users and the Northwest Energy Coalition.

D. Goals

NW Natural, in collaboration with the EEAG, established performance metrics for 2015. This report presents Energy Trust's performance against those goals.

II. ANNUAL REPORT HIGHLIGHTS

A. Summary

- Gas efficiency measures installed in 2015 by NW Natural's Washington customers saved 201,446 annual therms of natural gas—including 73,437 annual therms in Existing Buildings, 58,465 annual therms in Existing Homes and 69,545 annual therms in New Homes programs.
- Total 2015 savings were approximately 78 percent of Energy Trust's 2015 goal of 257,063 therms, which roughly aligns with NW Natural's stretch performance measure of 259,895 therms as detailed in NW Natural's 2015 Energy Efficiency Plan.
- While residential programs exceeded goals, the Existing Buildings program fell short of its goal. With a small portfolio of savings in Washington, delay of just a few large projects can have a big influence on annual savings. This was the case in 2015 as several large custom Existing Buildings projects were delayed to 2016, and custom projects that did complete in 2015 were smaller and saved less energy than expected. In addition, few prescriptive projects were completed, which could indicate that incentive levels were not high enough to spur customer action.
- The shortfall in Existing Buildings savings negatively impacted other performance metrics, which are calculated based on energy savings. Energy Trust spent \$6.82 per therm saved, falling short of the dollars spent per therm saved metric of less than \$6.50.
- To spur business customers to invest in energy-efficiency upgrades, Existing Buildings increased incentives for custom projects in 2015. Incentives were increased from \$2.00 per therm capped at 60 percent of eligible project cost to \$2.50 per therm capped at 70 percent of eligible project cost. While not enough to achieve goal in 2015, increasing incentives helped develop a strong pipeline of six custom projects expected to complete in 2016. Incentives were further increased in Q1 2016 to spur customer participation and help ensure achievement of 2016 goals. Reduced demand for commercial gas projects was widespread and consistent with low gas savings for Existing Buildings customers in Oregon.

B. Washington Utilities and Transportation Commission performance metrics

The table below compares 2015 annual results to 2015 goals, as established in NW Natural's Energy Efficiency Plan for Washington (approved December 2014).

2015 results	compared	to	goals ^{1,2}
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		2015 total				
Metrics	Goal	YTD	Q1 Results	Q2 Results	Q3 Results	Q4 Results
Therms Saved	220,991 – 259,895	201,446	24,469	28,816	28,804	119,357
Total Program Costs	\$1,342,559 – \$1,570,292	\$1,373,523	\$228,791	\$278,382	\$309,000	\$557,350
Average Levelized Cost Per Measure	Less than \$0.65	\$0.52	\$0.84	\$0.68	\$0.74	\$0.37
Dollars Spent Per Therm Saved	Less than \$6.50	\$6.82	\$9.35	\$9.66	\$10.73	\$4.67
Utility Costs at Portfolio Level	Greater than 1.0	1.0	Reported annually	Reported annually	Reported annually	Reported annually

2015 Utility Cost and Total Resource Cost benefit cost ratios by program²

Program	Utility Cost Test benefit cost ratio	Total Resource Cost benefit cost ratio
Existing Buildings	0.8	0.8
Existing Homes	1.0	0.9
New Homes	1.1	0.8
Total NW Natural Washington portfolio	1.0	0.8

2015 Total Utility Cost and Total Resource Cost benefit cost ratios²

Program	Utility Cost Test benefit cost ratio	Total Resource Cost benefit cost ratio
NW Natural Washington Portfolio	1.0	0.8
NW Natural Washington Low Income	0.9	0.6
Total	1.0	0.8

2015 benefit cost ratios were impacted by the Existing Buildings Washington program, which fell short of goal as few large projects completed. Historically, Existing Buildings has provided a high volume of low-cost savings, supporting benefit cost ratios of 1 and above.

¹ Achievement of metrics were calculated excluding spending on Northwest Energy Efficiency Alliance gas efforts in Washington. ² While Energy Trust is required to report the Total Resource Cost benefit cost ratio, it is not included as a performance metric for utility costs at the portfolio level.

C. Commercial sector highlights

Existing Buildings

- Existing Buildings saved 73,437 annual therms, 51 percent less than the goal of 150,000 annual therms in 2015.
- Completion of several large custom projects was delayed to 2016, negatively impacting savings in 2015. In addition, custom projects that did complete in 2015 were smaller and saved less energy than expected.
- Existing Buildings increased incentives for custom projects in 2015 to spur business customers to invest in energy-efficiency upgrades. Incentives were increased from \$2.00 per therm capped at 60 percent of eligible project cost to \$2.50 per therm capped at 70 percent of eligible project cost. While not enough to achieve goal in 2015, increasing incentives helped develop a strong pipeline of projects expected to complete in 2016.
- Existing Buildings also offered bonus incentives (temporarily increased incentive amounts) for qualifying insulation installations between April 1 and November 30. Despite the bonus, participation remained low. As a result, Energy Trust increased prescriptive incentives for 2016 and additional food service equipment bonuses have been planned for Q2 and Q3 of 2016 to drive more activity earlier in the year.
- Existing Buildings installed one boiler in 2015 compared to four in 2014. With an average of 4,800 therms savings per boiler, just a few projects can make a big difference in year-end savings goals.
- Similar to 2014, gas fryers accounted for roughly one-quarter of savings. Custom projects also contributed significant savings, with the remainder from condensing boilers, building controls and efficient showerheads. Weatherization also contributed a very small proportion of savings.
- Energy Trust offered a sales performance incentive to restaurant equipment retailers, dealers and distributers to promote sales of energy-efficient equipment. The effort resulted in sales of 13 qualifying measures representing more than 7,000 therms in 2015.
- A bonus to encourage boiler retrofits increased the total available incentive level to be consistent with incentives for boilers in Oregon, however the bonus did not boost savings. In 2016, boiler incentives in Washington will remain consistent with the Oregon service territory.
- As is typical, the majority of energy savings occurred in the fourth quarter. To promote savings earlier in the year, the program planned to launch 2016 bonuses before Q4 2016.
- Existing Buildings, New Homes and Existing Homes programs collaborated to coordinate with Clark Public Utilities and to plan trade ally engagement events in 2016.

D. Residential sector highlights

• The residential sector saved 128,010 annual therms in 2015, 20 percent above the 2015 goal, and 31 percent more than residential sector savings achieved in 2014.

Existing Homes

- Existing Homes saved 58,465 annual therms, 14 percent above the goal of 51,148 annual therms in 2015.
- The program exceeded savings goals for 2015 due to increased outreach and incentives that drove installation of efficient gas furnaces, resulting in a 200 percent increase in Existing Homes savings compared to 2015.

- **HVAC measures contributed 73 percent of total Existing Homes savings**, with gas furnaces providing the majority, followed by gas hearths, smart thermostats and boilers.
- Savings from energy- and water-saving devices doubled compared to 2014, as a result of efficient showerheads and faucet aerators distributed in schools through Energy Trust's LivingWise Kits and curriculum. Working with regional school districts and the electric utility in Clark County, the program distributed 360 LivingWise Kits to fifth graders at 10 schools in Clark County.
- Existing Homes launched a new incentive for smart thermostats in Q4, following a successful pilot that completed in Q2. Nearly 40 smart thermostats were installed with the new incentive.
- Energy Trust launched a financing offering with an option to repay loans for energyefficiency upgrades through energy bills. In 2015, 23 southwest Washington customers applied for loans, including many for gas furnaces.

New Homes and Products

- New Homes and Products saved 69,545 annual therms, 24 percent more than the goal of 55,915 annual therms in 2015.
- The program exceeded goals as a result of a strong new construction market in Southwest Washington. In 2015, nearly 2,200 new construction permits were issued, a 40 percent increase compared to 2014.
- The program worked with our verifier network to increase builder participation. Outreach was targeted to verifiers to drive builder participation and support application submission.
- Newly built ENERGY STAR® certified homes contributed 64 percent of all New Homes savings. These nearly 400 homes represent 18 percent of total new construction market activity in Southwest Washington.
- New Homes and Products developed an EPS[™] offering to launch in 2016 for new homes built in Southwest Washington. EPS is an energy performance score that helps homebuyers understand and compare the energy-efficiency of newly built homes.
- The retail clothes washer incentive for gas customers was discontinued at the end of 2015 due to an increase in the federal energy code baseline.

E. Trade Ally Network highlights

- By year-end, 191 trade allies served Washington, including 79 based in Washington.
- Energy Trust enrolled 27 new trade allies serving Washington in 2015.
- Energy Trust held two networking events exclusively for Washington trade allies, one in June and one in December. Open to Existing Homes and Existing Buildings trade allies, attendance and engagement at these networking events continued to grow in 2015.
- New Homes hosted two breakfast events for verifiers in 2015, one in early 2015 to discuss program updates and one in October to discuss the program transition to EPS.

III. ANNUAL RESULTS

A. Activity highlights-sites served

	Q1	Q2	Q3	Q4	Total
Existing Commercial					
School/college retrofits	0	1	1	0	2
Other commercial retrofits	2	2	3	9	16
Studies	1	1	2	1	5
Existing Homes					
Weatherization (insulation, air and duct sealing and windows)	6	44	42	67	159
Gas hearths	11	36	7	45	99
Energy Saver Kits	19	8	5	34	66
Smart thermostats	20	1	0	18	39
Gas furnaces	39	95	69	217	420
Water heaters	2	12	6	6	26
Online Home Energy Reviews	31	28	23	21	103
New homes and products					
ENERGY STAR home certification	22	43	115	217	397
Clothes washers	305	124	51	122	602

B. Revenues

Source	Annual actual revenue		Annual budgeted revenue	
NW Natural	\$	1,435,515	\$	1,411,352

C. Expenditures

		Annual actual expenditures	4	Annual budgeted expenditures	Variance
	Existing Buildings	\$ 403,698	\$	663,666	\$ 259,968
Commercial programs	NEEA commercial	\$ 6,527	\$	22,964	\$ 16,437
	Subtotal	\$ 410,225	\$	686,630	\$ 276,405
	Existing Homes	\$ 464,767	\$	453,272	\$ (11,496)
Residential programs	New Homes	\$ 459,863	\$	344,105	\$ (115,758)
Residential programs	NEEA residential	\$ 14,712	\$	29,110	\$ 14,398
	Subtotal	\$ 939,343	\$	826,487	\$ (112,856)
Administration		\$ 45,922	\$	61,511	\$ 15,589
Total		\$ 1,395,490	\$	1,574,628	\$ 179,138

• The program spent less than budgeted, largely due to the shortfall of activity in the Existing Buildings program. Spending was higher than budgeted for the residential aspects of the portfolio due to strong customer participation.

Budgeted expenditures reflect Energy Trust's final budget. The 2015 Energy Efficiency Plan
was filed with preliminary budget numbers. Small changes occurred across program delivery
line items in Energy Trust's final budget. Energy Trust always works to ensure this new
budget amount is within total funds available as determined by new revenue, existing budget
and carryover funds from the previous year. This misalignment of Energy Trust's final budget
and the Energy Efficiency Plan is a result of Energy Trust's internal processes not in full
alignment with WUTC filing schedule. Energy Trust takes care in ensuring this small risk is
managed and misalignment is minimal.

D. Incentives paid

			nual actual ncentives
Commercial programs	Existing Buildings	\$	148,287
Commercial programs	Subtotal	\$	148,287
	Existing Homes	\$	252,954
Residential programs	New Homes	\$	232,371
	Subtotal	\$	485,325
Total		\$	633,612

Incentives paid account for 53 percent of year-to-date program expense, when total program expense is adjusted down by 15 percent to account for costs that a utility-delivered program would recover through rates.

E. Savings

		Total savings therms	Annual goal	Percent achieved	\$/the	erm	Levelized cost/therm
Commercial	Existing Buildings	73,437	150,000	49%	\$	5.80	0.60
programs	Subtotal	73,437	150,000	49%	\$	5.89	0.61
De stide artist	Existing Homes	58,465	51,148	114%	\$	8.08	0.54
Residential programs	New Homes	69,545	55,915	124%	\$	6.84	0.48
programs	Subtotal	128,009	107,063	120%	\$	7.52	0.52
Total		201,446	257,063	78%	\$	6.93	0.53

NW NATURAL APPENDIX 1: 2015 ENERGY EFFICIENCY MEASURE COUNTS AND SAVINGS

Table 1: Residential sector measures

Category	Measure	Measures installed	Total therms saved
Enorgy Sover Kite	Energy Saver Kits	66	2,379
Energy Saver Kits	LivingWise kits distributed through schools	360	4,140
	Energy Saver Kits total	426	6,519
Online Home Energy Reviews	Online Home Energy Reviews total	103	0
	Air sealing	3	77
	Ceiling insulation	20	1,246
Weatherization	Floor Insulation	7	293
	Duct Insulation	3	37
	Windows	131	6,202
	Weatherization total	164	7,855
	Boilers	3	89
Space heating	Smart thermostats	39	1,059
Space nearing	Furnaces	420	33,924
	Gas Fireplaces	99	8,287
	Space heating total	561	43,359
Water heating	Tank water heaters	26	732
	Water heating total	26	732
	ENERGY STAR home certification	397	44,844
New homes and products	High-efficiency clothes washers	602	2,366
	Water saving products	2,628	22,335
	New homes and products total	3,627	69,545
	Grand total	4,907	128,009

Category	Measure	Installed	Saved
	Gas fryers	35	19,915
Foodservice Equipment	Convection ovens	6	1,812
	Dishwashers	1	554
	Foodservice equipment total	42	22,281
Shell insulation	Ceiling insulation	1	1,075
	Shell insulation total	1	1,075
Space heating	Boilers	1	4,378
	Space heating total	1	4,378
Water heating	Conventional condensing tanks	202	714
water neating	Showerwands	340	5,270
	Water heating total	542	5,984
Motors	Custom variable frequency drive	-	-
	Motors total	-	-
	Studies	5	-
Custom	Custom building controls	2	9,528
	Misc. custom measures	6	30,191
	Custom total	13	39,719

Table 2: Commercial sector measures

NW NATURAL APPENDIX 2: CUSTOMER SATISFACTION

In 2015, Energy Trust conducted short phone surveys of NW Natural customers in Washington to determine satisfaction with their participation in Energy Trust programs. Results from 154 residential customers and thirteen commercial customers indicate a generally high level of customer satisfaction, with moderate satisfaction regarding turnaround time to receive an incentive.

Lower-than-expected customer satisfaction with turnaround time to receive incentives is attributed to processing delays in early 2015 related to an increased volume of incentives at the end of 2014, staff turning, and a transition to a new Program Management Contractor. During this time, incentive processing did not exceed established service level agreements of six to eight weeks.

To improve the experiences of customers in Southwest Washington regarding turnaround time to receive incentives, Energy Trust launched new online incentive applications and instant incentives that expedite incentive distribution. In addition, Energy Trust increased outreach to trade allies serving Southwest Washington to ensure consistent and high-quality interactions with customers.

Residential (n=154)	Dissatisfied	Neutral	Satisfied
Overall satisfaction	3%	8%	90%
Incentive application form	3%	3%	94%
Turnaround time to receive incentive	15%	13%	72%

Table 1: NW Natural Washington residential customer satisfaction 2015

Energy Trust surveyed thirteen commercial customers in 2015. Most respondents were satisfied with their overall program experience, incentive amount, ease of applying for an incentive and interaction with program representatives.

Commercial (n=13)	Dissatisfied	Neutral	Satisfied			
Overall satisfaction	-	-	13			
Incentive amount	-	-	13			
Ease of applying for incentive	-	-	13			
Interaction with program representative	-	-	13			
Performance of equipment or system installed	-	-	13			
Turnaround time to receive incentive	1	1	11			

Table 2: NW Natural Washington commercial customer satisfaction 2015

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WASHINGTON LOW INCOME ENERGY EFFICIENCY (WALIEE)

ENERGY TRUST OF OREGON APRIL 22, 2016

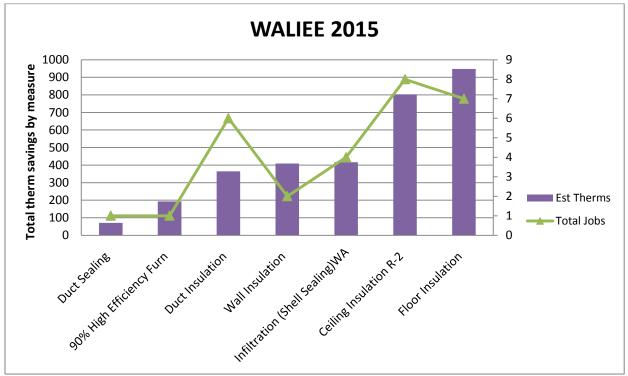
Washington Low Income Energy Efficiency Program 2015 Program Results

NW Natural partners with Clark County's Community Development Office and Skamania-Klickitat Community Action to administer its Washington Low Income Energy Efficiency (WALIEE) program. While offerings are available in Skamania and Klickitat counties, the agency that serves these counties rarely sees gas customers and did not provide services to any through WALIEE during 2015. Results below are specific to Clark County's Department of Community Services.

Historically, the WALIEE program has reimbursed 90% of all cost-effective measures up to \$3,500 per home. Additionally, the agencies are allotted 15% of job costs (up to the cap) for administrative costs and an average of \$440 per home for Health, Safety, and Repairs (HSR), which are not subject to cost effectiveness tests. A WALIEE job could cost the program no more than \$4,465.

Measure Analysis:

The figure below provides a breakdown of weatherization occurrences by measure, as well as the associated annual therms savings. Floor and ceiling insulation are, once again, the most commonly installed measures and achieve the most therm savings in total.



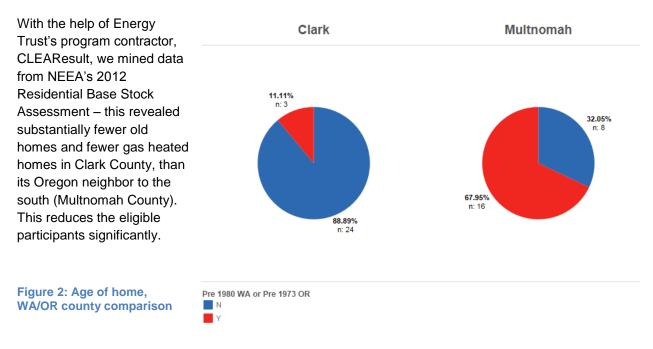


2012-2015 Results:

Performance Metric	2015	2014	2013	2012
Homes served	9	10	20	8
Average Reimbursement per home ³	\$4,313	\$4,334	\$3,984	\$3,845
Total Reimbursed	\$38,817	\$43,339	\$79,677	\$30,761
Average estimated therms saved per home ⁴	357	305	351	319
Total estimated therms saved	3,213	3,050	7,026	2,538
Estimated Cost per Therm	\$12	\$14	\$11	\$12

Despite a dedication to program production, the chart above reflects a small and steady weatherization program. In 2015 the County and NW Natural worked to identify root issues for meager uptake, present these to the EEAG and implement our recommendations through tariff changes effective January 15, 2016. While the results are expected to impact 2016, the activities to understand and tackle these issues occurred in 2015 and are therefore outlined in this report.

Challenge #1: Finding qualified customers and eligible gas homes to weatherize



³ Note, reimbursed costs do not reflect total County cost for home weatherization and repairs – only a portion is paid through WALIEE.

⁴ An impact evaluation has not been conducted on these homes so the actual per therm savings has not been verified. The therm estimates are based on modeling software estimates.

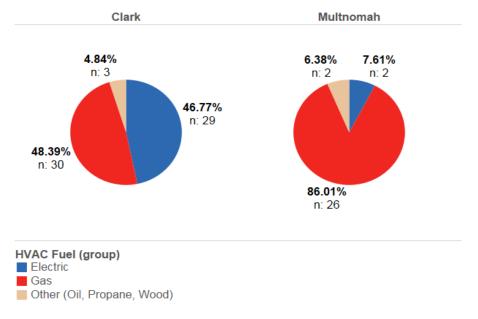


Figure 3: Gas Customers, WA/OR county comparison

Solutions #1: Finding qualified customers and eligible gas homes to weatherize

Typically weatherization participants enter WALIEE via bill assistance. Two ways to increase WALIEE participation then: (1) help a higher percentage of the bill assistance customers see the value of weatherization, and/or (2) find additional paths for WALIEE intake.

- (1) In its determination to reach more bill assistance customers with long-term help (weatherization), the County worked to educate both the intake workers from Clark PUD and the bill assistance recipients through nine group intake sessions on the merits of weatherization. Mike Selig was given 20 minutes during group intake to explain what happens during weatherization and the myriad of benefits residents' experience. Approximately 25 households are represented at each group intake.
- (2) In addition to NW Natural's standard outreach efforts through bill stuffers and call center hold messaging, we worked with a communications firm to craft an outreach strategy using social media. This effort will target our desired demographic and experiment with different messaging to determine which is most effective. The tariff allows a one-time \$11,000 spend which is anticipated to generate nearly 700,000 impressions.

Challenge #2: Finding measures to cost-effectively upgrade in the few homes that do qualify

Even when eligible customers and homes are identified, with natural gas prices at 15-year lows, it is a challenge to retrofit homes for less cost than the accumulated benefit of the saved energy over the measure life. As seen in Figure 1, only one gas furnace passed the cost effectiveness threshold even though a new furnace is one of the most basic and durable ways to help these customers. In homes that receive whole-home weatherization, the benefits of these measures go well beyond energy savings. In well insulated and properly ventilated homes, many forms of asthma and allergies are avoided (reducing health care costs), utility bills are more affordable, and accidents from deferred maintenance are avoided.

However, the value of the benefits beyond energy savings is not represented by the cost-effectiveness tests currently deployed by this program.

Solutions #2: Finding measures to cost-effectively upgrade in the few homes that do qualify

For 2016, two new measure eligibility methods were added to the tariff. In addition to the standard TREAT audit using the Participate Cost Test, the County may use the Department of Commerce's approved priority lists as outlined in its Weatherization Manual, or a hybrid between the original and the new method.

Additional agency-facing tariff change for 2016:

Increase in the per unit cap: The maximum rebate amount per home has been increased to the greater of \$5,000 or the average total installed cost of measures as reported by the Agencies for the prior program year. Previously agencies were reimbursed the greater of \$3,500 or an amount equal to ninety percent (90%) of the average total installed cost of measures as reported by the Agencies for the prior program year. This will help create better alignment between actual job costs and reimbursed cost which is expected to increase program performance.

Conclusion: NW Natural is both grateful for, and impressed by, the dedication and thoughtfulness of the Clark County weatherization staff. We are so pleased that already in the first quarter 11 homes are either complete or in process of weatherization. We are eager to see the fruits of 2015 efforts continue to ripen as we progress through the year and learn from this first-ever social media outreach effort.

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NW NATURAL TRANSACTIONAL AUDIT 2015 PROGRAM COSTS

NW NATURAL APRIL 22, 2016

Washington Energy Efficiency Program 2015 Transactional Audit Results

With the Washington Utilities and Transportation Commission ("WUTC") review and approval of NW Natural's ("NW Natural" or "Company") request for amortization of 2013 energy efficiency program costs (Docket UG-143333), the Commission adopted the recommendation made by Commission Staff that NW Natural conduct a transactional audit of program costs relating to the Energy Trust of Oregon's ("Energy Trust") administration of the Company's Washington energy efficiency programs. NW Natural agreed to the following audit schedule:

- By April 1 of each year, NW Natural will select a random sample of prior year program cost transactions from the Energy Trust. The sample size will be based on the population of transactions. A summary of the audit process and the Company's findings or recommendations will be included in the April 25 Annual EE Report.
- By August 1 of each year, NW Natural will select a random sample of program cost transactions from the Energy Trust for the current year January through June 30 time period. The sample size will be based on the population of transactions. A summary of the audit process and the Company's findings or recommendations will be included in the August 25th second quarter EE Report.

NW Natural's Internal Audit Department (IA) has completed a review of the Energy Trust expenditures billed for 07/01/2015 – 12/31/2015.

The assessment consisted of a review of Energy Trust's allocation and territory reporting policies, chart of accounts, and Report data relating to program effectiveness. IA Management and Staff visited the Energy Trust Offices and met with employees. Additionally, IA obtained the 2015 Financial Statements audited by Moss Adams noting an unqualified opinion, which included a limited review of the internal controls environment as it related to financial reporting.

Utilizing a statistical sampling model a representative sample of 40 (based on 85% confidence level and a 10% margin of error) transactions were selected for detail review.

For selected transactions IA verified balances were correctly captured within the proper period, transactions were appropriately classified and coded to NW Natural territories, allocations were completed per Energy Trust policy and were related to NW Natural specific programs and territories, incentive details were properly captured, and management and program expenses appeared appropriate. Lastly, IA verified that programs captured within the detail testing were included within the last available report (Q3' 2015) and reviewed for program effectiveness.

IA noted no issues as a result of the review. All expenditures reviewed appear to be appropriate.