

Q2 2016 REPORT ON ACTIVITIES FOR NW NATURAL IN WASHINGTON

April 1, 2016, through June 30, 2016

This quarterly report covers the period April 1 through June 30, 2016. This report addresses progress toward 2016 goals for the NW Natural energy-efficiency program in Washington. It includes information on expenditures, gas savings, projects completed and incentives paid during the quarter and year to date.

I. PROGRAM SUMMARY

A. General

- **Gas efficiency measures installed in Q2 2016 by NW Natural's Washington customers saved 48,227 annual therms of natural gas**—including 10,621 annual therms in Existing Buildings, 15,184 annual therms in Existing Homes and 22,421 annual therms in New Homes and Products.
- **Q2 2016 savings were approximately 18 percent of the 2016 annual performance metric** of 263,184 therms in NW Natural's 2016 Energy Efficiency Plan submitted to the Washington Utilities and Transportation Commission.¹
- **In total, savings achieved in Q2 2016 were 67 percent higher than Q2 2015 savings** due to strong program accomplishments in all three programs. Energy Trust supported efficient construction in a thriving new homes market and bolstered installation of commercial foodservice equipment through a bonus incentive.
- **Energy Trust expects to meet 2016 goals with a strong pipeline of projects in all three programs.** Thanks to a strong economy and vintage of homes, in the Existing Homes program, HVAC and equipment measures are also expected to be strong for the remainder of the year. The commercial custom project pipeline currently includes 10 active custom projects scheduled to complete in 2016; which, if all projects come in as projected, will result in more than 55,000 therms saved, twice the year-end goal.

B. Commercial sector highlights

Existing Buildings

- **Existing Buildings saved 10,621 annual therms in Q2**, primarily through foodservice equipment such as gas fryers and gas combination ovens.
- **Through Q2, savings from prescriptive measures were 250 percent higher than in the same period in 2015**, with nearly 80 percent of savings from foodservice equipment eligible for a bonus launched in Q1. Boiler projects, expected to complete in Q3 and Q4, will also contribute savings.
- **Launched in Q1, the foodservice equipment bonus** resulted in installation of 17 gas fryers, one combination oven and one convection oven.

¹ Energy Trust's 2016 board-approved budgeted goal for NW Natural territory in Washington differs slightly due to timing. Q2 2016 savings were approximately 18 percent of Energy Trust's 2016 budgeted goal of 265,079 therms.

- **A strong pipeline of custom projects, driven largely by digital controls system upgrades,** are scheduled to finish in the second half of the year. Many of these projects are coming to the program through Allied Technical Assistance Contractors.
- **The program focused outreach on recruiting new participants from grocery stores and schools.** Two new school districts began working with the program, with projects scheduled to complete in 2016.
- **The program worked with Northwest Energy Efficiency Alliance and New Buildings to develop a new Spark pilot approach for commercial properties.** Spark provides customized design concepts and initial economic analysis of a project. Spark was developed for design and real estate professionals and project managers to facilitate and streamline the early analysis of building renovation projects. Spark allows for quicker identification of potential design strategies and project scopes of work, and provides a preliminary view of project costs and economic benefits.
- **The program began developing an Energy Management Certification incentive** for engineers, technicians and facility maintenance and energy managers. Participants learn energy management principles and techniques, including building energy use, glazing, insulation, building envelope, heating and cooling, secondary HVAC, controls, central plant equipment, energy auditing and operations and maintenance. This is being developed as a possible offering in Washington for 2017 on a limited basis, subject to approval by Energy Trust and the Washington Utilities and Transportation Commission.
- **The program promoted market adoption of a Building Operator Certificate,** a professional development program created by NEEA and available to eligible professionals working in Washington. Certification for building operators helps them identify and increase savings opportunities.
- **The program began exploring savings opportunities for new construction projects** in NW Natural's Washington territory.

C. Residential sector highlights

- **The residential sector saved 37,606 annual therms in Q2,** primarily through ENERGY STAR[®] and EPST[™] rated homes, gas furnaces, gas fireplaces, efficient windows, Energy Saver Kits and showerheads.
- **Energy Trust collaborated with NW Natural to develop an outreach plan to engage** nonprofits and housing organizations to serve as aggregators in support of streamlined outreach and measure adoption and uptake for retrofit and new construction markets.

Existing Homes

- **Existing Homes saved 15,184 annual therms in Q2,** primarily through gas furnaces and energy-saving products, followed by gas fireplaces and efficient windows.
- **Demand for energy-efficient gas furnaces contributed to strong savings in Q2.**
- **The program collaborated with Clark Public Utilities** to deliver LivingWise Kits to sixth graders in Clark County, providing free LEDs funded through Clark Public Utilities and free showerheads provided through Energy Trust.
- **Gas furnaces, gas hearths and smart thermostats** continued to contribute significant savings.

- **The program initiated a rental market analysis** to better understand housing stock characteristics and inform new strategies to serve customers living in rental properties.
- **Approximately 25 trade allies, distributors, program representatives, utility representatives and other stakeholders** attended a biannual trade ally networking event, hosted in collaboration with Clark Public Utilities.

New Homes and Products

- **New Homes and Products saved 22,421 annual therms**, primarily through ENERGY STAR homes, EPS rated homes and showerheads. In Q2, 75 percent of New Homes savings came from whole-home improvements supported by EPS and ENERGY STAR incentives.
- **Strong new construction activity in Clark County supported higher-than-anticipated savings for New Homes.** The program has recognized 222 homes to date, compared to approximately 300 homes budgeted for the 2016 program year.
- **The program worked with the Building Industry Association of Clark County** to support development of the first ever Green Homes Street Fair in May 2016. The fair featured two completed EPS homes.
- **The program implemented database improvements to support market verifiers in reporting site information** and expedite program analysis and incentive processing.
- **The program is refining analysis to update the EPS incentive pathway** for the 2017 program year, due to a new Washington State Energy Code effective July 1, 2016.

D. Washington Utilities and Transportation Commission performance metrics

The table below compares quarterly results to 2016 goals, as established in NW Natural's Energy Efficiency Plan for Washington (filed December 2015).

Metrics	Goal	2016 total				
		YTD	Q1 Results	Q2 Results	Q3 Results	Q4 Results
Therms Saved	223,706 - 263,184	72,422	24,195	48,227		
Total Program Costs	\$1,441,218 - \$1,695,551	\$594,333	\$262,708	\$331,625		
Average Levelized Cost Per Measure	Less than \$0.65	\$0.58	\$0.73	\$0.49		
Dollars Spent Per Therm Saved	Less than \$6.50	\$8.21	\$10.86	\$6.88		
Utility Costs at Portfolio Level	Greater than 1.0	n/a	Reported annually	Reported annually	Reported annually	Reported annually

- **Dollars spent per therm saved are typically higher in the first half of the year** as Energy Trust invests in studies and outreach that result in completed projects by year-end.
- **This table does not include therm goal or budget** associated with NW Natural's Washington Low-Income Energy Efficiency program delivery.
- **Energy Trust allocated budget to NEEA for gas market transformation activities**, which is not included in this table.

2015 Utility Cost and Total Resource Cost benefit/cost ratios by program

Program	Utility Cost Test benefit/cost ratio	Total Resource Cost Test benefit/cost ratio
Existing Buildings	1.5	1.5
Existing Homes	0.8	1.0
New Homes	0.9	1.8
Total NW Natural Washington portfolio	1.1	1.5

2015 Total Utility Cost and Total Resource Cost benefit/cost ratios

Program	Utility Cost Test benefit/cost ratio	Total Resource Cost Test benefit/cost ratio
NW Natural Washington Portfolio	1.1	1.5
NW Natural Washington Low Income	0.7	0.5
Total	1.1	1.4

II. QUARTERLY RESULTS

A. Expenditures¹

		Actual	Budgeted	Variance
		expenditures Q2	expenditures Q2	
Commercial programs	Existing Buildings	\$ 92,759	\$ 163,063	\$ 70,304
	NEEA commercial	\$ 3,750	\$ 6,739	\$ 2,989
Commercial total		\$ 96,509	\$ 169,802	\$ 73,294
Residential programs	Existing Homes	\$ 96,564	\$ 109,376	\$ 12,811
	New Homes	\$ 131,315	\$ 94,829	\$ (36,485)
	NEEA residential	\$ 15,520	\$ 13,223	\$ (2,297)
Residential total		\$ 243,399	\$ 217,428	\$ (25,971)
Administration	Administration total	\$ 10,987	\$ 14,620	\$ 3,633
Total expenditures		\$ 350,895	\$ 401,851	\$ 50,956

Energy Trust allocated budget to NEEA for gas market transformation activities in 2016.

B. Incentives paid

		Q2 actual incentives
Commercial programs	Existing Buildings	\$ 24,789
	Commercial total	\$ 24,789
Residential programs	Existing Homes	\$ 44,042
	New Homes	\$ 71,053
Residential total		\$ 115,095
Total incentives		\$ 139,884

C. Savings

		Therms	Annual	Percent		Levelized
		saved Q2	goal	achieved	\$/therm	cost/therm
				YTD		
Commercial programs	Existing Buildings	10,621	151,056	7%	\$ 8.73	\$ 0.95
	Commercial total	10,621	151,056	7%	\$ 8.73	\$ 0.95
Residential programs	Existing Homes	15,184	55,054	28%	\$ 6.36	\$ 0.45
	New Homes	22,421	57,074	39%	\$ 5.86	\$ 0.38
Residential total		37,606	112,128	34%	\$ 6.06	\$ 0.41
Total savings		48,227	263,184	18%	\$ 6.88	\$ 0.49

Energy Trust allocated budget to NEEA for gas market transformation activities in 2016.. While there were no associated savings through Q2, savings are expected in subsequent quarters.

III YEAR-TO-DATE RESULTS

A. Activity highlights—sites served

	Q1	Q2	Q3	Q4	Total
Existing Commercial					
School/college retrofits	4	3			7
Other commercial retrofits	-	12			12
Studies	2	1			3
Existing Homes					
Weatherization (insulation, air and duct sealing and windows)	29	36			65
Gas hearths	22	18			40
Energy Saver Kits	8	23			31
LivingWise Kits distributed through schools	-	360			360
Smart thermostats	19	29			48
Gas furnaces	61	74			135
Water heaters	5	3			8
Online Home Energy Reviews	22	19			41
New Homes					
ENERGY STAR home certification	97	58			155
Clothes washers	-	10			10
New EPS homes	-	67			67

B. Revenue

Source	Actual revenue YTD	Budgeted revenue YTD
NW Natural \$	768,840 \$	870,618

C. Expenditures

		Actual expenditures YTD	Budgeted expenditures YTD	Variance
Commercial programs	Existing Buildings	\$ 160,378	\$ 298,881	\$ 138,503
	NEEA commercial	\$ 11,241	\$ 11,821	\$ 581
	Commercial total	\$ 171,619	\$ 310,702	\$ 139,083
Residential programs	Existing Homes	\$ 178,912	\$ 206,992	\$ 28,080
	New Homes	\$ 230,168	\$ 178,927	\$ (51,241)
	NEEA residential	\$ 33,859	\$ 27,794	\$ (6,065)
	Residential total	\$ 442,939	\$ 413,713	\$ (29,226)
Administration	Administration total	\$ 24,875	\$ 30,264	\$ 5,389
Total expenditures		\$ 639,433	\$ 754,679	\$ 115,246

Energy Trust allocated budget to NEEA for gas market transformation activities in 2016. While there were no associated savings through Q2, savings are expected in subsequent years.

D. Incentives paid

		Annual actual incentives	
Commercial programs	Existing Buildings	\$	34,879
	Commercial total	\$	34,879
Residential programs	Existing Homes	\$	82,779
	New Homes	\$	120,136
	Residential total	\$	202,915
	Total incentives	\$	237,794

- **Incentives paid account for approximately 44 percent of year-to-date program expenses**, 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 saved YTD	Annual goal	Percent achieved YTD	\$/therm	Levelized cost/therm
Commercial programs	Existing Buildings	13,477	151,056	9%	\$ 11.90	\$ 1.30
	Commercial total	13,477	151,056	9%	\$ 11.90	\$ 1.30
Residential programs	Existing Homes	24,815	55,054	45%	\$ 7.21	\$ 0.50
	New Homes	34,129	57,074	60%	\$ 6.74	\$ 0.44
	Residential total	58,945	112,128	53%	\$ 6.94	\$ 0.46
	Total savings	72,422	263,184	28%	\$ 8.21	\$ 0.58

Energy Trust allocated budget to NEEA for gas market transformation activities in 2016. While there were no associated savings through Q2, savings are expected in subsequent quarters.

F. Program evaluations

- **In Q2 Energy Trust worked with Illume Advising on a process evaluation** expected to complete in 2016. The evaluation will focus on Energy Trust's Existing Homes program in Oregon, and will also feature residential programs in Washington, including installation rates of energy-saving showerheads and faucet aerators and the associated customer experience.

Washington Low Income Energy Efficiency Program (WA-LIEE) Q2 2016 Status

NW Natural (NWN) partners with Clark County's Housing Weatherization Program to administer its Washington Low Income Energy Efficiency (WA-LIEE) program. The WA-LIEE program now reimburses 100% of all cost-effective measures up to \$5,200 per home². The agency is also 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 WA-LIEE job could cost the program no more than \$6,420. Measures must be modeled as cost-effective to be reimbursed by WA-LIEE. The measures included in the program - as well as number of completions of each - during the first half of 2016, are listed in the table below:

WA-LIEE funded measures	Number of occurrences
Ceiling Insulation	11
Duct Insulation	10
Floor Insulation	8
Infiltration (Shell Sealing)	7
Wall Insulation	2
Hot Water Pipe Insulation	1
Duct Sealing	0
90% + High Efficiency Furnace	0

The next table lists the 2016 program goals for WA-LIEE as stated in the Company's EE Plan and the actual results as of June 30, 2016 as compared to our progress at this point over the last three years:

	Estimated for 2016	Actual as of 6/30/16	Actual as of 6/30/15	Actual as of 6/30/14	Actual as of 6/30/13
Homes served	15-25	11	6	4	7
Average Cost of Incentives per home	\$5,200	\$4,629	\$3,500	\$3,238	\$3,334
Cost per home (\$5,200 incentives + \$440 health, safety and repairs and \$780 administration costs)	\$6,420	\$5,646	\$4,465	\$4,164	\$4,274
Total cost	\$96,300 to \$160,500	\$62,110	\$26,790	\$16,654	\$29,920
Modeled therms saved per home	211	304	377	262	458
Total modeled therms saved	3,165 to 5,275	3,344	2,262	1,048	3,206

² Until 2016, the program reimbursed 90% of job costs up to \$3,500

The biggest challenge of this program has been finding qualified customers and eligible gas homes to weatherize. NW Natural and our Clark County Agency partner are taking a two tiered approach to resolving this.

1. The Clark County's Housing Weatherization Program Manager, Mike Selig, began educating bill assistance applicants, as well as the intake workers, on the merits of weatherization. This audience is most primed for WA-LIEE as they already qualify, are being proactive and want help managing their energy bills. The fruits of this education were immediately apparent.
2. However, the pool of bill assistance applicants doesn't represent the population of everyone eligible for WA-LIEE. Therefore, to bring additional customers into the program, NW Natural has commissioned an agency to develop a targeted social media campaign. This campaign will run from September through December 2016. We are testing a multitude of messages – the ones that generate the least clicks will drop out of rotation until we have refined the messaging to the most effective ones. NW Natural will provide an update on these efforts, the messages and results to date during the September EEAG call.

Our County partner has indicated the increased funds, and removal of the 10% minimum matching requirement, have been very helpful for program implementation. For homes completed in the first six months, WA-LIEE reimbursed 82% of job costs. Using the prior reimbursement limits, WA-LIEE would have covered only 60% of job costs putting additional pressure on limited state and federal funding used to supplement WA-LIEE weatherization.

We are pleased to see YTD progress in line with the annual goals; further, Mike Selig has confirmed the County is on track to meet their annual target of 20 homes.

Washington Energy Efficiency Program

Q2 2016 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.

Q2 2016 Program Cost Audit

NW Natural’s Internal Audit Department (IA) completed a review of transactions from the period of 1/1/2016 – 6/30/2016. 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. Utilizing a statistical sampling model a representative sample of 40 (based on 80% 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 2016 Energy Efficiency Plan analysis and reviewed for program effectiveness.

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