# Energy Trust Board of Directors

**July 21, 2021**

Energy Trust of Oregon
Board of Directors' Meeting Zoom Webinar

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PUBLIC COMMENT:

There are two PUBLIC COMMENT opportunities during the meeting at 10:00 a.m. and at 12:45 p.m.
To request to speak email meeting host cheryle.easton@energytrust.org with contact information and interested agenda topic.

# 191st Board Meeting

July 21, 2021
Register in advance for this Zoom

| | Agenda | Tab | Purpose |
|---|---|---|---|
| **10:00 a.m.** | **Board Meeting Call to Order** (Melissa Cribbins) 5 minutes<br>• Approve agenda | | Info |
| | **General Public Comment** 10 minutes<br>*The president may defer specific public comment to the appropriate agenda topic.* | | Info |
| **10:15 a.m.** | **President's Report** (Melissa Cribbins) 15 minutes | | |
| | **Consent Agenda**<br>*The consent agenda may be approved by a single motion, second and vote of the board. Any item on the consent agenda will be moved to the regular agenda upon the request of any member of the board.*<br>• May 18, 2021 Board Learning Session Minutes<br>• May 19, 2021 Board Meeting Minutes<br>• Request approval of Andy Cameron as Oregon Department of Energy member to the Evaluation Committee R#944 | **Tab 1** | Action |
| **10:30 a.m.** | **Executive Director Report** (Michael Colgrove) 30 minutes<br>• Update on Red Rocks Biofuels project. Request authorization for a contract amendment to the Incentive Funding Agreement with Red Rock Biofuels LLC R#945<br>• COVID Reentry/workplace of the future<br>• Wildfire update<br>• Executive Assistant Introduction Elaine Dado<br>• Sr. Outreach Manager Introduction Emma Clark | **Tab 2** | Action<br>Info<br>Info<br>Info<br>Info |
| **11:00 a.m.** | **Committee Reports** 45 minutes | | |
| | • Audit Committee (Anne Root) | **Tab 3** | Info |
| | • Evaluation Committee (Lindsey Hardy) | **Tab 4** | Info |
| | • Finance Committee (Susan Brodahl)<br>o Request authorization of using efficiency program reserves and contingency funds for use efficiency gas programs R#946 | **Tab 5** | Action<br>Info |
| | • Policy Committee (Henry Lorenzen) | **Tab 6** | |
| | • Conservation Advisory Council (Lindsey Hardy) | **Tab 7** | Info |
| | • Diversity Advisory Council (Mark Kendall) | **Tab 8** | Info |
| | • Ad hoc Board DEI Committee (Mark Kendall) | | Info |
| | • Ad hoc Board Roles & Responsibilities Committee (Roland Risser) | | Info |
| | • Ad hoc Board Structure Committee (Henry Lorenzen) | | Info |
| **11:45 a.m.** | **Break for Lunch** (60 minutes) | | |

| | Agenda | Tab | Purpose |
|---|---|---|---|
| **12:45 p.m.** | **Call Meeting to Order** (Melissa Cribbins)<br><br>**General Public Comment** 5 minutes<br>*The president may defer specific public comment to the appropriate agenda topic.* | | |
| **12:50 p.m.** | **Legislative Report** (Hannah Cruz and Jay Ward) 30 minutes | **Tab 9** | Info |
| **1:20 p.m.** | **2022 Business Plan and Organizational Goals** (Michael Colgrove) 60 minutes<br>• Present 2022 Business Plan activities in support of the 2022 Organizational Goals | | Info |
| **2:20 p.m.** | **Break** 10 minutes | | Info |
| **2:30 p.m.** | **2020 Annual Results** (Michael Colgrove) 45 minutes<br>• Present 2020 Annual Results | | Info |
| **3:15 p.m.** | **Staff Report: Annual Update Northwest Energy Efficiency Alliance End Use Load Research Project** (Sarah Castor and Erika Kociolek) 30 minutes<br>• Present annual update Northwest Energy Efficiency Alliance End Use Load Research Project | | Info |
| **3:45 p.m.** | **Adjourn Meeting** (Melissa Cribbins) | | |

**The next meeting of the Energy Trust Board of Directors will be held Tuesday October 13 at 1:00 p.m. at Energy Trust of Oregon.**

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# Tab 1

# Board Learning Session Minutes—188th Meeting

May 18, 2021

**Board members present**: Alan Meyer, Anne Root, Elee Jen, Eric Hayes, Erik Andersson, Ernesto Fonseca, Henry Lorenzen, Lindsey Hardy, Mark Kendall, Melissa Cribbins, Susan Brodahl, Roland Risser, Janine Benner (Oregon Department of Energy special advisor), Letha Tawney (Oregon Public Utility Commission ex officio)

**Board members absent**: Alexia Kelly

**Staff attending**: Amanda Potter, Amanda Thompson, Amber Cole, Cheryle Easton, Dave Moldal, Debbie Menashe, Diamante, Jamison, Elizabeth Fox, Emily Estrada, Fred Gordon, Gayle Roughton, Greg Stokes, Hannah Cruz, Jay Ward, Justin Buttles, Kristin Pinit, Mana Haeri, Mark Wyman, Marshall Johnson, Melanie Bissonnette, Michael Colgrove, Pati Presnail, Scott Clark, Spencer Moersfelder, Steve Lacey, Susan Fletcher, Thad Roth, Tracy Scott

**Others attending**: Anna Kim Oregon Public Utility Commission, Brooke Landon CLEAResult, Holly Valkama 1961 Consulting, Keri Greer PacifiCorp, Heather McNeill RHT Energy

## Learning Session Meeting Called to Order

Melissa Cribbins, called the meeting to order at 1:04 pm. Outlining the Zoom format procedures for the meeting. Melissa then called on Hannah Cruz and Jay Ward to present an update on the 2021 Oregon Legislative Session.

## **Legislative Report** (Hannah Cruz, Jay Ward)

Hannah Cruz, Senior Communications Manager, and Jay Ward, Senior Community Relations Manager introduced themselves to the board. Jay recognized Energy Trust intern Alexis Bright for her assistance in preparing the written report provided to the board in advance of the meeting. Jay noted that Energy Trust tracks legislative activities and provides information upon request to policy makers and stakeholders, but Energy Trust does not advocate. Jay reported on activity at the legislature and on progress of bills relevant to Energy Trust. Of particular focus is HB 3141 which would update current statutory provisions regarding public purpose charge funding for energy efficiency and renewable energy. HB 3141 has been referred to the joint Ways and Means Committee where it awaits a hearing. Another bill of note is HB 2475 which focuses on equity and energy burden and permits the OPUC to consider differentiated rates for energy burdened ratepayers. This bill has passed and is heading to Governor Brown for signature. Hannah and Jay reported that energy policy trends emerging from the session include community energy, equity, labor standards for energy projects, decarbonization and changes in natural gas policy. A complete list of bills being tracked was included in the board's learning session packet.

Board members asked clarifying questions about the various bills and policy trends.

## **Strategic Planning Committee 2020-2024 Strategic Plan Progress Update and Board Discussion** (Mark Kendall, Michael Colgrove, Hannah Cruz, Lizzie Rubado)

Strategic Planning Committee Chair Mark Kendall introduced staff and outlined the presentations to report out on progress for the first year of the 2020-2024 Strategic Plan. Mark also described the Strategic Planning Committee's work over the year to monitor plan progress on a quarterly basis. Based on those reviews, the committee finds the plan's focus areas and strategies remain valid and

have driven the development of Energy Trust's annual goals. Mark also described how the how the committee is engaged in work developing metrics for tracking progress on the focus areas and strategies.
Mark then turned the presentation over to Executive Director Michael Colgrove who described this year's approach to presenting on strategic plan progress. Mike focused on the organization's vision and purpose and described how this year, staff will make presentations describing progress at a high level, showing that Energy Trust is on track to advance the organization's strategies and vision and purpose.

Hannah Cruz, Senior Communications Manager, then presented key highlights and staff learnings from the strategic plan so far, and how the organization is responding to the plan's five focus areas and measuring progress. Hannah described 2020 activities that reflect how the key strategies outlined in the Strategic Plan served Energy Trust well in 2020. These examples and stories described our work and value in working with utilities on targeted load management projects, in policy work with policy makers and stakeholder, and leveraging more customer benefits by collaborating with community-based organizations with complementary objectives. In addition, Hannah described ways in which the organization is improving its focus and results in terms adaptability and diversity, citing examples of decision-making norms and recruiting efforts, among other things.

The board then discussed the presentation and the role of the board in reviewing progress and the metrics set to assist staff and board in monitoring progress. Board members indicated interest in continuing the discussion on these topics as part of the board's work on committee structures and board roles and responsibilities.

Next, the board briefly discussed the draft of the 2022 organizational goals. Mike described how the goals were drafted with input from advisory councils and the board to provide direction for the coming year for activities and focus aligned with the strategic plan for the coming year.

Board member Lindsey Hardy then facilitated a board discussion on the strategic plan progress and direction. Board members discussed the continued relevance of the strategic plan and its focus areas, acknowledging that the organization is on track as compared to the high level strategic direction identified in the plan. Board members also expressed support and excitement about the direction reflected in the annual goals. Areas of particular interest were the ways in which the goals provide flexibility in changing times for the utility and energy industry, support for disaster recovery, leveraged funding, engagement with policy, and connecting to communities and community-based organizations. Board members urged staff and each other to watch continuing developments that might affect Energy Trust in 2022 and in the current strategic plan period, including energy planning and policy information coming out of the Northwest Power and Conservation Council's next power plan.

Board members participated in a quick online survey to express their satisfaction with the high-level presentation on annual strategic plan progress. Results were not definitive, and members of the Strategic Planning Committee will review them and discuss further with the full board and their preferences for future presentations.

## **Planning and Budgeting** (Susan Brodahl, Business Planning Team and New Budget & Planning Process Team)

Executive Director Michael Colgrove discussed plans for the 2022 budget planning process. Mike and Finance Committee chair, Susan Brodahl, then asked board members to brainstorm initiatives or resources they anticipate for 2022. Board members provided several thoughts, including continued support of the board roles and responsibilities and committee structure work, possible other consultant or expert presentations, and resources for in-person meetings outside of Portland. Cheryle Easton, Board Services Administration Manager tracked the suggestions and will include them in budget planning.

## **Marketing Communications Presentations** (Sue Fletcher, Senior Manager in CCS, Susan Jowaiszas, Marketing Lead for the Energy Programs, Mana Haeri, Senior Program Marketing Manager)

Sue Fletcher, Senior Manager, Communications and Customer Service, Susan Jowaiszas, Energy Programs Marketing Lead, and Mana Haeri, Senior Program Marketing Manager, provided a 2021 update on outreach efforts, describing how these efforts result in savings and generations and how it connects to the strategic plan and our annual goals.

Board members asked questions, including about analytics and on outreach approaches, particularly for communities previously underserved by Energy Trust. Staff members explained how important it is to identify different communication approaches, including internet and social media and more direct relationship approaches. Staff has learned that it is critical to determine which tactic is going to resonate with the particular community.

## **Adjourn**

The meeting adjourned at 4:58 pm.

**The next regular meeting of the Energy Trust Board of Directors** will be held Wednesday May 19, 2021 at 10:00 a.m. held virtually on Zoom.

_____ ____/____/____

Signed: Mark Kendall, Secretary Date

# PINK PAPER

# Board Meeting Minutes—189th Meeting

May 19, 2021

**Board members present**: Alan Meyer, Alexia Kelly, Anne Root, Elee Jen, Eric Hayes, Ernesto Fonseca, Henry Lorenzen, Lindsey Hardy, Mark Kendall, Melissa Cribbins, Roland Risser, Susan Brodahl, Janine Benner (Oregon Department of Energy special advisor), Letha Tawney (Oregon Public Utility Commission ex officio)

**Board members absent**: Erik Andersson,

**Staff attending**: Abbey Spegman, Amanda Davidowitz, Amanda Potter, Amanda Thompson, Amanda Zuniga, Amber Cole, Betsy Kauffman, Brigid Gormley, Cameron Star, Cheryle Easton, Dave McClelland, Debbie Menashe, Elizabeth Fox, Emily Estrada, Fred Gordon, Greg Stokes, Hannah Cruz, Jay Ward, Jeni Hall, Jessica Kramer, Julianne Thacher, Justin Buttles, Kate Wellington, Kathleen Belkhayat, Kenji Spielman, Kirstin Pinit, Matt Getchell, Mayra Aparicio, Melanie Bissonnette, Michael Colgrove, Nichole Stolarik, Oliver Kesting, Pati Presnail, Peter West, Phil Degens, Ryan Crews, Salvatore Militello, Sarah Castor, Scott Clark, Steve Lacey, Sue Fletcher, Susan Jowaiszas, Thad Roth, Tracy Scott, Tyrone Henry

**Others attending**: Anna Kim (Oregon Public Utility Commission), Brian Lynch (AESC-Inc.), Becca Yates (Northwest Energy Efficiency Alliance), Brooke Landon (CLEAResult), Chris Smith (Energy 350), Erik Holman (Cascade Energy, Heather McNeill (RHT Energy), Holly Valkama (1961 Consulting), Josh Weissert (Energy 350), Laurel McCombs (The Osbourne Group), Lisa McGarity (Avista Corporation), Rick Hodges (NW Natural Gas), Ross Finney (RHT Energy), Sara Fredrickson (CLEAResult), Tami Boedigheimer (Compensation Consulting), Zach Podell-Eberhardt (Cascade Energy)

## Business Meeting

President Melissa Cribbins called the meeting to order at 10:02 a.m. outlining the Zoom format procedures for the meeting and advising members of the public of opportunities to provide public comment. Melissa also advised board members that any items identified as consent agenda items can be changed to regular agenda items at any time by any board member. No changes were made to the consent agenda, and the board unanimously approved the meeting agenda as presented.

## General Public Comments

Melissa asked for public comments at this meeting, and there were none. Melissa advised the public that there is another opportunity later in the meeting.

## President's Report

Melissa expressed her hope that this would be the last board meeting she chairs in a primarily remote format. Energy Trust will have more people in the office beginning at the end of June, and the office will be open on-site for vaccinated employees and other staff. She announced that she is making plans with staff for hybrid format board meeting in July. Board members who want to attend in person must be vaccinated. These plans are consistent with changes around the state as a whole. Counties are moving to low risk, and when the state as a whole achieves a 70% vaccination rate, restrictions will be lifted state-wide.

The board discussed the benefits and challenges of remote meetings and discussed ways in which lessons learned through the pandemic may be helpful in future planning, including the benefits of reducing travel time to and from Portland for meetings.

## Consent Agenda

*The consent agenda may be approved by a single motion, second and vote of the board. Any item on the consent agenda will be moved to the regular agenda upon the request from any member of the board*.

**MOTION: Approve consent agenda**

Melissa then called for approval of the consent agenda. The consent agenda included the April 7, 2021 Board meeting Minutes

| | | |
|---|---|---|
| Moved by: Mark Kendall | | Seconded by: Roland Risser |
| Vote: | In favor: 12 | Abstained: |
| | Opposed: 0 | |

## Executive Director Report

Executive Director Michael Colgrove introduced Tracy Scott, the new Energy Trust Director of Energy Programs, and board members welcomed Tracy and introduced themselves to her. Tracy expressed her appreciation for the opportunity to meet the board and their welcome.

## Committee Reports

***Audit Committee (Anne Root)***

Anne Root, chair of the Audit Committee, provided an update to the board on the status of the solicitation process for auditor firms, noting that solicitations periodically is best practice. Anne reported that committee had receive five responses to the solicitation, one then withdrew, and two were selected for live interviews. Interviews will be scheduled over the next few weeks.

***Compensation Committee (Roland Risser)***

Roland Risser, chair of the Compensation Committee, referred to the meeting notes as a complete report of the meeting. He highlighted the committee's recommendation to adjust the default investment risk option for the Energy Trust 401k plan RetireView to "moderately aggressive" from "aggressive" in order to better track and exceed inflation. Board members asked about the adjustment, including how employees will be advised of the change, and Roland answered their questions.

***Evaluation Committee (Lindsey Hardy)***

Lindsey Hardy, chair of the Program Evaluation Committee, briefly described highlights of two recent Evaluation Committee meetings, focusing on the Customer Insight Study presentation, the Production Efficiency program impact evaluation, and an adaptive heat pump analysis. Board members asked questions about the studies and evaluations, including specific questions about the realized savings under the heat pump program. Board members requested more information on cost-effectiveness tests use in evaluations, and staff will arrange to provide more information to interested board members.

***Finance Committee (Susan Brodahl)***

Susan Brodahl, chair of the Finance Committee, referred the board to the Finance Committee notes, and advised board members that more discussion will happen later in the agenda when the proposed budget changes are presented to the board.

***Policy Committee (Henry Lorenzen)***
Henry Lorenzen, chair of Policy Committee, reported that the committee had previewed the presentation on the proposed contract approval for a project performance tracking tool. Henry also reported that the committee has started to receive advanced notification of policies for upcoming review, and these are listed in the meeting notes. In addition, Henry noted that the committee approved the appointment of Becky Walker of NEEA to the Conservation Advisory Council.

***Strategic Planning Committee (Mark Kendall)***
Mark Kendall, chair of the Strategic Planning Committee, reported that the committee's last meeting was to prepare for the May board presentation on the progress of the Strategic Plan. In addition, the committee also continued to monitor progress on the plan's five focus areas. The committee has set the charter drafting work aside as the board governance process moves forward. The board asked questions and discussed the board's role in identifying metrics for tracking progress, and Mark encouraged board members to attend the August 17 meeting of the committee.

***Ad hoc Diversity, Equity & Inclusion Committee (Mark Kendall)***
Mark Kendall, chair of the Ad hoc Diversity, Equity & Inclusion Committee, then reported on the work of the committee. The committee issued a solicitation for consultants to support the committee's DEI work. Four submissions were received in response to the solicitation, and the committee is moving two of those submission firms forward for interviews. Before conducting interviews, the committee seeks board input on the capacity for the time commitment for the board work that is anticipated from the committee's DEI work. Board members discussed coordination of this work with the other board development work underway. Board members agreed to work together to coordinate.

***Joint Advisory Council (Betsy Kauffman)***
Betsy provided background and information about the joint council meeting of CAC, DAC and RAC to provide input on the annual organization goals. The meeting was also planned to allow the three committees got to know each other and to provide input on the goals. Highlights of the advisory council input include the need to raise awareness of Energy Trust programs among certain communities, focus on health, safety and social equity, resilience and community and organization partnerships. The board appreciated the report and had no questions.

***Ad hoc Board Governance Roles & Responsibilities Committee and Governance Structure Committees (Henry Lorenzen)***
Henry reported on both of the ad hoc committees. The committees are planning a June 8 workshop for the entire board, and Henry explained that the workshop will be facilitated by 1961 Consulting who has been supporting the committee's work on board governance, roles and responsibilities, and structure.

The Board adjourned for Lunch at 11:04 a.m.

President Melissa Cribbins called the meeting back to order at 12:04 p.m. Melissa then reviewed the Zoom procedures for meeting participation and asked if there were any requests for public comment. called the meeting back to order at 12:04 pm.

## General Public Comments

There were no public comments.

Melissa then adjourned the board meeting at 12:05 p.m. for a board Executive Session to discuss matters pursuant to bylaws section 3.19.1 internal personnel matters, section 3.19.3 trade secrets, proprietary or other confidential commercial or financial information and section 3.19.4 information regarding negotiations whose disclosure would likely frustrate corporate purposes. ***The Executive Session is not open to the public.***

Board members returned from Executive Session at 2:30 p.m., and President Melissa Cribbins called the meeting back to order. The first item addressed was the Executive Director Review. Board members moved to approve Resolution 941 as follows:

**RESOLUTION 941**

**EXECUTIVE DIRECTOR PERFORMANCE REVIEW**

**WHEREAS:**

1. **Energy Trust's Executive Director Review Committee completed its evaluation of Michael Colgrove's performance for the 2019/2020 work plan and performance period.**

2. **An evaluation of Michael's performance compared to his 2019/2020 work plan goals and competencies have been met and demonstrated. Michael is well-regarded by the board of directors, Energy Trust staff and stakeholders.**

3. **The Executive Director Review Committee considered the following in proposing a merit increase from the review:**

    a. **Energy Trust's existing salary structure and Michael's current salary position on that range.**

    b. **Periodic survey and market analysis of comparable position salaries.**

**It is therefore RESOLVED:**

**The Board of Directors authorizes a merit award increasing Michael's salary $1710.30 effective January 1, 2021.**

| | | |
|---|---|---|
| Moved by: Henry Lorenzen | | Seconded by: Alan Meyer |
| Vote: | In favor: 9 | Abstained: |
| | Opposed: 0 | |

## Energy Programs: Request to authorize Performance Tracking Tool Platform Technology and Services Contract

Kathleen Belkhayat, Program Manager-Commercial, presented information about a proposed contract with Cascade Energy for a performance tracking tool platform. Board members asked questions regarding the scope and cost of the contract, and then moved to approve Resolution 942 as follows:

**RESOLUTION 942**
**AUTHORIZE A CONTRACT WITH CASCADE ENERGY FOR PERFORMANCE TRACKING TOOL PLATFORM TECHNOLOGY AND SERVICES**

**WHEREAS:**

1. **Energy Trust staff conducted a competitive solicitation process to select a vendor to deliver Performance Tracking Tool Platform services and technology for the next 2-4 years;**
2. **Staff selected Cascade Energy's proposed technology and services as best meeting the needs of Energy Trust and Energy Trust customers;**
3. **Staff has estimated a total budget for the January 1, 2022 through December 31, 2025 contract with Cascade of up to $1.4 million.**
4. **Final annual costs will be approved by this Board as part of the Existing Buildings and Production Efficiency annual budget approval process.**

**IT IS THEREFORE RESOLVED:**

1. **The Executive Director or his designee is authorized to negotiate and to enter into a contract with Cascade Energy, Inc. for an initial term from January 1, 2022, through December 31, 2023, with the potential for up to two additional one-year extensions, and a total four-year contract budget of up to $1.4 million, for Performance Tracking Tool Platform technology and services.**
2. **Annual contract costs shall be consistent with the board-approved annual budget and action plan(s) and the Executive Director or his designee is authorized to sign such contract amendments. In no event would the total term of the contract plus extensions exceed four years.**

| | | |
|---|---|---|
| Moved by: Anne Root | | Seconded by: Henry Lorenzen |
| Vote: | In favor: 10 | Abstained: |
| | Opposed: 0 | |

## 2021 Amended Budget Recast

Executive Director Michael Colgrove presented information and a recommendation to the board on a proposed amendment to the 2021 Budget, 2022 Project, and 2021-2022 Action Plan. He described the revised budget outreach process leading up to his presentation and explained the reasons for the proposal. These reasons include lower-than-expected 2020 carryover funds and higher than predicted volume of 2021 business projects, leaving a smaller portion of originally approved budget for new commercial and industrial electric efficiency projects in 2021. The proposed revised budget addresses these conditions by adding new revenue from Portland General Electric (PGE) and Pacific Power and drawing from the program and contingency reserves in 2021 and 2022. This revised budget would enable Energy Trust to achieve more electric savings and respond to market demands.

Board members asked a number of questions, including about projections and ratepayer impact. Board members also asked questions about concerns expressed in public comment from PGE on the visibility of the revised budget proposal and the public process. Staff responded by describing the outreach and will also post the board's briefing paper along with the budget revisions on the Energy Trust website for added information.

The board then moved to approve the proposed amended budget, projection, and action plan as follows:

**RESOLUTION 940**
**ADOPT AMENDED 2021 BUDGET, 2022 PROJECTION AND 2021-2022 ACTION PLAN**

**BE IT RESOLVED that Energy Trust of Oregon, Inc. Board of Directors approves the Energy Trust Amended 2021 Budget, 2022 Projection and 2021-2022 Action Plan as presented to the board at its meeting on May 19, 2021.**

| | | |
|---|---|---|
| Moved by: Susan Brodahl | | Seconded by: Anne Root |
| Vote: | In favor: 9 | Abstained: |
| | Opposed: 0 | |

## 2018-2020 Diversity Equity and Inclusion Operations Plan Report – Final Results

Tyrone Henry, Energy Trust DEI Lead, along with the team of Energy Trust staff members who are the "goal leads" for the 2018-2020 Diversity, Equity and Inclusion (DEI) Operations Plan, presented information to the board on each of the 2018-2020 DEI Operations Plan goal results and lessons learned. Board members asked questions throughout the presentation, expressing appreciation for the staff members presenting and the work underway.

## Adjourn

Henry expressed gratitude for a good two days of meetings. The meeting adjourned at 4.17 p.m.

**The next regular meeting of the Energy Trust Board of Directors** will be held Wednesday July 21, 2021 at 10:00 a.m. at Energy Trust of Oregon, Inc., 421 SW Oak Street, Suite 300, Portland, Oregon.

_____ ____/____/____
Signed: Mark Kendall, Secretary Date

# PINK PAPER

# Resolution 944
**BOARD COMMITTEE APPOINTMENTS**
July 21, 2021

**RESOLUTION 944**
**BOARD COMMITTEE APPOINTMENTS**
(*REPLACES RESOLUTION 932)*

WHEREAS:

1. **Energy Trust of Oregon, Inc. Board of Directors are authorized to appoint by resolution committees to carry out the Board's business.**

2. **Oregon Department of Energy (ODOE) director and special advisor and ex-officio member to the board, Janine Benner, has requested that Andy Cameron, ODOE Energy Efficiency and Conservation Manager, replace Warren Cook as the ODOE representative on the Energy Trust Program Evaluation Committee.**

3. **The Board President recommends the appointment of Andy Cameron to the Program Evaluation Committee in place of Warren Cook.**

It is therefore RESOLVED:

1. **This resolution replaces Resolution 932 adopted by the board at its February 24, 2021 meeting to reflect the addition of Andy Cameron on the Evaluation Committee; and**

2. **That the Board of Directors hereby appoints the following directors to the following committees for terms that will continue until a subsequent resolution changing committee appointments is adopted:**

| Audit Committee |
|---|
| Anne Root, Chair |
| Henry Lorenzen |
| Mark Kendall |
| Karen Ward, outside expert |
| Melissa Cribbins *(*ex officio*)* |
| Pati Presnail, staff liaison |
| **Board Nominating Committee** |
| Anne Root, Chair |
| Alan Meyer |
| Alexia Kelly |
| Ernesto Fonseca |
| Lindsey Hardy |
| Letha Tawney OPUC *(*ex officio*)* |
| Melissa Cribbins *(*ex officio*)* |
| Greg Stokes, staff liaison |

| Compensation Committee |
|---|
| Roland Risser, Chair |
| Mark Kendall |
| Susan Brodahl |
| Eric Hayes |
| Melissa Cribbins *(*ex officio*)* |
| Amanda Sales, staff liaison |
| Executive Director Review Committee |
| Elee Jen, Chair |
| Erik Andersson |
| Roland Risser |
| Eric Hayes |
| Melissa Cribbins (ex officio) |
| Amanda Sales, staff liaison |
| Finance Committee |
| Susan Brodahl, Chair |
| Anne Root |
| Henry Lorenzen |
| Roland Risser |
| Melissa Cribbins *(*ex officio*)* |
| Pati Presnail, staff liaison |
| Policy Committee |
| Henry Lorenzen, Chair |
| Alan Meyer |
| Anne Root |
| Eric Hayes |
| Erik Andersson |
| Susan Brodahl |
| Letha Tawney OPUC *(*ex officio*)* |
| Melissa Cribbins (ex officio) |
| Debbie Goldberg Menashe, staff liaison |
| Program Evaluation Committee |
| Lindsey Hardy, Chair |
| Alan Meyer |
| Eric Hayes |
| Erik Andersson |
| Jennifer Light, expert outside reviewer |
| Andy Cameron, ODOE *(*ex officio*)* |
| Melissa Cribbins *(*ex officio*)* |
| Sarah Castor, staff liaison |

| Strategic Planning Committee |
|---|
| Mark Kendall, Chair |
| Lindsey Hardy |
| Roland Risser |
| Ruchi Sadhir, ODOE *(*ex officio) |
| Letha Tawney OPUC *(*ex officio*)* |
| Melissa Cribbins *(*ex officio*)* |
| Debbie Goldberg Menashe, staff liaison |
| Ad hoc Committee on Board Roles and Responsibilities |
| Roland Risser, Chair |
| Alan Meyer |
| Elee Jen |
| Eric Hayes |
| Mark Kendall |
| Melissa Cribbins (ex officio) |
| Letha Tawney OPUC (ex officio) |
| Cheryle Easton, staff liaison |
| Ad hoc Committee on Board Governance and Structure |
| Henry Lorenzen, Chair |
| Alan Meyer |
| Anne Root |
| Eric Hayes |
| Ernesto Fonseca |
| Susan Brodahl |
| Letha Tawney OPUC *(*ex officio*)* |
| Melissa Cribbins *(*ex officio*)* |
| Cheryle Easton, staff liaison |
| Ad hoc Committee on Board Diversity |
| Mark Kendall, Chair |
| Elee Jen |
| Eric Hayes |
| Ernesto Fonseca |
| Lindsey Hardy |
| Letha Tawney OPUC *(*ex officio*)* |
| Ruchi Sadhir, ODOE (ex officio) |
| Melissa Cribbins *(*ex officio*)* |
| Cheryle Easton, staff liaison |

**3. The executive director, chief legal officer or director of finance are authorized to sign routine 401(k) administrative documents on behalf of the board, or other documents if authorized by the Compensation Committee.**

The board also acknowledges that the following board members have committed to attend advisory council meetings:

**a.** Conservation Advisory Council: Lindsey Hardy, Elee Jen and Alan Meyer

**b.** Renewable Energy Advisory Council: Susan Brodahl and Alexia Kelly

**c.** Diversity Advisory Council: Mark Kendall, Ruchi Sadhir

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed:

# Tab 2

# Board Decision

## Authorization to Amend a Funding Agreement with Red Rock Biofuels LLC to Extend the Deadline for Energy Efficiency Project Plant Construction Completion and Add an Additional Milestone for Securing Adequate Funding to Complete Construction

July 21, 2021

## Summary

Authorizes Energy Trust's Executive Director to execute a contract amendment with Red Rock Biofuels LLC (Red Rock) to extend the current incentive funding agreement's deadline for plant construction completion from September 2021 to December 31, 2023 and adding an additional deadline of March 30, 2022 for securing adequate funding for construction completion.

## Background

Red Rock is constructing a biofuels production plant in Lakeview, Oregon. The plant is designed to include cost effective energy efficiency measures that qualify for Energy Trust energy efficiency incentives in amounts that exceed Energy Trust's program cap of $500,000. In accordance with Energy Trust's Policy on Waiving Program Incentive Caps, Energy Trust's board of directors previously approved an incentive funding agreement between Energy Trust and Red Rock and authorized Energy Trust's executive director to sign an incentive agreement for Red Rock's proposed energy efficiency project for up to $2 million, subject to certain conditions. One of those conditions was that Red Rock was required to complete construction of the Lakeview biofuels production facility by September 30, 2021. Red Rock does not anticipate being able to meet that deadline. To complete the project, Red Rock is in negotiations for additional funding and expects to be able to secure adequate funding to complete the project, but not on the original timeline. Red Rock has reached out to request an extension of the construction deadline condition.

A copy of the briefing paper submitted to the board of directors in June 2018 is attached to this briefing paper for additional background and information on the project, including discussion of the expected savings and costs. The efficiency project is projected to result in over 48,000,000 kWh in savings, and staff proposed, and the board approved, Energy Trust incentives of $0.0417/first-year kWh, capped at 25 percent of eligible project costs, with a maximum incentive of $2 million.

## Current Status and Proposed Contract Amendments

Red Rock has completed the following key pre-construction milestones and activities for its new biofuels production facility:

- Project site has been purchased;
- All major pre-construction permitting has been completed;
- Major construction and technology contracts have been executed;
- Red Rock has entered into offtake agreements with FedEx and Southwest Airlines for the purchase of a minimum of six (6) MGPY of unblended biofuel that qualifies under the EPA Renewable Fuel Standard Program guidelines. These agreements represent 100%

of the project's planned jet fuel production, which is 40% of the project's total annual production of 15 MGPY.

- Red Rock has entered into long-term feedstock agreements for 95,300 BDT per year of woody biomass for eight years from the commencement of operations and has plans to purchase approximately 30% of its required feedstock on the spot market. This is consistent with Red Rock's feedstock assessment consultant's recommendation that no more than 70% of annual feedstock consumption be procured through long-term agreements.
- An independent engineer's report was completed for Red Rock on February 24, 2018. The report reviews the organization, management, financial and environmental aspects of Red Rock's planned facility. It provides observations and conclusions that support the current design, project plan, projected costs, operations and maintenance (O&M), contracts, third party agreements, environmental requirements, site conditions and the overall financial model of the proposed biofuels production facility as realistic and achievable.
- Financing agreements were executed, but additional funding is necessary to complete the project. Red Rock is currently in negotiations for additional financed funding.
- Construction has commenced and is estimated to be 60% complete.

In order to continue to support the project, Energy Trust staff proposes extending the deadline for construction completion from September 30, 2021 to December 31, 2023 and add a new contract milestone deadline for securing adequate funding to complete construction not later than March 2022. The proposed board resolution is as follows:

**RESOLUTION 945**
**WAIVING PROGRAM INCENTIVE CAP AND APPROVING INCENTIVES**
**FOR THE RED ROCK EFFICIENCY PROJECT**

**WHEREAS:**

1. **The Energy Trust Production Efficiency program has worked with Red Rock Biofuels, LLC (Red Rock) to identify a custom waste heat to energy system project (the Project) in connection with the gasification process at Red Rock's new biofuel production facility, to be constructed and located in Lakeview, Oregon.**

2. **In June 2018, the Energy Trust board of directors authorized the executive director to enter into an incentive funding agreement with Red Rock for up to $2 million, subject to certain conditions including:**

    - **Energy Trust funding would be contingent on Red Rock's agreement to suspend self-direction at the facility site where the Project is located for at least three years.**

    - **Electric energy generated by the Project will be used by Red Rock on-site to reduce the amount of electricity purchased for the facility.**

    - **Energy Trust funding would be conditioned on Red Rock's construction completion by September 2021 and would be payable annually based on savings performance.**

3. **Energy Trust and Red Rock entered into an incentive funding agreement consistent with the Energy Trust board of directors' approval effective June 19, 2020 (the Red Rock Incentive Agreement).**
4. **Red Rock has commenced construction and completed approximately 60% of the project, but Red Rock will not complete construction by September 2021 and has, therefore, requested an extension of the original construction completion deadline condition in order to secure adequate funding for completion.**
5. **Energy Trust remains supportive of the Red Rock project as it provides very cost effective energy efficiency savings for the benefit of ratepayers.**
6. **Energy Trust staff proposes amending the Red Rock Incentive Agreement to (i) extend the construction completion deadline from September 30, 2021 to December 31, 2023 and (ii) add an additional milestone condition for securing adequate funding not later than March 30, 2022, such funding must be adequate for construction completion by the December 2023 deadline.**

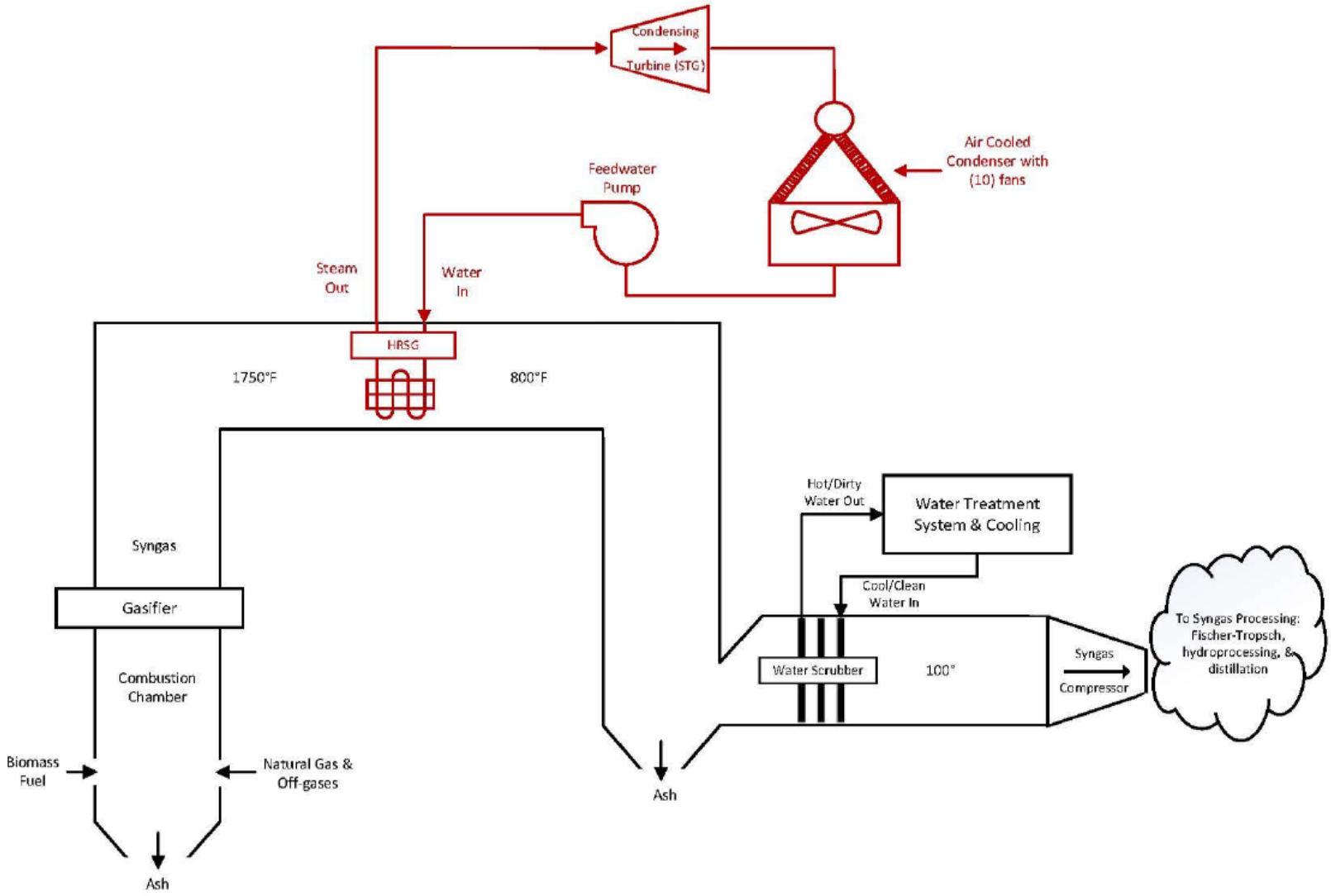
**It is therefore RESOLVED that the board of directors of Energy Trust of Oregon:**

- **Authorizes the executive director to negotiate and sign an amendment to the Red Rock Incentive Agreement that contains the following terms:**
    - **Revises the condition for incentive payment for construction completion by extending the current construction completion deadline in the Red Rock Incentive Agreement from September 30, 2021 to December 31, 2023; and**
    - **Adding an additional condition for incentive payment to secure adequate funding to complete construction not later than March 30, 2022.**

Moved by: Seconded by:
Vote:
In favor: Abstained:
Opposed:

## ATTACHMENT 1

**(EFFICIENCY PROJECT IN RED)**



# Tab 3

# Audit Committee Meeting Notes

May 11, 2021 2:30pm

**Board members in attendance:**
Anne Root (committee chair); Henry Lorenzen; Susan Brodahl, Karen Ward, outside expert.

**Board members absent:**
Melissa Cribbins (ex officio),

**Staff in attendance:**
Pati Presnail (staff liaison), Cheryl Gibson, Cheryle Easton, Michael Colgrove, Michelle Spampinato

## Background

Energy Trust audit committee is conducting an RFP for audit and tax services, currently provided by Moss Adams. Progress to date includes: the RFP was posted, respondent questions and answers provided, proposals received, and proposals read and evaluated by both committee and staff.

Energy Trust received five intent-to-respond notifications and one candidate dropped out due to time constraints. The committee received four finalist proposals to review.

## Discussion

The committee discussed the merits of each proposal and decided to interview the top two proposing firms: Grant Thornton and Moss Adams.

The interviews will be scheduled for May 26, 2021.

## Adjourned meeting

The meeting was adjourned at approximately 3:20 p.m.

**The next meeting for the Audit committee will be May 26, 2021.**

# PINK PAPER

# Audit Committee Meeting Notes

May 26, 2021 1:00 p.m.

**Board members in attendance:**
Anne Root (committee chair); Henry Lorenzen; Susan Brodahl, Karen Ward, outside expert.

**Board members absent:**
Melissa Cribbins (ex officio),

**Staff in attendance:**
Pati Presnail (staff liaison), Cheryl Gibson, Cheryle Easton, Michelle Spampinato

The committee conducted interviews of the top two candidate firms, getting to know the teams, philosophy, DEI approaches, cost, and services beyond the core audit and tax functions.

After thorough discussion and evaluation, the committee decided to select Moss Adams with a new lead partner to provide the desired fresh perspective.

Staff will notify all candidates of decision.

## Adjourned meeting

The meeting was adjourned at approximately 3:50 p.m.

**The next meeting for the Joint Audit/Compensation Committee will be July 8, 2021.**

# Tab 4

# Evaluation Committee Meeting Notes

May 7, 2021, 2:00pm

**Committee attending by Zoom**: Lindsey Hardy (chair), Alan Meyer, Eric Hayes, Erik Andersson, Jennifer Light (outside expert)

**Board members absent:** Janine Benner (Oregon Department of Energy)

**Staff attending by Zoom or phone:** Alex Novie, Andrew Shepard, Andy Griguhn, Eric Braddock, Erika Kociolek, Fred Gordon, Gina Saraswati, Jackie Goss, Kathleen Belkhayat, Kenji Spielman, Michael Colgrove, Oliver Kesting, Phil Degens, Sarah Castor (staff liaison), Shelly Carlton, Spencer Moersfelder, Steve Lacey, Wendy Gibson

**Others attending by Zoom or phone:** Colin Podelnyk, Roger Kainu (Oregon Department of Energy – for Janine Benner), Shelley Beaulieu, Vibhuti Agarwal

## **Existing Buildings 2019 Impact Evaluation** (Sarah Castor)

Sarah Castor presented results from an impact evaluation of the 2019 Existing Buildings program for commercial customers. The overall realization rates were 102% for electric savings and 86% for gas savings. The realization rate for standard boiler measures was 30% because the deemed savings were overestimated for most projects, including K-12 school projects which were half of the sample; the measure was updated in 2020 and future evaluations are expected to show better savings realization for standard boilers. The evaluation conducted all data collection virtually, to avoid the potential health risks associated with site visits during the COVID-19 pandemic. Overall, the program is performing well with no major issues.

Alan Meyer asked if Energy Trust still does a true-up of past savings for realization rates from evaluations; Fred Gordon said that we are no longer truing up past savings, but we are producing an annual summary of all impact evaluation results and continue to use the results to forecast future savings. Jennifer Light said that the recommendation that the assumed hours of use for direct install lighting should be reduced from 3,600 to 3,000 aligns with various metered studies she has reviewed. She agrees with the evaluator's recommendation that Energy Trust should report the interactive effects of lighting projects on HVAC energy usage. Vibhuti Agarwal asked what building types were represented in the boiler sample. Besides schools, the evaluated projects were from offices, arts and entertainment buildings, a healthcare site and a municipal building. Alan Meyer asked if the updated boiler measure is still cost-effective with lower savings; Jackie Goss said that it is, but the cost-benefit ratio is lower than before.

## **2020 Fast Feedback Survey Results** (Andy Griguhn)

Andy Griguhn presented findings from Fast Feedback surveys of 2020 program participants. Fast Feedback is monthly survey of recent Energy Trust participants to assess satisfaction, program experience and influence. The survey received 1,201 responses from residential participants and 807 responses from non-residential participants. Overall, 96% of respondents were satisfied with their program experience and 98% of non-residential respondents were satisfied with interactions with their program representative. Satisfaction was above 90% across all Energy Trust programs. Most respondents also reported that Energy Trust had a significant influence on the decision to complete their project. Residential respondents are asked to report their race/ethnicity and annual income to help Energy Trust assess the equity of its program impacts. From 2019 to 2020, there was a noticeable increase in the percent of Oregon participants who reported that they were from communities of color, from 14% to 24%; much of the increase was in Hispanic/Latino communities. There have been very few changes to the survey for 2021, but one is that the answer options for the race/ethnicity question have been set in alphabetical order to avoid bias, based on recommendations from stakeholders.

Shelly noted that there have been multiple marketing campaigns and outreach efforts to reach communities of color over the last few years and it is good to see that reflected in increased participation in 2020.

The 2020 Fast Feedback Survey Report is posted on Energy Trust's website at https://www.energytrust.org/wp-content/uploads/2021/05/Energy-Trust-2020-Fast-Feedback-End-of-Year-Report-FINAL.pdf.

## **Large/Complex Industrial Project Evaluation** (Erika Kociolek)

Erika Kociolek presented results from an evaluation of a large industrial project that took place in mid-2020. The evaluation was conducted soon after implementation, in late 2020. The project realization rates for electric and gas savings were greater than 100%. This is the first project that went through a new large/complex project evaluation process for the Production Efficiency program and the process worked well. The evaluator was able to create an evaluation plan as the project was being planned and leverage the program's verification visit to collect some data.

Alan Meyer asked what the potential might be for the type of measure in this project to be used at other facilities. Eric Braddock said that many candidates for the measure would use enough natural gas to have transport accounts, which are not eligible for Energy Trust programs. The program has seen one of these projects every few years, so there is some potential. Alan Meyer said it would be great to try to find more customers eligible for this measure, given the high savings and good return on investment.

**The meeting adjourned at 3:23 pm. Sarah Castor will send out a poll for availability for the next meeting, to take place in late June.**

# PINK PAPER

December 17, 2020

# Oregon Commercial and Industrial Boiler Market Characterization Memo


**Developed For**

Energy Trust of Oregon
421 SW Oak St. #300
Portland, OR 97204

**Developed By**

Cadeo Group
107 SE Washington St., Suite 450
Portland, OR 97214

# Memorandum

To: Phil Degens, Energy Trust of Oregon
From: Bretnie Eschenbach, Cadeo
Date: December 17, 2020
Re: Oregon Commercial and Industrial Boilers Market Characterization

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## Introduction

Cadeo conducted a high-level market characterization of the Oregon boiler market in the fall of 2020. This research sought to characterize the commercial and industrial natural gas boiler market to inform energy savings potential estimates and program opportunities for the Energy Trust of Oregon (Energy Trust).

This memo describes our methodology, the market characterization and efficiency opportunity findings, and our program recommendations and opportunities for future research. A workbook is available upon request that supplements this memo, which contains boiler market characterization data, market analysis, and program opportunity detail.

Our key program and research recommendations from the research include:

1. Creating targeted commercial boiler retrofit programs specific to schools
2. Incentivizing condensing boiler performance as opposed to the condensing boiler itself
3. Tailoring industrial programs to boiler system improvements as opposed to boiler replacement
4. Supporting the Regional Technical Forum's (RTF) measure development and future research
5. Conducting further research into the industrial boiler market to fill data gaps
6. Interviewing boiler technicians, tune-up implementers, and boiler operators to inform program design

## Methodology

Cadeo performed three activities to better understand the boiler market and the efficiency opportunities available to the Energy Trust:

1. Conducted a **market characterization** from available data sources to identify the number of commercial and industrial boilers installed in Oregon and where they are located
2. Conducted six **market actor interviews** to better understand the boiler market and identify regional opportunities

3. Performed a broad **efficiency scan** to understand what boiler efficiency opportunities exist and the measures boiler efficiency programs are incenting

The following section describes the methodology the team used to perform these three activities. The full list of sources referenced in this document and consulted for the memo and the supplementary workbook are listed in Appendix A. Source List.

## Market Characterization

Our first step in understanding the natural gas boiler market in Oregon included a review the available data sources to develop an estimate of the current installed stock of commercial and industrial boilers. The primary market characterization sources were:

- **The State of Oregon's Database of Active Vessels (Oregon Database)**. The Oregon Database tracks all permitted pressurized vessels in the state of Oregon, including boilers. Using this data source, we characterized all boilers and, where possible, identified those fueled by natural gas. For the purposes of this memo, findings from this source will be limited to natural gas boilers.
- **The 2019 Commercial Building Stock Assessment (CBSA).** The CBSA provided a more detailed snapshot of the commercial boiler stock in the Northwest and filled gaps in the Oregon Database information by including efficiency, capacity, and building type. The team limited the CBSA data to sites in Oregon and estimated the total number of representative boilers by multiplying the number of identical boilers and building sample weight.
- **Additional federal and state energy studies, reports, and data.** We reviewed a number of federal and state publications to supplement the Oregon Database and the 2019 CBSA and gain additional insight into the commercial and industrial boiler markets in Oregon, including:
    - DOE's 2005 Characterization of U.S. Industrial and Commercial Boiler Population
    - The Energy Information Administration (EIA)'s 2018 Oregon State Profile and Energy Estimates
    - The Oregon Public Utility Commission's 2019 Oregon Utility Statistics
    - The DOE Commercial Packaged Boilers Standard's Technical Support Document (TSD)
    - DOE's Compliance Certification Database
    - DOE's ENERGY STAR certification for commercial boilers

We used these data sources to develop high level market characterization calculations, including an estimate of the number of boilers in Oregon by sector, boiler type, fuel type, age, and transport vs non-transport natural gas fuel customer.[1] We also conducted high-level calculations

[1] We define transport customers as natural gas customers that purchase fuel directly from a gas transmission company as opposed to a natural gas utility company, also referred to as brokered and non-brokered customers.

of the energy consumption associated with commercial and industrial natural gas boilers, both for transport and non-transport customers, found in the supplemental workbook.

## Market Actor Interviews

In addition to the secondary source review, the team conducted interviews with regional experts on the commercial and industrial boiler market in the Northwest. The team interviewed the three investor-owned natural gas utilities operating in Oregon (Avista, Cascade Gas, and NW Natural), two industry associations specializing in natural gas (Northwest Gas Association [NWGA] and the Gas Technology Institute [GTI]), and a regional market expert on commercial and industrial boilers in the Northwest. The team sought these experts' insights on the following topics:[2]

- **Types of Boilers.** What types of boilers are most common in the commercial sector and industrial sector, respectively? What is the average useful life expectation of a steam boiler versus a hot water boiler? What types of boilers are most common by building type?
- **Boiler Operation.** How are boilers operating in the field? Are there any lessons learned about operational opportunities, either in commercial or industrial boilers?
- **Transport vs Non-Transport Customers.** What portion of natural gas customers are transport customers versus non-transport, and what are the key characteristics of both?
- **Market Trends.** What trends in Oregon are affecting the boiler market? For example: electrification or trends in major Oregon industries.
- **Program Opportunities.** What are the best opportunities to save gas energy is from boilers? How obtainable are those savings, and what are the challenges?

## Efficiency Scan

Finally, we performed an efficiency scan to understand the scope of utility commercial and industrial boiler programs, the recommended boiler upgrade and retrofit guidance, and commercial and industrial boiler control strategies. We reviewed the following sources to evaluate the available commercial and industrial boiler measures:

- Consortium for Energy Efficiency (CEE), which provides guidance to utilities on boiler upgrade and efficiency recommendations with definitions
- DOE's Federal Energy Management Program (FEMP), which provides boiler efficiency recommendations and requirements for federal buildings
- Minnesota Consortium for Energy Efficiency (MNCEE), which studied savings associated with five energy efficiency measures and their savings on the sampled buildings

[2] Appendix B includes the full interview guide.

- North Carolina Clean Energy Technology Center's "DSIRE" database, which provides information on current commercial and industrial boiler measures run by utilities in the U.S.

## Market Characterization Findings

As described in the Methodology section, we reviewed the Oregon Database, the 2019 CBSA, and federal and state energy data sources to characterize the commercial and industrial natural gas boiler market and identify energy savings potential and opportunities in Oregon. We also conducted six market actor interviews to fill gaps and further characterize the boiler market.

This section describes the key findings from the market characterization,[3] summarized in two categories:

1. Findings related to the overall Oregon boiler market and gas consumption estimates from the Oregon Database, Oregon energy data, and national trends
2. Findings specific to commercial boilers from the 2019 CBSA

Limited data exist specific to the industrial boiler market, so the Market Characterization Findings does not include a section specific to industrial. Instead, we included findings related to the industrial boiler market in the first section addressing the total Oregon boiler market.

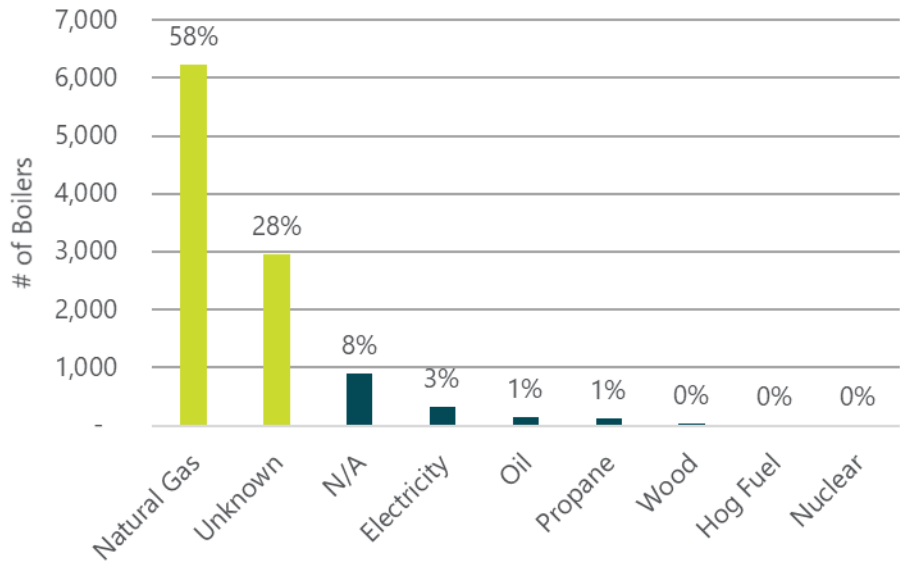
### Oregon Boiler Market and Gas Consumption Findings

We first characterized the total boiler market by identifying boilers by fuel type. An estimated 86% of boilers in the Oregon Database are natural gas boilers.[4]

[3] The supplementary workbook, available on request from Phil Degens (phil.degens@energytrust.org) at Energy Trust, contains more detail on these findings.

[4] 28% of the boilers in the Oregon database were labeled as "unknown" fuel type. Since 99% of boilers in the CBSA were natural gas, we assumed all of the "unknown" boilers were natural gas.

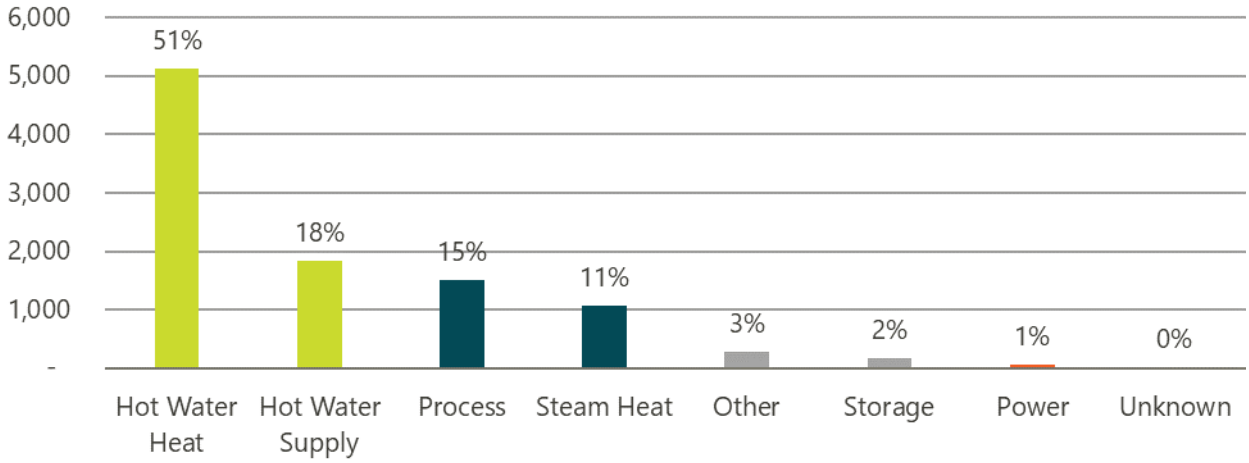
**Figure 1: Oregon Boilers by Fuel Type (Oregon Database)**




*Hot Water vs Steam Boilers*

After filtering the Oregon Database for only natural gas boilers, we found 70% of Oregon's commercial and industrial boilers are hot water boilers. Steam boilers account for 26% of Oregon's boilers, and power generation only accounts for 1% of Oregon's boilers.

**Figure 2: Oregon Boilers by End Use (Oregon Database)[5]**




[5] We assumed Hot Water Heat and Hot Water Supply boilers were hot water boilers, and Process and Steam Heat were steam boilers.

These findings are consistent with DOE's Commercial Packaged Boiler rulemaking documents, which indicate the market share of gas-fired hot water boilers is increasing, while steam boilers and non-gas boilers are decreasing.

The Oregon Database does not identify if a boiler is in a commercial or industrial application, so we assumed hot water boilers appear most often in commercial applications and steam boilers appear most often in industrial applications, although both boiler types are installed in both sectors.

### *Boiler Vintages*

We further explored hot water and steam boilers by age and found that buildings are replacing hot water boilers much more frequently than steam boilers. Of the hot water boilers, 72% were manufactured in the past 20 years, while only 49% of the steam boilers were manufactured in the same time period.

**Figure 3: Number of Hot Water Boilers by Vintage**

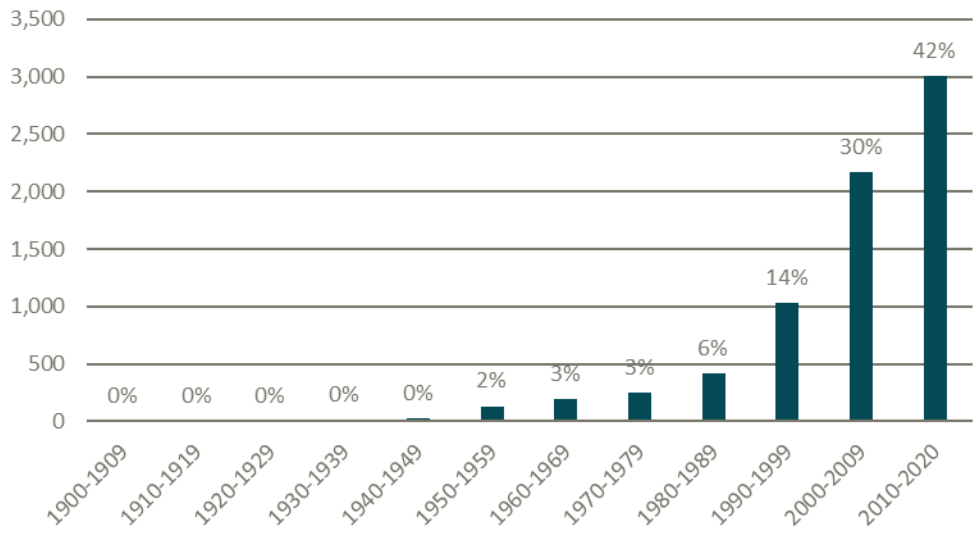


**Figure 4: Number of Steam Boilers by Vintage**

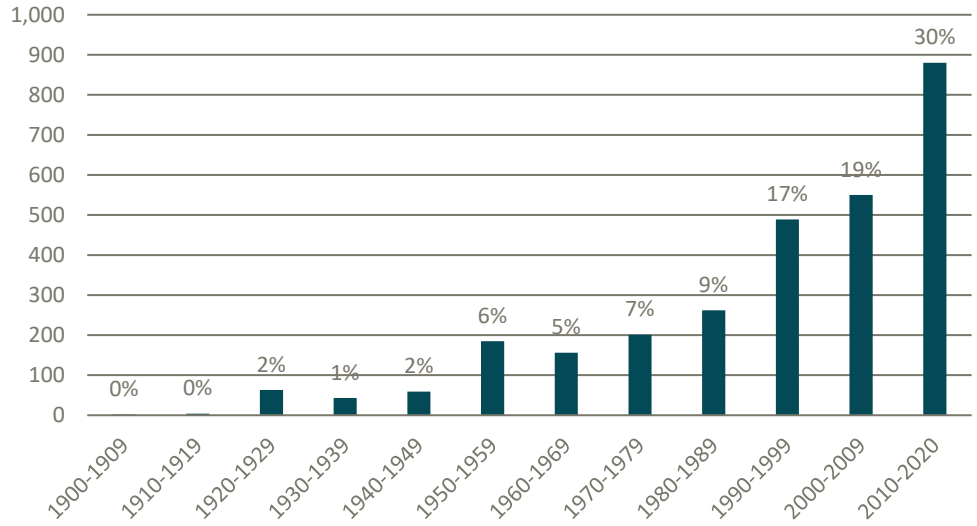
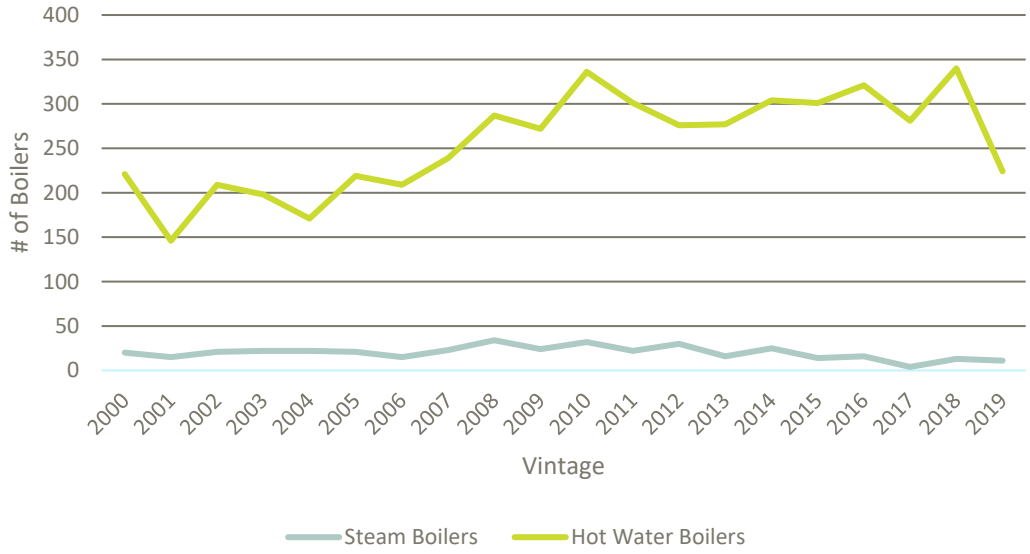



**Figure 5: Number of Boilers by Vintage and Type, 2000-2019**

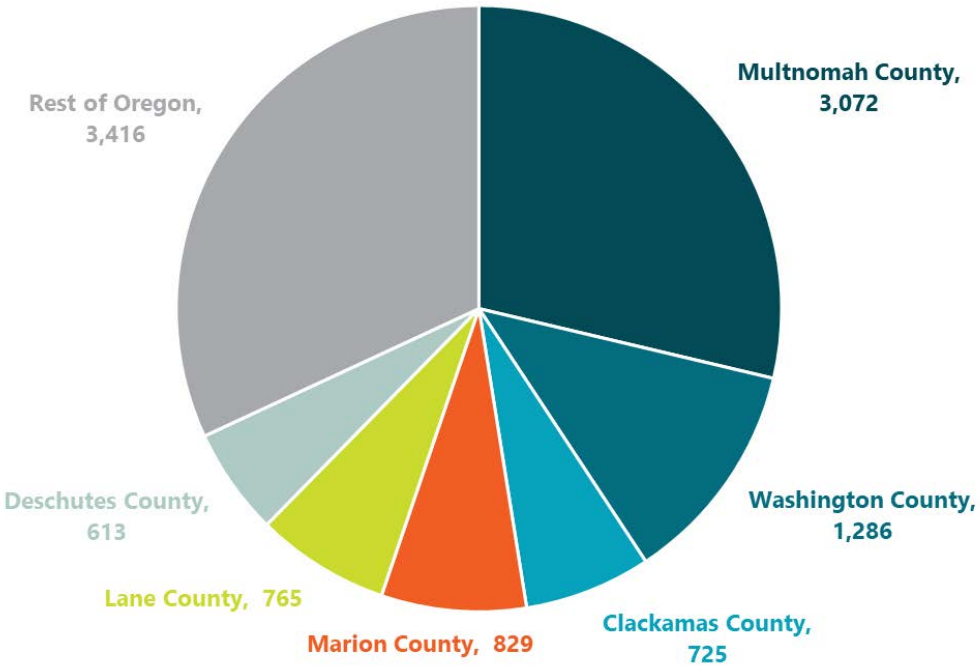



The efficiency industry commonly describes the boiler market as older vintage, with some market experts implying a prevalence of barely-functioning boilers in ancient boiler rooms. The interviewees we spoke with explained that while many commercial and industrial buildings have boilers older than 20 years (a commonly cited expected life), many actually operate well and efficiently. When operators maintain boilers well, the mechanical components can last a very long time. Efficiency programs have discounted or ignored opportunities for boilers beyond their estimated useful life, focusing instead on the purchase of a new boiler. The efficiency industry could realize significant savings by thinking more broadly about savings opportunities from boilers beyond their traditionally defined expected useful life.

*Boiler Geographic Location*

We also reviewed the boiler locations by zip code and county and found that the Portland metro area (Multnomah, Washington, and Clackamas counties) contains nearly 50% of the installed boilers in Oregon.

**Figure 6: Percent of Boilers by County (Oregon Database)**




*Natural Gas Consumption and Number of Boilers by Customer Type in Oregon*

Even though the majority of boilers in Oregon are hot water boilers and likely commercial, the EIA's 2018 Oregon State Profile estimates industrial natural gas consumption accounts for 65% of the commercial and industrial natural gas consumption in Oregon (all gas consumption, not just boilers). Cadeo estimates that 12.4 TBtu of natural gas consumption is associated with commercial gas boilers and 23.2 TBtu is associated with industrial boilers, excluding transport customers that purchase fuel directly (see Table 1 for supporting assumptions). We corroborated these findings with DOE's 2005 boiler market characterization that estimates while industrial boilers only make up 25% of the number of boilers, they make up 80% of energy consumed by boilers in both the commercial and industrial sectors.

**Table 1: Estimates of the Number of Boilers in Oregon[6]**

| Total number of boilers in Oregon | | Source of Assumption |
|---|---|---|
| 10,092 | Total Number of Gas Boilers in Oregon[7] | Oregon Database of Active Vessels |
| 7,951 | Total Number of Commercial Gas Boilers in Oregon | Boiler & Active Vessel Database, Assumes Hot Water Boilers = Commercial, plus the number of steam boilers in the CBSA |
| 1,580 | Total Number of Industrial Gas Boilers in Oregon | Boiler & Active Vessel Database, Assumes Steam Boilers = Industrial, minus the number of steam boilers in the CBSA |
| 26% | Percent of boilers not regularly operating (backup applications) | 2019 CBSA |
| 5,884 | Number of Active Commercial Gas Boilers in Oregon | Number of Commercial Gas Boilers minus backup boilers |
| 1,169 | Number of Active Industrial Gas Boilers in Oregon | Number of Industrial Gas Boilers minus backup boilers |
| 5,825 | Number of Active Non-Transport Commercial Gas Boilers in Oregon | NWGA Interview (99% Commercial Non-Transport) |
| 59 | Number of Active Transport Commercial Gas Boilers in Oregon | NWGA Interview (1% Commercial Transport) |
| 818 | Number of Active Non-Transport Industrial Gas Boilers in Oregon | NWGA Interview (70% Industrial Non-Transport) |
| 351 | Number of Active Transport Industrial Gas Boilers in Oregon | NWGA Interview (30% Industrial Transport) |

### *Electrification Trends*

Interviewees indicated that while electrification is an emerging topic in the commercial sector, they are not seeing changes to the stock of commercial boilers yet. They noted that there has actually been an *increase* in gas boilers, partially due to boilers transitioning away from other non-electric fuels such as oil.

All interviewees told us the industry expects boilers as a technology to transition to electrification slowly because water heating and steam generation is an energy intensive process at the commercial and industrial scale. Therefore, switching gas boilers to electric boilers can be cost-prohibitive, and this incremental cost increases as the capacity of the boiler increases. The commercial hot water boiler market could electrify sooner because there are other options for

[6] The supplementary workbook includes more detailed analysis of Oregon boilers by boiler type (water tube, fire tube, etc.), vintage, and end use.

[7] Remaining boilers not in commercial or industrial include storage, power, and "unknown" boilers.

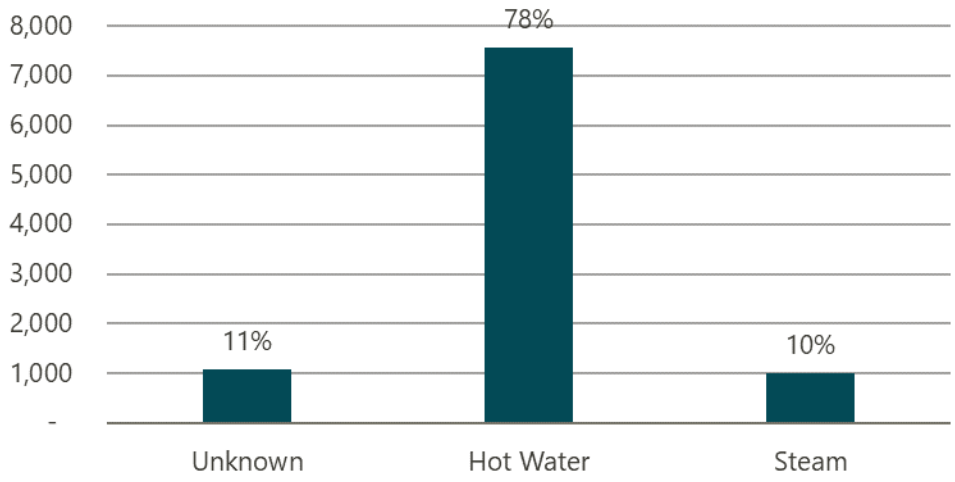
space heating on the commercial scale. The market is unlikely to transition to electric boilers but might shift to non-boiler systems entirely.

The industry expects the industrial boiler market to electrify last because these are mostly steam boilers and larger capacity (more energy intensive) units, and because few viable options for electric alternatives currently exist.

## Commercial Boiler Findings

In addition to the Oregon Database, we analyzed the 2019 CBSA boiler data to further characterize the boiler market. While the CBSA is limited to commercial boilers,[8] the database includes more granular data that the Oregon Database does not include, such as efficiency, capacity, and location data. Consistent with previous findings, the CBSA showed that 99% of commercial boilers are natural gas. The CBSA also confirmed that the majority of boilers in commercial applications are hot water boilers and only 10% are steam.

**Figure 7: Number and Percent of Boilers by Type (2019 CBSA)**

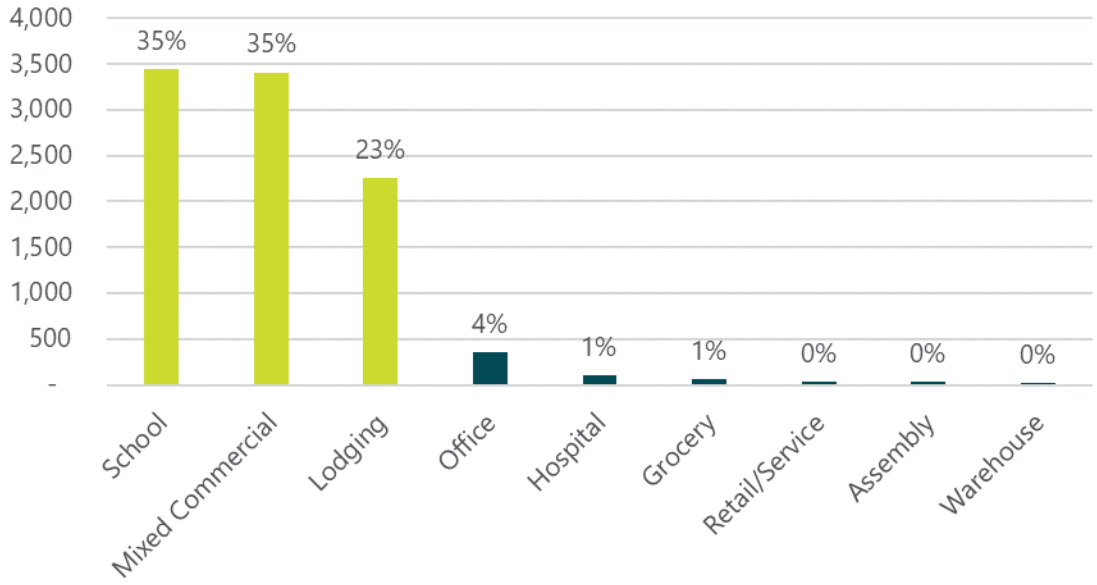



### *Boilers by Commercial Building Type*

We found that of the commercial boilers, 93% are located in three building types: schools, mixed commercial, and lodging.

[8] The CBSA includes all commercial building types, but excludes multifamily buildings, covered in NEEA's Residential Building Stock Assessments.

**Figure 8: Number and Percent of Oregon Boilers by Building Type (2019 CBSA)**




The CBSA indicates that the majority of steam boilers in commercial buildings (88%) are in schools. The rest are in hospitals, lodging, and retail, but at very small percentages.

**Table 2: Boiler Type by Building Type (2019 CBSA)**

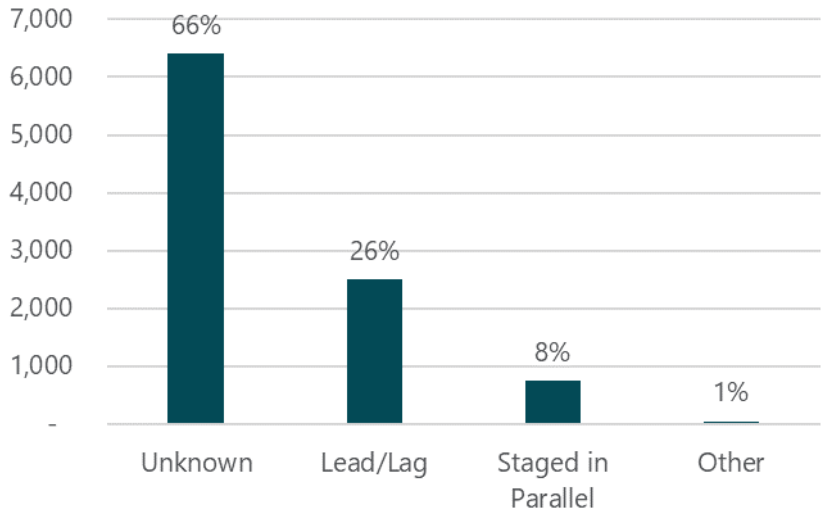
| Building Type | Hot Water | Steam | Unknown | Total Building Type |
|---|---|---|---|---|
| Assembly | 1% | - | - | - |
| Grocery | 1% | - | - | 1% |
| Hospital | - | 4% | - | - |
| Lodging | 15% | 3% | 100% | 23% |
| Mixed Commercial | 45% | - | - | 35% |
| Office | 5% | - | - | 4% |
| Retail/Service | - | 4% | - | - |
| School | 34% | 88% | - | 35% |
| Warehouse | - | - | - | - |
| Total | 100% | 100% | 100% | 100% |

### *Commercial Boiler Staging*

The CBSA also contains data about boiler staging, which we used to build assumptions around the number of boilers serving as backup, and therefore not operating frequently or consuming

much natural gas. Of the commercial boilers, 26% serve in a lead/lag operation, where one boiler continuously operates, and additional boilers only serve peak loads.

**Figure 9: Number and Percent of Boilers by Staging (2019 CBSA)**

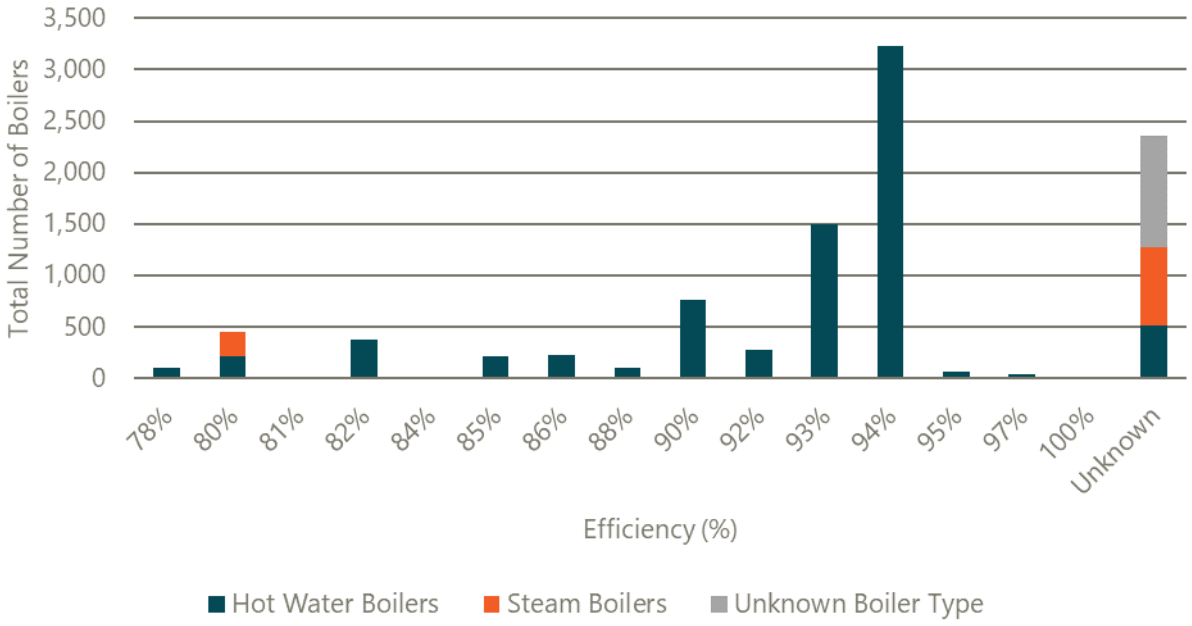



*Commercial Condensing Boilers and Efficiency*

Much of the focus of national efficiency programs and efficiency opportunities focus on incentivizing customers to purchase a condensing boiler, and the CBSA and other sources indicate the market is moving towards condensing boilers in the stock. A major finding from the 2019 CBSA review was that 63% of Oregon's commercial gas boilers are already condensing or have condensing capability. These findings are consistent with ENERGY STAR's market data that show condensing boiler sales rose from 30% of the commercial market in 2012, to 60% in 2016, and are expected to continue growing.

Even though the market is moving to more efficient condensing boilers in the stock, there may still be opportunities to ensure installed condensing boilers are operating at condensing efficiency levels. DOE publications, the RTF, and interviews with regional market experts estimate as much as 90% of condensing boilers in the market are not reaching condensing conditions due to improper design, installation, and operational practices. Boilers not operating at condensing temperatures means the temperature difference between the water temperature leaving and returning to the unit does not provide enough of a delta for the boiler to condense. When a boiler does not condense, it loses the opportunity to recover a significant amount of heat that instead vents out the stack. This indicates an opportunity to improve the efficiency of these installed condensing commercial boilers by ensuring proper design, installation, and operation practices.

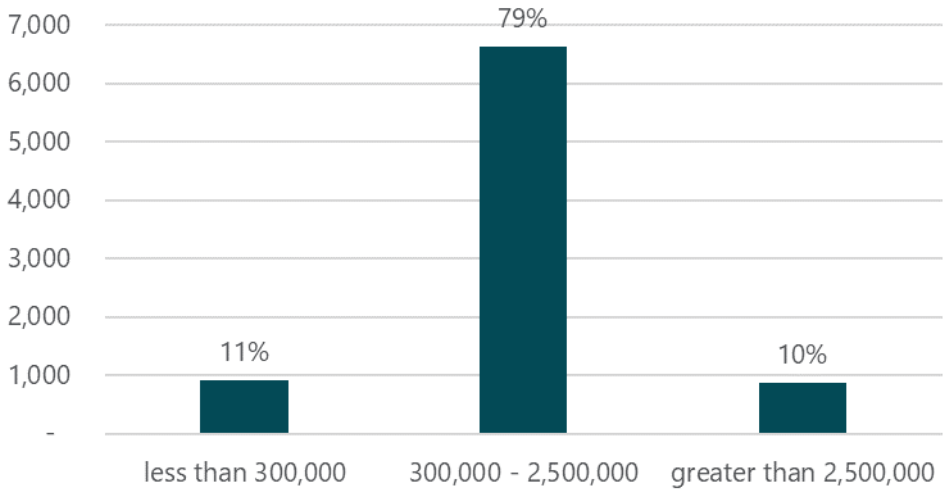
**Figure 10: Number of Commercial Boilers by Rated Efficiency and Boiler Type (2019 CBSA)**




*Commercial Boiler Capacity*

The Oregon Database excludes capacity data, but the CBSA indicates the majority of commercial boilers fall under DOE's "small" boiler size, between 300,000 and 2,500,000 Btu. These findings are consistent with DOE's Commercial Packaged Boiler rulemaking documents, which indicate the majority of boilers fall between 300,000 and 2,500,000 Btu. We do not have data on industrial boiler sizes, but we think it safe to assume the majority of those boilers are larger than 2,500,000 Btu.

**Figure 11: Number of Commercial Boilers by Capacity (Btu) (2019 CBSA)**



# Opportunity Findings

After characterizing the commercial and industrial boiler market, we explored the efficiency opportunities available to improve the existing boiler stock. We categorized our findings into four primary categories:

1. Total Boiler Market Opportunities
2. Commercial Boiler Opportunities
3. Industrial Boiler Opportunities
4. Utility Program Measure Opportunities

The following sections describe our findings related to these four categories in more detail.

## Total Boiler Market Opportunities

The following findings are applicable to both commercial and industrial boilers in Oregon.

### *Retrofit Opportunities for Older Boilers*

As described previously, boilers beyond their traditional estimated useful life are often working properly and as efficiently as newer boilers. One interviewee told us boilers could run forever if maintained properly, and, therefore, people are more likely to fix an existing boiler than replace it. This is partially due to the difficulty and expense of physically removing a boiler from a space, which one interviewee said can be more than the cost of a new boiler. An alternative approach to removing and replacing older boilers is to replace an older boiler without removing it from the site; depending on the site, newer properly sized boilers can be smaller than old boilers and often can be installed in the same boiler room with the old boiler remaining in place.

Because boilers have a longer useful life than assumed and removal can be challenging, vintage should not prevent programs from pursuing retrofit measures. Future opportunities should not ignore these older boilers; programs may see more success in getting them to run more efficiently rather than encouraging the customer to replace them. For example, while the industry has identified condensing technology as a key energy savings opportunity in boiler systems, burner retrofits and other retrofits can also realize condensing-level savings. According to subject matter experts, older boilers can operate efficiently, but they are commonly oversized or have a failing distribution system (oversized pipes, leaking steam traps). These factors can affect the increase the gas consumption of existing boilers, even when operating at high efficiency ranges.

Interviewees mentioned three approaches for addressing operational or efficiency issues with older boilers:

- Since boilers like to run constantly and evenly, buildings with oversized boilers may look for additional ways to use the extra boiler capacity, such as for domestic hot water. An oversized boiler often runs intermittently in order to meet the building's relatively low heating load during non-peak hours. The boiler could run more efficiently by running

constantly to produce more steam or hot water than the building requires and diverting the additional heat to boost domestic hot water.

- Even if an oversized boiler is able to run at a reduced firing rate (e.g., 2-stage burner), the reduced load case where an oversized boiler would spend the majority of its time likely has a lower efficiency. Retrofitting these boilers with a modulating burner and modern digital controls would allow these boilers to operate more efficiently at part loads where they spend the majority of their time.
- Another option for increasing the efficiency of an old boiler is the retrofit addition of a secondary heat exchanger, or turning a conventional boiler into a condensing boiler. This is a more common practice with industrial steam boilers, but there are also commercially available products for hot water hydronic heating boilers as well.

*Improving the Performance of Condensing Boilers*

As previously mentioned, findings indicate as much as 90% of condensing boilers in the market are not reaching condensing conditions due to improper design, installation, and operational practices. Even though the market is moving to more efficient condensing boilers naturally, the larger opportunity may be to ensure installed condensing boilers are operating at condensing efficiency levels through better design, installation, and operational practices.

- **Design practices.** Designers commonly oversize boilers by 10% or more, but oversizing increases the likelihood boilers will not reach condensing temperatures. Designing boilers to meet the load is crucial to ensuring condensing boilers achieve their rated efficiency. Designers also often overlook control sequencing, which is integral to a condensing boiler's performance.
- **Installation practices.** Regional market experts and program scan activities introduced three installation practices that can address condensing boiler performance:
    - When a boiler is installed, and especially a condensing boiler, boiler tuning is key to maximizing combustion efficiency. Boiler tuning is also an important periodic maintenance step for condensing boilers.
    - Properly commissioned controls ensure the boiler varies temperature resets to match the increased or reduced load. Since the control settings, such as hot water supply temperature or boiler sequencing, are also key to ensuring condensing operation, proper installation would confirm that a boiler system is operating at the design conditions.
    - The installation phase is critical to ensuring a system operates optimally during both peak loads, but also the most common part load conditions where a boiler most commonly operates. Equipment designers often add a safety factor in their design to ensure the boiler can meet loads during the coldest days of the year. Oversizing can be minimized with modulating burners, digital controls, and outside air temperature reset, which puts more emphasis on commissioning the controls.

- **Operation Practices**. Many condensing boilers do not operate in condensing range, meaning the temperature difference between the water temperature leaving and returning to the unit does not provide enough of a delta for the boiler to condense. When a boiler does not condense, it loses the opportunity to recover a significant amount of heat that instead vents out the stack. The operating efficiency of a boiler will drop by 5% or more when not operating in condensing ranges. Implementing a water temperature reset strategy ensures the supply water temperature will match the load, allowing the temperature difference to operate in conditions optimal for condensing. Any boiler tune-up program should include controls checks when digital controls are present on a condensing system, including ensuring temperature resets are working correctly.

### *Region Technical Forum's New Boiler Measure*

The RTF approved a draft standard protocol that regional utilities can use in commercial boiler programs at the November 2020 RTF meeting.[9] The new protocol includes a calculator to estimate savings from natural gas boiler efficiency measures. The protocol is primarily targeted at commercial hot water boilers due to the data availability to develop the protocol; however, the tool could be expanded for industrial boilers, especially if additional research fills current data gaps.

The calculator estimates savings for the following measures:

- The purchase of a new condensing boiler
- The retrofit of an existing boiler with an upgraded burner
- Burner controls including reset strategies, modulating capabilities, and staging sequences

The RTF has identified areas of future research that would improve or expand the calculator:

- Pre- and post-monitoring or billing analysis to support or update the assumptions in the calculator
    - The key areas of interest are efficiency curves, time spent at each load condition, the load level of boilers at each load condition, and average return water temperature at each load condition
- Boiler model specific data to better represent boiler characteristics that vary between models such as efficiency curves and other performance data
- Better understanding how boilers are operating in the field and the types of controls on existing boilers

[9] https://rtf.nwcouncil.org/meeting/rtf-meeting-november-10-2020, https://nwcouncil.app.box.com/v/ComGasBoilersSPv1-0

The RTF also emphasized the previously mentioned finding that while the prevalence of condensing boilers has increased significantly, many condensing boilers are not operating to their rated performance due to improper design, installation, or operation practices.

### *Mid-Efficiency Boilers*

We heard from several interviewees that they are considering mid-efficiency boiler incentives in the future. Mid-efficiency boilers refer to non-condensing boilers with efficiencies between 83-88%. The efficiency industry is still defining mid-efficiency boilers, but are commonly less expensive than condensing boilers, require less maintenance, and provide an average 85% efficiency. The market is moving towards more affordable mid-efficiency boilers, and interviewees believe there is a savings opportunity associated with these boilers.

Mid-efficiency boilers also offer an alternative to high-efficiency condensing boilers. As already discussed, improperly sized or controlled condensing boilers will spend much of their time in non-condensing operation, which drops their efficiency down to that of a conventional boiler. The most common reason for this is a lack of an outdoor air temperature reset control strategy, which has been identified to improve the operation of a condensing boiler. Condensing boilers without this controls strategy spend most operating time at an efficiency comparable to a mid-efficiency boiler. Therefore, it can be more cost effective to use a mid-efficiency boiler that requires less maintenance and still provides steady efficiency above a baseline conventional boiler.

## Commercial Boiler Opportunities

The following findings are specific to the commercial boiler opportunities.

### *Opportunities for Targeted Building Type Programs*

Even though commercial boilers use less natural gas on average than industrial boilers, there are far more of them, and the vast majority of commercial facilities are non-transport customers. NWGA estimated only 1% commercial customers are transport customers. Since schools, lodging, and mixed commercial house 93% of the commercial boilers, future programs should target measures towards these customers and building types. Additionally, 88% of the commercial steam boilers are in schools, so focusing on schools in future programs would capture a large portion of the commercial steam boiler market.

Schools are a unique opportunity because while they have maintenance staff, historically they do not have the bandwidth or training to maintain boiler systems in a way that prioritizes energy efficiency. Training or incentivizing boiler tune-ups and controls initiatives tailored to schools should focus on sequencing, burner staging, digital controls, and temperature resets.

### *Commercial Condensing Boilers*

The commercial boiler market appears to be turning over at a higher rate that the industrial boiler market, and when facilities do purchase new boilers, they appear to be purchasing condensing boilers. Natural gas utilities we interviewed have seen steady growth of condensing

boilers to dominate the market. They have also seen a spike in boiler replacements in recent years, primarily driven by the school market.

While most utility companies and efficiency organizations have focused on promoting the purchase of condensing boilers, we recommend future programs focus on ensuring these condensing boilers follow best design, installation, and operation practices described previously.

## Industrial Boiler Opportunities

The following findings are specific to the industrial boiler market.

### *Industrial Opportunities Outside of Transport Customers*

A much higher percentage of industrial natural gas customers are also transport customers compared to commercial customers, largely because transport customers consume more gas and, therefore, tend to be larger sites like production facilities. NWGA estimates 30% of industrial facilities are transport customers as opposed to commercial transport customers which only account for 1% of customers. The industrial boiler market is relatively small (about 1,600 in Oregon). We assume that half of these boilers are either in backup applications or associated with transport customers, leaving 800 industrial boilers to pursue through programs. Our market characterization findings indicate that despite the small number of boilers in the non-transport industrial sector, these boilers are very large and consume natural gas in orders of magnitude larger than commercial boilers, and interviewees agreed that the industrial sector is still worth pursuing but will require a more targeted approach.

Industrial boilers have more variability in application, size, and configuration than commercial boilers, which makes their market a more challenging target for programs. One major theme of the interviews conducted was that industrial boiler programs will need to utilize a customized approach instead of a standardized incentive program. One way to customize this approach, one interviewee said, is to subdivide the industrial sector by steam pressure (which affects the code safety requirements for a site), application, or industry site (e.g., breweries, dairy processing). This helps focus the program opportunity offerings to each subdivision. Our interview findings indicated focusing on smaller, lower pressure, light industrial boilers as a good entry point for the industrial market. The larger, higher pressure, more heavy industrial boilers are more likely to be well maintained by on site engineering and maintenance staff, and therefore have the incentive and ability to monitor and improve efficient boiler operation themselves.

### *Industrial Retrofit Opportunities*

Boiler replacements will be harder to justify in industrial applications due to the high cost and the business impacts of taking a boiler offline from operations. Based on our interview findings, the best industrial opportunities are retrofitting boilers' burners to condensing or modulating and upgrading controls to ensure operational strategies can be employed. Key interviewees identified two opportunities for industrial boiler programs:

- Industrial facilities present good opportunities for boiler tune-up programs to ensure the boilers are operating optimally.
- Industrial boiler systems typically have larger distribution systems, so piping insulation and properly operating steam traps have a larger impact on natural gas than commercial systems.

Since boiler tune-ups and steam traps historically have low program uptake, understanding how to improve these measures for higher uptake with industrial customers may be worth additional research.

### Utility Program Measure Opportunities

Our scan of commercial and industrial utility programs found a wide range of measures and program strategies. Both commercial and industrial programs focused heavily on encouraging the purchase of an efficient boiler, primarily condensing boilers. Commercial and industrial programs also offered a range of controls measures through both custom and deemed incentives.[10] Boiler tune-up programs were the most common, but other measures included:

- Steam trap replacement
- Outside air temperature reset strategies
- Modulating burner retrofits
- O2 or cut-out controls
- Turbulators
- Advanced load monitoring
- Pipe insulation

CEE's Commercial Boiler Incentive provides guidance on the most cost-effective efficiency measures. They include purchasing an efficient boiler while emphasizing the importance of installing and operating boilers properly in order to ensure the boiler's performance meets its rated expectations. CEE recommends the following measures as specific areas of focus:

- Boiler tune-ups, focusing on:
    - Inspecting the burner
    - Inspecting and optimizing the flame pattern
    - Inspecting the systems controlling the air to fuel ratio
    - Optimizing CO emissions
    - Measuring CO and $O_2$ levels before and after the tune-up
- Modulating boiler burners, which allow the boiler to operate efficiently at partial loads
- Boiler and burner sequencing for systems with multiple boilers
- Supply water temperature reset, which is crucial to ensuring condensing boilers operate in condensing ranges

[10] Appendix C includes a full list of boiler control strategy definitions, and the supplementary workbook includes tables of measures incented by utility.

- Boiler right-sizing, since boilers are commonly oversized
- System maintenance, including specific guidance for operators
- Pipe insulation to limit heat loss from the distribution system
- Hybrid boiler systems, which include both condensing and conventional boilers with advanced controls

Both CEE's program and interview findings indicate boiler tune-ups can increase the efficiency of a boiler by 5%, which is on the order of the savings from a condensing boiler. Appendix D includes a full description of these measures.

## Program Recommendations and Future Research

The following program recommendations come from Cadeo's assessment of the Oregon boiler market and the efficiency opportunities to improve the performance of Oregon's boiler stock. Cadeo views this research as the first step in exploring this market further, so we have also provided recommendations for future research the Energy Trust can explore to fill data gaps and develop robust, effective boiler programs in the future.

### Program Recommendations

Our market characterization and interviews indicate that while some opportunities overlap, the types of boilers (type, vintage, size, etc.) and the opportunities to improve those boilers vary widely between the commercial and industrial sectors, so each require programs and measures specific to each sector. Commercial programs should focus on deemed measures and easy accessibility to reach a large number of customers, while industrial programs should focus on custom measures with targeted outreach to industrial customers.

#### *Targeted Commercial Programs*

Since schools, lodging, and mixed commercial house 93% of the commercial boilers, future programs should target measures and program design towards these customers and building types. Additionally, with the majority of the commercial steam boilers in schools, prioritizing schools in future programs would capture a large portion of the commercial steam and hot water boiler market.

Programs targeting schools present a unique opportunity but also challenges. Maintenance staff often have limited bandwidth and technical training, but schools have a high interest in cost-saving measures. We recommend exploring program opportunities with the following priorities:

- Offering free training to maintenance staff on low-cost boiler opportunities and no-cost maintenance practices
- Incentivizing boiler tune-ups and controls incentives tailored to schools, either through free tune-ups or working with implementers to control costs to the participant
    - Controls measures should focus on upgrading to digital controls to allow for sequencing, burner staging, and temperature resets

### *Incentivize Performance, not Condensing*

Since the market appears to already be shifting to condensing boilers, we recommend future programs do not incentivize the purchase of a condensing boiler. Instead, we recommend future programs focus on incentivizing boilers to perform as rated, and not the efficiency rating itself:

- Incentivizing right-sizing of boilers
- Incentivizing commissioning of new boilers
- Incentivizing boiler tune-ups and controls upgrades, focusing on upgrading to digital controls to allow for sequencing, burner staging, and temperature resets

If Energy Trust does pursue a condensing boiler program, we recommend including burner retrofit incentives to target existing boilers unlikely to purchase a new boiler.

### *Industrial Program Measures*

Since most industrial boilers are larger boiler *systems* with multiple boilers, we recommend exploring measures that focus on improving the efficiency of the system:

- Boiler and burner sequencing
- Pipe insulation
- Steam trap replacement
- Hybrid boiler systems
- Boiler tune-ups

Since boiler tune-ups and steam traps historically have low program uptake, understanding how to improve these measures for higher uptake with industrial customers may be worth additional research.

## Future Research

This research sought to understand the Oregon boiler market, but further research could improve the current findings and fill data gaps.

### *Support the RTF's Research Goals*

The RTF's recent addition of a commercial boiler measure presents good program opportunities and additional research questions. As the RTF explores possible research, we recommend Energy Trust support that research where feasible with the following priorities:

- Research and data gathering on industrial load shapes to support using the new tool for industrial customers more accurately
- Research on part load efficiency to better understand the savings tradeoffs of operating at lower loads, but also lower efficiencies at part load
- Researching how boilers actually operate in the field, as opposed to rated efficiency, with a focus on common control capabilities

### *Industrial Boiler Data Gaps*

This research provided a high-level overview of the commercial and industrial boiler market, but robust data specifically on the industrial boiler market left this research without a full picture of industrial boilers in Oregon.

If Energy Trust chooses to pursue industrial boiler program measures, we recommend further researching the following industrial boiler gaps:

- Industrial boiler capacities
- Industrial boiler locations, by facility type and application, to understand niche opportunities
- Further understanding which industrial facility types are transport customers and non-transport customers to target programs to appropriate customers

### *Market Research on Program Opportunities*

This research identified several high-level program opportunities. We recommend exploring these opportunities in more depth through:

- Interviewing boiler technicians to better understand the retrofit and tune-up opportunities and inform program design strategies
- Interviewing boiler tune-up implementers to better understand the reasons for low uptake of tune-up measures and what would make future programs better
- Interviewing industrial facility boiler operators to vet any proposed program measures, build understanding of barriers to efficiency and inform possible program strategies

# PINK PAPER

Opinion Dynamics

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# Energy Trust of Oregon

## Manufactured Home Replacement Pilot Evaluation

**August 12, 2020**

# 1. Executive Summary

## 1.1 Overview and Methods

Energy Trust of Oregon's (Energy Trust) Manufactured Home Replacement Pilot began in June of 2017 and is a collaborative effort among several stakeholders. The Pilot offers financial and other support to replace pre-1994, inefficient manufactured homes with new, energy-efficient manufactured homes. The Pilot began targeting replacements in three Oregon manufactured housing parks and has since expanded to offer the opportunity to manufactured housing homeowners on private land. The Pilot staff and partners include:

- Energy Trust: Conducts outreach, coordinates stakeholders, supports households in the replacement process, and provides a financial incentive for qualifying replacements.
- CLEAResult: Acting as an implementer for the Pilot, conducts outreach and supports households in the replacement process.
- Craft3: Offers a low-interest loan for households who do not own their land. They conduct outreach, provide financial counseling, and support participants.
- Community and Shelter Assistance Corp. (CASA) of Oregon: CASA arranges financing and provides support to purchase manufactured home parks and establish them as cooperatives. CASA recruits new participants and provides support to homeowners.
- Earth Advantage: Conducts pre-inspections of manufactured homes to determine eligibility and support an energy savings impact analysis.
- NeighborWorks Umpqua: Purchases manufactured home parks and operates them as a nonprofit. Residents own their homes and lease the land. NeighborWorks helps homeowners in their park navigate the replacement process.
- The United Community Action Network (UCAN): UCAN is a Community Action (CAP) agency that offers funds in the form of a subsidy to qualifying households to facilitate their home replacement.

Opinion Dynamics conducted a three-year, real-time embedded process evaluation of the Pilot. The evaluation objectives were to better understand energy and non-energy impacts, project costs, barriers to participation, and key elements of a successful program design. The evaluation team used information from Pilot documents, Pilot team meetings, home inspection results, and interviews with six stakeholders and 29 manufactured home residents or homeowners (referred to as participants).[1]

## 1.2 Key Findings

Key findings from the evaluation include:

- **Existing, pre-1994 manufactured homes are generally in poor condition and in need of major repairs.** Issues related to the foundation, floor, roof, walls, plumbing, and HVAC systems. Mold and pests, as well as air and water leaks, were common.
- **Participants actively worried about their home.** Participants were stressed about affording rent and their utility bills and faced evictions or shutoffs. Many participants reported being uncomfortable in

[1] Earth Advantage representatives were not interviewed, while a representative of Saint Vincent de Paul of Lane County, a park operator, was interviewed.

their homes and feared it would burn down due to electrical issues and poor wiring. Close to half of the existing manufactured home residents (11 of 25) mentioned new health conditions occurring or prior health conditions worsening as a result of the problematic home conditions. Residents frequently mentioned itchy or watery eyes and coughs.

- **Participants learned about the Pilot through Pilot staff, their park operator, or through a manufactured home retailer.** The majority of participants (72%) were excited to learn about the Pilot, though 28% were unsure or skeptical if the opportunity was a good fit for them. Low-income households tend to be conservative with new financial endeavors and are cautious about taking on new debt; for these reasons, some lost interest after learning more about the financial commitment required from them.
- **Some homeowners who have pursued home replacement through the Pilot have been unable to piece together sufficient funding (incentives and subsidies) to make a loan financially viable for them.** No participant has yet qualified for the United States Department of Agriculture (USDA) Rural Housing Service Section 502 low-interest loan or Craft3's loan. One participant has thus far qualified for UCAN's weatherization subsidy. Most homeowners on private land (3 of 4) were able to leverage the equity in another piece of property (home or land) to get cash for a down payment on their new mobile home.
- **Oregon Housing and Community Services (OHCS) weatherization funds funneled through Community Action Agencies are an important subsidy that reduces the amount of money the homeowner will need to borrow on the loan, but are limited in their availability.** Currently, each CAP agency chooses whether they will request permission to allocate weatherization funds to manufactured home replacement and one has agreed to support the Pilot. This means additional work for Pilot staff to engage each agency and limited availability of these funds for participants.
- **Project costs can vary and are hard to predict** but have so far ranged between $75,000 to $123,000 for single wide replacements. If asbestos is found in the existing home, it can add up to $10,000 to the decommissioning costs. The site preparation phase can incur additional costs if the ground needs to be leveled and reinforced. If the new home does not come with gutters, those must be hung along with adding stairs or a ramp to the front door. Difficulty estimating project costs increases the difficulty for a participant to convey to a lender what they need to borrow.
- **There were some challenges with selecting a new manufactured home that will fit on the existing property.** Newer homes tend to be larger than older homes, which can make it difficult to comply with setback requirements when siting a home in the same lot. Park operator participants visited multiple retailers to find appropriately-sized homes.
- **Our assessment to date indicates that participants realize substantial non-energy benefits after moving from a pre-1994 manufactured home to a new, efficient one.** The biggest difference noted by participants was improved thermal comfort. They no longer needed extra blankets and jackets to stay warm. Most reported health improvements due to improved air quality in the new home. They also worried less about things in the new home, and one felt much safer in their new home and had an easier time getting around in their wheelchair and walker.
- **The Energy Trust incentive influenced park operators to replace their old inefficient manufactured homes and eased the process for private land homeowners.** For one park operator, the incentive allowed them to replace more homes than they would have otherwise. Two private land homeowners felt more comfortable in their decision to buy the home, knowing that they had additional funds to help with removing the old home and preparing the site.
- **Additional resources and partnerships should allow the Pilot to expand to other areas of Oregon.** Energy Trust has been working with OHCS to increase the availability of funding for home replacement throughout the State of Oregon. The 2019 passage of Oregon House Bill 2896 will allocate funds for

decommissioning of old homes and for loans to households to buy new manufactured homes. Interviewed Pilot partners and park operators all want to pursue replacements in other parks they manage in Oregon.

## 1.3 Conclusions and Recommendations

We offer the following conclusions and recommendations.

**Conclusion 1:** There is a considerable need to replace pre-1994 manufactured homes in Oregon. Many of these homes are in disrepair. Roof leaks, cracks in the walls, holes in the floor, mold, and pests make the homes uncomfortable, worrisome, and potentially unhealthy to live in.

**Conclusion 2:** The Pilot is sufficiently resourced, attractive, and flexible enough to encourage manufactured home replacements inside and outside of the park context. Pilot staff have engaged stakeholders to facilitate replacements for residents in parks indiscriminate of whether the participants own the home, land, or neither. Pilot partners support homeowners who do and do not own their land and also engage park operators for replacements where tenants occupy the homes.

**Conclusion 3:** Each replacement project is unique due to the household's financial situation and the land plot the home is sited on. Each homeowner considers their assets and whether a loan is in their best interest. At the same time, loan decisions are complicated when project costs are hard to estimate. The cost to replace a single wide manufactured home can vary considerably, and some of the costs are hard to predict. Individualized attention is necessary when home replacement projects occur on a case by case basis.

> **Recommendation:** Pilot staff should ensure continued or reinvigorated discussions with interested partner organizations and initiate discussions with other potential organizations to secure funding for a participant liaison role that can provide individualized support and be a point of contact to shepherd the participant.

**Conclusion 4:** The Pilot brings together a variety of financial support, including incentives, subsidies, grants, and low-interest loans, but most participants cannot qualify for all of them, and some have had difficulty qualifying for any. Most of the Pilot's financial support is available in geographically restricted areas, and only one of the state's 15 CAP agencies contributes weatherization funds to the Pilot. Soon, Oregon House Bill 2896 will provide additional funds for manufactured home replacement, which can potentially be used to supplement Pilot support.

> **Recommendation:** Pilot staff should investigate ways to make best use of the HB2896 funds and determine opportunities for combining them with Pilot funds to further reduce the cost of home replacements for participants. Pilot staff should also pursue the possibility of OHCS approving all of Oregon's CAP agencies to assign a portion of weatherization funds to manufactured home replacement.

**Conclusion 5:** Early post-occupancy findings point to substantial non-energy benefits for people who move from a pre-1994 manufactured home to a new, energy-efficient one. Thermal comfort was markedly improved, health conditions improved, and residents reported reduced stress and worry in the new homes. Some experienced pride in the new home and increased feelings of safety as well.

> **Recommendation:** Subsequent evaluations should include efforts to measure self-reported non-energy benefits.

# Memo

**To:** Board of Directors

**From:** Phil Degens, Evaluation Manager
Mark Wyman, Sr. Program Manager -- Residential Portfolio

**Date:** September 16, 2020

The pilot has successfully achieved many of its stated goals. The pilot diligently documented the process of replacing an existing manufactured home. The steps needed as well as the cost and time requirements or each step were also gathered. This information is now available to better plan additional engagements and inform current and future partnering organizations and participants. The many non-energy benefits that come as a result of home replacement have also been reported on. These additional benefits show that the pilot does much more than just save energy and are an important factor in gaining support for this type of offering.
In May of 2020 the PUC authorizing additional expenditures to support the ongoing research objectives of the Manufactured Home Replacement Pilot. This also marked the pilot's transition to focus on serving owner-occupied replacement projects. The successful completions during this first phase were exclusively homes purchased by park operators for use as rental housing. We expect significant differences in the financial models and requirements as well as the home occupant experience with the shift from park operator and tenant to owner occupants.

Energy Trust's program team have worked with SVDP to address work quality issues identified in this report. Pilot site inspection information is passed on to facilitate any repair work needed from the manufacturer. Additionally, our partners at Multnomah County's Weatherization Assistance Program identified an issue with the ventilation strategy that has since been remediated.

The forthcoming OHCS program authorized under HB2896 represents an opportunity to address many of the barriers that remain for owner-occupied replacement projects sited in parks. The additional grants and enhanced financing terms expected from the HB2896 program will make home replacement feasible for many more households. Staff are working to support OHCS, sharing the successes of and challenges to our efforts to date, many of which have been documented in this report. Staff are also working with stakeholders to anticipate remaining gaps in the program model.

During the pilot Energy Trust and our partners have managed to provide personalized engagement and support to participants. There is general agreement that when the pilot is scaled up to a larger program is a dedicated team of program liaisons will be required. A scaled up Manufactured Home Replacement (MHR) program has the potential to achieve substantial energy savings among rural, low income and/or minority households. MHR's value to ratepayers and alignment with Energy Trust's mission provides grounds to consider Energy Trust funding of a "navigator" service as an integrated component of our broader program infrastructure and expanding work with community-based organizations throughout Oregon.

We need to acknowledge that the recent natural disasters that have hit Oregon in the form of flooding and wildfires have had a significant impact on many manufactured home communities. The disasters' impacts have increased interest in tapping into the pilot's services and learnings. The most recent news indicates that the impacted communities' needs far exceed the pilot's current resources and

many of these needs go far beyond the scope of the pilot research objectives. Many of the learnings and experiences gained from this pilot will support any future initiatives that target the impacted communities

# PINK PAPER

December 4, 2020

# Oregon Lighting Market Characterization

## Energy Trust of Oregon


**Developed For**

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# Executive Summary

On behalf of Energy Trust of Oregon, Cadeo Group and Apex Analytics conducted extensive secondary market research to summarize existing data on the residential and nonresidential lighting markets in Oregon. The research team sought to provide insight into both the current and forecasted states of these markets, as well as areas of remaining opportunity for energy efficiency programs. The catalogue of data sources reviewed is available in a workbook available on request from Energy Trust.[1]

This research provided insights into the residential and nonresidential lighting markets in Oregon as of October 2020. Key findings include:

### Residential

LED market share has grown rapidly among residential lighting products, with LEDs representing more than 60% of residential bulb sales in 2019. Reflecting this high market share, forecasts predict significant growth in household saturation of LEDs, with estimates of 2020 saturation at 61% overall, more than three times the level reported from the most recent RBSA's 2016/2017 observations (17% overall). Most estimates place both the sales and saturation of LED globe and decorative lamps below that of A-type lamps and reflectors.

LED market share is lower, however, in certain retail channels and among certain demographics. Grocery, dollar, and mass merchandise retailers, which collectively make up 30% of residential lightbulb sales, have a notably lower LED market share than other retail channels. A recently completed Energy Trust Customer Insights study suggests that Black respondents, low- and moderate-income households, and renters were less likely to purchase LEDs than other respondents.

There is considerable uncertainty in the residential lighting market. Recent Department of Energy (DOE) rules rescinded long-anticipated increases to lighting efficiency standards. Lawsuits have sought to reverse those decisions and the results of the 2020 presidential election could alter future regulatory actions. Added to this regulatory uncertainty, the COVID-19 pandemic has affected global lighting supply chains and changed consumer buying practices, potentially with long-term implications. All these factors add uncertainty to future lighting market forecasts.

As a result, niche opportunities for energy efficiency exist throughout the residential lighting market.

- Grocery, dollar, and mass merchandise retailers sell fewer LEDs than hardware and DIY channels. There is an opportunity to incentivize LEDs within these channels to encourage higher sales.

[1] Contact Phil Degens (phil.degens@energytrust.org) to request the workbook.

- Sales and saturation of LED globe and decorative lamps remain below that of A-type lamps and reflectors. There may be remaining opportunities to encourage LED adoption of these specialty lamp types.
- There may also be remaining opportunities within specific demographic groups. Black, low-income, moderate-income, and renter households purchased LEDs less frequently than other demographic groups.

### Nonresidential

In the nonresidential market, the research team found that the rapid proliferation of LEDs across products in the installed stock over time has driven LED saturation[2] toward 100% in many lighting applications. The applications where saturation is lowest, namely in the ambient linear and high/low bay applications, however, are typically the largest applications by volume. This creates an opportunity for eventual replacement of legacy non-LED technologies, especially when including networked lighting controls (NLCs) in LED replacements.

Linear fluorescent 32W T8s remain the most dominant lighting technology in the nonresidential market, particularly in the ambient linear application. The building types where T8s are most prevalent (warehouses, schools, and offices) are also building types that make up the largest portion of commercial floor area. Converting this large volume stock of T8s to LED technologies, and especially LED technologies with NLCs like luminaire level lighting controls (LLLCs), is a likely the largest area of opportunity for energy efficiency remaining in this market.

Niche opportunities for energy efficiency exist throughout the nonresidential lighting market.

- A small but stubborn percentage (8%) of installed stock of inefficient linear fluorescent T12s persists in the nonresidential market, concentrated in small- and medium-sized rural buildings. There is an opportunity to replace these inefficient lamps with more energy efficient LED alternatives, or LEDs with NLCs.
- The indoor agriculture market is growing rapidly, but legacy technologies (including HIDs) make up most of installed stock. Pushing the indoor agriculture market towards more energy efficient lighting solutions represents a large opportunity for energy savings regionally.
- Controls are likely to continue to be part of the conversation. There is no dominant control technology, and 68% of indoor lighting is controlled by manual on/off switches. However, controls can reduce hours of use by up to 38% and NLCs on average can achieve 49% energy savings. We assume there will continue to be innovations in controls that Energy Trust should monitor for opportunities to move the market towards greater adoption of controls.

[2] For the purposes of this report, the team defines penetration as whether or not LEDs are in a given application, and saturation as the percentage of LED products in a given application.

# PINK PAPER

# Executive Summary

ADM Associates ("ADM") conducted the Energy Trust of Oregon 2020 Fast Feedback program participant survey from April 2020 to early February 2021, which included program participants from January through December 2020. This report summarizes the analysis conducted by ADM and results of the survey. The purpose of the analyses was to summarize Fast Feedback survey findings by program and quota group.

## Residential Survey Summary

The residential survey respondents generally well represented the Energy Trust participant base, with the following exceptions:[1] 1) homeowners represented a larger percentage of survey respondents than of Energy Trust participants; 2) people of color represented a somewhat larger share of survey respondents than of Energy Trust participants.

Results generally show high or moderately high satisfaction ratings across all facets of program experience for all measures. In nearly all cases, overall satisfaction remained consistent or showed a slight upward trend over time. Table ES-1 shows mean overall program satisfaction for each of two types of quota group.[2] "Exclusive" quota groups are based on state (Oregon or Washington) and, within Oregon, type of measure installed; each respondent appears in only one of these quota groups. "Cross-cutting" quota groups are based on features that may or may not apply to a project that are independent of the exclusive quota group; a respondent may appear in more than one of these quota groups.

The overall program influence on purchase decisions was moderately high to high for all quota groups.[3] Factors influencing the purchase decision varied somewhat by measure type, but a contractor was one of the most commonly identified influencers, followed by the measure's efficiency rating. The Energy Trust incentive, Energy Trust information or materials, and a salesperson or retailer were commonly identified influencers for certain measures.

Among participants who used a contractor, by far the most consistently identified way participants found that contractor was by word of mouth. Web searches, use of an online referral or rating service (e.g., Yelp or Angie's List), and contractor advertisements were also frequently identified for most quota groups.

[1] As compared with data from the 2019 Customer Insights Study (CIS). The CIS comparison group is only of "direct participants." That is, it excludes households that indirectly benefited from improvements to their homes not tied directly to their units (e.g., insulation and central hot water or heating), as a result of their landlords' program participation, as such participants are not represented in the Fast Feedback survey.

[2] For both residential and nonresidential surveys, satisfaction was defined as a rating of 4 or 5 on a scale from 1 (not at all satisfied) to 5 (very satisfied). "Don't know" and "no response" were excluded from the denominators for all analyses to be consistent with previous years.

[3] Influence was defined as a rating of 4 or 5 on a scale from 1 (did not have any influence) to 5 (had a great influence). "Don't know" and "no response" were excluded from the denominators for all analyses. For each respondent, "overall influence" rating was equal to the highest influence rating that respondent provided for all factors reflecting Energy Trust influence. See Section 3.2 for more details.

*Table ES-1: Summary of Residential Satisfaction*

| Quota Group | Number of Survey Respondents | Overall Satisfaction |
|---|---|---|
| Exclusive Quota Groups | | |
| Residential - Oregon | 883 | 94% |
| Smart Thermostats | 71 | 94% |
| Heat Pump Advanced Controls | 57 | 94% |
| Ceiling Insulation | 88 | 93% |
| Other Insulation | 88 | 89% |
| Ducted Heat Pumps | 81 | 97% |
| Ductless Heat Pumps | 96 | 95% |
| Central Air Conditioner | 66 | 92% |
| Windows | 90 | 94% |
| Gas Fireplaces | 86 | 97% |
| Gas Furnaces | 89 | 100% |
| Spa Covers | 71 | 89% |
| Residential - Washington | 169 | 96% |
| Residential Solar PV | 149 | 94% |
| Cross-Cutting Quota Groups | | |
| Moderate Income Track | 96 | 96% |
| Rental Properties | 76 | 100% |
| Fixed-Price Promotions | 73 | 96% |
| Instant Incentives | 322 | 96% |
| Pay for Performance Pilot | 102 | 92% |

## Nonresidential Survey Summary

Results generally show high satisfaction ratings across all facets of program experience for all quota groups. In nearly all cases, satisfaction with the overall program experience and with interactions with program representatives remained consistent or showed a slight upward trend over time. Respondents across all quota groups reported influence from multiple factors. Although some factors tended to have more influence on average than others, no single factor showed consistently greater influence across programs and quota groups than any other – that is, the most influential factor tended to be specific to the group in question.

Table ES-2 shows mean overall program satisfaction for each of quota group. Again, each respondent appears in only one “exclusive” quota group but may appear in multiple cross-cutting quota groups.

*Table ES-2: Summary of Nonresidential Satisfaction*

| Quota Group | Number of Survey Respondents | Overall Progam Satisfaction | Interaction with Program Representative |
|---|---|---|---|
| **Existing Buildings** | | | |
| Existing Buildings End-Use Quotas (Exclusive Quotas) | | | |
| Assembly/Religious | 40 | 100% | 97% |
| Auto Services | 56 | 96% | 100% |
| Education | 34 | 100% | 96% |
| Government | 51 | 100% | 100% |
| Grocery | 41 | 98% | 95% |
| Healthcare | 32 | 90% | 100% |
| Higher Education | 9 | 100% | 100% |
| Hospitality | 29 | 97% | 93% |
| Office | 66 | 98% | 100% |
| Other Commercial | 15 | 100% | 100% |
| Recreation | 38 | 94% | 97% |
| Restaurant | 76 | 99% | 100% |
| Retail | 71 | 100% | 100% |
| Warehouse | 53 | 98% | 98% |
| Washington | 13 | 100% | 100% |
| Commercial Solar | 14 | 92% | 75% |
| Existing Buildings Cross-Cutting Quotas | | | |
| Direct Install (DI) | 122 | 100% | 100% |
| Lighting (Non-DI) | 346 | 98% | 98% |
| BE TLED Giveaway | 93 | 99% | 99% |
| **Multifamily** | | | |
| Appliances | 22 | 100% | 100% |
| Direct Install | 25 | 100% | 100% |
| Hot Water | 7 | 86% | 86% |
| HVAC | 49 | 100% | 100% |
| Insulation and Windows | 48 | 98% | 100% |
| Lighting | 38 | 95% | 100% |
| Other Measures | 0 | n/a | n/a |
| Products | 3 | 100% | 100% |

Continued

*Table ES-2: Summary of Nonresidential Satisfaction (continued)*

| Quota Group | Number of Survey Respondents | Overall Progam Satisfaction | Interaction with Program Representative |
|---|---|---|---|
| **Production Efficiency** | | | |
| Production Efficiency End-Use Quotas (Exclusive Quotas) | | | |
| Agriculture | 50 | 98% | 94% |
| Compressed air | 3 | 100% | 67% |
| HVAC and controls | 22 | 95% | 100% |
| Lighting | 88 | 97% | 99% |
| Other industrial measures | 63 | 100% | 100% |
| Pumps and Motors | 35 | 100% | 97% |
| Refrigeration | 15 | 93% | 100% |
| Production Efficiency Cross-Cutting Quotas | | | |
| PE TLED giveaway | 11 | 100% | 100% |
| Custom projects | 28 | 100% | 96% |
| Standard projects | 160 | 98% | 98% |
| Agriculture sector | 123 | 98% | 97% |
| Food & beverage sector | 28 | 100% | 100% |
| High tech sector | 11 | 100% | 100% |
| Metals sector | 12 | 100% | 90% |
| Wood & paper sector | 21 | 100% | 100% |

The overall program influence on purchase decisions was high for all programs and program tracks. It was moderately high or high for all quota groups. The small sample sizes argue for using caution in interpreting findings at the individual quota group level. However, the Energy Trust incentive consistently appeared to have relatively high influence in several programs and tracks. Some other influencers stood out somewhat in particular tracks within particular programs but did not appear to have consistently high influence across programs and tracks.

# Tab 5

# Resolution 946

**AUTHORIZING USE OF PROGRAM AND CONTINGENCY RESERVES TO SUPPORT GAS EFFICIENCY PROGRAMS**

July 21, 2021

## Discussion

High gas customer measure installation activity , within the commercial and residential sectors, is driving Energy Trust to reduce incentives to manage the unanticipated demand. To manage this demand and also sustain gas efficiency programs, Energy Trust is taking steps, including changing incentives and implementing incentive and project caps. In addition, to managing incentive caps in line with budgets for NW Natural and Avista revenues, Energy Trust staff proposes spending program and operational contingency reserves to sustain gas program offerings.

Energy Trust staff discussed this high demand condition with NW Natural and Avista staff and received support for utilizing program reserves and in the case of Avista leveraging contingency reserves. This support allows for a minimal amount of incentive mitigation and appreciable incremental therm savings. The utilities suggest tariff adjustments in 2022 to replenish program and contingency reserves by the close of 2022.

Accessing and spending program reserves and operational contingency reserves requires Energy Trust board of directors approval. Energy Trust staff presented information regarding the gas programs funding status to the Energy Trust board of directors Finance Committee on June 28, 2021. The Finance Committee recommended presenting a proposal for accessing program and operational contingency reserves to the full board of directors.

## Recommendation

1. Authorize staff to access program reserves for NW Natural Gas, and Avista gas programs in 2021 in amounts that will exceed 50% of those program reserves in order to support and continue Energy Trust's gas efficiency programs.
2. Authorize staff to temporarily use up to $500,000 from the Energy Trust Operational Contingency Reserve in 2021 to support and continue Energy Trust's Avista gas programs through 2021.

**RESOLUTION R946**
**AUTHORIZING USE OF PROGRAM AND CONTINGENCY RESERVES TO SUPPORT GAS EFFICIENCY PROGRAMS**

**WHEREAS:**

1. **Energy Trust's board policy on Maintaining, Establishing, and Using Net Assets requires that Energy Trust's board of directors approve expenditures that exceed 50% of Energy Trust's program reserves and in any amounts from Energy Trust's Operational Contingency Reserves.**

2. **Market conditions and program design have resulted in a higher uptake of incentives in gas efficiency programs, and to support the continuation of these programs, Energy Trust staff is implementing incentive changes and proposes accessing program and operational contingency reserves.**
3. **Energy Trust staff has taken steps to manage gas program incentive demand, including changing incentives and implementing incentive and program caps. To sustain the gas programs, Energy Trust staff also proposes accessing program reserves for NW Natural and Avista and accessing operational contingency funds temporarily in an amount up to $500,000 for support of Avista gas incentive offerings.**

**It is therefore RESOLVED that in order to sustain and support the continuation of the gas efficiency programs in 2021:**

1. **Energy Trust staff is authorized to access and use the NW Natural and Avista program reserves in amounts that will exceed 50% of those program reserves; and**

2. **Energy Trust staff is authorized to access and use temporarily an amount not to exceed $500,000 from the operational contingency reserves.**

Moved by: Seconded by:

Vote: In favor: Abstained: 0

Opposed: 0

# PINK PAPER

**Finance Committee Meeting Notes**
May 28, 2021 2:00 pm

**Board members present:**
Susan Brodahl (chair), Henry Lorenzen, Roland Risser,
Melissa Cribbins (ex officio)

**Board members absent**: Mark Kendall, Anne Root,

**Staff attending:** Scott Clark, Amber Cole, Michael Colgrove, Fred Gordon, Steve Lacey, Debbie Menashe, Karin Murray, Pati Presnail (staff liaison), Tracy Scott, Michelle Spampinato

**Review of April Financials** (Pati Presnail)

Pati presented the April financial statements to the committee. The budget included in these statements is the amended budget, which was approved by the board of directors in May to show the additional electric expenditures and reductions in marketing and evaluation expenditures. The amended budget includes four months of actual results, plus eight months of projected results, as is typical when reforesting. Variances for the month and year are zero for this reason. As the year progresses, the committee can expect to see (hopefully modest) variances between actual and amended budget for May through December.

Committee members requested a report identifying the differences in expenditures between the original and amended budget and in current expenditures. Pati provided a spreadsheet with the information requested.

Overall, the April financial statements reflect that revenue is still trending as expected, but there are variances, particularly with respect the Cascade Natural Gas revenues. While a large percentage variance, the overall dollar amount is small. Pati also reviewed the statement of net assets with the committee and reported that revenues derived from administration of the Oregon Community Solar Program are increasing and held for development activities.

Pati then reported on Energy Trust's OPUC administrative cost and staffing cost performance measures and Energy Trust's performance as compared to those measures. Current administrative and staffing expenditures are within the OPUC caps. Committee members asked questions about the caps, including with regard to unused vacation liability and expense. Pati reported that vacation balances are decreasing as lockdown restrictions due to COVID are reduced. As further encouragement to use vacation time, Energy Trust has reinstated its cap on carry over vacation time.

Committee members thanked Pati for the report, and asked that future reports include prior year historical information for comparison. Pati will guide committee members to that information.

## **Continued discussion of budget engagement** (Michael Colgrove)

Mike continued the discussion on the board's involvement in budget development with committee. Also present at the meeting was Scott Clark, Energy Trust Director of IT, who is part of Energy Trust's staff Business Planning Steering Team, an ad hoc team that oversees the organization business planning process which precedes the formal budget development process. The committee and Mike discussed impressions of the workshops with the advisory councils and the discussion during the May board learning session.

Committee members provided direction on the kinds of topics of interest, including discussion of annual goals and more information on the kinds of levers and choices made in developing the proposed budget. These levers include considerations of allocation of budget among sectors depending upon achievable energy efficiency, ratepayer impact, timing of projects, incentive levels

and other things. In addition, committee members suggested providing board members more foundational information on utility cost tests and boundaries that are relevant to Energy Trust's budget planning considerations.

Committee members support these discussions as ways for the board to better evaluate what staff proposes. Committee members requested that staff provide more explanation how they get to the budget numbers they propose. Mike appreciated the input and will work with staff to provide this kind of information.

Mike suggested adding a learning session day in advance of the July board meeting to go deeper with the board on topics like this and regarding budget development. Committee members supported this idea, and Mike advised that Cheryle Easton will schedule the time.

Based on this discussion, at the next committee meeting on June 29, staff will provide a draft agenda for this topic. Committee members asked that materials be provided in advance of the discussion. That will allow board members to be ready with questions. Staff should assume that board members will review the materials if they get them in advance.

## **Components of levelized cost and changes over time (**Michael Colgrove)

In response to a committee request, Mike provided background and historical information on levelized costs and changes to such costs over time. Staff prepared materials on the history of electric and gas levelized costs since 2018. 2018 reflects lower levelized costs in 2018 due to program distribution of LEDs, but generally levelized costs are stable over time and continue to be. Committee members appreciated the historical information and asked for copies of the materials presented.

Committee members expressed their appreciation to Mike and staff for their ongoing work to deliver energy efficiency results to the region. They thanked staff for providing requested information in order to support the board's role in reviewing the budget and the tradeoffs and considerations staff use to do this work.

## **Adjourn**

The meeting adjourned at 3:30 pm

**The next meeting of the Finance Committee is scheduled for June 29, 2021.**

# PINK PAPER

# April 2021 Financial Statements

**Note: Throughout this report, the budget is the Amended budget which consists of four months actual and eight months forecasted.**

## Revenue

We continue to monitor utility revenue carefully. April utility revenue appears 8.8% above budget because of timing of payment from NWN for Washington and DSM. Year to date revenues are very close to budget for both April and May.

April 2021:

| | April Last Year | actual v LY | Actual - Month of April | actual v bud | April Budget | April YTD - Actual | April YTD - Budget | actual v bud |
|---|---|---|---|---|---|---|---|---|
| PPC 1149 | 2,695,365 | 5% | 2,842,848 | 0% | 2,842,848 | 12,829,576 | 12,829,576 | 0% |
| Rev 838 | 4,163,924 | 0% | 4,178,190 | 0% | 4,178,190 | 18,213,269 | 18,213,269 | 0% |
| PPC Renewables | 783,282 | 2% | 798,631 | 0% | 798,631 | 3,370,723 | 3,370,723 | 0% |
| PGE Total | 7,642,571 | 2% | 7,819,669 | 0% | 7,819,669 | 34,413,568 | 34,413,568 | 0% |
| PPC 1149 | 1,801,632 | 1% | 1,825,634 | 0% | 1,825,634 | 7,907,567 | 7,907,567 | 0% |
| Rev 838 | 525,579 | 487% | 3,087,522 | 0% | 3,087,522 | 12,738,865 | 12,738,865 | 0% |
| PPC Renewables | 2,714,565 | -81% | 527,965 | 0% | 527,965 | 2,284,293 | 2,284,293 | 0% |
| PAC Total | 5,041,776 | 8% | 5,441,121 | 0% | 5,441,121 | 22,930,726 | 22,930,726 | 0% |
| NWN | 2,472,373 | 54% | 3,812,293 | 0% | 3,812,293 | 12,966,391 | 12,966,391 | 0% |
| CNG | 334,985 | -1% | 331,260 | 0% | 331,260 | 1,782,781 | 1,782,781 | 0% |
| Avista | 172,774 | 18% | 203,608 | 0% | 203,608 | 814,431 | 814,431 | 0% |
| NWN Washington | | | 1,000,291 | | 1,000,291 | 1,000,291 | 1,000,291 | 0% |
| Total Utility Revenue | 15,664,479 | ▲ 18.8% | 18,608,243 | 0.0% | 18,608,243 | 73,908,188 | 73,908,188 | 0.0% |

May 2021:

| | May Last Year | actual v LY | Actual - Month of May | actual v bud | May Budget | May YTD - Actual | May YTD - Budget | actual v bud |
|---|---|---|---|---|---|---|---|---|
| PPC 1149 | 2,612,876 | 2% | 2,662,597 | 4% | 2,568,665 | 15,492,173 | 15,398,241 | 1% |
| Rev 838 | 3,814,132 | 0% | 3,800,526 | 8% | 3,503,428 | 22,013,795 | 21,716,697 | 1% |
| PPC Renewables | 755,132 | -2% | 740,470 | 5% | 706,092 | 4,111,193 | 4,076,815 | 1% |
| PGE Total | 7,182,141 | 0% | 7,203,593 | 6% | 6,778,185 | 41,617,161 | 41,191,754 | 1% |
| PPC 1149 | 1,720,520 | -3% | 1,670,337 | 3% | 1,620,562 | 9,577,904 | 9,528,128 | 1% |
| Rev 838 | 2,551,873 | 2% | 2,600,161 | 3% | 2,529,814 | 15,339,026 | 15,268,679 | 0% |
| PPC Renewables | 499,033 | -4% | 478,694 | 0% | 476,926 | 2,762,988 | 2,761,220 | 0% |
| PAC Total | 4,771,425 | 0% | 4,749,193 | 3% | 4,627,301 | 27,679,918 | 27,558,027 | 0% |
| NWN | 1,946,541 | 7% | 2,081,812 | 2% | 2,037,083 | 15,048,203 | 15,003,474 | 0% |
| CNG | 195,539 | 11% | 216,462 | -10% | 241,283 | 1,999,243 | 2,024,064 | -1% |
| Avista | 172,774 | 18% | 203,608 | 0% | 203,608 | 1,018,039 | 1,018,039 | 0% |
| NWN Washington | | | | | | 1,000,291 | 1,000,291 | 0% |
| Total Utility Revenue | 14,268,420 | ▲ 1.3% | 14,454,666 | ▲ 4.1% | 13,887,460 | 88,362,854 | 87,795,648 | 0.6% |

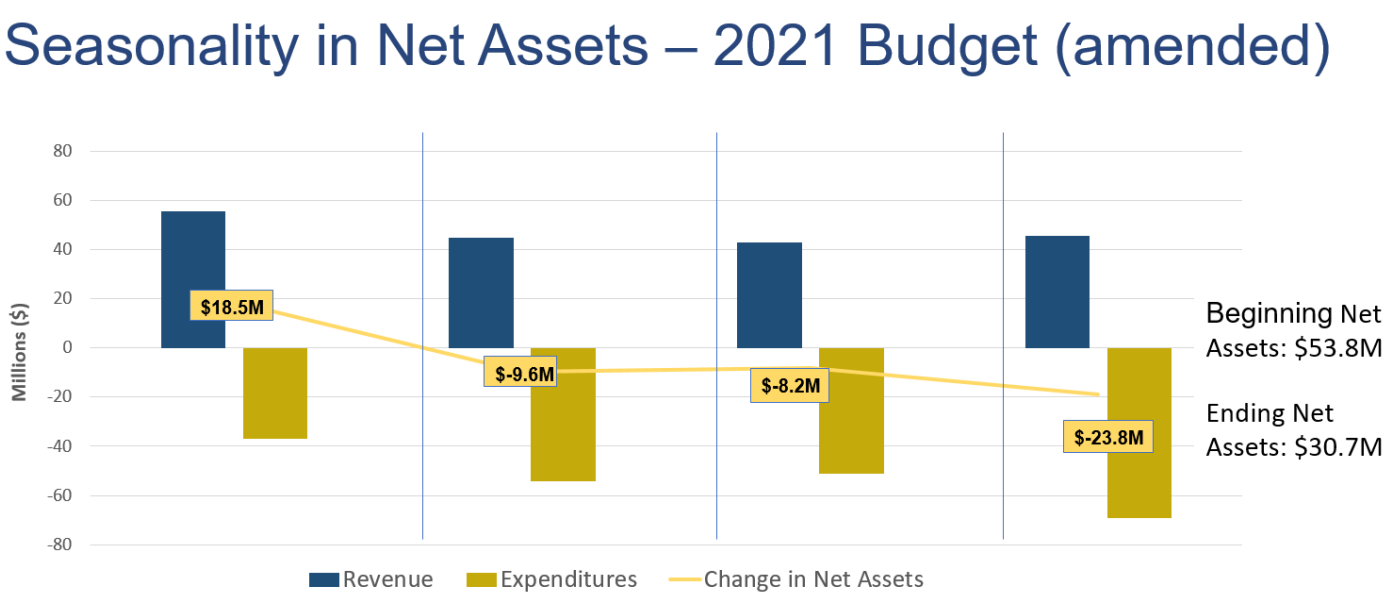
## Net Assets

### By Funding Source: Net Assets by Funding Source – Year to Date

Net Assets by funding source for the Year, as of April 2021

| | Actual | | | | Budget | Comparisons | |
|---|---|---|---|---|---|---|---|
| Funding Source | Beginning of Year Net Assets | Current Year Net Income | Distributed Investment Income | Ending Net Assets at end of this period | Budgeted Net Assets at end of this period | Difference from Budget | Difference due to Beginning Net Assets |
| PGE | 9,030,935 | 9,580,716 | 20,092 | 18,631,743 | 18,631,743 | - | - |
| PacificPower | 4,194,123 | 7,344,244 | 11,435 | 11,549,801 | 11,549,801 | - | - |
| NWN - Industrial | 1,123,295 | (538,410) | 1,242 | 586,126 | 586,126 | - | - |
| NWN | 3,688,393 | 3,791,816 | 8,118 | 7,488,327 | 7,488,327 | - | - |
| Cascade Natural Gas | 2,206,949 | 879,705 | 3,848 | 3,090,502 | 3,090,502 | - | - |
| Avista Gas | 335,576 | (116,629) | 403 | 219,349 | 219,349 | - | - |
| OPUC Efficiency | 20,579,271 | 20,941,441 | 45,137 | 41,565,850 | 41,565,850 | - | - |
| PGE | 15,767,413 | 604,411 | 23,360 | 16,395,185 | 16,395,185 | - | - |
| PacificPower | 6,213,075 | 53,338 | 9,071 | 6,275,483 | 6,275,483 | - | - |
| OPUC Renewables | 21,980,488 | 657,749 | 32,431 | 22,670,668 | 22,670,668 | - | - |
| | | | | | | 0 | 0 |
| Washington | 610,702 | (126,346) | 796 | 485,151 | 485,151 | - | - |
| LMI | (48) | (2,339) | (2) | (2,389) | (2,389) | - | - |
| Community Solar | 322,444 | 80,570 | 527 | 403,542 | 403,542 | - | - |
| PGE Storage | 8,021 | (4,587) | 8 | 3,442 | 3,442 | - | - |
| NWN Geo TLM Phase 3 | - | (1,993) | (1) | (1,994) | (1,994) | - | - |
| Development | 11,640 | (10,287) | 9 | 1,363 | 1,363 | - | - |
| Total Other Net Assets | 952,759 | (64,981) | 1,338 | 889,116 | 889,116 | - | - |
| | | | | | | 0 | 0 |
| Craft3 Loans | 2,300,000 | | | 2,300,000 | 2,300,000 | - | - |
| Operational Contingency | 2,946,818 | | 14,896 | 2,961,713 | 2,961,713 | - | - |
| Emergency Contingency | 5,000,000 | | | 5,000,000 | 5,000,000 | - | - |
| Total Contingency | 10,246,818 | - | 14,896 | 10,261,713 | 10,261,713 | - | - |
| Investment Income | | 93,801 | (93,801) | | | - | - |

**Net Assets**




| | Q1 actual | Q2 Fcst | Q3 Fcst | Q4 Fcst |
|---|---|---|---|---|
| Revenue | $56M | $45M | $43M | $45M |
| Expenditures | $-37M | -54M | -51M | $-69M |
| Change | $18.5M | $-9.7M | $-8.2M | $-23.8M |
| Ending Net Assets | $72.3M | $62.6M | $54.5M | $30.7M |

**Contingent Liabilities**

Energy Trust commits program reserves and expected revenue to fund future efficiency and renewable projects and other agreements. Each of these commitments is contingent on the project being completed according to the milestones established in the agreement. Once a project is complete, the commitment becomes a liability and is paid as quickly as possible from the then-available program reserves.

Current reserves plus future revenue ensure funds are available when commitments come due.

Contingent liabilities as of May 1, 2021 are as follows:

| | |
|---|---|
| Efficiency Incentive commitments to be paid in the future | 49,400,000 |
| Renewables Incentive commitments to be paid in the future | 11,800,000 |
| Estimated In-force contracts for delivery and operations, to be paid in the future | 76,900,000 |
| **Total contingent liabilities for future commitments** | 138,100,000 |

## OPUC Financial Performance Measures

The two OPUC financial performance measures deal with administrative and program support (as defined by OPUC) and staffing cost (Employee Salaries and Fringe Benefits). We are operating well within the administrative and program support measure, at 5.2% of revenue and a 3.2% decrease year over year.

Staffing costs are below budget and equal to last year due to vacant positions.

| | | |
|---|---|---|
| Administrative and Program Support | less than 8% of revenue | 5.2% ok |
| | less than 10% increase over prior year | -3.2% ok |
| Employee Salaries and Fringe | less than 9% increase over prior year | -0.2% ok |

| Details | YTD 2021 | YTD 2020 | Y/Y Change |
|---|---|---|---|
| Revenue | 72,907,896 | 70,538,824 | |
| Administrative and Program Support | 3,802,800 | 3,929,504 | -3.2% |
| Percent of Revenue | 5.2% | 5.6% | |
| | | | |
| Employee Salaries and Fringe Benefits | 4,982,194 | 4,993,300 | -0.2% |

## Expenses

For April, spending is even with the budget as the first four months of the amended budget are based on actuals. Marketing and professional services expenditures were reduced in the amended budget and in actuals because the project pipeline is strong and does not need marketing effort. The budget for rent expense was overstated.

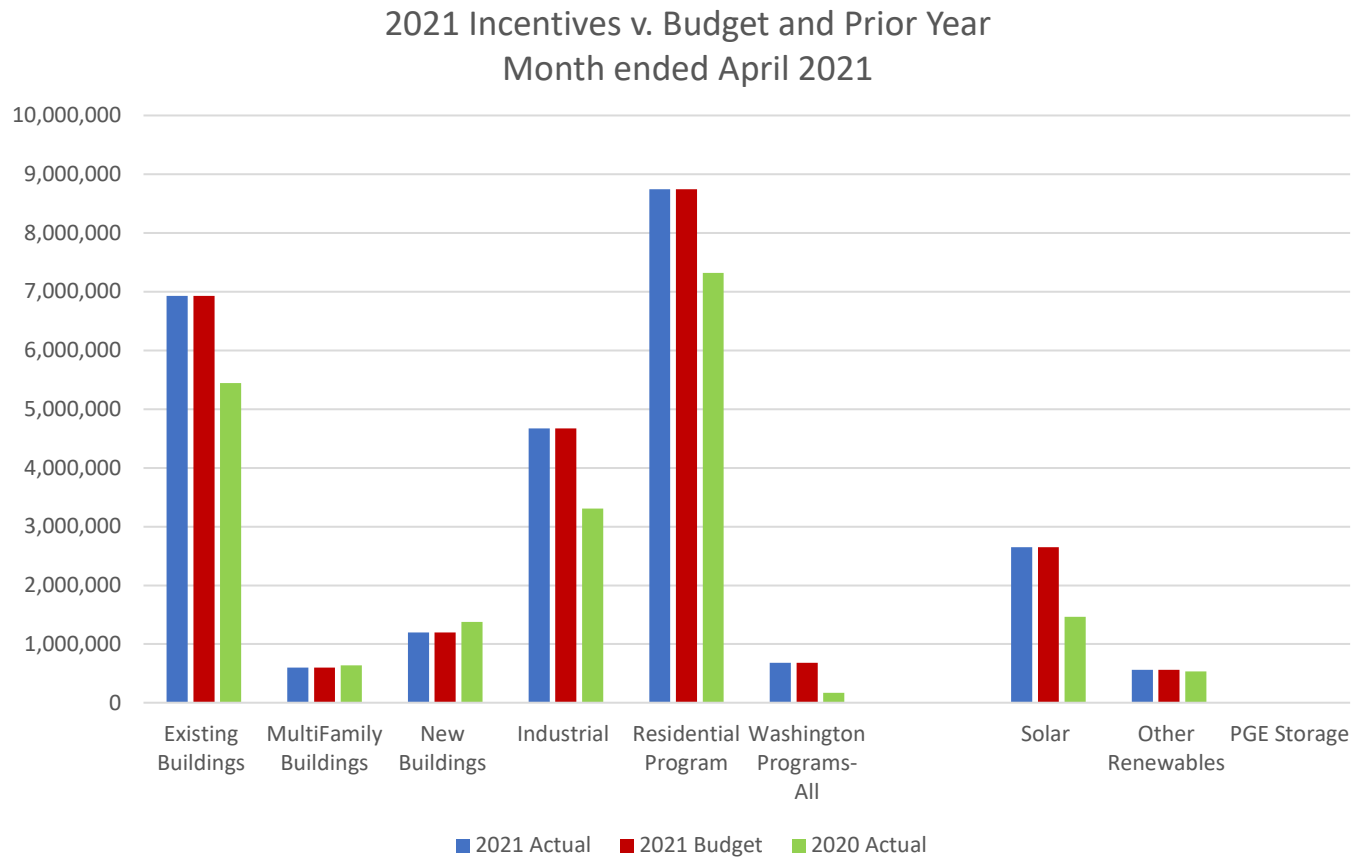
| Total Expenditure | Actual | Year to Date Amended Budget | Budget Variance | Total Year Amended Budget |
|---|---|---|---|---|
| Incentives | 26,030,029 | 26,030,029 | - | 120,805,454 |
| Program Delivery Contractors | 17,913,527 | 17,913,527 | - | 56,097,373 |
| Employee Salaries & Fringe Benefits | 5,215,924 | 5,215,924 | - | 16,808,212 |
| Agency Contractor Services | 523,242 | 523,242 | - | 2,169,863 |
| Planning and Evaluation Services | 701,671 | 701,671 | - | 3,482,785 |
| Advertising and Marketing Services | 294,744 | 294,744 | - | 3,253,100 |
| Other Professional Services | 1,103,582 | 1,103,582 | - | 5,891,758 |
| Travel, Meetings, Trainings & Conferences | 12,639 | 12,639 | - | 260,630 |
| Dues, Licenses and Fees | 71,299 | 71,299 | - | 334,420 |
| Software and Hardware | 202,393 | 202,393 | - | 817,203 |
| Depreciation & Amortization | 111,122 | 111,122 | - | 275,295 |
| Office Rent and Equipment | 343,879 | 343,879 | - | 1,247,500 |
| Materials Postage and Telephone | 19,232 | 19,232 | - | 148,750 |
| Miscellaneous Expenses | 3,452 | 3,452 | - | 5,500 |
| **Expenditures** | **52,546,734** | **52,546,734** | **-** | **211,597,841** |

**Amended budget consists of four months actual and eight months forecasted.**

## Incentives Detail

Incentives year to date are equal to the budget. For efficiency programs, there is the large backlog of projects that have not been reviewed and approved, while at the same time the budget for certain program tracks was front loaded in Q1 in anticipation of that backlog clearing in Q1. In short, we believe any variance is due to timing, and will settle in the next two quarters. Just as 2020 was not a normal year, 2021 is likely not a normal year either.

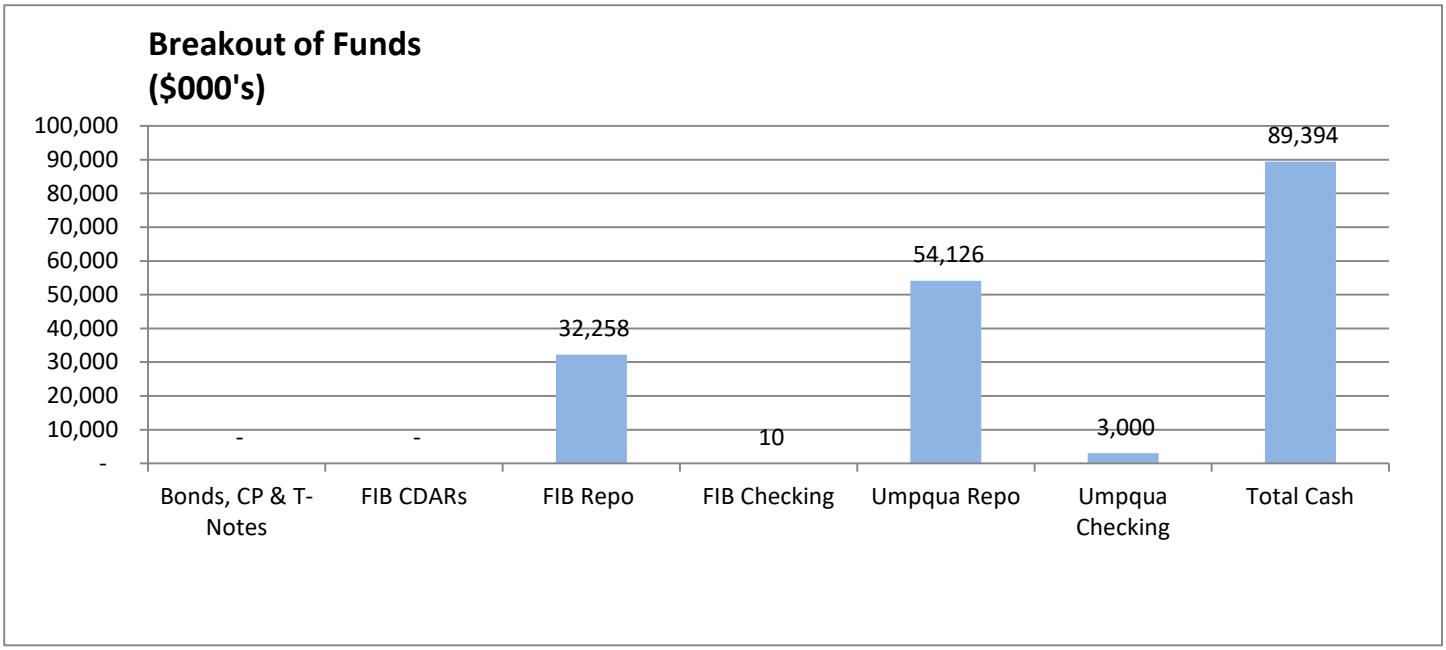
| Incentives to Date | 2021 Actual | 2021 Budget | Variance from Budget | Percent Variance | 2020 Actual |
|---|---|---|---|---|---|
| Existing Buildings | 6,927,875 | 6,927,875 | - | 0% | 5,441,667 |
| MultiFamily Buildings | 599,157 | 599,157 | - | 0% | 636,718 |
| New Buildings | 1,199,296 | 1,199,296 | - | 0% | 1,377,066 |
| Industry and Agriculture | 4,670,391 | 4,670,391 | - | 0% | 3,309,185 |
| Residential Program | 8,740,218 | 8,740,218 | - | 0% | 7,316,016 |
| Washington Programs- All | 681,585 | 681,585 | - | 0% | 171,147 |
| Efficiency Incentives | 22,818,521 | 22,818,521 | - | 0% | 18,251,799 |
| Solar | 2,651,094 | 2,651,094 | - | 0% | 1,462,885 |
| Other Renewables | 560,414 | 560,414 | - | 0% | 536,199 |
| PGE Storage | | | - | | - |
| Total Incentives | 26,030,029 | 26,030,029 | - | 0.0% | 20,250,883 |



## Cash and Investment Status

The graphs below show the type of investments we hold and the institutions where our funds are held. As expected for this time of year, cash levels continue to increase. There were no new reinvested funds in CDAR investments this month.

The column "Umpqua Repo" represents the operating cash balances at Umpqua Bank that are parked in an overnight repurchase account, which is backed by Umpqua Bank.




The average maturity in 2021 through April is 1 day, and the average return is 0.18%.

Energy Trust of Oregon
Balance Sheet
For the Period Ending April 2021

| | April | March | December 2020 | December 2019 | One Year Ago April | One month change | Year to date change |
|---|---|---|---|---|---|---|---|
| Cash | 78,279,173 | 77,951,936 | 70,585,985 | 45,339,145 | 54,661,146 | 327,237 | 7,693,188 |
| Investments | | | 5,168,914 | 51,078,975 | 41,919,437 | - | (5,168,914) |
| Accounts Receivable | 172,421 | 146,269 | 434,579 | 253,398 | 196,768 | 26,152 | (262,157) |
| Prepaid | 728,672 | 773,266 | 376,223 | 392,897 | 698,664 | (44,594) | 352,449 |
| Advances to Vendors | 1,516,859 | 2,275,289 | 1,924,827 | 2,094,555 | 1,446,886 | (758,430) | (407,968) |
| Current Assets | 80,697,126 | 81,146,761 | 78,490,527 | 99,158,970 | 98,922,901 | (449,635) | 2,206,598 |
| | | | | | | | |
| Fixed Assets | 5,871,005 | 5,871,005 | 5,861,911 | 5,601,847 | 5,680,355 | - | 9,094 |
| Depreciation | (5,195,495) | (5,171,159) | (5,084,373) | (4,812,355) | (4,885,204) | (24,336) | (111,122) |
| Net Fixed Assets | 675,510 | 699,846 | 777,538 | 789,492 | 795,151 | (24,336) | (102,028) |
| | | | | | | | |
| Other Assets | 2,863,477 | 2,859,627 | 2,342,127 | 2,169,653 | 2,190,447 | 3,850 | 521,350 |
| | | | | | | | |
| **Assets** | **84,236,112** | **84,706,233** | **81,610,192** | **102,118,115** | **101,908,499** | **(470,121)** | **2,625,920** |
| | | | | | | | |
| Accounts Payable and Accruals | 4,979,502 | 8,563,355 | 24,327,087 | 34,510,901 | 10,015,078 | (3,583,854) | (19,347,585) |
| Salaries, Taxes, & Benefits Payable | 1,336,300 | 1,329,152 | 957,359 | 1,036,938 | 969,956 | 7,147 | 378,941 |
| Current Liabilities | 6,315,801 | 9,892,508 | 25,284,446 | 35,547,839 | 10,985,034 | (3,576,706) | (18,968,645) |
| | | | | | | | |
| Long Term Liabilities | 2,532,966 | 2,542,815 | 2,566,412 | 2,508,638 | 2,485,454 | (9,849) | (33,446) |
| | | | | | | | |
| **Liabilities** | **8,848,767** | **12,435,322** | **27,850,858** | **38,056,477** | **13,470,488** | **(9,849)** | **(19,002,091)** |
| | | | | | | | |
| **Net Assets** | **75,387,345** | **72,270,911** | **53,759,336** | **64,061,637** | **88,438,011** | **3,116,434** | **21,628,009** |
| | | | | | | | |
| **Liabilities and Net Assets** | **84,236,112** | **84,706,233** | **81,610,194** | **102,118,115** | **101,908,499** | **(470,121)** | **2,625,919** |

Energy Trust Of Oregon
Statement of Net Assets
Actual As of Period Ending April 2021

| | Actual | | | | Budget | Comparisons | |
|---|---|---|---|---|---|---|---|
| **Funding Source** | **Beginning of Year Net Assets** | **Current Year Net Income** | **Distributed Investment Income** | **Ending Net Assets at end of this period** | **Budgeted Net Assets at end of this period** | **Difference from Budget** | **Difference due to Beginning Net** |
| PGE | 9,030,935 | 9,580,716 | 20,092 | 18,631,743 | 18,631,743 | - | - |
| PacificPower | 4,194,123 | 7,344,244 | 11,435 | 11,549,801 | 11,549,801 | - | - |
| NWN - Industrial | 1,123,295 | (538,410) | 1,242 | 586,126 | 586,126 | - | - |
| NWN | 3,688,393 | 3,791,816 | 8,118 | 7,488,327 | 7,488,327 | - | - |
| Cascade Natural Gas | 2,206,949 | 879,705 | 3,848 | 3,090,502 | 3,090,502 | - | - |
| Avista Gas | 335,576 | (116,629) | 403 | 219,349 | 219,349 | - | - |
| OPUC Efficiency | 20,579,271 | 20,941,441 | 45,137 | 41,565,850 | 41,565,850 | - | - |
| PGE | 15,767,413 | 604,411 | 23,360 | 16,395,185 | 16,395,185 | - | - |
| PacificPower | 6,213,075 | 53,338 | 9,071 | 6,275,483 | 6,275,483 | - | - |
| OPUC Renewables | 21,980,488 | 657,749 | 32,431 | 22,670,668 | 22,670,668 | - | - |
| | | | | | | 0 | 0 |
| Washington | 610,702 | (126,346) | 796 | 485,151 | 485,151 | - | - |
| LMI | (48) | (2,339) | (2) | (2,389) | (2,389) | - | - |
| Community Solar | 322,444 | 80,570 | 527 | 403,542 | 403,542 | - | - |
| PGE Storage | 8,021 | (4,587) | 8 | 3,442 | 3,442 | - | - |
| NWN Geo TLM Phase 3 | - | (1,993) | (1) | (1,994) | (1,994) | - | - |
| Development | 11,640 | (10,287) | 9 | 1,363 | 1,363 | - | - |
| Total Other Net Assets | 952,759 | (64,981) | 1,338 | 889,116 | 889,116 | - | - |
| | | | | | | 0 | 0 |
| Craft3 Loans | 2,300,000 | | | 2,300,000 | 2,300,000 | - | - |
| Operational Contingency | 2,946,818 | | 14,896 | 2,961,713 | 2,961,713 | - | - |
| Emergency Contingency | 5,000,000 | | | 5,000,000 | 5,000,000 | - | - |
| Total Contingency | 10,246,818 | - | 14,896 | 10,261,713 | 10,261,713 | - | - |
| Investment Income | | 93,801 | (93,801) | | | - | - |
| Total Net Assets | 53,759,336 | 21,628,011 | - | 75,387,345 | 75,387,345 | - | - |

**Energy Trust of Oregon**
**Income Statement - Actual and YTD Budget Comparison**
For the Period Ending April 2021
Total Company and All Funding Sources

| | Period to Date | | | Year to Date | | | Full Year |
|---|---|---|---|---|---|---|---|
| | Actual | Amended Budget | Budget Variance | Actual | Amended Budget | Budget Variance | Amended Budget |
| Revenue from Utilities | 18,608,242 | 18,608,242 | - | 73,908,187 | 73,908,187 | - | 187,344,583 |
| Contract Revenue | 44,416 | 44,416 | - | 172,756 | 172,756 | - | 1,045,484 |
| Investment Income | 16,360 | 16,360 | - | 93,801 | 93,801 | - | 96,000 |
| **Revenue** | **18,669,019** | **18,669,019** | **-** | **74,174,745** | **74,174,745** | **-** | **188,486,067** |
| | | | | | | | |
| Incentives | 8,855,715 | 8,855,715 | - | 26,030,029 | 26,030,029 | - | 120,805,454 |
| Program Delivery Contractors | 4,608,442 | 4,608,442 | - | 17,913,527 | 17,913,527 | - | 56,097,373 |
| Employee Salaries & Fringe Benefits | 1,281,686 | 1,281,686 | - | 5,215,924 | 5,215,924 | - | 16,808,212 |
| Agency Contractor Services | 127,776 | 127,776 | - | 523,242 | 523,242 | - | 2,169,863 |
| Planning and Evaluation Services | 120,213 | 120,213 | - | 701,671 | 701,671 | - | 3,482,785 |
| Advertising and Marketing Services | 104,350 | 104,350 | - | 294,744 | 294,744 | - | 3,253,100 |
| Other Professional Services | 286,260 | 286,260 | - | 1,103,582 | 1,103,582 | - | 5,891,758 |
| Travel, Meetings, Trainings & Conferences | 6,373 | 6,373 | - | 12,639 | 12,639 | - | 260,630 |
| Dues, Licenses and Fees | 16,056 | 16,056 | - | 71,299 | 71,299 | - | 334,420 |
| Software and Hardware | 29,771 | 29,771 | - | 202,393 | 202,393 | - | 817,203 |
| Depreciation & Amortization | 24,336 | 24,336 | - | 111,122 | 111,122 | - | 275,295 |
| Office Rent and Equipment | 87,568 | 87,568 | - | 343,879 | 343,879 | - | 1,247,500 |
| Materials Postage and Telephone | 4,039 | 4,039 | - | 19,232 | 19,232 | - | 148,750 |
| Miscellaneous Expenses | (0) | (0) | - | 3,452 | 3,452 | - | 5,500 |
| **Expenditures** | **15,552,584** | **15,552,584** | **-** | **52,546,734** | **52,546,734** | **-** | **211,597,841** |
| | | | | | | | |
| **Operating Net Income** | **3,116,434** | **3,116,434** | | **21,628,011** | **21,628,011** | | **(23,111,774)** |

**Amended budget consists of four months actual and eight months forecasted.**

# Total Expenditures Programs By Funding Source
# Actual For the Year to Date Period Ending April 2021

| | All Funding Sources | PGE | PacificPower | NWN - Industrial | NWN | Cascade Natural Gas | Avista Gas |
|---|---|---|---|---|---|---|---|
| Existing Buildings | 14,162,808 | 7,182,466 | 3,109,021 | 1,068,467 | 2,139,630 | 405,878 | 257,345 |
| Multi-Family | 839,811 | 404,676 | 212,179 | 19,367 | 172,493 | 18,214 | 12,883 |
| New Buildings | 4,324,084 | 2,525,988 | 1,126,602 | 6,531 | 543,962 | 54,730 | 66,270 |
| NEEA Commercial | 968,418 | 486,830 | 367,258 | | 83,255 | 21,208 | 9,867 |
| Commercial Sector | 20,295,122 | 10,599,960 | 4,815,060 | 1,094,366 | 2,939,340 | 500,031 | 346,365 |
| Industry and Agriculture | 9,220,164 | 4,431,086 | 4,025,448 | 520,563 | 205,289 | 32,594 | 5,184 |
| NEEA - Industrial | 12,996 | 7,407 | 5,588 | | | | |
| Industry and Agriculture Sector | 9,233,160 | 4,438,493 | 4,031,036 | 520,563 | 205,289 | 32,594 | 5,184 |
| Residential | 15,337,399 | 5,744,258 | 3,943,550 | | 4,768,611 | 323,371 | 557,609 |
| NEEA Residential | 1,445,759 | 679,418 | 512,543 | | 184,816 | 47,080 | 21,903 |
| Residential Sector | 16,783,157 | 6,423,676 | 4,456,093 | | 4,953,427 | 370,450 | 579,512 |
| **OPUC Efficiency** | **46,311,439** | **21,462,129** | **13,302,188** | **1,614,929** | **8,098,055** | **903,076** | **931,060** |
| Solar | 3,867,328 | 2,103,572 | 1,763,756 | | | | |
| Other Renewables | 1,129,940 | 662,740 | 467,200 | | | | |
| **OPUC Renewables** | **4,997,267** | **2,766,312** | **2,230,956** | | | | |
| **OPUC Programs** | **51,308,706** | **24,228,441** | **15,533,144** | **1,614,929** | **8,098,055** | **903,076** | **931,060** |
| Washington | 1,126,637 | | | | | | |
| Community Solar | 81,330 | | | | | | |
| PGE Storage | 15,443 | | | | | | |
| LMI | 2,339 | | | | | | |
| NWN Geo TLM Phase 3 | 1,993 | | | | | | |
| Development | 10,287 | | | | | | |
| **Total Company** | **52,546,734** | **24,228,441** | **15,533,144** | **1,614,929** | **8,098,055** | **903,076** | **931,060** |

R00407

**Energy Trust of Oregon**
**Contract Status Summary Report**

Report Date: 5/19/2021

For contracts with costs through: 5/1/2021

| CONTRACTOR | Description | City | EST COST | Actual TTD | Remaining | Start | End |
|---|---|---|---|---|---|---|---|
| **Administration** | | | | | | | |
| | | **Administration Total:** | **14,527,704** | **8,694,516** | **5,833,188** | | |
| **Communications** | | | | | | | |
| | | **Communications Total:** | **3,599,630** | **1,404,033** | **2,195,597** | | |
| **Energy Efficiency** | | | | | | | |
| Northwest Energy Efficiency Alliance | NEEA Funding Agreement | Portland | 42,866,366 | 11,537,984 | 31,328,382 | 1/1/2020 | 8/1/2025 |
| Northwest Energy Efficiency Alliance | Regional EE Initiative Agmt | Portland | 33,662,505 | 33,569,081 | 93,424 | 1/1/2015 | 9/15/2022 |
| TRC Environmental Corporation | 2021 BE PMC | Windsor | 14,911,514 | 4,046,268 | 10,865,246 | 1/1/2021 | 12/31/2021 |
| CLEAResult Consulting Inc | 2021 Residential PMC | Austin | 9,358,533 | 2,830,488 | 6,528,045 | 1/1/2021 | 12/31/2021 |
| CLEAResult Consulting Inc | 2021 NBE PMC | Austin | 5,916,534 | 2,162,461 | 3,754,073 | 1/1/2021 | 12/31/2021 |
| CLEAResult Consulting Inc | 2021 Lighting PDC | Austin | 3,263,440 | 986,267 | 2,277,173 | 1/1/2021 | 12/31/2021 |
| Energy 350 Inc | PE PDC 2021 | Portland | 2,815,324 | 955,643 | 1,859,681 | 1/1/2021 | 12/31/2021 |
| TRC Engineers Inc. | 2021 EPS New Const PDC | Irvine | 2,559,773 | 821,557 | 1,738,216 | 1/1/2021 | 12/31/2021 |
| Northwest Power & Conservation Council | Regional Technical Forum Agrmt | Portland | 2,081,000 | 742,629 | 1,338,371 | 1/1/2020 | 12/31/2024 |
| Cascade Energy, Inc. | PE PDC 2021 | Walla Walla | 1,773,600 | 581,517 | 1,192,083 | 1/1/2021 | 12/31/2021 |
| Cascade Energy, Inc. | PE PDC 2021 | Walla Walla | 1,740,738 | 565,514 | 1,175,224 | 1/1/2021 | 12/31/2021 |
| RHT Energy Inc. | PE PDC 2021 | Medford | 1,553,763 | 497,570 | 1,056,193 | 1/1/2021 | 12/31/2021 |
| CLEAResult Consulting Inc | 2021 Retail PDC | Austin | 1,456,941 | 416,846 | 1,040,095 | 1/1/2021 | 12/31/2021 |
| Craft3 | Manufactured Home Pilot Loan | Portland | 1,000,000 | 0 | 1,000,000 | 9/20/2018 | 9/20/2033 |
| Open Energy Efficiency, Inc. | Automated Meter Data Analysis | Mill Valley | 700,000 | 702,300 | (2,300) | 1/1/2018 | 5/31/2021 |
| NW Natural | OR GeoTEE2021Funding Agreement | Portland | 644,196 | 0 | 644,196 | 3/1/2021 | 12/31/2023 |
| Craft3 | Loan Agreement | Portland | 500,000 | 500,000 | 0 | 1/1/2018 | 12/31/2027 |
| Craft3 | Loan Funding for EE Projects | Portland | 500,000 | 500,000 | 0 | 1/1/2021 | 9/30/2025 |
| Balanced Energy Solutions LLC | New Homes QA Inspections | Portland | 482,275 | 284,472 | 197,803 | 4/27/2015 | 12/31/2021 |
| CLEAResult Consulting Inc | 2021 Residential PMC-PILOTS | Austin | 449,968 | 0 | 449,968 | 1/1/2021 | 12/31/2021 |
| The Cadmus Group LLC | NB 2018_19 Impact Evaluation | Portland | 382,000 | 226,944 | 155,056 | 9/14/2020 | 12/31/2021 |
| The Cadmus Group LLC | 2020 PE Impact Evaluation | Portland | 350,000 | 10,317 | 339,683 | 3/30/2021 | 3/30/2022 |
| TRC Environmental Corporation | 2021 BE DSM PMC | Windsor | 309,405 | 0 | 309,405 | 1/1/2021 | 12/31/2021 |
| TRC Environmental Corporation | 2021 BE NWN WA PMC | Windsor | 305,751 | 99,054 | 206,697 | 1/1/2021 | 12/31/2021 |
| Craft3 | Loan Agreement | Portland | 300,000 | 300,000 | 0 | 6/1/2014 | 6/20/2025 |
| CLEAResult Consulting Inc | 2021 Residential PMC-CustSvc | Austin | 299,340 | 77,655 | 221,685 | 1/1/2021 | 12/31/2021 |
| CLEAResult Consulting Inc | 2021 Residential PMC-WA | Austin | 283,263 | 79,174 | 204,089 | 1/1/2021 | 12/31/2021 |
| Verde | DHP Installation Program | Portland | 221,800 | 88,222 | 133,578 | 1/31/2020 | 12/31/2021 |
| Alternative Energy Systems Consulting, Inc. | PE Technical Review Assistance | Carlsbad | 200,000 | 140,632 | 59,368 | 5/8/2019 | 6/30/2021 |
| Ekotrop, Inc. | ModelingSoftware for NC | Boston | 200,000 | 137,498 | 62,503 | 1/21/2020 | 12/31/2021 |
| Pivotal Energy Solutions LLC | Software Product Support | Gilbert | 200,000 | 154,974 | 45,027 | 1/1/2020 | 12/31/2021 |
| The Cadmus Group LLC | Site Speciific Impact Evals | Portland | 170,000 | 48,406 | 121,594 | 2/8/2019 | 12/31/2021 |
| TRC Engineers Inc. | 2021 EPS New Const PDC-WA | Irvine | 142,048 | 67,741 | 74,307 | 1/1/2021 | 12/31/2021 |
| Battele Memorial Institute | PNNIL Services Agreement | | 140,142 | 140,142 | 0 | 5/9/2019 | 9/30/2021 |

| CONTRACTOR | Description | City | EST COST | Actual TTD | Remaining | Start | End |
|---|---|---|---|---|---|---|---|
| Evergreen Consulting Group, LLC | Consulting for Lighting Tool | Tigard | 120,600 | 7,306 | 113,294 | 2/16/2021 | 1/31/2022 |
| SBW Consulting, Inc. | Measure Development Support | Bellevue | 100,000 | 0 | 100,000 | 5/1/2021 | 12/31/2021 |
| Evergreen Economics | DHP Controls Research Project | Portland | 99,000 | 7,829 | 91,171 | 12/22/2020 | 6/30/2022 |
| FMYI, INC | Subscription Agreement | Portland | 69,650 | 69,650 | 0 | 4/25/2016 | 2/1/2022 |
| Opinion Dynamics Corporation | Evaluation MHR Pilot | Waltham | 66,000 | 65,404 | 596 | 5/1/2017 | 12/31/2021 |
| E Source Companies LLC | 2021 Membership Agreement | Boulder | 63,237 | 63,237 | 0 | 1/1/2021 | 12/31/2021 |
| Craft3 | SWR Loan Origination/Loss Fund | Portland | 55,000 | 18,661 | 36,339 | 1/1/2018 | 12/31/2021 |
| Oregon Architecture, INC | NZEL Grants 2020-21 | | 51,000 | 10,000 | 41,000 | 11/2/2020 | 12/31/2021 |
| Anchor Blue LLC | Technical Support for Planning | Vancouver | 50,000 | 45,290 | 4,710 | 10/26/2020 | 12/31/2021 |
| Evergreen Economics | PGE Smart ThermostatImpactEval | Portland | 50,000 | 0 | 50,000 | 5/1/2021 | 9/1/2021 |
| Northwest Energy Efficiency Alliance | SmartThermostatPerformance | Portland | 50,000 | 50,000 | 0 | 9/15/2019 | 9/14/2021 |
| Portland General Electric | Verfi Assistance D1X Mega Proj | Portland | 45,500 | 21,710 | 23,790 | 1/1/2020 | 12/31/2021 |
| The Cadmus Group LLC | Solar Install Requirements | Portland | 44,015 | 26,910 | 17,105 | 12/1/2020 | 6/30/2021 |
| Recurve Analytics Inc | Wind Up Services | | 39,500 | 20,500 | 19,000 | 1/1/2021 | 4/30/2021 |
| Northwest Energy Efficiency Council | Tool Lending Library | Seattle | 37,250 | 36,500 | 750 | 1/1/2021 | 12/31/2021 |
| INCA Energy Efficiency, LLC | Intel Mega Projects Eval | Grinnell | 35,000 | 33,170 | 1,830 | 8/1/2019 | 7/1/2021 |
| INCA Energy Efficiency, LLC | Red Rock Evaluation | Grinnell | 30,000 | 5,808 | 24,193 | 6/10/2018 | 7/10/2021 |
| American Council for and Energy Efficient Economy | Research Sponsorship Agreement | Washington | 30,000 | 30,000 | 0 | 1/12/2021 | 12/31/2021 |
| Housing Authority of Jackson County | Manufactured Home Funding | | 25,000 | 0 | 25,000 | 11/1/2020 | 11/1/2021 |
| DNV GL Energy Services USA Inc | Large/Complex EB Impact Eval | Oakland | 24,000 | 23,859 | 141 | 9/1/2020 | 8/31/2021 |
| African American Alliance for Homeownership | CommunityProgramImplementation | Portland | 20,000 | 13,000 | 7,000 | 1/1/2021 | 12/31/2021 |
| Pivot Advising | TLM Evaluation | Portland | 20,000 | 5,425 | 14,575 | 2/5/2021 | 9/30/2021 |
| DNV GL Energy Services USA Inc | CSEM Evaluation Consultants | Oakland | 18,000 | 18,000 | 0 | 10/1/2020 | 6/30/2021 |
| Rouj Energy Analytics, LLC | CSEM Evaluation Consultants | | 15,000 | 14,988 | 13 | 10/1/2020 | 6/30/2021 |
| The Cadmus Group LLC | CSEM Evaluation Consultants | Portland | 15,000 | 14,999 | 1 | 10/1/2020 | 6/30/2021 |
| Demand Side Analystics, LLC | TheromstatOpitmizationStudy OR | Woodstock | 8,600 | 0 | 8,600 | 10/10/2019 | 6/4/2021 |
| Green Hammer, Inc | NZEL Grant 2020-21 | Portland | 6,000 | 0 | 6,000 | 11/11/2020 | 6/18/2021 |
| GBD Architects Incorporated | NZEL Grant 2020-21 | Portland | 6,000 | 0 | 6,000 | 11/11/2020 | 6/18/2021 |
| Alexander Salazar | NZEL Grant 2020-21 | Portland | 6,000 | 0 | 6,000 | 11/11/2020 | 6/18/2021 |
| Carleton Hart Architecture PC | NZEL Grant 2020-21 | Portland | 6,000 | 0 | 6,000 | 11/11/2020 | 6/18/2021 |
| | **Energy Efficiency Total:** | | **132,945,571** | **63,873,598** | **69,071,973** | | |
| **Joint Programs** | | | | | | | |
| ADM Associates, Inc. | Fast Feedback | Seattle | 182,000 | 92,791 | 89,209 | 4/16/2020 | 6/30/2021 |
| Apex Analytics LLC | ResidentialPayPerformance P4P | Boulder | 83,000 | 29,314 | 53,686 | 8/1/2019 | 4/30/2022 |
| Lake County Resources Initiative | EE/RE Outreach & Support | | 74,800 | 7,265 | 67,535 | 1/1/2021 | 12/31/2021 |
| The Cadmus Group LLC | Smart Thermostat Savings | Portland | 65,100 | 9,994 | 55,107 | 12/1/2010 | 8/31/2021 |
| Consortium for Energy Efficiency | CEE 2021 Dues | Boston | 36,527 | 36,527 | 0 | 1/1/2021 | 12/31/2021 |
| Empress Rules LLC | DEI Training & Consulting | | 32,075 | 31,688 | 388 | 9/1/2019 | 12/31/2021 |
| Market Decisions Corporation | Solar Within Reach Study | | 21,713 | 12,983 | 8,730 | 1/15/2021 | 5/30/2021 |
| Lake County Resources Initiative | OIT EA REDA Grant Agreement | | 17,730 | 0 | 17,730 | 4/26/2021 | 4/15/2023 |
| Infogroup Inc | Data License & Service Agmt | Papillion | 17,000 | 8,500 | 8,500 | 2/4/2020 | 3/1/2022 |
| Cheryl Roberts | DAC Consulting Services | | 10,000 | 0 | 10,000 | 4/15/2021 | 12/31/2021 |
| Susan Badger-Jones | DEI Consultant Services | Joseph | 7,000 | 0 | 7,000 | 2/1/2021 | 12/31/2021 |

| CONTRACTOR | Description | City | EST COST | Actual TTD | Remaining | Start | End |
|---|---|---|---|---|---|---|---|
| Environmental Leadership Foundation | RAY Fellowship Agreement | | 5,500 | 0 | 5,500 | 7/16/2021 | 7/15/2023 |
| Sherry Tran | DAC Consultant Services | | 4,000 | 1,781 | 2,219 | 1/1/2021 | 12/31/2021 |
| Indika Sugathadasa | DAC Consultant Services | | 500 | 500 | 0 | 3/1/2021 | 12/31/2021 |
| | | **Joint Programs Total:** | **556,945** | **231,341** | **325,603** | | |
| **Renewable Energy** | | | | | | | |
| Sunway 3, LLC | Prologis PV installation | Portland | 3,405,000 | 2,964,146 | 440,854 | 9/30/2008 | 9/30/2028 |
| Clean Water Services | Project Funding Agreement | Hillsboro | 3,000,000 | 2,013,106 | 986,894 | 11/25/2014 | 11/25/2039 |
| City of Salem | Biogas Project - Willow Lake | Salem | 3,000,000 | 1,112,500 | 1,887,500 | 9/4/2018 | 11/30/2023 |
| Water Environment Services, A Dept. of Clackamas County | Bio Water Cogeneration System | Clackamas | 1,800,000 | 0 | 1,800,000 | 11/15/2019 | 9/30/2041 |
| Oregon Institute of Technology | Geothermal Resource Funding | Klamath Falls | 1,550,000 | 1,550,000 | 0 | 9/11/2012 | 9/11/2032 |
| Farmers Conservation Alliance | Irrigation Modernization | Hood River | 1,500,000 | 1,038,454 | 461,546 | 4/1/2019 | 3/31/2021 |
| Farm Power Misty Meadows LLC | Misty Meadows Biogas Facility | Mount Vernon | 1,000,000 | 1,000,000 | 0 | 10/25/2012 | 10/25/2027 |
| Three Sisters Irrigation District | TSID Hydro | Sisters | 1,000,000 | 1,000,000 | 0 | 4/25/2012 | 9/30/2032 |
| Farmers Irrigation District | FID - Plant 2 Hydro | Hood River | 900,000 | 900,000 | 0 | 4/1/2014 | 4/1/2034 |
| Three Sisters Irrigation District | Mckenize Reservoir Irrigation | Sisters | 865,000 | 0 | 865,000 | 3/18/2019 | 3/17/2039 |
| Klamath Falls Solar 2 LLC | PV Project Funding Agreement | San Mateo | 850,000 | 382,500 | 467,500 | 7/11/2016 | 7/10/2041 |
| Old Mill Solar, LLC | Project Funding Agmt Bly, OR | Lake Oswego | 490,000 | 490,000 | 0 | 5/29/2015 | 5/28/2030 |
| Clean Power Research, LLC | PowerClerk License | Napa | 459,172 | 459,172 | 0 | 7/1/2017 | 5/31/2021 |
| City of Medford | 750kW Combined Heat & Power | Medford | 450,000 | 450,000 | 0 | 10/20/2011 | 10/20/2031 |
| City of Pendleton | Pendleton Microturbines | Pendleton | 450,000 | 150,000 | 300,000 | 4/20/2012 | 4/20/2032 |
| Energy Assurance Company | Solar Verifier Services | Milwaukie | 450,000 | 307,300 | 142,700 | 10/15/2020 | 10/14/2022 |
| Deschutes Valley Water District | Opal Springs Hydro Project | Madras | 450,000 | 450,000 | 0 | 1/1/2018 | 4/1/2040 |
| RES - Ag FGO LLC | Biogas Manure Digester Project | Washington | 441,660 | 441,660 | 0 | 10/27/2010 | 10/27/2025 |
| RES - Ag FGO LLC | Biogas Manure Digester - FGO | Washington | 441,660 | 438,660 | 3,000 | 10/27/2010 | 10/27/2025 |
| Three Sisters Irrigation District | TSID Funding Agreement | Sisters | 400,000 | 400,000 | 0 | 1/1/2018 | 12/31/2038 |
| SunE Solar XVI Lessor, LLC | BVT Sexton Mtn PV | Bethesda | 355,412 | 355,412 | 0 | 5/15/2014 | 12/31/2034 |
| CIty of Gresham | City of Gresham Cogen 2 | Gresham | 350,000 | 334,523 | 15,477 | 4/9/2014 | 7/9/2034 |
| American Microgrid Solutions LLC | RE Feasability Analysis | Easton | 207,500 | 197,800 | 9,700 | 11/18/2019 | 6/30/2021 |
| City of Prineville | PDA Funding Agreement | | 150,000 | 0 | 150,000 | 4/29/2021 | 12/31/2021 |
| Kevala, Inc. | Targeted Load Management | San Francisco | 149,000 | 149,000 | 0 | 12/20/2019 | 6/30/2021 |
| City of Astoria | Bear Creek Funding Agreement | Astoria | 143,000 | 143,000 | 0 | 3/24/2014 | 3/24/2034 |
| Craft3 | NON-EEAST OBR Svc Agrmt | Portland | 135,000 | 112,500 | 22,500 | 1/1/2018 | 12/31/2021 |
| Oregon Solar Energy Industries Association | Solar soft costs install price | Portland | 110,640 | 75,303 | 35,338 | 12/21/2018 | 6/30/2021 |
| Faraday Inc | Software Services Subscription | Burlington | 108,000 | 90,000 | 18,000 | 1/15/2019 | 12/14/2021 |
| New Buildings Institute | GridOptimalBuildings Intiative | White Salmon | 100,000 | 100,000 | 0 | 12/1/2019 | 11/30/2021 |
| Wallowa Resources Community Solutions Inc | Renewables Field Outreach | Enterprise | 95,920 | 78,240 | 17,680 | 3/1/2020 | 2/28/2022 |
| Solar Oregon | Solar Education & Outreach | Portland | 91,375 | 56,235 | 35,140 | 12/15/2019 | 10/31/2021 |
| City of Hillsboro | Project Funding Agreement | Hillsboro | 85,000 | 85,000 | 0 | 6/8/2020 | 12/31/2040 |
| University of Oregon | Solar + Storage Microgrids | Eugene | 85,000 | 34,000 | 51,000 | 12/1/2020 | 12/31/2021 |
| Kendrick Business Services LLC | Small Business Financial Dev | Albany | 84,750 | 72,254 | 12,496 | 8/1/2018 | 6/30/2021 |
| Wallowa County | Project Funding Agreement | Enterprise | 80,000 | 80,000 | 0 | 4/1/2018 | 3/31/2038 |
| Site Capture LLC | SiteCapture Subscription | Austin | 78,000 | 63,000 | 15,000 | 2/1/2018 | 1/31/2022 |
| Hood River County | Hood River County Letter Agree | | 75,000 | 75,000 | 0 | 8/28/2020 | 6/30/2021 |
| SPS of Oregon Inc | Project Funding Agreement | Wallowa | 75,000 | 74,513 | 488 | 10/15/2015 | 10/31/2036 |

| CONTRACTOR | Description | City | EST COST | Actual TTD | Remaining | Start | End |
|---|---|---|---|---|---|---|---|
| Clean Power Research, LLC | WattPlan Software | Napa | 74,000 | 74,000 | 0 | 11/17/2017 | 5/31/2021 |
| Kleinschmidt Associates | Other Renewable Consulting | Pittsfield | 73,500 | 25,930 | 47,570 | 2/1/2020 | 10/30/2021 |
| Farmers Conservation Alliance | Grant Agreement Microgrid | Hood River | 65,000 | 65,000 | 0 | 8/12/2020 | 3/30/2021 |
| TRC Engineers Inc. | 2021 EPS New Const-Solar | Irvine | 55,695 | 18,713 | 36,983 | 1/1/2021 | 12/31/2021 |
| Oregon Solar Energy Fund | Solar Education Training | Portland | 46,626 | 7,914 | 38,712 | 3/10/2020 | 8/31/2021 |
| Clean Energy States Alliance | MOU 20-2021 | Montpelier | 39,500 | 39,500 | 0 | 7/1/2020 | 6/30/2021 |
| Oregon Solar Energy Fund | Workforce Trainings | Portland | 33,000 | 0 | 33,000 | 4/16/2021 | 4/30/2022 |
| Oregon Solar Energy Industries Association | 2021 Sponsorship for OSEC | Portland | 24,500 | 24,500 | 0 | 12/15/2020 | 12/31/2021 |
| Robert Migliori | 42kW wind energy system | Newberg | 24,125 | 24,125 | 0 | 4/11/2007 | 1/31/2024 |
| Rogue Climate | Solarize Campaign | | 22,840 | 7,000 | 15,840 | 1/1/2020 | 8/31/2021 |
| Solar Oregon | Go Zero Tour Sponsorship | Portland | 22,000 | 0 | 22,000 | 4/1/2021 | 12/31/2021 |
| | **Renewable Energy Total:** | | **25,941,875** | **18,009,957** | **7,931,918** | | |
| | **Grand Total:** | | **177,571,724** | **92,213,446** | **85,358,278** | | |
| | **Contracts without Incentives Total:** | | **153,833,367** | **75,885,549** | **77,947,819** | | |
| | **Renewable Energy Incentive Total:** | | **23,738,357** | **16,327,897** | **7,410,460** | | |
| | **Energy Efficiency Incentive Total:** | | **0** | **0** | **0** | | |

# Tab 6

# Policy Committee Meeting Notes

June 17, 2021
Conducted via Zoom Teleconference

**Board Members Attending:** Henry Lorenzen (Chair), Alan Meyer, Anne Root, Eric Hayes, Anna Kim (attending on behalf of Oregon Public Utility Commissioner Letha Tawney, ex-officio), Susan Brodahl,

**Board Members absent:** Melissa Cribbins (ex-officio)

**Others Attending:** Anna Kim (Oregon Public Utility Commission)

**Staff Attending:** Tyrone Henry, Amber Cole, Debbie Menashe (Staff Liaison), Fred Gordon, Pati Presnail, Michelle Spampinato, Steve Lacey

Chair Henry Lorenzen called the meeting to order.

**Consent and Appointment of Member to Diversity Advisory Council (DAC)** (Tyrone Henry)

Pursuant to board policy and the DAC charter, Energy Trust staff requested Policy Committee approval of Terrance Harris for the appointment to the DAC.

Terrance Harris is currently director of the Lonnie B. Harris Black Cultural Center at Oregon State University (OSU), a role he has held for 5 years. In his position, Mr. Harris plans many programs for the OSU campus community. A short and incomplete list of these programs includes programs such as Black Excellence Celebration, Juneteenth, Black History Month events, Pre-Kwanzaa, Outstanding Black Graduation and alumni networks. In addition, Mr. Harris co-chairs the OSU President's Commission on the Status of Black Faculty & Staff Affairs. The commission supports Black faculty, staff, as well as students, creating, among other things, a robust on-boarding process for new and current Black employees to OSU, recruitment and retention strategies, and faculty/staff professional development. Mr. Harris has served in a number of other positions, supporting programs and grassroots organizing, especially related to programs focused on Black students and communities.

Committee members expressed strong support for Mr. Harris's appointment to the DAC and expressed appreciation for the perspective and experience he will bring to the DAC. Committee members approved the appointment of Terrance Harris without objection.

**Update on Policies in Review Process** (Debbie Menashe)

**Fossil Fuel Combined Heat and Power Policy 4.11.000-P** (Debbie Menashe)

The "CHP Policy" was up for its regular three-year review, and staff recommended no changes. Committee members discussed the policy extensively and asked questions regarding its meaning and scope. Committee members request that staff return to the policy and provide context for the policy and the types of projects it covers along with more detailed information and explanation of what kind of projects are covered. Committee members also requested that staff present options for the policy language for committee review at its next committee meeting. Staff will return to the policy and provide suggested revisions and options as requested to the committee at the September meeting.

**Program Approval Process 4.22.000** (Debbie Menashe, Pati Presnail and Steve Lacey)

The Program Approval Process policy outlines requirements for budgeting and board approval for program budgets. As currently draft, the policy requires board approval for moving budgeted funds between sectors. Staff explained that under current discussion in program design is the possibility of establishing a new sector that includes cross-sector and cross-program efforts. Examples of the types of programs that could be part of this new sector include targeted load management program offerings to support utility non-wire and non-pipeline capacity solutions and solar, storage and residential efficiency offerings. In 2021, the business programs established a cross-sector lighting program (Commercial and Industrial Lighting) to better respond to customer needs. These evolving program designs could result in increased needs for moving funds across sectors or even the creation of a new sector that would need to be referenced in the policy. Staff sought committee member input on the possibility of such policy revisions.

Committee members discussed the policy and identified that it raises the question of the appropriate level of board engagement in the budget development and the budget implementation. Committee members and staff discussed budgeting at the sector, program portfolio, and measure levels. Committee members are interested in having a clear understanding of the allocation of resource decisions and direction proposed by staff in budgeting. It is with that context that committee members suggest that staff review and revise the Program Approval Process policy. Staff listened to committee suggestions and will return to the committee at its next meeting with suggested revisions based on the discussion, including meaningful alternatives for the policy revisions.

Committee members then discussed engagement in developing the annual organization goals, noting the recent presentation of the goals at the Conservation Advisory Council. Committee members expressed interest in more board discussion on the annual organization goals before they are presented as final.

Debbie Menashe then reported on the status of other policies under review and development and policies that will be up for regular review by the Policy Committee later in the year.

**Update on 2021 Oregon Legislative Session** (Hannah Cruz and Jay Ward)

Hannah Cruz, Senior Communications Manager, and Jay Ward, Senior Community Outreach Manager, presented the latest information on the 2021 Legislative Session and bills of interest to Energy Trust, including bills related to differentiated rates based on energy burden, wildfire recovery, HB 2021, Oregon's clean energy bill, and the public purpose charge modernization bill, HB 3141. Jay and Hannah reported that HB 3141 has passed out of a subcommittee of the joint Ways and Means committee earlier in the week and was expected to move to the Senate floor for a full vote in the next day or two.

**Annual Review of Report on Contractors Receiving More than $500,000 with added Information on Contractors Receiving More than $400,000** (Pati Presnail, Michelle Spampinato, and Debbie Menashe)

The board policy on contract execution provides that not less than annually, Staff shall report to the Policy Committee all instances in which Energy Trust has paid more than $500,000 to an individual

contractor in a given calendar year." Staff provided the 2020 report to the committee. In addition, and in response to the committee's request in 2020, the report included information about contracts with authorized expenditures of greater than $400,000 for committee review and discussion. Committee members asked several questions on some of the contracts and vendors referenced in the report and expressed appreciation for the information provided in the reports and the format in which they were provided.

## Staff Update

Tracy Scott, Director of Energy Programs, updated the Policy Committee on program demand for gas measures and the impact on program and sector budgets. Tracy also provided an update on discussions the gas utilities and OPUC staff on the program funding implications. Tracy reported that she, Steve and Pati are exploring options for additional revenue from the gas utilities as well as the use of program reserves and the operations contingency reserve. Committee members asked follow up questions of Tracy. Tracy responded and advised the committee that information will be provided to the Finance Committee and the full board as discussions continue.

Committee members appreciated the update and welcomed Tracy to the Policy Committee meeting, her first.

Debbie then briefly described three new funding opportunities, each of which directly support current program goals and activities and were approved by the Energy Trust Executive Team: Submission of two concept papers to NREL, one focused on community energy resilience planning and the other to build awareness of solar energy in BIPOC communities; funding for serving on a team convened by the Clean Energy States Alliance to share and disseminate knowledge among state energy agencies and organizations on solar programs aimed at increasing participation in low-and-moderate communities. The funding opportunities were briefly described to the Policy Committee for information at the meeting, with written descriptions sent to committee members following the meeting. Committee members asked questions about the funding opportunities and urged staff to take care to maintain focus on Energy Trust's core mission when deciding on pursuing new funding opportunities.

## Adjourned meeting

The meeting was adjourned at 3:15 pm

**The next meeting of the Policy Committee is scheduled for September 9, 2021, 1:00-3:00 pm**

# Tab 7

# Conservation Advisory Council Meeting Notes

June 16, 2021

**Attending from the council:**

Jeff Bissonnette, NW Energy Coalition
Roger Kainu, Oregon Department of Energy
Don Jones, Jr. (for Kari Greer), Pacific Power
Tim Hendricks, Building Owners and Managers Association
Rick Hodges, NW Natural
Tina Jayaweera, NW Power and Conservation Council
Anna Kim, Oregon Public Utility Commission
Lisa McGarity, Avista
Becky Walker, Northwest Energy Efficiency Alliance
Tyler Pepple, Alliance for Western Energy Consumers
Alyn Spector, Cascade Natural Gas
Matt Tidwell (for Jason Klotz), Portland General Electric

**Attending from Energy Trust:**

Hannah Cruz
Elizabeth Fox
Caryn Appler
Auric Armstrong
Kathleen Belkhayat
Melanie Bissonnette
Shelly Carlton
Karen Chase
Alex Novie
Kirstin Pinit
Thad Roth
Fred Gordon
Susan Jowaiszas
Steve Lacey
Cameron Starr
Julianne Thacher
Oliver Kesting
Jackie Goss
Amanda Potter
Adam Bartini
Tom Beverly
Jessica Kramer
Amanda Thompson
Amanda Zuniga
Amber Cole
Eric Braddock
Debbie Menashe
Jay Ward
MacKenzie Kurtzner
Mark Wyman
Ryan Crews
Tara Crookshank
Wendy Gibson
Salvatore Militello
Scott Leonard
Tracy Scott

**Others attending:**

Alan Meyer, Energy Trust board
Lindsey Hardy, Energy Trust board
Elee Jen, Energy Trust board
Beth Baxter, TRC
Shelly Beaulieu, TRC
Andy Cameron, Oregon Department of Energy
Eric Holman, Cascade Energy
Eric Koch, CLEAResult
Raphaela Hsu-Flanders, Bonneville Environmental Foundation
Cheryl LaCombe, TRC
Misti Nelmes, CLEAResult
Chris Smith, Energy 350
Josh Peterson, University of Oregon
Jenny Sorich, CLEAResult
Heather Moline, NW Energy Coalition
Joe Marcotte, TRC
Shannon Todd, TRC

## 1. Welcome

Hannah Cruz, senior communications manager, convened the meeting at 1:30 p.m. via Zoom. The agenda, notes and presentation materials are available at www.energytrust.org/about/public-meetings/conservation-advisory-council-meetings.

Hannah Cruz opened with a summary of the agenda and noted that the meeting is recorded. There were no concerns with the previous meeting notes. A council member commented that it's harder to get the full picture without attributions in the notes (Lisa McGarity).

Hannah provided a brief update on HB 3141, which seeks to modify the public purpose charge. It's the result of months of negotiation between the Governor's office, electric utilities, customer and environmental justice advocates, the OPUC and others. It was referred to the Joint Ways and Means Committee and passed the Transportation and Economic Development subcommittee yesterday. The legislative session will end on June 27 and staff will send an update on the final status of the bill.

## 2. Update on business incentives management

*Topic summary*

Oliver Kesting, business sector lead, and Amanda Potter, industry and agriculture sector lead, provided an update on the changes implemented to manage the commercial and industrial incentive budgets.

Amanda Potter explained that the industrial sector started 2021 with strong pipelines due to bonuses and higher demand in 2020. As expected 2021 will be a dynamic year with stronger than expected industrial activity. Wood products have been very busy with production. Hi-tech is booming due to the global chip shortage and there's strong interest in energy efficiency there. Food and consumer products remained strong, along with agriculture. Airline and petroleum were hit hard during the pandemic. Labor is still an issue due to a shortage of available workers.

Custom industrial is forecasting to hit its savings goal and land at budget. Energy Trust put a waiting list into place along with caps of $250,000 on all new projects. The track could come in under budget if projects move into 2022. There's a strong pipeline for Portland General Electric (PGE) due to hi-tech customers. Staff will need to continue the waiting list in 2022, along with the cap. Pacific Power looks similar to other years. The gas side on custom is tracking to savings goal and budget.

Lighting has lower than expected uptake. The cap of $6,000 on most lighting projects may be the cause of reduced interest in lighting. Energy Trust expects to be below budget on lighting and funds may shift into other commercial and industrial areas with higher demand.

The standard track is more active than expected. On the gas side, standard is stronger than expected. Greenhouses are seeing higher activity. They were busy in 2020 and now have money and interest in energy efficiency. Chicken farmers are expanding operations and looking at energy efficiency. Energy Trust had caps on electric at the beginning of the year, but now will implement caps on gas standard projects and is looking to coordinate with the commercial team.

Oliver Kesting presented for the commercial sector. Existing Buildings is seeing stability and renewed interest from the healthcare industry. The public sector is short on dollars and projects are pushing to 2022. There is a continued focus on indoor air quality. Large office occupancy rates are increasing as people transition back. Delayed projects are starting to move forward. For schools, they're expecting HVAC controls projects to increase in 2022. They are being delayed due to incentive caps this year. Schools have received additional federal funding

focused on improving indoor air quality and student learning in classrooms. Multifamily owners are pulling back on their projects. Data center interest is quite high.

In New Buildings, multifamily starts are continuing to decline in the Portland area. Projects are unable to complete as they are waiting for appliances to arrive. It may push projects into 2023. Grocery stores are busy and there will be four new grocery stores in Portland in 2022. Offices tenant improvements are strong this year due to airflow design and bringing employees back. Warehouse projects remain at an all-time high.

Commercial programs are on track for PGE, Pacific Power and Cascade Natural Gas. NW Natural is forecasting to exceed budget, and Energy Trust and NW Natural are working together to decide how to respond. Lighting and non-lighting program changes that were put in place earlier this year have been in the market for three months and the pipeline is slightly lower. Non-lighting is on track for goal and budget for all utilities. Existing Buildings is a little over budget in Pacific Power but offset by the shortfall in lighting as lighting is slightly behind.

New Buildings is on track to meet savings goals and budgets. Pacific Power and NW Natural are slightly ahead and Energy Trust is working with them.

Energy Trust is in discussions with NW Natural about the forecast indicating exceeding goals and budget. To manage the NW Natural budget, Energy Trust is looking to work with customers and may eliminate some gas measures that are least disruptive for customers.

*Discussion*
A council member pointed out that data centers do a lot of energy efficiency on their own and asked how Energy Trust is reaching this difficult market and if they are doing a free-rider assessment on them (Tina Jayaweera). Oliver Kesting responded that Energy Trust has good relationships with data centers and work closely with them to employ best practices. Data centers are secretive about what they're doing. It's similar on the Existing Buildings side. For savings determinations, Energy Trust works closely with its evaluations team to update estimates and use the latest information for baselines.

Council members also asked about demand in the Klamath Falls area (Don Jones, Jr.). Amanda Potter responded that they have an outreach person in Bend who spends time in Klamath County. They are seeing more uptake in irrigation projects due to that outreach, and she can share more data.

*Next steps*
Energy Trust is closing quarter two and looking at the pipeline. Staff will present plans for 2022 to the council in August and September. This will be informed by updates in the pipelines and forecasts. Staff will follow-up with Pacific Power on Klamath area irrigator activity.

**3. Residential sector budget management update**
*Topic Summary*
Thad Roth, residential sector lead, provided an update on budget and management tools. Trends from quarter four 2020 have continued into 2021. Some customers are spending more time at home and making improvements to support comfort and functionality. Those who can invest in home improvements are upgrading windows, insulation and smart thermostats. There is more demand than budgeted for. New home demand is strong in the Portland area and Willamette Valley. Interest rates and inventory are both very low. At the same time, there is a continued need to support other groups of customers who were impacted by the pandemic.

Forecasts show natural gas exceeding budget. Demand is strong for market rate measures. There's an expanded focus on income qualified offers. Wildfire recovery has been uneven, but

engagement has driven more demand. Top measures contributing driving demand are insulation, windows, thermostats and new construction.

So far, staff responses to this high uptake have included ending bonuses for insulation and gas furnaces, reducing incentives for smart thermostats and engagement with the utilities. Energy Trust will need to make some additional adjustments to manage budgets for NW Natural and Avista. Criteria for determining adjustments include minimizing market disruption and impact on customers.

For windows, there are multiple incentive tiers and Energy Trust can eliminate the least efficient tier while still maintaining a presence in the market,.

*Discussion*
Council members asked if there are any markets that have been transformed, like the clothes washer market. A member asked if there are any markets close enough to be considered transformed (Lisa McGarity). Thad Roth responded that windows may be closest to that. The baseline for a standard window is close to their lowest-tier incentive. Energy Trust could decide to eliminate the lowest tier.

A council member asked if this might be part of the market disruption and market rate portion of the criteria and if there are interactions with other collaborators or organizations in this area (Anna Kim). The council member also asked if there would be an impact on specific targeted offers and, if so, whether there will be consideration on the interactions of incentive changes on other offers. Thad Roth responded that there may be state funding for some of these activities where Energy Trust is engaged and will keep this in mind.

Energy Trust met with the gas utilities about the magnitude of the forecasted budget overages and where the program can make changes. For some measures it will take several weeks to make changes. For those, they will act in the next couple of weeks. Smart thermostat changes are something that can happy right away. If demand is greatly, smart thermostats can be reinstated quickly. Action will be sooner rather than later if there are changes to measures delivered by trade allies.

Council members asked if Energy Trust will track on the impacts of these changes and reverse some of them in the future (Becky Walker). Thad Roth stated that they are trying to manage in 2021 with the intention of re-establishing these offers and support levels in 2022.

*Next Steps*
Energy Trust is likely to provide an update on how well changes are working and any measure changes for 2022 at the September council meeting.

**4. Wildfire rebuilding support**
*Topic summary*
Karen Chase, outreach manager, and Scott Leonard, senior project manager, provided an update on wildfire rebuilding efforts. The Oregon Department of Forestry just announced that fire season is already here, a month early. Todays' update is a very early preview of ongoing measure development.

For the Labor Day wildfires, cleanup is ahead of schedule, but recovery will take longer. There are challenges with builder availability and astronomical material costs. Energy Trust is working closely with local and regional organizations and municipalities. The fires strongly impacted affordable housing. Energy Trust is supporting by way of the residential new construction offers through program incentives and early design assistance. Energy Trust is also offering

manufactured home replacement as this moves from pilot to program. On the New Buildings side, program incentives and early design assistance are being offered.

Manufactured home replacement was covered at the last council meeting. Any site impacted by a state-declared disaster area will be eligible. Energy Trust is directly funding a position at the Jackson County Housing Authority to hire a manufactured home specialist. They are trying to get in front of community leaders to help with early design assistance and are working closely with Fred Gant, the outreach contact in the new construction field in the area. He has waived his fees for verifications and that has had a great impact. Lumber costs are pushing some rebuilding efforts into 2022.

Codes with Building Codes Division were discussed to consider using an older code. Customers rebuilding are able to waive the requirement or modify a code requirement as long as there isn't health and safety issue. The authority is left to the local jurisdiction. There is mixed feedback from Jackson and Douglas counties, but Jackson County gave full support.

There is legislative support. HB 2289 allows the 2008 code to be used. HB 3127-4 provides additional funding for Oregon Housing and Community Services and Oregon Department of Energy for wildfires. SB 405 allows homes to be rebuilt to original standards and extends permitting into 2025.

Energy Trust is looking at 2008 code but with updated market realities, like using LEDs. They would pay incentives for builders to go beyond the 2008 and the current (2021) code. This will make more value available from energy savings, leading to a higher incentive and will help Energy Trust provide more money for rebuilding efforts. They plan to discuss this with the local market actors, like building officials, to ensure they are still onboard. Code changes in 2021 and program changes go into effect in 2022. They are trying to align the regular EPS offer and wildfire offer.

Energy Trust wants to add wildfire resilience, including resistant materials that prevent ignition and spread of fire in structures. It also wants to consider air sealing and barriers for smoke resistance and HVAC systems. Materials that help with tips for smoke events will be provided. Solar + storage will allow homes to continue working during power outages.

*Discussion*
A council member asked whether the fire resilience savings are based on current code or 2008 code (Becky Walker). Scott Leonard responded that they are based on current code. Council members asked if it is possible for someone to exceed 2008 code but not meet current code and if projects have to pass current code or older code to get incentives (Don Jones). Scott Leonard responded that they would have to exceed current code to receive incentives.

Council members commented that NEEA is doing some work with builders around thin triple-pane windows and there may be some opportunities to coordinate and align on this (Becky Walker).

Council members suggested Energy Trust look for a builder in Southern Oregon to give an on-the-ground look at whether or not they would use that code. A member noted that there might be consequences from the decision to move backward in code which may diminish how good the story sounds (Don Jones). Scott Leonard explained that Energy Trust did run it by the local verifier and plans to run it past the Jackson County code official, who has already signed off. It's still a question of whether individual builders will want to build to older code.

Council members commented that they appreciate the presentation. If HB 3127 does go through, Energy Trust will be the first place Oregon Department of Energy calls to wade through the discussion and will probably bring in Building Code Division and Energy Trust.

*Next steps*
Energy Trust will share this again in the fall when it has a more developed offer. Incentives, requirements and bumps in the road will be more complete at that point.

**5. Commercial and Industrial performance tracking tool platform**
*Topic summary*
Kathleen Belkhayat, program manager, provided an overview of the new tracking tool. This is a new tool designed for customers to track their performance and is a cornerstone of our engagements in Energy Performance Management, Strategic Energy Management (SEM) and Pay for Performance. Previously it was time consuming to update, maintain and retrieve information for the growing volume of participants. The solution will be a customized web tool that will contain an energy model, reporting dashboard and opportunity register.

Energy Trust has offered industrial SEM since 2009 and commercial SEM since 2011. The offering focuses on low-cost approaches and maintenance. It uses an education and cohort approach which helps increase awareness across organizations and drive action to improve energy use.

The current process uses Excel spreadsheets shared with SEM coaches and then customers. It's time consuming and feedback suggested it should be streamlined. Cascade Energy has adapted Energy Sensei, the platform selected for this project, since 2010. It streamlines the process for both customers and SEM coaches. Benefits of the new tool include supporting diversity, equity and inclusion goals (through supporting small/medium businesses and rural customers with capacity constraints), cutting management and delivery costs, redirecting cost savings with value-added activities, improved data for forecasting savings and incentives, and improved user experience for customers. It's specifically built for SEM. Energy Trust will begin working with Energy350 on the tool in early 2022.

*Discussion*
Council members asked about data security (Lisa McGarity). Kathleen Belkhayat replied that they currently email spreadsheets back and forth with password protection. A cloud-based platform improves security.

Hannah Cruz asked how long engagements are with these customers and if they retain access to the tool after the contracted relationship ends. Kathleen Belkhayat explained that it's a continuous engagement for both industrial and commercial customers. Energy Trust hasn't decided if it will allow ongoing access, although it makes sense to allow ongoing access with the five- to seven-year measure life in SEM.

Hannah Cruz asked if there are concerns with rural customers having bandwidth issues. Kathleen Belkhayat replied that she doesn't see that as an issue. The program has already worked with these customers on applications that require a lot of bandwidth, but it haven't encountered problems. They plan to talk with customers about whether use of the tool would be a deal breaker for them.

Council members asked for companies that have sites in investor-owned utility (IOU) and consumer owned utility territories, but have gas at both, if the program could support building an electric model for those consumer-owned electric properties. A council member asked it if would be affordable enough to do that (Rick Hodges). Kathleen Belkhayat responded that there's an

opportunity to collaborate more with non-IOUs, but they would currently only build a model for utilities in their territory.

*Next steps*
Staff will follow-up with Lisa McGarity on the data security details of the tool.

**6. 2022 Organizational Goals and Budget Development Schedule**
*Topic summary*
Melanie Bissonnette, senior project manager, provided an update on the organizational goals the council provided input on in April. Energy Trust sought input from the board, staff and advisory councils to create four goals for 2022 that will help guide 2022-2023 action plans and budget development.

The budget process kicks off this month and the draft budget will be posted in October. Revisions will happen in November and the final proposed budget will be presented to the board in December. The next three months will be spent in early development and engagement with utilities. The council engagement points include September for information on new or changed activities for 2022, October for the budget workshop and public comment period and November to see major revisions between the draft and final proposed budgets.

*Discussion*
Council members asked if the electric utilities will be engaged to discuss the definitions of peak savings before the value is added into the goal statement (Don Jones). Fred Gordon, director of planning and evaluation, responded that they plan to consult with each utility about how peak savings are estimated. Pacific Power and PGE define peak differently, so they will be discussing it to define this accordingly.

A council member asked if Energy Trust is thinking about high energy burden for commercial customers as well as residential customers (Tina Jayaweera). Melanie Bissonnette and Fred Gordon stated that they are more focused on residential customers. Council members suggested considering commercial also (Tina Jayaweera). Alan Meyer, Energy Trust board representative, agreed that it's a good suggestion since the vast majority of savings are from commercial and industrial, so they should be part of the focus.

A council member asked if staff already track community energy policy efforts or if that will need to be set up in 2022 (Lisa McGarity). Amber Cole, director of communications and customer service, noted Energy Trust outreach managers currently keep track of community planning and policy efforts that engage them. She anticipates that that work should continue to be a focus so Energy Trust can better anticipate and plan for customer engagement opportunities that surface through these community activities.

Hannah Cruz called for comments from council members about areas within the goals where staff should focus.

Council member Tina Jayaweera, Northwest Power and Conservation Council, stated that as the council works on the next power plan, it is finding that the cost competitiveness of energy efficiency is challenging. The goal that highlighted co-funding and developing energy efficiency more holistically will be important going forward.

The council commented that goals are broad and asked how Energy Trust will measure success and give visibility (Lisa McGarity). Melanie Bissonnette responded that Energy Trust develops metrics each year about how to measure achievement.

*Next steps*

Staff will present to the council in September on early action plan drafts before they are prepared for the draft budget workshop and public comment period.

**7. Member share-out**

Council member Tina Jayaweera, Northwest Power and Conservation Council, shared that the council is working on the 2021 Power Plan. The draft will be released in August, which is delayed by a month. Energy efficiency is becoming challenging from a cost competitiveness perspective. Renewables have become dramatically less expensive. Low-cost energy-efficiency measures have largely been achieved. The Power Council staff anticipate a lower efficiency target than in the 7th Power Plan. The utilities and region will need to be more creative about how to accomplish efficiency. The council is seeing a different kind of capacity going forward that is less about peak hours and more about ramping during evening hours. The ramping hours may have greater weight. The presence of more renewables for all utilities is changing the dynamic. There's a lot to be done to finish the draft power plan between now and the release date.

**8. Public comment**

There was no additional public comment.

**9. Adjournment**

The meeting adjourned at 4:07 p.m. The next meeting will be held on August 4, 2021.

# Tab 8

# Diversity Advisory Council Meeting Notes

June 15, 2021

**Attending from the council:**
Susan Badger-Jones, special projects consultant
Charity Fain, Community Energy Project
Dolores Martinez, EUVALCREE
Indika Sugathadasa, PDX HIVE
Shane Davis, City of Portland
Kheoshi Owens, Empress Rules
Cheryl Roberts, African American Alliance for Homeownership
Sherry Tran, Bend small business owner
Rebecca Descombes, Native American Youth and Family Center
Oswaldo Bernal, OBL Media

**Attending from Energy Trust:**
Emily Findley
Elaine Dado
Cheryle Easton
Elizabeth Fox
Alexis Bright
Amanda Thompson
Alex Novie
Tracy Scott
Tyrone Henry
Mayra Aparicio
Taylor Navesken
Cameron Starr
Jessica Kramer
Melanie Bissonnette
Naomi Cole
Ryan Crews
Hannah Cruz
Juliana Hairston
Kenji Spielman
Wendy Gibson
Julianne Thacher
Shelly Carlton
Thad Roth
Susan Jowaiszas
Kirstin Pinit
Karl Whinnery
Ashley Bartels
Jay Ward
Amber Cole
Amanda Zuniga
Diamante Jamison
Mana Haeri

**Others attending:**
Mark Kendall, Energy Trust board
Jessica Arnold, Cascade Energy
Ezell Watson III, Oregon Public Utility Commission
Terrence Harris, Oregon State University
Aaron Frechette, Cascade Energy
Anna Kim, Oregon Public Utility Commission
Shelly Beaulieu, TRC

1. **Welcome, Agenda Review and Group Reflection**

Tyrone Henry, Energy Trust's diversity, equity and inclusion lead, convened the meeting at 9:01 a.m. The agenda, notes and presentation materials are available at Energy Trust's website at https://www.energytrust.org/about/public-meetings/diversity-advisory-council-meetings/.

Tyrone Henry led the group in a reflection on a diversity image highlighting the strong reaction and consequences to Colin Kaepernick, a professional football player whose practice of kneeling during the national anthem in protest of social injustice led to the loss of his career. His image is contrasted with other examples of conscientious objection to patriotic symbols and practices by white individuals on the grounds of religion, which had no negative consequence. Council members reflected on the striking perspective created by comparing these images.

Members pointed out that when [Kaepernick] began his protest, the movement was not as loud, and predicted that if a white person did the same action, they would not have been ostracized. The NFL and its fans were trying to set an example, which is a form of anti-black racism aimed at preserving the status quo.

Tyrone Henry introduced a new member who will soon join the Diversity Advisory Council, Terrence Harris of Oregon State University, whose role there involves directing student activities. Tyrone then led a round of introductions among all the council members, who each shared about themselves and welcomed Terrence.

Tyrone Henry announced an upcoming series of Energy Trust Community Summits that will take place virtually to solicit public input on future DEI goals and activities. He invited the Diversity Advisory Council to attend or get involved in these events.

**2. Legislation and Policy Update**

*Topic summary*

Hannah Cruz, Energy Trust senior communications manager, and Alexis Bright, Energy Trust community relations/policy intern, presented an update on state legislative activity and the status of priority bills Energy Trust has been monitoring. Staff reviewed Oregon Public Utility Commission grant agreement language outlining the organization's prohibition on lobbying, stating that staff make new legislators aware of these guidelines and reference this non-advocacy role whenever responding to requests for information on pending legislation.

The state legislative session is in its final two weeks and legislators are working through a backlog of bills. Of highest interest to Energy Trust is HB 3141, which modifies the public purpose charge that underpins Energy Trust's program funding. The bill is multi-faceted and includes extending the 2026 deadline to 2036, expanding the uses of renewables funding, moving energy efficiency funding out of the charge and into regular OPUC ratemaking processes and adding equity metrics to create accountability for environmental justice. This bill just received a work session and is expected to move on to the Joint Committee on Ways and Means. The bill received a public hearing early in the session and includes largely the same content as when it was introduced. One clause related to low-income electric bill payment assistance was removed due to that work being addressed in a separate piece of legislation. HB 3141 is the result of months of discussion by an array of stakeholders in a process Energy Trust participated in at the request of the Governor's office.

Other energy-related bills have moved forward or passed during this session including: a bill that will allow Oregon Public Utility Commission to consider energy burden and other cost considerations when setting rates; a bill that would set zero emissions standards for electricity and increase the amount of renewable energy that must be derived from smaller community-led projects; a bill that would temporarily increase low-income bill assistance; and a bill that would designate $350 million in funding to mitigate wildfire damage to residential homes.

Staff also reviewed the status of notable bills related to racial equity, which the council has expressed interest in hearing updates about.

*Discussion*
Council members asked about the bills related to low-income bill assistance, and how they connect to Energy Trust's work. Staff clarified that Energy Trust monitors this activity because it aims to ensure that programs catch customers where low-income assistance ends to avoid any gap in assistance. Eliminating or reducing debt due to arrearages also allows customers to focus on essential needs. The council asked if arrearages could disrupt Energy Trust's revenue stream, and staff expressed that is hard to determine at this point and is a good question. Staff clarified the implementation dates for enrolled bills, many of which will take effect at the start of 2022.

*Next steps*
Staff will continue monitoring bills and provide updates as needed. Staff will provide a summary of activity from the full legislative session at the next public board meeting in July. Tyrone Henry will share today's PowerPoint presentation with the council for reference.

**3. Finalized Organizational Goals for 2022**
*Topic summary*
Melanie Bissonnette, Energy Trust senior project manager, presented the final versions of Energy Trust's 2022 organizational goals, which the Diversity Advisory Council helped shape during its development. Four goals were developed based on common themes heard at a joint advisory council session that took place in April. The high-level goals center on achieving energy savings and generation while supporting customers who have been impacted by natural disasters; expanding community-led approaches; increasing internal capacity to engage in strategic partnerships; and developing new ways of working and supporting staff.

*Discussion*
The council asked if the goal development was influenced by community members and customers we wish to serve and asked for more context on our community engagement strategy. The council stressed that the process should be centered around customer input, not just stakeholders (Kheoshi Owens). Tyrone Henry stated that the upcoming Community Summits will be a step toward including customers in Energy Trust's planning process. A board member (Mark Kendall) added that we received significant public input on our most recent 5-year Strategic Plan. Tyrone Henry stressed the importance of DEI as an organization-wide effort that requires accountability from all staff. The council expressed a strong desire to see anti-racism explicitly called out in the goals and wanted to know how activities to promote clean energy solutions will produce tangible benefits in communities (Kheoshi Owens).

The group discussed having Diversity Advisory Council members support development of explicitly anti-racist language for the goals. Council members also suggested adding meaningful numeric metrics to the goals to promote accountability (Kheoshi Owens). Members were interested in learning about ways Energy Trust will achieve these goals and metrics. Staff shared that the action planning process that occurs during our annual budget cycle later in the year will lay out the strategy for achieving the goals.

A council member (Kheoshi Owens) shared her approach to community engagement, which involves education to the community, finding out what members need and providing compensation for their time and input. The member shared that she offers consulting services as part of her business to support efforts to achieve cultural change and equip staff with tools to

call out anti-racism more prominently in organizational planning and communications. She stressed the importance of these tools in dismantling white supremacy ingrained in organizational structures.

*Next steps*
The organizational goals will influence staff action plans and Energy Trust's annual budget for 2022. More conversations will take place to discuss incorporating specifically anti-racist language into organizational goals and communications.

**4. DAC Selective Interest Survey**
*Topic summary*
Tyrone Henry provided an update on a survey offered to Diversity Advisory Council members to learn about their areas of interest, to inform support for organizational initiatives outside of council meetings. Most council members have completed their surveys, and Tyrone invited members already working in their interest areas to share about their contributions so far.

*Discussion*
A council member shared about participating on hiring committees for new staff (Sheri Tran). Each hiring panel is now required to include a Diversity Advisory Council member. The member was encouraged by the experience, stating staff seem open to different perspectives and supportive of candidate diversity.

Another member shared her experience contributing in various ways to advocate for racial diversity in many aspects of organizational work (Kheoshi Owens). The member's perspective and direct feedback has already led to staff changing their thinking in some cases. The group discussed having this member return to deliver a training on creating inclusive environments.

*Next steps*
Diversity Advisory Council members are encouraged to complete the survey and continue working in their focus areas as opportunities arise.

**5. OPUC Update**
*Topic summary*
Ezell Watson III, DEI lead for the Oregon Public Utility Commission, introduced a discussion on UM1124, which provides a moratorium on utility disconnects due to nonpayment. He will be convening a discussion among internal and external stakeholders to inform a recommendation he will be making to the commission in December on how to deal with disconnects and arrearages once the moratorium ends.

Ezell Watson III encouraged council members to join in this discussion when it takes place, especially members of color. He aims to create a recommendation that considers the Oregon Public Utility Commission's new ability to create differentiated rates for low-income customers, which could decrease the overall number of disconnects. He encouraged participants to lean into the process, as his facilitation style may be different than what they have encountered in the past.

*Discussion*
A council member stated that more voices need to be heard to create longer-term changes (Charity Fain). The council asked if the current funding to support low-income bill assistance is expected to be inadequate compared with the need. Ezell Watson clarified it is inadequate on its own, but other sources of support can factor in, including the Low-Income Home Energy

Assistance Program (LIHEAP) and federal assistance. He also hopes to bring the investor community to the table. Ezell Watson III stated he does not support using threat of disconnect as an incentive to force a customer to seek available assistance.

The council asked if there is a donation process for utility customers to support other customers facing disconnection. Ezell Watson III confirmed there is, but there is low awareness of it. A council member asked if public purpose charge funds could be credited to customers (Kheoshi Owens), and Ezell Watson III stated it would take several pieces of legislation to grant statutory authority to Oregon Public Utility Commission, so that is not a short-term option.

*Next steps*
Diversity Advisory Council members are encouraged to participate in this upcoming public participation process.

**8. Meet our New Energy Programs Director and Executive Assistant**
*Topic summary*
Tyrone Henry introduced Tracy Scott, Energy Trust's new Energy Programs Director and new Executive Assistant, Elaine Dado.

*Discussion*
Tracy Scott shared her career background, which includes working with neighborhoods and communities, construction management and the energy sector. Tracy Scott spoke to some lessons learned through working in different areas of the country. Elaine Dado spoke about her experience working in nonprofit organizations for the past 25 years and expressed excitement about learning about the energy industry in her new role.

**9. Announcements**
The council discussed the idea of re-visiting a past event that brought the Diversity Advisory Council and board members together to engage directly with each other in an informal way.

Mark Kendall provided an update on the board's DEI ad hoc committee to improve the board's performance regarding DEI. The ad hoc group accepted applications for coach consultants and co-leaders to guide implementation. Interviews will be taking place shortly with two candidates. He encouraged council members to continue their direct style of guidance to help us all move ahead.

Council members encouraged all attendees to engage in activities to honor Juneteenth, especially through donation to Black organizations and businesses, and to be proactive in furthering anti-racism (Kheoshi Owens).

**10. Public Comment**
There was no public comment.

**11. Adjournment**
The meeting adjourned at 11:28 a.m. The next council meeting is scheduled for Tuesday, September 14, 2021, from 9:00 a.m. to 11:30 a.m. on Zoom.

# Tab 9

# Briefing Paper
## 2021 State Legislation Update

July 2, 2021

## Summary

This briefing paper summarizes bills considered in the 2021 Oregon legislative session that are potentially connected to Energy Trust programs and the customers we serve. The table at the end of the paper lists all bills staff monitored, with URL links in the bill number.

## Background

- The session began January 19 and ended on June 27.
- As usual, staff monitored bills that could impact our programs, and responded to requests for information from legislators, interested parties and the Oregon Public Utility Commission (OPUC). We took no positions on any bill, per our grant agreement with the OPUC.
- The Capitol was closed to the public due to COVID-19. Partway through the schedule, committee meetings were moved from virtual to in-person and regular in-person floor votes resumed.
- The 2021 legislative session was marked by bills to address economic recovery, COVID-19 and the passage of the federal American Rescue Plan, wildfire recovery and prevention, and racial justice and reforms.
- Clean energy legislation passed ranged from appliance efficiency standards to modernizing the public purpose charge to setting a zero-electricity emissions requirement.

### Among the bills that passed:

- **Public purpose charge: HB 3141**
    - Modifies the 3 percent public purpose charge as established in SB 1149.
    - The bill was a result of months of negotiation among public purpose charge stakeholders at meetings convened by the Governor's office. Energy Trust participated in the meetings at the invitation of the Governor. While the vote in the House was bipartisan, the Senate vote followed party lines. The bill is multi-faceted and includes the following provisions:
    - Modifications within ORS 757.612; statute for SB 1149 (1999)
        - Reduces the public purpose charge to 1.5 percent of electric utility revenues and extends the sunset for collecting public purpose charges on electric company bills through 2035
        - Removes funding for cost-effective energy efficiency and new market transformation from the public purpose charge, large customer (greater than 1 aMW) requirements for energy efficiency, and board and reporting requirements on a nongovernmental entity but inserts requirements on these topics in ORS 757.054 (see below)
        - Retains all other public purposes and adjusts percentage allocation to reflect a 1.5 percent charge: renewable energy resources (0.51 percent of the fund),

low-income weatherization (0.55 percent), low-income housing (0.14 percent), school conservation (0.3 percent)
        - Provides for expanded uses of the renewable energy portion of the public purpose charge for “customer investments in distribution-system connected technologies that support reliability, resilience and the integration of new renewable energy resources with the distribution systems of electric companies” and requiring 25% of the renewables funding be used for “activities, resources and technologies that serve low and moderate income customers, including for technologies that do not have above-market costs”
        - Provides for new uses for low-income weatherization, including funding for manufactured home replacements and replacing equipment using bulk fuels with electric equipment
        - Continues renewables self-direct provisions and allows investment in “distribution system-connected technology” by customers using more than 1 aMW of electricity per site
    - Within ORS 757.054; statute for SB 1547 (2016)
        - Allows utilities to collect in rates “all funds necessary to plan for and pursue cost-effective energy efficiency resources”
        - Allows the OPUC to select a nongovernmental entity to invest the funds
        - Provides self-direct provisions for energy efficiency, and imposes a cap on amounts collected in rates from electric customers using more than 1 average megawatt of electricity per year; the cap adjusts up over time and by the amount of electricity used at a site; the cap is repealed at the end of 2035
    - Continues requirements on governance for the nongovernment entity previously in ORS 757.612 and adds the following:
        - Requires the nongovernmental entity investing energy efficiency funds to “jointly develop” with each electric utility “electric company-specific budgets, action plans and agreements with activities”; plans are subject to public process
        - Requires the OPUC to establish equity metrics subject to public process for “assessing, addressing and creating accountability for environmental justice” in all funds paid to a nongovernmental entity, and requires the nongovernmental entity to report on progress to achieving the equity metrics
- **100% Clean Energy for All: HB 2021**
    - Supported by Governor, municipalities, utilities, energy, equity and ratepayer advocates
    - Passed both chambers on largely party line votes (one Democrat Senator opposed)
    - Requires Electricity system GHG emission reductions, Small- and Community-based Renewables Work Group, Contractor Labor Standards; creates Community Renewables Grant Program
    - Establishes multiple energy and clean energy requirements, including provisions in previously introduced separate 2021 legislation: among other provisions, the bill:
        - Establishes electricity emissions reduction standards of 80% below baseline emissions by 2030, 90% by 2035 and 100% by 2040 for electricity sold to Oregon consumers. Limits cumulative rate impact of actions necessary to comply with targets to 6% of annual revenues. Allows rewards for early compliance with targets. Requires investor-owned electric utilities to file clean

energy plans that reflect input from a Community Benefits and Impacts Advisory Group. Extended to 2030 the deadline by which large investor owned electric utilities would have to source a percentage of their aggregate electrical capacity from small scale (< 20 MW) renewable generation and increased the percentage from 8 percent to 10 percent.
        - Directs ODOE to convene a work group to examine small-scale and community-based renewable energy development opportunities. Energy Trust is specifically named to this work group.
        - Creates a Community Renewable Investment Fund to be administered by ODOE to provide grants to public entities and Tribes. Appropriates $50 million for the next biennium for this grant program and limits first year grant spending by Oregon Department of Energy to ~$26 million.
        - Establishes contractor labor standards when constructing or re-powering
            - renewable energy, sequestration or storage projects greater than 2 MW in capacity; or
            - community solar projects greater than 3 MW in capacity.
        - Prohibits new site certificates for facilities that generate fossil fuels and prohibits amended site certificates that would result in an increase in carbon dioxide emissions at existing facilities.
- **Energy Affordability Act: HB 2475**
    - Authorizes the OPUC to consider differential energy burdens for low-income customers and other inequities when setting rates and reduce "energy burdens through bill reduction measures or programs that may include, but need not be limited to, demand response or weatherization". The bill also expands definitions for organizations which can qualify for financial assistance, or intervenor funding to enable their participation in regulatory proceedings. The organizations newly qualifying include those who represent low-income customers and customers from environmental justice communities. Total intervenor funding is capped at $500,000 annually.
- **Temporary low-income electric bill payment assistance: HB 2739**
    - Increases by $10 million annually, until 2024, the funds collected by Portland General Electric and Pacific Power for low-income electric bill payment and crisis assistance.
- **Product Energy Efficiency Standards: HB 2062**
    - Establishes minimum energy efficiency standards for more than a dozen products and allows the Oregon Department of Energy to update existing product standards with methods used by other states when done in consultation with the Department of Consumer and Business Services.
- **Healthy Homes: HB 2842**
    - Establishes within the Oregon Health Authority a Healthy Homes Program and appropriates $10 million for the biennium beginning July 2021. The program provides grants to eligible entities, including non-profit organizations to support low-income households and landlords repairing and rehabilitating residences. Qualifying expenses include actions that maximize energy efficiency and improve health and safety for occupants.
- **Wildfire recovery and rebuilding bills**
    - HB 2289 effectively resets building codes for structures destroyed by the September 2020 wildfires to 2008 code. This will create additional energy savings opportunities

for those customers in Energy Trust service territories. Requires reconstruction applications utilizing new processes to be submitted by September 2025 and reconstruction completed by December 2030. Sunsets January 2, 2031.
    - SB 762 directs Public Utility Commission to convene workshops and requires public utilities that provides electricity to develop and file risk-based wildfire protection plans with the commission. The Department of Consumer and Business Services is directed to adopt wildfire hazard mitigation residential building code standards. The Oregon Health Authority (OHA) is required to establish a grant program to fund local governments to establish emergency clean air shelters and to equip public buildings with smoke filtration systems to allow the buildings to serve as cleaner air spaces during wildfire smoke events. The law also requires OHA to establish a grant program to increase availability of residential smoke filtration devices.
    - HB 3218 allows OHCS to support rebuilding of manufactured homes and parks that were destroyed by natural disaster and modifies other parts of the agency's manufactured home replacement loan program.
- **Transportation electrification bills**
    - HB 3055 Allows electric and natural gas utilities to rate-base investments in alternative transportation infrastructure, if the infrastructure is determined to benefit the distribution system, reduce transportation sector GHG emissions over time.
    - HB 2165 requires PGE and Pacific Power to collect 0.25% from customers to invest in OPUC approved transportation electrification activities through 2030. Increases the rebate on electric vehicles for income-qualified customers from $2500 to $5000 and repeals the 2024 sunset of the privilege tax which funds the rebate program.
- **Racial justice bills**
    - SB 79 authorizes Housing and Community Services Department to provide grants and technical assistance to organizations increasing homeownership program access to persons of color.
    - SCR 17 establishes state environmental justice framework principles, including that all state agencies must respond to the health, environmental, economic and climate crises; build a just, equitable and resilient future; and consider environmental justice in their processes. The bill directs the state to make reparative investments in frontline communities.
    - Senate Joint Memorial (SJM) 2 urges Congress to amend the U.S. constitution to remove "except as punishment" in the 13th Amendment which abolishes slavery and involuntary servitude.
    - SJM 4 urges Congress to begin a process to implement reparations for Black Americans.
    - Senate Joint Resolution (SJR) 10 refers to voters proposed Oregon constitution amendment to prohibit slavery and involuntary servitude.
    - HB 2168 established Juneteenth as a legal state holiday.
- **Appropriations bills with potential Energy Trust program nexus**
    - **HB 5006**

**Oregon Department of Energy**

- $3,500,000 for the Small Scale Local Energy Project Loan Program. (SELP)
- $10,000,000 for the Rooftop Solar Incentive Fund

- $10,831,296 for a new grant program to incentivize energy efficient rebuilding after the 2020 wildfires.

**Water Resources Department**

- $30 million for water supply grants/loans
- $14 million for Wallowa Lake dam rehabilitation
- $10 million for Deschutes basin irrigation piping
- $6 million for Umatilla County regional water infrastructure project
- $14 million City of Sandy Wastewater Treatment plant
- $10 million City of Aurora Wastewater Treatment plant
- $5.8 million City of Carlton Wastewater Treatment Plant
- $4.8 million City of Astoria Wastewater Treatment plant

- **HB 5506**

**Oregon Housing and Community Services**

- $410 million for Affordable Housing (LIFT Program)

- **HB 5534**

**Oregon Housing and Community Services**

- $50 million to increase interim housing supply and to purchase land to develop housing for Oregonians displaced by 2020 wildfires

## Among the bills that failed:

- **Voluntary REACH Code Adoption by Municipalities: HB 2398**
  - The bill passed out of its first committee (House Energy & Environment) with a do-pass recommendation and referral to Ways and Means but was not further considered.
  - The bill would have allowed permits cities or counties to adopt the state's voluntary REACH code as the minimum commercial or residential building code for their jurisdiction. It would also have required energy efficiency savings and incentives to be based upon the statewide building code.
- **Utility Resiliency Measures, Green Tariffs for Local Governments, Voluntary Natural Gas Emissions Program, Contractor Labor Standards: SB 784**
  - The bill was passed out of its first committee (Senate Energy & Environment) with a do-pass recommendation and referral to Ways and Means but was not further considered.
  - Many of the bill's provisions are reflected or touched upon in HB 2021, which was passed by the legislature.
  - The bill would have authorized electric or natural gas investor-owned utilities to recover in rates resiliency measure costs; allow electric investor-owned utilities to establish rate options for public and tribal entities seeking electricity from renewable energy sources; directed the OPUC to establish a voluntary natural gas emissions reduction program; established contractor labor standards when constructing or re-

powering renewable energy, storage projects or large renewable natural gas processing facilities.

- **Oregon Renewable Options Program: HB 3221**
  - The bill was passed out of its first committee (House Water) with a do-pass recommendation, referred to Joint Ways and Means and assigned to the Transportation and Economic Development subcommittee, but did not receive a hearing prior to adjournment.
  - The bill would have authorized the OPUC to establish an "Oregon Renewable Options Program" that allows local governments, local service districts and Tribal governments to request certain renewable electricity to serve their jurisdictions. The program included a role for the *public purpose charge administrator* which, at the request of the participating communities and on a fee-for-service or other basis, recover costs as directed by the OPUC to provide facilitation services, resilience planning or other technical assistance in the development of a proposal for an Oregon Renewable Options Community Program.
  - Authorization for community renewable energy and resiliency projects and associated tariffs was included in HB 2021.
- **SB 318** would have authorized the OPUC to determine resource adequacy for load-serving entities; requires the entities to demonstrate achievement in providing resource adequacy and requires public utilities to provide resource adequacy such that the utility has qualified capacity needed to reliably satisfy future load requirements and operating reserves.

- **Transportation**
  - HB 2188 would have required utilities, investor and consumer owned, to transfer at least 20 percent of revenues acquired through monetizing Clean Fuels Program credits to the public purpose fund administrator for purposes of providing grants to nonprofits, and local governments for transportation electrification.
- **Wildfire bills**
  - HB 3127 appropriates moneys from General Fund to various state agencies for expenditures related to 2020 wildfires, including for distribution to local governments and other entities for specified biennial expenses related to 2020 wildfires. These appropriations were included in HB 5534, an omnibus spending bill.
  - HB 2722 directs the Public Utility Commission to convene workshops on best practices regarding wildfires. PUC wildfire policies were included in SB 762.
  - SB 287 would have required investor-owned and consumer-owned utilities to develop wildfire plans, among many other wildfire related requirements for state agencies. Similar legislative language was included in SB 762, described above.
  - HB 2234 would have added fire prevention measures into building codes for areas susceptible to wildfires. Similar legislative language was included in SB 762, described above.
  - HB 2812 would have set a mechanical and HVAC code amendment for air filtration when outside air poses harm to the building occupants.
- **Racial justice bills**
  - SB 618 would have required the Department of Administrative Services to study methods to provide reparations to Black Oregonians
  - SB 619 would have established reparations payments for Black Oregonians
  - SB 247 would have directed ODOE to study opportunities and challenges for renewable energy, energy equity and development of a clean energy workforce.

- SB 286 would have renamed the Environmental Justice Taskforce as the Environmental Justice Council, providing council level resources from the state for this area of work.
- HB 2353 would have required all agency rulemaking notices to identify how the rule affects racial equity.

## Tables of bills monitored by staff (as of June 28, 2021)

### *Table 1: Bills monitored by staff that passed*

| Bill # | Relating To | Bill Summary | Bill Sponsor |
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| HB 2007 Enrolled | Relating to addressing disparities; prescribing an effective date. | Allows Department of Consumer and Business Services to require implicit bias training for mortgage loan originators. | Rep Alonso Leon; Rep Bynum; Rep Campos; Rep Dexter; Rep Fahey; Rep Gomberg; Rep Grayber; Rep Hudson; Rep Kropf; Rep Meek; Rep Noble; Rep Pham; Rep Power; Rep Reynolds; Rep Ruiz; Rep Schouten; Rep Smith DB; Rep Wilde; Rep Williams; Rep Witt; Rep Zika; Sen Dembrow; Sen Frederick; Sen Jama; Sen Manning Jr |
| HB 2021 Enrolled | Relating to clean energy; prescribing an effective date. | Requires retail electricity providers to reduce greenhouse gas emissions associated with electricity sold to Oregon consumers to 80 percent below baseline emissions levels by 2030, 90 percent below baseline emissions levels by 2035 and 100 percent below baseline emissions levels by 2040. | Rep Campos; Rep Dexter; Rep Grayber; Rep Kropf; Rep Marsh; Rep Neron; Rep Power; Rep Reynolds; Rep Valderrama; Rep Wilde |
| HB 2062 Enrolled | Relating to energy efficiency standards; prescribing an effective date. | Establishes energy efficiency standards for certain appliances sold or offered for sale in this state. | Presession filed (at the request of Governor Kate Brown for State Department of Energy) |
| HB 2063 Enrolled | Relating to standby generation facilities; prescribing an effective date. | Removes requirement that person seeking exemption from requirement to obtain site certificate for standby generation facility request exemption from Energy Facility Siting Council. | Presession filed (at the request of Governor Kate Brown for State Department of Energy) |
| HB 2064 Enrolled | Relating to a quorum of the Energy Facility Siting Council; prescribing an effective date. | Modifies quorum requirement for Energy Facility Siting Council. | Presession filed (at the request of Governor Kate Brown for State Department of Energy) |
| HB 2109 Enrolled | Relating to county land use permits to establish renewable energy facilities; declaring an emergency. | Modifies definition of "renewable energy facility" for purposes of county permitting process for certain energy facilities. | Presession filed (at the request of Governor Kate Brown for Department of Land Conservation and Development) |

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| HB 2165 Enrolled | Relating to alternative fuel transportation. | Requires electric companies that make sales of electricity to 25,000 or more retail electricity consumers in this state to collect amount from all retail electricity consumers, to be expended to support transportation electrification pursuant to plan accepted by Public Utility Commission. | Presession filed (at the request of Governor Kate Brown for Office of the Governor) |
| HB 2180 Enrolled | Relating to vehicles. | Requires Director of Department of Consumer and Business Services to amend state building code to require that new construction of certain buildings include provisions for electrical service capacity for specified percentage of parking spaces. | Rep Evans; Rep Smith DB; Rep Wilde (Presession filed) |
| HB 2289 Enrolled | Relating to building in areas affected by wildfires. | Establishes alternative process for alteration, restoration or replacement of certain uses affected by 2020 wildfires. Expands eligibility to repair or replace subsurface sewage disposal system for dwellings approved under alternative process. Sunsets January 2, 3021. | Rep Cate; Rep Clem; Rep Evans; Rep Zika (Presession filed) (at the request of House Land Use and Agriculture Committee) |
| HB 2290 Enrolled | Relating to transportation electrification. | Requires State Parks and Recreation Department to allow for installation and service of public electric vehicle charging stations in parking spaces that are part of facilities of state park system. | Rep Dexter; Rep Evans; Rep Schouten; Rep Sollman; Rep Wilde (Presession filed) |
| HB 2475 Enrolled | Relating to public utilities. | Authorizes Public Utility Commission to consider differential energy burden and other inequities of affordability in rates. | Rep Alonso Leon; Rep Campos; Rep Dexter; Rep Fahey; Rep Holvey; Rep Kropf; Rep Nosse; Rep Pham; Rep Power; Rep Reynolds; Rep Wilde; Rep Williams; Sen Dembrow; Sen Jama; Sen Taylor (Presession filed) (at the request of House Energy and Environment) |
| HB 2739 Enrolled | Relating to utility ratepayer assistance. | Increases temporarily, by $10 million annually, funds collected by electric companies for low-income electric bill payment and crisis assistance. | Rep Leif (Presession filed) |

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| HB 2842 Enrolled | Relating to healthy homes; prescribing an effective date. | Establishes Healthy Homes Program within the Oregon Health Authority to provide grants to entities to provide financial assistance to low-income households and landlords. | Rep Campos; Rep Dexter; Rep Fahey; Rep Grayber; Rep Kropf; Rep Leif; Rep Marsh; Rep Neron; Rep Nosse; Rep Owens; Rep Pham; Rep Power; Rep Reynolds; Rep Ruiz; Rep Sollman; Rep Valderrama; Rep Wilde; Rep Williams; Rep Zika (Presession filed) |
| HB 3055 Enrolled | Relating to transportation; prescribing an effective date; providing for revenue raising that requires approval by a three-fifths majority. | Modifies, adds and repeals laws relating to transportation. | Transportation (J) |
| HB 3082 Enrolled | Relating to the contract price required for an exemption from competitive bidding requirements for public improvement contracts; prescribing an effective date. | Raises contract price at which public improvement contract solicitations are exempt from competitive bidding requirement from $5,000 to $10,000. | Business and Labor (H) |
| HB 3141 Enrolled | Relating to energy; prescribing an effective date. | Reduces public purpose charge for retail electricity consumers within service areas of electric companies and Oregon Community Power. | Energy and Environment (H) |
| HB 3218 Enrolled | Relating to manufactured dwellings; declaring an emergency. | Expands allowable uses for Housing and Community Services Department's manufactured dwelling programs to support dwellings and parks destroyed by natural disaster. | Rep Marsh; Rep Morgan; Rep Nathanson; Rep Reynolds; Rep Smith DB; Sen Golden |
| HB 3219 Enrolled | Relating to manufactured dwelling parks; declaring an emergency. | Amends definition of "manufactured dwelling park" to include parks with certain prefabricated structures. | Rep Gomberg; Rep Marsh; Rep Morgan; Rep Smith DB; Rep Wilde; Rep Zika |
| HB 3375 Enrolled | Relating to floating offshore wind energy; prescribing an effective date. | Establishes goal of planning for development of up to three gigawatts of floating offshore wind energy projects within federal waters off Oregon Coast by 2030. | Rep Campos; Rep Dexter; Rep Grayber; Rep Levy; Rep Marsh; Rep Moore-Green; Rep Morgan; Rep Reardon; Rep Smith DB; Rep Sollman; Rep Wilde; Rep Zika |
| HB 5032 Enrolled | Relating to the financial administration of the Public Utility Commission of Oregon; declaring an emergency. | Limits certain biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by Public Utility Commission of Oregon. | Presession filed (at the request of Oregon Department of Administrative Services) |

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| SB 79 Enrolled | Relating to housing disparities. | Authorizes Housing and Community Services Department to provide grants and technical assistance to organizations increasing homeownership program access to persons of color. | Presession filed (at the request of Governor Kate Brown for Housing and Community Services Department) |
| SB 154 Enrolled | Relating to solar projects; prescribing an effective date. | Extends sunset of program under which property constituting solar project may be exempt and instead pay fee in lieu of property taxes. | Presession filed (at the request of Senate Interim Committee on Finance and Revenue) |
| SB 164 Enrolled | Relating to corporate activity tax; prescribing an effective date. | Modifies provisions of corporate activity tax. | Presession filed (at the request of Senate Interim Committee on Finance and Revenue) |
| SB 333 Enrolled | Relating to renewable hydrogen; prescribing an effective date. | Directs State Department of Energy to conduct study of benefits of, and barriers to, renewable hydrogen production and use in Oregon and report results to interim committees of Legislative Assembly related to revenue no later than September 15, 2022. | Rep Smith DB; Sen Beyer (Presession filed) (at the request of Kris Nelson) |
| SB 338 Enrolled | Relating to the limited renewable energy technician license; declaring an emergency. | Amends requirements for limited renewable energy technician license. | Rep Grayber; Rep Marsh; Sen Golden (Presession filed) |
| SB 589 Enrolled | Relating to a regional transmission organization; declaring an emergency. | Requires State Department of Energy to prepare report identifying benefits, opportunities and challenges posed by development or expansion of regional transmission organization in this state. | Rep Helm; Rep Owens; Rep Power; Sen Beyer; Sen Dembrow; Sen Taylor (Presession filed) |
| SB 762 Enrolled | Relating to wildfire; declaring an emergency. | Directs Public Utility Commission to convene workshops. | Natural Resources and Wildfire Recovery (S) |
| SCR 17 Enrolled | Establishing environmental justice framework of principles for State of Oregon. | Establishes environmental justice framework of principles for State of Oregon. | Rep Alonso Leon; Rep Dexter; Rep Hudson; Rep Lively; Rep Meek; Rep Neron; Rep Nosse; Rep Pham; Rep Power; Rep Salinas; Rep Sanchez; Rep Wilde; Sen Dembrow; Sen Frederick; Sen Golden; Sen Gorsek; Sen Jama; Sen Manning Jr; Sen Riley |

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| SJM 2 Enrolled | Urging Congress to amend Thirteenth Amendment to United States Constitution to omit clause excepting criminal punishment. | Urges Congress to amend Thirteenth Amendment to United States Constitution to omit clause excepting criminal punishment, thereby ending racist legacy of slavery in nation's most important document. | Sen Frederick; Sen Gelser; Sen Manning Jr; Sen Wagner (Presession filed) |
| SJM 4 Enrolled | Urging Congress to enact legislation to begin process of implementing reparations for African Americans based on slavery and discrimination. | Urges Congress to enact legislation to begin process of implementing reparations for African Americans based on slavery and discrimination. | Sen Frederick; Sen Manning Jr; Sen Wagner (Presession filed) (at the request of former Representative Tiffiny Mitchell) |
| SJR 10 Enrolled | Proposing amendment to Oregon Constitution relating to slavery and involuntary servitude. | Proposes amendment to Oregon Constitution to prohibit slavery and involuntary servitude in all circumstances. | Rep Bynum; Rep Fahey; Rep Meek; Rep Sollman; Rep Valderrama; Rep Williams; Sen Dembrow; Sen Frederick; Sen Gelser; Sen Manning Jr; Sen Riley; Sen Steiner Hayward; Sen Wagner (Presession filed) (at the request of former Representative Tiffiny Mitchell) |

### *Table 2: Bills monitored by staff that did not pass*

| Bill # | Relating To | Bill Summary |
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| HB 2099 | Relating to manufactured dwelling replacement loans. | Allows Housing and Community Services Department to contract for administration of manufactured dwelling replacement loans. |
| HB 2161 | Relating to a Racial Justice Council; prescribing an effective date. | Directs office of Governor to study laws related to economic opportunity and provide results of study to appropriate interim committees of Legislative Assembly not later than September 15, 2022. |
| HB 2179 | Relating to electric farm equipment; prescribing an effective date. | Modifies zero-emission and electric vehicle rebate programs to allow rebate for purchase or lease of electric farm tractor or repowering of farm tractor. |
| HB 2181 | Relating to electric-powered vehicles; prescribing an effective date. | Modifies definition of "plug-in hybrid electric vehicle" for purposes of zero-emission and electric vehicle rebates. |
| HB 2182 | Relating to electric-powered vehicles. | Directs administrator of electric and zero-emission vehicle rebate program to conduct outreach efforts. |
| HB 2184 | Relating to electric buses. | Directs Department of Environmental Quality to provide interest-free loans to school districts, mass transit districts and transportation districts for purchase of electric buses and charging infrastructure for electric buses. |

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| HB 2186 | Relating to solar photovoltaic energy systems; prescribing an effective date. | Establishes requirements for product stewardship program for solar photovoltaic energy systems. |
| HB 2187 | Relating to transportation electrification. | Requires electric companies to expend any revenues from participation as credit aggregator or credit generator in clean fuels program on transportation electrification. |
| HB 2188 | Relating to transportation electrification. | Requires electric companies and consumer-owned utilities to transfer no less than 20 percent of revenue from monetization of clean fuels credits to Public Purpose Fund Administrator. |
| HB 2189 | Relating to energy; declaring an emergency. | Directs Public Utility Commission to conduct study related to renewable energy and to provide results of study in report to interim committees of Legislative Assembly related to energy no later than September 15, 2021. |
| HB 2190 | Relating to energy. | Directs State Department of Energy to convene work group to develop program awarding grants for community energy resilience projects and implement program no later than January 1, 2023. |
| HB 2191 | Relating to electric vehicles; prescribing an effective date. | Directs Department of Transportation to study electric vehicles and per-mile road usage charge and to report its findings to interim committees of Legislative Assembly related to transportation on or before September 15, 2022. |
| HB 2234 | Relating to emergency preparedness; declaring an emergency. | Requires Director of Department of Consumer and Business Services to prescribe in appropriate specialty codes standards, safeguards and guidelines for incorporating fire prevention and fireproofing or fire resistance measures into construction, repair, renovation, rehabilitation, retrofitting or maintenance of buildings and other structures that are located in areas of this state that are subject to or susceptible to wildfires. |
| HB 2291 | Relating to renewable portfolio standards; declaring an emergency. | Requires Public Utility Commission to identify and compile projected percentages of electricity sold by each electric company to retail electricity consumers in 2025, 2030 and 2035 that will be qualifying electricity, and provide information in report to appropriate interim committees of the Legislative Assembly no later than September 15, 2021. |
| HB 2324 | Relating to tax benefits; prescribing an effective date. | Expands definition of "funds of a public agency" to include dollar amount of tax credits or tax abatements for purposes of public contracting law. |
| HB 2332 | Relating to energy. | Repeals provisions requiring that before issuing site certificate for nuclear-fueled thermal power plant, Energy Facility Siting Council must find that repository for disposal of waste produced by plant is licensed to operate by federal government. |

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| HB 2353 | Relating to agency rulemaking. | Requires agency to include in rulemaking notice statement identifying how adoption of rule will affect racial equity. |
| HB 2398 A | Relating to building codes; declaring an emergency. | Adds Reach Code to state building code as specialty code and gives power of administration and interpretation of Reach Code to Director of Department of Consumer and Business Services. |
| HB 2419 | Relating to prevailing wage rates; prescribing an effective date. | Provides that prevailing rate of wage for trade or occupation in locality is rate of wage set forth in collective bargaining agreement for trade or occupation in locality or, if more than one collective bargaining agreement covers trade or occupation in locality, highest rate of wage among collective bargaining agreements for trade or occupation in locality. |
| HB 2429 | Relating to corporate activity tax; prescribing an effective date. | Modifies provisions of corporate activity tax. |
| HB 2448 | Relating to solar projects; prescribing an effective date. | Extends sunset of program under which property constituting solar project may be exempt and instead pay fee in lieu of property taxes. |
| HB 2476 | Relating to the Public Utility Commission; declaring an emergency. | Authorizes Public Utility Commission to allow electric companies to recover costs from retail electricity consumers for prudent infrastructure measures to support transportation electrification if certain criteria are met. |
| HB 2477 | Relating to the taxation of solar projects; prescribing an effective date. | Makes program for payment of fee in lieu of property taxes imposed on property constituting solar project permanent. |
| HB 2479 A | Relating to black carbon; prescribing an effective date. | Modifies definition of "global warming" to include certain aerosol air contaminants, including black carbon. |
| HB 2488 A | Relating to addressing climate justice through land use planning; declaring an emergency. | Requires that statewide land use planning goal relating to citizen involvement address participation and engagement for disadvantaged groups. |
| HB 2490 | Relating to classification of service for public utilities; declaring an emergency. | Authorizes Public Utility Commission to consider differential energy burden and other inequities of affordability in rates. |
| HB 2520 A | Relating to the adoption of energy policies into statewide land use planning goals; declaring an emergency. | Requires Land Conservation and Development Commission to adopt rules no later than July 1, 2022, by which county may justify exception to statewide land use planning goals for development of renewable energy facilities. |
| HB 2535 | Relating to property tax exemption for hydrogen systems; prescribing an effective date. | Exempts from ad valorem property taxation property constituting hydrogen system used to produce hydrogen by electrolysis or from renewable natural gas. |
| HB 2551 A | Relating to individual development accounts. | Extends and modifies tax credits for donations for individual development accounts. |
| HB 2566 | Relating to audits; prescribing an effective date. | Establishes Task Force on Audit Equity Analysis. |

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| HB 2567 | Relating to audits; prescribing an effective date. | Directs Secretary of State to study and make recommendations regarding best practices for conducting audits related to equity issues. |
| HB 2576 | Relating to development following wildfires; declaring an emergency. | Requires local governments to approve reconstruction of manufactured dwelling parks after wildfire. |
| HB 2610 | Relating to fish passage. | Provides that State Fish and Wildlife Commission may waive requirement that artificial obstruction in waters of this state provide for fish passage if commission determines that artificial obstruction will be repaired or replaced and is less than eight feet tall, or that artificial obstruction is dam that provides hydropower, drinking water or water for irrigation use, artificial obstruction provides fish habitat and providing for fish passage would increase cost of project by more than 10 percent. |
| HB 2674 | Relating to engine emissions; prescribing an effective date. | Directs Department of Environmental Quality to study impacts of engine emissions on environment and provide results of study in report to interim committees of Legislative Assembly no later than September 15, 2022. |
| HB 2688 | Relating to procurements of certain materials at the lowest carbon dioxide cost; declaring an emergency. | Requires Department of Transportation to establish pilot program to assess how products that department or contractor for department procures affect emissions of carbon dioxide. |
| HB 2692 | Relating to energy. | Exempts issuance of site certificate for small modular reactors from requirement that proposal by Energy Facility Siting Council to issue site certificate for nuclear-fueled thermal power plant must be approved by voters. |
| HB 2714 | Relating to resuming uses after emergencies; declaring an emergency. | Requires local governments to approve certain reconstruction after 2020 wildfires. |
| HB 2761 A | Relating to manufactured dwellings. | Directs Secretary of State to publish on secretary's website list of top five most commonly spoken languages in Oregon, other than English. |
| HB 2722 A | Relating to wildfires; declaring an emergency. | Directs Public Utility Commission to convene workshops on best practices regarding wildfires. |
| HB 2783 | Relating to funding the transition to electric motor vehicles; prescribing an effective date; providing for revenue raising that requires approval by a three-fifths majority. | Increases rate of privilege tax imposed on Oregon motor vehicle dealers upon retail sale of taxable motor vehicle and rate of use tax imposed on storage, use or other consumption in this state of taxable motor vehicle purchased at retail. |
| HB 2812 | Relating to filtration requirements for air admitted into buildings; prescribing an effective date. | Requires Director of Department of Consumer and Business Services to amend state mechanical, heating and ventilating code to require use of current best available technology for filtering outside air admitted into buildings and to |

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| | | require that all outside air admitted into buildings passes through filtration technology during periods in which air outside building poses significant risk of harm to health or safety of occupants of building. |
| HB 2814 A | Relating to indirect sources of air pollution; prescribing an effective date. | Directs Department of Environmental Quality to study approaches to reducing diesel engine emissions attributable to indirect sources of air contamination and submit report to interim committees of Legislative Assembly related to environment no later than September 15, 2022. |
| HB 2889 | Relating to State Department of Energy; prescribing an effective date. | Direct State Department of Energy to study laws related to energy incentives and provide results to interim committees of Legislative Assembly no later than September 15, 2022. |
| HB 2916 | Relating to strategies for environmentally beneficial economic growth; declaring an emergency. | Establishes Blue-Green Timber Economy Task Force. |
| HB 2995 | Relating to clean energy. | Requires 100 percent of electricity sold in 2035 and each subsequent calendar year to retail electricity consumers to be clean electricity. |
| HB 3025 | Relating to the compensability of COVID-19 for the purposes of workers' compensation; declaring an emergency. | Adds exposure to or infection by SARS-CoV-2 to definition of occupational disease for purposes of workers' compensation. |
| HB 3089 A | Relating to utility ratepayer assistance. | Establishes Public Drinking Water and Sewer Ratepayer Assistance Fund. |
| HB 3106 | Relating to utilities. | Provides that, for purposes of electric companies' planning and pursuit of energy efficiency resources, energy efficiency programs include programs for assisting retail electricity consumers with replacing building heating, appliances and other technologies powered by any energy source with higher-efficiency electric heating, appliances and other technologies. |
| HB 3127 A | Relating to wildfire recovery; declaring an emergency. | Appropriates moneys from General Fund to various state agencies for expenditures related to 2020 wildfires, including for distribution to local governments and other entities for specified biennial expenses related to 2020 wildfires. Appropriates moneys from General Fund for deposit in Lost Revenue Stabilization Fund and School Stabilization Fund. Limits biennial expenditures by certain state agencies from lottery moneys for purposes related to 2020 wildfires, including for distribution to local governments and other entities for specified purposes related to 2020 wildfires. Declares emergency, effective July 1, 2021. |
| HB 3180 | Relating to utilities. | Modifies and adds laws related to utilities. |

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| HB 3221 A | Relating to renewable electricity; prescribing an effective date. | Grants Public Utility Commission authority to authorize Oregon Renewable Options Programs offered by qualified utilities. |
| HB 3224 | Relating to manufactured dwellings. | Directs Housing and Community Services Department to study issues relating to manufactured dwellings and report to appropriate committee or interim committee of Legislative Assembly on or before September 15, 2022. |
| HB 3240 | Relating to fire mapping for construction of structures; declaring an emergency. | Requires Department of Consumer and Business Services to map wildfire risk and to develop appropriate fire protection standards within state building code for residential structures based on fire risk identified in maps. |
| HB 3290 | Relating to the Bureau of Labor and Industries; declaring an emergency. | Transfers certain duties, functions and powers related to state building code and Building Codes Division from Department of Consumer and Business Services to Bureau of Labor and Industries. |
| HB 3314 | Relating to building in areas affected by wildfires. | Directs Housing and Community Services Department to study issues relating to building in areas affected by wildfires and report to appropriate committee or interim committee of Legislative Assembly on or before September 15, 2022. |
| HB 3315 | Relating to building in areas affected by wildfires. | Directs Housing and Community Services Department to study issues relating to building in areas affected by wildfires and report to appropriate committee or interim committee of Legislative Assembly on or before September 15, 2022. |
| HB 3319 | Relating to light pollution; prescribing an effective date. | Directs State Department of Energy, in consultation with Department of Land Conservation and Development, to study light pollution and provide results of study in report to interim committees of Legislative Assembly no later than September 15, 2022. |
| HB 3348 | Relating to net metering. | Increases to three percent of historic single-hour peak load the cumulative amount of generating capacity from certain net metering facilities below which public utilities', municipal electric utilities', electric cooperatives' and people's utility districts' obligations to offer net metering to new customer-generators may not be limited. |
| HB 3351 | Relating to minimum wage rate. | Establishes increase in statewide minimum wage rate beginning on July 1, 2022. |
| SB 56 | Relating to greenhouse gas emissions; prescribing an effective date. | Authorizes Department of Environmental Quality to include amount estimated to equal economic benefit of violation when imposing civil penalty for violation of rule pertaining to a program to cap and reduce greenhouse gas emissions from large stationary sources, transportation fuels or other liquid and gaseous fuels, including natural gas. |

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| SB 80 | Relating to the Oil-Heated Dwellings Energy Account. | Disconnects computation of petroleum supplier assessment from energy resource supplier fees. |
| SB 82 | Relating to individual development accounts. | Establishes Individual Development Account Fund. |
| SB 148 | Relating to a tax credit for individual development account donations. | Extends sunset for tax credit for individual development account donations. |
| SB 247 | Relating to clean energy; prescribing an effective date. | Directs Department of Energy to study opportunities and challenges in Oregon for renewable energy, energy equity and development of clean energy workforce. |
| SB 276 | Relating to supporting homeownership for low income individuals; declaring an emergency. | Authorizes Housing and Community Services Department to provide grants to eligible entities for providing financial assistance to persons in low income households for repair and rehabilitation of residences. |
| SB 286 A | Relating to environmental justice; prescribing an effective date. | Renames Environmental Justice Task Force as Environmental Justice Council. |
| SB 287 | Relating to wildfire; declaring an emergency. | Requires that electric companies and consumer-owned utilities have wildfire plans based on best practices. |
| SB 314 A | Relating to alternative fuel transportation. | Authorizes Public Utility Commission to allow electric companies to recover costs from retail electricity consumers for prudent infrastructure measures to support transportation electrification if certain criteria are met. |
| SB 318 A | Relating to resource adequacy. | Authorizes Public Utility Commission to determine resource adequacy for load serving entities. |
| SB 340 | Relating to fossil fuel infrastructure; prescribing an effective date. | Directs State Department of Energy to study fossil fuel infrastructure in Oregon and provide results to interim committees of Legislative Assembly no later than September 15, 2022. |
| SB 350 | Relating to the energy supplier assessment. | Reduces, to 0.15 percent, percentage of energy resource supplier's gross operating revenue that annual energy resource supplier assessment may not exceed. |
| SB 353 | Relating to the Energy Facility Siting Council. | Requires State Department of Energy to conduct study related to Energy Facility Siting Council and report findings to interim committees of Legislative Assembly by September 15, 2022. |
| SB 360 | Relating to small nuclear reactors. | Exempts small modular reactors from certain siting restrictions that apply to nuclear-fueled thermal power plants. |
| SB 390 | Relating to clean energy; prescribing an effective date. | Directs Public Utility Commission, in coordination with State Department of Energy, to study and develop proposal for modifying Oregon laws as necessary to |

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| | | require 100 percent of electricity sold to retail electricity consumers to be electricity generated utilizing renewable and carbon-free energy. |
| SB 392 A | Relating to fugitive emissions; prescribing an effective date. | Directs Department of Environmental Quality, in consultation with Public Utility Commission and State Department of Energy, to study fugitive methane emissions from natural gas production, storage, transportation and delivery and provide results of study and recommendations for legislation in report to interim committees of Legislative Assembly no later than November 15, 2022. |
| SB 449 | Relating to a tax credit for workforce expansion; prescribing an effective date. | Creates income tax credit for taxpayers that expand workforce, with positions that pay above average wage, by 10 percent or more in tax year. |
| SB 488 | Relating to the compensability of COVID-19 for the purposes of workers' compensation; declaring an emergency. | Adds exposure to or infection by SARS-CoV-2 to definition of occupational disease for purposes of workers' compensation. |
| SB 489 | Relating to workers' compensation benefits. | Removes restriction on authorization of retroactive temporary disability compensation. |
| SB 522 | Relating to performance audits; prescribing an effective date. | Directs Division of Audits to conduct certain performance audits and issue recommendations for addressing risks. |
| SB 540 | Relating to the use of hydroelectric energy to comply with a renewable portfolio standard. | Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard. |
| SB 541 | Relating to carbon sequestration. | Declares that policy of state is to include atmospheric carbon sequestered by lands and waters of state in calculation to determine progress towards greenhouse gas reduction goals. |
| SB 542 A | Relating to the Task Force on Vehicle Charging Stations; prescribing an effective date. | Establishes Task Force on Vehicle Charging Stations. |
| SB 618 | Relating to reparations for slavery. | Directs Oregon Department of Administrative Services to study methods of providing reparations for slavery to Black Oregonians and report to appropriate committee or interim committee of Legislative Assembly no later than September 15, 2022. |
| SB 619 | Relating to reparations for slavery. | Directs Department of Revenue to establish program to pay reparations to Black Oregonians who can demonstrate heritage in slavery and who submit application no later than December 31, 2022. |
| SB 639 | Relating to an increase in the contract price at which the prevailing rate of wage applies to a contract for public works; prescribing an effective date. | Changes minimum contract price at which prevailing rate of wage applies to public works projects from $50,000 to amount that Oregon Department of Administrative Services determines by rule. |

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| SB 660 | Relating to the use of hydroelectric energy to comply with a renewable portfolio standard. | Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard. |
| SB 664 | Relating to allowable green energy technology in public improvement contracts; prescribing an effective date. | Expands definition of "green energy technology" for purposes of public improvement contracts. |
| SB 784 A | Relating to energy. | Authorizes public utility to seek rate recovery for operating expenses and capital costs associated with resiliency measures from retail electricity consumers or natural gas consumers. |
| SB 825 | Relating to energy; prescribing an effective date. | Creates income tax credit for energy production in Oregon. |
| SB 833 | Relating to natural gas pipelines. | Authorizes Public Utility Commission to initiate proceeding to increase certainty concerning cost recovery for actions taken by natural gas utilities to reduce hazardous leaks and nonhazardous fugitive emissions from natural gas utility's gas pipeline system in this state. |
| SB 839 | Relating to workforce standards for energy projects. | Prohibits Public Utility Commission from acknowledging in integrated resource plan, or allowing in customer rates, costs of investment in or upgrade of renewable energy facility, or certain contracts to acquire electricity, unless energy proposed to be acquired is generated by renewable energy facility constructed in compliance with certain labor standards. |
| SJM 5 A | Urging Congress to enact bipartisan climate change legislation. | Urges Congress to enact bipartisan climate change legislation. |
| SJR 5 | Proposing amendment to Oregon Constitution relating to right of people to clean and healthy environment. | Proposes amendment to Oregon Constitution establishing right to clean and healthy environment and to preservation of natural, cultural, scenic, recreational and healthful qualities of environment. |