

PacifiCorp's Planned Changes to Home Energy Savings Program in Washington Effective for 2016 - 2017

PacifiCorp (Company) is planning to make modifications to the Washington Home Energy Savings program (Program), which offers incentives and services for residential energy efficiency projects. The changes are designed to align with the Company's 2016 – 2017 Business Plan and to align measures and incentive values with current industry standards.

Consistent with the approved change process for the Program, after receiving and addressing feedback from the Company's Washington Demand-side Management Advisory Group the proposed changes will be posted on the program website 45 days prior to becoming effective and implemented. The changes will be effective January 1, 2016.

Background

The Program, which is offered through Schedule 118, was approved by the Washington Utilities and Transportation Commission (Commission) and began operating in September 2006. The Company filed the program for approval with the Commission on August 11, 2006, and the Program became effective on September 14, 2006 (refer to Docket No. UE-061297). The change process for the Program is described in advice letter 06-004, through which the program was introduced. Language describing the program change process is found on page 3 of Advice No. 06-004, which is copied below.

“...the Company would present information on proposed changes to its Advisory Group and seek comments prior to making changes. Changes in equipment specifications or incentive levels would be clearly posted on the Web site and emailed to the appropriate Commission staff person with at least 45 days advance notice.”

The Program change process is also described in provision of service no. 5 in the program tariff (Schedule 118). Provision of service no. 5 states:

“All changes will occur with a minimum of 45 days-notice, be prominently displayed as a change, include a minimum 45 day grace period for processing prior offers (except for manufacturer buy-down incentive delivery) and be communicated at least once to retailers who have participated within the last year.”

Annual Program reports are available on-line at:
www.pacificorp.com/es/dsm/washington.html

Description of Planned Home Energy Savings Changes

The planned changes align the program offers with the Company's 2016 – 2017 Business Plan, updated Regional Technical Forum (RTF) information, current industry standards and best available market and technology information.

These changes were provided to the Washington DSM Advisory Group on October 14, 2015. Consistent with the current biennial period, the program will use the same unit energy savings for the 2016-2017 biennial period.

Proposed Program changes are summarized in Tables 1-4.

Exhibits Provided

Exhibit 1 - Washington HES Incentive Tables – Planned

Exhibit 2 - Washington HES Incentive Tables – Red-lined

Exhibit 3 - Washington HES Cost Effectiveness Analysis

Exhibit 4 - Washington Measure Savings Detail

Definitions

British Thermal Unit (Btu): It is approximately the amount of energy needed to heat 1 pound of water from 39° to 40° Fahrenheit.

Compact Fluorescent Lamp (CFL): Light bulbs that produce light much more efficiently than traditional incandescent light bulbs.

Consortium for Energy Efficiency (CEE): CEE is a consortium of US and Canadian gas and electric efficiency program administrators. Members work to unify program approaches across jurisdictions to increase the success of efficiency in markets. CEE members define one or more tiers of energy performance for a particular product or service. A specification is an advanced level of energy performance, higher than is normal in a market, for a residential, commercial, or industrial product or service.

Cubic Feet per Minute (CFM): A measurement of the velocity at which air flows into or out of a space.

Customer: Any party who has applied for, been accepted and receives service at the real property, or is the electricity user at the real property.

Direct Install: Installation of an Energy Efficiency Measure directly by the Company, Program, or a Program-approved contractor or other 3rd party.

Downstream: Payment of incentive made by the Company to a customer, owner, contractor or other approved third party for the purchase or installation of an Energy Efficiency Measure pursuant to an approved energy efficiency incentive application.

Energy Efficiency Incentive: Payments of money made by Company to Owner or Customer or other approved party for installation of an Energy Efficiency Measure pursuant to an approved Energy Efficiency Incentive Application.

Energy Efficiency Measure (EEM): A permanently installed measure which can improve the efficiency of the Customer's electric energy use.

Energy Efficiency Ratio (EER): The ratio of the cooling capacity Btu per hour to the power input (in watts). The higher the EER rating, the more efficient the air conditioner.

Energy Factor (EF): Indicates a water heater's overall energy efficiency based on the amount of hot water produced per unit of fuel consumed over a typical day. The higher the energy factor, the more efficient the water heater.

Heating Seasonal Performance Factor (HSPF): The efficiency of heat pumps measured by the ratio of Btu heat output over the heating season to watt-hours of electricity used. The higher the number, the greater the efficiency.

Heating, Ventilation and Air Conditioning (HVAC): Refers to technology of indoor environmental comfort.

Integrated Modified Energy Factor: Calculated as the clothes container capacity in cubic feet divided by the sum, expressed in kilowatt hours (kWh), of: (1) the total weighted per-cycle hot water energy consumption; (2) the total weighted per-cycle machine electrical energy consumption; (3) the per-cycle energy consumption for removing moisture from a test load; and (4) the per-cycle standby and off mode energy consumption.

Light-emitting Diode (LED): A semiconductor light source.

Mail by Request: Refers to the delivery method by which customers order the measure through a third party contractor.

Manual J: Manual J, "Residential Load Calculation," published by the Air Conditioning Contractors of America (ACCA), is the recommended method for sizing heating and cooling systems for use in the United States.

Manufactured Homes (mobile homes): A type of prefabricated housing that is largely assembled in factories and transported to the site of use. Units are at least 320 square feet and installed with a permanent chassis to assure the initial and continued transportability of the home.

Mid-Market: An approved third party (typically a contractor, retailer or manufacturer) who installs Energy Efficiency Measures at the real property or sells Energy Efficiency Measures to a Customer.

New Home: A newly constructed residence.

Owner: The person who has both legal and beneficial title to the real property, and is the mortgager under a duly recorded mortgage of real property, the trustor under a duly recorded deed of trust.

Prescriptive incentives: Per unit incentives are listed in the program incentive tables for specific EEMs. Incentives are subject to change.

RTF: Regional Technical Forum

R-Value: Indicates insulation’s resistance to heat flow. The higher the R-value, the greater the insulating effectiveness.

Seasonal Energy Efficiency Ratio (SEER): The efficiency of air conditioners, measured by the cooling output in Btu during a typical cooling-season divided by the total electric energy input in watt-hours during the same period. The higher the unit's SEER rating, the more energy efficient it is.

U-Factor: Measures the rate of heat transfer and indicates how well the window insulates. U-factor values generally range from 0.25 to 1.25 and are measured in Btu/h·ft²·°F. The lower the U-factor, the better the window insulates.

Upstream: Payment of incentive made by the Company directly to a manufacturer, retailer, or other pre-approved vendor to apply a pre-purchase discount for customers.

General Notes

- Incentive cannot exceed total price of product or service
- All work must be installed per local, state, and federal building codes and requirements

Table 1 – Program Modifications (Lighting)

Measure Name	Description of Change	Measure Summary
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Table 1 – Program Modifications (Lighting)

Measure Name	Description of Change	Measure Summary
CFLs	<p><u>Type of Change:</u> Adjust lumen bin categories and unit energy savings for general purpose and specialty CFLs.</p> <p><u>Reason for Change:</u> Aligns lumen bins and unit energy savings with latest RTF values.</p>	<p><u>Current Qualifications (unchanged):</u> ENERGY STAR</p> <p><u>Current Maximum Incentive Amount (unchanged):</u> General Purpose: \$1.50 Specialty: \$3.00</p> <p><u>Current Delivery Methods (unchanged):</u> Upstream Mail by Request Direct Install</p>
LEDs	<p><u>Type of Change:</u> Adjust lumen bin categories and unit energy savings for LEDs.</p> <p><u>Reason for Change:</u> Aligns lumen bins and unit energy savings with latest RTF values.</p>	<p><u>Current Qualifications (unchanged):</u> ENERGY STAR</p> <p><u>Current Maximum Incentive Amount:</u> General Purpose: \$10.00 Specialty: \$10.00</p> <p><u>Revised Maximum Incentive Amount:</u> General Purpose: \$5.00 Specialty: \$5.00</p> <p><u>Current Delivery Methods (unchanged):</u> Upstream Mail by Request Direct Install</p>
LED Light Fixtures	<p><u>Type of Change:</u> Modify delivery method</p> <p><u>Reason for Change:</u> Shifting delivery models to upstream only will reduce additional administrative costs incurred in downstream delivery.</p>	<p><u>Current Qualifications (unchanged):</u> ENERGY STAR</p> <p><u>Current Incentive Amount (unchanged):</u> Up to \$10.00</p> <p><u>Current Delivery Methods:</u> Upstream Downstream</p> <p><u>Revised Delivery Methods:</u> Upstream</p> <p><u>Notes:</u> Torchiere and portable products are not qualified.</p>

Table 2 – Program Modifications (Non-Lighting)

Measure Name	Description of Change	Measure Summary
<p>Low-Flow Showerheads</p>	<p><u>Type of change:</u> Modify incentive for the retail channel only.</p> <p><u>Reason for change:</u> Incremental costs have dropped making the measure less expensive to residential customers at retail.</p>	<p><u>Current Qualifications (unchanged):</u> ENERGY STAR</p> <p><u>Current Incentive Amount:</u> Up to \$15</p> <p><u>Revised Maximum Incentive Amount:</u> Up to \$4</p> <p><u>Current Delivery Methods:</u> Upstream Mail by Request Direct Install</p> <p><u>Note:</u> Incentive change applies to Upstream only.</p>
<p>Low-Flow Aerators</p>	<p><u>Type of change:</u> Modify incentive for the retail channel only.</p> <p><u>Reason for change:</u> Incremental costs have dropped making the measure less expensive to residential customers at retail.</p>	<p><u>Current Qualifications (unchanged):</u> ENERGY STAR</p> <p><u>Current Incentive Amount:</u> Up to \$5</p> <p><u>Revised Maximum Incentive Amount:</u> Up to \$1</p> <p><u>Current Delivery Methods:</u> Upstream Mail by Request Direct Install</p> <p><u>Note:</u> Incentive change applies to Upstream only.</p>
<p>Advanced Power Strips</p>	<p><u>Type of change:</u> Add a new RTF measure</p> <p><u>Description of measure:</u> Power strips shut off power to controlled devices when no activity is detected for a set period of time.</p>	<p><u>Planned Qualification:</u> Power strip must have infrared sensor, occupancy sensor, or load sensor and automatically shut off the plug loads when no motion or reduced load is detected for a period of time.</p> <p><u>Planned Incentive Amount:</u> Up to \$60</p> <p><u>Planned Delivery Methods:</u> Downstream Direct Install Mail by Request</p>

Table 2 – Program Modifications (Non-Lighting)

Measure Name	Description of Change	Measure Summary
Smart Thermostat	<p><u>Type of change:</u> Add a new measure</p> <p><u>Description of measure:</u> Wi-Fi enabled, programmable climate control device that allows the user to customize a schedule to control the temperature of their home throughout the day</p>	<p><u>Planned Qualification:</u> Wi-Fi enabled, programmable, online dashboard and/or mobile device app, occupancy sensor</p> <p><u>Planned Incentive Amount:</u> \$50</p> <p><u>Planned Delivery Methods:</u> Downstream</p> <p><u>Notes:</u> Occupancy sensing units must be enabled</p> <p>Only electrically heated homes are eligible for an incentive.</p> <p>Customers may self-install unit. Contractor not required.</p>
Hybrid Heat Pump Clothes Dryer	<p><u>Type of change:</u> Add a new measure</p> <p><u>Description of measure:</u> Clothes dryer that utilizes energy-efficient heat pump technology which captures that hot air, removes the moisture from it, then reuses the already-hot air to dry more clothing.</p>	<p><u>Planned Qualification:</u> Northwest Energy Efficiency Alliance (NEEA) Specification</p> <p><u>Planned Incentive Amount:</u> \$150</p> <p><u>Planned Delivery Methods:</u> Downstream</p>
Heat Pump Clothes Dryer	<p><u>Type of change:</u> Add a new measure</p> <p><u>Description of measure:</u> Clothes dryer that rely solely on energy-efficient heat pump technology which captures that hot air, removes the moisture from it, then reuses the already-hot air to dry more clothing.</p>	<p><u>Planned Qualification:</u> Northwest Energy Efficiency Alliance (NEEA) Specification</p> <p><u>Planned Incentive Amount:</u> \$300</p> <p><u>Planned Delivery Methods:</u> Downstream</p>

Table 2 – Program Modifications (Non-Lighting)

Measure Name	Description of Change	Measure Summary
Refrigerator	<p><u>Type of Change:</u> Remove an existing measure</p> <p><u>Reason for Change:</u> On September 15, 2014, the federal standard for refrigerators and freezers were increased for equipment. As result very few models which exceed the new standards are available and the incremental savings above the new baseline is very small.</p>	<p><u>Measure Retirement:</u> The measure was removed from the program due to the low energy savings available beyond the new federal standards.</p>
Freezers	<p><u>Type of Change:</u> Remove an existing measure</p> <p><u>Reason for Change:</u> On September 15, 2014, the federal standard for refrigerators and freezers were increased for equipment. As a result, very few models which exceed the new standards are available and the incremental savings above the new baseline is very small.</p>	<p><u>Measure Retirement:</u> The measure was removed from the program due to the low energy savings available beyond the new federal standards. .</p>
Clothes Washers	<p><u>Type of Change:</u> Revise qualifications</p> <p><u>Reason for the Change:</u> Align with new efficiency metrics outlined in current federal standards as well as the RTF.</p> <p>On March 7, 2015 the ENERGY STAR specification changed from modified energy factor (MEF) for quantifying energy used by clothes washers to an integrated modified energy factor (IMEF), which includes the low-power mode energy consumption.</p>	<p><u>Current Qualifications:</u> MEF \geq 3.2</p> <p><u>Revised Qualifications:</u> IMEF \geq 2.75 See program website for the CEE qualified products list.</p> <p><u>Current Incentive Amount (unchanged):</u> \$50 (customer)</p> <p><u>Notes:</u> Only homes equipped with electric gas domestic water heating and/or an electric dryer are eligible for incentives.</p>
Clothes Washer Recycling	<p><u>Type of Change:</u> Remove existing measure</p> <p><u>Reason for Change:</u> Given the measure has experienced no participation to date and reliable unit energy savings values are not readily available the measure will be removed for the biennial period.</p>	<p><u>Measure Retirement:</u> Incentives will be provided only for units recycled on or before the tariff effective date.</p>

Table 2 – Program Modifications (Non-Lighting)

Measure Name	Description of Change	Measure Summary
Electric Water Heaters	<p><u>Type of Change:</u> Remove an existing measure</p> <p><u>Reason for Change:</u> On April 16, 2015 the federal standard for electric storage tank water heaters was increased for all equipment sizes between 20 and 100 gallons, requiring units above 55 gallons to have an EF of 1.92 or higher, and requiring units 55 gallons or smaller to achieve an EF 0.94 or higher. Increasingly stringent federal standards have resulted in lower savings for electric storage tanks.</p>	<p><u>Measure Retirement:</u> Measure had a sunset on April 16, 2015 under the current program.</p>
Heat Pump Water Heaters	<p><u>Type of Change:</u> Revised qualifications and incentives.</p> <p><u>Reason for Change:</u> To align qualification with the NEEA Northern Climate Specification and the revised federal standard for electric storage tank water heaters</p>	<p><u>Current Qualifications (unchanged):</u> NEEA Northern Climate Specification See program website for qualified products list.</p> <p><u>Current Incentive Amount (unchanged):</u> Up to \$600 (customer) \$200 (contractor) Incentive may vary by tier qualification.</p>
Room Air Conditioners	<p><u>Type of Change:</u> Remove existing measure</p> <p><u>Reason for Change:</u> Low participation and savings.</p>	<p><u>Measure Retirement:</u> Incentives will be provided only for units purchased or installed on or before January 1, 2016.</p>

Notes on Heat Pump Water Heater:

1. Units that do not meet the new federal standard will not be eligible for incentives after the tariff effective date.
2. See program website for specification for the location of unit in home.
3. Customers who perform self-installs are only eligible for the customer incentive.

Table 2 – Program Modifications (Non-Lighting)

Measure Name	Description of Change	Measure Summary
Windows	<p><u>Type of change:</u> Revise qualifications and incentives</p> <p><u>Reason for change:</u> To align savings and measure qualifications with RTF values. Adjust incentives based on available savings and updated incremental cost information.</p>	<p><u>Current Qualifications:</u> Tier 1: U-factor ≤ 0.30 (electrically heated home only) Tier 2: U-factor ≤ 0.22</p> <p><u>Revised Qualifications:</u> U-factor ≤ 0.22 (electrically heated homes only)</p> <p><u>Current Incentive Amount:</u> Tier 1: \$0.25/sf (electrically heated homes only) Tier 2: \$1.50/sf (electrically heated homes) Tier 2: \$0.50/sf (electrically cooled homes)</p> <p><u>Revised Incentive Amount:</u> \$1.50/sf (electrically heated homes only)</p> <p><u>Notes:</u> Customer may self-install windows.</p> <p>Incentive is paid based on area of windows installed.</p> <p>Electrically cooled homes do not qualify for the incentive.</p>
Central Air Conditioner	<p><u>Type of Change:</u> Remove existing measure</p> <p><u>Reason for change:</u> Measure yielded minimal savings which did not support incentive.</p>	<p><u>Measure Retirement:</u> The measure will be revised to require proper installation and sizing. Incentives for this measure will be provided only for units that are purchased or installed on or before January 1, 2016.</p>

Table 2 – Program Modifications (Non-Lighting)

Measure Name	Description of Change	Measure Summary
<p>Central Air Conditioner Best Practices Installation & Sizing</p>	<p><u>Type of Change:</u> Revise qualifications</p> <p><u>Reason for change:</u> To expand measure to achieve more savings.</p>	<p><u>Current Qualifications:</u> ≥ 13 SEER Meet airflow/refrigerant requirements 350 CFM/ton of airflow Refrigerant charge within +/- 3 degrees of target subcooling Equipment properly sized per program requirements</p> <p><u>Revised Qualifications:</u> ≥ 15 SEER with Best Practices Install and Sizing</p> <p><u>Current Incentive Amount (unchanged):</u> \$50 (customer) \$75 (contractor)</p>
<p>Ductless Heat Pump</p>	<p><u>Type of Change:</u> Revise qualifications</p> <p><u>Reason for change:</u> To align with current RTF values as well as other regional utilities.</p>	<p><u>Current Qualifications:</u> Single or multi-head units ≥ 10 HSPF</p> <p><u>Revised Qualifications:</u> Single or multi-head units ≥ 9.0 HSPF</p> <p><u>Current Incentive Amount (unchanged):</u> \$1,000 (customer) \$300 (contractor)</p>
<p>Heat Pump Upgrade with Best Practices for Install and Sizing</p>	<p><u>Type of Change:</u> Revise qualifications</p> <p><u>Reason for change:</u> To align with current RTF values as well as other regional utilities.</p>	<p><u>Current Qualifications:</u> ≥ 9.5 HSPF</p> <p><u>Revised Qualifications:</u> ≥ 9.0 HSPF with Best Practices Installation and Sizing</p> <p><u>Current Incentive Amount:</u> \$150 (customer) \$100 (contractor)</p>

Table 2 – Program Modifications (Non-Lighting)

Measure Name	Description of Change	Measure Summary
<p>Heat Pump Conversion with Best Practices for Install and Sizing</p>	<p><u>Type of Change:</u> Revise qualifications</p> <p><u>Reason for change:</u> To align with current RTF values as well as other regional utilities.</p>	<p><u>Current Qualifications:</u> ≥ 9.5 HSPF</p> <p><u>Revised Qualifications:</u> ≥ 9.0 HSPF with Best Practices Installation and Sizing</p> <p><u>Current Incentive Amount (unchanged):</u> \$1,250 (customer) \$500 (contractor)</p>
<p>Duct Sealing</p>	<p><u>Type of Change:</u> Revise qualifications and incentives</p> <p><u>Reason for change:</u> Low savings from electrically cooled homes to support the incentive.</p>	<p><u>Current Qualifications:</u> Must have ducted electric heating or cooling system serving at least 80% of the home’s floor area. Existing insulation should only be removed if it is being replaced. Installation completed by contractor</p> <p><u>Revised Qualifications:</u> Must have ducted electric heating system serving at least 80% of the home’s floor area. Existing insulation should only be removed if it is being replaced. Installation completed by contractor.</p> <p><u>Current Incentive Amount:</u> Electrically heated homes: \$300 (customer) Electrically cooled homes: \$100 (customer)</p> <p><u>Revised Incentive Amount:</u> \$300 (customer) Electrically heated homes only</p>

Table 2 – Program Modifications (Non-Lighting)

Measure Name	Description of Change	Measure Summary
<p>Whole-home Upgrade Package</p>	<p><u>Type of change:</u> Revised qualifications</p> <p><u>Reason for Change:</u> Low savings from wall insulation and the additional costs driven by the requirement has proven to be a participation barrier when included in the prescriptive checklist.</p> <p><u>Description of Bonus:</u> Customers who install several measures together are eligible for a bonus incentive. Each element of the combined measure must meet the qualifications of the individual measure.</p>	<p><u>Current Qualifications:</u> Install all of the following per Program requirements:</p> <ul style="list-style-type: none"> • Heat Pump or Ductless Heat Pump • Whole-home Attic Insulation • Whole-home Wall Insulation • Duct Sealing & Insulation if main heat or cooling source is ducted • Air Sealing <p><u>Revised Qualifications:</u> Install all of the following per Program requirements:</p> <ul style="list-style-type: none"> • Heat Pump or Ductless Heat Pump • Whole-home Attic Insulation • Duct Sealing & Insulation if main heat or cooling source is ducted • Air Sealing <p><u>Current Incentive Amount (unchanged):</u> \$1,000 bonus per home</p>

Table 3 – Program Modifications (Non-Lighting, New Homes)

Measure Name	Measure Name	Measure Name
New Homes Refrigerator	<p><u>Type of Change:</u> Remove an existing measure</p> <p><u>Reason for Change:</u> On September 15, 2014, the federal standard for refrigerators and freezers were increased for equipment. As a result, very few models which exceed the new standards are available and the incremental savings above the new baseline is very small.</p>	<p><u>Measure Retirement:</u> The measure was removed from the program due to the low energy savings available beyond the new federal standards.</p>
New Homes Heat Pumps	<p><u>Type of Change:</u> Revise qualifications</p> <p><u>Reason for change:</u> To expand measure to achieve more savings and align qualifications with the RTF as well as other regional utilities.</p>	<p><u>Current Qualifications:</u> ≥ 9.5 HSPF</p> <p><u>Revised Qualifications:</u> ≥ 9.0 HSPF</p> <p><u>Current Incentive Amount (unchanged):</u> \$250 (customer or builder)</p>
New Homes Ductless Heat Pumps	<p><u>Type of Change:</u> Revise qualifications</p> <p><u>Reason for Change:</u> To align qualifications with RTF</p>	<p><u>Current Qualifications:</u> Single or multi-head units ≥ 10 HSPF</p> <p><u>Revised Qualifications:</u> Single or multi-head units ≥ 9.0 HSPF</p> <p><u>Current Incentive Amount (unchanged):</u> \$1,300 (customer or builder)</p>
New Home Central Air Conditioner with Best Practices Install and Sizing	<p><u>Type of change:</u> Revise qualifications</p> <p><u>Reason for Change:</u> To expand measure to achieve more savings and align with RTF and align qualifications with the RTF</p>	<p><u>Current Qualifications:</u> ≥ 18 SEER</p> <p><u>Revised Qualifications:</u> ≥ 15 SEER with Best Practices Installation and Sizing</p> <p><u>Current Incentive Amount (unchanged):</u> \$100 (customer or builder)</p>

Table 3 – Program Modifications (Non-Lighting, New Homes)

Measure Name	Measure Name	Measure Name
New Home Heat Pump Water Heater	<p><u>Type of Change:</u> Revised qualifications and incentives.</p> <p><u>Reason for Change:</u> To align qualification with the NEEA Northern Climate Specification and the revised federal standard for electric storage tank water heaters</p>	<p><u>Current Qualifications (unchanged):</u> NEEA Northern Climate Specification See program website for qualified products list.</p> <p><u>Current Incentive (unchanged):</u> Up to \$800 (customer or builder) Incentive may vary by tier qualification.</p>

Notes on New Homes Heat Pump Water Heater:

1. Units that do not meet the new federal standard will not be eligible for incentives after the tariff effective date.
2. See program website for specification for the location of unit in home.
3. Customers who perform self-installs are only eligible for the customer incentive.

Table 4 – Program Modifications (Non-Lighting, Manufactured Homes)

Measure Name	Description of Change	Measure Summary
Manufactured Homes Ductless Heat Pumps	<p><u>Type of Change:</u> Add a new measure to expand delivery methods for existing measures.</p>	<p><u>Planned Qualifications:</u> ≥ 9.0 HSPF</p> <p><u>Planned Incentive Amount:</u> \$1,000 (customer) \$300 (contractor)</p> <p><u>Planned Delivery Methods:</u> Downstream</p>
Manufactured Homes Heat Pump Upgrade	<p><u>Type of Change:</u> Add a new measure to expand delivery methods for existing measures.</p>	<p><u>Planned Qualifications:</u> ≥ 9.0 HSPF/14 SEER</p> <p><u>Planned Incentive Amount:</u> \$150 (customer) \$100 (contractor)</p> <p><u>Planned Delivery Methods:</u> Downstream</p>
Manufactured Homes Heat Pump Conversion	<p><u>Type of Change:</u> Add a new measure to expand delivery methods for existing measures.</p>	<p><u>Planned Qualifications:</u> ≥ 9.0 HSPF/14 SEER</p> <p><u>Planned Incentive Amount:</u> \$1,250 (customer) \$500 (contractor)</p> <p><u>Planned Delivery Methods:</u> Downstream</p>

Table 4 – Program Modifications (Non-Lighting, Manufactured Homes)

Measure Name	Description of Change	Measure Summary
<p>New High Performance Manufactured Homes</p>	<p><u>Type of change:</u> Expand delivery methods to allow for flexibility to implement the new manufactured homes channel effectively.</p>	<p><u>Current Qualifications (unchanged):</u> Home must meet NEEA specifications and receive High Performance certification by incorporating energy-efficient enclosure design and construction, HVAC systems, water heating, lighting, and appliances.</p> <p><u>Current Incentive Amount:</u> \$2,000 (manufacturer)</p> <p><u>Revised Incentive Amount :</u> \$2,000 (customer, or manufacturer, or dealer)</p> <p><u>Current Delivery Method:</u> Midstream</p> <p><u>Revised Delivery Method(s):</u> Midstream Downstream</p>
<p>New Manufactured Homes ENERGY STAR</p>	<p><u>Type of Change:</u> Expand delivery methods to allow for flexibility to implement the new manufactured homes channel effectively.</p>	<p><u>Current Qualifications (unchanged):</u> Home must receive ENERGY STAR certification by incorporating an energy-efficient building enclosure design, air-distribution system, and equipment.</p> <p><u>Current Incentive Amount:</u> \$1,000 (manufacturer)</p> <p><u>Revised Incentive Amount :</u> \$1,000 (customer, or manufacturer, or dealer)</p> <p><u>Current Delivery Method:</u> Midstream</p> <p><u>Revised Delivery Method(s):</u> Midstream Downstream</p>

Table 4 – Program Modifications (Non-Lighting, Manufactured Homes)

Measure Name	Description of Change	Measure Summary
New Manufactured Homes Eco-rated Homes	<u>Type of Change:</u> Expand delivery methods to allow for flexibility to implement the new manufactured homes channel effectively.	<u>Current Qualifications (unchanged):</u> Home must receive Eco-rated certification by achieving efficiency metrics in energy, material, water, construction practice, and indoor air quality. <u>Current Incentive Amount:</u> \$1,250 (manufacturer) <u>Revised Incentive Amount :</u> \$1,250 (customer, or manufacturer, or dealer) <u>Current Delivery Method:</u> Midstream <u>Revised Delivery Method(s):</u> Midstream Downstream

Regional Technical Forum (RTF) alignment

Unit energy savings values used for the Home Energy Savings program and their source, including alignment with RTF can be found in the *WA_HES_Measure Savings_Details 10-12-1015Final.xlsx* file.

Cost-Effectiveness

Cost-effectiveness analysis of the program with the planned changes incorporated is included in the 2016-2017 Biennial Conservation Plan filing dated October 30, 2015. The program overall is forecasted to pass 4 of the 5 cost-effectiveness tests¹. The cost-effectiveness analysis of the program and by measure group and is included in this program change package – see *PacifiCorp Benefit-Cost Memo _WA Home Energy Savings Program_092915.docx* file. The measure group cost effectiveness results include an allocated portion of total program administrative costs.

The appliance category which includes heat pump dryers is not forecasted to be cost effective, though the addition of non-energy benefits improves the category results. The limited savings above recent standards changes also contribute to sub-optimal results. Overall savings and costs for the category are small when compared to the same metrics for the two year program. The opportunity to help the region move the dryer market

¹ The program does not pass the Ratepayer Impact Test (RIM).

toward heat pump technology and continue to focus consumers on high efficiency washing machines, especially outside the western Washington markets provides support for program offers for these appliances.

The electronics category includes smart plug strips and is not currently forecast to be cost effective. Savings and costs are low compared to the overall tow year program and if administrative costs were not directly allocated, results would improve. The market smart plug strips continues to evolve and it is likely the cost of the measure will decline which will improve results over time. Improved control of connected loads is an area of emerging opportunity as the connected loads themselves become more efficient through codes, standards and innovation. The electronics offer, specifically plug strips, is a programmatic feature to engage and influence this important area.

The HVAC category, before the addition of non-energy benefits is marginally cost effective. These results are influenced by measure cost information and the decision to allocate administration costs. Since purchases for HVAC measures typically occur when existing equipment fails or no longer meets customer requirements, the opportunity to influence the customer purchase is limited (and potentially lost if missed), the Company believes it is appropriate to offer these incentives for HVAC measures.

The weatherization category is a comparatively small part of the program, but a key feature to drive comprehensiveness and the installation of long life shell measures. The sub-optimal results are influenced by the measure costs which are challenging to allocate specifically to electric energy savings.