

DRAFT

ITEM NO. 1

**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: September 30, 2014**

REGULAR X CONSENT _____ EFFECTIVE DATE _____ N/A _____

DATE: August 13, 2014

TO: Public Utility Commission

FROM: Juliet Johnson

THROUGH: Jason Eisdorfer, Maury Galbraith and Aster Adams

SUBJECT: ENERGY TRUST OF OREGON: (Docket No. UM 1622) Request approval of exceptions to energy efficiency cost effectiveness guidelines.

STAFF RECOMMENDATION:

Commission grant cost effectiveness exceptions to those measures summarized in Appendix A and adopt Staff's recommendations outlined in this report.

DISCUSSION:

Issue:

On August 2, 2012, the Energy Trust of Oregon (Energy Trust or ETO) requested exceptions to the Oregon Public Utility Commission's (PUC or Commission) cost effectiveness guidelines spelled out in Commission Order No. 94-590 in Docket UM 551 for certain gas energy efficiency measures. On October 18, 2012, the Commission approved those exceptions in Order No. 12-394 for a time period of two years, until October 18, 2014.

On November 12, 2012, the Energy Trust submitted a second request for exceptions to the Commission's cost effectiveness guidelines for additional gas efficiency measures. After review, Staff requested that Energy Trust withdraw its second request and Staff recommended the Commission grant Energy Trust an exception from the current cost effectiveness guidelines for *all* gas efficiency measures and programs starting July 2, 2013 and ending October 18, 2014. In Order No. 13-256, the Commission adopted Staff's recommendations outlined below:

1. During the exception period between July 2, 2013 and October 18, 2014, the Energy Trust should take active steps to make its gas programs as cost effective

as possible. Energy Trust should also develop a plan to modify or eliminate measures that are: (a) clearly not cost effective now, (b) not likely to be cost effective in the future, or (c) do not meet the exception criteria set forth in Order No. 94-590.

2. The Energy Trust should submit a report (Report) to Commission Staff by July 1, 2014 and provide an analysis of their best estimate benefit to cost ratios (BCRs) from a utility and societal perspective, for all measures and programs where BCRs are close to or less than one. Energy Trust shall indicate the projected achievable savings of each measure and program. For measures and programs with societal benefit/cost ratios of less than one, Energy Trust shall identify where measures and programs:
 - a. Produce significant non-quantifiable non-energy benefits
 - b. May lead to market transformation and reduced costs
 - c. The measure is needed for consistency with other DSM programs in the region
 - d. Keeping the measure helps to increase participation in a cost-effective program
 - e. The package of measures cannot be changed frequently, and the measure will be cost-effective during the period the program is offered
 - f. The pilot or program is included in a pilot or research project
 - g. The measure is required by law or is consistent with Commission policy and/or direction

By July 1, 2014, Energy Trust should propose which programs and measures to continue and which to discontinue and provide a rationale for doing so.

Staff indicated they will consider Energy Trust's proposal and parties' comments and make a recommendation to the Commission to be considered at or before the first public meeting in October 2014. The Commission would then make a determination regarding gas efficiency cost effectiveness by October 18, 2014.

Energy Trust filed the required report on July 1, 2014 in response to the PUC Order No. 13-256 in UM 1622. In its report Energy Trust listed steps it took to make gas programs as cost effective as possible. Energy Trust also provided an analysis of the estimated BCRs for all its remaining gas programs and measures where BCRs are close to or less than 1.0 and the corresponding projected achievable savings for each gas measure and program. Energy Trust also identified programs and measures it proposes to continue and those to discontinue, based on specific exception criteria defined in Order No. 94-590 from Docket No. UM 551.

In addition to those items required by the Commission in Order No. 13-256, Energy Trust also provided ideas for improving and streamlining the approval process for future exceptions and proposed that the hedge or risk mitigation value of energy efficiency be considered for gas measures as it currently is for electric measures.

Rule:

Below is a summary of applicable statutes, rules, and orders.

Oregon Revised Statute (ORS) 469.633 requires investor owned utilities (IOUs) to have an approved residential energy conservation programs that a) makes available to all residential customers information about energy conservation measures and available financing, and b) provides within 60 days assistance and advice about ways to save energy, including an energy audit.

Oregon Administrative Rules (OAR) 860-030-0005, which implements ORS 469.631 to 469.645 requires energy utilities to provide energy audits upon request by customers and states, in relevant part, that the initial utility audit must be without charge.

ORS 469.865 and OAR 860-030-0050 concerns audits of commercial buildings. The energy utility is to have information available upon request about energy saving operations and maintenance measures for commercial buildings. The utility must have trained commercial building auditors available, capable of reviewing both simple and complex building systems.

- For buildings that use less than 4000kWh of electricity or 200 therms of gas per month, the audit is to be on-site, and evaluate conservation measures including, but not limited to: operations and maintenance measures, simple automatic control systems, envelope weatherization, infiltration controls, and lighting system improvements.
- For more energy-intensive buildings, unless the auditor can substantiate that such an analysis is not necessary, the audit is to evaluate “complex” conservation measures, including sophisticated automatic control systems, furnace and boiler efficiency improvements, heat recovery devices, HVAC system modifications, lighting system improvements, and solar water heaters or water heating heat pumps.

Commission Order No. 94-590 in Docket UM 551 specifies the following:

- The total resource cost test (TRC) must be used to determine if energy efficiency measures and programs are cost effective.¹
- In cost effectiveness calculations a minimum value of ten percent should be used to account for risk and uncertainty.²
- A utility should calculate cost savings and other non-energy benefits if they are significant and there is a reasonable and practical way for calculating them.³
- Utilities should set demand-side acquisition targets to minimize total resource costs.⁴
- If a utility considers rate impacts in setting its demand-side targets, it should justify the decision in its least-cost plan (now called Integrated Resource Plan (IRP)).⁵
- Utilities should offer incentives to end-users sufficient to meet or exceed acknowledged least-cost plan conservation targets.⁶
- Measures that are not cost effective could be included in utility programs if it is demonstrated that:⁷
 - A. The measure produces significant non-quantifiable non energy benefits. In this case, the incentive payment should be set at no greater than the cost effective limit (defined as present value of avoided costs plus 10 percent) less the perceived value of bill savings, e.g. two years of bill savings
 - B. Inclusion of the measure will increase market acceptance and is expected to lead to reduced cost of the measure
 - C. The measure is included for consistency with other DSM programs in the region

¹ UM 551 Order 94-590, response to item 11 and 12 on page 14

² Ibid

³ UM 551 Order 94-590, response to item 11 and 12 on page 15

⁴ Ibid

⁵ Ibid

⁶ Ibid

⁷ UM 551 Order 94-590, response to item 13 on page 18

- D. Inclusion of the measure helps to increase participation in a cost effective program
 - E. The package of measures cannot be changed frequently and the measure will be cost effective during the period the program is offered
 - F. The measure or package of measures is included in a pilot or research project intended to be offered to a limited number of customers
 - G. The measure is required by law or is consistent with Commission policy and/or direction
- The conditions above apply both to measures and programs with the exception of Item D.⁸
 - The utility or another party (i.e. Energy Trust) should show that one or more of these factors offsets the likely costs associated with applying measures that are not cost-effective.⁹
 - The present value of measurement and evaluation costs should be levelized over the expected program life for TRC calculations.¹⁰
 - Utilities lost revenue should not be included in the calculation of the TRC, because they represent transfer payments from consumers.¹¹
 - Demand-side resources can provide the utility with increased reliability before new resources are brought on line. The value of demand side resources is reasonably represented by the price of sold or purchased wholesale firm energy/commodity capacity.¹²

The Grant Agreement between the Energy Trust and the PUC entered into in December 2005, in Guidelines, subsection e., on page 14 states:

Individual conservation programs will be designed to be cost-effective and will be independently evaluated on a regular basis. This guideline should not, however, restrict investment in pilot projects, educational programs, demonstrations, or similar endeavors.

⁸ Ibid

⁹ Ibid

¹⁰ UM 551 Order No 94-590, response to Item 14 on page 19

¹¹ UM 551 Order No 94-590, response to Item 15 on page 20

¹² UM 551 Order No 94-590, response to Item 4 on page 6

Regarding administrative costs, the Grant Agreement in Guideline I states:

The costs of operating the Energy Trust will be reasonable and support efforts toward cost effectiveness. Costs of operating the Energy Trust will balance the lowest possible administrative costs with overall organizational effectiveness... Energy Trust will allocate administrative costs in a manner to avoid cross-subsidies between programs that are supported by the Funds and programs that are not.

Analysis – Measure Exception Requests:

Below is a list of measures and programs for which Energy Trust is seeking exceptions in this filing:

- Single family residential ceiling insulation
- Single family wall insulation
- Single family floor insulation
- Single family duct insulation
- Air sealing as added requirement for ceiling insulation
- Manufactured home air sealing
- Manufactured home duct sealing
- 0.67 and 0.70 EF Water Heaters
- New Homes Builder Option Package with 0.67 water heater
- Solar water heating
- Spa covers
- Select Customer Commercial Projects
- Multifamily ceiling insulation
- Multifamily wall insulation
- Multifamily floor insulation
- Multifamily duct insulation
- Multifamily windows
- Commercial vent hoods with VSDs (2 and 2.5 HP)
- New commercial buildings condensing tank water heater
- New commercial buildings condensing unit heater for non-multifamily
- New commercial buildings market solutions packages

Energy Trust is proposing to remove the following measures:

- Whole home air sealing
- Duct sealing-already removed

- Office dishwashers
- Air to air heat exchangers in new buildings
- Demand control ventilation

The following measures were not cost effective, but they have been reworked and they are now cost effective:

- Condensing Tank Water Heater in low-use facilities
- Gas convection oven

Per Commission direction, Energy Trust took several actions, starting in 2012 and continuing through today, to improve cost effectiveness of gas programs. These actions include:

- Removed the Performance Tested Comfort Systems duct sealing initiatives from existing homes program in 2013
- Continued a prescriptive duct sealing pilot (2012-2013), which was then cancelled based on results to date (2014)
- Reworked eligibility criteria for residential ceiling/attic and floor insulation (2013)
- Eliminated incentives for custom commercial gas measures that have a TRC of less than 0.7 under new avoided costs (2013)
- Removed rooftop heating, ventilation, and air conditioning (HVAC) unit tune ups (2014)

In its filing, Energy Trust provided UM 551 rationale for each of the measures it proposes to keep. Appendix A contains a table of measures Energy Trust is proposing exceptions for along with the BCRs for each measure. Staff supports Energy Trust removing from their programs those measures they are currently proposing to remove.

Below Staff lays out three potential directions the Commission could take in response to Energy Trust's proposal for cost effectiveness exceptions for individual measures.

- 1) Take a measure by measure approach, much like Docket No. UM 1696 and make a yes or no determination for each measure individually on its own merit, based on cost effectiveness and the UM 551 exception criteria.
- 2) Consider instituting a core program approach whereby a set of measures are considered core and part of a standard utility service package not subject to cost effectiveness screening.

- 3) Consider instituting an incentive cap for residential shell measures. The cap would be significantly less than current incentive levels for non-cost effective shell measures. Within the cap, Energy Trust could have flexibility about what to incentivize. Energy Trust would be held to performance standards that incent acquiring the biggest “bang for buck” measures. Staff is still looking into what this type of approach would look like and how it would be applied.

Below, Staff expounds on each approach to cost effectiveness exceptions for gas efficiency measures.

1) Measure by Measure approach

Below is a summary of each exception request from Energy Trust on a measure by measure basis, using UM 551 as the foundation. Staff’s recommendations accompany each request. Comments received from parties were considered in development of these recommendations.

Single family residential ceiling, wall, floor and duct insulation

Energy Trust proposal

The TRC BCR for single family residential ceiling, wall, floor, and duct insulation is 0.5, 0.2, 0.2, and 0.2, respectively. For standard track measures, which do not include Clean Energy Works Oregon (CEWO) or Energy Trust’s home performance track, the TRC BCRs are greater at 0.7, 0.3, 0.3, and 0.2, respectively. The utility cost test (UCT) BCRs for all these measures are 1.0 or greater.

Energy Trust asserts that insulation measures provide significant benefits to customers beyond energy savings. Those non-energy benefits (NEBs) include comfort, noise attenuation, benefits to health as a consequence of reduced drafts and reduced mold problems, increased property values, and an overall belief or feeling that the house is a “quality home”. Many of these benefits are difficult to quantify and so are not included in the TRC BCR.

Energy Trust recently released a customer-facing online tool to help customers assess the financial case for their projects by calculating the simple payback of measures using bid costs. Energy Trust asserts this system may inspire some customers to ask for alternative bids, and may lead to reduced measure costs. Additionally, Energy Trust contends that if customers are provided with energy payback analysis of their investments in insulation, and they continue with projects with long paybacks, it is reasonable to assume that NEBs are a significant influence on their final decision.

In their filing, Energy Trust proposes that insulation measures be provided as part of a core residential program.

Staff position

Staff acknowledges that insulation measures provide benefits to customers beyond energy savings. Staff notes that these benefits clearly fall into the UM 551 exception criteria A - *The measure produces significant non-quantifiable non energy benefits.*

Although UM 551 exception criteria A allows for measures to be included in programs when they are not cost effective if that criteria is met, it is silent about to what extent NEBs should be factored into cost effectiveness calculations. Staff will not attempt to put a number or weight on the importance of NEBs in insulation cost effectiveness calculations. However, Staff does not believe NEBs alone are enough to compensate for a TRC BCR of 0.2 or 0.3.

Staff also understands that there are some cross fuel benefits of insulation that are not accounted for in the TRC BCR. These include for example reduced electricity use in a well-insulated gas heated home because of less need for portable electric heaters to supplement gas heat during very cold days and less need for air conditioning in the summer.

Staff recognizes that there are risk reduction benefits of energy efficiency for electricity and gas. As Northwest Energy Coalition (NWECC) points out in their comments, price and market condition forecasts are always uncertain and risk hedging remains an important consideration to the benefits of energy efficiency. NWECC also points out that the Northwest Power Planning and Conservation Council and some electric utilities have included the benefits of conservation risk mitigation in their determinations of cost-effectiveness, but natural gas utilities in Oregon have not.¹³ In their filing, Energy Trust points out that the electric risk avoidance factor currently used in Energy Trust avoided electric costs is 16 percent of the forward market prices when evaluated over the portfolio of resources weighted average measures life of 12 years.¹⁴

Energy Trust has worked hard to develop a trade ally network with weatherization contractors. Staff sees value in preserving those relationships. Gas prices always change and are likely to go up again in the future. It would be expensive and take time to re-establish relationships if all weatherization measure incentives were discontinued and then had to be reinstated.

¹³ NWECC UM 1622 Comments filed July 24, 2014, pages 2 &3

¹⁴ Energy Trust July 1,2014 filing in UM 1622 *Cost-Effectiveness Review for Specific Gas Measures and Programs*, page 32

Staff recommends the Commission grant an exception based on UM 551 exception criteria A (significant hard to quantify NEBs) for ceiling insulation, but not approve exceptions for single family wall, floor, and duct insulation. Staff recognizes the presence of NEBs such as comfort and noise reduction. Staff also appreciates the risk reduction and cross fuel benefits of energy efficiency. However, Staff does not see these as weighty enough to justify continuing measures with TRC BCRs of 0.2 and 0.3. By maintaining ceiling insulation (the most cost effective of the insulation measures) the relationships and communication lines between Energy Trust and weatherization contractors will be maintained.

Air sealing as added requirements for ceiling insulation

Energy Trust proposal

Energy Trust reports that whole-home air sealing had a TRC BCR of 0.3 in 2012 and that went down to 0.17 in late 2013. Energy Trust plans to continue to offer this measure through 2014 but in 2015 will discontinue it as a stand-alone measure. Energy Trust is proposing a pilot whereby an incentive would be provided for air sealing when performed along with ceiling insulation. The pilot would be evaluated in mid-2015 and if successful may result in a proposal to rework air sealing as a requirement for ceiling insulation. Because this is a proposed pilot, BCRs for these combined measures are not known.

Staff position

Staff is skeptical that combining two non-cost effective measures will result in a cost effective bundle of measures. Unless Energy Trust can provide reasonable support for why these two non-cost effective measures will likely result in something that is cost effective, Staff recommends that this pilot not be given a cost effectiveness exception.

Manufactured Home Duct and Air Sealing

Energy Trust proposal

Duct and air sealing for manufactured homes continues to not be cost effective with TRC BCRs of 0.4 and 0.5 and UCT BCRs of 0.4 and 0.5. Energy Trust offers incentives for both measures for gas and electric heated homes at the full cost of the measure to encourage participation. The majority of projects are seen for electrically-heated homes where the TRC BCRs are 2.7 and 2.4. Energy Trust suggests that narrowing eligibility to only electric-heated homes creates confusion and may impact acquisition of electric-heated home projects. It is based on this that Energy Trust proposes to continue the

measure under UM 551 exception criteria C – for consistency with other programs in the region. The Commission has previously granted an exception for these measures.

Staff position

Staff understands the Energy Trust's position that maintaining this measure will support cost effective duct and air sealing on electrically heated manufactured homes through consistency and reduced market confusion. Additionally, according to Energy Trust, these measures account for just 0.22 percent of total program saving. Staff recommends the Commission maintain incentives for manufactured homes duct and air sealing.

0.67 and 0.70 Energy Star Gas Water Heaters

Energy Trust proposal

The TRC BCR for 0.67 and 0.70 Energy Star gas water heaters is 0.6 and the UCT BCR is 1.0. Energy Trust notes that there is a significant variance in incremental cost between water heater brands and contractors. For some vendors who sell high volumes of water heaters, the TRC was close to 1.0. UM 551 exception criteria B is that inclusion of the measure will increase market acceptance and lead to reduced costs. Energy Trust believes that with implementation of a range of upstream tactics to improve sales, some of which are being developed in concert with other programs across the country, there will be greater market acceptance of high efficiency gas water heaters and costs will go down. New federal standards for these units are scheduled to take effect in mid-2015. Energy Trust points out that its efforts at increasing market adoption prior to mid-2015 should help transition the market to wider acceptance of the Energy Star efficiency level and may lead to more effective and rapid adoption of the standard.

Staff position

Staff proposes that an exception be provided for 0.67 and 0.70 water heaters under UM 551 exception criteria B.

Solar Water Heating

Energy Trust proposal

This measure continues to not be cost effective with a TRC BCR of 0.12 and a UCT BCR of 1.0. Energy Trust proposes to keep the measure under UM 551 exception criteria A – produces significant non-energy benefits. Energy Trust suggests the

significant non-energy benefits are environmental values and a desire to build a new industry, be a technology leader, and achieve energy autonomy.

Staff position

Staff does not support an exception for solar water heating. Staff does not believe that NEBs can be sufficient enough to make this measure cost effective. Consistent with Commission action in Docket No. UM 1696, Staff recommends this exception not be granted.

Spa Covers

Energy Trust proposal

Spa covers for spas heated with gas have a TRC BCR of 0.5 and a UCT BCR of 1.6. The majority of spa covers incented by Energy Trust are heated with electricity. In 2013 Energy Trust incentivized 533 electric spa covers and only 24 gas covers. Electric spa covers have a TRC BCR of 2.0. When the electric and gas spa covers are considered together, they have a TRC BCR of 1.0. Energy Trust is recommending an exception for this measure on the basis that inclusion of the measure will maintain consistency with the electric offer for the region and minimize market delivery confusion, which corresponds with UM 551 exception criteria C.

Staff position

Staff sees the benefit of continuing to incent electric spa covers which are cost effective with a TRC BCR of 2.0. Staff also understands the market confusion that would ensue if incentives were offered for electric and not for gas spa covers. From a retailer's perspective, it would likely be difficult to confirm whether a spa was heated with electricity or gas in order to decide whether to provide an incentive or not. Staff also appreciates that only 24 gas spa cover incentives were provided in 2013 compared to 533 for cost effective electric installations. For these reason, Staff supports an exception for spa covers under UM 551 exception criteria C.

New Homes Builder Option Package with 0.67 water heater

Energy Trust proposal

Energy Trust indicates in their filing that the impact of reduced gas avoided costs on the New Homes and Products program measures is very small. There is one new homes builder option package, that Energy Trust indicates is rarely used, that includes a 0.67 water heater. This package is no longer cost effective. The TRC BCR for this package

is 0.6 and the UCT BCR is 1.1. Energy Trust is requesting an exception under exception criteria B (will increase market acceptance and lead to reduced cost) and C (for consistency with other programs in the region).

Staff position

At the July 22, 2014 public meeting where the Commission addressed the UM 1696 electric energy efficiency exception requests, there was discussion of lost opportunity efficiency measures. At least one Commissioner verbalized in general terms support for additional leniency on cost effectiveness when it came to lost opportunity measures.

Lost opportunity measures are those measures that are not discretionary but rather where there is one or a very limited number of opportunities to install the measures and the measure could be in place for many years. When a lost opportunity measure is being incentivized, the incentive is encouraging selection of higher-efficiency equipment or building practices than would typically be chosen at the time of a purchase or design decision. For lost opportunity measures, one cannot change their mind or go back and install the measure if conditions, such as gas prices, change in the future. Staff sees the New Homes Builder Option Packages as lost opportunity measures. For that reason, and because of the UM 551 exception criteria Energy Trust has proposed, Staff recommends the Commission grant an exception for New Homes Builder Option Package with 0.67 water heaters.

Multifamily ceiling, wall, floor and duct insulation

Energy Trust proposal

The TRC BCRs for multifamily ceiling, wall, floor, and duct insulation are 0.4, 0.4, 0.3, and 0.3, respectively. The UCT BCRs are 1.2, 1.3, 1.1, and 1.0, respectively. Although the investment decision for multifamily may be quite different than for single family due to the building owner assuming the cost of the tenant improvement, the non-energy benefits of weatherization in a living space are similar between the two programs. In addition, building owners may enjoy the benefits of having a more desirable property for tenants, resulting in potentially lower turnover, higher rents, and the ability to promote lower energy costs to prospective renters.

Energy Trust is proposing exceptions to cost effectiveness for multifamily insulation as they did for single family insulation, recommending they be included as part of a core residential program.

Staff position

As with single family, Staff acknowledges the presence of non-energy benefits but does not believe those benefits are weighty enough to justify an exception where the TRC BCR is 0.4 and 0.3. However, for consistency with Staff's single family recommendations, Staff recommends that an exception be granted for multifamily ceiling insulation, but not for wall, floor, or duct insulation. Customers can still choose to install these measures, but Staff recommends they not be given ratepayer incentive dollars to do so.

Multifamily window retrofits

Energy Trust proposal

The TRC BCR for multifamily windows is 0.2 and the UCT BCR is 1.3. Energy Trust has done surveys that suggest that few multifamily window projects would take place without Energy Trust incentives. Energy Trust notes that there are many non-energy benefits associated with shell measures, including windows. Those NEBs are described previously. Energy Trust is seeking an exception for multifamily windows based on the presence of significant NEBs.

As with multifamily insulation, multifamily windows also have the landlord – tenant dynamic where the landlord pays for improvement but presumably the tenant is the primary beneficiary of the energy savings.

Staff position

Staff notes that single family windows for gas heated homes are cost effective, but multifamily windows for gas heated homes are not. Staff agrees that there are non-energy benefits associated with multifamily windows. Staff also notes that to some extent multifamily windows can be seen as lost opportunities, being installed at the time of a major remodel or at the time of vacancy in a rental property. However, based on the information Staff has to date, Staff does not believe that the presence of NEBs nor the fact that multifamily windows can be considered lost opportunities are enough to compensate for a TRC BCR of 0.2. Therefore, Staff does not recommend an exception for multifamily windows.

Commercial vent hoods with variable speed drives (2 and 2.5 HP)

Energy Trust proposal

The TRC BCR for this measure is 0.2 and the UCT BCR is >1. Energy Trust explains

that this particular application of variable speed drives saves both electricity and gas, because it influences the exhaust rate from spaces that are often gas-heated. Energy Trust offers incentives for a range of commercial vent hood sizes, most of which are cost effective. In Docket No. UM 1696 Energy Trust requested and received an exception for commercial vent hoods with variable drives that were less than 2 horsepower (HP) on the grounds that including the 2 HP hood would provide consistency and reduce confusion and labor costs that would result from an inconsistent incentive offering, particularly when the non-cost effective measure represented a small fraction of the units installed.

Energy Trust is requesting a continuation of the exceptions that were previously granted for 0.5 and 1.0 HP hoods under the UM 551 exception criteria D; inclusion of this measure will increase participation in the program. Energy Trust is also seeking an exception for the 2 and 2.5 HP hoods because it claims that including these measures will lead to ease of implementation in the marketplace. Energy Trust indicates that although the 2.0 and 2.5 HP units are not cost effective, they see limited uptake in the market. The majority of these new hoods are larger than 2.5 HP and are cost effective.

Staff position

Staff understands the Energy Trust's position that the 0.5, 1.0, 2.0 and 2.5 HP hoods are sizes within a range of sizes, the majority of which are cost effective. Staff also recognizes that these hoods may be considered lost opportunity measures as they are most likely installed at the time of construction or major remodel. However, Staff does not support an exception for these hoods because of their low TRC BCR.

New Commercial Buildings condensing tank water heater

Energy Trust proposal

These measures are cost effective in high water use building types such as restaurants and laundry facilities, but are not cost effective in low water use buildings. For the total program as currently defined, the TRC BCR is 0.4 and the UCT BCR is 1.8. Beginning in 2015, the program will claim savings for this measure separately based on building type, and will exclude the lowest saving buildings from the offering. The only building type that remains of concern is schools, where condensing tank water heaters were not cost effective in 2013 because a number of water heaters went to new schools with limited hot water use. Energy Trust will be moving toward a new more targeted approach to educate designers and developers and explain that the extra cost of condensing tank water heaters are justified only in schools with high hot water use such as locker facilities and full service cafeterias. With this new approach, Energy Trust expects the average cost effectiveness in schools to improve. Accordingly, Energy

Trust is suggesting an exception under UM 551 exception criteria B – inclusion of the measure will increase market acceptance and is expected to lead to reduced cost of the measure.

Staff position

Staff understands the issue and the remedy Energy Trust is proposing. Based on this remedy and excluding the low savings applications Staff supports this exception under UM 551 exception criteria B. Because these water heaters are also going in new commercial buildings, Staff also recognizes these as lost opportunity measures which is another reason we support an exception.

New Commercial buildings condensing unit water heater for non-multifamily buildings

Energy Trust proposal

Condensing unit heaters are not cost effective for many building types and are not a common HVAC choice. The current TRC BCR for this measure is 0.5 and the UCT BCR is >1. Energy Trust proposes to rework this measure to better align it with a similar Production Efficiency measure. It will be removed from buildings where it is not cost effective.

Staff position

Staff supports Energy Trust reworking this measure and only keeping it where it is cost effective.

Demand Control Ventilation (DCV)

Energy Trust proposal

The TRC BCR for this measure is 0.6 and the UCT BCR is >1. Energy Trust explains that most projects using DCV go through the Special Measures track rather than use this prescriptive measure. In Special Measures, track measures are evaluated in context of a specific building and are tested for cost effectiveness in each application. Energy Trust proposes to continue this measure as part of the HVAC calculator through the end of 2014 and then after that only offer it as a custom measure where it is cost effective.

Staff position

Staff supports Energy Trust continuing this measure as part of the HVAC calculator

through 2014 and then only doing the measure in custom applications where it is cost effective.

New Commercial buildings market solution packages

Energy Trust proposal

Energy Trust is requesting exceptions for four New Commercial buildings market solution packages that have TRC BCRs between 0.6 and 0.8 and UCT BCRs of between 1.0 and 4.5. Energy Trust's New Buildings program designed and developed a 'market specific incentive offering' in 2013 that provides more savings opportunities for small commercial new construction market. For each building type (retail, office, restaurant, grocery, school, and multifamily) measures are bundled into "good, better and best" packages. This is an innovative model that has been quite successful in getting small business owners to act when they otherwise might not. The Commission previously granted exceptions for two of the four measure packages for which Energy Trust is seeking exceptions. The two measures previously excepted are:

- Air barriers in offices elective
- Radiant heating and cooling in offices under the "Best" track

The two new market solution exceptions being requested are:

- Multifamily (gas heat) increment between "Better to Best" and "Good to Better"
- Tankless water heat in offices

Staff position

Staff supports exceptions for these New Commercial market solutions packages and measures for the reasons cited by Energy Trust in their submittal and because Staff views these new commercial building market solution packages as lost opportunity measures.

2) Core Program Approach

The previous section laid out a measure by measure approach to dealing with non-cost effective energy efficiency measures. Another approach the Commission might consider is to define a core program that includes basic measures that would not be subject to cost effectiveness limitation. Energy Trust proposed a core program in its July 2014 filing in this docket. It was suggested that single family and multifamily ceiling, wall, floor and duct insulation, as well as duct sealing could be considered as

part of a core program. Below is a summary of parties' comments on this issue and Staff's response.

Parties' comments

Northwest Natural Gas (Northwest Natural or NWN) supports the idea that weatherization measures should be offered as part of a utility's basic customer service and that the cost of delivering these incentives should not be subject to cost effectiveness screening. NWN believes customers and policy makers in Oregon expect that utilities will offer basic weatherization services.¹⁵

NWN points out four other reasons it believes a core program should be considered:

- Customers would receive consistent messaging about savings opportunities
- Utilities would not incur costs for starting, stopping, and restarting programs
- Would prevent lost savings opportunities that would occur if a program or measures were not always available
- Measures would be fuel neutral so would not be controversial in a changing market

The Northwest Energy Efficiency Council (NEEC) states it believes that some type of core program services seems justified despite current challenges to cost effectiveness tests. NEEC points to the fact that common sense practices of reducing home air leakage, sealing gaps in home heating duct work, and providing sufficient insulation have been encouraged regardless of heat source since the beginning of the region's energy efficiency program efforts in the early 1980's. NEEC says this has led to a market expectation that energy efficiency programs will provide assistance for homeowners to implement these measures. NEEC compares the utility service or core program idea to other basic services that utilities provide to their customers on issues related to safety, stewardship, billing, and security.

Cascade Natural Gas (Cascade or CNG) also supports the concept of a core residential program that includes air sealing and that is provided independently of cost effectiveness. Cascade points out that a core program concept leaves the customer free to determine for themselves, in light of the incentives provided through the Core Program, the level of non-energy benefits they perceive and/or realize as they do their household calculus of what they are willing to pay for the measure.

¹⁵ NWN points to ORS 469.633 and OAR 860-030-0005 where gas utilities are currently required to provide energy audits and information regarding energy efficiency measures. NWN also points to the fact that independently owned electric utilities are required to charge customers a public purpose charge for the steady investment in energy efficiency programs.

The Home Performance Guild of Oregon (HPG or the Guild) recommends the PUC work with Energy Trust and stakeholders to better understand the core program concept. HPG suggests that careful consideration be given to what would be included in a core program. HPG would recommend considering consumers' expectations first, regardless of the cost effectiveness of the measure. HPG also recommends that careful consideration be given to how the core program would be justified. HPG also strongly recommends that air sealing continue to be offered as an incentivized Energy Trust program because they see it as a hallmark of the weatherization program.

Clean Energy Works (CEW) believes the idea of a core program or basic utility service has merit and deserved additional study. CEW proposes that a core program should be focused on minimum home performance standards.

At the July 29, 2014 workshop, the Citizens' Utility Board (CUB) and NWEK voiced concerns about the idea of a core program. CUB noted that in the 1990s energy efficiency was viewed as a utility service and not as resource acquisition. CUB said the risk of moving back to the service model is that it takes away from the idea of energy efficiency as a resource. CUB believed there could be a lot of downsides to the core program idea that have not yet been thought through.

NWEK said that a core program may not be needed and that we may be able to solve the issues in a simpler way that is more consistent with UM 551.

Staff's response

Staff understands the desire of some parties to see core energy efficiency measures offered as a utility service outside the bounds of cost effectiveness. However, Staff agrees with CUB and NWEK that the idea of a core program goes contrary to the idea of energy efficiency as a resource that competes on par with supply side resources. Staff does not recommend the Commission support moving to a core program or utility service model that operates outside cost effectiveness. Staff believes, as NWEK, that UM 551 with the cost effectiveness exceptions provided in Order No. 94-590 provides the needed flexibility to incent measures that provide greater customer benefits and is a better tool to use to address cost effectiveness challenges in a way that benefits ratepayers in the long run. Further, Staff believes that allowing energy efficiency measures that are not cost effective to be implemented under a core program without ongoing regulatory review would not be good policy.

3) Incentive Cap Approach

Another alternative approach the Commission could elect to take is to set an incentive cap for weatherization measures that is well below current incentive levels. Energy

Trust would be provided flexibility to incent measures within that cap. The cap would be significantly less than current incentive levels for non-cost effective shell measures. Energy Trust would be held to performance standards that would encourage them to acquire the biggest “bang for buck” measures.

Staff is interested in looking more at the idea of an incentive cap for weatherization measures and will continue to research what such a cap might look like, how it would operate, and how it would impact overall cost effectiveness. Staff is open to public comment on this idea.

Gas Existing Homes Program Cost Effectiveness

Energy Trust proposal

The gas portion of the existing homes program is not currently passing the utility cost test. The gas portion of the existing homes program had a UCT BCR of 0.7 in 2013 and is projected to have the same in 2014. The TRC BCR for the gas existing homes program was 0.9 in 2012, 0.8 in 2013, and is projected to be 1.5 in 2014. When the electric and gas measures that make up the existing homes program are combined, they result in TRC BCRs and UCT BCRs that have been and are projected to continue to be greater than one. Historically, Energy Trust has reported program BCRs as a single number that combined gas and electric measures. Because this docket is focused on gas only, Energy Trust looked at the numbers from strictly a gas perspective for the purposes of the July 1st filing.

To bring the gas portion of the existing homes program TRC BCR up in 2014, Energy Trust plans to increase the number of energy saver kits that are distributed. Up to 40 percent of savings are planned to come from kits in 2014.¹⁶ The gas energy savings that come from kits are primarily from showerheads and faucet aerators. Energy Trust acknowledges that the savings from showerheads in the future may be limited.

Energy Trust runs through various scenarios in their filing and demonstrates that in order for the gas existing homes program to pass the UCT, there must be at a minimum a reduction in the delivery and incentive costs.¹⁷

¹⁶ Energy Trust July 1, 2014 filing in UM 1622 *Cost-Effectiveness Review for Specific Gas Measures and Programs*, page 18

¹⁷ *Ibid*, page 20

The Grant Agreement between Energy Trust and the PUC requires that¹⁸:

Individual conservation programs will be designed to be cost-effective...

And¹⁹:

The costs of operating the Energy Trust will be reasonable and support efforts toward cost effectiveness. Costs of operating the Energy Trust will balance the lowest possible administrative costs with overall organizational effectiveness... Energy Trust will allocate administrative costs in a manner to avoid cross-subsidies between programs that are supported by the Funds and programs that are not.

Staff response

The Commission has a choice to continue to look at cost effectiveness of the existing homes program as a whole, or to look separately at gas and electric measures and require each to have a UCT and TRC BCRs greater than one.

If the Commission elects to consider the existing homes program from the gas and electric perspective separately, Staff recommends that the Commission allow exceptions for the gas existing homes program but require Energy Trust to find a way bring the UCT BCR and TRC BCR of the gas existing homes program to 1.0 or greater by the end of 2015.

Additional Energy Trust Requests

In addition to the specific exception requests for gas efficiency measures, the July 1, 2014 Energy Trust filing also contained recommendations related to:

- A. Streamlining the approval process for prescriptive measure exceptions
- B. Streamlining the approval process for custom measure exceptions
- C. Inclusion of a hedge or risk mitigation value in estimating avoided cost forecasts

Below are a summary of each of these with Staff's recommendations.

A. Streamlining the approval process for prescriptive measure exceptions

¹⁸ Subsection e of the Guidelines contained on page 14 of the Grant Agreement between Energy Trust and the PUC clearly states

¹⁹ Ibid, Guideline I

Energy Trust proposal

The Commission has directed Energy Trust to request approval whenever new measures are not cost effective based on a simple TRC calculation but appear eligible for exceptions under the categories listed in UM 551. This includes pilot projects. Currently, Energy Trust uses a two-pronged approach when considering exceptions:

- a. For minor exception requests, where the size and scope are limited, Energy Trust provides details to PUC Staff who review and if appropriate, provide approval through an email. A copy of the email is kept on file by the PUC Staff.
- b. For major exception requests, Energy Trust provides an official filing and requests an exception. PUC Staff opens a docket, solicits comments from parties, and then makes formal recommendations to the Commission at a public meeting. Commissioners then make a decision on the exception request at the public meeting.

Energy Trust requests that this process be more formally defined going forward and asks the Commission to consider more clearly describing the difference between “minor” and “major” exceptions. Energy Trust also asks the Commission to consider not requiring reviews or formal exceptions for limited duration pilot activities.

Staff position

Staff recommends continuing to allow minor exceptions to be reviewed and approved by Commission Staff. Staff does not feel the need to establish a formal definition of major and minor requests. Staff encourages Energy Trust to continue to propose to Staff measures that it believes are minor. If Staff agrees, they will consider and if appropriate approve the exception. If Staff disagrees, Energy Trust will be asked to submit a formal exceptions request that will go through the docket process and be reviewed by the Commission.

Pilot projects clearly fall within UM 551 exception criteria F which states:

“The measure or package of measures is included in a pilot or research project intended to be offered to a limited number of customers.”

Additionally, subsection e of the Guidelines contained on page 14 of the Grant Agreement between Energy Trust and the PUC clearly states (emphasis added):

Individual conservation programs will be designed to be cost-effective and will be independently evaluated on a regular basis. This guideline should not, however, restrict investment in pilot projects, educational programs, demonstrations, or

similar endeavors

Staff supports Energy Trust implementing pilot projects without seeking Commission approval each time. It is understood that a pilot project may not be cost effective, but should lead to a cost effective program or the measure or program should be discontinued within a reasonable time period.

Commission Staff is requiring Energy Trust to update avoided costs every two years after which Energy Trust should come before the Commission and summarize the measures that are no longer cost effective. Exception requests, if any, should be made at that time, even if a previous exception had been granted. Energy Trust should plan to discontinue measures that are no longer cost effective and are not granted exceptions within a reasonable time period. Staff recommends that at the same time exception requests are made, Energy Trust should also provide a summary of pilot projects in process or in the planning stages.

B. Streamlining the approval process for custom measure exceptions

Custom measures are efficiency measures where savings, costs, cost-effectiveness, and in some cases incentives, are determined based on a site-specific calculations. At certain times in the past, Energy Trust planning Staff approved custom measures themselves based on UM 551 criteria. In those times, Energy Trust believed many projects benefited from the ability to identify and approve appropriate exceptions with a single phone call allowing the planning engineer to continue to move forward on a project without delay. Energy Trust believes that expediency in approving custom exceptions can support innovation and lead to potentially capturing important learnings.

Energy Trust suggests the Commission consider one or more of the following:

- Allow Energy Trust planning Staff to review and approve custom project exceptions. Energy Trust could provide to PUC Staff a structured process for reviewing what exceptions Energy Trust made quarterly. Based on quarterly reviews, Staff could decide to take this authority back from Energy Trust.
- Energy Trust could create a list of measures where further experience can help identify costs and savings and/or further practical experience is likely to lead to increased savings and lower costs. Energy Trust could request an exception covering all the measures on this list. In this way, exceptions could be pre-arranged in advance of the “press of construction schedules.”
- Measures could be analyzed for cost effectiveness as part of a bundle.

Staff is not convinced that this is a large problem. Staff is not comfortable with any of these approaches and is not comfortable with Energy Trust approving cost

effectiveness exceptions on major custom energy efficiency measures. Staff will do our best to turn around exception requests in a timely manner. In the meantime, Energy Trust should document where opportunities arose that could not be capitalized and where savings and learnings were forgone because of the current exceptions approval process.

C. Inclusion of a hedge or risk mitigation value in estimating avoided cost forecasts

Energy Trust proposal

Energy Trust notes that in resource planning for electric utilities, a value is included for efficiency resources to reflect the avoided risk of high load/high power price scenarios where underinvestment in efficiency has a high penalty, compared to the low penalty for over-buying efficiency in a low load/low price scenario. This value is referred to as a hedge or premium value. For electric utilities, a hedge or premium value is included in avoided cost calculations on top of the ten percent energy efficiency adder that was defined in the Northwest Power Planning Act of 1980.

There is no current estimate of this value for gas. Energy Trust asserts that NWN has committed to examine this issue as part of their 2015 IRP. Until the gas value is analyzed, Energy Trust suggests that the Commission direct them to add a percent value to the estimated benefits from gas efficiency measures or the Commission should consider the absence of this value in granting exceptions.

Parties' comments

NWEC supports the inclusion of a risk avoidance value for efficiency programs in Oregon because price and market condition forecasts are always uncertain. NWEC points to the Northwest Power and Conservation Council (Power Council) which says over the past 15 years efficiency has proven to be a very stable electricity resource that ends up being a better deal for electricity customers at least 95 percent of the time. NWEC says that while the Power Council and some electric utilities have included the benefits of conservation risk mitigation in their determinations of cost-effectiveness, natural gas utilities in Oregon have not. NWEC emphasizes that the benefit of energy efficiency to the utility and its customers as a tool to reduce risk and price uncertainty is currently overlooked in the cost-effectiveness analysis for gas utilities in Oregon.

Cascade also supports the ongoing examination of including a hedge or risk mitigation value in estimating avoided cost forecasts. Cascade would like to see a strong analytical case made before an adder is applied.

Staff's response

Energy Trust indicates that the electric risk avoidance factor currently used in Energy Trust avoided electric costs is 16 percent of the forward market prices when evaluated over the portfolio resource weighted average measure life for 12 years. Staff believes that because of differences between the nature of gas and electricity, such as gas storage and long-term contracts, the hedge or premium value for gas would be less than for electricity. Therefore, although Staff acknowledges the value will be greater than zero, it will not likely be large enough to cause measures with TRC BCRs of 0.5 or less to be anywhere close to becoming cost effective.

Staff supports the exploration of a risk mitigation adder, much as is used for electric utilities. Such an adder should be developed through the IRP process. In Energy Trust's filing it is indicated that NWN has agreed to look at a hedge value as part of the development of its 2015 IRP. Staff supports the Commission recommending NWN report back on the status and final determination of the hedge value of energy efficiency.

Additional Parties Comments

Written comments were received by Cascade, CEW, HPG, NWEA, NEEC, NWN and an interested member of the public. CUB provided verbal comments at the workshop on July 29, 2014. Their comments are grouped by topic and summarized below.

Parties' comments related to the idea of a core program and the risk benefits of energy efficiency are presented in previous sections of this memorandum and will not be repeated here. What follows is a summary of additional comments and Staff's response.

Non-energy benefits and how cost tests are currently being applied

Parties' comments

NWEA voices support for the framework established under Order 94-590 in UM 551 and for looking at measures from both a TRC and UCT perspective. NWEA requests that the Commission examine whether we are utilizing and implementing cost tests correctly, and particularly whether we are accurately accounting for all the costs and benefits attributable to a measure. NWEA believes that we may be failing to account for substantial non-energy benefits in the TRC calculation. NWEA asks what protocols could be put in place in Oregon to ensure that we are adequately accounting for benefits in our evaluation frameworks.

NWN pointed out the current commission policy regarding NEBs contained in Order No.

94-590: “A utility should calculate cost savings and other non-energy benefits if they are significant and there is a reasonable and practical method for calculating them.” NWN says it may be useful to discuss if the 10 percent adder for NEBs is sufficient enough to ensure that the value and costs of benefits in the TRC are balanced.

CEW points to the 5,000 homeowners who have invested in whole home retrofits in recent years for what they call “benefits well beyond energy efficiency alone.”

HPG points to the fact that NEBs are widely acknowledged for insulation. HPG points out improved indoor air quality as another important NEB. The Guild also voiced support for a concept that was originally brought up by Portland General Electric and Pacific Power in Docket No. UM 1696 to seek out and develop improved information on non-energy benefits.

Customer comment

A customer named Paul Roberts read an article on energy efficiency cost effectiveness in *The Oregonian* and called the PUC call center to provide comments. He said that benefits like sound suppression, comfort in the home, and increasing the home’s value are intangible things and if customers want them, they should have to pay for them themselves without subsidies from the public. He also said that rate payers should not be paying for higher wage jobs, but rather that is up to the business community and should not be the purpose of the program. He closed by saying we should be doing things that incentivize people to save energy for the population as a whole, not to feel more comfortable in their own homes.

Staff’s response

Staff acknowledges that non-energy benefits exist for weatherization measures. Staff does not support Energy Trust or the utilities spending large amounts of money to define and quantify the value of non-energy benefits. Staff supports the Commission considering NEBs in a general way as they look at case by case exception requests under UM 551.

Measure and fuel type aggregation

Parties’ comments

CEW points out that in terms of HVAC, homes function as systems and weatherization measures work together to achieve a level of home performance that is both efficient and safe. CEW suggests that whole home programs should be viewed as single interventions and that weatherization measures be lifted to a higher level of

aggregation.

CEW says they are uncertain of the benefits to segregate measures by fuel type for home weatherization. They point out that homeowners have limited choice in fuel type and weatherization measures outlive average remaining occupancy by four times. Any residential ratepayer may not enjoy the benefits of avoided costs by fuel type.

Likewise HPG and NEEC also point out that we live in an increasingly mobile society and someone living in a house heated by one fuel type has a good possibility of re-locating within a few short years to another home with a different source of heat. Both contend that good quality home weatherization and insulation practices across the entire building stock is the best way to ensure that a mobile population enjoys the benefits of lower energy costs and good occupant comfort.

Staff's response

Staff recommends the Commission support the current policy of looking at programs by fuel type so that gas and electric customers individually support solid cost effective programs, and so that one fuel type is not subsidizing another. That being said, Staff is open to exploring more the idea of an incentive cap for all weatherization measures that could be used to flexibly incent measures that provide the best bang for the buck for customers. The total program would need to be cost effective. Staff will work with Energy Trust and parties on developing this alternative more fully.

Specific exception requests

Parties' comments

A few parties mentioned support for exceptions for specific measures in their comments. These are summarized below:

NWN recommended exceptions be granted and Energy Trust continue to offer incentives for the following measures:

- 0.67 and 0.70 EF Energy Star water heating
- Solar water heating
- Spa covers
- New home builder option package with 0.67 EF water heater
- Multifamily window retrofits
- Customer projects where there are non-energy benefits
- Commercial kitchen vent hoods

- Condensing tank water heaters
- Market Solutions measures
- Manufactured home duct and air sealing
- Whole home air sealing

CEW recommends UM 551 exception criteria A – significant non-quantifiable non-energy benefits be used to support an exception for whole house energy retrofits.

Cascade supports the concept of a core program that specifically includes whole-home air sealing. Cascade also supports the continuation of incentives for multifamily ceiling, wall, floor, and duct insulation measures as part of a core residential program.

HPG supports continuing incentives for whole home air sealing and wall, floor, and duct insulation.

Staff response

Staff does not support continuing to offer direct incentives for air sealing or for wall, floor, or duct insulation. Staff acknowledges there are currently unaccounted for NEBs and risk mitigation benefits; however, Staff does not see these benefits as large enough to warrant providing exceptions to cost effectiveness tests, where TRC BCRs are in the range of 0.2.

Senate Bill 844 (SB 844)

Party comments

CUB did not submit written comments in response to Energy Trust's July 1, 2014 filing. However, at the workshop on July 29, 2014 CUB talked about the potential interactions between this docket and SB 844, which says gas utilities can do things that reduce greenhouse gas emissions if they also benefit customers. CUB pointed out that technically anything that passes the UCT benefits customers. CUB suggested that anything that falls between the TRC and UCT could technically be applied to SB 844. If energy efficiency were implemented through SB844 it would cost more to customers because the utility can earn a higher return on their investment. CUB suggested that one way to handle this would be that the PUC could consider a new exception based on applicability to SB 844, whereby efficiency that passes the UCT but not the TRC could be acquired through a standard efficiency program rather than a more expensive SB 844 project.

CUB proposed that approved SB 844 projects could help determine a threshold value of carbon reductions which could tell us where the exception should be applied in the

future.

Staff response

Staff is interested in this approach, but has not yet given it enough consideration to offer a recommendation. Given the status of SB 844, this may be a preliminary concept at this time.

Other items

In addition to the items mentioned above, the following issues were brought up by parties. Staff's response is included in the bullets below:

- CEW encourage the Commission to look at the potential benefits of more rigorous training, wage, and utilization standards. Staff does not support this recommendation because it is outside the purview of the Commission.
- Cascade recommended that as part of future investigations into simplifying program delivery and/or reducing program costs, consideration be given to Cascade's own experience with delivering programs. Staff does not view this docket as the appropriate place to address this suggestion.
- Cascade supports exploring ways to streamline the approval process for cost effectiveness exceptions. Staff supports streamlining exception approval for pilots and continuing the Staff approval process for minor exception requests but not for major requests as discussed previously in this memorandum.
- NWN recommends the Commission provide clear acknowledgement that low income weatherization programs are invested in for many reasons and are not expected to meet the cost effectiveness standards in UM 551. Staff agrees with NWN that low income weatherization programs are not intended to meet UM 551 cost effectiveness standard and for clarification recommends the Commission acknowledge that fact in the final order for this docket.

Conclusion

Consistent with how UM 1696 was handled; Staff has considered each of Energy Trust's cost effectiveness requests and made recommendations on each measure consistent with UM 551. Appendix A contains a summary of Staff's recommendations for each measure. Staff does not recommend the Commission support moving to a core program or utility service model that operates outside cost effectiveness. Staff believes that UM 551 is a better tool to use to address cost effectiveness challenges in

a way that benefits ratepayers in the long run.

One potentially reasonable alternative to a measure by measure UM 551 approach would be for the Commission to establish a per residence incentive cap for weatherization measures. Staff will work with parties and Energy Trust to develop this concept further.

If the Commission elects to consider the existing homes program from the gas and electric perspective separately, Staff recommends that the Commission require Energy Trust to find a way to bring the UCT BCR and TRC BCR of the gas existing homes program to 1.0 or greater by the end of 2015.

Staff recommends continuing to allow minor exceptions to be reviewed and approved by Commission Staff. Staff supports Energy Trust implementing pilot projects without seeking Commission approval each time.

Staff is not comfortable with Energy Trust approving cost effectiveness exceptions for major custom energy efficiency measures without consulting PUC Staff. Staff will do our best to turn around exception requests in a timely manner. In the meantime, Energy Trust should document where opportunities arose that could not be capitalized on and where savings and learnings were forgone because of the current exceptions approval process and report this back to Staff at an appropriate time.

Staff supports the Commission recommending NWN report back on the risk reduction value of energy efficiency determined through modeling in its 2015 IRP.

Staff acknowledges that non-energy benefits exist for weatherization measures. Staff does not support Energy Trust or the utilities spending large amounts of money to define and quantify the value of non-energy benefits. Staff supports the Commission considering NEBs in a general way as they look at case by case exception requests under UM 551

Staff supports the Commission making clear that low income energy efficiency programs are not held to the same UM 551 cost effectiveness standards as non-low income programs.

PROPOSED COMMISSION MOTION:

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Appendix A - Items where Energy Trust is proposing cost effectiveness exceptions under UM 551

Measure	TRC BCR	UCT BCR	Energy Trust recommendation	Staff recommendation:
Single family residential ceiling insulation	0.5 - 0.7	2.2	Non-energy benefits exist, new online payback estimator may lead to reduced measure cost. Proposed as part of core program	Approve based on NEBs, cross fuel benefits, lack of risk value, payback estimator, maintain market
Single family wall insulation	0.2 - 0.3	1.5		No exception
Single family floor insulation	0.2 - 0.3	1.2		No exception
Single family duct insulation	0.2	1		No exception
Air sealing as added requirement for ceiling insulation	N/A	N/A	UM 551 Criteria F - Pilot	No exception - unless ETO can make case for why pilot would be fruitful
Manufactured home air sealing	0.5	0.5	Exception C - Majority of manufactured homes are electric which are CE - keep gas for consistency	Exception - UM 551 Criteria C
Manufactured home duct sealing	0.4	0.4	Exception C - Majority of manufactured homes are electric which are CE - keep gas for consistency	Exception - UM 551 Criteria C
0.67 & 0.70 EF Water Heaters	0.6	1	Criteria B - Encourage market adoption and reduce cost	Exception - UM 551 Criteria B
Solar water heating	0.12	1	Criteria A - Non-energy benefits	No exception
Spa covers	0.5	1.6	Criteria C - most spas are electric which are cost effective; maintain for consistency	Exception - UM 551 Criteria C
New Homes Builder Option Package with 0.67 water heater	0.6	1.1	Criteria Band C	Exception - UM 551 Criteria B and C
Select Customer Commercial Projects	0.7 - 0.94	>1	Site Specific exceptions	Retain - where TRC / UCT > 1 or entertain specific exception request
Multifamily ceiling insulation	0.4	1.2	Non-energy benefits exist. Proposed as part of core program	Approve based on NEBs and consistency with single family
Multifamily wall insulation	0.4	1.3		No exception
Multifamily floor insulation	0.3	1.1		No exception
Multifamily duct insulation	0.3	1		No exception
Multifamily windows	0.2	1.3	Criteria A - Significant non-energy benefits; surveys show minimal free ridership	No exception
Commercial vent hoods w/ VSDs (2 and 2.5 HP)	0.2	>1	Criteria D - will increase participation in a cost effective program	No exception
New commercial buildings condensing tank water heater	0.4	1.8	ETO moving to a tailored approach and will only do those that are cost effective. Request an exception for schools under criteria B	Support removing lowest savings buildings from offering. Support UM 551 Criteria B for schools
New commercial buildings condensing unit heater for non-multifamily	0.5	>1	Rework and only keep where Cost Effective	Support reworking and keeping only where cost effective
New commercial buildings market solutions	0.6 - 0.8	1 - 4.5	Multiple UM 551 criteria - A, B, D, and E	Support exceptions based on UM 551 Criteria A, B, D, and E