

2015 NOFA Instructions

Low Income Weatherization Program

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NOFA INSTRUCTIONS TABLE OF CONTENTS

Energy Efficiency Plans	3
Calculating Energy Savings	3
Rehabilitation Worksheet Instructions	4
New Construction Worksheet Instructions.....	5
Wx Workbook (Excel Spreadsheet) Instructions.....	6

Energy Efficiency Plans

For the 2015 NOFA, Low Income Weatherization (LIW) funding will only be available for projects located in **PGE and PPL Service Areas**. LIW Program funds are available for energy efficiency improvements on projects submitted for funding through the NOFA. For new construction projects, all work must exceed the minimum required by the local or Oregon Residential Energy Code. For existing housing, funds may be used to bring current conditions up to code. Energy efficient appliances and energy saving lighting may also be eligible uses of the funds. The current energy code in Oregon can be found here:

<http://www.cbs.state.or.us/bcd/programs/energy.html>

Applicants must review the **Low-Income Weatherization Program manual** for instructions on completing which will be located on the OHCS website.

Please describe all the energy efficient measures proposed for this project.

Calculating Energy Savings

To assist you in completing the Energy Efficiency Plan worksheets, the Department has developed two (2) spreadsheets (calculators) for calculating energy savings for new construction and rehabilitation.

You may choose to use this tool or any other Department and/or US DOE approved energy analysis tool for calculating energy efficiency upgrades. The calculator in this application is designed for most weatherization activities. It reflects the kWh savings for the first year but is not measure interactive.

The tools that the Department has reviewed and approved for multi-family use are – EnergyPro (mid-rises only), TREAT, DOE-2, TRACE, HAP, REM/Rate™, REM/Design™ and EQuest. Some of these have limitations regarding scope of project so applicants must make sure the project scope matches the tool.

It is recommended you contact an energy consultant if unsure of weatherization measures that need to take place in the construction or rehabilitation of your proposed project. Please check with the agency on the most updated qualified Energy Analysts.

The compilation of this list does not imply the State of Oregon or Oregon Housing and Community Services Department (OHCS) endorses or recommends any particular contractor, nor does it imply the selection of any contractor is any guarantee of project feasibility or receipt of funding. This list is NOT an all-inclusive list of qualified energy analysts or energy technicians. OHCS reserves the right to review any analysis submitted with the Weatherization application as well as the qualifications of the preparer, when application forms have been completed by an outside independent third party.

Rehabilitation Worksheet Instructions

Proposed R/U Value: Refer to the Manufacturer's Info Tag.

Increased R/U Value: Difference between existing and proposed R/U Values.

Square Feet: Square footage (footprint) of the total conditioned area to be weatherized.

Cost: Labor and materials for weatherization activities only.
For appliances, the cost of the appliance only.
For CFLs, cost of installed Energy Star approved pin-based fixtures and lamps.

Energy saved: From Excel "OHCS Wx Calculator Spreadsheet" provided on the website.

Analysis: The OHCS goal is to allow Weatherization funding of one (1) dollar for every kilowatt hour (kWh) saved the first year or the cost of installation, whichever is less.

Appliances : <http://energy.gov/eere/buildings/standards-and-test-procedures>

For refrigerators, clothes washers, and dishwashers:

- 1) Must provide a metered sample (10% required of each type in a multi-family complex) OR provide the appliances manufacturer annual energy usage rating.
- 2) Supply usage value from refrigerator usage reference (USDOE) available in the OHCS WX spreadsheet of each type of appliance within the units.
- 3) Replacements must be Energy Star qualified.

A list of Energy Star qualified models can be found here:

<http://library.cee1.org/content/qualifying-product-lists-residential-refrigerators>

<http://library.cee1.org/content/qualifying-product-lists-residential-clothes-washers>

<http://library.cee1.org/content/qualifying-product-lists-residential-dishwashers>

New Construction Worksheet Instructions

Code or Minimum Standard: On windows, insulation, etc., self-explanatory. On appliances and Energy Star Lighting fixtures (CFLs), use normal rating from the yellow tag (energy guide) on the appliance or manufacturer's information and subtract the baseline kWh usage to determine savings.

Proposed R or U-Value: On anything rated in U-values, a lower number is better. R-values must exceed code to increase energy savings. U / R values are the reciprocal of each other.

Square Footage: Total only the conditioned area that is improved.

Increased Cost: The labor and materials for weatherization activities only. For appliances, the cost of the appliance only. For CFLs, cost of installed Energy Star approved pin-based fixtures and lamps. Currently the residential code requires 50% of all lighting shall be compact fluorescent lighting. The NOFA applicants must use that 50% as the base in its calculations for determining estimated savings and possible awards.

Kilowatts Saved: Use the OHCS Wx spreadsheet or any DOE approved tool to project your energy savings.

Appliances:

REFRIGERATORS must be Energy Star qualified. The kWh can be found on the energy guide for the appliance.

<http://library.cee1.org/content/qualifying-product-lists-residential-refrigerators>

CLOTHES WASHERS must be Energy Star qualified.

<http://library.cee1.org/content/qualifying-product-lists-residential-clothes-washers>

The kWh can be found on the energy guide for the appliance. All ENERGY STAR qualified clothes washers with a Modified Energy Factor, or MEF, of 2.4 to 2.59 are eligible until March 7, 2015. Please note changes that will be in effect March 2015. See link:

<http://www.energystar.gov/sites/default/files/specs/ENERGY%20STAR%20Final%20Version%207.0%20Clothes%20Washers%20Cover%20Memo.pdf>

http://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/39#standards

DISHWASHERS must be Energy Star Qualified. The kWh can be found on the energy guide for the appliance. Note: Baseline= federal minimum standard for energy consumption.

Baseline model info found here:

http://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/67

Qualifying dishwashers use 268 kWh per year or less.

A list of Energy Star qualified models are found here:

<http://library.cee1.org/content/qualifying-product-lists-residential-dishwashers>

Wx Workbook (Excel spreadsheet) Instructions

For electrically heated units, shell measures must be calculated in kWh savings.

Insert information into the colored cells only, when entering data into the NOFA Wx calculator.

NOFA Wx Calculator:

Project Name: Insert name of project.

Location: Insert street address and city.

Degree Days/Design Temp: These are the heating degree days for the climate location of the project. By selecting the geographic region from the drop down box, the degree days and design temperature will automatically change to coincide with that area.

Salem area =	4740 degree days/design temp 22
Redmond area =	6746 degree days/design temp 6
Portland area =	4693 degree days/design temp 22
North Bend area =	4664 degree days/design temp 32
Medford =	4803 degree days/design temp 23
Astoria =	5250 degree days/design temp 29

Pick an area closest to your located project and apply.

Air Heat Capacity: Leave as is. Worksheet will not allow changes.

Project Volume: Remember, volume is square foot time's height (sq ft x h). You can do the entire complex or one (1) unit of each type depending on design differences, as long as each unit is represented and modeled.

If the entire complex has units that are all the same, then you can do one (1) unit in the calculator and multiply the savings by the amount of total units OR do the whole facility as one (1) unit. If you have multiple buildings and each one is a different design, you will need to run the calculations on each building.

Heat Pump: Please insert "1" if a heat pump exists (rehab) or is being proposed. "0" is the default.

Component: These are the measures that this tool can consider. If you have other measures, i.e. GFX systems, solar systems or heating recovery systems, etc., another DOE approved tool will need to be used.

Area: Total square footage of project.

U-Values: Existing and Proposed values must be indicated in U-values. U-values and R-values are related in that they are a reciprocal of one another. R-Values can be added together. U-values are numbers needed for the calculator. You can convert R-values to

U-values by $1/R$ (1 divided by R). Example: The R-value of the batt of insulation is R-19. The U-value of this would be 1 divided by 19=.052. Therefore the U-value is .052. When entering your U-values please only round to the thousandth position.

Table of Values:

Worksheet will not allow you to alter numbers or formulas.

Totals:

Will be displayed via category and total in KWH's at the bottom.