ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

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July 9, 2014

VIA ELECTRONIC FILING
AND OVERNIGHT DELIVERY

Public Service Commission of Utah
Heber M. Wells Building, 4th Floor
160 East 300 South
Salt Lake City, UT 84114

Attention: Gary Widerburg, Commission Secretary

Re: Advice No. 14-07
Proposed Changes to Schedule 111 Home Energy Savings Incentive Program

Enclosed for filing are an original and five copies of proposed tariff sheets associated with Tariff P.S.C.U No. 49 of PacifiCorp, d.b.a. Rocky Mountain Power, applicable to electric service in the State of Utah. Pursuant to the requirement of Rule R746-405D, Rocky Mountain Power (the Company) states that the proposed tariff sheets do not constitute a violation of state law or Commission rule. The Company will also provide an electronic version of this filing to psc@utah.gov. The Company respectfully requests an effective date of August 8, 2014 for these changes.

Seventh Revision of Sheet No. B.1		Tariff Index
First Revision of Sheet No. 111.2	Schedule 111	Home Energy Savings Incentive Program
First Revision of Sheet No. 111.3	Schedule 111	Home Energy Savings Incentive Program
Second Revision of Sheet No. 111.4	Schedule 111	Home Energy Savings Incentive Program
Second Revision of Sheet No. 111.5	Schedule 111	Home Energy Savings Incentive Program
Original Sheet No. 111.6	Schedule 111	Home Energy Savings Incentive Program
Original Sheet No. 111.7	Schedule 111	Home Energy Savings Incentive Program

The purpose of this filing is to propose changes to the Home Energy Savings Incentive Program (Program) administered through Schedule 111. The Program reduces residential customer energy usage by offering customer incentives for installing various residential energy efficiency

measures. Through this filing, the Company is proposing modifications to the Program intended to introduce new energy efficiency opportunities, expand delivery channels, make administrative changes and align Program incentives with revised measure costs, savings estimates and standards. All changes are designed to increase participation and energy savings while maintaining or enhancing program cost-effectiveness.

The Company proposes to modify incentives, equipment qualifications, delivery channels, and/or availability for the following currently offered Program measures:

- Clothes washers
- Refrigerators
- Room air conditioners
- Evaporative coolers
- Light fixtures
- Freezers
- Heat pump water heaters
- Insulation
- Lighting (CFLs and LEDs)
- Dishwashers
- Electric water heaters
- Windows
- HVAC tune-ups
- Central air conditioner proper sizing/installation
- Central air conditioners
- Duct sealing
- Duct insulation
- $\geq$ 95% AFUE gas furnace with ECM
- HVAC/Weatherization Super Bundle

Further, the Company proposes introducing several new qualifying measures, including:

- Advanced power strips
- Air sealing
- Heat pumps
- Ductless heat pumps
- ECM on existing gas furnace
- Showerheads
- Aerators
- Thermostatic valves
- Combination Showerhead/Thermostatic valve
- Pool pumps
- Whole home upgrade package
- New manufactured home: ENERGY STAR
- Manufactured homes duct sealing

Proposed Program Changes

Application Submission Deadline

The Program proposes to modify the language under Provisions of Service for item number 7 on Original Sheet No. 111.2 from 90 days to 180 days to align with Questar's submission requirements and to provide a longer submission period for customers performing projects that take longer to complete, such as whole-home upgrade packages. In 2013 the Program received 26,876 incentive applications and of those 1,164 (4.3%) were rejected for exceeding the 90 day submission requirement. Of those rejected for exceeding the submission deadline 199 were received after 180 days. Having a submission deadline of 180 days would have allowed additional 965 incentive applications to be reviewed by the Program. The different submission deadlines for the two companies causes customer confusion and often results in customers being denied an incentive from the Program while they receive an incentive from Questar. Aligning the

submission deadlines will resolve these issues. The modification is anticipated to increase customer satisfaction and overall Program participation.

Beyond the 180-day submission deadline the Program feels it is important to give the Program flexibility in handling exceptions to the submission deadline. The Commission order on docket number 10-035-T05 issued on July 19, 2010 acknowledges instances "where an extension for submittal of an incentive application may be appropriate." However, the order goes on to state, "exceptions are reasonable as long as the exception documented in writing and attested to by the customer's senior military/public service official, or medical provider and is verifiable." The Program understands the importance and need to document all exceptions to the submission deadline but only granting exceptions when the request is provided in writing by the customer's senior military/public service official, or medical provider has generated strong customer complaints, especially from customers with medical issues which are considered highly sensitive and private. The Program proposes to continue to document all exceptions to the submission deadline but requests that the requirement for exception requests in writing from customer's senior military/public service official, or medical provider be removed and provide the Program the latitude to handle exception requests.

Delivery Channels

The Program currently uses upstream and downstream incentives to acquire energy savings. Upstream incentives are paid to manufacturers or retailers to lower the cost of a product sold at retail. The Program currently uses upstream incentives for CFL and LED bulbs. Downstream incentives are post-purchase or post-installation incentives provided to customers and/or trade allies. Downstream incentives are currently used by the Program for all non-lighting measures such as appliances and weatherization.

The Program proposes to add two new delivery channels, mail-by request and direct install. The Program intends to add mail-by request and direct install for specific measures to provide new opportunities for customers to participate in the Program. Direct install of measures is designed to cover 100% of the product and installation cost of a measure. The Program is proposing to offer direct installation of duct sealing for manufactured homes with ducted heating systems. CFLs, LEDs and plumbing measures will be installed as part of in-home visits such as during direct installation of duct sealing in manufactured homes or during quality assurance inspections of contractor installed measures such as insulation, windows, heating and cooling systems.

The Program intends to offer mail-by request kits containing lighting and plumbing measures. The primary channel to advertise the kits will be business reply cards with a postage paid return order form. Customers will also be able to order kits online or by calling a toll free number. Upwards of 80% of customers are expected to use the business reply cards. The Program proposes to offer variations of the kits as outlined in the table below.

Table 1 Planned Kit Contents by Kit Type

Kit Type	13W CFL Spiral	10W LED A-Lamp	1.5GPM Aerator Kitchen	0.5GPM Aerator Bath	1.5GPM Showerhead
Basic 1	4	0	1	1	1
Basic 2	4	0	1	2	2
Better 1	4	0	1	1	1
Better 2	4	0	1	2	2
Best 1	0	4	1	1	1
Best 2	0	4	1	2	2
CFL Only	4	0	0	0	0
LED Only	0	4	0	0	0

Only customers who self-identify they have electric water heat will receive kits with plumbing measures. The basic and CFL only kits will be free to customers. The difference between the level 1 and 2 kits is that the level 2 kits are for customers with two bathrooms and will receive 2 showerheads and 2 bath aerators. As part of the screening process customers who identify they have electric water heat will be able to select a one or two showerhead kit based on the number of showers they have.

Customers will have the option to purchase higher quality items to include in the kits. Even with the customer payment the Program is paying the majority of the costs for the upgraded kits. The customer payment covers a portion of the incremental cost for the upgraded kits. Without the customer payment higher cost items like LEDs would not be cost-effective and would not be available in the kits.

The better kits have an upgraded showerhead and will cost the customer $4.99 after the Program pays an incentive to the kit supplier of $11.82 for the better 1 kit and $21.37 for the better 2 kit to buy down the cost of the measures. The best kits will contain aerators, the upgraded showerhead and 4 general purpose 60-W replacement LEDs with the customer paying $19.99 after the Program pays an incentive to the kit supplier of $30.34 for the best 1 kit and $39.89 for the best 2 kit. The LED only kits will include 4 general purpose 60-W replacement LEDs with the Program providing an incentive of $18.69 to bring down the price of the bulbs so the customer will pay $19.99 (~$5/bulb). The incentives paid by the Program cover the equipment cost. Additional expenses for postage, shipping and handling of the kits are covered by the Program and are included in the cost-effectiveness analysis. The incentives provided and the customer portion may vary overtime up or down as product prices change or the products offered changes.

The Program proposes to offer no more than 4 bulbs in the kits to help insure all bulbs received are installed and not placed in storage. The 4 bulb limit will apply to all three versions of the kits: basic (4 CFLs), better (4 CFLs) and best (4 LEDs). The number of bulbs in the kits may be revised over time based on customer feedback and changes in product prices. Customers will be limited to one kit, of any type. For the same reason the kits are limited to 4 bulbs customers will be limited to only one kit to encourage high installation rates of every item in the kits and to avoid items going into storage or discarded with the receipt of multiple kits. The kits are designed to encourage customers to buy more CFLs and LEDs through our retail partners. With

today's information on product costs, discounted bulbs purchased through our retail partners tend to be more cost-effective than those mailed out in the kits.

Should a kit recipient have any questions about the kits, or how to use any products within it, or should they receive a product damaged in shipment, or one that is defective, the Program's kit vendor is prepared to handle each of these scenarios. The Program's kit vendor will operate a toll free number, available during standard business hours, to take kit orders and address customer service issues. In the event of a defective or damaged product or kit, a replacement product or replacement kit will be shipped to the customer at no cost to the customer. All products are warranted for two years. To minimize costs the kit contents will direct customers to the Program website for more information on choosing the right bulb, where to buy more CFL and LED bulbs and information on proper CFL disposal.[1]

The Program proposes to modify the language under Provisions of Service for item number 2 on Original Sheet No. 111.2 to add the new delivery channels, mail-by request and direct install. A summary of measures that will be offered via mail-by request and/or direct install is listed below. Additional details on the new channels and associated measures are provided in the lighting and plumbing measure sections below.

Table 2 Measures with Mail-by Request & Direct Install Delivery Channels

Measure Type	Mail-By Request	Direct Install
CFL & LED General Purpose Bulbs	✓	✓
CFL & LED Specialty & Downlight Bulbs	✓	✓
Low Flow Showerheads	✓	✓
Low Flow Aerators	✓	✓
Thermostatic Valves	✓	✓
Combo Showerheads and Thermostatic Valves	✓	✓
Manufactured Homes Duct Sealing		✓

Incentive Payments

The Program proposes to modify the language under Provisions of Service for item number 8 on Original Sheet No. 111.2 to allow incentive payments to pre-approved Utah Department of Workforce Services, Housing & Community Development Division's (HCDD) Weatherization Assistance Program (WAP) contractors as third party entities responsible for project activity at properties served by the Company. The modification is being proposed at the request of WAP to allow the low income weatherization agencies access to weatherization incentives for homes

[1] See http://www.homeenergysavings.net/homeowner/category/light-bulbs/in/utah/energy-efficient-light-bulbs.

heated with natural gas and that have central air conditioning. Allowing WAP low income agencies to receive incentives from the Program was discussed with the Utah DSM Advisory Group on December 10, 2013. The Program attended WAP's state-wide annual stakeholder meeting on January 24, 2014 to explain the Home Energy Savings Incentive Program and solicit feedback from prospective participants.

The language change will allow the Program to work with and pay incentives directly to whoever is managing and spending money on energy efficiency upgrades at low-income residential properties served by the Company on eligible service schedules. WAP low income agencies will be allowed to receive incentive payments only for insulation, windows, and duct sealing/insulation measures for WAP approved projects. The change aligns with Questar, which allows WAP to receive ThermWise® Weatherization incentives. The Program will not allow WAP to "double dip" for incentives from both the Home Energy Savings Incentive Program and the Company's Low Income Weatherization program. Savings from WAP participation in the Home Energy Savings Incentive Program will be reported under the Home Energy Savings Incentive Program. Low income weatherization agencies will not be eligible to bill the Program for any administrative costs for measure incentives requested through Program.

Qualifying Equipment or Services Table Modifications (Schedule 111.2 – 111.6)

The Program proposes making minor modifications to "Table 1: Qualifying Equipment or Services" in Schedule 111 to reduce confusion of notes and remove columns that are no longer relevant to the Program:

- To make the tables more clear, the Program proposes removing the notes on Schedule 111.5 and adding relevant note content in measure-specific rows in the table.
- The Program proposes removing the column titled "Availability" in Table 1. The column is a hold-over from when the Program only offered lighting incentives seasonally. All current measures have year-round availability, as well as the proposed measures, and thus the column is no longer necessary.

Clothes Washers

The Program proposes shifting the clothes washer incentive from two tiers tied to CEE Tier 2 to a single tier that is dependent on a minimum Modified Energy Factor of 3.2. The Program proposes a $50 incentive to continue market transformation to higher efficient units above the CEE specifications.

The Program provides incentives for clothes washers for customers with either electric or natural gas water heat. The Program claims savings based on the water heater and dryer fuel customers self-report on their incentive applications. The four different combinations of water heater and dryer fuel are shown in the cost-effectiveness results in Attachment 1. Only the gas water heat and gas dryer combination is not cost-effective. Excluding the gas water heat and gas dryer combination is not recommended as it would strain relationships with the retailers and complicate the sales process by requiring retailers to screen customers at time of sale to determine if they are eligible for Program incentives. The Program does not exclude the gas water heat and gas dryer configuration type because it is extremely rare and as such has minimal impact on the measure's cost-effectiveness.

Table 3 Proposed Clothes Washer Measure

	Existing Measure	Proposed Measure
Tier 1	CEE Tier 2 $35 incentive	MEF ≥ 3.2 $50
Tier 2	CEE Tier 2 plus 18% $50 incentive	n/a
Eligible water heat	No water heat restriction	No water heat restriction

Refrigerators

The Program proposes increasing incentive for CEE Tier 3 refrigerators to $100 to drive increased customer interest and participation.

Table 4 Proposed Refrigerator Measure

	Existing Measure	Proposed Measure
Qualification	CEE Tier 3	CEE Tier 3
Incentive	$40	$100
Eligible sizes	Standard and compact size models	Standard and compact size models

Freezers

The Program proposes dropping the requirement for freezers to be 20% better than the federal standard and use ENERGY STAR as the measure requirement. The ENERGY STAR standard is easier for customers to understand and will likely yield higher participation. In addition to simplifying the qualification criteria, the Program proposes increasing the incentive to $50 to further increase adoption of energy efficient freezers.

Table 5 Proposed Freezer Measure

	Existing Measure	Proposed Measure
Qualification	20% above federal standard	ENERGY STAR Qualified
Incentive	$20	$50
Eligible sizes	Standard and compact size models	Standard and compact size models

Dishwashers

Dishwashers are proposed to be retired due to a high market share for energy efficient units. Incentives are probably not a key driver in maintaining or growing this market share so the recommendation is to retire dishwashers from the Program.

Room Air Conditioners

In an effort to encourage more adoption of high efficiency room air conditioners, the Program proposes shifting the incentive from a downstream, post purchase rebate to an upstream buy-down. By shifting to upstream, the Program intends to reduce the incentive from $30 to "up to" $20 per unit. The upstream buy down for room air conditioners will be operated the same as the upstream buy-down for lighting.

Table 6 Proposed Room Air Conditioner Measure

	Existing Measure	Proposed Measure
Qualification	ENERGY STAR Qualified	ENERGY STAR Qualified
Incentive	$30	Up to $20
Delivery Channel	Downstream (post-purchase rebate)	Upstream buy-down

Portable Evaporative Cooler

To increase participation and adoption of portable evaporative coolers, the Program proposes increasing the incentive for portable evaporative coolers from $50 to $200. All qualification criteria will remain unchanged.

Table 7 Proposed Evaporative Cooler Measure

	Existing Measure	Proposed Measure
Qualification	Minimum 2,000 CFM	Minimum 2,000 CFM
Incentive	$50	$200

Evaporative Cooler First Time Install & Replacement

To increase participation and adoption of permanent evaporative coolers the Program proposes increasing the incentive for new and replacement evaporative coolers. All qualification criteria will remain unchanged. As is the case currently, self-installs of evaporative coolers are allowed, but self-installers are not eligible for the contractor incentive.

Evaporative cooling measures are compared to a code minimum central air conditioner baseline which costs more than the measure. This results in a negative incremental cost when the baseline cost is subtracted from the measure cost. While this convention has been widely discussed and utilized in other cost effective analyses, it does present a challenge on the best way to display any cost benefit ratio (PTRC, TRC and PCT) result utilizing overall measure cost. In Attachment 1 the cost-effectiveness analysis provided set the result to "NA". In the last Cool Cash program evaluation, these results were displayed as "NA". In the 2012 annual report, these results were displayed as "-".

Table 8 Proposed Evaporative Cooler Incentives

	Existing Measure	Proposed Measure
Evaporative Cooler, First-time Install	Customer: $300 Contractor: $25	Customer: $400 Contractor: $100
Evaporative Cooler, Replacement	Customer: $100 Contractor: $25	Customer: $400 Contractor: $100

Electric Water Heaters

There are no proposed changes to water heater qualification criteria or incentives. However, on April 16, 2015 the federal standard for electric storage tank water heaters will be increased for all equipment sizes, requiring units 55 gallons and above to have an EF of 1.92 or higher, and requiring units smaller than 55 gallons to achieve an EF 0.94 or higher. Due to the federal standard change, incentives for electric water heaters will not be available for purchases made on or after April 16, 2015. Incentives will be provided only for units purchased on or before April 15, 2015.

Heat Pump Water Heaters

To encourage the purchase of high efficiency heat pump water heaters, the Program proposes to increase the customer incentive to $600 and increase the contractor incentive to $200 for qualifying units. The Program proposes modifying the qualification criteria from ENERGY STAR to Northwest Energy Efficiency Alliance's Northern Climate Specification[2]. The Northern Climate Specification requires manufacturers meet the ENERGY STAR criteria but also requires the unit to provide high levels of consumer satisfaction and energy performance in cooler, northern climates. Due to customer interest, the Program plans on allowing self-installs of heat pump water heaters. Customers performing self-installs are not eligible for the contractor incentive. Due to the April 2015 federal standard changes, heat pump water heaters that do not meet the new federal standard will no longer be offered incentives after April 15, 2015. The Program currently requires the previous water heater to be electric to be eligible for the heat pump water heater incentive. This requirement is not changing as part of the proposed changes.

A few variations of the measure have a UCT below 1.0 in Attachment 1. All variations are included to provide a comprehensive offer covering all sizes of heat pump water heaters.

Table 9 Proposed Heat Pump Water Heater Measures

	Existing Measure	Proposed Measure
Qualification	ENERGY STAR	Northern Climate Specification
Incentive	$300 customer $100 contractor	$600 customer $200 contractor

Insulation – Attic

[2] http://neea.org/northernclimatespec/

The Program recommends reducing the incentive for attic insulation in gas heated homes to better align incentives with installed costs and the availability of other utility incentives, which will increase Program cost-effectiveness.

Table 10 Proposed Attic Insulation Measures

	Current (per sq. ft.)	Proposed (per sq. ft.)
Incentive: R-30 gas/cac	$0.15	$0.10
Incentive: R-30 electric	$0.65	$0.65
Incentive: R-30 gas/cac self	$0.15	$0.10
Incentive: R-30 electric self	$0.40	$0.40
Qualification	Pre-existing R-20 or less; final insulation level of R-38 or greater. Work must be performed by a Qualified Weatherization Trade Ally per the Weatherization Program Manual. Self-installed work must meet Program requirements as outlined on incentive applications and on the Program website. Incentive amount cannot exceed cost of project.	Pre-existing R-20 or less; final insulation level of R-38 or greater. Work must be performed by a Qualified Weatherization Trade Ally per the Weatherization Program Manual. Self-installed work must meet Program requirements as outlined on incentive applications and on the Program website. Incentive amount cannot exceed cost of project.

Insulation – Wall

The Program recommends reducing the incentive for wall insulation in gas heated homes to better align incentives with installed costs and the availability of other utility incentives, which will increase Program cost-effectiveness.

Table 11 Proposed Wall Insulation Measures

	Current (per sq. ft.)	Proposed (per sq. ft.)
Incentive: R-13 or fill gas/cac	$0.30	$0.25
Incentive: R-13 or fill electric	$0.65	$0.65
Incentive: R-13 or fill gas/cac self	$0.20	$0.20
Incentive: R-13 or fill electric self	$0.45	$0.45
Qualification	Pre-existing R-10 or less; min. installation of R-13 or fill the cavity. Work must be performed by a Qualified Weatherization Trade Ally per the Weatherization Program Manual. Self-installed work must meet	Pre-existing R-10 or less; min. installation of R-13 or fill the cavity. Work must be performed by a Qualified Weatherization Trade Ally per the Weatherization Program Manual. Self-installed work must meet

	Current (per sq. ft.)	Proposed (per sq. ft.)
	Program requirements as outlined on incentive applications and on the Program website. Incentive amount cannot exceed cost of project.	Program requirements as outlined on incentive applications and on the Program website. Incentive amount cannot exceed cost of project.

Insulation – Floor

The Program recommends modifying the requirement for floor insulation from $R_{final} \geq$ R-30 to $R_{final} \geq$ R-30 or fill cavity to accommodate customers in older homes with smaller floor joists. The incentives for this measure will remain unchanged.

Windows

The Program recommends allowing customer self-installations of qualifying windows. The Program has received requests from many customers who wish to install their own windows. The tariff currently allows for self-installation of insulation so allowing windows to be self-installed will provide a consistent pathway for the do-it-yourself weatherization customer. The incentives and other qualifications for windows will remain unchanged.

Central Air Conditioner and Heat Pump Tune-ups

Tune-ups for central air conditioners and heat pumps will be retired due to a combination of low uptake and high quality assurance costs. Contractors have not been attracted to tune-ups and struggle to sell the value added service. Raising the incentive high enough to generate interest is not viable because the incentive would be so high it would no longer be cost-effective. Doing field inspections are challenging to do cost-effectively because they initially involve nearly duplicating the work of the contractor(s).

Duct Sealing and Duct Insulation

The Program proposes increasing incentives for electrically heated homes and reducing incentives for gas heated homes to better align incentives with available savings.

Table 12 Proposed Duct Sealing & Duct Insulation Measure

	Existing Measure	Proposed Measure
Qualification	Work must be completed by a Program qualified contractor. Duct sealing and insulation must be performed at the same time. CAZ testing is required. Ductwork must be insulated to a minimum of R-8. 100% of ductwork in unconditioned space must be sealing and insulated.	Work must be completed by a Program qualified contractor. Duct sealing and insulation must be performed at the same time. CAZ testing is required when applicable. Ductwork must be insulated to a minimum of R-8. 100% of ductwork in unconditioned space must be sealed and insulated.

Incentive	$150 customer/$50 contractor – electrically cooled homes $300 customer/$50 contractor – electrically heated homes	$100 customer/$20 contractor – electrically cooled homes $600 customer/$200 contractor – electrically heated homes
Eligibility	All homes must have central air conditioning serving 80% of the conditioned floor area. Ducts must be located in unconditioned space. Pre-existing insulation must be non-existent or less than R-2. Minimum of 10 linear feet of exposed ductwork in unconditioned space.	All homes must have central air conditioning or electric heat serving 80% of the conditioned floor area. Ducts must be located in unconditioned space. Pre-existing insulation must be non-existent or less than R-2. Minimum of 10 linear feet of exposed ductwork in unconditioned space.

Duct Sealing

The Program proposes to increase the incentive on the prescriptive stand-alone duct sealing measure for electrically heated homes. The Program proposes to offer $300 to the customer and $100 to the contractor.

Table 13 Proposed Duct Sealing Stand-Alone Measure

	Existing Measure	Proposed Measure
Qualification	Work must be completed by a Program qualified contractor. All homes must have electric heat serving 80% of the conditioned floor area. CAZ testing is required when applicable. 100% of ductwork in unconditioned space must be sealed. Minimum of 10 linear feet of exposed ductwork in unconditioned space $R_{initial}$ > R-2.	Work must be completed by a Program qualified contractor. All homes must have electric heat serving 80% of the conditioned floor area. CAZ testing is required when applicable. 100% of ductwork in unconditioned space must be sealed. Minimum of 10 linear feet of exposed ductwork in unconditioned space $R_{initial}$ > R-2.
Incentive	$200 customer $50 contractor	$300 customer $100 contractor

Manufactured Homes Duct Sealing

There are approximately 20,000 manufactured homes in the Company's Utah service territory.[3] Residents of manufactured homes are hard to reach and participation from them in Company energy efficiency programs is typically low. In order to actively engage these customers the Program proposes to mimic a successful program from Idaho Power.[4] The Program proposes

[3] United States Census Bureau's American Community Survey 2013 Update
[4] Idaho Power Energy House Calls Program, https://www.idahopower.com/EnergyEfficiency/Residential/Programs/EnergyHouseCalls/default.cfm.

creating a direct install duct sealing measure for manufactured homes with ducted heating systems. Working with contractors the Program will target customers living in manufactured homes and recruit them to participate at no cost to the customer.

For customers in manufactured homes with a ducted electric forced air furnace or ducted heat pump, the incentive paid to the contractor is designed to cover the entire job cost so customers are able to participate for free (i.e. no cost to the customer). Contractors will receive incentives for the entire cost of the job.

For gas heated and electrically cooled manufactured homes with a ducted central air conditioner or ducted evaporative cooler, the Program's incentive is designed to leverage and complement Questar's Thermwise incentive for duct sealing so customers are able to receive duct sealing at no net cost to the customer.

Table 14 Proposed Manufactured Homes Duct Sealing Measure

	Electrically Heated	**Electrically Cooled**
Qualification	Must be installed by a Program qualified HVAC trade ally At least 80% of manufactured home floor area must be heated by electric forced air furnace or heat pump.	Must be installed by a Program qualified HVAC trade ally At least 80% of manufactured home floor area must be cooled by ducted central air conditioner or evaporative cooler.
Incentive	Contractor: Up to $750	Contractor: Up to $200
	Note: Customers with both electric heat and electric cooling are only eligible for the electric heat incentive.	

Central Air Conditioners

In effort to continue to shift the market towards higher efficiency cooling equipment, the Program proposes modifying the single-tiered central air conditioner measure into a 3-tiered measure with higher incentives for customers and trade allies for more efficient equipment.

Table 15 Proposed Central Air Conditioner Measures

	Current Measure	**Proposed Measure**
Qualification	Must be installed by a Program participating or qualified HVAC trade ally 15+ SEER, 12.5 EER & TXV	Must be installed by a Program participating or qualified HVAC trade ally **Tier 1:** ≥ 15 SEER **Tier 2:** ≥ 17 SEER **Tier 3:** ≥ 20 SEER
Incentive	Customer: $150 Contractor: n/a	**Tier 1** Customer: $100 Contractor: $25 **Tier 2** Customer: $150

	Current Measure	Proposed Measure
		Contractor: $50 **Tier 3** Customer: $300 Contractor: $100

Central Air Conditioner Best Practice Installation & Sizing

The Program proposes combining the central air conditioning (CAC) sizing & best practices measures into one single measure. In doing so, the Program will offer a single contractor incentive of $150 and no customer incentive. Because the nature of best practice installation and sizing work is driven almost entirely by the contractor, the Program anticipates that shifting all of the incentives to the contractor will result in increased participation and savings.

There are no TRC results for this measure since there is no equipment cost and the incremental measure cost is zero.

Table 16 Proposed Central AC Best Practices Installation and Sizing Measure

	Current CAC Best Practice Install Measure	Current CAC Proper Sizing Measure	Proposed CAC Best Practice Install and Sizing Measure
Incentive	Customer: $50 Contractor: $75	Customer: $50 Contractor: $25	Customer: n/a Contractor: $150

Electronically-Commutated Motor (ECM) on Existing Furnace

Due to the recent successes of the ≥95% AFUE furnace with ECM measure, the Program proposes a stand-alone ECM on existing furnace measure. The Program solicited feedback on the measure from five of the top performing HVAC trade allies. Trade allies estimated installed cost to the customer for an ECM replacement is $650-$800 compared to a standard permanent split capacitor (PSC) motor at $400-$700. The savings for this measure does not support an incentive that fully covers the incremental cost of the measure. Trade allies reported a $50-$100 incentive would be sufficient to get uptake on this measure. Additionally, the Program is striving to align the incentive for retrofitting ECMs in an existing furnace with the incentive for the 95% AFUE gas furnace with ECM measure. The Program proposes to offer $100 to customers and $50 to trade allies for replacing existing furnace motors with an ECM. Based on trade ally feedback, the Program feels the $100 customer incentive and $50 contractor incentive is sufficient to move the market. The measure will not compete with the ≥95% AFUE furnace with ECM measure since this incentive will only be available for projects where an existing furnace is retrofitted with a new motor, not for projects where a new furnace is purchased.

Light Fixtures

LED fixtures were first eligible to qualify as ENERGY STAR light fixtures in September 2008. The Program saw very few incentive applications for ENERGY STAR LED fixtures until the end of 2013. The Program currently offers a $20 downstream customer incentive for ENERGY STAR light fixtures. Prices for LED fixtures have dropped rapidly over the last several months,

especially for recessed downlight LED fixtures. As prices neared the $20 incentive unit volumes for LED fixtures have increased dramatically in 2014. In some instances the purchase price has been lower than the $20 incentive. In such cases, per the terms and conditions of the Program incentive application, the incentive paid will not exceed the purchase price. Through mid-June 2014 the Program has processed incentive applications for nearly 186,000 LED fixtures compared to approximately 4,200 CFL fixtures. Nearly all of them are recessed downlight LED fixtures. The high volume of LED fixtures is putting upward pressure on the Program incentive budget. 2014 year-end expenditures are expected to be 10% higher for the Program than in 2013 due to higher incentive expenditures on LED bulbs and LED fixtures.

To better manage incentive budgets and to leverage incentive dollars further the Program proposes removing the $20 downstream customer incentives for ENERGY STAR light fixtures and replacing it with an upstream incentive to retailers and/or manufacturers. The Program proposes an "up to" $10 incentive for fixtures to align incentives with market costs to improve Program cost-effectiveness. The upstream buy down for light fixtures will be operated the same as the upstream buy down for light bulbs. As with the current upstream buy down for light bulbs, the "up to" or maximum incentive gives the Program the flexibility to negotiate with retailers and manufacturers for lower incentives.

Lighting

The Program proposes adjusting the LED and CFL savings for general purpose and specialty bulbs by using the US Department of Energy's Uniform Methods Project which defines protocols for determining energy savings from energy efficiency measures and programs. The updated methodology is a shift away from using a baseline wattage ratio, which calculated baselines mathematically, to using actual, commercially available baselines. The updated methodology is more accurate and aligns with the US DOE protocols. The updated savings calculations incorporate storage rates from the 2011-2012 Program evaluation[5], heat interaction factor and revised hours of use per day as shown in the below table.

Table 17 CFL & LED Factors for Estimated Unit Energy Savings

Bulb Type	Retail Storage/ Removal Rate	Mail-by Request Storage/ Removal Rate	Direct Install Storage/ Removal Rate	Heat Interaction Factor	Hour of Use per Day
CFL, General Purpose	30.6 %	30.6 %	2 %	0.70 %	2.27
CFL, Specialty	30.6 %	30.6 %	2 %	0.70 %	2.27
LED, General Purpose	0 %	4 %	4 %	0.70 %	2.27
LED, Specialty	0 %	4 %	4 %	0.70 %	2.27

The Program proposes to clarify the incentives for CFL and LED bulbs. In the current tariff incentives for CFLs and LEDs are shown under the column heading "Customer Incentive".

[5]2011-2012 Utah Residential Home Energy Savings Evaluation (1/20/14). The Cadmus Group, Inc. p.11. www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Demand_Side_Management/2014/Utah_Final_2011-2012_HES_Evaluation_Report.pdf

While customers benefit from discounted bulbs at select retailers, the customers do not directly receive the incentive. The incentives for CFLs and LEDs are provided upstream to retailers and/or manufacturers. The Program proposes to change the column heading "Dealer Incentive" to "Mid-Market Incentive" and show the "up to" or maximum incentive the Program can provide to retailers and/or manufacturers for CFLs and LEDs. The table below summarizes the current lighting incentive structure on sheet 3 of the tariff (Schedule 111.3)

Table 18 Current Tariff Lighting Incentives

Bulb Type	Description	Customer Incentive	Dealer Incentive
CFL	Bare Spiral	CFLs available for $2.50 (or less) at selected retailers	NA
CFL	Candelabra, Cold Cathode, Daylight	CFLs available for $6.00 (or less) at selected retailers	NA
CFL	Globe, Reflector, 3-Way, A-Lamp, Outdoor Lamp	CFLs available for $8.00 (or less) at selected retailers	NA
CFL	Dimmable	CFLs available for $14.00 (or less) at selected retailers	NA
LED	General Purpose, Specialty, Downlight	Maximum incentive of $14.00	NA

The incentives shown in the tariff are not-to-exceed retail prices for the bulbs. To meet or stay below the not-to-exceed retail price the Program uses "up to" maximum incentives paid to retailers and/or manufacturers. The maximum incentive and not-to-exceed retail prices have been provided in previous advice letters such as the below table which displays the current Program lighting incentives and pricing targets.

Table 19 Current Tariff Lighting Incentives and Maximum Incentives

Bulb Type	Description	Maximum Incentive	Not-to-Exceed Price
CFL	Bare Spiral	$2.00	$2.50
CFL	Globe	$2.25	$8.00
CFL	Reflector	$2.75	$8.00
CFL	3-Way	$2.75	$8.00
CFL	A-Lamp	$2.25	$8.00
CFL	Candelabra	$2.25	$6.00
CFL	Cold Cathode	$2.75	$6.00
CFL	Daylight (4500+ Kelvin)	$2.25	$4.00
CFL	Dimmable	$4.00	$14.00
CFL	Outdoor Lamp	$2.75	$8.00
LED	General Purpose, Specialty, Downlight	$14.00	NA

The Program proposes removing the not-to-exceed retail price for incentivized CFLs bulbs from the tariff and shift to using to having the "up to" maximum incentive shown in the tariff. The current tariff sheet specifies the not-to-exceed retail price for the four types of CFLs but doesn't specify a maximum incentive. LEDs are treated the exact opposite in the current tariff with a specific maximum incentive paid to retailers and/or manufacturers and no not-to-exceed retail price. To provide greater clarity the Program proposes to list in the tariff the maximum incentive paid to retailers and/or manufacturers as shown in the below table under "Mid-Market Incentive".

Table 20 Proposed Lighting Incentives

Bulb Type	Customer Incentive	Mid-Market Incentive
CFL, General Purpose	NA	Up to $3.00
CFL, Specialty	NA	Up to $4.00
LED, General Purpose, Specialty	NA	Up to $23.00
Note: Incentives cover all delivery channels, upstream, mail-by request and direct install.		

Though the Program currently has not-to-exceed retail pricing for very specific types of bulbs (i.e. bare spiral, 3-way, dimmable, etc.), there are essentially two incentive levels for CFLs and one for LEDs. The Program proposes consolidating incentive requirements into three categories. As shown in Table 20 CFLs will have different incentives for general purpose and specialty bulbs and LEDs will have one incentive covering both general purpose and specialty bulbs.

The incentive for general purpose CFLs is proposed to be raised from $2.00 to $3.00 to cover the full cost of CFL incentives for the new delivery channels, mail-by request and direct install channels. The Program proposes to simply the incentives for specialty CFL bulbs by consolidating all the different permutation of specialty bulbs under one category covering all three delivery channels.

Along with changes in how the lighting incentives are displayed in the tariff the Program proposes to increase the incentive for LEDs from $14 to $23 in order to cover a wider range of LED products. In 2012 less than 5% of Program lighting savings came from LEDs. By 2013 the amount of savings from LEDs increased to 33%. The Program expects upwards of 50% of lighting savings to be from LEDs in 2014. With the swift growth of LEDs, prices are dropping but the range of products continues to rapidly expand so the Program needs a higher incentive to cover a broader range of products and price points. A higher maximum incentive is also necessary to cover the full cost of LED bulbs for mail-by request and direct install channels. With the proposed higher incentive LEDs provided through the retail channel are cost-effective as noted in Table 19 of Attachment 1. The term "Downlights" will be removed from the LED bulb type description since the term "Specialty" covers downlights.

As discussed in the section on Delivery Channels the Program proposes to add mail-by request and direct install delivery channels for LED and CFL general purpose and specialty bulbs to provide new opportunities for customers to participate in the Program. CFLs and LEDs will be available via mail-by request kits as described in the Delivery Channels section. For direct install, CFLs and LEDs will be installed as part of in-home visits such as during direct installation of duct sealing in manufactured homes or during quality assurance inspections of

contractor installed measures such as insulation, windows, heating and cooling systems. The incentives listed in the table cover all delivery channels for CFLs and LEDs, upstream, mail-by request and direct install. As required in the current tariff there will be no change in the requirement that all CFL and LED bulbs must be ENERGY STAR qualified for all delivery channels.

Lighting remains very cost-effective with CFLs nearly twice as cost-effective as LEDs. Direct install general purpose and specialty LEDs and mail-by request specialty LEDs have a 0.6 – 0.8 on the Utility Cost Test due to higher equipment costs for these bulbs. The Program recommends including these bulb as prices are falling rapidly for LEDs and cost-effectiveness is expected to improve over time.

Advanced Power Strips

The Program proposes an "up to" $60 incentive for advanced power strips. Advanced power strips replace conventional power strips and save energy by limiting plug loads when no activity is detected for a set period of time. The Program proposes that a qualifying power strip must have occupancy, infrared, or load sensor and automatically shut off the plug loads when no motion or reduced load is detected for a period of time. The Program proposes only offering upstream incentives for this measure through participating retailers and manufacturers.

Cost-effectiveness results for this measure range from 0.4 – 1.0 on the Utility Cost Test. The Program recommends adding this measure and all configuration types in order to help shape the market as adoption of advanced power strips increases. By adding this measure the Program wants to educate retailers and manufacturers on stocking, selling and using advanced power strips. Increased sales of this equipment will likely lower the measure costs which will, in turn improve the TRC results (all other inputs being equal). Increased sales will also reduce the buy down incentives necessary which will improve UCT results (all other inputs being equal).

New Manufactured Homes, ENERGY STAR

The Program proposes offering a mid-market incentive for manufacturers of new ENERGY STAR manufactured homes that are installed in the Program's service territory. Although there are no qualifying manufacturers in Utah at this time, there are several qualifying manufacturers in other states that regularly ship to Utah (currently including Champion, Fleetwood, Kit Homes, and Marlette). The Program will verify:

- The participating manufacturer's plant has been certified to produce ENERGY STAR qualified manufactured homes (current list available at: http://www.research-alliance.org/pages/es_plant_list.htm)
- The ENERGY STAR site installation checklist is complete and in Company service territory (Sample available here: https://www.energystar.gov/ia/partners/bldrs_lenders_raters/downloads/SampleSiteInstallationChecklist.pdf?9761-671c)
- The home has received an ENERGY STAR label/certification

The Program proposes a $1,000 incentive for electrically-heated homes and $500 incentive for gas-heated homes with central air conditioning. The Program feels it is more appropriate to have new manufactured homes under the Home Energy Savings Incentive Program than the New Homes program because working with manufacturers and upstream incentives paid to manufacturers is more similar to the upstream incentives currently offered through the Home Energy Savings Incentive Program than the builder incentives for site built homes available through the New Homes program.

Air Sealing

The Program proposes adding an incentive for air sealing of electrically heated homes. This new measure will complement existing weatherization measures and will generate additional opportunities for savings from Weatherization Trade Allies. The measure will deviate from Questar's air sealing measure in that the measure will be prescriptive. Industry accepted prescriptive air sealing standards have been developed by:

- International Energy Conservation Code (2009)
- International Residential Code
- ENERGY STAR new homes
- Municipal/State agencies (i.e. California's Title 24 and Fort Collins, Colorado).

Progress Energy in North Carolina and Energy Trust of Oregon offer incentives for prescriptive air sealing measures. Energy Trust's prescriptive measure evaluation[6] states that, "the air sealing measure is simple, inexpensive and successfully reduces air infiltration making it a cost-effective measure," and further recommends adding additional prescriptive air sealing incentives. To streamline the process and encourage greater participation the Program proposes to offer a prescriptive air sealing incentive built on the standards outlined above.

[6] Energy Trust of Oregon and Fluid Market Strategies. "Final Evaluation Report: New Homes Air Sealing Pilot". http://energytrust.org/library/reports/Air_Sealing_Pilot_Evaluation_Report.pdf

Table 19 Proposed Air Sealing Measures

	Proposed Measure
Qualification	Home's primary heat source must be electric and serve at least 80% of the home's floor area Contractor must complete comprehensive prescriptive checklist including but not limited to sealing: • Recessed lights • Duct penetrations • Top Plates • Chases • Electrical penetrations • Bath Fans • Attic hatch/doors • Dropped soffits • Kneewall doors, transitions, and bottom plates • Garage wall • Bottom plates CAZ testing is required when applicable
Incentives	Customer: $0.15/sf Contractor: $0.05/sf
Unit Energy Savings [(kWh/yr)/sf]	0.28 – 0.58 (varies by HVAC equipment)

Plumbing Measures

A Company survey of residential customers in 2013 in Utah with over roughly 32,000 respondents found there are approximately 11.6% customers with electric water heating. The survey results indicate out of approximately 720,000 residential customers in Utah 83,000 customers have electric water heat. While the majority of customers have natural gas water heat there are a substantial number of customers with electric water heat which provides an opportunity for electric savings through efficient use of hot water.

The Program proposes adding plumbing devices that reduce the use of hot water in residential homes: low flow showerheads, low flow aerators, thermostatic valves, and combination low flow showerheads/thermostatic valves. A thermostatic valve is a small device that installs between the showerhead and showerhead arm. The device allows cold water to run through the showerhead but automatically switches to a trickle mode when the water reaches 95° F. The user flips a switch or pulls a cord to resume normal flow. A combination showerhead/thermostatic valve is a showerhead with a built-in thermostatic valve.

The Program intends to distribute these devices to customers via mail-by request and/or direct install in order to selectively target only customers with electric hot water. For mail-by request, plumbing measures will be limited to customers that self-identify as having electric water heat. For direct installs, water heat fuel type will be verified as electric prior to installation by Program staff and/or contractors. Plumbing measures will be available via mail-by request kits as described in the Delivery Channels section. For direct install, plumbing measures will be installed as part of in-home visits such as during direct installation of duct sealing in manufactured homes or during quality assurance inspections of contractor installed measures such as insulation, windows, heating and cooling systems.

The Program is proposing to include a 1.50 gpm showerhead in the kits. A range of showerhead sizes, 1.50 gpm, 1.75 gpm and 2.00 gpm, are being included as measures for all the mail-by-request and direct install delivery channels to accommodate a broad range of products to allow the Program flexibility to adapt to different customer expectations, product quality and product prices. The unit energy savings listed below vary by unit flow rate and by delivery channel.

Table 20 Proposed Plumbing Measures

Measure	Description	Qualification	Mid-Market Incentive	Unit Energy Savings Range (kWh/yr)
Low-Flow Showerhead	A device that constricts the flow rate of water in showers, consequentially reducing the load on a hot water heater	≤ 2.0 GPM	Up to $31	117 - 307
Low-Flow Aerator	A device that constricts the flow rate of water in sinks, consequentially reducing the load on a hot water heater	≤ 1.5 GPM	Up to $5	25.77 – 74.12
Thermostatic Valve	A device that reduces shower flow rate when water achieves a desired temperature	Valve restricts water flow when a set point is reached	Up to $30	24.17 – 36.08
Combination Low Flow Showerhead/ Thermostatic Valve	A single device that contains a low-flow showerhead and a thermostatic valve	≤ 1.5 GPM, Valve restricts water flow when a set point is reached	Up to $54	284 – 343

Pool Pumps

Approximately 250-450 new pool permits are pulled in the Company's service territory each year according to permit data analyzed dating back to 2007. The Program estimates the market size for retrofitting existing and upgrading new pumps to high efficiency pool pumps to be around several thousand in the Company's service territory. Pool pumps recirculate water through a filter to maintain water clarity and hygiene. Low cost single speed pool pumps dominate the market and run continuously. Variable speed pool pumps save energy by operating the filtration pump motor at lower speeds. The Program's implementation contractor contacted top pool contractors in the Company's service territory to confirm the size of the market. The pool contractors confirmed single speed pool pumps have the largest market share and that high efficiency variable speed pool pumps are available but rarely installed due to higher cost.

Offering incentives to customers to upgrade to high efficiency variable speed pool pumps provide an opportunity to acquire cost-effective savings. Based on the analysis of permit data and market information from pool contractors the Program proposes to offer customers an incentive of $500 for installing a qualifying variable speed pool pump. For implementation, the Program intends to work with top pool dealers and contractors and Questar's solar pool heater contractors as trade allies to sell and install variable speed pumps in new pools and retrofits. Combined with Questar's current $750 incentive, customers will be able to receive $1,250 for upgrading to a variable speed pump and installing a solar assisted pool heater. Only below ground pools will be eligible since above ground pools have lower horsepower pumps. Jacuzzis or hot tubs are not eligible due to having lower horsepower pumps.

The Program does not propose to use the equipment specification from ENERGY STAR or from the Consortium for Energy Efficiency (CEE). ENERGY STAR's qualified product list includes single speed and multi-stage pool pumps alongside variable speed pool pumps. Single speed and multi-stage pool pumps, even when rated by ENERGY STAR, do not provide as much savings as variable speed pool pumps. For this reason the Program proposes to not use the ENERGY STAR specification and limit participation to higher efficiency variable speed pool pumps. CEE currently does not maintain a qualifying product list for high efficiency pool pumps so there is no feasible way to screen pool pumps using CEE's pool pump specification.

To determine estimates for energy savings for variable speed pool pumps, the Program's implementation contractor estimated pool use days for all counties in the Company's service territory with permits for new pools in 2013. The permit data used to determine the market opportunity and unit energy savings is from Construction Monitor, a leading source of construction permit data. The permit data is down to the zip code level for each county and discerns between "Swimming Pool", "Pool & Spa", "Spa", "Pool House", and "Hot Tub". The data used to determine the size of the pool pump market is the "Swimming Pool" category as it represents approximately 90% of all permits. The permit data examined is specific to residential-class permits, however approximately 5-10% of those permits appear to be for apartments, hotels, country clubs or other non-residential locations that have residential sized pools. The pool permit data is only down to the zip code level and does not provide address level details for identifying specific customers served by the Company so the data serves as an estimate of the number of pools being installed by Company customers at the zip code and county level.

For each of the counties in the Company's service territory with pool permits for 2013, a cooling degree day (CDD) profile by month was developed with the following assumptions:

- Months with high CDD assumed that every day is considered a pool use day (PUD)
- Months with moderate CDD assumed to be a transitional period in which some but not all days are considered PUDs
- Months with low CDD assumed to have no PUDs

The pool use day estimates were verified against Pentair's (a large pool pump manufacturer) pool design calculator. Total pump use time was determined for each city by multiplying the estimated pool use days by 19 hours per day. Typical variable speed pool pumps run between 16 and 24 hours per day, and 19 hours per day was used in savings estimates as a moderate estimate.

For each county the estimated number of operating hours, 19 hours per day, was multiplied by the number of PUDs specific to each county to determine the energy usage for a baseline single speed pool pump and for a variable speed pool pump with the difference between the two being the estimated unit energy savings (UES) for the county. Each of the county specific UES values was weighted based on the number of permits in each county. Due to the high number of pool use days and swimming pool permits in Washington County but a low number of Company customers the data for Washington County was adjusted downward by the percentage of Company customers in each zip code in the county. Using this analysis the Program proposes claiming a weighted average UES of 1,329 kWh/yr based on pool usage days and percentage of 2013 swimming pool permits for counties in the Company's service territory. Only counties with 2013 pool permits are included in the analysis so several counties in the Company's service territory are not part of the analysis. The below table shows the number of estimated permits in the Company's service territory, the percentage weighting for each county based on the total number of pool permits, the UES value for each county and the weighted average UES to be used by the Program.

Table 21 Pool Pump Savings by County with Permit Data

County	Estimated # of Permits in RMP Territory (2013)	% of Total RMP Permits (2013)	UES (kWh/yr)
Salt Lake County	83	27.67%	1,403
Washington County	66	22.00%	1,871
Utah County	38	12.67%	1,196
Davis County	32	10.67%	1,092
Summit County	31	10.33%	624
Weber County	29	9.67%	1,248
Cache County	8	2.67%	1,040
Morgan County	4	1.33%	1,014
Box Elder County	3	1.00%	1,403
Wasatch County	3	1.00%	832
Iron County	2	0.67%	1,196
Tooele County	1	0.33%	1,320
Weighted Average UES (kWh/yr):			1,329

Heat Pumps and Ductless Heat Pumps

The Program has been monitoring the evolution of the heat pump market in Utah closely. The Program implementation contractor recently conducted a survey of 15 top HVAC stakeholders covering a large portion of the Company's service territory. The stakeholders represented a variety of levels of the HVAC industry: contractors, distributors and manufacturers.

All contractors reported that heat pump and ductless heat pump installations make up some portion of their business, ranging from <5% of their work to over 90% of their work for some contractors. All contractors reported that most heat pump activity was the installation of ductless heat pumps as supplemental heat in cold spots or new rooms in homes that already have gas heat as a primary heat source. Approximately 5% - 10% of heat pump installations, however, are for replacement of existing electric heat. Manufacturers reported the estimated annual number of ductless heat pumps being installed in the Utah market at around 2,000 units per year. HVAC stakeholders estimate 700 – 1,000 heat pump units are being installed per year in Utah.

To help ensure that the highest efficiency equipment is installed once the decision about installing a heat pump has been made, the Program proposes offering an incentive for customers and contractors who are installing new high efficiency ductless heat pumps for supplemental heat. The Program also proposes offering incentives for those customers who replace existing ducted electric heat with a high efficiency heat pump. For customers with existing electric resistance heat (i.e. baseboard heat), the Program proposes offering incentives for ductless heat pumps.

All variations of heat pumps and ductless heat pumps are cost-effective as shown in Attachment 1. Ductless heat pumps installed as supplemental heat has a Utility Cost Test benefit cost ratio of 1.0. The Program recommends including the measure since it is the primary installation scenario and to provide contractors and customers a comprehensive offer. Participation information on installation configurations and installed costs will be analyzed and may suggest future opportunities to refine input assumptions and improve the associated benefit cost ratios.

Table 22 Proposed Heat Pump Measures

Measure	Description	Qualification	Incentive Level	Proposed Unit Energy Savings (kWh/yr)
Heat Pump Installation	Replace an existing ducted electric heat with a new efficient heat pump	Tier 1: HSPF ≥ 9 SEER ≥ 15 Tier 2: HSPF ≥ 9.5 SEER ≥ 16	Tier1: Customer: $200 Contractor: $50 Tier2: Customer: $400 Contractor: $200	Tier 1: 793 – 9,254 Tier 2: 1,225 – 9,686
Ductless Heat Pump, Single-head	Replace existing electric resistance heat with new efficient unit	HSPF ≥ 9.5 SEER ≥ 16	Customer: $1,000 Contractor: $300	2,824
Ductless Heat	Replace existing	HSPF ≥ 9.5	Customer: $1,300	5,654

Pump, Multi-head	electric resistance heat with new efficient unit	SEER ≥ 16	Contractor: $500	
Ductless Heat Pump, Supplemental Heat	Install a new ductless heat pump as supplemental heat (i.e. Bonus Room)	HSPF ≥ 9.5 SEER ≥ 16	Customer: $400 Contractor: $100	945

**Savings varies by type of heat equipment being replaced*

Insulation Spiff and HVAC/Weatherization Super Bundle

The insulation incentive spiff and HVAC/weatherization super bundle are being retired and are being replaced with a whole-home upgrade package.

Whole Home Upgrade Package

The Program proposes adding a bonus incentive for customers who install combinations of several measures to increase the energy efficiency of their home. Customers must meet all requirements for each measure individually. The Program proposes an "up to" bonus, not to exceed $1,000.

The Program will require at least 4 measures be completed for the Whole Home Upgrade Package incentive. The various combination of measures for gas heated/electrically cooled homes and electrically heated homes are below. The Program will continue to coordinate with Questar on HVAC and weatherization measures.

Gas heated and electrically cooled homes will need to install each of the following per Program requirements:

- ECM Retrofit or 95% AFUE Furnace with ECM
- Permanent Evaporative Cooler Installation or Central Air Conditioner Tier 2 or 3 w/ Best Practice
- Duct Sealing & Insulation
- Whole-home Attic or Wall Insulation
- Air Sealing

The Program will require air sealing as a prerequisite requirement to receive the Whole Home Upgrade Package incentive for gas heated and electrically cooled homes. While no savings will be reported for the air sealing measure, air sealing is a best practice and will help insure the rest of the package delivers the estimated savings. The cost for air sealing in gas heated and electrically cooled homes are included in the cost-effectiveness analysis to provide a conservative view of the impacts of the added costs.

Electrically heated homes will need to install each of the following per Program requirements:

- Heat Pump or Ductless Heat Pump
- Duct Sealing or Duct Sealing & Insulation (for ducted heat pumps)
- Whole-home Attic or Wall or Floor Insulation
- Air Sealing

To continue to grow non-lighting savings the Program will continue to focus on comprehensive installations of HVAC and weatherization measures. In order to maintain the focus on HVAC and weatherization measures the Program does not recommend including a lighting requirement as part of the Whole Home Upgrade Package. The Program offers a robust upstream lighting incentive that allows customers to purchase efficient discounted bulbs at stores across the Company's service territory.

Program Cost Effectiveness

Measure and Program level cost effectiveness are provided to support the filing as Attachment 1 – Utah HES Cost Effectiveness Analysis. Cost effectiveness was assessed using the decrement values generated by the 2013 integrated resource plan (IRP) as the avoided costs. These values can be found on pages 358-359 of Volume 2 of the 2013 IRP dated April 30, 2013. Net-to-gross factors and realizations rates directly drawn from or derived from the 2011 and 2012 Home Energy Savings and Cool Cash evaluations and applied to the unit energy savings. Measure level cost effectiveness does not include administrative costs given the challenges of allocating them to individual measures. Measure level results are provided in Tables 17-22 of Attachment 1. Total Program administrative costs are included in and accounted for in the Program level cost effectiveness. The cost-effectiveness analysis includes both current and proposed incentives for 2014 in order to provide a complete and accurate as possible forecast of Program cost-effectiveness. Generally, the maximum amounts for "up to" incentives are used for the cost-effectiveness analysis to provide the most conservative scenario, however, for some measures, a historic average or planned incentive level was used to more accurately represent projected Program costs.

During a teleconference on April 17, 2014 with the Utah DSM Steering Committee to review the proposed Program changes, parties noted individual measures where the TRC benefit-cost ratios were higher than the UCT benefit-cost ratios which seemed counter intuitive. These results are driven primarily by the application of net-to-gross (NTG) ratios of less than 1.0. In the TRC calculation, NTG ratios are applied to both savings and measure costs in accordance with the California Standard Practice Manual and the NTG ratios reduce the measure costs used in the TRC calculation. In the UCT calculation, the NTG ratio is applied only to benefits (energy savings) but not the utility incentive. The presence of this counter intuitive result depends on the values for (and relationship between) measure costs, utility incentives, NTG ratios and energy savings for a given measure.

Measure level assessment was performed using five end use specific loads shapes and decrement values to more fully capture the time differentiated value of the savings. This approach is consistent with the economic analysis found in the annual reports. Program level results are the sum of measure specific benefits and costs weighted by participation which are then added to overall Program administration costs.

To account for a range of participation, two Program level scenarios were run with participation varying at +/- 10%. Sensitivity to carbon prices was not performed since the 2013 IRP only contains a single series of values. This is different than the 2011 IRP which contained multiple series of values, each with a different carbon price assumption.

Three different Program level cost-effectiveness scenarios were run on the proposed changes.

- Expected participation
- Ten percent higher than expected participation
- Ten percent lower than expected participation

The Home Energy Savings Incentive Program remains cost-effective with the proposed changes herein under the expected, high and low participation scenarios. Detailed cost-effectiveness results are provided in Attachment 1.

Conclusion

The changes proposed in this filing were previewed with the Utah DSM Advisory Group via email on April 1, 2014. A teleconference was held with the Utah DSM Steering Committee on April 17, 2014 to address questions and provide more details on the proposed changes. A revised filing was shared with the Utah DSM Steering Committee via email on May 13, 2014. Key elements of the proposed changes and the budgetary impacts for LED bulbs and fixtures were reviewed with the Utah DSM Advisory Group and Utah DSM Steering Committee during meetings on June 6, 2014. Comments and advice received from parties have been incorporated into this filing as appropriate.

Further communications about these changes and the proposed effective date will be provided to trade allies and retailers via 45-day public notice on the Program's website, and through direct outreach to key Program partners via the Program administrator's outreach staff.

The following attachments are provided as support to the Program modifications requested herein:

- Attachment 1 – Utah HES Cost Effectiveness Analysis
- Attachment 2 – P-Corp Design Tool (Confidential)
- Attachment 3 – UT HES State Savings Summary (Confidential)
- Attachment 4 – Confidential Information Certificate

Attachment 2 contains propriety information that would be detrimental to Navigant, the contractor who prepared the cost effectiveness results, if disclosed to a competitor. Attachment 3 contains propriety information that would be detrimental to PECI, the Program implementation contractor. Accordingly, Rocky Mountain Power is filing Attachments 2 and 3 under seal, and requesting that the Commission require any party who wishes to view these attachments execute a Confidential Information Certificate. For the Commission's convenience the Company has provided as Attachment 4 a draft Confidential Information Certificate with this filing.

This Program is forecasted to contribute 112,683 MWH (103,076 MWH at site) to the 2014 Utah IRP target of 224,220 MWH provided in the November 1, 2013 filing. The forecast included with this filing represents an increase when compared to the 77,643 MWH forecast for this Program provided in the November 1, 2013 filing.

The Home Energy Savings Incentive Program is funded through the Schedule 193 Demand Side Management Rate Adjustment. Any proposed adjustments to Schedule 193 will be informed by the next tariff rider analysis which will examine the combined effect of the current balance, forecasted revenues and forecasted expenditures for all programs. The Company is not recommending an adjustment to the Demand Side Management Rate Adjustment as part of this filing.

It is respectfully requested that all formal correspondence and staff requests regarding this matter be addressed to:

By E-mail (preferred): datarequest@pacificorp.com

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah St., Suite 2000
Portland, OR 97232

Informal inquiries may be directed to Laura Miller, DSM Regulatory Manager, at (801) 220-4346.

Sincerely,

Kathryn Hymas
Vice President, Finance and Demand-side Management

Enclosures

Cc: DPU
OCS