

ORDER NO. 24-443

ENTERED Dec 10 2024

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

UM 1696

In the Matter of

PUBLIC UTILITY COMMISSION OF  
OREGON,

Energy Trust of Oregon Cost Effectiveness  
Exception Request for Manufactured  
Homes Early Replacement Measure.

ORDER

**DISPOSITION: STAFF'S RECOMMENDATION ADOPTED**

At its public meeting on December 10, 2024, the Public Utility Commission of Oregon adopted Staff's recommendation in this matter. The Staff Report with the recommendation is attached as Appendix A.

BY THE COMMISSION:



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**Alison Lackey**  
Chief Administrative Law Judge



A party may request rehearing or reconsideration of this order under ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-001-0720. A copy of the request must also be served on each party to the proceedings as provided in OAR 860-001-0180(2). A party may appeal this order by filing a petition for review with the Circuit Court for Marion County in compliance with ORS 183.484.

ITEM NO. RA1

**PUBLIC UTILITY COMMISSION OF OREGON  
STAFF REPORT  
PUBLIC MEETING DATE: December 10, 2024**

REGULAR  X  CONSENT       EFFECTIVE DATE  December 11, 2024

DATE: December 2, 2024

TO: Public Utility Commission

FROM: Kiran Ayub

THROUGH: Caroline Moore, JP Batmale, and Sarah Hall **SIGNED**

SUBJECT: OREGON PUBLIC UTILITY COMMISSION STAFF:  
(Docket No. UM 1696)  
Energy Trust of Oregon cost effectiveness exception request for  
manufactured homes early replacement measure.

**STAFF RECOMMENDATION:**

The Oregon Public Utility Commission (Commission or OPUC) should grant exceptions to cost effectiveness of energy efficiency measures for manufactured homes replacement through December 31, 2027, as requested by Energy Trust of Oregon.

**DISCUSSION:**

Issue

Whether the Public Utility Commission of Oregon should grant exceptions to cost effectiveness for energy efficiency measures for manufactured homes.

Applicable Rule or Law

The Oregon legislature has granted the Commission discretion to require that a portion of the funds collected in an electric company's rates under ORS 757.054(4) be paid to a nongovernmental entity for the purpose of making expenditures consistent with the provisions of ORS 757.054.

Pursuant to ORS 757.612(3)(d), the Commission may require funds collected by electric companies through public purpose charges be directed to a nongovernmental entity for investment in public purposes described in ORS 757.612(1).

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ORS 757.746 further permits OPUC to, through natural gas tariffs, require local distribution companies to direct funds collected to a nongovernmental entity for similar purposes.

In addition, under ORS 757.695(1), the Commission may address the mitigation of energy burdens on customers as described in ORS 757.230(1) through various measures, including demand response and weatherization programs.

In Order No. 24-243 the Commission authorized an Agreement to Direct Funding to Nongovernmental Entity (Agreement) with Energy Trust of Oregon (Energy Trust).<sup>1</sup> Exhibit A of the Agreement provides that energy efficiency programs “generally must use measures and incentive levels that are cost-effective. Energy Trust may apply the Total Resource Cost (TRC) test, Utility Cost Test (UCT) or another test approved by the Commission to demonstrate cost-effectiveness. . .”<sup>2</sup>

Energy Trust may request and receive an exception from the Commission for the use of a cost effectiveness test of energy efficiency measures. Exhibit A of the Agreement states that an exception from the use of a cost-effectiveness test may be granted for a measure, building or program, as applicable (collectively referred to here as “measure”), when:<sup>3</sup>

- A. The measure produces significant non-quantifiable non-energy benefits;
- 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;

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<sup>1</sup> See generally Order No. 24-243, authorizing the agreement, *In the Matter of Energy Trust of Oregon Agreement to Direct Funding to Non-Governmental Entity*, Docket No UM 1158, July 24, 2024; see also executed agreement available at, [https://www.energytrust.org/wp-content/uploads/2024/08/3964\\_Energy-Trust\\_PUC-Agreement-2024\\_Executed.pdf](https://www.energytrust.org/wp-content/uploads/2024/08/3964_Energy-Trust_PUC-Agreement-2024_Executed.pdf).

<sup>2</sup> See Exhibit A to the Agreement, explaining that the cost effectiveness test required under Order No. 94-590 is the Total Resource Cost Test (TRC). Order No. 94-590 *In The Matter of an Investigation into the Calculation and Use of Conservation Cost-effectiveness Levels*, Docket No. UM 551, (April 6, 1994). Energy Trust has used the TRC test with the approval of the Commission since its inception to guide what measures can be offered by Energy Trust programs. Energy Trust has used the Utility Cost Test (UCT) to set the maximum allowable incentive amount that can be offered to participants. The TRC measures cost effectiveness from the total utility system perspective and includes costs and benefits incurred by both participants and non-participants. The UCT measures costs and benefits from the perspective of the utility only and does not consider the non-energy benefits or incremental measure costs experienced by program participants.

<sup>3</sup> *Id.*, at Exhibit A, Requirement J, pp. 24-25.

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- 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; and
- H. Inclusion of the measure mitigates energy burden.

Under the Agreement, Energy Trust may request an exception pursuant to processes directed by the Commission or as otherwise required by law alternative guidelines set by the Commission. The process to consider cost effectiveness exceptions, last discussed in Docket No. UM 1622, is as follows:<sup>4</sup>

- 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.

In Order Nos. 20-158<sup>5</sup> and 21-312<sup>6</sup> the Commission previously granted exceptions for manufactured homes replacement measures.

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<sup>4</sup> Order No. 14-332, *In the Matter of Energy Trust of Oregon, Request for Approval of Exceptions to Cost Effectiveness Guidelines*, Docket No. UM 1622, October 1, 2014.

<sup>5</sup> Order No. 20-158, *In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures*, Docket No. UM 1696, May 07, 2020. In May 2020, under the prior agreement with Energy Trust, the Commission granted exceptions for manufactured homes replacement measures through December 31, 2021, so that Energy Trust could complete a pilot study to explore the costs and benefits of manufactured homes replacement

<sup>6</sup> Order No. 21-312, *In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures*, Docket No. UM 1696, September 22, 2021. In September 2021, under the prior agreement with Energy Trust, the Commission granted exceptions to cost effectiveness of energy efficiency measures for manufactured homes replacements through March 31, 2025, with a cap of \$5 million in measures under the exception.

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## Analysis

### *Background*

Energy Trust submitted a request for a major cost effectiveness exception request for measures in its Manufactured Homes Early Replacement Program on September 27, 2024. At the October 29 public meeting, the Commission adopted Staff's recommendations presenting an initial analysis and proposing a schedule for public comment to ensure transparency and stakeholder input.<sup>7</sup> Accordingly, this concluding memo will summarize Staff's initial recommendation, discuss stakeholder comments, and present a final recommendation.

Energy Trust of Oregon is seeking to continue utilizing the Total Resource Cost (TRC) and Utility Cost Test (UCT) methodologies as outlined in the August 2024 Agreement. However, Energy Trust has requested a three-year major cost-effectiveness exception for energy efficiency measures related to the replacement of pre-1995 manufactured homes with new ENERGY STAR or Northwest Energy Efficient Manufactured (NEEM) Homes, available in both single- and double-wide formats. Specifically, Energy Trust is requesting a major exception for measures within its Manufactured Homes Early Replacement Program, as many of the proposed measures have TRC scores below the 0.8 threshold for a minor exception.

Energy Trust's request for a major exception would enable the combination of various funding sources necessary for completing the replacement of pre-1995 manufactured homes. The TRC scores for the proposed energy efficiency measures generally range from 0.6 to 0.7. A detailed overview of the energy efficiency measures, and their respective cost-effectiveness scores is provided in Table 1 of Attachment A.

Energy Trust's cost-effectiveness calculations are conservative, excluding external funding from other programs that could potentially improve TRC values. When these additional funds are applied, TRC scores are expected to increase. Energy Trust is proposing that the UCT for each measure be set at 1.0.<sup>8</sup>

Commission Order No. 21-312 previously granted Energy Trust a major exception to fund energy efficiency measures for the replacement of manufactured homes, with a maximum incentive expenditure cap of \$5 million through March 31, 2025. To date, \$1,712,540 has been spent, representing 34 percent of the available funding. Moving forward, Energy Trust forecasts an annual incentive expenditure of \$1.2 million, driven

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<sup>7</sup> Order No. 24-397, *In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Manufactured Homes*, Docket No. UM 1696, October 31, 2024.

<sup>8</sup> As a cost-effectiveness test, the UCT focuses only ratepayer dollars spent for the benefit of avoided energy costs. It does not account for total measure cost.

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by growing interest in the program, particularly from new manufacturers and funding partners entering the market.

The Energy Trust incentive, when combined with co-funding, enables rural and low-to-moderate income customers to replace aging manufactured homes with energy-efficient models they might otherwise be unable to afford. Energy Trust's initiative relies heavily on co-funding, as many customers delay projects until additional funding becomes available. Approval of the requested exception would maintain access to this initiative, expanding the ability of customers to combine incentives and replace older homes.

Since 2018, Energy Trust, in partnership with a network of organizations, has replaced outdated manufactured homes with energy-efficient models. By 2024, the program will have replaced 100 homes, significantly improving the living conditions for many families.<sup>9</sup>

For 2024, Energy Trust estimates that the Manufactured Homes Early Replacement Program will serve 68 homes, resulting in an estimated 1.95 percent of electric savings and 0.16 percent of gas savings within the Residential Sector portfolio. This equates to approximately 1,082,186 kWh and 3,338 therms in annual energy savings, as detailed in Table 2 in Attachment A.

Upon approval of this requested exception, Energy Trust anticipates increasing program output to 110 homes annually, with estimated energy savings of 1,838,700 kWh and 2,345 therms. Staff noted that this represents a significant increase in program activity and requested further explanation. Energy Trust indicated that the increased estimates are based on additional implementation contractor capacity and the availability of several new funding sources including potential federal funding through the OHCS's Preservation and Reinvestment Initiative for Community Enhancement (PRICE) and state funding through the Homeowner Assistance and Reconstruction Program (HARP) starting in 2025.

Another important consideration for the TRC and UCT is the anticipated adoption of a new Housing and Urban Development (HUD) code in 2026, which may impact costs and savings used in cost effectiveness testing. A three-year extension of the exception will allow alignment with forthcoming updates to the New Manufactured Homes measures, the new HUD code, and revisions to both ENERGY STAR and NEEM specifications.

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<sup>9</sup> Energy Trust of Oregon, [More Than 100 Oregon Families Receive New Energy Saving Homes, Energy Trust Blog](#), September 25, 2024.

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Energy Trust requests this exception under Categories A, C, G, and H:

- A. Measure produces significant non-quantifiable nonenergy benefits.
- C. Measure is included for consistency with other DSM programs in the region.
- G. The measure is required by law or is consistent with the Commission Policy.
- H. Inclusion of the measure mitigates energy burden.

*Staff Review*

As noted in its October 29, 2024, Staff Memo, Staff agrees that these criteria apply:

- A. Measure produces significant non-quantifiable nonenergy benefits.

Staff agrees that replacing aging manufactured homes with energy-efficient models offers significant non-quantifiable benefits beyond energy savings. These improvements enhance comfort, health, safety, and durability for residents. Energy-efficient homes contribute to better air quality, a more stable indoor environment, and reduced maintenance costs, while also ensuring long-term resilience. Additionally, with improved thermal envelopes, these homes require less heating or cooling, making them candidates for flexible load programs, where pre-heating or pre-cooling can reduce grid strain without compromising occupant comfort.

- C. Measure is included for consistency with other DSM programs in the region.

Staff agrees that this initiative aligns with several regional Demand-Side Management (DSM) programs. The Oregon Housing and Community Services (OHCS) operates a Manufactured Housing Replacement Program, funded in part by HB 2896, which could co-fund Energy Trust's efforts. Both organizations are committed to a coordinated customer service approach, using a Navigator model to help clients navigate multiple programs. Additionally, the Bonneville Power Administration (BPA) has a similar program for homes built before 1976, and the Regional Technical Forum (RTF) offers a Manufactured Home Replacement measure through May 31, 2027. The Northwest Energy Efficiency Alliance (NEEA) has also supported energy-efficient manufactured homes and is collaborating with the Department of Energy and ENERGY STAR on relevant certifications.

- G. The measure is required by law or is consistent with the Commission Policy.

Staff agrees that these exceptions are consistent with the Commission's approval of DEI-specific performance metrics for Energy Trust under Order No. 21-068 that emphasizes partnerships with affordable housing and low-income service

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organizations.<sup>10</sup> Collaboration with OHCS strengthens the impact of both programs. These exceptions would also support Executive Order No. 20-04<sup>11</sup> by helping reduce greenhouse gas emissions and alleviating energy burdens for low-income customers.

H. Inclusion of the measure mitigates energy burden.

Staff agrees that the exception request also qualifies under category H resulting in the reduction of gas and energy use as noted and reducing energy burden due to lower energy bills.

Staff concurs that non-quantifiable benefits make these measures valuable to participants despite the low TRC scores. Overall, the proposed exceptions will bolster efforts to improve low-income housing.

#### *Stakeholder Engagement*

The comment deadline for inclusion in Staff's memo was November 13, 2024. Staff did not receive written comments to Docket No. UM 1696. Staff confirmed that no comments were shared directly with Energy Trust.

Energy Trust also discussed plans to pursue a cost-effectiveness measure exception for this measure at its September 11, 2024, Conservation Advisory Committee (CAC) meeting and no concerns were expressed. As a result, Staff finds that Energy Trust's exception request reflects the collective views of many entities.

#### Conclusion

After the close of the public comment period, Staff maintains its initial recommendations to grant the major TRC exception for the measure applications in the Manufactured Homes Early Replacement Program through December 31, 2027. To date, stakeholders have been supportive of Staff's recommendation. Manufactured homes play a vital role in addressing Oregon's housing crisis, offering an affordable pathway to homeownership for many residents. Out of approximately 140,000 manufactured homes in the state, over 110,000 were built before 1995, prior to the implementation of federal energy standards that dramatically improved construction and insulation practices. Homes built before this benchmark are often energy-inefficient, frequently past their expected lifespan, and may pose safety concerns. This program specifically targets

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<sup>10</sup> Order No. 21-068, *In the Matter of Energy Trust of Oregon: Recommendations for Performance Measures*, Docket No. UM 1158, February 25, 2021.

<sup>11</sup> Executive Order 20-04, [Directing State Agencies to Take Actions to Reduce and Regulate Greenhouse Gas Emissions](#), March 10, 2020.

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rural areas, including Eastern and South-Central Oregon, as well as housing occupied by low-income residents.

**PROPOSED COMMISSION MOTION:**

Grant exceptions to cost effectiveness of energy efficiency measures for manufactured homes replacement through December 31, 2027, as requested by Energy Trust of Oregon.

RA1 – UM 1696

ITEM NO. CA5

PUBLIC UTILITY COMMISSION OF OREGON  
STAFF REPORT  
PUBLIC MEETING DATE: October 29, 2024

REGULAR \_\_\_\_\_ CONSENT  X  EFFECTIVE DATE \_\_\_\_\_ N/A \_\_\_\_\_

DATE: October 21, 2024

TO: Public Utility Commission

FROM: Kiran Ayub

THROUGH: Caroline Moore, JP Batmale, and Sarah Hall **SIGNED**

SUBJECT: OREGON PUBLIC UTILITY COMMISSION STAFF:  
(Docket No. UM 1696)  
Energy Trust of Oregon cost effectiveness exception request for  
manufactured Homes, and schedule for public comments.

**STAFF RECOMMENDATION:**

Adopt Staff's proposed schedule for submission of public comments, and for Staff's final recommendation to grant exceptions to cost effectiveness of energy efficiency measures for manufactured homes as requested by Energy Trust of Oregon.

**DISCUSSION:**

Issue

Whether the Public Utility Commission of Oregon (Commission, OPUC, or PUC) 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 manufactured homes.

Applicable Rule or Law

The Oregon legislature has granted the PUC discretion to require that a portion of the funds collected in an electric company's rates under ORS 757.054(4) be paid to a nongovernmental entity for the purpose of making expenditures consistent with the provisions of ORS 757.054. The legislature has further authorized the PUC under ORS 757.612(3)(d) to require funds collected by electric companies through public purpose charges be directed to a nongovernmental entity for investment in public purposes described in ORS 757.612(1). The legislature also recognizes in

ORS 757.746 that the PUC may, through natural gas tariffs, require local distribution companies to direct funds collected to a nongovernmental entity for similar purposes.

In addition, under ORS 757.695(1), the PUC may address the mitigation of energy burdens on customers as described in ORS 757.230(1) through various measures, including demand response and weatherization programs.

On August 19, 2024, the Commission and Energy Trust of Oregon (Energy Trust) entered into an Agreement to Direct Funding to Nongovernmental Entity (Agreement). Exhibit A of the Agreement provides that energy efficiency programs “generally must use measures and incentive levels that are cost-effective. Energy Trust may apply the Total Resource Cost (TRC) test, Utility Cost Test (UCT) or another test approved by the PUC to demonstrate cost-effectiveness. . .”<sup>1</sup> Exhibit A also authorizes Energy Trust to request and receive an exception from the Commission from the use of a cost effectiveness test of energy efficiency measures. Exhibit A of the Agreement states that an exception from the use of a cost-effectiveness test may be granted for a measure, building or program, as applicable (collectively referred to here as “measure”), when:

- A. The measure produces significant non-quantifiable non-energy benefits;
- 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

<sup>1</sup> 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 the TRC test with the approval of the Commission since its inception to guide what measures can be offered by Energy Trust programs. Energy Trust has used the Utility Cost Test (UCT) to set the maximum allowable incentive amount that can be offered to participants. The TRC measures cost effectiveness from the total utility system perspective and includes costs and benefits incurred by both participants and non-participants. The UCT measures costs and benefits from the perspective of the utility only and does not consider the non-energy benefits or incremental measure costs experienced by program participants.

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; and

H. Inclusion of the measure mitigates energy burden.

Under the August 19, 2024, Agreement, Energy Trust may request an exception pursuant to processes directed by the Commission or as otherwise required by law or by alternative guidelines set by the Commission. The process to consider cost effectiveness exceptions was last discussed in Docket No. UM 1622 and is as follows:<sup>2</sup>

- 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.

In May 2020, under the prior agreement with Energy Trust, the Commission granted exceptions for manufactured homes replacement measures through December 31, 2021, so that Energy Trust could complete a pilot study to explore the costs and benefits of manufactured homes replacement.<sup>3</sup>

In September 2021, under the prior agreement with Energy Trust, the Commission granted exceptions to cost effectiveness of energy efficiency measures for manufactured homes replacements through March 31, 2025, with a cap of \$5 million in measures under the exception.<sup>4</sup>

<sup>2</sup> 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).

<sup>3</sup> In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures, Docket No. UM 1696, Order No. 20-158.

<sup>4</sup> In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures, Docket No. UM 1696, Order No. 21-312.

## Analysis

### *Background*

Energy Trust seeks to continue using the TRC and the UTC under the August 2024 Agreement but requests a major cost-effectiveness exception for measures supporting the retirement of existing pre-1995 manufactured homes and their replacement with new ENERGY STAR or Northwest Energy Efficient Manufactured (NEEM) Homes, available in single- or double-wide formats. Energy Trust requests a major exception to measures within its Manufactured Homes Early Replacement offering because many of the requested measures have TRC scores below 0.8. Staff presents its initial recommendation and asks that the Commission approve the proposed schedule to allow for public comment and for Staff to present its final recommendation at a later public meeting.

This exception will enable Energy Trust to combine various funding sources essential for completing these replacement projects. The TRC scores for these measures mostly fall between 0.6 and 0.7, which is below the threshold for minor exceptions. A detailed overview of the proposed energy efficiency measures and their cost-effectiveness scores can be found in Table 1 below and in Attachment A. To present a conservative estimate, Energy Trust calculated cost-effectiveness without applying additional, external funds from other programs against the approved measures' incremental costs. TRC values will most likely increase with application of those external funds. Energy Trust proposing incentives such that the Utility Cost Test for each measure is 1.0.<sup>5</sup>

As context, Commission Order No. 21-312 granted Energy Trust a major exception to fund energy efficiency measures for manufactured homes replacements, with an established a maximum incentive expenditure of \$5 million through March 31, 2025. Spending to date has been \$1,712,540, or 34 percent of the exception allowance. Moving forward, Energy Trust forecasts an annual incentive spend to grow to \$1.2 million, driven by growing interest in the program, particularly from new manufacturers and funding partners entering the market.

Most early replacement measures for manufactured homes rely on co-funding for successful completion. From 2023 to 2024, 82 out of 88 completed projects (93 percent) received co-funding, primarily from Oregon Housing & Community Services (OHCS). On average, co-funding accounted for \$153,760, covering approximately 84 percent of total project costs.

<sup>5</sup> As a cost-effectiveness test, the UCT focuses only ratepayer dollars spent for the benefit of avoided energy costs. It does not account for total measure cost.

The availability of the incentive from Energy Trust empowers rural and low-to-moderate income customers to access energy-efficient manufactured homes that they might otherwise be unable to afford. The success of Energy Trust’s initiative is closely tied to co-funding since customers often delay starting projects until additional funding becomes available. A decision to approve this exception will likely increase the accessibility of the OHCS manufactured homes offer, as more customers can combine benefits to replace aging homes

Since 2018, Energy Trust, in collaboration with a network of partners, has successfully replaced older manufactured homes. By 2024, the Manufactured Homes Early Replacement measures have achieved the replacement of 100 outdated homes with new, energy-efficient models, significantly enhancing living conditions for many families.<sup>6</sup>

**Table 1: Cost Effectiveness of Manufactured Homes Early Replacement**

#	Measure	Savings (kWh)	Savings (therms)	Incremental Costs (\$)	Total NEB (Annual \$)	Maximum Incentive (\$)	UCT BCR at Max Incentive	TRC BCR w/o Cofunding
1	ENERGY STAR 2.0 - SW - Any Zone - Electric	15,228.18	0.00	\$102,411.27	\$2,275.81	\$41,793.33	1.0	0.9
2	ENERGY STAR 2.0 - DW - Any Zone - Electric	18,362.03	0.00	\$133,583.03	\$2,968.51	\$50,394.10	1.0	0.8
3	NEEM+ - SW - Any Zone - Electric	15,639.49	0.00	\$134,493.79	\$2,988.75	\$42,922.17	1.0	0.8
4	NEEM+ - DW - Any Zone - Electric	18,947.66	0.00	\$175,430.78	\$3,898.46	\$52,001.35	1.0	0.7
5	ENERGY STAR 2.0 - SW - Any Zone - Gas	678.85	387.88	\$102,411.27	\$2,275.81	\$19,396.56	1.0	0.6
6	ENERGY STAR 2.0 - DW - Any Zone - Gas	690.38	532.80	\$133,583.03	\$2,968.51	\$25,978.96	1.0	0.6
7	NEEM+ - SW - Any Zone - Gas	696.89	407.60	\$134,493.79	\$2,988.75	\$20,337.40	1.0	0.6
8	NEEM+ - DW - Any Zone - Gas	696.96	561.06	\$175,430.78	\$3,898.46	\$27,274.30	1.0	0.6
9	ENERGY STAR 2.0 - SW - Any Zone - Gas Only	0.00	387.88	\$102,411.27	\$2,386.05	\$17,533.48	1.0	0.6
10	ENERGY STAR 2.0 - DW - Any Zone - Gas Only	0.00	532.80	\$133,583.03	\$3,080.62	\$24,084.22	1.0	0.7
11	NEEM+ - SW - Any Zone - Gas Only	0.00	407.60	\$134,493.79	\$3,101.92	\$18,424.82	1.0	0.6
12	NEEM+ - DW - Any Zone - Gas Only	0.00	561.06	\$175,430.78	\$4,011.64	\$25,361.52	1.0	0.6

The TRC cost-effectiveness of each home will vary based on several factors, primarily the availability of complementary funding for individual projects. Energy Trust proposes measures that will be cost-effective however, without substantial funding from other

<sup>6</sup> September 25, 2024, More than 100 Oregon families receive new, energy-saving homes - Energy Trust Blog Energy Trust Blog.

sources, these measures may not be cost-effective for participants in terms of energy savings alone.

For 2024, Energy Trust estimates that the Manufactured Homes Early Replacement measures will serve 68 homes, contributing to 1.95 percent of electric and 0.16 percent of gas savings within the Residential Sector portfolio. This translates to annual savings of approximately 1,082,186 kWh and 3,338 therms, as detailed in Table 2 here and in Attachment A.

**Table 2: 2024 Forecasted Budget of Manufactured Homes Early Replacement Program**

2024 Manufactured Homes Early Replacement Forecast	Number of Homes	Reportable kWh	Reportable therms	Total Incentives
Double Wide - Any Zone - Electric	21	503,456	-	\$310,500
Double Wide - Any Zone - Gas	2	520	1,804	\$30,000
Single Wide - Any Zone - Electric	42	577,617	-	\$418,000
Single Wide - Any Zone - Gas	3	594	1,534	\$30,000
<b>MHR Total</b>	<b>68</b>	<b>1,082,186</b>	<b>3,338</b>	<b>\$788,500</b>
<b>Total Residential Portfolio</b>		55,395,325	2,084,795	\$46,387,995
	<b>% of total</b>	<b>1.95%</b>	<b>0.16%</b>	<b>1.70%</b>

Upon approval of this exception request, Energy Trust anticipates increasing programmatic output by working with around 110 homes annually, yielding estimated savings of 1,838,700 kWh and 2,345 therms, as illustrated in Table 3 here and Attachment A. Staff notes that this is a significant increase and requested supporting explanation from Energy Trust. In response, Energy Trust explained that additional implementation contractor capacity, and several new funding sources coming online or becoming available in 2025 have led to these increased estimates. These sources include potential Federal funding through the OHCS application to Preservation and Reinvestment Initiative for Community Enhancement (PRICE) and State funding of the Homeowner Assistance and Reconstruction Program (HARP).

**Table 3: Forecasted 2025 Manufactured Homes Early Replacement Participation**

2025 Manufactured Homes Early Replacement Forecast	Number of Homes	Reportable kWh	Reportable therms	Total Incentives
Double Wide - Any Zone - Electric	22	446,028	-	\$330,000
Double Wide - Any Zone - Gas	2	1,491	1,122	\$30,000
Single Wide - Any Zone - Electric	83	1,388,943	-	\$830,000
Single Wide - Any Zone - Gas	3	2,237	1,223	\$30,000
<b>MHR Total</b>	<b>110</b>	<b>1,838,700</b>	<b>2,345</b>	<b>\$1,220,000</b>
<b>Total Residential Portfolio</b>		54,716,497	1,780,997	\$45,660,351
	<b>% of total</b>	<b>3.36%</b>	<b>0.13%</b>	<b>2.67%</b>

*Exception Criteria*

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

**A. Measure produces significant non-quantifiable nonenergy benefits.**

Energy Trust recognizes that while it can quantify certain non-energy benefits, significant advantages exist beyond energy savings. Replacing aging manufactured housing enhances comfort, health, safety, and durability for residents.

**C. Measure is included for consistency with other DSM programs in the region.**

Several regional DSM programs align with this initiative. OHCS operates a Manufactured Housing Replacement Program, supported by funding from HB 2896, which can potentially co-fund Energy Trust's program. Both Energy Trust and OHCS are committed to a coordinated customer service approach, aided by a Navigator model to streamline the process for clients navigating multiple programs. Additionally, the Bonneville Power Administration (BPA) offers a similar program for homes built before 1976. The Regional Technical Forum (RTF) Manufactured Home Replacement measure is available through May 31, 2027. Northwest Energy Efficiency Alliance (NEEA) has historically supported energy-efficient manufactured homes and is collaborating with the Department of Energy and ENERGY STAR on relevant certifications.

**G. The measure is required by law or is consistent with the Commission Policy.**

The Commission's approval of DEI-specific performance metrics for Energy Trust through Order No. 21-068 emphasizes partnerships with organizations advocating for affordable housing and services for low-income customers.<sup>7</sup> Collaboration with OHCS enhances the effectiveness of both programs.

These exceptions also support Executive Order No. 20-04 (2021) by reducing greenhouse gas emissions and alleviating energy burdens for low-income customers, as well as House Bill 2475 (2021).

**H. Inclusion of the measure mitigates energy burden**

Staff thinks that the exception request also qualifies under category H resulting in the reduction of energy burden due to lower energy bills.

Staff concurs that Categories A, C, G, and H are applicable, noting that the non-quantifiable benefits make these measures valuable to participants despite the low

<sup>7</sup>In the Matter of Energy Trust of Oregon: Recommendations for Performance Measures, Docket No. UM 1158, Order No. 21-068.

TRC scores. Overall, the proposed exceptions will bolster efforts to improve low-income housing.

#### *Stakeholder Engagement*

During the Conservation Advisory Committee (CAC) meeting on September 11, 2024, Energy Trust discussed plans to seek a measure exception for the 2025-2027 period. No organizations expressed opposition to this initiative. In addition to the recent CAC meeting and as detailed in Attachment A, Energy Trust has actively engaged stakeholders regarding the major exceptions related to application of the TRC cost-effectiveness test of energy efficiency measures for manufactured homes. As a result, Staff finds that Energy Trust's proposal reflects the collective views of many entities. Staff looks forward to reviewing additional stakeholder feedback prior to presenting a final Staff position.

#### Staff's Recommendation

Staff preliminarily proposes granting the major TRC exception for the measure applications in Manufactured Homes Early Replacement measure through December 31, 2027. Manufactured homes play a vital role in addressing Oregon's housing crisis, offering an affordable pathway to homeownership for many residents. Out of approximately 140,000 manufactured homes in the state, over 110,000 were built before 1995, prior to the implementation of federal energy standards that dramatically improved construction and insulation practices. Homes built before this benchmark are often energy-inefficient, frequently past their expected lifespan, and may pose safety concerns. This program specifically targets rural areas, including Eastern and South-Central Oregon, as well as housing occupied by low-income residents.

Also, an important consideration for the TRC and UCT is the anticipated adoption of a new Housing and Urban Development (HUD) code in 2026, which may impact costs and savings used in cost effectiveness testing. A three-year exception will allow alignment with forthcoming updates to the New Manufactured Homes measures, the new HUD code, and revisions to both ENERGY STAR and NEEM specifications.

#### *Procedural Schedule for Public Comment*

Staff proposes a schedule to allow the filing of public comment through November 13, 2024. This will allow stakeholders two weeks after the October 29, 2024, Public Meeting to review and respond. If the Commission adopts the proposed schedule, Staff will receive and compile comments, and return at the December 10, 2024, Public Meeting with a final recommendation.

Event	Date
Deadline to file written public comments in Docket No. UM 1696 or contact Staff with comments	November 13, 2024
Staff's final recommendation at Commission Public Meeting	December 10, 2024

Conclusion

Staff preliminarily concludes that Energy Trust should be granted exceptions for manufactured homes replacement measures through December 31, 2027. Staff proposes that stakeholders have until November 13, 2024, to file comments or contact Staff regarding the recommended major cost effectiveness exceptions. Staff will present stakeholder comments and Staff's final recommendations at the November 26, 2024, Public Meeting.

**PROPOSED COMMISSION MOTION:**

Adopt Staff's proposed schedule for submission of public comments, and for Staff's final recommendation on major exceptions to cost effectiveness of energy efficiency measures for manufactured homes as requested by Energy Trust.

CA5 – UM 1696

# Major Exception Request for Manufactured Home Early Replacement

We are requesting a major TRC exception for the measure applications in our Manufactured Homes Early Replacement measure.

If approved, we hope to continue the measure with updates January 1, 2025. We suggest the exception be in place through December 31, 2027, in alignment with our standard 3-year measure update cycle. Federal Housing and Urban Development, HUD, building codes for manufactured homes and specifications for ENERGY STAR® are scheduled to occur in 2026 but the timeline is uncertain due to a litigation case. This measure will be updated at the end of 2027, or within 6 months of the new HUD & ENERGY STAR implementation, whichever occurs first. If the code and above-code specifications are not updated during the life of this measure, Energy Trust will seek another cost-effectiveness exception.

## Overview

Energy Trust's Manufactured Homes Early Replacement offering is operated through our Products Program within the Residential Sector. The incentives are provided to the homeowner based on the size and efficiency level of the home, ranging from \$10,000 to \$16,000 per home.

This offer is focused on the early retirement of existing pre-1995 vintage single- or double-wide manufactured homes or homes destroyed by natural disasters such as wildfires or flooding and the replacement of these homes with new ENERGY STAR or Northwest Energy Efficient Manufactured Home, NEEM, single- or double-wide manufactured homes. Manufactured Homes built before 1995, the year that HUD implemented energy standards to their building standards, are known to be largely past their life span, energy-inefficient, and many have safety issues. This offer focuses on serving rural regions, such as Eastern and South Central Oregon<sup>1</sup> and housing occupied by low-income residents<sup>2</sup>.

## Reason for exception

This measure falls under the following exception criteria:

### **A. Measure produces significant non-quantifiable nonenergy benefits.**

Energy Trust is able to incorporate quantifiable non-energy benefits into our cost-effectiveness calculations. However, customers receive significant non-quantifiable benefits when their aging manufactured housing is replaced, which are not captured within our cost-effectiveness calculations. These benefits include increased physical comfort and health benefits, and reduction in mental burdens due to lingering maintenance issues and high energy costs associated with living in a home beyond its functional life. Customers purchasing new manufactured homes benefit from the safety

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<sup>1</sup> University of Oregon Manufactured Housing Memo, 2016: [https://www.oregon.gov/lcd/UP/Documents/UO-Manufactured\\_Housing.pdf](https://www.oregon.gov/lcd/UP/Documents/UO-Manufactured_Housing.pdf)

<sup>2</sup> Ten-Year Plan - Reducing the Energy Burden in Oregon Affordable Housing: <https://www.oregon.gov/energy/Get-Involved/Documents/2018-BEEWG-Ten-Year-Plan-Energy-Burden.pdf>

and durability of their energy efficient home, and in some cases are able to pass on generational wealth to their family generational wealth to their family generational wealth to their family.

**C. Measure is included for consistency with other DSM programs in the region.**

There are several DSM programs in the region similar to ours. Oregon Housing and Community Services, OHCS, runs a Manufactured Housing Replacement Program, which replaces old, energy-inefficient homes. This program was supported by funding from HB 2896 and can potentially be co-funded with our program. There is a high level of coordination between OHCS and Energy Trust to support manufactured home replacement customers, with an emphasis from both organizations to have a supportive customer service approach. Both programs have invested resources into a Navigator model where a dedicated customer contact helps the customer navigate the intricacies of each program, while reducing the challenges of working in two different programs on the same project. The programs are much more effective with the additional support and coordination added for the customer. Additionally, Bonneville Power Administration, BPA, offers a program that replaces manufactured homes built before 1976 with new, energy-efficient models. The Regional Technical Forum, RTF, Manufactured Home Replacement measure is available through May 31, 2027<sup>3</sup>.

Northwest Energy Efficiency Alliance, NEEA, has historically supported energy-efficient manufactured homes in the region. While NEEA has shifted their efforts to long-term monitoring and tracking efforts, they are also engaged in collaboration with the Department of Energy and ENERGY STAR regarding Net Zero Ready and ENERGY STAR certification and alignment with NEEM+, as noted in the April 2024 memorandum to the NEEA Manufactured Homes Transition Market Progress Evaluation Report from December 2023<sup>4</sup>. These efforts will likely inform analysis and program to regional organizations and offerings.

**G. The measure is required by law or is consistent with the Commission Policy.**

The Commission approved the OPUC Equity Metrics which provides direction to allocate resources to serve environmental justice communities, including no- and low-cost offers for customers experiencing energy burden. These measures will be offered in partnership with organizations that advocate for affordable housing, as well as other organizations that provide services to benefit low-income households. These exceptions would also support Executive Order 20-04 by reducing greenhouse gases while also mitigating energy burden among low-income customers.

## Prevalence

In 2024, the Manufactured Homes Early Replacement offer is forecasted to serve 68 homes, making up 1.95% of electric and 0.16% of gas savings within the Residential Sector portfolio. This is equivalent to an annual savings of 1,082,186 kWh and 3,338 therms, as shown in Table 1. These values represent both ENERGY STAR and NEEM+ configurations combined; the majority of homes are expected to be ENERGY STAR efficiency levels. Projects in this forecast

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<sup>3</sup> Regional Technical Forum, Manufactured Home Replacement:  
<https://rtf.nwcouncil.org/measure/manufactured-home-replacement/>

<sup>4</sup> NEEA Manufactured Homes Transition Market Progress Evaluation Report, Report \$e23-474, 12/22/23:  
<https://neea.org/resources/manufactured-homes-transition-market-progress-evaluation-report>

and within the analysis include both co-funded and non-co-funded projects, some of the co-funded measures may be cost-effective with co-funding while others may not.

*Table 1 Budgeted Prevalence of Manufactured Homes Early Replacement in 2024*

2024 Manufactured Homes Early Replacement Forecast	Number of Homes	Reportable kWh	Reportable therms	Total Incentives
Double Wide - Any Zone - Electric	21	503,456	-	\$310,500
Double Wide - Any Zone - Gas	2	520	1,804	\$30,000
Single Wide - Any Zone - Electric	42	577,617	-	\$418,000
Single Wide - Any Zone - Gas	3	594	1,534	\$30,000
<b>MHR Total</b>	<b>68</b>	<b>1,082,186</b>	<b>3,338</b>	<b>\$788,500</b>
<b>Total Residential Portfolio</b>		55,395,325	2,084,795	\$46,387,995
	<b>% of total</b>	<b>1.95%</b>	<b>0.16%</b>	<b>1.70%</b>

We expect to serve more customers in 2025 than in previous years if this exception is approved. This offering is budgeted to serve approximately 110 homes per year moving forward. This is equivalent to 1,838,700 kWh and 2,345 therms, as shown in Table 2. As with 2024 forecasts, these values represent both ENERGY STAR and NEEM+ configurations combined; the majority of homes are expected to be ENERGY STAR efficiency levels.

*Table 2 Prevalence of Manufactured Homes Early Replacement Forecasted for 2025*

2025 Manufactured Homes Early Replacement Forecast	Number of Homes	Reportable kWh	Reportable therms	Total Incentives
Double Wide - Any Zone - Electric	22	446,028	-	\$330,000
Double Wide - Any Zone - Gas	2	1,491	1,122	\$30,000
Single Wide - Any Zone - Electric	83	1,388,943	-	\$830,000
Single Wide - Any Zone - Gas	3	2,237	1,223	\$30,000
<b>MHR Total</b>	<b>110</b>	<b>1,838,700</b>	<b>2,345</b>	<b>\$1,220,000</b>
<b>Total Residential Portfolio</b>		54,716,497	1,780,997	\$45,660,351
	<b>% of total</b>	<b>3.36%</b>	<b>0.13%</b>	<b>2.67%</b>

Exception Order 21-312, approved 9/21/2021, allowed a maximum incentive spend of \$5 million through 3/31/2025. The program has paid a total of \$1,136,000 through August 2024, with an additional \$576,540 in incentives expected through March 2025 for a total spend of \$1,712,540 over the life of the exception period, 34% of the \$5 million exception allowance.

Over the course of this updated measure, we forecast a total incentive spend of \$1.2M per year. Interest in this program is increasing, specifically with new manufacturers and funding partners coming into the market. There is potential for a higher volume during the period of this measure.

## Cost Effectiveness details

Cost effectiveness is shown below in Table 3, using 2025 Oregon electric and gas avoided costs. The maximum incentives and resulting UCT shown are for reference only. Actual incentives are expected to be between \$10,000 and \$16,000 per project.

Table 3 2025 Cost Effectiveness of Manufactured Homes Early Retirement

#	Measure	Savings (kWh)	Savings (therms)	Incremental Costs (\$)	Total NEB (Annual \$)	Maximum Incentive (\$)	UCT BCR at Max Incentive	TRC BCR w/o Cofunding
1	ENERGY STAR 2.0 - SW - Any Zone - Electric	15,228.18	0.00	\$102,411.27	\$2,275.81	\$41,793.33	1.0	0.9
2	ENERGY STAR 2.0 - DW - Any Zone - Electric	18,362.03	0.00	\$133,583.03	\$2,968.51	\$50,394.10	1.0	0.8
3	NEEM+ - SW - Any Zone - Electric	15,639.49	0.00	\$134,493.79	\$2,988.75	\$42,922.17	1.0	0.8
4	NEEM+ - DW - Any Zone - Electric	18,947.66	0.00	\$175,430.78	\$3,898.46	\$52,001.35	1.0	0.7
5	ENERGY STAR 2.0 - SW - Any Zone - Gas	678.85	387.88	\$102,411.27	\$2,275.81	\$19,396.56	1.0	0.6
6	ENERGY STAR 2.0 - DW - Any Zone - Gas	690.38	532.80	\$133,583.03	\$2,968.51	\$25,978.96	1.0	0.6
7	NEEM+ - SW - Any Zone - Gas	696.89	407.60	\$134,493.79	\$2,988.75	\$20,337.40	1.0	0.6
8	NEEM+ - DW - Any Zone - Gas	696.96	561.06	\$175,430.78	\$3,898.46	\$27,274.30	1.0	0.6
9	ENERGY STAR 2.0 - SW - Any Zone - Gas Only	0.00	387.88	\$102,411.27	\$2,386.05	\$17,533.48	1.0	0.6
10	ENERGY STAR 2.0 - DW - Any Zone - Gas Only	0.00	532.80	\$133,583.03	\$3,080.62	\$24,084.22	1.0	0.7
11	NEEM+ - SW - Any Zone - Gas Only	0.00	407.60	\$134,493.79	\$3,101.92	\$18,424.82	1.0	0.6
12	NEEM+ - DW - Any Zone - Gas Only	0.00	561.06	\$175,430.78	\$4,011.64	\$25,361.52	1.0	0.6

A significant factor which could influence the TRC/UCT is the adoption of new HUD code in 2026. Therefore, we are requesting a three-year exception to ensure that our next measure update aligns with our corresponding New Manufactured Homes measures, the new HUD code and updates to both ENERGY STAR and NEEM specifications.

**Is there a potential for additional value through complementary funds in the future?**

The program design includes a co-funding option and most homes are able to utilize co-funding that typically comes from OHCS. This funding varies each year but has historically come in the form of a direct fund to demolish an existing home, a direct grant to fund the purchase of a new home and/or a forgivable loan to help secure the funds for a home. Some customers are not able to access these funds and Energy Trust believes that we should still be able to serve these customers. For example, the funds may be limited to customers that are within a cooperative park, part of a non-profit organization or privately owned property. These funding requirements have unintentionally left out some Tribal communities, who are still in need of funding for the replacement of their homes.

The majority of Manufactured Homes Early Replacement projects rely on co-funding to achieve completion. From 2023-2024, 82 of 88 (93%) completed projects were co-funded, primarily by Oregon Housing & Community Services. Across these projects, the average co-funding amount was \$153,760 which composed an average of 84% of total project costs. Co-funded projects will be tracked for future cost effectiveness analysis

## Discussion

### **Does granting or denying an exception significantly impact specific groups? Particularly DEI priority customers?**

Many manufactured homeowners are experiencing low-to-moderate incomes as well as living in classifiably rural areas, and therefore have a higher prevalence of attributes targeted by Energy Trust's DEI initiative if compared to owners of site-built homes. The availability of this incentive positions rural and low-to-moderate income customers to purchase an energy-efficient manufactured home when they otherwise would not have been able to select an upgraded model. It also provides the funding needed to motivate a customer to make the purchase of a new home when they would have otherwise stayed in their existing home.

The success of this offer is tied to co-funding and the approval or denial of this exception will have an impact on OHCS manufactured homes offer. In addition, park owners and several community groups have a vested interest in seeing this offer continue to be able to support more housing replacements for their residents.

### **Would approving or denying an exception be of particular interest to utilities?**

Manufactured homes are prevalent in all five Energy Trust funding utilities but due to the rural geography and wildfire risk of southern Oregon, Avista and PacifiCorp have a higher prevalence of manufactured home replacement. The longevity of this offer is of particular interest to these two utilities and the customers they serve.

### **What opportunities have stakeholders had to share their thoughts and concerns? This is of particular interest if it is likely stakeholders will have an opinion.**

At Energy Trust's September 11, 2024, Conservation Advisory Committee (CAC) meeting, Energy Trust discussed plans to pursue a measure exception for this measure for 2025-2027. No one was opposed to this.

In the measure exception request in 2021, there were seven organizations that expressed support for moving this pilot to a permanent offer. These organizations were the following: Earth Advantage, Rep. Pam Marsh, Portland General Electric (PGE), Citizens Utility Board (CUB), OHCS, Community and Shelter Assistance of Oregon (CASA), and Network for Oregon Affordable Housing (NOAH)<sup>5</sup>.

In the measure exception request in 2020, there were ten organizations that provided comments. There were eight organizations that expressed support and they were the following: St. Vincent de Paul of Lane County, Jason Sweely, Rep. Pam Marsh, Craft3, Northwest Energy Coalition (NVEC), NOAH, CASA, and Neighborworks Umpqua. Then, there were two organizations which were neutral: Cascade Natural Gas and PGE<sup>6</sup>.

### **Do we want to monitor activities in some way during the exception time period?**

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<sup>5</sup> OPUC UM 1696, Order No. 21-312: <https://apps.puc.state.or.us/orders/2021ords/21-312.pdf>

<sup>6</sup> OPUC UM 1696, Order No. 20-158: <https://apps.puc.state.or.us/orders/2020ords/20-158.pdf>

Programs will monitor the uptake of these non-cost-effective pathways to ensure this does not exceed 5% of approved incentives or savings threshold during the exception time period.

## History:

Energy Trust was granted a major exception from the Oregon Public Utility Commission on April 27, 2020, per Order No. 20-158 to continue to fund this pilot program. OPUC staff granted an exception from cost effectiveness requirements based on Criteria A, B, F, & G. This exception was granted through December 31, 2021, and was approved a budget of \$500,000. OPUC staff also recommended that Energy Trust hold four stakeholder workshops during this time.

Energy Trust was granted a major exception from the Oregon Public Utility Commission on September 22, 2021, per Order No. 21-312. OPUC staff granted the exceptions from cost effectiveness requirements based on Criteria A, B, and G. This exception was granted for three years and with a total incentive cap of \$5 million. The program did not exceed the budget cap within the current exception period and has paid a total of \$1,136,000 through August 2024.