

# NW Natural's 2014 Energy Efficiency Plan

## I. Background

Northwest Natural, dba NW Natural ("NW Natural" or Company"), began offering its current energy efficiency programs to Washington customers on October 1, 2009. The Washington Utilities and Transportation Commission's ("WUTC's") Order No. 04 in the Company's 2008 rate case, docketed as UG-080546, directed NW Natural to create and begin offering a program.

## II. Oversight

NW Natural's energy efficiency programs were developed and continue to evolve under the direction and oversight of the Energy Efficiency Advisory Group ("EEAG") which is comprised of interested parties to the Company's 2008 rate case. The EEAG includes representatives from NW Natural, Energy Trust of Oregon ("Energy Trust"), WUTC Staff, Public Counsel, Northwest Industrial Gas Users ("NWIGU"), The Energy Project, and NW Energy Coalition.

## III. Program Administration

NW Natural's general energy efficiency programs are administered by the Energy Trust, which is an independent, nonprofit organization dedicated to helping utility customers save electric and gas energy. Energy Trust was formed in 2002 in response to Oregon legislation that restructured electric utilities<sup>1</sup> for multiple reasons including allowing non-residential customers to purchase their electricity from providers other than the utility and reassigning the responsibility for demand side management from utility operations to Energy Trust.

NW Natural began using Energy Trust as the delivery arm for its Oregon energy efficiency program in 2003. Since NW Natural's Washington service territory is contiguous with its Oregon territory, it made sense to have Energy Trust extend the boundaries of the Oregon program offerings into Washington.

As agreed to in UG-080546, Energy Trust administered the Company's program for one pilot year. During this time, the EEAG monitored the program's performance and assessed whether Energy Trust should be the ongoing program administrator. On May

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<sup>1</sup> SB 1149, codified as ORS 757.612, mandated the creation of an independent entity capable of providing demand side management services to utility customers.

25, 2011, NW Natural made a compliance filing in UG-080546 wherein it stated the EEAG's opinion to allow Energy Trust to continue administering NW Natural's energy efficiency programs in Washington. On June 8, 2011, Public Counsel separately filed a letter supporting this decision.

NW Natural's Washington Low Income Energy Efficiency Program ("WA-LIEE") is administered by Clark County Community Action Agency, Klickitat County Community Action Agency and Skamania County Community Action Agency.

#### IV. Programs Offered

NW Natural offers the following general energy efficiency programs:

Residential – Residential customers with gas heated homes are offered home energy reviews wherein an energy consultant identifies measures that could be installed to improve the customer's home's efficiency. Specific incentive offerings are also available for the installation of certain efficient gas appliances.

New Homes – The New Homes program encourages builders to construct homes to an energy efficiency standard that is better than Washington building code. Qualifying homes must meet the criteria established in ENERGY STAR's Builder Option Package ("BOP") for natural gas heated new construction.

Commercial – Commercial customers are offered incentives for prescriptive efficient gas appliance installations, as well as efficient installations unique to the customer's facilities that are identified in a custom study.

Specific measure offerings are as listed in Appendix A to this Plan."

Under NW Natural's low income energy efficiency program, agencies administering the program leverage other funding sources with WA-LIEE dollars to provide whole-house weatherization services to qualifying customers. Agencies are paid \$3,500 per home for cost effective energy efficiency installations as well as an average of \$440 per home for health and safety repairs. Program details are available in the Company's Schedule I, "Washington Low Income Energy Efficiency Program (WA-LIEE)."

#### V. Program Evaluation, Monitoring and Verification ("EM&V")

##### Impact Evaluations

Deemed gross savings by measure are used to determine total therms reported as saved per program year. The deemed savings used will be consistent with the most current impact studies performed on the programs that the Energy Trust delivers in Oregon until after mid-2012 when such impact evaluations will include results from the

Washington-delivered programs. The Energy Trust performs the impact study wherein they analyze customers' energy usage data before and after a measure is installed. The savings from all measures' are analyzed annually unless sample sizes based on participation rates are not statistically significant. From the impact evaluation, the Energy Trust is able to determine if average savings are consistent with deemed savings. If they are not, the deemed savings are "trued-up" once annually to reflect the findings. A link to the annual true up report as well as a short summary of the results will be provided in the quarterly report following the report's release.

#### Process Evaluations

Besides impact evaluations, the Energy Trust contracts with a third party to perform a process evaluation on all general energy efficiency programs offered, typically on an annual basis. The third party studies and reports on the processes employed for each program. Study results are available on the Energy Trust's website: [www.energytrust.org](http://www.energytrust.org). A link to the annual process evaluation as well as a short summary of the results will be provided in the quarterly report following the report's release.

## VI. Process for Program Changes

NW Natural will file to revise Appendix A of its Energy Efficiency Plan when it plans to add, change, or remove a long- term incentive offering. Every year the Company will consider if program year changes are needed. If they are, the Company will revise its EE Plan to make requested program modifications when it makes its annual advice filing, submitted no later than December 1, to revise the performance metrics and budget that are also included in the Plan. This does not preclude the Company from filing to revise Schedule G or its EE Plan at any time during the year. Advice filings revising or adding measures will include:

- 1) A benefit cost ratio ("BCR") calculator demonstrating the measure's life, measure cost, the quantifiable non-energy benefits, the utility system benefits and the societal BCR; and
- 2) For new measures, a blessing memo which refers to an in-house Energy Trust document that summarizes the vetting of a measure before it is introduced as a program offering. The EEAG will be given the opportunity to review all tariff filings before they are filed. The Company will generally give the EEAG ten business days to review a draft filing. The EEAG's review process will not be less than five business days.
- 3) New programs proposed mid-cycle will include a program-specific plan addressing the possible need for program-specific metrics.

Please note that not all advice filings must include the EE Plan. The EE Plan will only be included when it is being revised.

The Company will work to resolve issues with EEAG members before filing. If the EEAG cannot completely recommend approval of a filing, the Company may still choose to make the filing with the WUTC with the understanding that EEAG members may intervene in that public proceeding.

## VII. Annual Schedule for Program Planning

By November 15 of each year, the Company will provide the EEAG with the following proposals for the next program year, which will subsequently be filed with the WUTC in a new docket that will contain all the required reporting for the calendar year, including a link to the Purchased Gas Adjustment (PGA) filing wherein program costs are recovered:

### Budget

The Company will provide a total estimated program budget for the next calendar year. The budget will present expected expenditures by program and customer class.

Please note that this budget forecast will be based on the best information available at the time. As the year progresses, budgeted dollars may be reallocated among various programs or new offerings that are approved by the WUTC.

### Funding Schedule

A funding schedule is a contractually-agreed-to timeline between NW Natural and Energy Trust wherewith NW Natural will provide Energy Trust the necessary money for program administration and delivery. The amounts dispersed to the Energy Trust in one year are the sum of all funds needed for that program year determined by subtracting any unspent or uncommitted funds previously dispersed to the Energy Trust for the Washington program from the total forecasted budget.

### Metrics

The Company will propose performance metrics that will address the following:

- Total program costs
- Projected therm savings consistent with most recent IRP
- Average levelized cost for measures
- A ceiling for average cost per therm
- Projected homes to be weatherized in the WA-LIEE program

The Company expects that Total Resource Cost (TRC) and Utility Cost (UC) at the portfolio level should always be greater than 1.0 and will report compliance to this on an annual basis.

The Company will come to agreement with the EEAG on the next year’s budget and performance metrics before making a tariff filing with the WUTC to modify this plan so that it incorporates the next year’s projected costs and metrics accordingly. This filing will be made annually not later than December 1 for a January 1 effective date.

Generally, milestones for the program year will be as follows:

Program Year Schedule	
January 1	Start of program year
April 25	Annual report for previous program year is filed.
May 25	Q1 report on January 1 through March 31 of current year
August 25	Q2 report on April 1 through June 30 and YTD
October 1	Tariff filing submitted for program cost recovery.
November 1	Requested effective date of program cost recovery filing.
November 15	Share next year’s budget range, funding schedule, and proposed performance metrics with EEAG no later than this date
November 25	Q3 report on July 1 through September 30 and YTD
December 1	Latest date to file EE Plan for next program year
January 1	Start of next program year; new EE Plan effective

## VIII. Reporting

The Company will file all required reporting with the WUTC in the docket established for the current program year.

### Quarterly

The Company will report on its program on a calendar year basis. Quarterly reports will be provided to the EEAG and filed with the WUTC on the following schedule:

- 1Q – May 25
- 2Q – August 25
- 3Q – November 25

### Annual

An annual report will be due annually for the previous year by April 25<sup>th</sup>.

### EEAG Review

The EEAG will meet either in person or by teleconference to review the annual report and on an as requested basis.

### Content of Reports

The quarterly reports will include

- Quarterly progress toward annual program metrics
- A breakdown of costs by program and customer sector
- A reporting on percentage of program costs spent on customer incentives
- The funding received to date
- The 2Q report will include a 6 month check in on WA-LIEE
  - program year costs,
  - homes served,
  - estimated total therms saved per home, and
  - total therm savings to-date
- The quarterly report following the annual release of the impact and process report will include a link to that report and a short summary of the findings

The annual report will include the following:

- Budget compared to actual results by program
- Cost-effectiveness calculations on a program by program and total portfolio basis
- Measure level participation (units installed and savings) under each program
- Reporting on achievement of metrics
- Evaluation results (if performed)
- WA-LIEE program results including:
  - total program year costs
  - homes served
  - estimated total therm savings, and
  - average therms saved per home.

## IX. Annual Program Budget

### Budgets

Forecasted program costs for the next calendar year will be reviewed annually in November when metrics are also proposed for the following program year.

### Actual Costs

Each year, the Company will file its annual report by April 25 which will detail costs and acquisitions for the previous program year. This filing will trigger the EEAG's review of general energy efficiency and WA-LIEE program costs.

## X. Cost Recovery

Energy Efficiency and WA-LIEE program costs are deferred and later amortized for recovery from applicable customers on an equal cents per margin basis as established annually in the temporary rate adjustments, Schedules 215 and 230, respectively. Beginning in 2012, the Company will annually submit a stand-alone filing concurrently with its PGA filing, for cost recovery of its energy efficiency program expenses for the prior calendar year. That annual filing will include the following information:

- Background on the Company's energy efficiency programs and cost recovery
- A copy of the prior program year's Annual Report which will include detail on the achievement of performance metrics; the forecasted budget for that year and actual expenditures
- The total dollar amount the Company is seeking to recover
- The total incremental dollar impact that the proposed rate change will have on average residential and commercial customer monthly bills.
- Total average monthly bill of proposed rate for applicable customers.
- Work papers demonstrating the analysis behind the collection rate.

The Company also includes a message on applicable Customers' monthly bills stating how much of their current monthly bill represents costs collected to pay for the residential and commercial energy efficiency programs.

## XI. 2014 Performance Metrics

Below are the 2014 program metrics. Each metric is followed by a statement explaining how it was determined.

- Total residential and commercial program costs will be between \$1,298,699 and \$1,527,881

The total costs for this metric correlate to the range of costs estimated to achieve all cost effective terms for the programs being offered as determined in the Company's 2013 Integrated Resource Plan ("IRP").

- Terms saved for the residential and commercial program will be between 220,868 and 259,845. Including WALIEE, term savings targets for the total portfolio will be between 225,088 and 265,120.

The program's primary goal is to meet system demand with the least cost conservation as required per WAC 480-90-238(1). The therm savings target is aligned with the demand-side management targets for the programs offered as identified in the Company's 2011 Modified IRP.

- Average levelized cost for the portfolio of measures will not to exceed \$0.65 per therm

This metric is unchanged from the prior two years. The profile of NW Natural Washington service territory makes it harder to reduce the averaged levelized cost per therm than it would be in an area with more industrial customers since therm savings are acquired more cost effectively for bigger customers than for residential customers.

- First year therms will cost less than \$6.50 per therm

This metric remains unchanged from 2013.

- Total Resource Cost (TRC) and Utility Cost (UC) at the portfolio level are greater than 1.0

The TRC and the UC shall be calculated as prescribed in Schedule G. A value greater than 1.0 demonstrates that the benefits received are greater than the costs. This test is applied at the portfolio level to allow measures that are less cost effective to be bundled with those that are more cost effective.

#### Schedule I, Washington Low Income Energy Efficiency (WA-LIEE) 2014 Performance Targets

In 2014, the WA-LIEE program will strive to weatherize 20-25 homes for a cost of \$89,300 to \$111,625. Assumptions are as provided below in Table II.

**Table II – WA-LIEE 2014 Performance Targets**

Estimated homes served	20-25
Estimated Average Cost of Incentives per home	\$3,500
Maximum Cost per home (\$3,500 incentives + \$440 health, safety and repairs and \$525 administration costs)	\$4,465
Maximum cost based on estimated homes served	\$89,300 to \$111,625
Estimated therms saved per home	211
Total estimated therms saved	4220 to 5275

## XII. 2014 Budget and Funding Schedule

Below is the 2014 budget for the residential and commercial energy efficiency programs and the WA-LIEE program.

Programs 2014 Budget		
Range	Low	High
<b>Commercial</b>		
Retrofit	\$584,036	\$687,101
<b>Residential</b>		
Retrofit	\$384,486	\$452,337
New Homes	\$330,177	\$388,444
<b>Total For Schedule G Programs</b>		
WALIEE	\$89,300	\$111,625
<b>TOTAL</b>	<b>\$1,387,999</b>	<b>\$1,639,507</b>

Funding Schedule: As of the November 2014, the Company and Energy Trust have not executed a contract to define the 2014 funding schedule but parties expect the funding schedule will mirror what was done in 2013, which was that 50% of budgeted need was provided to Energy Trust on March 1 and the remaining 50% was provided on October 1.

**APPENDIX A to EE Plan**

**The Company's Residential and Commercial Program offers incentives for measures as listed below.**

**RESIDENTIAL PROGRAM INCENTIVES**

The following are offerings for Residential customers:

<b>DESCRIPTION</b>	<b>INCENTIVE</b>
<b>Weatherization</b>	
Air Sealing	\$150 per home
Attic/Ceiling Insulation	\$0.25 per square foot
Duct Insulation	50% of cost, up to \$100
Floor Insulation	\$0.30 per square foot
Knee-Wall Insulation	\$0.30 per square foot
Boiler Pipe Insulation	\$0.50 per linear foot
Wall Insulation	\$0.30 per square foot
Windows (0.25 to 0.30)	\$2.25 to \$3.50 per square foot
<b>Heating</b>	
Gas Furnace	\$100.00
Direct Vent Gas Unit Heater	\$100.00
Direct Vent Gas Fireplace	\$100.00 to \$150.00
Intermittent Pilot Ignition	\$100.00
Gas Boiler	\$200.00
<b>Water Heating</b>	
Gas Water Heater	\$35.00 - \$150.00
Clothes Washer with gas water heat (MEF 2.2+)	\$30.00
Solar Thermal Pool Heating	\$3 per square foot of collector
<b>Direct Install Measures</b>	
Faucet Aerator	Free to customer
Home Energy Review	Free to customer
Showerhead	Free to customer
Shower wand	Free to customer
Water Heater Set Back	Free to customer
<b>Distributor or Retail Buy Down</b>	
Showerhead	\$8.50

## **APPENDIX A to EE Plan (Continued)**

### **RESIDENTIAL NEW CONSTRUCTION**

Tankless Hot Water Heating	\$ 200.00 per unit
Energy Star Builder Option Package*	\$ 600.00 per home
Showerhead	Free to customer
Clothes Washer with gas water heat (MEF 2.2+)	\$30.00

\* Building requirements are as stated on this site: [http://www.energystar.gov/index.cfm?c=bop.pt\\_bop\\_washington](http://www.energystar.gov/index.cfm?c=bop.pt_bop_washington)

### **COMMERCIAL**

#### General

Custom	\$1.50 per therm
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#### Heating

Steam Traps, Small Commercial, <12 hrs/day, small-med pressure	\$ 100.00 per trap*
Gas-fired Condensing Boiler > 2500 kbtuh 0.9 EC	\$ 4.00 per kBtu hr in
Gas-fired Condensing Boiler < 300 kbtuh 0.9 AFUE	\$ 4.00 per kBtu hr in
Gas-fired Condensing Boiler >= 300 kbtuh, <= 2500 kbtuh 0.9 ET	\$ 4.00 per kBtu hr in
Boiler Vent Damper	\$ 1,000.00 per unit
High Efficiency Unit Heater - Non-Condensing with Electronic Ignition	\$ 1.50 per kBtu hr in
High Efficiency Condensing Furnace <225,000 kBtu	\$ 3.00 per kBtu hr in
Direct-fired Radiant Heating	
Minimum 80% Efficiency, non-modulating	\$ 6.50 per kBtu hr in
Minimum 82% Efficiency, modulating	\$10.00 per kBtu hr in
Pipe Insulation	\$2.00 to \$6.00 per linear foot
Building Envelope insulation	\$0.30 per sq ft
Greenhouse Thermal Curtain	\$0.9 per sq ft

\* Pre-verification of steam traps required for dry cleaners

#### Water Heating

Domestic Tankless/Instantaneous Water Heater with Electronic Ignition	\$ 2.00 per kBtu hr in
Domestic Tankless/Instantaneous Water Heater with Standing Pilot	\$ 1.50 per kBtu hr in
Condensing Tank	\$ 2.50 per kBtu hr in
Commercial Clothes Washer, Gas Water Heat, Partial Gas	\$ 200.00 per unit
Showerhead Gas	\$ 6.00 to \$10.00 per unit
Commercial Bathroom Faucet Aerators (0.5 gal per minimum; 15 unit minimum)	\$3.00 each
Commercial Kitchen Faucet Aerators (1.5 gal per minimum; 15 unit minimum)	\$5.00 each
Ozone Laundry System	\$40 per pound of washing capacity up to a max of 35% of cost of system
Solar Thermal Pool Heating	\$3 per sq ft of collector

**APPENDIX A to EE Plan (Continued)**

**Food Service**

Gas Full-Size Convection Oven	\$ 300.00 per unit
Gas Fryer	\$ 800.00 per vat
Gas Griddle	\$ 150.00 per unit
Gas Steam Cooker	\$ 1,300.00 per unit
Dishwasher - Single Tank Conveyor - Low temp - Gas hot water	\$ 500.00 per unit
Dishwasher - Single Tank Door/Upright - Low Temp - Gas water heat	\$ 400.00 per unit
Dishwasher - Single Tank Conveyor - High temp - Gas hot water	\$ 500.00 per unit
Dishwasher - Single Tank Door/Upright - High Temp - Gas water heat	\$ 400.00 per unit
Dishwasher - Undercounter - high temp - Gas water heat	\$ 200.00 per unit
Turbo Pot – limit one per applicant	\$40 per pot*

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\* Customers installing one other food service measure may receive one free turbo pot while promotional quantities last.

**SPECIAL PROVISIONS**

1. One time bonuses or coupons may be periodically offered to supplement standard incentives.
2. Limited time incentive offerings for measures may be offered.