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April 23, 2014

Steven King, Executive Director & Secretary Washington Utilities and Transportation Commission 1300 S Evergreen Park Drive SW Post Office Box 47250 Olympia, Washington 98504-7250

Re: UG -\_\_\_\_\_ - related to Dockets UG-132147 and UG-080546 2013 Annual Report on NW Natural's Energy Efficiency (EE) Program

Dear Mr. King:

Northwest Natural Gas Company, dba NW Natural ("NW Natural" or the "Company"), hereby submits an original and two copies of its 2013 Annual Report on the Company's Energy Efficiency program. This report is submitted in compliance with the Company's Energy Efficiency Plan ("EE Plan") which is by reference part of the Company's Tariff Schedule G, "Energy Efficiency Services and Programs – Residential and Commercial," and was filed and approved in Docket UG-132147.

The Company's Energy Efficiency program is monitored by the interested parties who have formed the Energy Efficiency Advisory Group (EEAG) in compliance with the stipulated agreement approved in Order 04 in the Company's last rate case, Docket UG-080546 and the Company's Energy Efficiency Plan.

If you have any questions, please call me at (503)226-4211, extension 3590.

Sincerely,

/s/ Jennifer Gross

Jennifer Gross

cc: EEAG

Enclosures

# 2013 Annual Report NW Natural Washington

ENERGY TRUST OF OREGON APRIL 15, 2014

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#### I INTRODUCTION, BACKGROUND, OVERSIGHT AND GOALS

#### A. Introduction

This report covers 2013, the fourth 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 and 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/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 the 2013 program year. This report presents Energy Trust's performance against those goals (see page 55).

#### II. ANNUAL REPORT HIGHLIGHTS

#### A. Summary

- Gas efficiency measures installed in 2013 by NW Natural's Washington customers saved 221,172 annual therms of natural gas—including 132,308 annual therms in Existing Buildings, 40,238 annual therms in Existing Homes and 48,626 annual therms in New Homes. In total, this was 4 percent greater than 2012 savings.
- Total 2013 savings met the minimum savings goal, as detailed in NW Natural's 2013 Energy Efficiency Plan. Total program spending (including incentives, delivery and administration) was under budget, with variances primarily occurring between budgeted and actual expenditures for incentives. This is, in part, a result of capping custom path commercial incentives at 50 percent of project costs, which may result in a lower-than-budgeted cost of therm acquisition. Within the Existing Homes program, the budget variance is the result of some incentive offers not being adopted at the expected rate.
- An energy-efficiency services group, comprised of Clark County stakeholders, continued meeting in 2013 to identify collaboration opportunities, including joint incentive offerings and coordination on outreach events and marketing. The group includes representatives from Energy Trust, Clark Public Utilities, Planet Clark, Clark County Department of Environmental Services and Clark County Community Development's Weatherization Program.
- Energy Trust completed transitions to new Program Management Contractors for commercial and residential programs providing services to NW Natural customers in Washington, following a 2012 competitive bid process.

#### **B. Washington Utilities and Transportation Commission Performance Metrics**

The table below compares 2013 annual results to 2013 program goals, as established in NW Natural's Energy Efficiency Plan for Washington (updated December 2012).

2013 Results Co	ompared to Goals
-----------------	------------------

Metrics	Goal	2013 Total YTD	Q1 Results	Q2 Results	Q3 Results	Q4 Results
Therms Saved	220,421 – 259,319	221,172	20,626	40,948	28,087	131,512
Total Program Costs	\$1,430,092 – \$1,613,437	\$1,170,602	\$190,711	\$291,420	\$240,649	\$447,821
Average Levelized Cost Per Measure	Less than \$0.65	\$0.42	\$0.826	\$0.573	\$0.648	\$0.268
Dollars Spent Per Therm Saved	Less than \$6.50	\$5.29	\$9.25	\$7.12	\$8.57	\$3.41
Total Resource Cost and Utility Costs at Portfolio Level	Greater than 1.0	1.26 and 1.19	Reported annually	Reported annually	Reported annually	Reported annually

#### 2013 Utility Cost and Resource Benefit/Cost Ratio by Program

		Total Resource
Program	Utility Benefit Cost/Ratio	Benefit/Cost Ratio
Existing Buildings	1.7	1.0
Existing Homes	0.8	0.9
New Homes	1.0	1.6
Total	1.26	1.19

#### 2013 Total Utility Cost and Resource Benefit/Cost Ratio

Program	Utility Benefit Cost/Ratio	Total Resource Benefit/Cost Ratio
NW Natural Washington Portfolio	1.3	1.2
NW Natural Washington Low		
Income	0.9	0.6
Total	1.24	1.16

#### C. Commercial Sector Highlights

Existing Buildings

- Existing Buildings achieved savings of 132,308 annual therms in 2013, 4 percent over the conservative goal of 127,500 annual therms.
- Custom path projects comprised 41 percent of commercial sector savings. Savings acquired through the custom path are initiated by technical studies. The cost of these studies is partially paid for with the program's incentives.
- Existing Buildings observed a significant increase in foodservice upgrades, with 34 in 2013 and five in 2012, resulting from increased outreach and marketing to restaurant and hospitality sectors.
- The rooftop HVAC unit tune-up incentive was discontinued in 2013, primarily due to less
  market potential than expected and evaluation efforts indicating rooftop tune-ups achieve fewer
  savings than expected. Advanced HVAC controls upgrades remain available through the custom
  path, where site specific studies can be produced to demonstrate cost-effective savings potential.
- Commercial customers expressed satisfaction with their experience with Energy Trust, with four of four respondents surveyed indicating satisfaction with their overall program experience.

#### D. Residential Sector Highlights

• Residential programs achieved total savings of 88,864 annual therms in 2013, of which Existing Homes accounted for savings of 40,238 annual therms, while New Homes saved 48,626 annual therms. Existing Homes results were 29 percent below the conservative goal of 56,409 annual therms, while the New Homes results were 13 percent over stretch goal of 42,956 annual therms. In total, the residential sector achieved savings that were 16 percent lower than 2012, which was a particularly strong year for savings.

#### Existing Homes

- The Existing Homes program planned to reduce savings from Energy Saver Kits and increase savings from equipment and weatherization. While equipment and weatherization measures did increase in 2013, the pace of the growth was not strong enough to make up for the significant reduction in savings from kits. The program distributed a total of 167 kits in 2013 as compared with 992 in 2012 and 1,757 in 2011.
- The program installed 94 gas hearths in 2013, a 24 percent increase over 2012. Dedicated outreach to trade associations and dealer networks and new marketing materials supported this trend.
- Installation of 192 high-efficiency gas furnaces comprised one-third of program savings, more than double the savings achieved in 2012. This is consistent with the above strategy to increase savings from equipment and weatherization.
- The volume of completed water heaters, insulation measures and window installations remained comparable to 2012.
- In 2013, the program launched mobile media campaigns to supplement online ads in KGW.com, The Oregonian and The Columbian. Mobile and online advertising with regional outlets enables exclusive targeting of customers in SW Washington.
- Customer satisfaction surveys indicate 93 percent of Existing Homes participants were satisfied with their experience with Energy Trust in 2013—up from 89 percent in 2012. Surveys were conducted with 145 program participants by phone shortly after completing energyefficiency upgrades and receiving an incentive check. While it is unclear what impacted the increased customer satisifaction, the 2013 sample included fewer participants who received Home Energy Reviews (17 percent in 2013 as compared to 23 percent in 2012), and was the first year that participants who installed gas hearths were surveyed.

#### New Homes

- The program saw a 22 percent increase in ENERGY STAR new homes since 2012, with 231 homes completed in 2013.
- In 2013, the program supported 846 high-efficiency gas clothes washers through a joint incentive offer with Clark Public Utilities, an increase of 31 percent from 2012.

#### E. Trade Ally Network

- Energy Trust's Trade Ally Network serving Washington customers continued its steady growth in 2013.
- By year-end, 201 trade allies served Washington, including 80 based in Washington. Energy Trust enrolled 18 new trade allies serving Washington in 2013.
- Breakfast meetings exclusively for Washington trade allies were held in June and December for Existing Homes trade allies and in June for Existing Buildings trade allies. Located in Vancouver, these breakfasts continue to be important forums, particularly on the residential side, and trade ally attendance and engagement continues to increase.

#### **III. ANNUAL RESULTS**

#### A. Activity Highlights—Sites Served

	Q1	Q2	Q3	Q4	Total
Existing Commercial					
School/college retrofits	0	2	0	2	4
Other commercial retrofits	1	20	13	24	58
Studies	0	2	1	3	6
Existing Homes					
Weatherization (insulation, air and duct sealing and windows)	11	33	32	51	127
Gas hearths	9	26	8	43	86
Gas furnaces	21	35	28	100	184
Water heaters	4	6	6	23	39
Home Energy Reviews	11	14	21	25	71
New Homes					
Builder Option Packages	5	55	16	155	231
Clothes washers	159	124	140	423	846

#### **B.** Revenues

Source	Actual Revenue YT	D Budgeted Revenue YTD
NW Natural	\$ 1,291	102 \$ 1,291,102

#### C. Expenditures

		Exp	Actual enditures YTD	ex	Budgeted penditures YTD	Variance
Commercial Programs	Existing Buildings	\$	475,643	\$	630,877	\$ 155,235
Commercial Frograms	Subtotal	\$	475,643	\$	630,877	\$ 155,235
	Existing Homes	\$	340,831	\$	456,436	\$ 115,605
Residential Programs	New Homes	\$	315,772	\$	331,005	\$ 15,233
	Subtotal	\$	656,603	\$	787,441	\$ 130,838
Administration		\$	38,356	\$	51,174	\$ 12,818
Total		\$	1,170,602	\$	1,469,492	\$ 298,890

A range of savings goals were established in the program annual update to the Energy Efficiency Plan, with conservative goal representing 15 percent less than stretch goal. Total program spending was under budget, with spending variances primarily occurred between budgeted and actual expenditures for incentives. In part, this is a result of capping custom path commercial incentives at 50 percent of the project cost, which may result in a lower than budgeted cost of therm acquisition. Within the Existing Homes program, the variance is the result of some incentive offers not being adopted at the expected rate.

#### D. Incentives Paid

		Actual	Incentives YTD
Commercial Programs	Existing Buildings	\$	218,066
Commercial Programs	Subtotal	\$	218,066
	Existing Homes	\$	103,337
Residential Programs	New Homes	\$	183,381
	Subtotal	\$	286,718
TOTAL			504,784

Incentives paid account for just over 50 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

		Therms	Annual Goal	% Achieved		Levelized
		Saved YTD	(Conservative)	YTD	\$/Therm	Cost/Therm
Commercial Programs	Existing Buildings	132,308	127,500	104%	\$ 3.72	30.5 ¢
Commorciary regrams	Subtotal	132,308	127,500	104%	\$ 3.72	30.5 ¢
	Existing Homes	40,238	56,409	71%	\$ 8.76	64.2¢
Residential Programs	New Homes	48,626	36,513	133%	\$ 6.71	52.7¢
	Subtotal	88,864	92,921	96%	\$ 7.64	58.1 ¢
TOTAL		221,172	220,421	100%	\$ 5.29	42.0 ¢

A portfolio-wide shift to acquire a greater proportion of measures with longer measure lives contributed to a reduction in levelized cost from \$0.48 to \$0.42. The levelized cost represents the annualized cost of the investment made in savings acquisition on a per unit basis. When the average measure life across a portfolio of programs increases, it reduces the annual per unit cost to acquire savings, when those costs are levelized across the useful life of the investment. The program is performing well below the per therm metric established by the WUTC.

# **NW NATURAL APPENDIX 1: 2013 Energy Efficiency Measure Counts and Savings**

**Table 1: Residential Sector Measures** 

Category	Measure	Measures	Total Therms
		Installed	Saved
Air Sealing	Air Sealing	11	230
	Blower Door Test	8	0
	Air Sealing Total	19	230
Duct Sealing and Insulation	Duct Insulation	7	86
	Duct Sealing	3	102
	Duct Testing	3	0
	Duct Sealing and Insulation Total	13	188
Energy Saver Kit	Energy Saver Kit Total	167	6,184
Home Energy Reviews	Home Energy Reviews Total	71	0
Shell Insulation	Ceiling Insulation	30	2,571
	Floor Insulation	14	567
	Wall Insulation	9	286
	Shell Insulation Total	53	3,424
Space Heating	Boiler	2	88
	Furnace	192	13,556
	Gas Fireplaces	94	9,572
	Space Heating Total	288	23,216
Water Heating	Tank Water Heater	47	1,149
	Tankless Water Heater	0	0
	Water Heater Thermostat Set-back	0	0
	Showerheads Left Behind At Home Energy Review	63	907
	Showerwands Left Behind At Home Energy Review	29	386
	Faucet Aerators Left Behind At Home Energy Review	137	1,005
	Cold Water Detergent Left Behind At Home Energy Review	41	238
	Water-saving Device Installed By Plumber	0	0
	Water Heating Total	317	3,685
Windows	Windows Total	86	3,310
New Homes	ENERGY STAR New Home	231	23,260
	Tankless Water Heater	10	650
	Low Income Energy Saver Kit	45	324
	Showerheads Sold At Retail	2,563	21,068
	High Efficiency Clothes Washers	846	3,325
	New Homes Total	3,695	48,627
	Grand Total	4,709	88,864

**Table 2: Commercial Sector Measures** 

Category	Measure	Measures Installed	Total Therms Saved
Foodservice Equipment	Gas Fryer	31	17639
	Convection Oven	3	906
	Foodservice Equipment Total	34	18,545
Shell Insulation	Ceiling Insulation	1	3,000
	Shell Insulation Total	1	3,000
Space Heating	Boiler	13	35,246
	Space Heating Total	13	35,246
Water Heating	Conventional Condensing Tank	4	642
	Water Heating Total	4	642
Rooftop HVAC Tune-up	RTU Tune Up DCV Control	60	20,287
	Rooftop HVAC Tune-up Total	60	20,287
Custom	Studies	6	0
	Custom Building Controls	20	43724
	Misc Custom Measures	5	10,864
	Custom Total	31	54,588
	Grand Total	143	132,308

#### **NW NATURAL APPENDIX 2: Customer Satisfaction**

In 2013, Energy Trust continued short phone surveys of NW Natural customers in Washington to determine satisfaction with their participation in Energy Trust programs. Results from 145 residential customers and four commercial customers indicate a generally high level of customer satisfaction.

**Table 1: NW Natural Washington Residential Customer Satisfaction 2013** 

Residential (n=145)	Dissatisfied	Neutral	Satisfied
Overall	1%	6%	93%
Incentive application form	3%	9%	88%
Turnaround time to receive incentive	9%	15%	76%

Energy Trust was able to interview four commercial customers in 2013. All respondents were satisfied with their overall program experience, the incentive amount, ease of applying for the incentive and interaction with program representatives.

**Table 2: NW Natural Washington Commercial Customer Satisfaction 2013** 

Commercial (n=4)	Dissatisfied	Neutral	Satisfied
Overall	-	-	4
Incentive amount	-	-	4
Ease of applying for incentive	-	-	4
Interaction with program representative	-	-	4
Performance of equipment or system installed	-	2	2
Turnaround time to receive incentive <sup>1</sup>	2	-	1

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<sup>&</sup>lt;sup>1</sup>Customer satisfaction ratings do not add to four because one customer responded "unknown."

## Washington Low Income Energy Efficiency Program 2013 Program Results

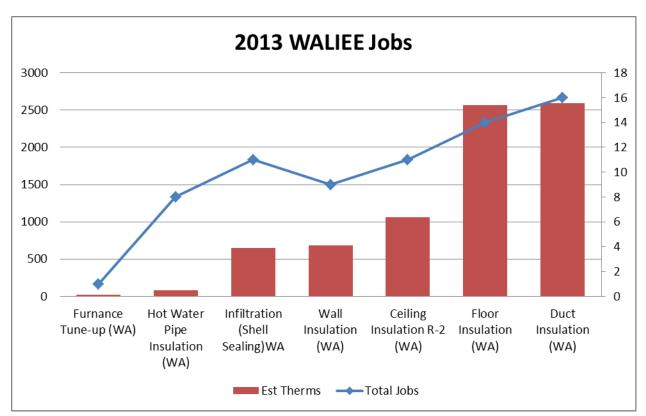
NW Natural partners with Clark County's Community Development Office and Skamania-Klickitat Community Action to administer its Washington Low Income Energy Efficiency (WA-LIEE) program.

Our WA-LIEE program reimburses agencies for 90% of all cost-effective, energy efficiency measures, up to \$3500 per home. The agencies are also allotted 15% of job costs (up to the cap) for administrative costs and an average of \$440 per home for Health, Safety, and Repair (HSR), which are not subject to cost effectiveness tests. A WA-LIEE job may cost the program no more than \$4465.

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 WA-LIEE during 2013. Results below are specific to Clark County's Department of Community Services.

#### **Measure Analysis:**

The figure below provides a breakout of how often individual weatherization and efficiency measures were completed in 2013 and the savings associated with these measures in total.



## Washington Low Income Energy Efficiency Program 2013 Program Results

#### 2012-2013 Results:

Performance Metric	Goal - 2013	Actual- 2013	Actual- 2012
Estimated homes served	20-40	20	8
Estimated Average Cost of per home	\$4465	\$3984	\$3845
Total Estimated Program Cost	\$89,300 to \$178,600	\$79,677	\$30,761
Estimated average therms saved per home	211	351	319 <sup>1</sup>
Total estimated therms saved	4220 to 8440	7026	2538
Estimated Cost per Therm	\$21	\$11	\$12

The charts above highlight two significant and interrelated outliers: number of homes weatherized and portion of those homes receiving duct and floor insulation. Prior to the current program year it was rationally assumed that homes with code insulation would not be cost-effective to weatherize. Unfortunately, construction practices often do not secure the required R-19 floor insulation firmly against floor decking. Therefore, with a minimal investment of R-11 insulation, new string and labor to secure it all, homes with non-functioning R-19 insulation (operating closer to R-0) were brought up to R-40 effectiveness. The same phenomenon had been observed and corrected as it pertains to duct insulation as well. We are grateful for the expertise at the county to have understood the unfortunate disconnect between required code compliance and actual practice in the field.

We are pleased that WA-LIEE was able to treat 20 homes in 2013, up from 8 in 2012. We believe this improvement is a result of program maturity, a great working relationship with the County, and quarterly coordination meetings with many energy efficiency providers in SW Washington. The coordination efforts have provided us a forum for sharing ideas and ensuring all customers have a comprehensive set of weatherization offerings regardless of their respective needs and income levels.

<sup>&</sup>lt;sup>1</sup> An impact evaluation has not been conducted on these homes so the actual per therm savings has not been verified. 325 is based on modeling software estimates.