

**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: November 15, 2022**

REGULAR **CONSENT** **EFFECTIVE DATE** November 16, 2022

DATE: November 7, 2022

TO: Public Utility Commission

FROM: Anna Kim

THROUGH: Bryan Conway, JP Batmale, and Sarah Hall **SIGNED**

SUBJECT: OREGON PUBLIC UTILITY COMMISSION STAFF:
(Docket No. UM 1696)
Energy Trust of Oregon cost effectiveness exceptions requests for 2022.

STAFF RECOMMENDATION:

Adopt Staff's proposed schedule for submission of public comments and for Staff's final recommendation on major exceptions to cost effectiveness on energy efficiency measures for specific window replacement measures and insulation measures, as requested by Energy Trust of Oregon (Energy Trust).

DISCUSSION:

Issue

Whether the Commission should adopt the schedule for public comment and Staff's presentation of its final recommendation on exceptions to cost effectiveness for energy efficiency measures for specific window replacement measures and insulation measures.

Applicable Law

Order No. 94-590 in Docket No. UM 551 establishes guidelines for cost effectiveness of energy efficiency measures. Section 13 of the Order details seven conditions under which exceptions to Oregon's two cost effectiveness tests may be granted by the Commission. The exceptions listed in the Order are as follows:

- 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 demand side management (DSM) programs in the region.
- 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.¹

The current process to consider cost effectiveness exceptions was reaffirmed in Docket No. UM 1622 and is as follows:²

- For minor exception requests, where the size and scope are limited, Energy Trust provides details to OPUC Staff who review and if appropriate, provide approval through an email. A copy of the email is kept on file by OPUC Staff.
- For major exception requests, Energy Trust submits an exception request to Staff. OPUC Staff makes formal recommendations to the Commission at a public meeting. Commissioners then decide on the exception request at the public meeting. For more significant requests, the recommendation presentation and the decision may occur on different meetings to allow more time for comments.

The threshold by which Staff can consider minor exceptions was officially established in

¹ The cost effectiveness test required under Order No. 94-590 is the Total Resource Cost Test (TRC). *In The Matter Of An Investigation Into The Calculation And Use Of Conservation Cost-effectiveness Levels*, Docket No. UM 551, Order No. 94-590 (April 6, 1994). Energy Trust has used this test since its inception to guide what measures can be offered by Energy Trust programs. Orders entered in Docket No. UM 551 also allow for the use of other cost effectiveness tests. Energy Trust uses the Utility Cost Test (UCT) to set the maximum allowable incentive amount that can be offered to participants.

² Docket No. UM 1622, Order No. 14-332.

Docket No. UM 1696.³ These orders codified a previous working arrangement in Docket No. UM 1622 whereby Staff could consider measure level cost-effectiveness exceptions under the following circumstances:

- The measure's Total Resource Cost (TRC) score is below one and above 0.8;
- The measure's savings do not comprise more than five percent of a program's annual savings; and
- The measure's cost does not represent more than five percent of the program's annual budget.

If a measure does not meet all of the minor exception criteria, the request goes through the Commission's major exception request process.

In 2015, the Commission adopted a cost threshold of \$500,000 for pilots, above which Energy Trust must seek cost effectiveness exceptions.⁴

Analysis

Background

Consistent with the process described above, Energy Trust submitted to Staff on September 27, 2022, a request for major measure exceptions for specific window replacement measures and insulation measures. This memo will first cover window replacements, followed by insulation. The analysis for each set of measures will provide background, review the requests and rationale for exceptions, and present a proposal for further action.

Windows Replacement Measures

Window replacement measures are for customers in existing single-family, small multifamily, and manufactured homes that are already in the market for new windows. Incentives are designed to influence customers to pursue highly efficient windows, as measured by higher window "U-value." U-value is a measure of window energy loss, with lower numbers indicating more efficient windows.

In 2022, Energy Trust realized that the assumed residential windows savings had been over-estimated based on misinterpreting an impact evaluation. Energy Trust updated savings for the 2023 program using methods set by the Regional Technical Forum (RTF). As a result, savings estimates are lower than the previous analysis. Energy

³ Docket No. UM 1696, Order Numbers 17-395 and 17-457.

⁴ Docket No. UM 1696, Order No. 15-029.

Trust reports that costs have also increased. These combined factors result in all measure applications failing to pass cost effectiveness for 2023.

Energy Trust plans to eliminate the least efficient tier for incentives and reduce all incentives to be within the updated measure Utility Cost Test (UCT), resulting in much smaller incentives overall. These are the only windows incentives Energy Trust currently offers for existing single-family, small multifamily, and manufactured homes. Without exceptions, Energy Trust would have to cease offering incentives in these markets.

Request and Criteria

Energy Trust is requesting exceptions for these measures because TRCs range from 0.3 to 0.6, which fall below the 0.8 threshold, requiring major measure exceptions.

Overall, windows are expected to be less than five percent of Residential program savings and incentives. In 2021, the measures for the exception request made up 1.7 percent of electric savings and 4.6 percent of gas savings for the program. Incentives were about 4.2 percent of electric and 15.5 percent of the gas incentives.

In 2021, windows in small multifamily homes made up 0.9 percent of Existing Buildings Program electric savings and 0.2 percent of gas savings. Incentives were approximately \$170,000 and made up about 0.9 percent of electric and 1.3 percent of gas incentives.

Table 1: TRC exception for select replacement window measure applications

Measure	Savings (kWh)	Savings (therms)	Incremental Costs (\$)	UCT BCR at Max Incentive	TRC BCR
SF/SMF window U-Value ≤ 0.22, Electric	0.74	0.00	\$5.18	1.0	0.3
SF/SMF window U-Value ≤ 0.22, Gas	0.14	0.08	\$5.18	1.0	0.5
SF/SMF window U-Value ≤ 0.22, Gas only Territory	0.00	0.08	\$5.18	1.0	0.6
SF/SMF window U-Value 0.23 to 0.27, Electric	0.49	0.00	\$3.31	1.0	0.3
SF/SMF window U-Value 0.23 to 0.27, Gas	0.09	0.05	\$3.31	1.0	0.5
SF/SMF window U-Value 0.23 to 0.27, Gas only Territory	0.00	0.05	\$3.31	1.0	0.6

Energy Trust requests windows exceptions under Categories A and C:

- 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.

Energy Trust states high efficiency windows increase thermal comfort, reduce drafts, and have higher sound mitigation properties, reducing the amount of outdoor noise entering a home. These are all notable non-quantifiable benefits that are of interest to customers.

- C. The measure is included for consistency with other demand side management (DSM) programs in the region.

Energy Trust's proposed offerings will be aligned with the new ENERGY STAR Northern Tier Spec 7.0, the Inflation Reduction Act, and with efforts by Northwest Energy Efficiency Alliance (NEEA), RTF, and national actors to create demand and encourage manufacturers to support the production of more efficient windows. Energy Trust believes that offers like these are critical to demonstrating demand for the product, and for providing deeper levels of training and engagement to trades who support customers in choosing more efficient options.

This proposed exception was discussed at the September 14, 2022, Conservation Advisory Council (CAC) meeting. No objections or concerns about granting exceptions were raised at the time.

Staff's Recommendation

Staff agrees with Energy Trust's assessment that these window replacement measures fit criteria A and C, and that exceptions are warranted under these circumstances. Without exceptions for these measures, Energy Trust will cease providing incentives for certain types of windows, leading to a complicated market landscape for contractors and customers alike. Such a change may erode the trust of the market. Staff believes we need Energy Trust to encourage a more efficient windows market as a whole and to support customers with more efficient choices overall.

Insulation

Insulation reduces the energy needed to heat and cool buildings. Energy Trust provides incentives for insulating ceilings, attics, walls, and floors for single-family, small multifamily, and manufactured homes. Energy Trust seeks to have a holistic set of insulation measures for homes regardless of whether they have electric or gas heat. Most insulation measure applications deliver sufficient savings to be cost-effective, but a few floor and attic measure applications are not passing the TRC for 2023 in electric-heated single-family homes and in manufactured homes for all fuels.

In 2022, Energy Trust updated its measure analysis and found increased costs for all insulation measure applications. Insulation measures designed for single-family gas-heated homes were under exception since 2014.⁵ These measures for gas-heated homes are now cost-effective primarily due to increases in gas avoided costs. Cost increases, however, caused wall and floor insulation in electric-heated homes to fail the TRC.

After reviewing Energy Trust's request, particularly with the history of past insulation exceptions, Staff determined that the original request was narrow and discussed options for expanding the scope of this request. Insulation is a massively important investment in energy efficiency in the long run, but costs may fluctuate in the short term. Investing in insulation literally and figuratively insulates customers from future costs associated with transitioning to cleaner energy systems. A well-insulated dwelling will result in lower energy needs regardless of which fuels the customer uses currently or will use in the future.

Staff believes there are more benefits to be served with a wider range of exceptions and a more aggressive approach to investing in insulation now. Staff proposes that:

- 1) All insulation measures be exempted from TRC cost-effectiveness requirements for five years (TRC exceptions); and
- 2) All insulation measure offers for income-qualified and energy-burdened households are exempted from UCT cost-effectiveness requirements up to a score of 0.8 for five years as long as insulation costs from these offers remain below five percent of program costs (UCT exceptions).

By providing exemptions from TRC cost-effectiveness requirements for insulation measures, Energy Trust will be impacted less by changes in avoided costs and have more flexibility in adjusting insulation offers based on the needs of the market while still maintaining cost-effectiveness at the UCT level. These exemptions acknowledge the benefits in helping customers invest in insulation regardless of changes to the energy markets.

By providing exemptions from UCT cost-effectiveness for targeted offers, Energy Trust will have more opportunities to develop new strategies targeting lower income and energy burdened customers. These offers may include existing programs such as *Savings Within Reach*, which targets low and moderate-income customers⁶ and

⁵ Orders No. 14-332 and 15-140.

⁶ More information about Savings Within Reach can be found at:
<https://www.energytrust.org/incentives/savings-within-reach/>.

collaborations with community partners.⁷ Energy Trust could also create new offers that target customers who have difficulty paying their bills, as Staff recommended in an earlier report reviewing Energy Trust's budget.⁸

Request and Criteria

Energy Trust initially requested exceptions for a short list of eight wall, floor, and attic insulation measures because TRCs for these measures ranged from 0.4 to 0.7, which falls below the 0.8 threshold, thus requiring major measure exceptions. Staff's proposal instead would apply to all insulation measures for existing single family, multifamily, and manufactured homes.

The insulation measures that are currently not cost-effective were approximately one percent of electric savings and incentives in 2021 for the Residential program, and a fraction of a percent of the Existing Buildings programs where multifamily measures reside. Staff's proposal would support the expansion of all insulation incentives offerings, with non-cost-effective measures from TRC exceptions expanding to an estimated three percent of Residential electric savings and five percent of Residential electric incentives. Currently, Energy Trust does not anticipate a need to offer measures for single-family gas-heated homes that are not cost-effective. Multifamily measures will remain below one percent of Existing Program savings and incentives. If the proposal were to be approved, it may lead to the development of more general measure offers that are not cost-effective and apply to manufactured homes and electric single-family.

For UCT exceptions, Energy Trust also proposes incentives be set at levels that provide a UCT of at least 0.8 for insulation offers for income-qualified and energy-burdened households. This will allow Energy Trust to develop new offers using enhanced incentives. The change from a 1.0 UCT requirement to a 0.8 UCT requirement will let Energy Trust pay for nearly the entire cost of insulation in many circumstances.

Staff requests exceptions for specific measures under Categories C and G.

- C. The measure is included for consistency with other demand side management (DSM) programs in the region.

The inclusion of insulation measures allows the program to offer customers a complete suite of incentives for insulating their home. Staff agrees with this assessment and

⁷ More information about Community Partner Funding can be found at:

<https://insider.energytrust.org/announcing-community-partner-funding/>

⁸ Staff Report: Presentation of 2023 Draft Budget and 2023-24 Action Plan, found at:

https://oregonpuc.granicus.com/MetaViewer.php?view_id=2&event_id=752&meta_id=34479

believes that it is important to make sure comprehensive insulation options are available to customers who currently are using electric or natural gas for heating. These measures will benefit the participant regardless of what their future heating plans are or may become.

The Northwest Power and Conservation Council (NWPCC) documented its continuing support for weatherization as an element of the 2021 Power Plan. In an article by the NWPCC titled “Addressing Equity with Energy Efficiency,”⁹ the Council expressed support for weatherization even if it is not cost-effective.

D. Inclusion of the measure helps to increase participation in a cost-effective program.

Energy Trust seeks to offer all possible insulation retrofits to all customers regardless of fuel or housing type. Granting exceptions for the few measure applications that aren't passing cost-effectiveness, particularly wall and floor insulation in electric-heated homes, will make it more likely for trade allies and other delivery partners to continue to offer insulation through Energy Trust's program. Providing these exceptions on a blanket basis reduces administrative costs, which can instead be spent on more incentives.

Overall, more customers, especially in electric-heated homes, will be able to participate when out-of-pocket costs are lower and participation is less restricted.

G. The measure is required by law or is consistent with Commission policy and/or direction.

Increasing incentives for insulation increases access to energy savings and incentives for lower income customers. Providing this exception will support recent legislative changes and policy efforts to reduce energy burdens. These policy efforts include State of Oregon's 10-Year Plan to Reducing the Energy Burden in Oregon Affordable Housing; Executive Order 20-04 to reduce greenhouse gases while minimizing energy burdens;¹⁰ work in UM 2114 that identifies low-cost and no-cost measures as an opportunity to counter the disproportionate impacts of the COVID-19 pandemic;¹¹

⁹ https://www.nwcouncil.org/2021powerplan_addressing-equity-energy-efficiency/.

¹⁰ Executive Order No. 20-04 found at: https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf.

¹¹ Staff Report, Docket No. UM 2114, Investigation into the Effects of the COVID-19 Pandemic on Utility Customers. October 23, 2020, p. 22.

ORS 757.695 and HB 3141 provisions that include the implementation of performance metrics for environmental justice communities.¹²

Staff also adds that the Commission approved DEI-specific performance metrics for Energy Trust through Order No. 21-068.¹³ Weatherization incentives have the potential to have a disproportionately positive impact on low-income housing by reducing energy burden and likely overlap with communities that traditionally have not benefited from Energy Trust programs. As part of Staff's annual budget review, Staff recommended that Energy Trust work with utilities to target customers that have difficulty paying their bills and insulation with enhanced incentives may be a solution for those customers.¹⁴ Some of the work that will go into developing new offers through these exceptions may help support potential programs pursued through HB 2475.¹⁵

Staff also argues that this strategy is an ideal opportunity to pursue a "no regrets" strategy that would be beneficial for the energy systems, the ratepayer, and the participant. The risks of future cost increases related to compliance with Oregon's clean energy goals have not been fully quantified yet, as there are many decisions about resource options and policy still to be made. As energy systems transition to lower carbon intensities, it is unknown how much of the cost of these transitions will be paid by ratepayers in the future. Investing now protects both participating customers and the general ratepayer regardless of what policy decisions happen in the future.

The exceptions originally proposed by Energy Trust were discussed at the September 14, 2022, CAC meeting. No objections or concerns about granting exceptions for that limited set of measures were raised at the time. Staff's specific recommendation for this exception has not been shared at CAC.

Staff's Recommendation

Staff believes that Criteria C, D, and G apply to both TRC exceptions and UCT exceptions as described above.

Staff proposes these exceptions:

¹² ORS 757.747.

¹³ *In the Matter of Energy Trust of Oregon: Recommendations for Performance Measures*, Docket No. UM 1158, Order Number 21-068.

¹⁴ Staff Report: Presentation of 2023 Draft Budget and 2023-24 Action Plan, found at: https://oregonpuc.granicus.com/MetaViewer.php?view_id=2&event_id=752&meta_id=34479.

¹⁵ ORS 757.695. OPUC may address the mitigation of energy burdens through bill reduction measures or programs.

- 1) All insulation measures be exempted from TRC cost-effectiveness requirements for five years; and
- 2) All insulation measure offers for income-qualified and energy-burdened households are exempted from UCT cost-effectiveness requirements up to a score of 0.8 for five years as long as insulation costs from these offers remain below five percent of program costs.

Staff proposes that Energy Trust report annually on the prevalence of these measures. Staff requests that Energy Trust work with the Conservation Advisory Committee and Staff through 2023 to adjust or develop new offers with UCT exceptions.

Proposed Action Plan for the Exception

Staff proposes granting three-year exceptions for window retrofits and five-year exceptions for insulation with annual reporting.

Staff invites stakeholders to comment on these exception requests and Staff's assessment, and notably on UCT exceptions for insulation. Recognizing that additional comment options appear appropriate, Staff proposes that the Commission adopt a schedule to allow the filing of public comment through December 1, 2022. This will allow stakeholders ten business days after the November 15, 2022, public meeting to review and respond to Energy Trust's exception request. If the Commission adopts the proposed schedule, Staff will receive and compile comments, and return at the December 13, 2022, Public Meeting with a final recommendation.

Proposed Schedule

Event	Date
Deadline to file written public comments or contact Staff in Docket No. UM 1696 on major exception requests	December 1, 2022
Staff's Final Recommendation at Commission Public Meeting	December 13, 2022

Conclusion

Staff's preliminary conclusion is that Energy Trust should be granted TRC exceptions for window measures through March 31, 2026, for all window measures listed in this memo, TRC exceptions for all existing residential and multifamily insulation measures through March 31, 2028, and UCT exceptions for insulation measures that target income-qualified or energy-burdened customers through March 31, 2028. Staff proposes that stakeholders have until December 1, 2022, to file comments or contact Staff regarding the recommended major cost-effectiveness exceptions. Staff will

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present stakeholder comments and Staff's final recommendations at the December 13, 2022, public meeting.

PROPOSED COMMISSION MOTION:

Adopt Staff's proposed schedule for submission of public comments on Energy Trust's request for major exceptions and for Staff's final recommendation on major exceptions to cost-effectiveness of energy efficiency measures for specific window replacement measures and insulation measures.

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