

NW Natural's 2015 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 utilities¹ 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 25, 2011, NW Natural made a compliance filing in UG-080546 wherein it stated the

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

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 efficiency of the customer's home. Specific incentive offerings are also available for the installation of certain efficient gas appliances. The Company also offers on-the-bill repayment services for loans offered by Craft3 for the purpose of installing energy efficiency measures

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. Cost Effectiveness Standard

The goal of NW Natural's portfolio of residential, new homes, and commercial energy efficiency programs is to acquire cost-effective gas therm savings. The portfolio of programs offered through the Energy Trust will be deemed cost-effective if at the end of the program year the program portfolio passes the Utility Cost (UCT) test by having a benefit to cost ratio of one or more. The UCT is defined as follows:

The UCT measures the present value of the energy savings in relation to the net costs incurred by the program, including incentive costs and excluding any net costs incurred by the participant. The UCT is Benefits divided by Costs where each is defined as follows:

UCT Benefits are:

1. The value of gas energy saved based on the Company's avoided costs. The Company's avoided costs include the following values:
 - The long term gas price forecast compiled from a consultant's gas price forecast;
 - A price for carbon included in the gas price forecast.
 - Gas storage carrying costs for inventory;
 - Upstream variable transmission costs; and
 - Peak related on-system transmission costs; and
2. The 10% credit for the benefits of conservation in addressing risk and uncertainty as well as unquantified environmental benefits.

UCT Costs are:

1. Incentives paid to the participant;
2. Administrative costs; and
3. Evaluation, verification, and monitoring.

The Company will continue to monitor and report the how the portfolio fairs using the Total Resource Cost (TRC), which is benefits divided by costs when each is defined as follows:

TRC Benefits includes

1. The value of gas energy saved based on the Company's avoided costs. The Company's avoided costs include the following values:
 - The long term gas price forecast compiled from a consultant's gas price forecast;
 - A price for carbon included in the gas price forecast.
 - Gas storage carrying costs for inventory;
 - Upstream variable transmission costs; and
 - Peak related on-system transmission costs; and
2. Non-energy benefits as quantified by a reasonable and practical method; and
3. The 10% credit for the benefits of conservation in addressing risk and uncertainty as well as unquantified environmental benefits.

TRC Costs are:

1. Incentives paid to the participant;
2. Administrative costs;
3. Evaluation, verification, and monitoring; and

4. The participant's remaining out-of-pocket costs for the installed cost of the measures after incentives and Federal tax credits.

Levelized Cost Metric

The portfolio of measures promoted through the program will also meet and report on a Levelized Cost metric, which is determined as follows:

The levelized cost is the present value of the total cost of a measure over its economic life, converted to equal annual payments. The levelized cost calculation starts with the incremental capital cost of a given measure or package of measures. The total cost is amortized over an estimated measure lifetime using the discount rate established in the Company's most current IRP. The annual net measure cost is then divided by the annual net energy savings (therms) from the measure application (again relative to a standard technology) to produce the levelized cost estimate in dollars per therm saved, as illustrated in the following formula.

$$\text{Levelized Cost} = \frac{\text{Net Annual Cost (\$)}}{\text{Net Annual Savings}}$$

The levelized cost of an energy efficiency measure is cost-effective if it is less than the average levelized costs of other supply-side options. A cost-effective threshold is established in the Company's most current Integrated Resource Plan (IRP) and further refined through the BCR test.

VI. 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. 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.

VII. 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.

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

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

IX. 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 25th.

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
- Energy payback estimator site traffic statistics both in aggregate and by geography, detailing the volume of visits to the URL
- A status report on NEEA, market transformation efforts, spending, and activity
- The 2Q report will include a report on the Company's mid-year transactional review of the Energy Trust's expenses
- 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-dateThe 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. Total Portfolio means all residential and commercial programs.
- Cost-effectiveness calculations of the total portfolio plus NEEA expenses
- Measure level participation (units installed and savings) under each program
- Reporting on achievement of metrics
- Energy payback estimator site traffic statistics both in aggregate and by geography, detailing the volume of visits to the URL
- A status report on NEEA, market transformation efforts, spending, and activity
- An overview of the Company's year-end review of Energy Trust transactions.
- 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.

X. 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.

XI. 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.

XII. 2015 Performance Metrics

Below are the 2015 program metrics. Each metric is followed by a statement explaining how it was determined.

- Total residential and commercial program costs, including NEEA gas efficiency market transformation, will be between \$1,342,559 and \$1,570,292

The total costs for this metric correlate to the range of costs estimated to achieve all cost effective therms for the programs being offered as determined in the Company's 2014 Integrated Resource Plan ("IRP").

- Therms saved for the residential and commercial program will be between 220,991 and 259,895. Including WALIEE, therm savings targets for the total portfolio will be between 223,021 and 262,427.

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 2014 Modified IRP.

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

This metric is unchanged from last year. 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 and 2014.

- The UCT at the portfolio level is greater than 1.0

The UCT 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.

Schedule I, Washington Low Income Energy Efficiency (WA-LIEE) 2015 Performance Targets

In 2015, the WA-LIEE program will strive to weatherize 10-12 homes for a cost of \$89,300 to \$111,625. Assumptions are as provided below in Table II.

Table II – WA-LIEE 2015 Performance Targets

Estimated homes served	10-12
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	\$44,650 to \$53,580
Estimated therms saved per home	211
Total estimated therms saved	2110 to 2532

XIII. 2015 Budget and Funding Schedule

Below is the 2015 budget for the residential and commercial energy efficiency programs, NEEA gas market transformation, and the WA-LIEE program.

Range	Low	High
Commercial		
Retrofit	\$587,753	\$691,474
Residential		
Retrofit	\$402,697	\$473,761
New Homes	\$300,035	\$352,982
NEEA		
NEEA*	\$52,075	\$52,075
Total For Schedule G Programs		
WALIEE	\$44,650	\$53,580
Total	\$1,387,209	\$1,623,872

Funding Schedule: As of the November 2015, the Company and Energy Trust have not executed a contract to define the 2015 funding schedule but parties expect the funding schedule will mirror what was done in prior years, which was that 50% of budgeted need was provided to Energy Trust on March 1 and the remaining 50% was provided on October 1.

XIV. Gas Market Transformation, First Year Pilot

NW Natural will participate in a regional gas market transformation initiative lead by the Northwest Energy Efficiency Alliance (NEEA). The Company views such activities as a necessary investment in the future of gas demand side management (DSM) as an enduring component of regional power planning. NEEA’s primary work on behalf of the Pacific Northwest is focused on two strategic goals; 1) bring energy efficient emerging gas technologies to market, and 2) create the market conditions that will accelerate and sustain the market adoption of energy efficient gas emerging technologies. NEEA uses a stage-gate approach to managing its work. Below are the six phases that a technology would go through to fully achieve the two goals, and result in a sustained market change that provides gas savings.



Prior to the market development phase, NEEA works on

- Scanning for new technologies (shown in the graphic above as “scanning and concept identifications”),
- Researching and assessing both the market and technology conditions and potential (through the concept opportunity assessment and market and product assessment stages),
- Developing and testing the market intervention strategy for the technology and developing cost effectiveness models which produce long term cost effectiveness metrics and energy savings forecasts (both part of strategy testing and finalization).

The purpose of these phases is not near-term savings, but to develop additional efficiency measures and strategies available to programs—cost-effective, reliable, and having a viable delivery strategy and channel to acquire savings at scale. At each stage, the assessment of the potential for long-term cost-effective savings is refined. NEEA does not typically forecast savings associated with these earlier phases. These first four phases are where most of the activity will be in the early years of the NEEA gas collaborative. Significant savings begin at the market development stage, stage five.

The Company is not including the costs invested in gas market transformation in the analysis it performs when reporting on its 2015 and 2016 cost effective performance metrics. For 2017, the Company will discuss with the EEAG whether or not keeping these costs out of its cost effectiveness analysis continues to be appropriate. The Company acknowledges that this practice of excluding market transformation costs from its cost effectiveness analysis for at least a two-year period of time is in no way precedent setting, and should the Company make any future requests for the unique treatment of costs, such requests will be evaluated by the EEAG on a case-by-case basis.

X. RESIDENTIAL LOAN ON THE BILL REPAYMENT SERVICES

Description of On the Bill Repayment Services

NW Natural will assist in marketing a low-interest, unsecured financing offer to residential homeowners who heat their homes with gas heat. The program lender will originate loans granted for the purposes of installing conservation and energy efficiency measures incented by the existing homes program, and the Company will provide billing and remittance services to the program lender by placing the loan repayment fee on the customers’ monthly gas bill. Customers who obtain a loan with on the bill repayment services will receive a loan repayment charge separately itemized as “Energy Upgrade Loan” on their monthly bill for natural gas service for the term of the loan or until the loan has been paid off, transferred, or otherwise discharged or removed from the bill in accordance with the terms and conditions of the Company’s service agreement with Energy Trust, who will manage the coordination of activities between the program lender, the program management contractor, and the Company.

Program Lender

Craft3, a non-profit community development financial institution (CDFI) lender, will act as the program lender, under the terms and conditions of a service agreement with Energy Trust. Craft 3 received a

grant from the State Of Washington's Clean Energy Revolving Loan Fund² for the purpose of providing financing to Washington residents for the purpose of installing energy efficiency measures. The intent of this offering is to facilitate the acquisition of cost-effective natural gas savings while extending the benefit of the State Of Washington's Clean Energy Revolving Loan Fund to natural gas ratepayers in Southwest Washington.

Loan

The loan offerings through Craft3 that will qualify for on-the-bill repayment services must fit the following parameters:

- Loans must be granted to residential homeowners who use natural gas as their primary heating fuel.
- Loan amounts must be used to install conservation and energy efficient measures incented under NW Natural's existing homes program.
- Loan Amount:
 - Loan amounts must be no less than \$2500 and no more than \$15,000.
- Term of loan:
 - Loans up to \$7500 to have a max term of 7 years,
 - Loans between \$7500-\$15,000 up to 15 years.
- The program will launch with a fixed interest rate at 4.49%. Contingent on market conditions, Craft3 may at a later date revise the interest rate offer for future customers, not to exceed 5.49%. Under all circumstances rates will be fixed, and consistent for any qualifying customer.
- Loans will be unsecured.
- No penalty for early repayment.
- Craft3 may assess a financing fee of \$100 for loans between \$2500-\$7500, \$200 for loans between \$7500-\$15,000
 - Fees may be financed as an addition to the loan balance
- The loan may include only those costs that are directly attributable to the commissioning and installation of the qualifying measure, costs incurred to comply with applicable building code, mechanical code, or other pertinent regulations, or costs incurred to meet any technical specifications established by the Energy Trust.

Terms and Conditions

1. The Company will directly bill Energy Trust or Craft3 for ongoing administrative costs, including costs associated with loan setup, loan termination and other incremental activities related to accounting and processing of bill payments.
2. The business relationship and the services exchanged between Energy Trust and the Company shall be in accordance with an executed Service Agreement. The Energy Trust will act as the program manager of this offering.

² See <http://www.commerce.wa.gov/Programs/Energy/Office/Pages/Clean-Energy-Funds.aspx>

3. The provision of On-the-Bill Repayment Services will in no way conflict with the Company's compliance to WAC 480-90, Washington Administrative Code (WAC).
4. A Customer's decision to enter into a loan agreement with Craft3 will not affect his/her ability to establish credit with the Company; it will have no impact on the amount that a Customer may be required to pay on deposit for Natural Gas utility service; and it will have no effect on a Customer's ability to receive reliable natural gas service. The Company will communicate this in writing to customers who participate in this loan program.
5. By entering into a loan agreement with Craft3, the customer will be responsible to remit the monthly loan repayment amount to NW Natural with his/her monthly bill payment for natural gas services.
6. NW Natural is not a party to the loan agreements and has no financial interest in these loans.
7. Monthly payments received from customers participating in this program will be allocated to the customers' account in accordance with Rule 4 of this the Company's Tariff.
8. The Company will not disconnect gas service to a customer for non-payment of loan repayment charges.
9. NW Natural is solely a billing agent for Craft3. Participating Customers must acknowledge that the Company shall be held harmless for any liability resulting from contractors' actions with regard to installation of energy efficiency measures resulting from this program.
10. NW Natural has no responsibility to collect charges, penalties, or fees beyond the remitting to Craft3 the loan repayment collections the Company receives from Customers in accordance with the services described herein.
11. Craft3 is responsible to tell the Company how much to bill per month for each loan and how many months each customer should be billed. The Company is not responsible for any information provided by Craft3.
12. The Company will not a) accept loan pay-offs, b) issue refunds on loan payments, c) offer payment arrangements on loan amounts due, or d) allow energy assistance to be applied to loan balances.
13. Craft3 must obtain a signed consent form from participating Customers that states that the Customer agrees to allow the Company to provide Craft3 with Customer-specific bill payment information.
14. Craft3 must obtain signed documentation from the Customer that certifies that the Customer has been made aware of the Company's limited role in the loan repayment process.
15. Craft3 must provide the Company with a toll-free customer service phone number to which the Company will refer Customers who have questions or concerns about their loan. The Company is not responsible for Customer questions and disputes related to the loan or the Customer's perceived or real experience related to any portion of the loan or energy efficiency measures.

16. The Company will provide Customers with an overview of the loan product. Specific terms and conditions of the loan will be provided by Craft3.
17. A Customer with a loan open at the time he/she sells his/her home may either pay the loan off at the time of the sale; or if the new homeowner is willing to assume the loan and is able to pass the Craft3's credit requirements, the new homeowner may assume the remaining balance of the loan.
18. If a Customer with a loan refinances his/her mortgage, Craft3 will work with the Customer. A fee may be assessed if Craft3 subordinates its lien to the new mortgage lender.