

**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: September 7, 2021**

REGULAR X CONSENT EFFECTIVE DATE September 8, 2021

DATE: August 30, 2021

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 Exception Requests for New Buildings.

STAFF RECOMMENDATION:

The Oregon Public Utility Commission (Commission or OPUC) grant exceptions to the cost effectiveness guidelines for portions of the New Buildings Program, as requested by Energy Trust of Oregon (Energy Trust).

DISCUSSION:

Issue

Whether the Commission should grant cost effectiveness exception requests for portions of Energy Trust's New Buildings Program, as recommended by Staff.

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 provides an official filing and requests an exception. 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 *In the Matter of Energy Trust of Oregon, Request for Approval of Exceptions to Cost Effectiveness Guidelines*, Docket No. UM 1622, Order No. 14-332 (October 1, 2014).

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 TRC score is below 1 and above 0.8;
- The measure's savings do not comprise more than 5 percent of a program's annual savings; and,
- The measure's cost does not represent more than 5 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.

Analysis

Background

In January 2020, the Commission granted an initial exception for the New Buildings program, giving Energy Trust time to work with stakeholders to develop a program re-design.⁴ In July 2021, Energy Trust requested an exception to the Custom and Market Solutions tracks of the New Buildings Program. Energy Trust requested more time to adapt the New Buildings Program to changes in building codes.

In February 2019, Oregon adopted the 2019 Oregon Zero Energy Ready Commercial Code ("2019 Code") as part of the 2019 Oregon Structural Specialty Code effective October 2019.⁵ While codes are expected to be updated periodically and often incrementally, the 2019 update resulted in more significant changes between versions than usual. The overall impact of the advances in codes, due to the adoption of ASHRAE 90.1-2016 standards, is an improvement of the baseline for energy usage in newly designed buildings. At the same time, Energy Trust had difficulty adapting the Custom and Market Solutions Tracks to these code changes because the existing approach would not provide clear information about savings and costs at the individual energy efficiency savings measure level.

This request falls under the major exception category since these tracks had in the past accounted for roughly half the savings of the New Buildings Program. Energy Trust requested these exceptions under Categories A, B, C, and G:

³ *In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures*, Docket No. UM 1696, Order Numbers 17-395 and 17-457.

⁴ *In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures*, Docket No. UM 1696, Order Number 20-018.

⁵ See BCD comments at <https://www.oregon.gov/bcd/codes-stand/Pages/adopted-codes.aspx>.

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

Staff analyzed Energy Trust's requests for cost effectiveness exceptions and presented initial recommendations at the August 10, 2021, Public Meeting. (Please see Attachment A for a copy of Staff's memo.) Staff proposed granting an extension to the current exceptions for these tracks of the New Buildings Program for two years, while the current program offerings continue to operate and collect information on new projects built under the updated codes. During this time, Energy Trust would engage with its Conservation Advisory Council, Oregon Department of Energy, and Oregon Building Codes Division to develop a new program design. Energy Trust is now exploring an education-based approach to promote and acquire energy savings.

In response, the Commission issued Order No. 21-254 on August 12, 2021, directing Staff to present final recommendations at the September 7, 2021, Public Meeting.⁶ This provided time for stakeholder comment in response to Staff's initial recommendations.

Stakeholder Comments

The deadline for comments for inclusion in Staff's memo was August 24, 2021. The following six stakeholders filed comments:

- Mill Creek Residential
- Security Properties
- Interface Engineering Inc.
- Northwest Housing Alternatives
- SORA
- Project Pivot

⁶ *In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures*, Docket No. UM 1696, Order Number 21-254.

Staff appreciates the public interest in this topic and the time that stakeholders took to review this proposal. Of the six responses on the pilot, all supported an extension to exceptions so that Energy Trust has time to redesign the program. Stakeholders cited the benefits of ongoing reliable and dependable guidance, and assistance in attaining higher efficiency goals. Four commenters highlighted the importance of continuing to support multifamily housing and affordable housing projects.

Staff Recommendations

After reviewing written comments, Staff maintains its initial recommendations to grant exceptions for portions of the New Buildings Program based on Criteria A, B, C, and G. As outlined in the previous memo, Staff determined that this exception met multiple criteria. These consisted of the presence of non-energy benefits from supporting the building design and architectural communities (Criteria A); potential for improvements on cost-effectiveness (Criteria B); coordination with other regional efforts (Criteria C); and reductions in site-level greenhouse gases in support of Executive Order 20-04, (Criteria G).

Staff notes that depending on the design developed, Energy Trust may still need to request exceptions from measure-level cost effectiveness in order to deliver a viable, cost-effective program. Energy Trust will need to discuss these strategies with the Commission before the exception period ends. Staff recommends that Energy Trust report back to Staff in Q3 of 2022 and 2023 with updates and progress towards a new program design.

Conclusion

At the August 10, 2021, Public Meeting, Staff presented its initial cost effectiveness recommendations. Staff proposed that the New Buildings Program Custom and Market solutions tracks be granted extensions to the cost effectiveness requirements exceptions through March 31, 2024, so that the program can continue to provide a range of offerings to builders and designers while taking the time to make modifications to the program. Staff was ordered to return with final recommendations at the September 7, 2021, Public Meeting.

To date, no stakeholders raised objections to Staff's proposed exceptions. Based on this, Staff believes that its initial recommendations should be adopted by the Commission. These recommendations are to grant an extension to cost-effectiveness exceptions for the Custom and Market Solutions tracks of the New Buildings Program through March 31, 2024. Staff recommends that Energy Trust reports on progress to Staff in Q3 of 2022 and Q3 of 2023.

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PROPOSED COMMISSION MOTION:

Adopt Staff's recommendation to grant exceptions to cost effectiveness guidelines for portions of Energy Trust's New Buildings Program through March 31, 2024.

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ITEM NO. CA2

**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: August 10, 2021**

REGULAR CONSENT EFFECTIVE DATE August 11, 2021

DATE: July 28, 2021

TO: Public Utility Commission

FROM: Anna Kim

THROUGH: Bryan Conway, JP Batmale, and Sarah Hall

SUBJECT: OREGON PUBLIC UTILITY COMMISSION STAFF:
(Docket No. UM 1696)
Energy Trust of Oregon Cost Effectiveness Exception Requests for New Buildings.

STAFF RECOMMENDATION:

Adopt Staff's proposed schedule for submission of public comments and for Staff's final recommendation on major exception to cost effectiveness on an energy efficiency measure for portions of the New Buildings Program, as requested by Energy Trust of Oregon (Energy Trust).

DISCUSSION:

Issue

Whether the Commission should adopt the Schedule for public comments and Staff's presentation of its final recommendation on exception to cost effectiveness on an energy efficiency measure for portions of Energy Trust's New Buildings Program.

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:

- H. 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.
- I. Inclusion of the measure will increase market acceptance and is expected to lead to reduced cost of the measure.
- J. The measure is included for consistency with other demand side management (DSM) programs in the region.
- K. Inclusion of the measure helps to increase participation in a cost effective program.
- L. The package of measures cannot be changed frequently and the measure will be cost effective during the period the program is offered.
- M. The measure or package of measures is included in a pilot or research project intended to be offered to a limited number of customers.
- N. The measure is required by law or is consistent with Commission policy and/or direction.⁷

The current process to consider cost effectiveness exceptions was reaffirmed in Docket No. UM 1622 and is as follows;⁸

- 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 provides an official filing and requests an exception. 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

⁷ 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.

⁸ *In the Matter of Energy Trust of Oregon, Request for Approval of Exceptions to Cost Effectiveness Guidelines*, Docket No. UM 1622, Order No. 14-332 (October 1, 2014).

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 Docket No. UM 1696.⁹ 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 TRC score is below 1 and above 0.8;
- The measure's savings do not comprise more than 5 percent of a program's annual savings; and,
- The measure's cost does not represent more than 5 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 January 2020, the Commission granted an initial exception for the New Buildings program, giving the Energy Trust time to work with stakeholders to develop a program re-design.¹⁰

Analysis

This analysis will a) provide background to the program and the existing exception; b) outline activities undertaken under the exception to date; c) review the request and rationale; and d) present a proposal for further action.

Background

The Energy Trust's New Buildings Program works with building owners and project developers for new construction buildings and significant retrofits in the commercial and industrial sectors. By getting involved with customers early during the design phase, Energy Trust is able to provide energy-saving recommendations before key design decisions are made that may limit additional opportunities to invest in energy efficiency. Projects may work with the program for 18 months or more, and choose between three different tracks offered by the program:

Prescriptive Track: Energy efficiency measure-level incentives for choosing one specific piece of equipment over another.

⁹ *In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures*, Docket No. UM 1696, Order Numbers 17-395 and 17-457.

¹⁰ *In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures*, Docket No. UM 1696, Order Number 20-018.

Market Solutions Track: Sets of recommendations based on models that had been established based on specific building types (ex: low-rise multifamily, or a school building).

Custom Track: Recommendations based on modeling an individual building. Energy Trust has both a whole building offering and “Path to Net Zero” approach.

In 2018, Energy Trust completed 462 projects across the three tracks, saving over 47 million kWh and 860,000 therms with a budget of \$6 million. Further, the program contributed approximately 11 percent of total electric savings and 13 percent of total gas savings to Energy Trust in 2018. The New Buildings program works with half or more of the newly constructed buildings in Energy Trust’s service territory. Overall, the program scored a 2.5 UCT and 1.6 TRC in 2018.

In February 2019, Oregon adopted the 2019 Oregon Zero Energy Ready Commercial Code (“2019 Code”) as part of the 2019 Oregon Structural Specialty Code effective October 2019 and replacing the previous 2014 Oregon Energy Efficiency Specialty Code (“2014 Code”).¹¹ This code update was driven by Executive Order 17-20¹² and results in a significantly higher baseline of efficiency for new construction and major retrofits. This will have lasting benefits, improving energy use for buildings permitted January 1, 2020, and later.¹³

While codes are expected to be updated periodically and often incrementally, the 2019 update resulted in more significant changes between versions than usual. The 2014 Code was based off the 2012 International Building Code and the 2019 Code is based off American Society of Heating, Refrigerating and Air-Conditioning Engineers (“ASHRAE”) 90.1-2016 standards.

The overall impact of the advances in codes due to the adoption of ASHRAE 90.1-2016 standards is an improvement of the baseline for energy usage in newly designed buildings. Under the 2019 code changes, the Prescriptive Track of Energy Trust’s New Buildings Program continues to operate as before, but with reduced overall savings. Meanwhile, Energy Trust had difficulty adapting the Custom and Market Solutions Tracks to these code changes because the existing approach would not provide clear information about savings and costs at the individual energy efficiency savings measure level.

OPUC Staff recommended an exception for the Custom Track and Market Solutions Track of the New Buildings Program to give Energy Trust time to study and test ways to

¹¹ See BCD comments at <https://www.oregon.gov/bcd/codes-stand/Pages/adopted-codes.aspx>

¹² Executive Order 17-20 https://www.oregon.gov/gov/Documents/executive_orders/eo_17-20.pdf

¹³ 2019 Oregon Structural Specialty Code Adoption documentation is available here: <https://www.oregon.gov/bcd/codes-stand/code-adoption/Pages/2019-osscc-adoption.aspx>

modify or redesign these tracks to comply with measure-level testing of savings and costs. These exceptions were granted in Order No. 20-018.

Activities Under the Existing Exception

Under the exception for New Buildings, Energy Trust was directed to:

1. Gather data and test cost effective re-design approaches for the custom track and market solutions track.
2. Dialogue with experts in the field and with Energy Trust's Conservation Advisory Council (CAC) in considering program track changes based on field observations.
3. Propose to the CAC and OPUC design changes to the program and/or changes to OPUC's cost effectiveness test(s) for the custom track and market solutions track.¹⁴

Energy Trust has followed through on items #1 and #2 to Staff's satisfaction but has not completed #3 at this time.

Over the last 18 months, Energy Trust hosted a series of workshops that included representatives from Oregon Department of Energy (ODOE), Northwest Energy Efficiency Alliance (NEEA), and OPUC Staff. Energy Trust also consulted with additional experts at Department of Consumer and Building Services (DCBS), in industry, and through the Conservation Advisory Council.

Energy Trust worked with stakeholders through workshops to explore different design options, considering a range of alternatives and attempted to pursue options that came closest to determining costs and savings at a measure level. The group concluded that the major challenge was determining the cost of the equipment that would be used in a building if the program did not exist. Energy Trust collected data as advised by stakeholders, and tested a proxy approach on specific building. Energy Trust used prototype buildings and cost estimates from a third-party cost consultant but found results were too variable to support the use of this approach.

As the end of the initial exception period approaches, Energy Trust does not have a new program design to propose, and will not be able to produce one before the exception period ends on December 31, 2021.

At this point, no projects under the new code have been completed, which limits Energy Trust's ability to learn from market practices. It may be until early 2023 before projects

¹⁴ *In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures*, Docket No. UM 1696, Order Number 20-018.

are completed. This lack of experience makes it more challenging to develop a program that provides value to the market.

The Exception Request

Energy Trust requests an extension of exceptions to the Custom Track and Market Solutions Track of the New Buildings Program. This request falls under the major exception category as these tracks had in the past accounted for roughly half the savings through New Buildings.

Energy Trust is requesting the extension because it needs more time to develop a new program design. At the same time, Energy Trust wants to continue supporting the market, which benefits from the stability of Energy Trust's services.

Energy Trust requests the exception under Categories A, B, C, and G, providing the following arguments.

- 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.

These tracks are a long-term investment in building more efficient buildings overall. The program also supports multifamily buildings, which benefits lower income and rural customers. By providing support through these tracks of the New Buildings program, Energy Trust supports the building design and architecture community, and can target communities to benefit from higher efficiency.

- B. Inclusion of the measure will increase market acceptance and is expected to lead to reduced cost of the measure.

An exception to these tracks of the program is expected to lead to increased market acceptance of the range of energy efficiency measures that Energy Trust would recommend through these tracks and is also expected to lead to reduced costs of those recommended measures, as well as reduced costs over time in terms of modeling and estimating impacts.

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

These tracks are part of state and regional efforts towards more efficient buildings, including Portland Housing Bureau Affordable Housing Green Building Policy, NEEA, and the efforts of Oregon Housing and Community Services in affordable multifamily housing.

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

These exceptions would support Executive Order 17-20 that led to the adoption of the new code changes, and support efficiency in affordable housing. These exceptions would also support Executive Order 20-04 by reducing site-level reductions of greenhouse gases.

Staff agrees with these assessments and believes exception Categories A, B, C, and G are applicable. Overall, Staff believes that an extension to an exception for these program tracks is important for the long-term growth of energy efficiency achievements in Oregon, and Energy Trust requires more time to complete this effort.

Proposed Action Plan for the Exception

Staff proposes granting an extension of two years to the exception for the Custom Track and Market Solution Track of the New Buildings Program. The current program offerings will continue to operate and collect information on how customers are responding to the code changes, measures costs, and measures savings under the new codes.

During this time, Energy Trust will continue to work with stakeholders, including CAC, Oregon Department of Energy and NEEA to develop a new program design. Energy Trust will report back to Staff every six months with updates and progress towards new offerings.

Since this request affects a large portion of a program while considering non-traditional cost effectiveness standards, Staff recommends providing an additional period for public comment. Staff proposes the following:

- All stakeholders be given until August 24, 2021 to file comments or contact Staff regarding these recommendations.
- At the September 10, 2021 Public Meeting Staff will return to the Commission to summarize stakeholder positions and present its final recommendations on the exception request for Commission approval.

Conclusion

Staff concludes that the New Buildings Program Custom Track and Market Solutions Track should be granted exceptions through March 31, 2024, to cost effectiveness requirements so that the program can continue to provide a range of offerings to builders and designers while taking the time to make modifications to the program. Staff proposes that stakeholders have until August 24, 2021 to file comments or contact Staff regarding the recommended major cost effectiveness exceptions. Staff will

present stakeholder comments and its final recommendations at the September 10, 2021, Public Meeting.

PROPOSED COMMISSION MOTION:

Adopt Staff's proposed schedule for submission of public comments and for Staff's final recommendation on major exception to cost effectiveness on an energy efficiency measure for portions of Energy Trust's New Buildings Program, as detailed in this memo.