# Energy Trust Board of Directors

**February 25, 2020**

421 SW Oak Street, Suite 300 Portland, OR 97204 1.866.368.7878 503.546.6862 fax energytrust.org

# 172nd Board Meeting

February 25, 2020
421 SW Oak Street, Suite 300, Portland, Oregon

EnergyTrust of Oregon

| | Agenda | Tab | Purpose |
|---|---|---|---|
| **10:00 a.m.** | **172nd Board Meeting Call to Order** (Roger Hamilton)<br>• Approve agenda<br><br>**General Public Comment**<br>*The president may defer specific public comment to the appropriate agenda topic.* | | |
| **10:05 a.m.** | **Nominating Committee** (Debbie Kitchin)<br>• Renew Terms of Directors (R895)<br>• Election of Officers (R896)<br>• Approval of New Directors (R897) | **1**<br><br>**Distributed at meeting** | Action |
| **10:25 a.m.** | **Resigning Board Members' Departing Remarks** | | Info |
| **10:35 a.m.** | **Adjourn Meeting** (Roger Hamilton) | | |
| **10:40 a.m.** | **Board Meeting Call to Order** (Melissa Cribbins)<br>**President's Report**<br>• Welcome and seating of new board members | | Info |
| | **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>• December 12, 2019, Board Learning Session Minutes<br>• December 13, 2019, Board Meeting Minutes<br>• Corporate Bank Signing Resolution (R902) | **2** | Action |
| **11:00 a.m.** | **Executive Director Report** (Michael Colgrove)<br>• Preliminary 2019 Annual Results | | Info |
| **11:15 a.m.** | **Committee Reports**<br>• Audit Committee (Anne Root)<br>• Evaluation Committee (Lindsey Hardy)<br>• Finance Committee (Susan Brodahl)<br>• Policy Committee (Roger Hamilton)<br>  o Approve Conservation Funding for Schools Policy (R899)<br>• Strategic Planning Committee (Mark Kendall)<br>• Diversity Advisory Council (Mark Kendall) | <br><br>**3**<br>**4**<br>**5**<br>**5**<br>**6**<br>**7** | <br>Info<br>Info<br>Info<br>Action<br><br>Info |
| **12:15 p.m.** | **Break for Lunch** | | |

| | Agenda | Tab | Purpose |
|---|---|---|---|
| **1:00 p.m.** | **Executive Session**<br><br>*In accordance with Energy Trust Bylaws 3.19.3 "Trade secrets, proprietary or other confidential commercial or financial information" and 3.19.4 "Information regarding negotiations whose disclosure would likely frustrate corporate purposes".*<br>***The Executive Session is not open to the public*** | | Info |
| **2:00 p.m.** | **Break** | | |
| **2:15 p.m.** | **Board Meeting Call to Order** (Melissa Cribbins) | **Distributed at meeting** | Action |
| **2:30 p.m.** | **Energy Programs**<br>• Update on Request for Proposals for Existing Buildings, Multifamily and Industrial Lighting (Oliver Kesting) | | Info |
| **3:00 p.m.** | **2020 State Legislative Session Update** (Jay Ward) | | Info |
| **3:30 p.m.** | **Diversity, Equity and Inclusion** (Debbie Menashe, Tyrone Henry)<br>• Approve DAC Stipend Compensation Procedures (R901) | **8** | Action |
| **4:00 p.m.** | **Adjourn Meeting** | | |

**The next meeting of the Energy Trust Board of Directors will be held Wednesday, February 26, 20208:00 a.m. at Energy Trust of Oregon, 421 SW Oak, Suite 300, Portland, OR 97204**

## Table of Contents

**Tab 1 Nominating Committee**
Renew Terms of Directors R895
Election of Officers R896

**Tab 2 Consent Agenda**
December 12, 2019, Board Learning Session Minutes
December 13, 2019, Board Meeting Minutes
Corporate Authorization (Bank Signing Authority)

**Tab 3 Evaluation Committee**
December 11, 2019 Evaluation Committee Meeting Notes
Impact Evaluation Report 2015-2016 New Buildings Program Final Report
Existing Multifamily Program Process Evaluation Final Report

**Tab 4 Finance Committee**
October 2019 Financial Notes
October 2019 Finance Committee Package
October 2019 Contract Status Summary

**Tab 5 Policy Committee**
January 30, 2020, Policy Committee Meeting Notes
Conservation Funding for Schools Policy R899

**Tab 6 Strategic Planning Committee**
January 27, 2020, Strategic Planning Committee Meeting Notes

**Tab 7 Diversity Advisory Council**
January 28, 2020 Diversity Advisory Council Notes

**Tab 8 Diversity Equity and Inclusion**
Approve DAC Stipend Compensation Procedures (R901)

# Tab 1

# Resolution 895
# Renew Terms of Directors

February 25, 2020

**RESOLUTION 895**
**ELECTING SUSAN BRODAHL, MELISSA CRIBBINS, ELEE JEN**
**TO NEW TERMS ON THE ENERGY TRUST BOARD OF DIRECTORS**

**WHEREAS:**

1. **The terms of incumbent board members Susan Brodahl, Melissa Cribbins and Elee Jen expire in 2020.**
2. **The Board of Directors Nominating Committee has recommended that these members' terms be renewed.**

**It is therefore RESOLVED that the Energy Trust of Oregon, Inc., Board of Directors elects Susan Brodahl, Melissa Cribbins and Elee Jen, incumbent board members, to new terms of office that end in 2023.**

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

# PINK PAPER

# Resolution 896
# Election of Officers
February 25, 2020

**RESOLUTION 896**
**ELECTION OF OFFICERS**

**WHEREAS:**

1. **Officers of the Energy Trust of Oregon, Inc., (other than the Executive Director) are elected each year by the Board of Directors at the board's annual meeting.**

2. **The Board of Directors Nominating Committee has nominated the following directors to renew or be appointed to terms as officers:**

   - **Melissa Cribbins, President**
   - **Henry Lorenzen, Vice President**
   - **Mark Kendall, Secretary**
   - **Susan Brodahl, Treasurer**

**It is therefore RESOLVED that the Board of Directors hereby elects the following as officers of Energy Trust of Oregon, Inc., for 2020:**

- **Melissa Cribbins, President**
- **Henry Lorenzen, Vice President**
- **Mark Kendall, Secretary**
- **Susan Brodahl, Treasurer**

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed:

# Tab 2

# Board Learning Session Minutes—170th Meeting

December 12, 2019

**Board members present**: Ernesto Fonseca, Roger Hamilton, Lindsey Hardy, Eric Hayes, Elee Jen, Mark Kendall, Debbie Kitchin, Henry Lorenzen, Alan Meyer, Roland Risser, Letha Tawney (Oregon Public Utility Commission ex officio), Ruchi Sadhir for Janine Benner (Oregon Department of Energy special advisor)

**Board members absent**: Susan Brodahl, Melissa Cribbins, Anne Root

**Staff attending**: Cheryle Easton, Jeni Hall, Tyrone Henry, Steve Lacey, Debbie Menashe, Mark Wyman

## Board Learning Session Call to Order

Roger Hamilton called the meeting to order at 1:05 p.m. He introduced and welcomed Energy Trust's new diversity, equity and inclusion lead, Tyrone Henry.

## General Public Comments

There were no public comments.

## Executive Director Report (Michael Colgrove)

Michael Colgrove, executive director, presented a proposed schedule for 2020 board meetings, which will include six board meetings, three half-day board learning sessions and two board orientation meetings.

The six board meetings will include a board president's report; executive director report; policy revisions for review and approval; contracts for approval; and presentations from staff, stakeholders, utilities, business partners and study results.

The three-half day board learning sessions are for topics the board has expressed interest in or informational presentations that support Energy Trust business.

The 2019 nominating Committee Orientation process calls for two half-day orientation meetings. Orientation meetings are designed to inform new board members and connect existing board members with the new board members. The two meetings will cover a general Energy Trust overview, program and process detail.

Debbie Kitchin arrived at 1:45 p.m.

## Update on Manufactured Homes Replacement Pilot (Mark Wyman)

Mark Wyman, residential program manager, provided an update on the status of the manufactured homes pilot and the development of an accompanying loan product. Mark reviewed the goals of the pilot, which include creating a replicable program model, developing new working relationships with partner organizations and formalizing the role of ratepayer energy efficiency programs in supporting home replacement activities. The pilot advances organizational goals to expand participation and to support new approaches, and aligns with focus area four of the 2020-2024 Strategic Plan.

The board asked if staff are looking at enhancing partnerships with health care entities. The program is interviewing participants and capturing self-reported health and welfare outcomes, and would like to develop partnerships with actors in the public health or health care systems.

Mark described the loans and financing models that help manufactured homeowners finance home replacements at a reasonably priced fixed rate. He outlined 2020 priorities to continue outreach to partnering Community Action Agencies and to work with Craft3 as it considers changes to its loan products. Staff will continue to explore new sources of loan capital and will work with market partners to seek cost efficiencies.

The pilot has completed more than 25 replacements, which have all been financed by nonprofit housing developers for use as rental housing. None of the completed projects served owner-occupied units, although owner-occupied projects are advancing, and staff expect partner financing to play a critical role in enabling these households to realize their goals.

## **Update on Residential Net Zero Specification** (Jeni Hall, Mark Wyman)

Mark Wyman and Jeni Hall, senior solar project manager, presented the Residential Net Zero Specification program, which combines energy efficiency and solar offerings. Energy Trust has been working with stakeholders and advisory councils for the last year to develop a Residential Net Zero specification, with the assumption that the offer complies with fuel-neutral policies, remains consistent with site-based savings analysis and works under current net metering rules.

Mark and Jeni provided background on how to design a combined energy efficiency and renewable energy offer that benefits both individual customers and the broader utility system. The board reviewed the results of a stakeholder survey that articulated support for Energy Trust's approach to developing a Residential Net Zero specification.

Mark outlined next steps to develop incentives and offers, including a smart grid responsive homes offer in development for 2020.

## **Update on High-Value Solar** (Dave McClelland)

Dave McClelland, senior solar program manager, described how the Solar program will prioritize high-value solar projects that provide more benefits for society and the grid through advanced technology and optimized deployment. Prioritizing high-value solar projects will enable the program to effectively advance solar in Oregon given limited staff time and resources.

The Solar program plans to combine advanced technologies and targeted system installations to address larger challenges facing customers, partners and utilities. By the end of 2020, staff will streamline Energy Trust's conventional Solar program and shift focus toward advanced technologies, equitable deployment and more integrated offerings.

Ruchi Sadhir arrived 3:25 p.m.

## **Discussion on What is a Non-stakeholder Board** (Debbie Kitchin)

Debbie Kitchin kicked off a board discussion about what it means to be a non-stakeholder board and described the Energy Trust board's history as a non-stakeholder board. Since its founding, Energy Trust's board has been comprised of members representing the broad interests of all ratepayers, rather than any particular stakeholder group or perspective. The board members have focused on Energy Trust's vision, strategic planning and organizational goals over specific interest areas. As stakeholders with a particular perspective, utilities do not serve on the board. Utilities are invited to serve on the organization's advisory councils and meet regularly with staff to provide input on plans and activities.

The board discussed the many advantages to continuing as a non-stakeholder board.

Ernesto Fonseca arrived at 4:00 p.m.

## Adjourn to Executive Session

The meeting adjourned at 4:00 p.m. for an executive session.

**The next regular meeting of the Energy Trust Board of Directors** will be held Friday, December 13, 2019, 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

# Board Meeting Minutes—171st Meeting

December 13, 2019

**Board members present**: Ernesto Fonseca, Roger Hamilton, Lindsey Hardy, Eric Hayes, Elee Jen, Mark Kendall, Debbie Kitchin, Henry Lorenzen, Alan Meyer, Roland Risser, Letha Tawney (Oregon Public Utility Commission ex officio), Ruchi Sadhir for Janine Benner (Oregon Department of Energy special advisor)

**Board members absent**: Susan Brodahl, Melissa Cribbins, Anne Root

**Staff attending**: Cheryle Easton, Michael Colgrove, Emily Findley, Wendy Bredemeyer, Debbie Menashe, Amber Cole, Fred Gordon, Peter West, Thad Roth, Tyrone Henry, Betsy Kauffman, Amanda Potter, Sue Fletcher, Dan Rubado, Phil Degens, Mark Wyman

**Others attending**: Joe Marcotte (TRC), Jason Klotz (Portland General Electric), Anna Kim (OPUC, by phone), Christine Chin Ryan (Synergy Consulting), Victoria Lara (Synergy Consulting), Jim Owens (Synergy Consulting), John Charles (Cascade Policy Institute)

## Business Meeting

Roger Hamilton called the meeting to order at 10:01 a.m. and reminded the board that consent agenda items can be changed to regular agenda items at any time.

## General Public Comments

There were no public comments.

## 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*.

**RESOLUTION 881**
**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**

- October 16, 2019, Budget Workshop Minutes
- October 28, 2019, Board Meeting Minutes
- Diversity, Equity and Inclusion Policy 4.08.000-P (R885)
- Approve Use of Contingency Funds up to $15,000 (R893)

| | | |
|---|---|---|
| Motion by: Debbie Kitchin | | Seconded by: Eric Hayes |
| Vote: | In favor: 10 | Abstained: 0 |
| | Opposed: 0 | |

**RESOLUTION 885**
**DIVERSITY, EQUITY AND INCLUSION POLICY**

**WHEREAS:**

1. **Energy Trust's board Policy Committee has reviewed proposed revisions to the Diversity, Equity and Inclusion Policy at its meeting on November 14, 2019, and recommends slight updating revisions to the policy language.**

**It is therefore RESOLVED that the Energy Trust Diversity, Equity and Inclusion Policy is revised as shown below.**

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed:

# Marked Version

# 4.08.000-P Diversity, Equity, and Inclusion Policy

| **History** | | | |
|---|---|---|---|
| Source | Date | Action/Notes | Next Review Date |
| Board Decision | May 22, 2002 | Approved (R104) | May 2005 |
| Policy Committee | March 5, 2005 | Postpone review | 11/05 |
| Board Decision | September 7, 2005 | Revised (R352) | September 2008 |
| Policy Committee | December 2, 2008 | Replaced references to numerical electric and gas goals | September 2011 |
| Board Decision | October 5, 2011 | Revised (R595) | October 2014 |
| Board Decision | October 1. 2014 | Revised (R714) | October 2017 |
| Board Decision | December 15, 2017 | Revised (R828) Name updated from Equity Policy to Diversity, Equity and Inclusion Policy | October 2018 |
| Board Decision | December 14, 2018 | Revised (R862) | October 2019 |
| | | | |

***Introduction***

Energy Trust envisions ~~a high quality of life, vibrant economy and a healthy environment and climate for generations to come, built with renewable energy, efficient energy use and conservation~~ clean, efficient, affordable energy for everyone. Energy Trust recognizes that to achieve this vision, all utility customers must benefit from our programs, ~~but certain~~ including customers ~~are~~ who may be underserved by our programs such as communities of color, rural communities, and low income customers.

Energy Trust commits to enhancing diversity, equity and inclusion in our programs and in internal operations in order to work to serve all communities and reach critical Energy Trust goals. We will advance diversity, equity and inclusion in our programs and internal operations through meaningful collaboration with our utility funders, trade allies, program allies, and customers and with geographic and culturally specific communities, organizations and businesses.

***Policy***

- Energy Trust will make programs available to all eligible electricity and gas customer classes by implementing programs in the residential, commercial, and industrial sectors.

- Energy Trust will monitor participation rates for all programs and adjust them as needed to ensure that all investor-owned utility electricity and gas customer classes in Energy Trust territory are being served.

- In addition to providing programs to reach all customer groups, Energy Trust will design and implement program strategies specifically to reach customers who have been underserved by Energy Trust programs, including rural customers, communities of color, and low-income communities in Energy Trust service territory.

- Energy Trust will use a diversity, equity and inclusion lens through which to:
    a. strategize and plan for Energy Trust program delivery
    b. deliver programs and services
    c. partner and collaborate
    d. allocate resources
    e. communicate and market
    f. build our workforce
    g. evaluate our work

- Energy Trust will maintain a diversity, equity and inclusion operations plan that:
    - includes goals, objectives and activities
    - assesses and measures progress
    - learns from mistakes and successes
    - shares progress publicly on no less than an annual basis

- Energy Trust has established and will maintain a Diversity Advisory Council to provide advice and resources to the board of directors to support Energy Trust's diversity, equity and inclusion operations plan and to advise the board of directors on assessing and measuring progress toward goals of such plan.

- Energy Trust will enhance diversity, equity and inclusion on the board of directors. In order to enhance diversity, equity and inclusion among board members, the nominating committee of the board of directors shall identify diversity, equity and inclusion goals and objectives, such goals and objectives to be submitted to the board of directors for approval.

For the first three years after adoption of these 2017 changes, the Energy Trust Policy Committee will review this policy annually to take account of new information and experience

# Clean Version
# 4.08.000-P Diversity, Equity, and Inclusion Policy

| History | | | |
|---|---|---|---|
| Source | Date | Action/Notes | Next Review Date |
| Board Decision | May 22, 2002 | Approved (R104) | May 2005 |
| Policy Committee | March 5, 2005 | Postpone review | 11/05 |
| Board Decision | September 7, 2005 | Revised (R352) | September 2008 |
| Policy Committee | December 2, 2008 | Replaced references to numerical electric and gas goals | September 2011 |
| Board Decision | October 5, 2011 | Revised (R595) | October 2014 |
| Board Decision | October 1. 2014 | Revised (R714) | October 2017 |
| Board Decision | December 15, 2017 | Revised (R828) Name updated from Equity Policy to Diversity, Equity and Inclusion Policy | October 2018 |
| Board Decision | December 14, 2018 | Revised (R862) | October 2019 |
| | | | |

***Introduction***

Energy Trust envisions clean, efficient, affordable energy for everyone. Energy Trust recognizes that to achieve this vision, all utility customers must benefit from our programs, including customers who may be underserved by our programs such as communities of color, rural communities, and low-income customers.

Energy Trust commits to enhancing diversity, equity and inclusion in our programs and in internal operations in order to work to serve all communities and reach critical Energy Trust goals. We will advance diversity, equity and inclusion in our programs and internal operations through meaningful collaboration with our utility funders, trade allies, program allies, and customers and with geographic and culturally specific communities, organizations and businesses.

***Policy***

- Energy Trust will make programs available to all eligible electricity and gas customer classes by implementing programs in the residential, commercial, and industrial sectors.

- Energy Trust will monitor participation rates for all programs and adjust them as needed to ensure that all investor-owned utility electricity and gas customer classes in Energy Trust territory are being served.

- In addition to providing programs to reach all customer groups, Energy Trust will design and implement program strategies specifically to reach customers who have been underserved by Energy Trust programs, including rural customers, communities of color, and low-income communities in Energy Trust service territory.

- Energy Trust will use a diversity, equity and inclusion lens through which to:
    h. strategize and plan for Energy Trust program delivery
    i. deliver programs and services
    j. partner and collaborate
    k. allocate resources

l. communicate and market
m. build our workforce
n. evaluate our work

- Energy Trust will maintain a diversity, equity and inclusion operations plan that:
    - includes goals, objectives and activities
    - assesses and measures progress
    - learns from mistakes and successes
    - shares progress publicly on no less than an annual basis

- Energy Trust has established and will maintain a Diversity Advisory Council to provide advice and resources to the board of directors to support Energy Trust's diversity, equity and inclusion operations plan and to advise the board of directors on assessing and measuring progress toward goals of such plan.

- Energy Trust will enhance diversity, equity and inclusion on the board of directors. In order to enhance diversity, equity and inclusion on the board of directors, the Nominating Committee of the board of directors shall identify diversity, equity and inclusion goals and objectives, such goals and objectives to be submitted to the board of directors for approval.

For the first three years after adoption of these 2017 changes, the Energy Trust Policy Committee will review this policy annually to take account of new information and experience

## **President's Report** (Mark Kendall)

At the request of President Roger Hamilton, Secretary Mark Kendall provided an overview of a training he recently attended on nonprofit board governance in Salem, along with Executive Director Mike Colgrove and other Energy Trust staff. Mark reported on sessions he attended including enhancing board and staff relationships, evaluating and managing risk, and governing an organization ethically and transparently. Mark recommended that more board members attend next year.

## **Executive Director Report** (Michael Colgrove)

Mike Colgrove presented updates on organizational activities from 2019. He provided background on large projects that were identified in 2018 through an organizational review process, and provided updates on projects that moved forward in 2019.

This year, an internal Innovation Team was formed. The team selected a framework to evaluate new opportunities and proposed ways to support the execution of innovative concepts brought forward by staff. In 2020, the team will select three to five new ideas from the business planning process to test and refine the methodology and gain learnings to carry forward.

A Decision-making Team was formed to create greater clarity for staff regarding who has authority to make decisions at each level of the organization. In 2019, the team reviewed literature and research about best practices to inform development of a framework and a set of tools to assist staff at each step of decision-making. Next year's focus will be to share the framework and tools with the organization and train staff.

Mike reviewed progress toward creating a multiyear planning and budget process. According to the envisioned new process, a three-year business plan informs each annual budget. Tapping stakeholders and market experts over one year to develop a three-year plan for subsequent years will enable a shorter annual budget process for the two following years.

This change also will allow for more stakeholder engagement. This year staff will complete implementation of a new budget tool to enable greater flexibility in scenario planning and free up staff time to devote to higher-value budget work.

Staff members presented Energy Trust's new organizational values, which were selected and refined through facilitated engagement sessions with staff. Board and staff talked about how diverse perspectives were captured during this process.

Mike provided an update on Oregon's 2019 ranking in the American Council for an Energy-Efficient Economy (ACEEE) energy scorecard. Oregon ranked 9th in the country, down two spots compared with 2018. The board discussed the process for evaluating the rankings, and whether time of use was factored in. It is not considered by ACEEE, but there are many ways Energy Trust is already engaged with utilities and OPUC on higher valuation of energy savings during peak times, and it is also addressed in the strategic plan. The board discussed how to propose valuation methods for OPUC to measure our accomplishments. Energy Trust can continue to serve as an information resource for the state to explore questions like these.

The board asked about commonalities in the top 10 states and the 10 lowest performing states. Energy Trust began a project in 2019 to profile the bottom 10 states and find out what similarities exist and what successes these states have achieved despite their low ranking. The project will continue in 2020 with listening tours focused on three to five of the 10 states that have lessons to share.

## Final Proposed 2020 Annual Budget and 2020-2021 Action Plan (Michael Colgrove)

Mike Colgrove presented Energy Trust's final proposed 2020 budget and action plans. The presentation included forecasted 2019 results. The board requested more detail on the forecasted results for PGE territory indicating the organization may fall short of goal for that utility. Contributing factors included commercial projects scaling back through value engineering, projects expected to complete in 2019 moving to 2020, fewer large multifamily buildings in the Portland metro area and a cost increase for building materials.

Mike reviewed a high-level summary of the final proposed budget, including minor adjustments from the draft budget. The changes were due to small corrections rather than public comments, which were generally supportive. OPUC staff acknowledged that while savings targets are lower for 2020, Energy Trust remains cost-effective and contributes to many positive trends such as market transformation.

Mike presented savings and generation goals for 2020 by utility. Savings goals for most utilities are lower than utility Integrated Resource Plan (IRP) targets for 2020, because the IRP cycle and Energy Trust annual goal cycle are not aligned.

**RESOLUTION 886**
**ADOPT 2020 BUDGET, 2021 PROJECTION AND 2020-2021 ACTION PLAN**

**BE IT RESOLVED that Energy Trust of Oregon, Inc., Board of Directors approves the Energy Trust 2020 Budget, 2021 Projection and 2020-2021 Action Plan as presented to the board at its meeting on December 13, 2019.**

| | |
|---|---|
| Moved by: Debbie Kitchin | Seconded by: Lindsey |
| Vote: In favor: 10 | Abstained: 0 |

Opposed: 0

The board took a break for lunch from 12:06 - 12:57 p.m.

## Diversity, Equity and Inclusion Annual Operations Plan Report (Debbie Menashe)

Debbie Menashe presented an update on diversity, equity and inclusion activities and progress in 2019. She introduced Tyrone Henry, Energy Trust's new diversity, equity and inclusion lead, and spoke about his background and role.

Debbie provided background on diversity, equity and inclusion efforts to date, reviewing Energy Trust's historical focus on serving all customers, efforts to become more inclusive and expand participation in subsequent years, and creation of the comprehensive diversity, equity and inclusion operations plan that is currently being implemented. The board will hear a progress report on the 10 diversity, equity and inclusion goals in May 2020. Debbie previewed upcoming activities for the Diversity Advisory Council, including ongoing recruitment for the remaining council spots and the 2020 meeting schedule.

Energy Trust is undertaking a data enhancement project that builds on a previous study to analyze participation by census track and create a baseline. That project did not analyze household-level data and didn't account well for commercial participation. Debbie walked through some ways that staff has begun to expand this work in 2019 and will continue in 2020 to go deeper in understanding customer participation. The board discussed ways that demographic information could be collected on a voluntary basis, including through home energy scoring programs, collaboration with community organizations and customer surveys. ODOE staff offered that its new solar rebate program has a low-income carve-out and could serve as a potential data source.

Debbie Menashe invited the board to propose diversity-related topics they would like to learn more about in a future half-day training.

The board discussed whether the term "people of color" signified non-white, which is how it is currently being understood. A board member cautioned that using this definition could result in leaving out underserved ethnic communities who should be included, such as Slavic or Russian.

Board members expressed excitement about opportunities to advance this work, such as identifying prospective Diversity Advisory Council members. Conversations at the OPUC about the new metrics have also been positive.

## Contracts for Approval

***Approve Amendment and Extension of Contract with Recurve Analytics, Inc. (R887)*** *(Mark Wyman and Dan Rubado)*

Energy Trust staff requested a contract renewal with Recurve Analytics, a company that makes open source software to analyze energy data. If renewed, the contract amount will exceed the executive director's signing authority.

Energy Trust has a history of using Recurve, which was selected in 2017 for a contract through a competitive process and extended once in 2019. Recurve developed a web-based platform that Energy Trust uses to conduct analyses for residential impact and supports a Pay for Performance pilot.

Staff are now ready to fully utilize the platform in 2020 to assist with impact analyses. The platform standardizes the analysis method and streamlines a manual process through automation, leading to faster turnaround time and enabling higher volume. For the Pay for Performance pilot, a custom platform allows staff to quantify savings for a site based on metered outcomes, then aggregate disparate sites into portfolios and visualize results. This is important because the pilot work isn't scalable using a manual resource.

The board asked if the cost of renewing the contract was already accounted for in the recently adopted 2020 annual budget. It is included and being brought to the board's attention due to the total cost exceeding $500,000. The board discussed the projected impact if Pay for Performance moves forward beyond the pilot stage, which will depend on whether the dashboard is used for other projects outside the pilot.

**RESOLUTION 887**
**APPROVING A CONTRACT AMENDMENT WITH RECURVE ANALYTICS, INC.**

**WHEREAS:**

1. **Energy Trust has contracted with Recurve since 2018, pursuant to a competitive bid process conducted in 2017, for data analytics, visualization and consulting services to support its energy efficiency impact evaluations and program design, particularly its pay-for-performance pilot.**
2. **Energy Trust wishes to continue to contract with Recurve for these services and, potentially, additional services relating to use of AMI data, to inform its program impact evaluations and design by extending the term of the contract and authorizing additional funding.**
3. **For 2020 services, Energy Trust has budgeted and proposes an addition of $300,000 for Recurve services.**

**It is therefore RESOLVED that the Board of Directors hereby authorizes the executive director to sign a contract amendment with Recurve Analytics, Inc. for up to $700,000.**

| | | |
|---|---|---|
| Moved by: Mark Kendall | | Seconded by: Lindsey Hardy |
| Vote: | In favor: 10 | Abstained: 0 |
| | Opposed: 0 | |

***Approve Five-Year Funding Commitment to the Regional Technical Forum (R888)*** *(Fred Gordon)*
Staff presented on a proposal to extend a funding agreement for the next five years with the Regional Technical Forum (RTF), a group of experts that operates as a committee reporting to the Northwest Power and Conservation Council.

Members are volunteers chosen for their technical expertise. The RTF is funded by program managers in the Pacific Northwest. The group synthesizes project savings information to determine estimates for measures, such as cost, savings, measure life and timing of savings. This information is critical to Energy Trust's measure development. Obtaining this information through the forum saves money, and participating with RTF allows a depth of research and analysis that Energy Trust could not do alone. Additionally, the independence of RTF adds weight and credibility to the findings. Two Energy Trust staff members serve on the forum, Sarah Castor and Jackie Goss. The board discussed that the Energy Trust portion of the

funding was around 30 percent, the second largest funder after Bonneville Power Administration.

John Charles with Cascade Policy Institute provided public comment on the contract. He stated that Energy Trust is unique because it receives guaranteed funding without having to engage in fundraising that a nonprofit would do or subscribe to the same governance process that a state agency would. John Charles questioned whether supporting the RTF with ratepayer funds is critical to the organization's mission. He stated that after attending 35 board meetings, he could not recall witnessing a vigorous debate on a spending proposal and suggested that may be due to our funding structure being taken for granted. John Charles encouraged the board to engage in more intellectual and philosophical discussion with regards to funding proposals, and to adopt greater skepticism in considering whether it's necessary to financially support publicly funded organizations like RTF.

Board and staff engaged in further discussion about the value of the investment, noting that using accurate measure-level energy-savings estimates is part of the grant agreement, and participating with RTF allows staff to accomplish this work more efficiently and effectively than relying solely on in-house analyses. It was pointed out that the forum has strong oversight through its governance structure and a policy advisory committee, with full Energy Trust participation.

Henry Lorenzen stated he would abstain from the vote due to his previous direct involvement with RTF.

**RESOLUTION 888**
**APPROVING A FIVE-YEAR CONTRACT WITH THE NORTHWEST POWER AND CONSERVATION COUNCIL TO FUND THE REGIONAL TECHNICAL FORUM**

**WHEREAS:**

1. **The Northwest Power and Conservation Council's Regional Technical Forum ("RTF") develops "consistent standards and protocols for verification and evaluation of energy savings, in consultation with all interested parties." The RTF is the Northwest's primary forum for developing benchmarks and measurement protocols to allow utilities and others to compare methods and results and learn from each other's experience in energy conservation.**
2. **Energy Trust has participated in the RTF consistently over the years, and derived significant benefits from RTF work on cost-effectiveness issues, energy savings analysis, and energy efficiency research and evaluation. Energy Trust committed to funding RTF through its 2015-2019 Business Plan for an amount up to $1,825,400.**
3. **Energy Trust wishes to continue to provide longer term funding to the RTF because it continues to derive significant value from RTF's regional work.**
4. **Proposed 2020-2024 funding contributions for RTF are based on the Northwest Energy Efficiency Alliance funding allocation methodology. Energy Trust's share of 2020-2024 funding contributions would be up to $405,800 in 2020, $415,900 in 2021, $426,300 in 2022, $436,900 in 2023 and $447,900 in 2024, for a total of up to $2,132,800.**
5. **As proposed, Energy Trust's funding agreement would allow Energy Trust to reduce or terminate funding if the Grant Agreement with the OPUC is terminated or the RTF is "significantly failing to meet its business plan objectives."**

**It is therefore RESOLVED that the Board of Directors hereby authorizes the executive director to sign a five-year funding agreement with the Northwest Power and Conservation Council for up to $2,132,800 for the RTF and its 2020-2024 Business Plan, with termination provisions as described above.**

| | | |
|---|---|---|
| Moved by: Debbie Kitchen | | Seconded by: Mark Kendall |
| Vote: | In favor: 9 | Abstained: 1 |
| | Opposed: 0 | |

***Approve Media Buying Contracts R889 and R890*** *(Shelly Carlton)*
Shelly Carlton, strategic marketing manager, presented on two contracts for media buying. External media buying contracts allow staff access to benefits beyond the advertising itself, creating greater value for the organization's advertising expenditures. The first contract is an extension of an existing contract for traditional media buying, and the second is a new contract that would optimize digital (online) media buying.

Staff briefly presented background on the role of advertising in raising awareness of Energy Trust offerings and the organization's overall brand. Compared with traditional channels such as print and radio, digital media buys allow for more precise targeting to reach priority audiences, but this makes the process complex to manage. Staff showed options for different proportions of traditional and digital media purchases, with the options increasingly trending toward digital.

The board discussed these options, including whether there is data available that correlates advertising with participation results. While results are not yet available, staff will have more data in 2020 after the conclusion of a new digital campaign. The board inquired how a new media strategy could help further diversity, equity and inclusion objectives. Staff cited that digital media is a key way to reach new audiences. Smartphones are now more accessible and widely used. Digital advertising is less costly than cable and newspaper advertising. Digital ads in rural areas often outperform the same versions in urban areas.

**RESOLUTION 889**
**AUTHORIZING A CONTRACT WITH COATES KOKES, INC.**
**FOR ADVERTISING PURCHASES AND PURCHASING SERVICES**

**WHEREAS:**

1. **Media buying at Energy Trust allows programs to advertise in print, radio, TV, outdoor and online, creating program awareness, and promoting services, programs, and products.**
2. **Advertising is the most common answer to how participating customers first hear of us, and there is a clear connection between advertising and customer awareness and engagement, leading to savings and generation.**
3. **Increased advertising reach, using a professional media buyer with constant media contact and significant media data, allows Energy Trust to expand customer participation by increasing the number of times people see our message.**
4. **Using a professional media buyer allows Energy Trust to take advantage of added-value that works in collaboration with PR goals and promotes Energy Trust across mediums.**

**It is therefore RESOLVED, that the board of directors of Energy Trust of Oregon, Inc. authorizes the executive director to:**

- **Sign a contract with Coates Kokes for advertising purchasing services with terms and conditions that include, but are not limited to, the following:**
  - **Authorizing payments of up to a total of $1.1 million for the purchase and reporting of broadcast radio, TV, print and non-programmatic online media on behalf of Energy Trust, which includes up to $160,000 of the total authorized contract amount payable to Coates Kokes for Energy Trust advertising purchasing services and payable to Coates Kokes under contract terms and conditions;**
  - **providing for a contract term to cover advertising and advertising purchasing services through 2020;**
  - **providing for monthly reporting on purchased media reach and copy; and**
  - **other terms and conditions to ensure Coates Kokes services and media purchases are designed and executed to further Energy Trust's advertising strategy.**

Moved by: Alan Meyer Seconded by: Roland Risser

Vote: In favor: 10 Abstained: 0

Opposed: 0

**RESOLUTION 890**
**AUTHORIZING A CONTRACT WITH DIGITAL MARK GROUP LLC**
**FOR DIGITAL ADVERTISING PURCHASE**

**WHEREAS:**

1. **Media buying at Energy Trust allows programs to advertise in print, radio, TV, outdoor and online, creating program awareness, and promoting services, programs, and products.**
2. **Advertising is the most common answer to how participating customers first hear of us, and there is a clear connection between advertising and customer awareness and engagement, leading to savings and generation.**
3. **Continuing to work with an established digital media-buying agency with digital systems for aggregating data and targeting potential participants in digital media, would allow Energy Trust to expand customer participation by increasing the number of times specific audiences see our message.**

**It is therefore RESOLVED, that the board of directors of Energy Trust of Oregon, Inc. authorizes the executive director to:**

- **Sign a contract with Digital Mark Group LLC (DMG) for advertising purchase with terms and conditions that include, but are not limited to, the following:**
  - **Authorizing payments of up to a total of $600,000 for the purchase and reporting of programmatic online media on behalf of Energy Trust, made on**

**behalf of Energy Trust and payable to DMG under contract terms and conditions;**

- **providing for a contract term to cover advertising purchase through 2020;**
- **providing for post-campaign reporting on purchased media reach and click-through rate; and**
- **other terms and conditions to ensure DMG purchases are designed and executed to further Energy Trust's advertising strategy.**

Moved by: Alan Meyer Seconded by: Roland Risser

Vote: In favor: 10 Abstained: 0

Opposed: 0

## Energy Programs

***Approval of Project Funding for a Production Efficiency Project Requiring Waiver of Project Incentive Funding Caps Mega Project (R891)*** *(Amanda Potter)*

Staff presented on a large megaproject for which Energy Trust is proposing to waive the incentive cap to acquire significant cost-effective savings. The project, one of the largest in the Portland area, has been working with the Production Efficiency program since 2010 and received incentive cap exceptions for two previous project phases. The current, third phase has a similar levelized cost to the first two phases and is expected to deliver 57,000,000 kWh of electric savings from 2022-2022.

The board confirmed with staff that the incentive payments are tied to actual, realized savings. It expressed that the exception is reasonable to acquire the cost-effective savings.

**RESOLUTION 891**
**WAIVE PROGRAM INCENTIVE CAP AND AUTHORIZE INCENTIVES**
**FOR THE INTEL D1X MOD 3 EFFICIENCY PROJECT**

**Whereas:**

1. **The Energy Trust Production Efficiency program has worked with Intel to identify comprehensive energy saving measures for a new facility in which to develop advanced technologies. It is expected to be the largest construction project in the Portland metro area.**

2. **Energy efficiency aspects of the project were reviewed through standard Energy Trust processes for complex custom-track industrial projects, including a technical energy analysis scoping study commissioned by Energy Trust and carried out by an expert in high tech manufacturing efficiency.**

3. **The project's energy savings will cost significantly less than the average custom capital electric project. The incentive for the project will be payable at $0.06/ first-year kWh; while custom capital electric projects average $0.17/ first-year kWh.**

4. **Energy Trust funding would be contingent on Intel's agreement to suspend self-direction at the Intel D1X site for at least three years.**

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

1. **Waives the Production Efficiency program's incentive cap for purposes of this project; and**

2. **Authorizes the Executive Director to negotiate and sign an incentive agreement with Intel for up to $1.95 million total in incentives payable in annual increments of up to $650,000 over multiple years at a rate of not more than .06 cents per first-year kWh in savings, such incentive commitment contingent on Intel's agreement to suspend self-direction at the DIX Intel site for at least three years from the final incentive payment which must occur before or by December 31, 2025.**

| | | |
|---|---|---|
| Moved by: Alan Meyer | | Seconded by: Roland Risser |
| Vote: | In favor: 10 | Abstained: 0 |
| | Opposed: 0 | |

## Board Governance Review and Benchmarking Final Report (Christine Chin-Ryan, Victoria Lara, Jim Owens; Synergy Consulting Inc.)

Henry Lorenzen introduced a presentation by Synergy Consulting on the results of a recently completed evaluation of Energy Trust's board to determine their effectiveness as a collective decision-making body. The project involved evaluation of the board processes, external review of best practices and exemplary comparable organizations, and internal review through interviews with staff and board members. It resulted in a robust set of holistic recommendations to improve board functioning.

Synergy staff Christine Chin-Ryan, Victoria Lara and Jim Owens presented some of the findings, including a need to improve board culture by helping the members form closer relationships and adopting a code of conduct. There were recommendations around the board's composition and recruitment, with the observation that the board's current diversity is reflected the most through geography. It was also noted that the board could take a stronger role in recruiting new members and consider implementing term limits for board officers. The evaluation found that Energy Trust has an unusually high number of committees and advisory councils compared with similar organizations, and recommended adopting committee charters. Synergy invited open discussion to evaluate and determine next steps.

The board discussed opportunities for members to meet and interact with each other outside of regular meetings, clarifying that they can legally do so as long as a quorum is not established.

A board member offered that he had already collected several codes of conduct used by other organizations that could be referenced. He raised that there are gaps with regards to committee charters, since some committees have charters while others do not, and the charters lack consistency. The board discussed that a process should be determined to make corrections if a member were to violate the code of conduct. The group will further research codes of conduct going forward, possibly with the help of staff.

The board discussed the level of involvement it should have in operations, noting that at times they may become over-involved in day-to-day activity and may consider creating a more defined boundary. There is opportunity to optimize meetings by making staff presentations briefer, so that more discussion can occur. The board agreed that since they read the material in advance, presentations are sometimes duplicative.

The group reflected on the onboarding process for board members, suggesting a more robust and official process to ensure all members are on the same footing. This could include making the position descriptions, rules and expectations for board officers clearer to encourage interest from newer members. The board decided that improvements to recommendations for selecting new board officers should be prioritized. Debbie Kitchin and Roger Hamilton invited any members interested in serving as an officer to contact them directly by January 6 to have a deeper discussion, and then meet with the board Nominating Committee.

The board discussed that with so many recommendations, a prioritization process is needed. The group decided to use an online survey allowing each board member to select their top five recommendations and indicate whether they would be willing to take on work around that recommendation in 2020. Mike Colgrove will work with executive support to implement the survey, then share the ideas that rise to the top with the aim of continuing the discussion at the next meeting.

## Committee Reports

***Nominating Committee (Debbie Kitchin)***

Debbie Kitchin previewed upcoming board and Diversity Advisory Council recruitment events in regional areas to engage community leaders. The first event will be held in Klamath Falls, with another event in Astoria in 2020.

***Audit Committee (Mark Kendall)***

In October Moss Adams completed the audit of Energy Trust's 2018 401(k) plan. The auditors acknowledged the audit went smoothly. They did not identify any material internal control deficiencies. Moss Adams did note that, in one pay period, certain deposits of employee deferrals were not made within the timelines set forth in Department of Labor guidelines.

***Compensation Committee (Mark Kendall)***

Health care increases were around 5 percent this year, comparing favorably with other organizations, which are experiencing increases of 8-12 percent. Within the 401(k) plan, the Compensation Committee agreed to switch one of the funds to one with a better fee and performance over time.

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

Lindsey Hardy reported on the results of a recent ductless heat pump study, which exemplified the importance of these studies. A few takeaways were quantifying savings in different scenarios, evaluating installation scenarios and learning what kind of controls are being used by customers.

***Executive Director Review Committee (R892) (Roger Hamilton)***

Roger stated that discussion on the executive director review occurred in Executive Session and he reviewed the resolution for the group.

**RESOLUTION 892**
**EXECUTIVE DIRECTOR PERFORMANCE REVIEW**

**Whereas:**

1. **Energy Trust's Executive Director Review Committee completed its evaluation of Michael Colgrove's performance for the 2018/2019 work plan and performance period.**

2. **An evaluation of Michael's performance compared to his 2018/2019 work plan goals demonstrated he is performing at a highly proficient level.**

3. **The Executive Director Review Committee also 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 by 6.0% effective August 12, 2019.**

Moved by: Roland Risser Seconded by: Eric Hayes
Vote: In favor: 10 Abstained: 0

Opposed: 0

***Policy Committee (Alan Meyer)***
Debbie Menashe is working on a stipend policy.

***Conservation Advisory Council (Lindsey Hardy, Alan Meyer, Elee Jen)***
Recent council topics included a budget update, a presentation on recent Diversity Advisory Council activity, the conclusion of the Existing Multifamily program assessment and a preview of an upcoming residential marketing campaign. A presentation on a program exception in progress with OPUC produced a robust discussion.

***Diversity Advisory Council (Ernesto Fonseca)***
The council is interested in working on having more say in how other committees' function, to encourage alignment with the organization's values. Members are also working on adopting a code of conduct.

## Adjourn

The meeting adjourned at 4:35 p.m.

**The next regular meeting of the Energy Trust Board of Directors** will be held Tuesday, February 25, 2020, at 8:00 am at Energy Trust of Oregon, Inc., 421 SW Oak Street, Suite 300, Portland, Oregon.

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

# PINK PAPER

# Resolution 902
## Corporate Authorization (Bank Signing Authority)
February 25, 2020

**RESOLUTION 902**
**AUTHORIZING APPROVED BANK SIGNERS**

**WHEREAS:**

1. **Umpqua Bank and Bank of the Cascades provide general banking services to Energy Trust (collectively, the "Banks").**
2. **Section 7.3 of the Energy Trust bylaws requires that the board of directors authorize officers or agents to sign checks, drafts, or other orders for the payment of money, notes and other evidences of indebtedness ("authorized bank signers") by way of resolution from time to time.**
3. **Effective February 25, 2020, Roger Hamilton's term as Energy Trust Board President ended, and Melissa Cribbins was elected Energy Trust Board President.**

**It is therefore RESOLVED that,**

1. **Roger Hamilton is to be removed from the list of authorized bank signers for the Banks.**
2. **Melissa Cribbins is to be added to the list of authorized bank signers for the Banks.**
3. **The resulting list of authorized bank signers for the Banks is as follows:**

    A. **Melissa Cribbins, Board President**
    B. **Susan Brodahl, Board Treasurer**
    C. **Michael Colgrove, Executive Director**
    D. **Debbie Goldberg Menashe, Director of Legal and Human Resources, chief legal officer**
    E. **Pati Presnail, Director of Finance**
    F. **Peter West, Director of Programs**
    G. **Steve Lacey, Director of Operations**

4. **The Director of Legal and Human Resources/chief legal officer is authorized to execute all required documentation to implement this resolution.**

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed:

# Tab 3

# Evaluation Committee Meeting

December 11, 2019, 12:00 pm

**Attending at Energy Trust offices**
Adam Bartini, Kathleen Belkhayat, Eric Braddock, Shelly Carlton, Sarah Castor, Quinn Cherf, Warren Cook, Phil Degens, Matt Doyle, Fred Gordon, Jackie Goss, Lindsey Hardy – *Committee Chair,* Kati Harper, Eric Hayes, Marshall Johnson, Abby Kemp, Oliver Kesting, Erika Kociolek, Steve Lacey, Scott Leonard, Jennifer Light, Aubrey Mange, Joe Marcotte, Alan Meyer, Spencer Moersfelder, Amanda Potter, Thad Roth, Dan Rubado, Gina Saraswati, Eric Sayre, Peter Schaffer, Adam Shick, Kenji Spielman, Kirstin Svaren, Kate Wellington, Peter West, Jamie Woods, Mark Wyman

**Attending by phone**
Anna Kim

## Recurve Billing Analysis

Presented by Dan Rubado

Background: We have been working on this tool platform for a while and now have some results to present. There will also be a presentation at the board meeting on Friday, December 13, 2019 related to a contract amendment for this platform. Recurve, formerly known as Open EE, develops open-source software for analyzing energy data using standardized, automated analysis methods, cloud-based data storage and processing, and online dashboards to display results. Energy Trust competitively selected Recurve for this work in 2017, and the first contract was executed January 1, 2018. Recurve has developed a web-based platform for Energy Trust, which conducts automated residential impact analyses and supports the Residential Pay for Performance pilot. The platform fully launched in 2019. There has been third-party review and beta testing of the platform, and major enhancements are now complete. This is the first batch of completed analyses using our vetted methods.

The benefits of using Recurve include standardized analysis methods and automated selection of comparison groups, which leads to faster turnaround time for analysis and allows us to do a higher volume of analyses. There is a lower cost per measure analyzed compared to other approaches and we are able to quickly update analyses and track measure savings over time on an ongoing basis. There is some flexibility in filters and data screens to allow for sensitivity analysis. We don't get as much customization, interpretation and reporting as we would with a traditional evaluation project, but we can do that ourselves. We will be conducting several analyses in 2020 using Recurve.

Methods: All residential participant and non-participant sites are matched to monthly utility billing data. We select a measure and fuel of interest to identify participants, and the baseline and reporting period in billing data for each participant using the measure installation date. Then Recurve identifies two types of comparison groups:

- Matched non-participants: Each participant is matched to 5 similar homes within the same zip code, none of which have any program participation during the analysis period
- Future participants: These are participants in the same measure in later years, with no program participation during the analysis period. They should have similar propensity to

participate as the treatment group. Stratified random sampling is used, based on baseline annual energy usage to match the distribution of participants.

Alan Meyer asked how the data are transferred. Dan Rubado said that each month we package program participation and utility customer information (UCI) data and transfer it via a secure file transfer protocol site to Recurve, who unpackages it and uses a secure Amazon Web Services platform to store and analyze data. There is two-stage login for the Recurve platform to promote security.

Recurve uses the CalTRACK site-level weather normalization protocol, which is determined by a national working group for standardizing billing analysis methods. New techniques are reviewed and tested, and the working group has to agree on adding it to the CalTRACK methods. Recurve runs site-level weather regression models for participant and comparison homes, computes the normalized annual consumption (NAC) for baseline and reporting periods for each home, then computes the differences between baseline and reporting period NAC (DNAC) for each home. They apply analysis filters and data screens, then compute the average DNAC for participant and comparison groups. Finally, they compare participant and comparison group averages to obtain savings estimates.

Results: Dan Rubado showed slides to demo the Recurve platform, beginning with results for smart thermostats. There are various filters on the data that can be used to adjust the results, including screens for model fit, months of billing data available, removal of outliers and participants who have installed multiple measures. Removing sites with multiple measures is the cleanest way to get the savings of a single measure of interest but does reduce the sample size and may not be representative of all homes that installed the measure.

For gas-heated homes in heating zone 1 (HZ1) who installed only a smart thermostat in 2015-2017, the savings were 26–32 therms, depending on which comparison group is used. This is close to what we expected. There is additional information in the tool about the geographic distribution of sites in the treatment and comparison groups, as well as average annual and monthly energy consumption so we can verify that the match between treatment sites and comparison sites is good. There is an attrition table to identify why we are losing samples from the analysis. For thermostats in gas-heated homes, we are losing a lot of sites because of the multiple measure screen. To remedy that, we could pull results out of the Recurve tool and do additional analysis. There are graphs of distributions of savings results and changes in consumption which show in what time of year they are occurring. There is information about the type of model used – heating only, cooling only, or heat and cooling. For gas, it makes sense that we are using heating-only models.

For smart thermostats in gas-heated homes in HZ1, results are consistent with past findings. We also see some electric savings in gas-heated homes, which are higher than we had anticipated. This is probably a combination of fan runtime reductions and cooling savings. In electrically heated homes, the sample size is small, but there appear to be no savings from smart thermostats. We aren't sure what is driving the results – they may be due to small sample size, difficulty isolating savings in all-electric homes, or there may be no savings. We also looked separately at Nest and ecobee thermostats. For Nest, savings are 21-29 therms; for ecobee, where there are many fewer measures, savings are 36-45 therms. We are not sure what would cause the difference in savings; it is something we can look into further.

Ceiling insulation in gas-heated homes has savings of around 105 therms per year, which is very close to what we expected and a significant portion of overall gas usage. For electricity use

in gas-heated homes, savings appear to be between 155 and 180 kWh per year. For electrically heated homes, ceiling insulation saves between 1,559 and 1,910 kWh per hear, also a little lower than expected (realization rate between 62% and 76%).

There are some surprising results in savings, both positive and negative. We may want to pull data out of the tool for more analysis.

Alan Meyer said we get a lot more data using the Recurve platform, but less narrative. He asked if we are reorganizing the Evaluation group to handle that. Phil Degens said we will spend time looking into measures with results that are confusing. We may bring in consultants or do more analysis ourselves. He noted the example of smart thermostats in electrically heated homes – savings were higher for the initial pilot than in this analysis. Dan Rubado said that the difference in savings for that measure may be due to the change in how the measure is offered now, as a mass-market retail offering.

Eric Hayes asked if we can explore what combinations of measures save more, to see if there are measures that make sense to offer as a bundle. Phil Degens said we can, but it is hard to know what saves more if they are installed at slightly different times. Dan Rubado acknowledged that not being able to analyze savings for bundles of measures is a limitation of the Recurve platform, which only allows us to look at one measure at a time. Fred Gordon said that when we looked at whole home programs a few years ago, it was clear there were diminishing savings for each additional measure installed.

## Extended Capacity Heat Pump Study

Presented by Dan Rubado

Background: Energy Trust has been piloting extended capacity heat pumps (ECHPs), based on some evidence that this measure might save more than a traditional ducted heat pump. They are very efficient, especially in cold temperatures, with the ability to maintain 85% of their heating capacity at 17ºF and reduce the use of auxiliary electric resistance heat. They provide an incremental improvement to high-efficiency variable capacity heat pumps (VCHPs); however, they are also more expensive than other heat pumps. The pilot began in late 2018 with the goal of better understanding the technology's performance, cost, installation practices and energy savings compared to VCHPs. The pilot involved incentives for installations to gather data, interviews with manufacturers and installers, a billing analysis through Recurve and a metering field study.

Bonneville Power Administration (BPA) initiated a field study of ducted heat pumps to learn about the heat pump market, what equipment heat pumps are replacing, current installation practices, energy use and savings in different seasons and weather conditions. Energy Trust wanted information specifically for ECHPs and we took the opportunity to subcontract with BPA's contractor, SBW, to add on ECHP units in our territory to the metering field study. Goals of the study were to:

- Learn about the energy performance of ECHPs, especially on the coldest days and during "standby" periods
- Establish typical year heating, cooling, standby, and annual electricity savings estimates for ECHPs, compared to VCHP
- Establish ECHP electricity peak demand savings and savings shape compared to VCHP electricity demand

- Identify operational characteristics of ECHP units that produce savings
- Determine sizing, commissioning, and setup practices for best energy performance without negatively impacting comfort
- Learn about differences in sizing, commissioning and installation practices between ECHPs and VCHPs

We relied heavily on BPA for site selection and recruitment plans. They randomly sampled recently installed heat pumps from permit data across the Northwest. SBW identified and recruited a subsample of ECHP and VCHP homes for metering. Homes had to be electrically heated with no gas backup, and the electrical panels had to have sufficient space to install metering equipment. Jennifer Light said that the Regional Technical Forum (RTF) has been looking at the BPA sample and noted that she does not feel that, based on the number of variable capacity units, they actually ended up with a random sample of homes.

Metering equipment was deployed in January and February 2019 and retrieved in August 2019. We only achieved 2 ECHP and 6 VCHP sites in our study, but we have detailed metering data at 1-minute intervals for these sites. Outdoor air temperature and refrigerant vapor line temperature (to determine if the unit was heating or cooling) were logged on a 15-minute interval. Metering observations were rolled up to the hourly level and the dominant mode – heating, cooling or standby – was identified for each hour. SBW determined the heating load of each home based on site visit data and developed site-level regression models to predict hourly energy demand. They applied typical weather data and computed differences between ECHP and VCHP systems, estimating annual heating, cooling, standby, and total electricity savings. They also estimated demand savings during utility peak demand hours. Finally, they summarized data collected on home and system characteristics, as shown in the following tables.

Heat pump characteristics:

| Variable | ECHP | VCHP |
|---|---|---|
| # of sites recruited* | 2 | 6 |
| West of Cascades | 1 | 4 |
| East of Cascades | 1 | 2 |
| Manufacturers | Carrier | Carrier, Lennox, Mitsubishi, Trane |
| HSPF | 12 | 9.9 |
| COP at 47°F | 4.2 | 3.3 |
| Heating capacity at 47°F | 39,500 | 38,500 |
| Percent heating capacity maintained at 17°F | 99% | 77% |

As noted by the asterisk in the table above, one VCHP site may meet ECHP criteria, but the indoor/outdoor unit combination was unrated, so it was left in the VCHP group.

Heat pump sizing and thermostat settings:

| Variable | ECHP | VCHP |
|---|---|---|
| Sizing | 1 oversized, 1 correctly sized | 3 oversized, 1 correctly sized, 2 undersized |
| Aux heat lockout settings* | "best practice" | 3 "best practice", 3 not |
| Setback schedules | 1 manual, 1 scheduled | 2 manual, 4 scheduled |
| Away heating setpoints | 69°F | 70°F |
| Away cooling setpoints | 73°F | 78°F |

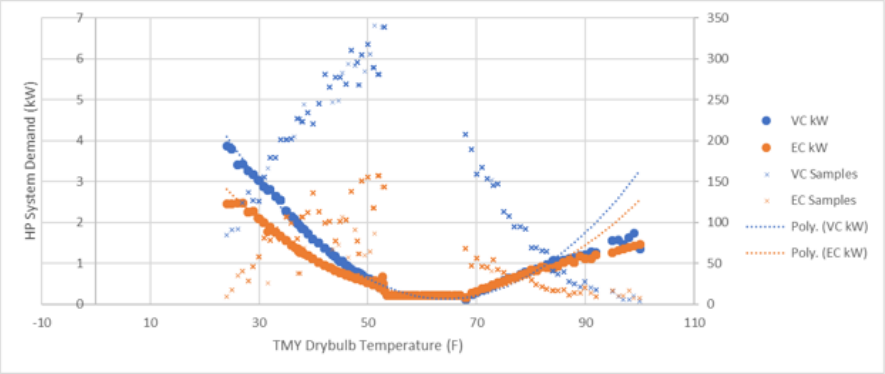
As noted by the asterisk in the table above, for ECHPs, best practice auxiliary heat lockout settings may not allow optimal performance, because compressors can produce heat at much colder outside temperatures than standard heat pumps.

Jennifer Light asked about the compressor lockout settings; Dan Rubado said they looked ok. "Best practice" auxiliary heat lockout may be too high for an ECHP to leverage its efficiency. Jennifer Light said the compressor should take priority until it gets to the compressor lockout setting, and then the auxiliary heat should turn on. She is not sure the auxiliary heat lockout would matter given the compressor lockout setting and how the unit should function.

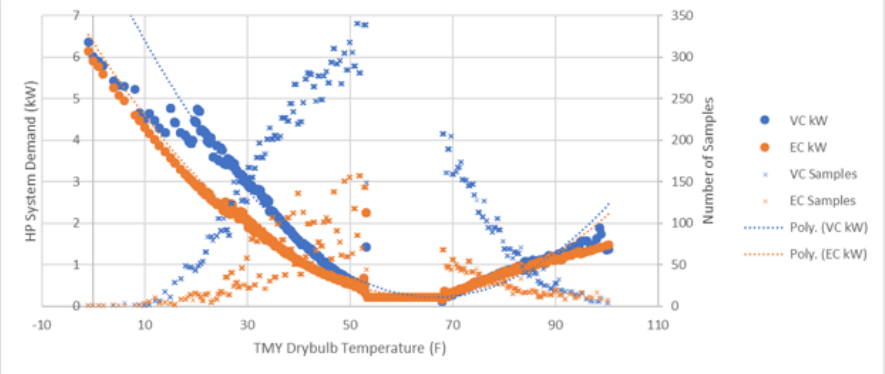
As shown in the figures below, the ECHPs (U-shaped line in orange) display the expected result of lower energy use at colder temperatures compared to VCHPs (U-shaped line in blue).

Performance comparison

West of the Cascades (Portland weather)




East of the Cascades (Redmond weather)



When looking over the year, in both climate zones, the savings occur in the winter months rather than summer, as hypothesized.

Savings results are anecdotal given the small sample sizes. West of the Cascades, there appear to be about 1,450 kWh per year of heating savings, or 430 kWh per ton of heating capacity. East of the Cascades, the savings are 3,350 kWh annually, or 1,010 kWh per ton. There were no discernable cooling or standby savings in either region.

Mark Wyman noted that the analysis just compares ECHP to VCHP, not to other standard (non-variable capacity) heat pumps, and if we wanted to do a different type of measure, we would need a different analysis. This VCHP-to-ECHP measure may not be what ends up in the program. Jennifer Light asked if we know whether the oversized units were installed east or west of the Cascades. Dan Rubado said that information is in the report, but he can't remember off the top of his head. Eric Hayes asked if we want to spend a lot of effort on this measure if it is not broadly applicable. Mark Wyman said that is a good question. These measures have potential to save energy during peak periods, so they can have a lot of value. Trade allies had asked why the program wasn't pursuing ECHPs given the needs of their customers in cold climates. The program recognizes these are expensive units and hopes that in the future they will become a bigger part of the market and come down in cost. For example, Nest thermostats have come down a lot in price with higher adoption. Jamie Woods said we can use a pilot to add information on top of engineering estimates and create better use and reliability of data. The program could do another, slightly different pilot after this one. Jennifer Light said the region needs better performing heat pumps for colder climates. Alan Meyer said ECHPs may not make sense for certain climates. Mark Wyman and Dan Rubado acknowledged that might be the case. There are still some very cold days even in HZ1, but are there enough to justify offering the measure? Mark Wyman said right now it looks like ECHPs are best in HZ2 only, but we are summarizing several pieces of research to reach a conclusion. Alan Meyer said he feels it is better to offer a measure where it makes sense rather than offer it in all climate zones and average the savings across them.

From the metering data, it appears peak demand savings were not that high – 0.45-0.55 kW west of the Cascades in the winter and about 0.8 kW east of the Cascades in the winter. There were no summer peak savings detected in either region. Thad Roth asked about possible auxiliary heat demand savings. Those are included in the peak demand estimates. Jennifer Light said it would be interesting to look at a regular heat pump rather than a VCHP as the baseline. Phil Degens said if there is interest in demand response, ECHP might be better able to ride through cold events.

Conclusions: Metering results are compelling, but the sample size is very small and not representative. Results indicate there are substantial differences in energy use between ECHP and VCHP units during the heating season. ECHP units performed better than VCHPs at colder outdoor temperatures, as expected. At very low temperatures, operation appeared to be similar—ECHPs may eventually lose advantage via defrost cycles and auxiliary heat usage. We observed very little difference in performance during the cooling season, or standby periods. ECHP units appear to save energy on heating and reduce winter peak demand compared to VCHPs. Again, savings estimates are suggestive but not reliable.

Energy Trust's take: ECHP technology is promising, but the metering results are insufficient for use in program planning. The program still needs information on cost and optimal installation and commissioning practices. Dan Rubado said initial results of billing analysis indicate commissioned ECHPs save less than non-commissioned ECHPs. We are not sure of the

reason for that; it could be that standard commissioning forces the use of auxiliary heat when it should not be needed for an ECHP, or it could be related more to the installation contractor's practices or other factors. We are planning further research and the next phase of the pilot. Lindsey Hardy asked if we have learned other things from the BPA study. Dan Rubado said that the rest of the BPA study wasn't relevant to our needs. The BPA study is available and will be discussed at RTF next week. It was mostly focused on commissioning, controls and sizing, and it didn't get into savings. Kenji Spielman noted that NEEA and others have done work to show the testing and commissioning practices on heat pumps are not very good, which makes it hard to get heat pumps to work as an energy efficiency measure. They are trying to remedy this.

## Targeted Load Management (TLM) – NW Natural Project Interim Evaluation

Presented by Phil Degens

Background: Energy Trust has undertaken a NW Natural TLM project, called Geographically-Targeted Energy Efficiency (GeoTEE) by NW Natural. The project started in September 2019 with targeted marketing and delivery. The next phase, which involves targeted increased incentives and new delivery approaches, will begin in August 2020. A third phase that leverages localized avoided costs will begin in August 2021. Project closeout and final reporting will take place in 2022 from September through December. Energy Trust hired Pivot Advising to do a process evaluation of the project. They interviewed staff at NW Natural, Energy Trust, and the Oregon Public Utility Commission (OPUC) and reviewed project documents. The focus of this early evaluation was the project planning phase; later, we will look at the results of the project. This early report will become an appendix to the final report.

Conclusions and Recommendations: GeoTEE would benefit from an agreed-upon and consistently used statement of purpose, objectives, research questions, activities, and success indicators. The evaluator recommended that Energy Trust organize a small group of stakeholders to create a logic model for GeoTEE. This would involve bringing all three organizations together to discuss, modify, and approve the model. The project team would then incorporate its results in project documents, especially the implementation plan.

The evaluator also said that stakeholders agree that GeoTEE is an innovative and worthwhile project and that the planning process, while not stellar, has been good. The recommendation is to take time to recognize the project as pioneering, and then consider and act upon some or all of the suggestions from stakeholders to improve the planning, implementation activities, and ongoing project management.

NW Natural, Energy Trust and the OPUC are very committed to the GeoTEE project. The project has been able to pivot quickly from focus on one community to another when the original choice of community did not work out. Different stakeholders may have different sets of goals and priorities. People need to be clear on the overarching goals, research questions and success indicators. Phil Degens doesn't feel a logic model makes sense at this point. It would take a lot of time, the project is already underway, and there is enough supporting material in current documents.

Alan Meyer said it seemed from the report that people weren't clear on the central goals. He would expect that would be taken care of upfront. Phil Degens said it is normal for people to focus on different things to some extent. Jamie Woods noted that outside the energy industry,

logic models are very commonly used and can be really useful. They can be used to identify how we are evaluating the whole portfolio. Phil Degens said they can be valuable, but at this point in the project it isn't as useful.

## Existing Multifamily Program Process Evaluation

Presented by Sarah Castor

Background: Energy Trust conducts process evaluations of major programs every few years to look at ways to improve customer experience, participation and processes. The last evaluation of the Existing Multifamily program was completed in early 2017. Lockheed Martin has been the program management contractor (PMC) since 2011. Their energy division was recently acquired by TRC. The PMC is in the fifth year of its contract and the contract will be rebid next year. This report summarizes the current state of the program and recent work to plan for its future, to inform the rebid. Energy Trust selected Evergreen Economics to conduct this process evaluation, which began in May 2019.

The program serves six market segments: affordable housing, assisted living, campus living, homeowner associations (HOAs), individually-owned units, and market rate housing. There are five tracks of the program. The buy-down track provides incentives to distributors for measures like appliances and water heaters. The common area lighting track is run by Evergreen Consulting Group, who operates it across multiple programs in the commercial and industrial space. The custom track provides technical analysis studies to evaluate custom measures that are more complex, like central HVAC measures, in order to get site-specific savings and incentive offers. The direct install (DI) track directly installs lighting, showerheads, aerators, and power strips in multifamily units at no cost to residents or property managers. It is implemented by CLEAResult under subcontract to the PMC. The standard track is for prescriptive (deemed savings) measures, where each measure gets an average savings that does not account for individual building differences. The program provides walkthrough surveys (WTS), a free service where program staff identify opportunities for upgrades that qualify for incentives and the site receives a report outlining those opportunities. The technical analysis study is a more in-depth process conducted by an Allied Technical Assistance Contractor (ATAC) that provides a comprehensive analysis of specific measures to assess savings and cost-effectiveness.

Findings: In the last year, the program has had several areas of focus. They are very interested in reengaging past participants, especially those who participated in the DI track, to find additional projects and savings through other tracks. They are also focused on improving marketing materials for different market segments to improve its resonance. Energy Trust has expanded Savings Within Reach, the moderate income offering, and on-bill repayment to multifamily customers. Savings Within Reach has been available for single-family customers since 2010 and on-bill repayment has been available to single-family since 2014. The program has developed relationships with industry and community-based organizations to increase awareness of program offerings and create inclusive messaging.

Alan Meyer asked what qualifies for Savings Within Reach – the building or the unit. Kate Wellington said it is mostly geared toward unit owners, although it is available for rental units if the property owner can demonstrate that the tenant qualifies.

In support of Diversity, Equity and Inclusion (DEI) goals, the program is working to expand participation in 2-9-unit complexes and properties outside the Portland and Bend areas. The

program is looking to drive deeper savings by analyzing program and permit data to find opportunities for participation. They are promoting walkthrough surveys and technical analysis studies to support customers in project planning. The program is also considering shifting some additional measures to midstream incentives, though they are conscious that this has an impact on trade allies. Finally, they are updating measures and developing new measures that are cost-effective and meet customer needs, along with considering the need for measures with different baselines for different market segments or customer types.

The evaluator reviewed many documents, including the 2019 Program Implementation Manual; monthly, quarterly, and annual reports produced by Lockheed Martin; the Energy Trust Trade Ally Survey Final Report; the Diversity, Equity and Inclusion Operations Plans; and data on trade allies, contractors, distributors, ATACs, and participants from 2017 to mid-2019. Evergreen Economics interviewed two Energy Trust staff, seven Lockheed Martin staff and 43 participants, as well as 30 trade ally and non-trade ally contractors, four ATACs and two distributors who participated in the buy-down track.

Program staff reported several successes over the past couple of years in their evaluation interviews. They identified the DI track as the main point of entry into the program. They also completed an analysis of non-participant sites and contractors to identify areas where they could improve coverage in the trade ally network. The program has been adapting marketing materials to different customer segments, especially unit owners who don't identify with the same messaging as building owners. There is high program participation in assisted living communities and improvements in participation in DEI-priority communities. The program has also improved coordination with Oregon Housing and Community Services (OHCS) in serving the affordable housing market. These customers have to choose either Energy Trust or OHCS incentives for projects, and coordination has been working well.

In terms of challenges for the program, staff noted that declining cost-effectiveness of key measures, including direct install lighting and ductless heat pumps (DHPs), has been an issue. It is also challenging to serve so many customer types, each with different decision makers and needs. There is sometimes confusion among customers about which program to use. For example, college campuses have to deal with Existing Buildings for non-residential buildings and the Multifamily program for dorms. It can also be challenging for the program to reach owners of smaller properties, who may not see themselves as property managers and can be difficult to identify. It also can be hard to find the right contact at large property management firms. Eric Hayes asked if customers have one point of contact at Energy Trust, so they don't have to worry about dealing with our various programs. Kate Wellington said that points of contact are at each PMC so sometimes customers do have to go back and forth between staff at different programs, but noted that program staff coordinate well.

Evergreen Economics completed interviews with 43 participants from 2018. We tried to get a mix of program tracks, customer segments and areas of the state, as shown below. Evergreen was not able to complete any interviews with buy-down or custom track participants; this was due to both the small number of participants in the custom track and small number with contact information in the buy-down track, as well as the fact that all those contacted declined the interview or were no longer with the company who completed the project.

Participant interview counts by program track, market segment and location

| Direct Install | Common Area Lighting | Standard | Buy-Down | Custom |
|---|---|---|---|---|
| 10 | 5 | 28 | 0 | 0 |

| Affordable | Assisted Living | Campus Living | Homeowner Associations | Individual Unit Owners | Market Rate |
|---|---|---|---|---|---|
| 6 | 1 | 2 | 5 | 10 | 19 |

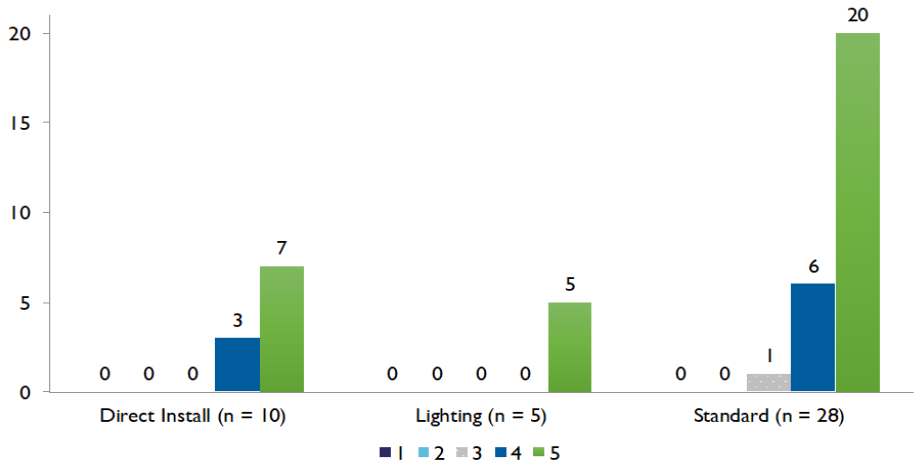
| Portland / Willamette Valley | Outside Portland / Willamette Valley |
|---|---|
| 27 | 16 |

There was widespread interest in energy efficiency among participants, but it was rarely the primary motivator for a project. Projects often arose from a need to replace equipment or make necessary repairs; improving comfort was also an important motivator. There was more interest in energy efficiency among affordable housing providers where it aligns with their mission to support tenants. Some participants, particularly individual unit owners, said they did not feel influenced by the program incentive. Many participants said the program offers useful information on energy efficiency opportunities, especially in walkthrough surveys.

About two thirds of interviewees had plans for more energy projects. Walkthrough survey participants, as well as those in the Portland Metro area, were much more likely to have plans for future energy efficient improvements than those who had not done a WTS. They were interested in appliances, water heaters, solar, windows, and air conditioning upgrades. Those outside the Portland Metro and Willamette Valley were less interested in upgrades, or noted they faced financial barriers. Participant suggestions for program improvements included larger incentives, more outreach to stay top of mind, streamlining processes and paperwork, and more options for qualifying products at lower price points.

Participant satisfaction was very high across market segments and across tracks. Only one respondent gave an overall satisfaction rating of less than 4 or 5 on a 1-5 scale where 1 is very dissatisfied and 5 is very satisfied, as shown below.

Participant satisfaction by track



For interviews with contractors, we aimed to get a mix of active and inactive Multifamily trade allies, trade allies in other program networks who were active in the Multifamily program, and non-trade allies. Many of those we identified as non-trade allies in our data saw themselves as trade allies, because they just joined the network, were trade allies in the past, or frequently work with the program. As shown below, there were a mix of contractors who did no projects, less than 10 projects or more than 10 projects in 2018.

Contractor interviews by type and number of projects in 2018

| # of projects in 2018 | Multi-family Allies | Other Program Allies | Non-Trade Allies |
|---|---|---|---|
| 10+ | 6 | 2 | 1 |
| 1-9 | 10 | 5 | 1 |
| 0 | 5 | 0 | 0 |
| **Total** | **21** | **7** | **2** |

Most allies and contractors reported they do a small portion of their business in the multifamily housing sector. Most lighting contractors focus on work in commercial buildings, and most HVAC and weatherization contractors focus on the single-family market, crossing over to multifamily when needed. They reported that most projects were planned replacements and single measures, not bundles of measures. Trade allies valued program trainings and being associated with Energy Trust because it is a trusted organization. Non-trade allies also felt they received good support from the program and were happy with it. They did not see a need to be a trade ally.

Contractors were highly satisfied with most aspects of program, as shown below. There was lower satisfaction with the effectiveness of Energy Trust marketing. There was very high satisfaction with interactions with program staff, ease of participation for customers and the program application process.

Contractor satisfaction (rating of 1 = very dissatisfied, rating of 5 = very satisfied)

| Satisfaction Area | Average Rating |
|---|---|
| Support received from the Existing Multifamily Program | 4.5 |
| Effectiveness of Energy Trust marketing | 3.7 |
| Support received from the program | 4.5 |
| Difficulty for customers to participate (5 is very easy) | 4.6 |
| Communication regarding program updates | 4.5 |
| Interactions with program staff | 4.9 |
| Ease of using program application | 4.6 |
| Turnaround time for invoice processing | 4.1 |
| Overall satisfaction with program involvement | 4.4 |

When asked about areas of opportunity within the multifamily market, contractors suggested apartment buildings, lower-income housing, electric wall and baseboard heating, condo associations, common area lighting and lighting controls.

Some interviewees said they would like more marketing support, such as one-pagers and fact sheets about the program, direct outreach to customers for education, and more online resources. A few respondents said they wanted to access co-op marketing and business development funds but were unable to for various reasons. For example, they wanted to use funds for yellow page ads which Energy Trust does not allow anymore. Shelly Carlton asked what type of direct outreach the interviewees suggested – information about Energy Trust in general or about specific measures offered by the Multifamily program. Sarah Castor said the quote from the respondent who suggested it wasn't very specific, but it was likely about specific measures offered by the Multifamily program.

Contractors were asked about what they see as challenges for customers to participate in the program. They noted long timelines for custom projects because of the time involved in a study and project approval, split incentives for landlords and renters, the high upfront cost of qualifying equipment and the complexities of working with HOAs to complete projects. They confirmed that participant motivations are generally comfort and bill savings. They said the application process is generally easy, but they would also like to see an online application like the one for the Residential program. Alan Meyer asked how the program can get more detailed information for improving market and operations. Sarah Castor said there is fairly detailed information in the report. We can also ask Evergreen Economics for additional detail if needed. Shelly Carlton said we sometimes ask additional questions and do more research based on evaluation findings.

Evergreen Economics interviewed four of the 12 ATCACs who work with the program. These ATACs also work as ATACs for the Existing Buildings program. They reported Multifamily program studies are a small part of their business. They had done a mix of targeted and full-scale studies. When asked about the reasons studies don't turn into projects, which is a minority of cases, they said it was most often because measures were not cost-effective or because the project payback was greater than 10 years, neither of which is allowed by the program. Sometimes the reason a project didn't go forward was simply unknown.

As with contractors, ATACs were asked about areas of opportunity they see in the multifamily market. Their answers were condos with central HVAC systems, college dorms with strip heat, assisted living facilities, low-income housing, and retro-commissioning for large buildings with fans that run continuously. ATACs reported that it is easy for customers to participate in the program. They provided mixed feedback on the level of detail in studies – one thought there was too much detail, one thought there was too little detail, and others felt it was just right. ATACs had high satisfaction with the program. Some ATACs want more information on how studies are assigned to ATACs within the pool, saying it was not always clear to them.

For perspective on the buy-down track, Evergreen Economics spoke with the two most active distributors, who were responsible for nearly all buy-down projects in 2018. There were no results in the report because some of the feedback made it easy to identify the distributors. Evergreen provided the distributor interview findings in a separate memo. We will ask them to put some of the non-identifying information in the main report. As with the other market actors, they both noted that multifamily makes up a small share of their revenue. Both distributors said they used program incentives in their sales process, and both felt it was easy for them, and for customers, to participate in the program. They gave satisfaction ratings of 4 and 5 for the process, turnaround time for incentives, communications and the overall program.

Lindsey Hardy asked if the midstream offering for Multifamily is the same as the one for the single-family Residential program. Kate Wellington said it is basically the same, in terms of mechanism. Incentives get paid to the distributor in bulk and they pass along the discount to customers. Sometimes the qualifying equipment is different between programs. One distributor participates in both the Multifamily and single-family buy-down offerings.

Conclusions: The Existing Multifamily program is yielding high satisfaction among a varied group of participants and market actors, leveraging past participation data to inform program direction, and providing the necessary information and financial incentives to encourage participants to pursue efficiency upgrades. The program is also presenting opportunities to participants to complete additional upgrades in the future. It is facing challenges to cost-effectiveness of key measures.

The evaluator had many recommendations for small changes to the program to further improve participation and satisfaction. Several were related to marketing and outreach to increase awareness of the program and measure offerings.

Energy Trust sees the evaluation results as confirming the value of the program's work to serve different types of customers in ways that fit their needs. The program is looking for additional ways to increase and streamline participation and improve cost-effectiveness. The program will be rebid, along with Existing Buildings, in the first half of 2020.

Peter West said he appreciates the timing of this evaluation, with findings delivered prior to writing the request for proposals for a new PMC. Lindsey Hardy asked about the connection between the two programs, and whether Energy Trust is looking for a single contractor for both or just rebidding both at the same time. Peter West said we are possibly looking at just one contractor, but that has yet to be determined. We are not sure how the contract structure will work. There is a trade-off between streamlining administration and finding specialized skills. There may be an overarching contract structure like the Residential sector and then individual program delivery contractors (PDCs) to deliver components of the program. Lighting will be pulled out as separate contract and span the commercial, multifamily and industrial programs, because many lighting contractors work across these customer groups. We think this is the best way to do it for the market.

## Industrial Operations & Maintenance (O&M) Persistence Study

Presented by Erika Kociolek

Background: Industrial O&M and first-year Strategic Energy Management (SEM) offerings use a three-year measure life. This is assumption was our best guess at the time these offerings started. Since then, several evaluations and studies have suggested that measure life may be longer than three years. Puget Sound Energy did an evaluation of its industrial systems optimization program and found 97% of measures still in place between six and 30 months later. Energy Trust's SEM evaluation found that 89% of measures were still in place between two and six years later. A literature review of O&M measures undertaken by Energy Trust revealed little published research on measure life. We wanted to undertake a study to better understand the measure life, which is defined as the amount of time it takes for half of the units installed to fail or not be retained. Measure life is an important assumption in cost-effectiveness.

The study goals were to estimate the long-term persistence of industrial O&M measures and determine reasons they are no longer in place. We also wanted to assess the appropriateness

of the three-year measure life and determine if persistence differs for standalone O&M versus SEM. Finally, we wanted to get recommendations for improving the persistence of industrial O&M measures.

Standalone O&M is focused on individual systems; savings calculations are based on bottom-up engineering. SEM is very holistic, often involving multiple systems, and savings are determined by top-down, facility-level regression models. SEM can include O&M and other practices and cultural changes that don't directly save energy but can make it work in the long run.

The study sampled standalone O&M and SEM projects installed between 2010 and 2017. Some customers completed multiple projects and could be represented in the sample multiple times. Some customers did both O&M and SEM, so it was not a totally clean cut. The study assessed persistence through interviews and site visits rather than using energy models. It is hard to get production and energy data, so we couldn't update regression models to assess persistence.

Methods: We worked with DNV GL on this study. They reviewed project documents to identify projects, measures and activities. They classified all activities in projects into one of seven categories to determine which activities to ask customers about during interviews and site visits. They chose a maximum of five activities to focus on with each sampled customer. The seven categories were controls, repairs – leak detection, repairs – new equipment, operations – setpoint adjustments, operations – schedules, maintenance, and behavior.

The interviews and site visits were used to determine if activities persisted, and if not, when and why they stopped persisting. The study had to determine what to do when a facility was closed, when they couldn't get in touch with the customer, and when the contact didn't know anything about activities. DNV GL put together business rules to deal with cases where measure end date was uncertain. If they didn't know when the measure stopped, then DNV GL assumed that it stopped halfway between the installed date and the interview (or attempted interview) date. Finally, they conducted a survival analysis to estimate measure life.

A total of 120 projects were sampled: 63 in standalone O&M and 57 in SEM, as shown below. Interviews were completed for 52 and 49 O&M and SEM projects, respectively. The projects covered 98 activities for O&M and 154 for SEM. There were a few facilities that had closed, where ownership changed, or that did not respond.

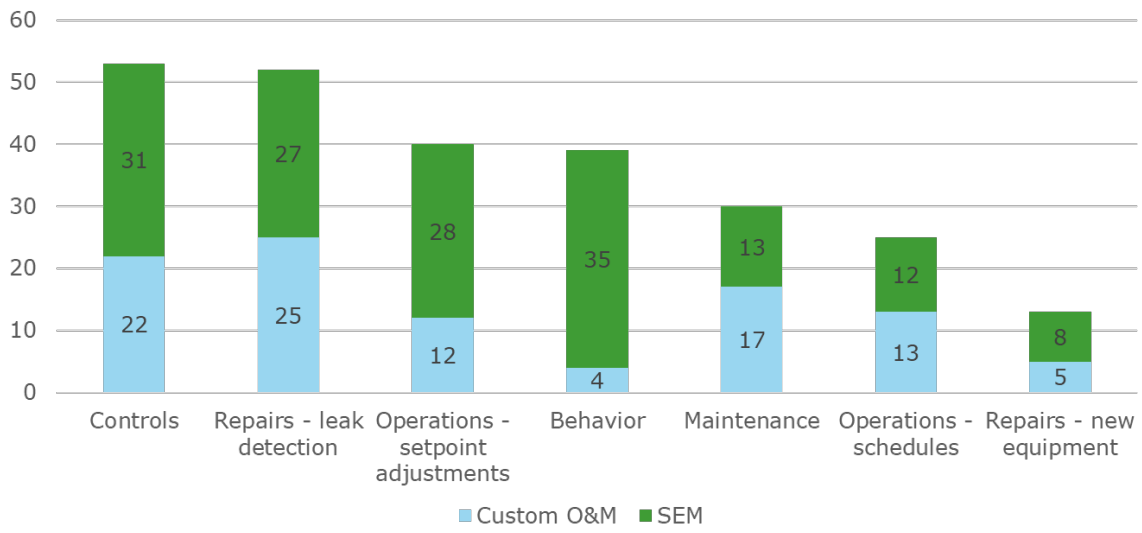
Population and sampled projects

| | Standalone O&M | SEM | Total |
|---|---|---|---|
| Population | 326 | 202 | 528 |
| Sample | 63 | 57 | 120 |

Sample disposition

| | Standalone O&M | SEM | Total |
|---|---|---|---|
| Completed interview | 52 | 49 | 101 |
| Incomplete – facility closed | 5 | 2 | 7 |
| Incomplete – change in ownership | 2 | 1 | 3 |
| Incomplete – no response | 4 | 5 | 9 |
| Total | 63 | 57 | 120 |
| Activities | 98 | 154 | |

The counts of O&M activities by category are shown in the figure below. The most common activities were controls and repairs – leak detection. There was a good mix of activities in project sampled for both O&M and SEM.




Findings: 65% of activities were still in place for both O&M and SEM. Key reasons activities did not persist were inability to recruit for interviews, closed facilities, facilities no longer implementing the activity, change in facility ownership, no program in place, changes to personnel or production, and equipment replacement.

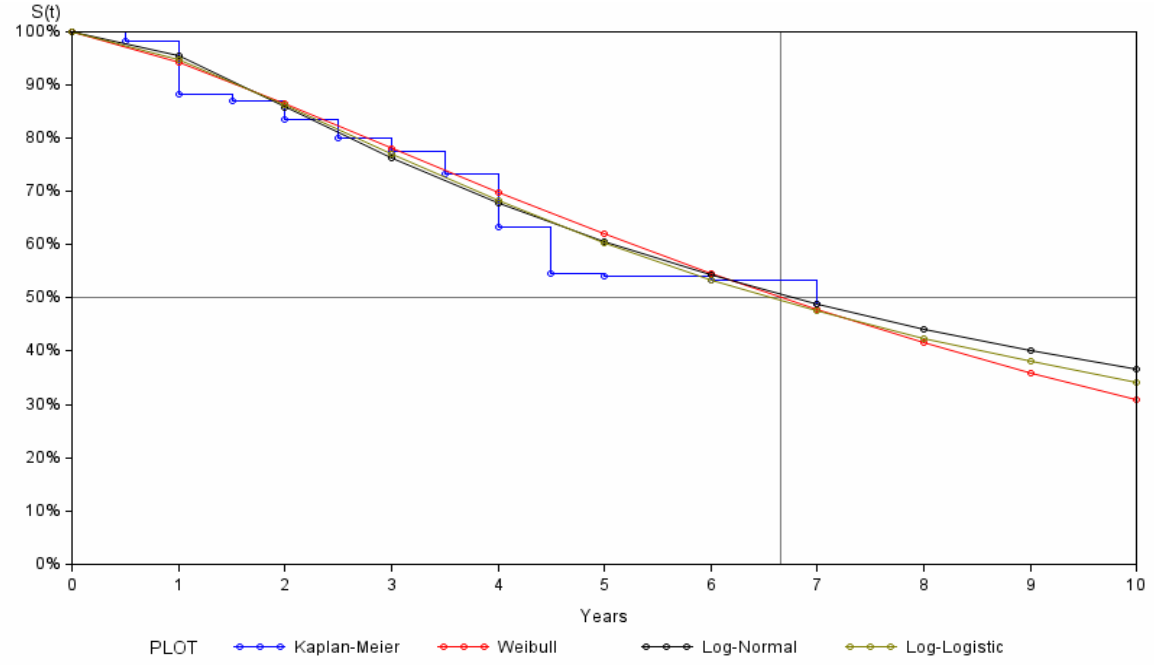
Alan Meyer asked how DNV GL counted persistence if they were not able recruit a participant for an interview. Erika Kociolek said if they couldn't interview a customer, they assumed the activities stopped halfway between the installed date and interview (or attempted interview) date. Jamie Woods said this median practice is unusual and there are other techniques for doing this. It would be more standard to use an interval censoring technique. If the customer

was not contacted, then there is total uncertainty and they would probably be excluded from analysis. He also said because the measures are behavioral, survival analysis might not be the best technique. There are more than two states: they could be doing the activity, not doing it, or still partially doing it. Erika Kociolek said that DNV GL felt that for these activities there would either be energy savings or not, but not partial savings.

Jennifer Light asked if it is possible to see different persistence rates for different categories. Erika Kociolek said the sample sizes get really small, but we might be able to look at some of the larger categories. There may be differences in persistence based on the ease of changing things or keeping them in place.

The proportion of activities no longer persisting is higher for earlier program years than for recent ones. This information was used to estimate a series of survival curves. DNV GL tried some different approaches. Kaplan-Meier (a non-parametric approach), was DNV GL's recommendation. They tried three methods of weighting: sample-weighted, savings-weighted, and aggregate-savings weighted. Different methods didn't affect the outcome much. DNV GL's preferred approach yielded a seven-year measure life. Across methods, there was a range of measure lives from 5.5 to 9 years. There was no difference in the survival curves between SEM and O&M.

Survival curves for various methods




Recommendations: Energy Trust should use a five- or seven-year measure life for O&M and SEM. A seven-year life would directly use the results of this study. The reason activities do not persist are similar to reasons why capital measures do not persist. The program does a good job of putting strategies in place with customers for maintaining the persistence of savings in facilities. These include doing yearly inspections, reviewing leaks, etc.

Energy Trust's take: We feel there is sufficient support for a seven-year measure life. The program's emphasis on long-term savings persistence in extremely valuable and should

continue. We are excited to share these results with regional and national SEM communities. In the literature, there was not much information available and much of it was self-referencing.

Alan Meyer asked if we are only changing the measure life going forward or whether we will change it for measures already claimed. Phil Degens said applying it retroactively wouldn't affect savings estimates, because we always use first-year savings. It affects cost-effectiveness, but not past savings. Fred Gordon said we do true-up savings, but measure life has never really played into it. Alan Meyer asked about reporting cumulative savings – we would have to account for measure life. Fred Gordon said we have tried to do that in the past, but it is complex since we have been operating for so long now. Jamie Woods said it is easy to do when the hazard rate is consistent, but this is generally not the case. Some things fail early, but others last forever. Alan Meyer asked if we need to run this by the OPUC. Fred Gordon said the process is that this committee reviews and then the program can implement the change. Phil Degens noted we needed eight years of program activity to be able to do this study and establish the measure life. Jackie Goss asked if these findings apply to commercial SEM as well. Erika Kociolek said that industrial measure types may or may not be applicable to commercial. Also, the commercial SEM program design is different.

## Strategic Energy Management Models: Is a Simple Model Enough?

Presented by Phil Degens

Background: This is a paper that Phil Degens, Erika Kociolek, and Sarah Castor wrote on simplified models for industrial SEM. The program puts a lot of effort into modeling at the site level to estimate savings. There are often two models for a site: one for electric and one for gas. Sometimes submetering increases the number of models used. That adds up to a lot of models to update and analyze.

Because the resources involved in creating and maintaining models is significant, we wanted to explore opportunities to simplify the analysis. One of the important inputs to models is production data, which is very difficult for us to obtain from customers after the fact. Our question was, can we use a simple model with no production data to estimate SEM savings? One assumption we need to make is that production isn't changing significantly. A benefit of one simplified model is that we can see impacts at the portfolio level.

Methods: The model is for average daily energy consumption as a function of the year of engagement and the years since the SEM engagement. We used an unbalanced cross-section time-series model and generalized least squares regression with heteroskedastic but uncorrelated error structure to estimate the model coefficients; this allows us to see average daily SEM savings for up to six years post-engagement.

There were 108 industrial sites that participated in SEM from 2012 to 2017. Of these, 36 sites were not included in the analysis for a variety of reasons: they added renewables, the facility closed, there was insufficient electric usage data, or there were large known changes at the site. We looked only at electric savings and not gas savings. The final sample included 72 sites, all of which had at least two years of post-engagement data.

We used the model to estimate average daily kWh savings and then subtracted the impact of capital projects. The net is SEM savings per day, as shown below. In the first year after engagement, participants saved about 3.6% of their baseline energy usage, then 9.2% in the second year and 13.6% in the third year. In the fourth year there are 25% savings. By the fifth

and sixth years, savings are so large they are not believable, and the sample sizes are very small.

SEM savings estimates from the simple model

| Variable | Estimated Average Daily kWh Reduction | Cumulative Average kWh Savings Per Day from Capital Projects | SEM Average kWh Daily Reduction | Percent Reduction Relative to Baseline | Number of Sites Represented |
|---|---|---|---|---|---|
| post_year1 | -1,096 | 239 | -857 | -3.6% | 72 |
| post_year2 | -2,840 | 649 | -2191 | -9.2% | 72 |
| post_year3 | -4,133 | 894 | -3238 | -13.6% | 67 |
| post_year4 | -6,943 | 985 | -5959 | -25.1% | 49 |
| post_year5 | -10,284 | 1,114 | -9170 | -38.6% | 27 |
| post_year6 | -12,973 | 1,407 | -11566 | -48.6% | 8 |

Conclusions: SEM participants on average are increasingly reducing their energy consumption as time goes on. Results are supported by other recent studies. First-year savings are relatively close to program estimates (3.6% versus 5.6%). Later year savings estimates appear to be unrealistically high, which may be due to changes in production processes or levels, or other non-programmatic changes at the site. The number of sites used to estimate the fifth and sixth years are very small and those sites may not be representative of the general population.

The next steps would be to obtain production data for a subsample of sites to determine how inclusion of a production variable impacts model estimates. We can also look at commercial SEM participants. It would be useful to develop a database that contains all SEM model data to make it easier to update this analysis and look at additional years of savings.

Fred Gordon said that it looks like this simple model works okay. Phil Degens said that he would like to see if results are consistent when accounting for production data. When SEM participants have been surveyed, many say that there have been large facility changes. That might indicate that we need production data to make the analysis work, but he agrees it looks okay using this simple model.

Jamie Woods said it is good to question the out-year results, but that simple models often work out really well.

**Meeting adjourned at 3:00 PM.**

**Sarah Castor will send out a poll to schedule the next meeting for a date in February 2020.**

# PINK PAPER

Impact Evaluation

# 2015 – 2016 New Buildings Program: Final Report

Energy Trust of Oregon

April 24, 2019

Energy Trust of Oregon

421 SW Oak St #300

Portland |OR 97204

Michaels No.: E9218AAN

MichaelsEnergy

EVERGREEN ECONOMICS

PWP Inc.

# MEMO

**Date:** January 10, 2020
**To:** Board of Directors
**From:** Jessica Iplikci, Senior Program Manager, Commercial
Dan Rubado, Evaluation Project Manager
**Subject:** Staff Response to 2015-2016 New Buildings Impact Evaluation

The 2015-2016 New Buildings impact evaluation conducted by Michaels Energy showed high electric realization rates in both years (97% and 96%, respectively) that were consistent with past years of the program. However, gas realization rates were somewhat lower (86% and 90%, respectively) and there were significant variances in evaluated gas savings for a variety of reasons. Michaels Energy offered specific explanations for these variances and found that savings adjustments were frequently not within the control of the program, such as modifications to building schedules and operating parameters. The evaluator provided recommendations for potential improvements, which the Program is considering. These include modifications to specific prescriptive measures to improve savings assumptions. In addition, the evaluator recommended improvements specific to the building simulation modeling process. However, some of the issues and recommendations become irrelevant under the new 2019 Oregon energy code.

New Buildings staff plans to make the following changes and process improvements in response to these recommendations:

- Continue adjusting the site verification process to align with detailed program requirements that are the basis of energy estimates. One adjustment will be to include the number of multifamily units built to account for any final changes made during construction.
- Although the evaluator recommended engaging customers post-occupancy to obtain more accurate information on final equipment specifications and operations, we believe this is beyond the scope of the program and it's not workable for customers, but our evaluation process serves the purpose of calculating final energy saved.
- Parametric model runs were identified by the evaluator as one way to simplify the simulation modeling process rather than developing separate building models to determine the savings impact of each measure implemented. The program allows for parametric modeling; however, it can be cost-prohibitive and is not always the best choice for modeling each project. Under the state's new code, this is expected to become less of an issue.
- Energy Trust's approach to modeling hybrid HVAC systems is to work with customers early in their design process to determine a reasonable hybrid baseline with a similar HVAC fuel mix to the proposed building. Better matching of the baseline model heating fuel ratio, as recommended by the evaluator, would be challenging, time-consuming, and costly. Rather than impose more onerous modeling guidelines, the program will continue to track cross-fuel interactions.
- The condensing boiler measure has been updated to better estimate savings.
- As the program is redesigned to work with the 2019 Oregon energy code, the energy modeling process for LEED projects will have the same modeling requirements as other whole building projects.

The program will continue utilizing TMY3, shorthand for total meteorological year, a historic weather file for building energy modeling, whenever possible to complete the program's technical reviews and will add this detail to our checklist. Energy Trust will also allow the use of the new typical weather year data, currently under development, once available.

# Executive Summary

This report summarizes the results of the impact evaluation of the Energy Trust of Oregon 2015-2016 New Buildings program completed by Michaels Energy, in partnership with Evergreen Economics and PWP Inc. (Michaels team or Michaels). The goals for this evaluation were to support Energy Trust's ongoing efforts to improve program performance by:

- Develop reliable estimates of the New Buildings program gas and electric savings for the 2015 and 2016 program years at a 90/10 confidence and precision level for each year.
- Develop reliable estimates of the New Buildings program gas and electric savings for the combined 2015 and 2016 program years at the building-use type level at a confidence and precision level of 90/15.
- Report important observations about New Buildings projects and making recommendations for specific changes to help Energy Trust improve the accuracy and effectiveness of future program savings estimates and the results of future impact evaluations.

The realization rates of this impact evaluation are shown below in Table 1 and Table 2.

Table 1 | Program Level Realization Rates

| Year | Fuel | Ex Ante | Ex Post | Realization Rate | Relative Precision, 90% Confidence |
|---|---|---|---|---|---|
| 2015 | Electric (kWh) | 42,603,421 | 41,376,442 | 97% | 1% |
| | Natural Gas (therms) | 527,045 | 451,519 | 86% | 2% |
| 2016 | Electric (kWh) | 44,152,290 | 42,439,181 | 96% | 1% |
| | Natural Gas (therms) | 693,943 | 621,912 | 90% | 2% |

Table 2 | Realization Rates and Relative Precision by Building Type

| Building Use Type | Sampled Projects | Realization Rate, kWh | Realization Rate, therms | Relative Precision at 90% Confidence, kWh | Relative Precision at 90% Confidence, therms |
|---|---|---|---|---|---|
| Multifamily-Market-Rate/Campus Housing | 29 | 106% | 84% | 4% | 2% |
| Multifamily-Affordable | 8 | 91% | 93% | 5% | 6% |
| Multifamily-Assisted Living | 9 | 77% | 92% | 5% | 4% |
| Data Center | 5 | 93% | N/A | 1% | N/A |
| Warehousing & Industrial | 19 | 96% | 89% | 2% | 3% |
| Hospitality | 13 | 98% | 102% | 3% | 5% |
| Elementary School | 16 | 97% | 85% | 3% | 8% |
| Middle-High School | 9 | 91% | 80% | 6% | 5% |
| College/University | 8 | 84% | 91% | 8% | 4% |
| Retail Grocery | 13 | 100% | 100% | 0% | 0% |
| Retail Non-Grocery | 15 | 92% | 92% | 10% | 5% |
| Office | 8 | 96% | 83% | 4% | 3% |
| Health | 3 | 97% | 69% | 1% | 5% |
| Other | 11 | 103% | 84% | 6% | 3% |
| **Total** | **166** | **97%** | **88%** | **1%** | **1%** |

Key observations and recommendations to improve the accuracy and effectiveness of future program savings estimates and the results of future impact evaluations are summarized below. In addition to these, Section 4 provides secondary observations and recommendations that had less impact on the program for this evaluation, but have the potential for greater impact in future years if not addressed.

**Overall Observation –** The program implementer accurately estimated electric and natural gas savings for the program. In particular, adjustments to savings for factors within the implementer's control (documentation error, baseline changes, tracking error, and calculation or engineering error) were less than 4%. This is commendable.

**Observation 1 –** (38) projects were found to be installed differently than calculated. Many of these adjustments were due to design changes that were not incorporated in the final savings analysis. This issue was most pronounced with multifamily facilities.

> **Recommendation 1A –** Engage customers during the final stage of project completion to ensure final equipment specifications and quantities are consistent with project analysis.
>
> **Recommendation 1B –** Consider expanding the verification of multifamily buildings and update project analysis based on the completed facility.

**Observation 2 –** Low flow fixtures (faucet aerators and showerheads) had poor realization rates in the 2014 evaluation with 82% electric and 42% gas savings. The 2015 and 2016 evaluation found significantly better results for these measures at 96% for electric and 87% for gas. However, there were instances of under-claimed quantities related to multi-family facilities using the

number of apartments instead of the number of bathrooms for quantities. Devices were also found to be removed due to tenant dissatisfaction. Tenant dissatisfaction varies but stems from low flow fixtures directly impacting day to day activities. Dissatisfied occupants either didn't understand the benefits of reduced water and energy usage or the benefits are not valued enough to offset the day to day impact of the low flow devices.

> **Recommendation 2 –** Continue to engage with customers and tenants where these devices are installed and remind customers about their purpose and benefits to reduce the number of dissatisfied occupants.

**Observation 3 –** Market solutions measures are entered in the tracking system in several different ways. Specifically, some projects claimed their "package" of measures with one entry while other projects tracked their "package" with individual measures listed as base measures and elective measures. While this does not impact verified savings, it limits the understanding of the market solutions program track measure make-up.

> **Recommendation 3 –** Consider claiming all market solutions packages measure-by-measure indicating the base and elective measures. This will allow the Program Management Contractor (PMC) to make informed decisions about the individual program measure performance.

**Observation 4 –** Four prescriptive condensing boiler gas projects were found to have claimed savings that represented a significant portion of the facilities natural gas usage – higher than what can be reasonably attributed to the installation of a condensing boiler. This suggests that a combination of oversizing and redundant boilers were incentivized.

> **Recommendation 4 –** Investigate the methodology and inputs such as boiler efficiency and effective full load hours for the Measure Approval Document for hot water condensing gas boilers. In addition, investigate additional screening to identify backup or oversized boiler systems. Alternatively, other metrics could be investigated to estimate savings and y the sizing of the boiler system for a facility. Metrics could include savings based on building type and square footage, or boiler size or quantities capped at typical BTU/square foot for different building types.

**Specific recommendations for modeling projects**:

**Observation 5 –** Hybrid Baselines have proven challenging for the program to consistently model correctly. These projects utilize two fuel sources for either heating or cooling or both. These complex systems make it difficult to develop a code compliant baseline that captures the energy savings without calculating savings for a fuel source shift. Not accounting for a fuel source shift amounts to fuel switching which is prohibited in the Energy Trust of Oregon New Buildings Program Technical Guidelines manual section 2.2.4 "Avoiding Fuel Switching".

> **Recommendation 5A –** The Technical Guidelines Manual in section 2.2.4 does provide guidance on selecting the appropriate baseline for hybrid systems. This could be further expanded providing more clarity around additional situations identified by the program such as heat recovery chillers. In addition, these projects could benefit from a hybrid

baseline specific review at the start of the modeling process and again at the end to ensure full compliance with the guidelines.

**Recommendation 5B –** Regardless of fuel type, any increase in energy usage due to fuel source shifting associated with a measure or project should be accounted for by the program. This can be accomplished by reporting the increased usage with the savings, allowing the other measures to offset the increased usage, or adjusting the baseline model to better match the mix of fuel types in both the baseline and proposed models. The latter is more challenging and will likely not fully mitigate the fuel switch. Modelers would benefit from additional guidance identifying metrics for when the models are close enough.

**Observation 6 –** As part of the calculation of savings for the LEED projects, ASHRAE 90.1-2004 and 2007 were used to develop the baseline building models. Adjustment factors were applied to the baseline simulated energy use to account for code discrepancies. Updating the baseline models to meet the applicable codes showed that the adjustment factors that were used to estimate the baseline energy use were, in some cases, very inaccurate and could lead to grossly underestimated or overestimated savings.

**Recommendation 6 –** Baseline building models should be updated to be consistent with all applicable codes, rather than applying an adjustment factor to the baseline energy use to account for code discrepancies.

**Observation 7 –** Some of the modeling projects that were evaluated included a mixture of modeled measures and prescriptive measures for which the savings were determined independently of the models. In one particular instance, the savings for a central boiler were calculated using a prescriptive track, but because the boiler is a critical part of the HVAC system, in the *ex post* savings calculations the building model was used to determine the boiler savings. This resulted in a significant adjustment to the savings for the boiler. Measures for ENERGY STAR® appliances and other similar items were always calculated outside of the building models, which is reasonable as the modeling software is not designed to calculate appliance loads with high levels of precision.

**Recommendation 7 –** To most accurately account for interactive effects between measures and equipment types, it is recommended that when building models exist for a project, the building models be used to calculate savings for all HVAC, lighting, and building envelope whenever possible.

**Observation 8 –** There were a total of 13 measures across seven projects for which the savings were determined by developing a separate building model with the measure implemented, but the savings could have easily been determined using parametric runs. Parametric runs have several benefits over developing separate building models – making changes to the models is easier due to fewer modeling files, it is easier to tell what changes are made with the implementation of measures, and it eliminates the risk of discrepancies existing between building models.

**Recommendation 8 –** Whenever possible, the savings for energy efficiency measures should be determined using parametric runs.

**Observation 9 –** Throughout the evaluation process of the modeling projects it was noted that some of the building simulations were run using TMY2 weather data, while some were run using TMY3 weather data. TMY3 weather data is based on more recent weather data and includes actual months of meteorological data rather than average values that exist in TMY2 weather data. TMY3 is widely regarded as the standard for developing weather-dependent savings estimates and metrics.

> **Recommendation 9 –** All reported savings for modeling projects should be determined using simulations run with TMY3 weather data from the nearest weather station.

**Observation 10 –** In some of the modeling projects evaluated, custom efficiency curves and performance curves were created for the installed energy efficient equipment. However, the data that defines these curves was stored in supplementary files in the file directory for the model, and not in the modeling file itself. Because of this, not all of the received models could be used to run simulations. This was especially prevalent with modeling files that were used to simulate variable refrigerant flow (VRF) system operation. Performance curves were able to be added to the models so simulations could be run, but it is unlikely that the curves that were added to the models are the same as what were used to calculate the *ex ante* savings.

> **Recommendation 10 –** Include all supplementary files used to develop the building model, including any custom performance and efficiency curves.

# PINK PAPER

EVERGREEN ECONOMICS

# Existing Multifamily Program Process Evaluation

## *Final Report*

Prepared for Energy Trust of Oregon

December 20, 2019

# 1 Executive Summary

Energy Trust of Oregon works with Lockheed Martin to implement the Existing Multifamily Program through five tracks: buy-down, common area lighting, standard, direct install, and custom. This evaluation sought to answer a series of research questions aimed at better understanding participant motivations, identifying opportunities for additional participation, and chronicling program successes and challenges. Methods included in-depth interviews with program staff, program participants, distributors, trade allies, and Allied Technical Assistance Contractors (ATACs). The research questions are listed in Appendix A, mapped to the sections of this report.

Based on participant and program staff perspectives, it is apparent that Energy Trust's Existing Multifamily Program is:

- Yielding high satisfaction among a varied group of participants.
- Leveraging past participation data to understand what program offerings may be of interest to participants and using this information to inform program direction.
- Providing the necessary information and financial incentives to encourage participants to pursue efficiency upgrades, often when replacing equipment for a non-energy related reason.
- Presenting opportunities to further participation in future upgrades.

Our research also identified that Energy Trust has opportunities to provide additional ideas for efficiency opportunities to multifamily decision-makers through both walkthrough surveys and in-person engagement when interacting during program participation. This can be achieved by increasing awareness of walkthrough surveys or technical analysis studies and continuing to bring up "additional opportunities" when feasible during direct interactions with participants.

Participants identified cost as the largest barrier to participating further in Energy Trust offerings. From the perspective of program staff, challenges include reduced cost effectiveness of measures that draw initial participants into the program; the additional work necessary to reach smaller multifamily buildings, which often results in lower savings than their larger counterparts; and the diverse set of market segments, which require various communication strategies and messaging.

Contractors (mostly participating trade allies), ATACs, and distributors were generally satisfied with the program. Below, we share findings from each group:

- **ATACs:** ATACs receive projects both from internal leads and from Energy Trust, with the majority of projects moving forward after technical assistance studies. Project failure was reportedly due to either cost effectiveness hurdles or payback

limitations. Two of the four firms we interviewed reported that work opportunities come through the Reserve Studies they do for condominium and homeowner associations (HOAs). ATACs were also happy with the turnaround time for study reviews. They expressed interest in knowing more about the study assignment process, and felt that there is low awareness among multifamily buildings about the particular service that they offer.

- **Distributors:** There are very few distributors involved with the program. The two we heard from reported that there are no large problems getting projects approved and that participation is easy, though one firm expressed frustration at having to keep track of which measures were in the multifamily buy-down track and not eligible for buy-down through other Energy Trust programs. Most distributors sell a single measure rather than a package of measures.
- **Contractors/Trade Allies:** Of the 30 contractors interviewed, nearly half specialize in HVAC, and only two were not part of any program trade ally network at Energy Trust. This group was very satisfied with most elements of the Energy Trust Existing Multifamily Program, with the exception of its marketing, though this was not a large concern. Many respondents rely on prior relationships for work, and see further potential in this market. Contractors work locally and incorporate incentives into their bids, and nearly half have taken advantage of some of Energy Trust's marketing funds, though they use the residential, not multifamily, funds. Contractors believe participation is easy for customers, and report having a clear understanding of how to navigate the client approval process, though HOAs remain challenging.

We have the following recommendations for Energy Trust of Oregon's consideration:

**Leverage high satisfaction rates by participants for word-of-mouth marketing.** Consider obtaining testimonials and encouraging multifamily managers to mention their program participation and Energy Trust to their peers (internally or externally).

**Continue to maintain relationships with past participants so Energy Trust is top-of-mind when exploring future opportunities.** To the extent feasible during interactions with participants, record future equipment upgrade needs and approximate dates so that the program can reach out at those times. Increase awareness of the Energy Portfolio Newsletter for participants, which introduces new program offers, reminds them of existing ones, and provides tips oriented around standard maintenance and replacement needs. To some extent, participants reported that follow-ups from Energy Trust already occur among larger multifamily building owners and operators, but not uniformly so, and that they are less common among smaller participants.

**Differentiate marketing messages and program offers (if possible) between for-profit multifamily investors and non-profit organizations that offer housing to clients.** The latter group is more open to efficiency opportunities that benefit tenants, but also may be more financially constrained, thereby needing more assistance.

**Prioritize investor-owned properties over tenant-owned ones.** Doing so would mitigate what appears to be lower program influence among participants in the individual unit owner group.

**Expand marketing and outreach to increase awareness of the walkthrough survey technical analysis studies and its benefits.** This became a clear need as conveyed through both participant and ATAC interviews. Energy Trust should continue to recognize the high value of interpersonal interactions between program representatives and multifamily decision-makers that occurs during these technical services to provide suggestions and plant seeds for efficiency improvements.

**Include more information about upgrade costs and benefits in program information.**

**Consider more direct outreach to potential participants by telephone.** Such outreach was well received by participants and spurred their participation. Targeted outreach to potential participants with high savings potential would be ideal. These calls could include a telephone screener to identify potential opportunities and then attempt to drive participants to a direct install or a walkthrough survey, if appropriate.

**Provide additional information to ATACs** including information about how the assignment process is conducted, and an explanation of the 10-year payback limit. Several ATACs expressed uncertainty about the process by which studies are assigned, and one did not understand why some of the potential studies they referred to the program were assigned to other firms. An annual review of the number of studies brought by ATACs and assigned by the program might encourage this kind of transparency.

**Encourage ATACs and contractors to clearly communicate the amount of time needed for technical analysis studies (TASs) or site assessment as part of a custom project.** Timelines and decision points should be explained to customers and agreed upon at the time a study is approved so that all parties understand the steps involved and the length of time between study initiation and approval.

**Consider a multi-measure bonus when more than one buy-down-qualifying piece of equipment is installed.** This may help to push customers to deepen program participation. One distributor suggested that customers would be interested in dishwashers though these are no longer cost effective.

**Work to expand the number of distributors involved in the buy-down track**, particularly in underserved areas.

**Maintain and encourage cooperation between trade ally representatives of the Existing Multifamily, Existing Residential and Existing Buildings programs.** For example, representatives from each program could send out a yearly reminder to all their trade allies and non-trade ally contractors telling them about other Energy Trust programs in which their customers might be able to participate, along with appropriate contact information.

**Increase communications with inactive trade allies to encourage their participation.** For example, consider a bonus incentive for the first project brought in by an Existing Multifamily trade ally after a full year of inactivity and use this to refresh interest in the program among the many inactive allies.

**Consider a bonus incentive for multi-measure packages** installed in a single building or individually owned unit.

**Where possible, expedite the application approval and rebate payment processes.**

**Expand program outreach to homeowner associations (HOAs), condominium boards and property management firms for apartments to ensure they are aware of the Existing Multifamily Program.** This could include targeted fact sheets explaining, for example, the benefits of replacing resistance heat with ductless heat pumps or the multiple advantages of high efficiency windows for multifamily buildings.

**Tailor Existing Multifamily marketing materials to fit varied contractor business models.** Most HVAC, window and insulation contractors primarily target residential customers, while lighting contractors primarily target commercial buildings.

# Memo

**To:** Board of Directors

**From:** Kate Wellington, Multifamily Program Manager
Sarah Castor, Evaluation Sr. Project Manager

**cc:**

**Date:** January 30, 2020

**Re:** Staff Response to the Existing Multifamily Program Process Evaluation

The Existing Multifamily program process evaluation found the program is operating well and achieving high satisfaction among participants, trade allies and contractors. Effectively serving the existing multifamily market requires tailoring offerings and communications to many different customer types and decision makers, and the evaluation concluded the program is using appropriate strategies to do so. In particular, the program is using participation data and external data sources to understand where opportunities for energy efficiency exist and where the program can provide additional resources in the form of outreach, trade ally and contractor support, and changes to offerings encourage new and repeat participation.

The program will use the results of the evaluation to propose program improvement for 2020. Moving forward, the program will continue to focus on reengaging past participants to encourage additional energy saving projects while increasing outreach to previously underserved customers. In coordination with other Energy Trust programs, Existing Multifamily program staff is actively pursuing development of new measures and adjustments to key existing measure to maintain and improve cost-effectiveness. The program will coordinate with the Residential and Existing Buildings programs to effectively engage customers.

In 2020, the Existing Buildings and Existing Multifamily program management contracts are being rebid together. The evaluation summarizes key information about the program in advance of the request for proposals (RFP) for the program management contract and will be a resource for those interested in bidding.

# Tab 4

# Notes on October 2019 Financial Statements

November 21, 2019

## Revenue

Revenue is 2% of budgeted amounts. We remain ahead of budget primarily because we have received more PGE 838 funding than we expected.

| | YTD Actual | YTD Budget | YTD Var | YTD % | PY |
|---|---|---|---|---|---|
| PGE Efficiency | 71,044,205 | 68,769,854 | 2,274,352 | 3% | 81,379,124 |
| PGE Renewables | 7,372,194 | 7,430,567 | (58,373) | -1% | 7,293,140 |
| PAC Efficiency | 46,028,551 | 46,153,255 | (124,704) | 0% | 46,633,915 |
| PAC Renewables | 5,214,233 | 5,457,359 | (243,127) | -4% | 5,361,521 |
| NWN | 23,648,435 | 23,726,536 | (78,101) | 0% | 19,113,343 |
| CNG | 2,643,988 | 2,149,244 | 494,744 | 23% | 1,885,480 |
| Avista | 1,743,225 | 1,743,225 | - | 0% | 1,096,393 |
| Community Solar Revenue | 210,574 | 267,217 | (56,643) | -21% | |
| Grant Revenue | 38,169 | | 38,169 | 0% | 76,636 |
| Investment Income | 1,372,933 | 500,000 | 872,933 | 175% | 825,328 |
| Total | 159,316,507 | 156,197,257 | 3,119,249 | 2% | 163,664,879 |

## Reserves

Reserve levels decreased $0.9 million over the prior month. We have about $5.2 million more in reserves than we did last year at this time. Community Solar is modestly accumulating net assets, which may be utilized by the program for unforeseen costs or released for other purposes.

In the remaining quarter of the year expenditure activity peaks, which is projected to bring reserve balances down below 2018 levels overall.

In this table we show an estimate of the interest attribution that will be made at year end. The 12/31/19 forecast balances include the estimated attributed interest.

| | 12/31/19 Forecast | 10/31/19 current | 12/31/18 Year End | 10/31/18 one year ago | 2019 Interest |
|---|---|---|---|---|---|
| PGE | 19,039,427 | 34,849,143 | 22,328,018 | 32,962,028 | 509,733 |
| PacifiCorp | 8,940,974 | 15,686,210 | 9,319,633 | 16,520,744 | 225,009 |
| NW Natural | 3,040,776 | 5,268,811 | 3,591,597 | 6,369,698 | 81,725 |
| Cascade | 908,562 | 1,029,301 | 373,597 | 952,860 | 15,799 |
| Avista | 40,492 | 371,685 | (45,817) | 123,827 | (66) |
| NWN Industrial | 779,497 | 2,644,621 | 772,993 | 1,518,436 | 19,130 |
| NWN Washington | 234,448 | 1,230,489 | 501,071 | 1,082,226 | 9,063 |
| PGE Renewables | 12,281,987 | 12,156,753 | 9,510,800 | 9,048,227 | 268,532 |
| PAC Renewables | 6,172,229 | 6,791,196 | 6,490,682 | 7,141,578 | 156,033 |
| Program Reserves | 51,438,393 | 80,028,209 | 52,842,574 | 75,719,603 | 1,284,958 |
| Other Reserves | 19,188 | 18,645 | 24,897 | 26,155 | 543 |
| Community Solar Reserves | 159,069 | 82,033 | - | | 1,960 |
| Program Loans | 1,800,000 | 1,800,000 | 1,800,000 | 1,800,000 | |
| Emergency Reserve | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 124,758 |
| Contingency Available | 3,340,339 | 4,510,234 | 3,137,301 | 3,666,637 | 78,280 |
| Total | 61,756,977 | 91,439,109 | 62,804,754 | 86,212,398 | 1,490,499 |

## 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. Controls prevent over committing against future revenue.

Contingent liabilities as of October 31, 2019 are as follows:

| | |
|---|---|
| Efficiency Incentive commitments to be paid in the future | 88,600,000 |
| Renewables Incentive commitments to be paid in the future | 12,300,000 |
| In-force contracts for delivery and operations, to be paid in the future | 28,700,000 |
| **Total contingent liabilities for future commitments** | 129,600,000 |

## OPUC Financial Performance Measures

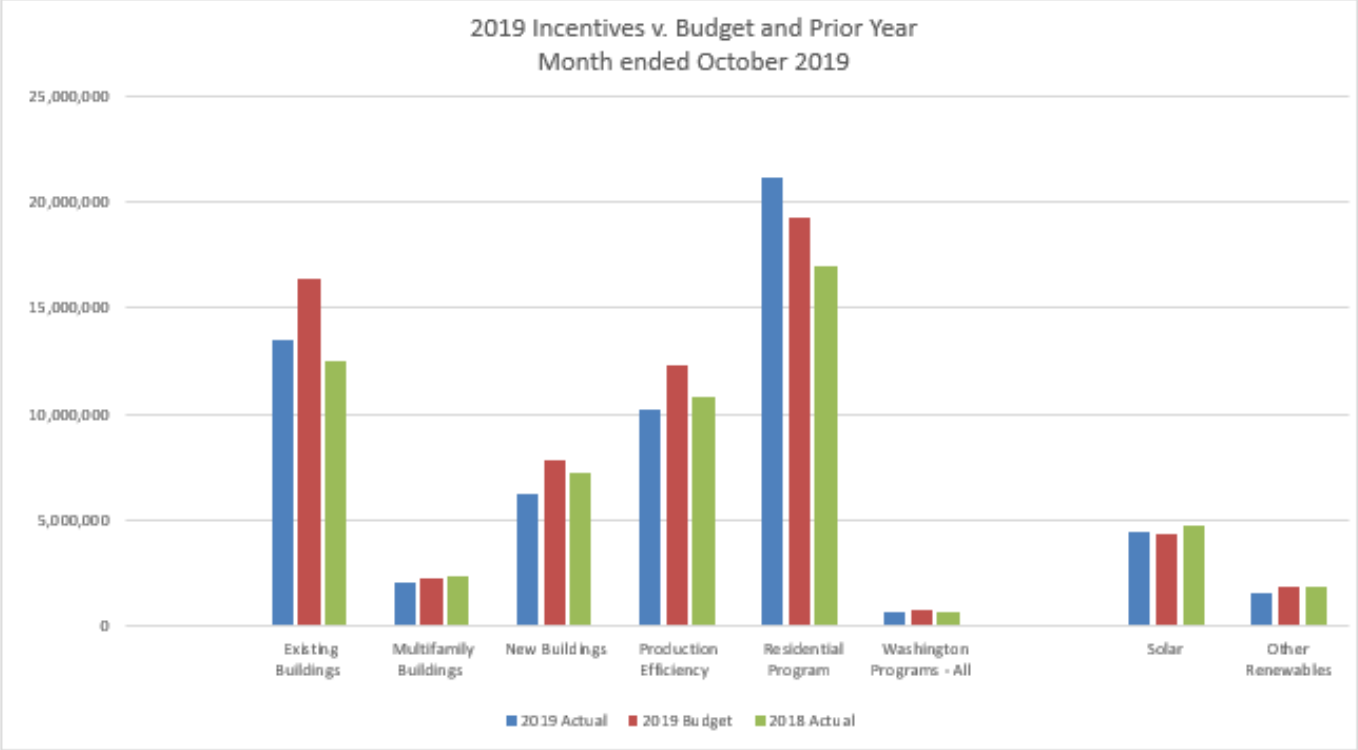
The two OPUC financial performance measures deal with administrative and program support (as defined by OPUC) and staffing cost (Employee Salaries and Fringe Benefits). We are operating well within the two measures.

| | | | |
|---|---|---|---|
| Administrative and Program Support | less than 8% of revenue | 6.2% | ✓ |
| | less than 10% increase over prior year | 6% | ✓ |
| Employee Salaries and Fringe | less than 10% increase over prior year | 4% | ✓ |

| Details | YTD 2019 | YTD 2018 | Y/Y Change |
|---|---|---|---|
| Revenue | 155,463,910 | 160,334,104 | |
| Administrative and Program Support | 9,576,302 | 9,008,077 | 6% |
| Percent of Revenue | 6.2% | 5.6% | |
| | | | |
| Employee Salaries and Fringe Benefits | 11,360,694 | 10,934,441 | 4% |

## Expenses

Total year-to-date spending at the end of October is about $11.4 million (8%) below budget. YTD incentives remain at $5.2 million below budget. Incentives are $1.2 million above last year at this time.

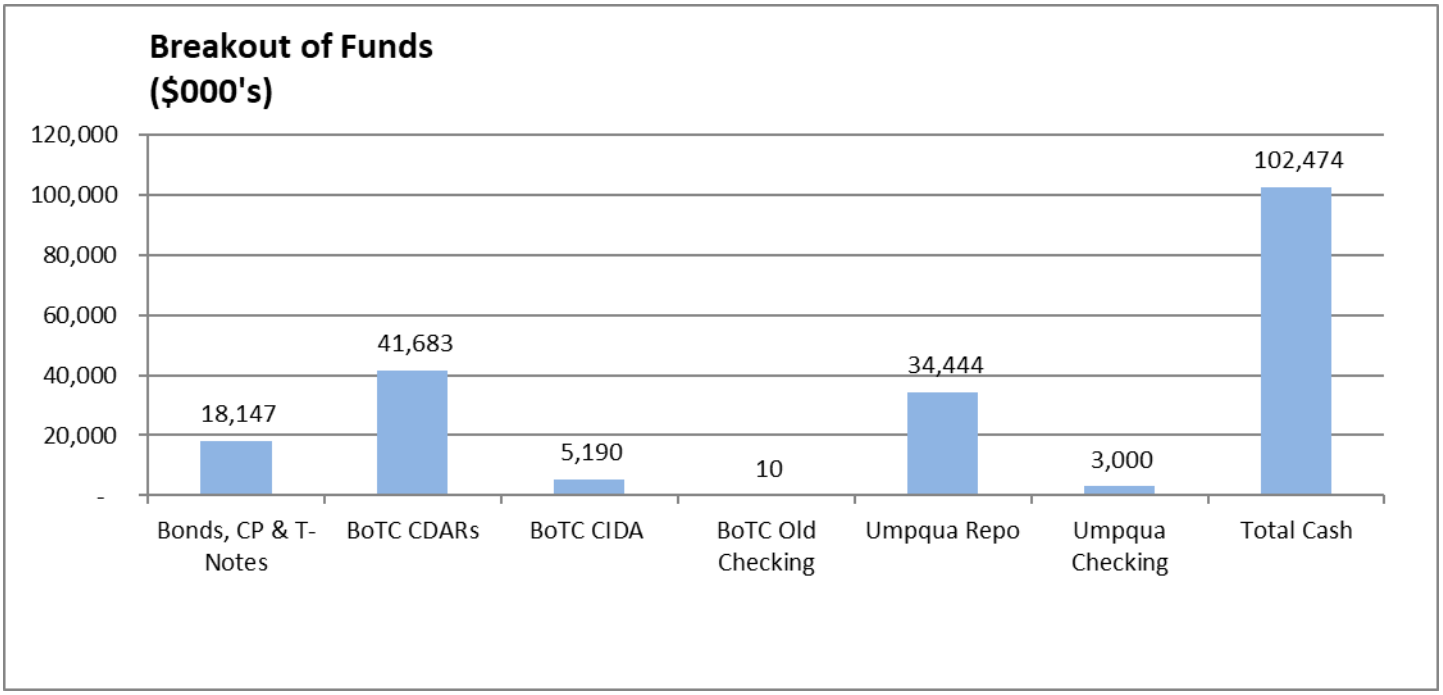



**Total Incentives**
**Year-to-Date 2019**

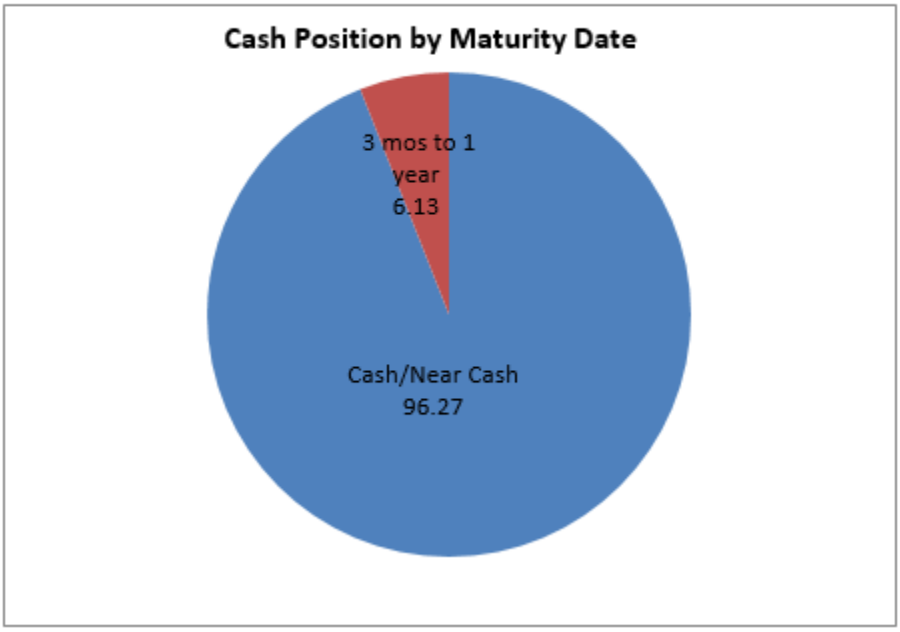
| | 2019 Actual | 2019 Budget | 2018 Actual |
|---|---|---|---|
| Existing Buildings | 13,486,121 | 16,382,064 | 12,478,744 |
| Multifamily Buildings | 2,018,087 | 2,252,758 | 2,383,003 |
| New Buildings | 6,209,394 | 7,785,124 | 7,272,294 |
| Production Efficiency | 10,232,474 | 12,319,080 | 10,854,630 |
| Residential Program | 21,207,785 | 19,301,751 | 16,995,335 |
| Washington Programs - All | 625,545 | 726,101 | 688,533 |
| Solar | 4,453,577 | 4,347,371 | 4,758,909 |
| Other Renewables | 1,580,798 | 1,807,683 | 1,829,720 |
| Total Incentives | 59,813,782 | 64,921,932 | 57,261,168 |
| **Energy Efficiency Only** | **53,779,406** | **58,766,878** | **50,672,539** |

## Investment Status

The graphs below show the type of investments we hold and the locations where our funds are held. Cash levels increased slightly. Our investments are primarily in CDAR's (a bundle of FDIC insured CD's) with maturities of 13 weeks. We are expecting that we can continue rolling them over until year-end. Our yield dropped slightly because CDAR rates declined by 0.2% (from 2% to 1.8%).




| | |
|---|---|
| **Average Days to Maturity:** | **29** |
| **Average Portfolio Yield:** | **1.55%** |



# PINK PAPER

**Energy Trust of Oregon**
**BALANCE SHEET**
**October 31, 2019**
**(Unaudited)**

| | Oct 2019 | Sep 2019 | DEC 2018 | Oct 2018 | Change from one month ago | Change from Beg. of Year | Change from one year ago |
|---|---|---|---|---|---|---|---|
| **Current Assets** | | | | | | | |
| Cash & Cash Equivalents | 42,655,735 | 34,140,961 | 53,104,536 | 35,958,523 | 8,514,775 | (10,448,801) | 6,697,212 |
| Investments | 59,768,628 | 65,703,843 | 38,440,394 | 58,536,874 | (5,935,215) | 21,328,234 | 1,231,754 |
| Receivables | 277,343 | 255,984 | 78,531 | 88,275 | 21,358 | 198,812 | 189,068 |
| Prepaid Expenses | 551,177 | 665,800 | 222,217 | 366,876 | (114,623) | 328,960 | 184,301 |
| Advances to Vendors | 1,639,433 | 2,459,149 | 2,238,777 | 1,468,528 | (819,716) | (599,344) | 170,904 |
| **Total Current Assets** | **104,892,316** | **103,225,737** | **94,084,454** | **96,419,077** | **1,666,579** | **10,807,862** | **8,473,239** |
| **Fixed Assets** | | | | | | | |
| Computer Hardware and Software | 3,925,582 | 3,875,285 | 3,869,226 | 3,934,165 | 50,297 | 56,356 | (8,583) |
| Software Development in Progress | 198,760 | | 0 | 0 | 198,760 | 198,760 | 198,760 |
| Leasehold Improvements | 617,915 | 617,915 | 615,557 | 605,621 | 0 | 2,358 | 12,294 |
| Office Equipment and Furniture | 803,782 | 803,782 | 831,612 | 819,795 | 0 | (27,830) | (16,013) |
| **Total Fixed Assets** | **5,546,039** | **5,296,982** | **5,316,395** | **5,359,581** | **249,057** | **229,644** | **186,458** |
| Less Depreciation | (4,778,453) | (4,760,635) | (4,658,292) | (4,796,909) | (17,819) | (120,161) | 18,455 |
| **Net Fixed Assets** | **767,586** | **536,347** | **658,103** | **562,672** | **231,239** | **109,483** | **204,914** |
| **Other Assets** | | | | | | | |
| Deposits | 267,559 | 258,653 | 258,653 | 258,653 | 8,906 | 8,906 | 8,906 |
| Deferred Compensation Asset | 987,448 | 984,488 | 967,280 | 987,596 | 2,960 | 20,168 | (148) |
| Note Receivable, net of allowance | 763,669 | 763,669 | 430,669 | 430,669 | 0 | 333,000 | 333,000 |
| **Total Other Assets** | **2,018,676** | **2,006,811** | **1,656,602** | **1,676,919** | **11,866** | **362,074** | **341,758** |
| **Total Assets** | **107,678,578** | **105,768,895** | **96,399,160** | **98,658,668** | **1,909,683** | **11,279,418** | **9,019,910** |
| **Current Liabilities** | | | | | | | |
| Accounts Payable and Accruals | 12,868,838 | 10,218,338 | 30,565,097 | 9,387,062 | 2,650,500 | (17,696,259) | 3,481,776 |
| Salaries, Taxes, & Benefits Payable | 978,848 | 800,198 | 931,049 | 964,479 | 178,650 | 47,799 | 14,369 |
| **Total Current Liabilities** | **13,847,686** | **11,018,535** | **31,496,146** | **10,351,541** | **2,829,150** | **(17,648,460)** | **3,496,145** |
| **Long Term Liabilities** | | | | | | | |
| Deferred Rent | 1,397,749 | 1,408,743 | 1,133,461 | 1,111,269 | (10,995) | 264,287 | 286,480 |
| Deferred Compensation Payable | 982,732 | 979,772 | 962,564 | 981,215 | 2,960 | 20,168 | 1,518 |
| Other Long-Term Liabilities | 11,310 | 20,325 | 2,235 | 2,235 | (9,015) | 9,075 | 9,075 |
| **Total Long-Term Liabilities** | **2,391,791** | **2,408,840** | **2,098,260** | **2,094,719** | **(17,049)** | **293,531** | **297,072** |
| **Total Liabilities** | **16,239,477** | **13,427,376** | **33,594,406** | **12,446,260** | **2,812,101** | **(17,354,930)** | **3,793,217** |
| **Net Assets** | | | | | | | |
| Unrestricted Net Assets | 91,439,101 | 92,341,519 | 62,804,754 | 86,212,408 | (902,418) | 28,634,347 | 5,226,693 |
| **Total Net Assets** | **91,439,101** | **92,341,519** | **62,804,754** | **86,212,408** | **(902,418)** | **28,634,347** | **5,226,693** |

**Energy Trust of Oregon**
**Cash Flow Statement-Indirect Method**
**Monthly 2019**

| | January | February | March | April | May | June | July | August | September | October | Year to Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Activities:** | | | | | | | | | | | |
| *Revenue less Expenses* | $ 12,037,369 | $ 8,616,210 | $ 6,368,168 | $ 6,175,429 | $ (955,899) | $ (3,352,949) | $ 3,003,837 | $ (1,636,018) | $ (719,381) | $ (902,418) | $ 28,634,347 |
| *Non-cash items:* | | | | | | | | | | | |
| Depreciation | 21,164 | 20,911 | 16,739 | 16,463 | 16,463 | 20,944 | 16,463 | 16,463 | 16,422 | 17,819 | 179,850 |
| Change in Reserve on Long Term Note | | | | | | | | | | | - |
| (Gain) Loss on disposal of assets | | (17,265) | | | | | | 1,150 | | | (16,116) |
| Receivables | (690) | 4,224 | (46,689) | (30,886) | 9,957 | (12,946) | 5,568 | 2,732 | (39,570) | (13,369) | (121,668) |
| Interest Receivable | 6,540 | (27,555) | (74,445) | 10,719 | 39,996 | (19,852) | 29,148 | (38,852) | 5,148 | (7,990) | (77,143) |
| Advances to Vendors | 746,259 | 746,259 | (1,556,553) | 767,604 | 767,604 | (1,840,321) | 869,308 | 869,308 | (1,589,841) | 819,716 | 599,344 |
| Prepaid expenses and other costs | (707,517) | 60,974 | (345,625) | 281,664 | 85,380 | (102,955) | (81,250) | 89,481 | (73,944) | 102,757 | (691,035) |
| Accounts payable | (18,806,695) | (713,165) | (705,741) | (1,416,005) | (2,276,491) | 4,497,952 | (5,522,131) | 1,900,930 | 3,494,776 | 2,829,149 | (16,717,421) |
| Payroll and related accruals | (212,773) | 57,285 | 118,962 | 17,034 | 158,606 | (10,470) | 63,753 | (324,754) | (761,159) | (6,054) | (899,570) |
| Deferred rent and other | 10,100 | 10,100 | 10,099 | 10,100 | 10,940 | 10,100 | 71,561 | 71,561 | 68,486 | (10,995) | 262,053 |
| **Cash rec'd from / (used in) Operating Activities** | (6,906,243) | 8,757,978 | 3,784,915 | 5,832,122 | (2,143,442) | (810,497) | (1,543,742) | 952,000 | 400,937 | 2,828,616 | 11,152,644 |
| **Investing Activities:** | | | | | | | | | | | |
| Investment Activity (1) | (2,035,756) | (4,000,472) | (9,238,890) | (5,568,183) | (7,087,432) | (2,087,422) | 2,922,783 | (96,506) | (71,571) | 5,935,215 | (21,328,234) |
| (Acquisition)/Disposal of Capital Assets | 20 | (5,929) | (1,963) | | | | | | (16,279) | (249,057) | (273,208) |
| **Cash rec'd from / (used in) Investing Activities** | (2,035,736) | (4,006,401) | (9,240,853) | (5,568,183) | (7,087,432) | (2,087,422) | 2,922,783 | (96,506) | (87,850) | 5,686,158 | (21,601,442) |
| **Cash at beginning of Period** | 53,104,536 | 44,162,558 | 48,914,136 | 43,458,198 | 43,722,137 | 34,491,263 | 31,593,346 | 32,972,380 | 33,827,873 | 34,140,961 | 53,104,536 |
| **Increase/(Decrease) in Cash** | (8,941,979) | 4,751,577 | (5,455,938) | 263,939 | (9,230,874) | (2,897,919) | 1,379,041 | 855,494 | 313,087 | 8,514,774 | (10,448,803) |
| **Cash at end of period** | $ 44,162,558 | $ 48,914,136 | $ 43,458,198 | $ 43,722,137 | $ 34,491,263 | $ 31,593,346 | $ 32,972,386 | $ 33,827,873 | $ 34,140,961 | $ 42,655,735 | $ 42,655,735 |

(1) As investments mature, they are rolled into the Repo account.
Investments that are made during the Six Months reduce available cash.

**Energy Trust of Oregon**
**Cash Flow Projection**
**January 2019 - December 2020**

| | Actual | | | | | | | | | | Budget | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **January** | **February** | **March** | **April** | **May** | **June** | **July** | **August** | **September** | **October** | **November** | **December** |
| **Cash In:** | | | | | | | | | | | | |
| **Public purpose and Incr funding** | 19,862,886 | 20,022,600 | 18,823,067 | 17,904,001 | 14,136,700 | 12,284,057 | 13,319,944 | 12,606,537 | 13,210,998 | 15,524,041 | 11,999,827 | 14,395,945 |
| **Investment Income** | 116,780 | 75,970 | 54,380 | 141,560 | 196,541 | 148,455 | 169,273 | 123,334 | 144,550 | 124,947 | - | - |
| **From Other Sources** | (690) | 14,377 | (24,879) | 699 | 34,935 | 12,260 | 45,929 | 23,326 | (948) | 22,065 | 22,257 | 22,257 |
| **Total cash in** | 19,978,976 | 20,112,947 | 18,852,568 | 18,046,260 | 14,368,176 | 12,444,772 | 13,535,145 | 12,753,198 | 13,354,600 | 15,671,054 | 12,022,084 | 14,418,202 |
| **Cash Out:** | (26,885,198) | (11,360,899) | (15,069,615) | (12,214,140) | (16,511,621) | (13,255,269) | (15,078,887) | (11,801,206) | (12,969,941) | (13,091,495) | (19,824,275) | (26,175,651) |
| **Net cash flow** | (6,906,222) | 8,752,048 | 3,782,953 | 5,832,120 | (2,143,445) | (810,497) | (1,543,742) | 951,991 | 384,659 | 2,579,559 | (7,802,191) | (11,757,448) |
| **Cash Flow from/to Investments** | (2,035,756) | (4,000,472) | (9,238,890) | (5,568,183) | (7,087,432) | (2,087,422) | 2,922,783 | (96,506) | (71,571) | 5,935,215 | | 5,000,000 |
| Beginning Balance: Cash & MM | 53,104,536 | 44,162,559 | 48,914,137 | 43,458,200 | 43,722,137 | 34,491,263 | 31,593,346 | 32,972,386 | 33,827,873 | 34,140,961 | 42,655,735 | 34,853,544 |
| **Ending cash & MM** | **44,162,559** | **48,914,136** | **43,458,198** | **43,722,137** | **34,491,263** | **31,593,346** | **32,972,386** | **33,827,873** | **34,140,961** | **42,655,735** | **34,853,544** | **28,096,095** |
| Future Commitments | | | | | | | | | | | | |
| Renewable Incentives | 10,100,000 | 10,400,000 | 10,300,000 | 10,500,000 | 11,000,000 | 10,000,000 | 11,700,000 | 11,800,000 | 12,300,000 | 11,300,000 | 11,000,000 | 10,800,000 |
| Efficiency Incentives | 77,500,000 | 79,500,000 | 79,800,000 | 80,000,000 | 85,600,000 | 86,300,000 | 86,500,000 | 86,500,000 | 88,600,000 | 89,600,000 | 90,200,000 | 97,900,000 |
| Emergency Contingency Pool | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 |
| Total Commitments | 92,600,000 | 94,900,000 | 95,100,000 | 95,500,000 | 101,600,000 | 101,300,000 | 103,200,000 | 103,300,000 | 105,900,000 | 105,900,000 | 106,200,000 | 113,700,000 |

**Dedicated funds adjustment:** reduction in available cash for commitments to Renewable program projects with board approval, or when board approval not required, with signed agreements
**Committed funds adjustment:** reduction in available cash for commitments to Efficiency program projects with signed agreements
**Cash reserve:** reduction in available cash to cover cashflow variability and winter revenue risk
**Escrow:** dedicated funds set aside in separate bank accounts

**Energy Trust of Oregon**
**Cash Flow Projection**
**January 2019 - December 2020**

| | 2020 R2 Projection | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **January** | **February** | **March** | **April** | **May** | **June** | **August** | **October** | **October** | **October** | **November** | **December** |
| **Cash In:** | | | | | | | | | | | | |
| **Public purpose and Incr funding** | 18,064,283 | 22,460,282 | 17,528,184 | 17,103,269 | 15,068,412 | 14,477,318 | 12,206,703 | 12,954,548 | 13,515,339 | 15,190,343 | 12,822,199 | 15,481,895 |
| **Investment Income** | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| **From Other Sources** | 43,923 | 43,923 | 45,905 | 45,905 | 45,905 | 45,905 | 45,905 | 45,905 | 45,905 | 45,905 | 45,905 | 45,905 |
| **Total cash in** | 18,114,283 | 22,510,282 | 17,578,184 | 17,153,269 | 15,118,412 | 14,527,318 | 12,256,703 | 13,004,548 | 13,565,339 | 15,240,343 | 12,872,199 | 15,531,895 |
| **Cash Out:** | (31,184,436) | (9,939,194) | (12,023,319) | (12,490,189) | (13,084,084) | (14,187,697) | (14,848,233) | (13,251,158) | (13,890,535) | (14,869,489) | (15,544,853) | (18,680,168) |
| **Net cash flow** | (13,070,154) | 12,571,088 | 5,554,865 | 4,663,080 | 2,034,328 | 339,622 | (2,591,530) | (246,610) | (325,196) | 370,854 | (2,672,654) | (3,148,273) |
| **Cash Flow from/to Investments** | 12,500,000 | | - | - | - | - | - | - | - | - | - | - |
| Beginning Balance: Cash & MM | 28,096,095 | 27,525,942 | 40,097,030 | 45,651,895 | 50,314,975 | 52,349,302 | 52,688,924 | 50,097,394 | 49,850,784 | 49,525,588 | 49,896,442 | 47,223,788 |
| **Ending cash & MM** | **27,525,942** | **40,097,030** | **45,651,895** | **50,314,975** | **52,349,302** | **52,688,924** | **50,097,394** | **49,850,784** | **49,525,588** | **49,896,442** | **47,223,788** | **44,075,515** |
| Future Commitments | | | | | | | | | | | | |
| Renewable Incentives | 10,800,000 | 11,200,000 | 11,400,000 | 11,400,000 | 11,400,000 | 11,400,000 | 11,400,000 | 11,400,000 | 11,400,000 | 11,400,000 | 11,400,000 | 11,400,000 |
| Efficiency Incentives | 97,900,000 | 97,600,000 | 97,000,000 | 97,300,000 | 97,600,000 | 98,300,000 | 98,300,000 | 98,500,000 | 98,600,000 | 98,800,000 | 99,100,000 | 99,400,000 |
| Emergency Contingency Pool | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 |
| Total Commitments | 113,700,000 | 113,800,000 | 113,400,000 | 113,700,000 | 114,000,000 | 114,700,000 | 114,700,000 | 114,900,000 | 115,000,000 | 115,200,000 | 115,500,000 | 115,800,000 |

**Dedicated funds adjustment:** reduction in available cash for commitments to Renewable program projects with board approval, or when board approval not required, with signed agreements
**Committed funds adjustment:** reduction in available cash for commitments to Efficiency program projects with signed agreements
**Cash reserve:** reduction in available cash to cover cashflow variability and winter revenue risk
**Escrow:** dedicated funds set aside in separate bank accounts

**Energy Trust of Oregon**
**Income Statement - Actual and YTD Budget Comparison**
**For the Ten Months Ending October 31, 2019**
**(Unaudited)**

| | October | | | | YTD | | | |
|---|---|---|---|---|---|---|---|---|
| | **Actual** | **Budget** | **Budget Variance** | **Variance %** | **Actual** | **Budget** | **Budget Variance** | **Variance %** |
| **OREGON PPC REVENUE** | | | | | | | | |
| Public Purpose Funds-PGE | 3,203,573 | 3,308,050 | (104,477) | -3% | 33,019,853 | 33,328,941 | (309,087) | -1% |
| Incremental Funds - PGE | 4,074,113 | 4,027,067 | 47,046 | 1% | 45,396,546 | 42,871,480 | 2,525,066 | 6% |
| Public Purpose Funds-PacifiCorp | 2,215,629 | 2,378,355 | (162,726) | -7% | 23,515,498 | 24,492,683 | (977,185) | -4% |
| Incremental Funds - PacifiCorp | 2,597,051 | 2,269,591 | 327,460 | 14% | 27,727,285 | 27,117,931 | 609,354 | 2% |
| Public Purpose Funds-NW Natural | 685,621 | 676,244 | 9,376 | 1% | 17,647,856 | 17,762,607 | (114,751) | -1% |
| NW Natural - DSM | 1,500,000 | 1,500,000 | - | - | 3,769,658 | 3,769,769 | (111.00) | 0% |
| Public Purpose Funds-Cascade | 142,810 | 87,859 | 54,951 | 63% | 2,643,988 | 2,149,244 | 494,744 | 23% |
| Public Purpose Funds-Avista | 174,323 | 174,323 | - | - | 1,743,225 | 1,743,225 | - | 0% |
| **Total Oregon PPC Revenue** | **14,593,120** | **14,421,489** | **171,631** | **1%** | **155,463,910** | **153,235,880** | **2,228,029** | **1%** |
| NW Natural - Washington | 930,921 | 694,160 | 236,761 | - | 2,230,921 | 2,194,160 | 36,761 | 2% |
| Grant Revenue | - | - | - | - | 38,169 | - | 38,169 | - |
| Community Solar Revenue | 35,434 | 33,402 | 2,032 | 6% | 210,574 | 267,217 | (56,643) | -21% |
| Revenue from Investments | 132,937 | 50,000 | 82,937 | 166% | 1,372,933 | 500,000 | 872,933 | 0% |
| **Total Other Sources of Revenue** | **1,099,292** | **777,562** | **321,730** | **41%** | **3,852,597** | **2,961,377** | **891,220** | **30%** |
| **TOTAL REVENUE** | **15,692,412** | **15,199,051** | **493,361** | **3%** | **159,316,507** | **156,197,257** | **3,119,249** | **2%** |
| **EXPENSES** | | | | | | | | |
| Incentives | 8,981,416 | 8,874,467 | (106,949) | -1% | 59,813,782 | 64,921,932 | 5,108,150 | 8% |
| Program Delivery Subcontracts | 5,351,553 | 5,248,707 | (102,846) | -2% | 49,815,477 | 51,515,030 | 1,699,553 | 3% |
| Employee Salaries & Fringe Benefits | 1,242,838 | 1,223,819 | (19,019) | -2% | 11,729,615 | 12,098,965 | 369,350 | 3% |
| Agency Contractor Services | 188,530 | 155,089 | (33,442) | -22% | 1,237,472 | 1,617,787 | 380,315 | 24% |
| Planning and Evaluation Services | 178,262 | 308,573 | 130,311 | 42% | 1,800,183 | 3,085,727 | 1,285,543 | 42% |
| Advertising and Marketing Services | 234,571 | 264,708 | 30,138 | 11% | 2,085,022 | 2,666,033 | 581,011 | 22% |
| Other Professional Services | 211,970 | 399,772 | 187,803 | 47% | 2,319,041 | 3,944,245 | 1,625,203 | 41% |
| Travel, Meetings, Trainings & Conferences | 39,691 | 38,381 | (1,310) | -3% | 308,808 | 393,848 | 85,040 | 22% |
| Dues, Licenses and Fees | 20,440 | 14,292 | (6,148) | -43% | 165,402 | 188,676 | 23,274 | 12% |
| Software and Hardware | 27,747 | 43,255 | 15,508 | 36% | 291,822 | 440,480 | 148,658 | 34% |
| Depreciation & Amortization | 17,819 | 25,602 | 7,784 | 30% | 179,850 | 216,319 | 36,468 | 17% |
| Office Rent and Equipment | 90,432 | 88,328 | (2,104) | -2% | 840,513 | 883,278 | 42,765 | 5% |
| Materials Postage and Telephone | 9,531 | 12,079 | 2,548 | 21% | 88,707 | 113,292 | 24,585 | 22% |
| Miscellaneous Expenses | 32 | 250 | 218 | 87% | 6,465 | 4,000 | (2,465) | -62% |
| **TOTAL EXPENSES** | **16,594,830** | **16,697,321** | **102,491** | **1%** | **130,682,159** | **142,089,611** | **11,407,451** | **8%** |
| **TOTAL REVENUE LESS EXPENSES** | **(902,418)** | **(1,498,270)** | **595,852** | **40%** | **28,634,347** | **14,107,647** | **14,526,700** | **103%** |

**Energy Trust of Oregon**
**Income Statement - Actual and Prior Yr Comparison**
**For the Ten Months Ending October 31, 2019**
**(Unaudited)**

| | October | | | | YTD | | | |
|---|---|---|---|---|---|---|---|---|
| | Actual | Actual Prior Year | Prior Year Variance | Variance % | Actual | Actual Prior Year | Prior Year Variance | Variance % |
| **OREGON PPC REVENUE** | | | | | | | | |
| Public Purpose Funds-PGE | 3,203,573 | 3,272,567 | (68,993) | -2% | 33,019,853 | 32,577,909 | 441,945 | 1% |
| Incremental Funds - PGE | 4,074,113 | 5,207,565 | (1,133,451) | -22% | 45,396,546 | 56,094,355 | (10,697,809) | -19% |
| Public Purpose Funds-PacifiCorp | 2,215,629 | 2,290,549 | (74,920) | -3% | 23,515,498 | 24,083,302 | (567,803) | -2% |
| Incremental Funds - PacifiCorp | 2,597,051 | 2,550,250 | 46,801 | 2% | 27,727,285 | 27,912,134 | (184,849) | -1% |
| Public Purpose Funds-NW Natural | 685,621 | 652,627 | 32,994 | 5% | 17,647,856 | 16,164,507 | 1,483,350 | 9% |
| NW Natural - DSM | 1,500,000 | 520,024 | 979,976 | - | 3,769,658 | 520,024 | 3,249,634 | |
| Public Purpose Funds-Cascade | 142,810 | 88,488 | 54,322 | 61% | 2,643,988 | 1,885,480 | 758,507 | 40% |
| Public Purpose Funds-Avista | 174,323 | 114,370 | 59,952 | 52% | 1,743,225 | 1,096,393 | 646,832 | 59% |
| **Total Oregon PPC Revenue** | **14,593,120** | **14,696,440** | **(103,320)** | **-1%** | **155,463,910** | **160,334,103** | **(4,870,194)** | **-3%** |
| NW Natural - Washington | 930,921 | 822,690 | 108,231 | 13% | 2,230,921 | 2,428,812 | (197,891) | -8% |
| Grant Revenue | | 7,864 | (7,864) | - | 38,169 | 76,636 | (38,467) | -50% |
| Community Solar Revenue | 35,434 | | 35,434 | - | 210,574 | | 210,574 | |
| Revenue from Investments | 132,937 | 118,385 | 14,552 | 12% | 1,372,933 | 825,328 | 547,605 | 66% |
| **Total Other Sources of Revenue** | **1,099,292** | **948,939** | **150,353** | **16%** | **3,852,597** | **3,330,775** | **521,822** | **16%** |
| **TOTAL REVENUE** | **15,692,412** | **15,645,379** | **47,033** | **0%** | **159,316,507** | **163,664,879** | **(4,348,372)** | **-3%** |
| **EXPENSES** | | | | | | | | |
| Incentives | 8,981,416 | 7,580,521 | (1,400,895) | -18% | 59,813,782 | 57,261,168 | (2,552,614) | -4% |
| Program Delivery Subcontracts | 5,351,553 | 4,831,502 | (520,051) | -11% | 49,815,477 | 48,052,116 | (1,763,361) | -4% |
| Employee Salaries & Fringe Benefits | 1,242,838 | 1,190,442 | (52,396) | -4% | 11,729,615 | 11,197,630 | (531,985) | -5% |
| Agency Contractor Services | 188,530 | 110,867 | (77,663) | -70% | 1,237,472 | 1,076,639 | (160,833) | -15% |
| Planning and Evaluation Services | 178,262 | 368,293 | 190,031 | 52% | 1,800,183 | 2,124,484 | 324,301 | 15% |
| Advertising and Marketing Services | 234,571 | 137,693 | (96,878) | -70% | 2,085,022 | 2,083,771 | (1,251) | 0% |
| Other Professional Services | 211,970 | 167,937 | (44,033) | -26% | 2,319,041 | 1,718,611 | (600,430) | -35% |
| Travel, Meetings, Trainings & Conferences | 39,691 | 33,041 | (6,650) | -20% | 308,808 | 315,030 | 6,223 | 2% |
| Dues, Licenses and Fees | 20,440 | 6,906 | (13,534) | -196% | 165,402 | 117,078 | (48,324) | -41% |
| Software and Hardware | 27,747 | 40,948 | 13,202 | 32% | 291,822 | 323,524 | 31,702 | 10% |
| Depreciation & Amortization | 17,819 | 22,937 | 5,119 | 22% | 179,850 | 354,488 | 174,638 | 49% |
| Office Rent and Equipment | 90,432 | 84,188 | (6,243) | -7% | 840,513 | 862,099 | 21,586 | 3% |
| Materials Postage and Telephone | 9,531 | 11,256 | 1,726 | 15% | 88,707 | 93,315 | 4,608 | 5% |
| Miscellaneous Expenses | 32 | 533 | 501 | 0% | 6,465 | 5,142 | (1,323) | -26% |
| **TOTAL EXPENSES** | **16,594,830** | **14,587,065** | **(2,007,765)** | **-14%** | **130,682,159** | **125,585,095** | **(5,097,064)** | **-4%** |
| **TOTAL REVENUE LESS EXPENSES** | **(902,418)** | **1,058,314** | **(1,960,732)** | **-185%** | **28,634,347** | **38,079,784** | **(9,445,437)** | **-25%** |

**Energy Trust of Oregon**
**Statement of Functional Expenses**
**For the Ten Months Ending October 31, 2019**
**(Unaudited)**

| | Energy Efficiency Total | Washington | Renewable Energy | Low and Moderate Income Solar Grant | Community Solar Operations | **Total Programs** | Management and General | Communications and Customer Service | Fund Development | **Supporting Centers** | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Incentives | $53,153,861 | $625,545 | $6,034,376 | | | $59,813,782 | | | | $0 | $59,813,782 |
| Program Delivery Subcontracts | 49,038,938 | 522,032 | 254,507 | | | 49,815,477 | | | | 0 | 49,815,477 |
| Employee Salaries & Fringe Benefits | 5,763,859 | 196,854 | 1,229,687 | 4,852 | 104,741 | 7,299,993 | 2,461,603 | 1,961,768 | 6,252 | 4,429,623 | 11,729,616 |
| Agency Contractor Services | 542,868 | 6,173 | 176,311 | 30,566 | 2,462 | 758,380 | 388,104 | 90,989 | | 479,093 | 1,237,473 |
| Planning and Evaluation Services | 1,757,573 | 6,715 | 43,670 | | | 1,807,958 | 274 | (8,050) | | (7,776) | 1,800,182 |
| Advertising and Marketing Services | 1,089,970 | 628 | 144,562 | | | 1,235,160 | | 849,862 | | 849,862 | 2,085,022 |
| Other Professional Services | 893,172 | 7,577 | 890,781 | 7 | 139 | 1,791,676 | 461,621 | 65,744 | | 527,365 | 2,319,041 |
| Travel, Meetings, Trainings&Conferences | 121,279 | 4,006 | 31,614 | 8 | 273 | 157,180 | 85,448 | 66,179 | | 151,627 | 308,807 |
| Dues, Licenses and Fees | 42,376 | 35,460 | 21,427 | - | 6 | 99,269 | 46,141 | 19,992 | | 66,133 | 165,402 |
| Software and Hardware | 105,345 | 2,877 | 150,112 | 55 | 1,162 | 259,551 | 16,157 | 16,115 | | 32,272 | 291,823 |
| Depreciation & Amortization | 97,274 | 2,682 | 21,024 | 76 | 1,775 | 122,831 | 30,150 | 26,869 | | 57,019 | 179,850 |
| Office Rent and Equipment | 329,017 | 9,251 | 113,739 | 426 | 10,760 | 463,193 | 205,191 | 172,128 | | 377,319 | 840,512 |
| Materials Postage and Telephone | 42,357 | 1,330 | 9,663 | 34 | 817 | 54,201 | 20,110 | 14,397 | | 34,507 | 88,708 |
| Miscellaneous Expenses | 1,558 | 18 | 2,187 | 1 | 21 | 3,785 | 2,339 | 341 | | 2,680 | 6,465 |
| TOTAL FUNCTIONAL EXPENSE | **112,979,450** | **1,421,148** | **9,123,659** | **36,025** | **122,156** | **123,682,437** | **3,717,139** | **3,276,334** | **6,252** | **6,999,727** | **130,682,159** |

**Energy Trust of Oregon**
**Administrative and Program Support Subject to OPUC Performance Measure**
**For the Ten Months Ending October 31, 2019**
**(Unaudited)**

| | PUC Grant Funded Total | Program Costs | Administrative and Program Support |
|---|---|---|---|
| Incentives | 59,188,237 | 59,188,237 | - |
| Program Delivery Subcontracts | 49,293,445 | 49,293,445 | - |
| Employee Salaries & Fringe Benefits | 11,360,694 | 5,676,763 | 5,683,930 |
| Agency Contractor Services | 1,192,181 | 467,489 | 724,694 |
| Planning and Evaluation Services | 1,793,567 | 1,801,245 | (7,676) |
| Advertising and Marketing Services | 2,073,597 | 1,234,532 | 839,065 |
| Other Professional Services | 2,304,614 | 1,769,680 | 534,932 |
| Travel, Meetings, Trainings & Conferences | 302,593 | | 302,593 |
| Dues, Licenses and Fees | 129,095 | | 129,095 |
| Software and Hardware | 287,318 | | 287,318 |
| Depreciation & Amortization | 174,593 | | 174,593 |
| Office Rent and Equipment | 815,280 | | 815,280 |
| Materials Postage and Telephone | 86,088 | | 86,088 |
| Miscellaneous Expenses | 6,390 | | 6,390 |
| **TOTAL FUNCTIONAL EXPENSE** | **129,007,695** | **119,431,391** | **9,576,302** |
| OPUC Grant / Utility Funded Revenue | | | 155,463,910 |

**Performance against OPUC Measure**

*Program support and administative cost may not exceed 8% of Revenue*

| | | |
|---|---|---|
| Maximum allowed under the performance measure | 8% | 12,437,113 |
| Actual program support and administrative cost | 6.2% | 9,576,302 |
| Unspent below the maximum allowed | | 2,860,811 |

**Energy Trust of Oregon**
**Program Expense by Service Territory**
**For the Ten Months Ending October 31, 2019**
**(Unaudited)**

| | PGE | Pacific Power | Subtotal Elec. | NWN Industrial | NW Natural Gas | Cascade | Avista | Subtotal Gas | Oregon Total | NWN WA | Solar LMI | Fund Development | Community Solar Operations | ETO Total | YTD Budget | Variance | % Var |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Energy Efficiency** | | | | | | | | | | | | | | | | | |
| **Commercial** | | | | | | | | | | | | | | | | | |
| Existing Buildings | $16,394,764 | $10,011,797 | $26,406,561 | $512,171 | $2,402,483 | $593,360 | $406,378 | $3,914,392 | $30,320,953 | $532,765 | | | | $30,853,718 | $36,680,714 | $5,826,996 | 16% |
| Multifamily Buildings | 4,399,976 | 1,493,859 | 5,893,835 | 7,369 | 931,641 | 19,324 | 111,447 | 1,069,782 | 6,963,617 | | | | | 6,963,617 | 7,822,672 | 859,055 | 11% |
| New Buildings | 8,175,833 | 3,663,991 | 11,839,824 | 61,207 | 1,296,606 | 232,152 | 122,438 | 1,712,403 | 13,552,227 | | | | | 13,552,227 | 15,513,751 | 1,961,524 | 13% |
| NEEA | 1,764,994 | 1,331,487 | 3,096,481 | | 216,739 | 24,082 | | 240,821 | 3,337,302 | | | | | 3,337,302 | 3,023,061 | (314,241) | -10% |
| **Total Commercial** | **30,735,568** | **16,501,134** | **47,236,702** | **580,747** | **4,847,469** | **868,918** | **640,263** | **6,937,397** | **54,174,099** | **532,765** | | | | **54,706,864** | **63,040,198** | **8,333,334** | **13%** |
| **Industrial** | | | | | | | | | | | | | | | | | |
| Production Efficiency | 11,868,087 | 10,903,630 | 22,771,717 | 1,317,280 | 300,973 | 176,093 | 25,814 | 1,820,159 | 24,591,876 | | | | | 24,591,876 | 27,333,410 | 2,741,534 | 10% |
| NEEA | 59,689 | 45,029 | 104,718 | | | | | | 104,718 | | | | | 104,718 | 113,059 | 8,341 | 7% |
| **Total Industrial** | **11,927,776** | **10,948,658** | **22,876,435** | **1,317,280** | **300,973** | **176,093** | **25,814** | **1,820,159** | **24,696,594** | | | | | **24,696,594** | **27,446,469** | **2,749,875** | **10%** |
| **Residential** | | | | | | | | | | | | | | | | | |
| Residential Combined | 14,174,389 | 10,940,780 | 25,115,169 | | 9,964,067 | 847,925 | 659,647 | 11,471,639 | 36,586,808 | 968,741 | | | | 37,555,549 | 37,279,540 | (276,009) | -1% |
| NEEA | 1,685,348 | 1,271,402 | 2,956,750 | | 858,131 | 95,348 | | 953,479 | 3,910,229 | | | | | 3,910,229 | 4,001,556 | 91,327 | 2% |
| **Total Residential** | **15,859,736** | **12,212,183** | **28,071,919** | | **10,822,198** | **943,273** | **659,647** | **12,425,118** | **40,497,037** | **968,741** | | | | **41,465,778** | **41,281,096** | **(184,682)** | **0%** |
| **Energy Efficiency Program Costs** | **58,523,080** | **39,661,974** | **98,185,052** | **1,898,030** | **15,970,642** | **1,988,284** | **1,325,723** | **21,182,678** | **119,367,735** | **1,501,503** | | | | **120,869,238** | **131,767,763** | **10,898,527** | **8%** |
| **Renewables** | | | | | | | | | | | | | | | | | |
| Solar Electric (Photovoltaic) | 3,848,827 | 2,678,345 | 6,527,172 | | | | | | 6,527,172 | | | | | 6,527,172 | 6,925,559 | 398,387 | 6% |
| Solar LMI | | | | | | | | | | | 38,169 | | | 38,169 | | | |
| Other Renewable | 877,415 | 2,235,372 | 3,112,787 | | | | | | 3,112,787 | | | | | 3,112,787 | 3,222,415 | 109,628 | 3% |
| **Renewables Program Costs** | **4,726,241** | **4,913,719** | **9,639,960** | | | | | | **9,639,960** | | **38,169** | | | **9,678,128** | **10,147,974** | **469,846** | **5%** |
| **Cost Grand Total** | **63,249,322** | **44,575,693** | **107,825,014** | **1,898,030** | **15,970,642** | **1,988,284** | **1,325,723** | **21,182,678** | **129,007,695** | **1,501,503** | **38,169** | | | **130,547,366** | **125,392,289** | **11,368,371** | **9%** |
| Community Solar Operations | | | | | | | | | | | | | 128,541 | 128,541 | 173,873 | 45,332 | 26% |
| Fund Development | | | | | | | | | | | | 6,252 | | 6,252 | | (6,252) | |
| **Cost Grand Total** | **63,249,322** | **44,575,693** | **107,825,012** | **1,898,030** | **15,970,642** | **1,988,284** | **1,325,723** | **21,182,678** | **129,007,695** | **1,501,503** | **38,169** | **6,252** | **128,541** | **130,682,159** | **142,089,611** | **11,407,450** | **8%** |

**ENERGY TRUST OF OREGON**
**Summary of All Units**
**For the Ten Months Ending October 31, 2019**

| | ENERGY EFFICIENCY | | | | | | | RENEWABLE ENERGY | | | OPUC Funded Programs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PGE | PacifiCorp | NWN Industrial | NW Natural | Cascade | Avista | Total | PGE | PacifiCorp | Total | |
| **REVENUES** | | | | | | | | | | | |
| Public Purpose Funding | 25,647,659 | 18,301,266 | | 17,647,856 | 2,643,988 | 1,743,225 | 65,983,994 | 7,372,194 | 5,214,233 | 12,586,427 | 78,570,421 |
| Incremental Funding | 45,396,546 | 27,727,285 | 3,769,658 | | | | 76,893,489 | | | | 76,893,489 |
| Grant Revenue | | | | | | | | | | | |
| Community Solar Revenue | | | | | | | | | | | |
| Revenue from Investments | | | | | | | | | | | |
| **TOTAL PROGRAM REVENUE** | **71,044,205** | **46,028,551** | **3,769,658** | **17,647,856** | **2,643,988** | **1,743,225** | **142,877,483** | **7,372,194** | **5,214,233** | **12,586,427** | **155,463,910** |
| **EXPENSES** | | | | | | | | | | | |
| Incentives | 25,192,441 | 17,700,295 | 854,032 | 7,795,940 | 962,889 | 648,261 | 53,153,861 | 2,969,052 | 3,065,323 | 6,034,375 | 59,188,236 |
| Program Delivery Subcontracts | 25,046,732 | 16,218,002 | 760,180 | 5,780,801 | 748,888 | 484,335 | 49,038,938 | 151,435 | 103,072 | 254,507 | 49,293,445 |
| Employee Salaries and Fringe Benefits | 1,495,502 | 1,059,288 | 65,869 | 386,397 | 46,349 | 32,903 | 3,086,307 | 432,661 | 508,725 | 941,386 | 4,027,693 |
| Agency Contractor Services | 157,310 | 117,274 | 8,931 | 29,219 | 4,736 | 2,992 | 320,461 | 84,052 | 58,491 | 142,543 | 463,004 |
| Planning and Evaluation Services | 824,820 | 570,546 | 38,939 | 134,088 | 20,543 | 12,293 | 1,601,230 | 21,683 | 15,089 | 36,773 | 1,638,003 |
| Advertising and Marketing Services | 512,035 | 360,134 | 15,928 | 165,495 | 18,952 | 13,280 | 1,085,827 | 78,455 | 65,880 | 144,335 | 1,230,162 |
| Other Professional Services | 320,947 | 233,778 | 3,667 | 176,456 | 15,962 | 12,303 | 763,113 | 363,948 | 476,844 | 840,792 | 1,603,905 |
| Travel, Meetings, Trainings and Conferences | 30,689 | 23,921 | 1,454 | 9,943 | 1,132 | 751 | 67,891 | 14,179 | 11,819 | 25,997 | 93,888 |
| Dues, Licenses and fees | 7,470 | 4,545 | 244 | 1,151 | 247 | 158 | 13,814 | 11,502 | 8,400 | 19,902 | 33,716 |
| Software and Hardware | - | - | - | - | - | - | - | 79,106 | 55,049 | 134,155 | 134,155 |
| Materials Postage and Telephone | 912 | 838 | 101 | 23 | 14 | 2 | 1,890 | 47 | 14 | 60 | 1,950 |
| Miscellaneous Expenses | 351 | 271 | 0 | 247 | 21 | 16 | 906 | 1,157 | 805 | 1,962 | 2,868 |
| Shared Office Space | 183,619 | 131,149 | 8,440 | 46,408 | 5,584 | 3,947 | 379,144 | 60,349 | 70,718 | 131,067 | 510,211 |
| Shared Information Technology | 764,567 | 494,261 | 18,411 | 253,909 | 27,215 | 20,922 | 1,579,287 | 108,804 | 133,457 | 242,262 | 1,821,549 |
| Customer Service Management | 91,323 | 59,840 | 2,106 | 31,037 | 3,493 | 2,654 | 190,455 | 6,180 | 4,300 | 10,480 | 200,935 |
| Trade Ally Management | 78,401 | 56,276 | 301 | 47,063 | 4,119 | 3,311 | 189,469 | 54,779 | 38,120 | 92,899 | 282,368 |
| Planning & Evaluation Management | 683,943 | 508,938 | 17,848 | 257,753 | 21,730 | 16,645 | 1,506,857 | 35,683 | 34,481 | 70,164 | 1,577,021 |
| **TOTAL PROGRAM EXPENSES** | **55,391,062** | **37,539,356** | **1,796,451** | **15,115,930** | **1,881,874** | **1,254,773** | **112,979,450** | **4,473,072** | **4,650,587** | **9,123,659** | **122,103,109** |
| **ADMINISTRATIVE COSTS** | | | | | | | | | | | |
| Management & General | 1,664,716 | 1,128,205 | 53,991 | 454,293 | 56,558 | 37,711 | 3,395,472 | 134,552 | 139,851 | 274,404 | 3,669,876 |
| Communications & Customer Svc | 1,467,302 | 994,413 | 47,588 | 400,419 | 49,852 | 33,239 | 2,992,813 | 118,617 | 123,281 | 241,897 | 3,234,710 |
| **Total Administrative Costs** | **3,132,018** | **2,122,618** | **101,579** | **854,712** | **106,410** | **70,950** | **6,388,285** | **253169** | **263132** | **516,301** | **6,904,586** |
| **TOTAL PROG & ADMIN EXPENSES** | **58,523,080** | **39,661,974** | **1,898,030** | **15,970,642** | **1,988,284** | **1,325,723** | **119,367,735** | **4,726,241** | **4,913,719** | **9,639,960** | **129,007,695** |
| **TOTAL REVENUE LESS EXPENSES** | **12,521,125** | **6,366,577** | **1,871,628** | **1,677,214** | **655,704** | **417,502** | **23,509,748** | **2,645,953** | **300,514** | **2,946,467** | **26,456,215** |
| **NET ASSETS - RESERVES** | | | | | | | | | | | |
| **Rollforward from beginning of year** | | | | | | | | | | | |
| **Beginning Total Net Assets at 1/1/2019** | 22,328,018 | 9,319,633 | 772,993 | 3,591,597 | 373,597 | (45,817) | 36,340,021 | 9,510,800 | 6,490,682 | 16,001,482 | 52,341,503 |
| Current Year Revenue Less Expenses | 12,521,125 | 6,366,577 | 1,871,628 | 1,677,214 | 655,704 | 417,502 | 23,509,748 | 2,645,953 | 300,514 | 2,946,467 | 26,456,215 |
| Attribution of Investment income this year (est) | 521,099 | 227,897 | 31,147 | 80,752 | 12,786 | 2,970 | 876,651 | 197,473 | 121,048 | 318,521 | 1,195,172 |
| **Ending Net Assets** | **35,370,242** | **15,914,107** | **2,675,768** | **5,349,563** | **1,042,087** | **374,655** | **60,726,420** | **12,354,226** | **6,912,244** | **19,266,470** | **79,992,890** |
| **Net Assets Breakdown** | | | | | | | | | | | |
| Efficiency Program Reserves by Utility | 35,370,242 | 15,914,107 | 2,675,768 | 5,349,563 | 1,042,087 | 374,655 | 60,726,422 | | | | 60,726,422 |
| Renewable Reserves by Utility | | | | | | | | 12,354,226 | 6,912,244 | 19,266,470 | 19,266,470 |
| Net Assets by Other Funding Source | | | | | | | | | | | |
| Net Assets Loaned through Craft3 Program | | | | | | | | | | | |
| Operational Contingency Reserve | | | | | | | | | | | |
| Emergency Contingency Reserve | | | | | | | | | | | |
| **Ending Net Assets / Reserves** | **35,370,242** | **15,914,107** | **2,675,768** | **5,349,563** | **1,042,087** | **374,655** | **60,726,420** | **12,354,226** | **6,912,244** | **19,266,470** | **79,992,890** |

**ENERGY TRUST OF OREGON**
**Summary of All Units**
**For the Ten Months Ending October 31, 2019**

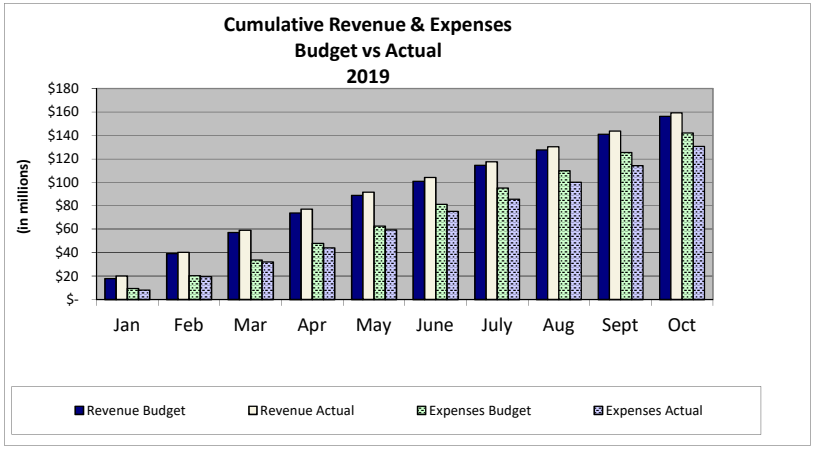
| | NWN Washington | OTHER FUNDING SOURCES | | | Investment Income | TOTAL ORGANIZATION | Approved budget | Change | % Change |
|---|---|---|---|---|---|---|---|---|---|
| | | Solar LMI | Fund Development | Community Solar | | | | | |
| **REVENUES** | | | | | | | | | |
| Public Purpose Funding | | | | | | 78,570,421 | 79,476,700 | (906,279) | -1% |
| Incremental Funding | 2,230,921 | | | | | 79,124,410 | 75,953,340 | 3,171,070 | 4% |
| Grant Revenue | | 38,169 | | | | 38,169 | | 38,169 | |
| Community Solar Revenue | | | | 210,574 | | 210,574 | 267,217 | (56,643) | |
| Revenue from Investments | | | | | 1,372,933 | 1,372,933 | 500,000 | 872,933 | 175% |
| **TOTAL PROGRAM REVENUE** | **2,230,921** | **38,169** | **-** | **210,574** | **1,372,933** | **159,316,507** | **156,197,257** | **3,119,250** | **2%** |
| **EXPENSES** | | | | | | | | | |
| Incentives | 625,545 | - | - | - | - | 59,813,781 | 64,921,932 | 5,108,151 | 8% |
| Program Delivery Subcontracts | 522,032 | - | - | - | - | 49,815,477 | 51,515,030 | 1,699,554 | 3% |
| Employee Salaries and Fringe Benefits | 84,405 | 4,249.00 | 6,252 | 91,907 | - | 4,214,506 | 4,340,439 | 125,933 | 3% |
| Agency Contractor Services | - | 30,450 | - | - | - | 493,454 | 718,619 | 225,166 | 31% |
| Planning and Evaluation Services | - | - | - | - | - | 1,638,003 | 2,731,560 | 1,093,556 | 40% |
| Advertising and Marketing Services | - | - | - | - | - | 1,230,162 | 1,734,782 | 504,623 | 29% |
| Other Professional Services | 3,975 | - | - | - | - | 1,607,880 | 2,594,066 | 986,184 | 38% |
| Travel, Meetings, Trainings and Conferences | 316 | - | - | 95 | - | 94,299 | 148,624 | 54,324 | 37% |
| Dues, Licenses and fees | 34,038 | - | - | - | - | 67,754 | 77,464 | 9,710 | 13% |
| Software and Hardware | - | - | - | - | - | 134,155 | 142,833 | 8,678 | 6% |
| Materials Postage and Telephone | - | - | - | - | - | 1,950 | 6,416 | 4,466 | 70% |
| Miscellaneous Expenses | - | - | - | - | - | 2,868 | - | (2,868) | - |
| Shared Office Space | 10,660 | 491 | - | 12,400 | - | 533,762 | 582,006 | 48,245 | 8% |
| Shared Information Technology | 43,138 | 834 | - | 17,754 | - | 1,883,275 | 2,218,696 | 335,422 | 15% |
| Customer Service Management | 28,867.00 | - | - | - | - | 229,802 | 288,135 | 58,334 | 20% |
| Trade Ally Management | - | - | - | - | - | 282,368 | 244,174 | (38,194) | -16% |
| Planning & Evaluation Management | 68,170 | - | - | - | - | 1,645,191 | 1,851,728 | 206,539 | 11% |
| **TOTAL PROGRAM EXPENSES** | **1,421,146** | **36,024** | **6,252** | **122,156** | **-** | **123,688,687** | **134,116,504** | **10,427,823** | **0** |
| **ADMINISTRATIVE COSTS** | | | | | | | | | |
| Management & General | 42,711 | 1,167 | - | 3,385 | - | 3,717,139 | 4,493,493 | 776,357 | 17% |
| Communications & Customer Svc | 37,646 | 978 | - | 3,000 | - | 3,276,334 | 3,479,611 | 203,276 | 6% |
| **Total Administrative Costs** | **80,357** | **2,145** | **-** | **6,385** | **-** | **6,993,473** | **7,973,104** | **979,633** | **0** |
| **TOTAL PROG & ADMIN EXPENSES** | **1,501,503** | **38,169** | **6,252** | **128,541** | | **130,682,159** | **142,089,607** | **11,407,448** | **8%** |
| **TOTAL REVENUE LESS EXPENSES** | **729,418** | **-** | **(6,252)** | **82,033** | **1,372,933** | **28,634,347** | **14,107,650** | **14,526,697** | **103%** |
| **NET ASSETS - RESERVES** | | | | | | | | | |
| **Rollforward from beginning of year** | | | | | | | | | |
| **Beginning Total Net Assets at 1/1/2019** | 501,071 | - | 24,897 | - | 9,937,301 | 62,804,772 | 43,871,177 | 18,933,595 | 43% |
| Current Year Revenue Less Expenses | 729,418 | - | (6,252) | 82,033 | 1,372,933 | 28,634,347 | 14,107,650 | 14,526,697 | 103% |
| Attribution of Investment income this year (est) | 15,781 | - | 397 | 748 | (1,212,098) | - | | | 0.0% |
| **Ending Net Assets** | **1,246,270** | **-** | **19,042** | **82,781** | **10,098,136** | **91,439,109** | **57,978,827** | **33,460,292** | **58%** |
| **Net Assets Breakdown** | | | | | | | | | |
| Efficiency Program Reserves by Utility | | | | | | 60,726,422 | | | |
| Renewable Reserves by Utility | | | | | | 19,266,470 | | | |
| Net Assets by Other Funding Source | 1,246,270 | - | 19,042 | 82,781 | | 1,348,092 | | | |
| Net Assets Loaned through Craft3 Program | | | | | 1,800,000 | 1,800,000 | | | |
| Operational Contingency Reserve | | | | | 3,298,136 | 3,298,136 | | | |
| Emergency Contingency Reserve | | | | | 5,000,000 | 5,000,000 | | | |
| **Ending Net Assets / Reserves** | **1,246,270** | **-** | **19,042** | **82,781** | **10,098,136** | **91,439,109** | | | |

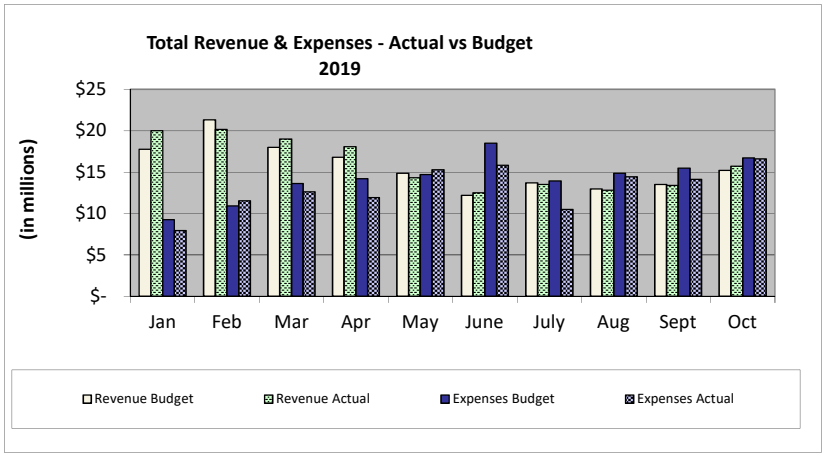
**Energy Trust of Oregon**
**Administrative Expenses**
**For the Quarter and Ten Months Ending October 31, 2019**
**(Unaudited)**

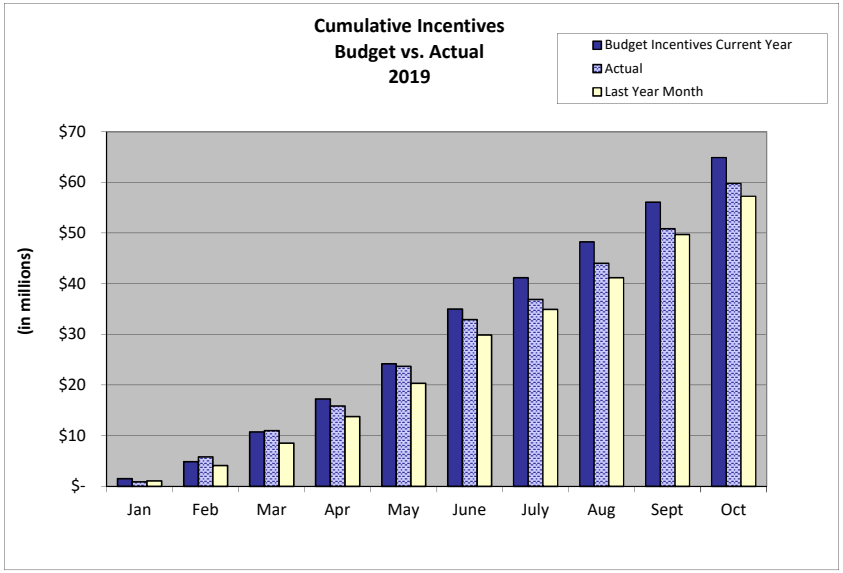
| | MANAGEMENT & GENERAL | | | | | | COMMUNICATIONS & CUSTOMER SERVICE | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | QUARTERLY | | | YTD | | | QUARTERLY | | | YTD | | |
| | ACTUAL | BUDGET | REMAINING | ACTUAL | BUDGET | VARIANCE | ACTUAL | BUDGET | REMAINING | ACTUAL | BUDGET | VARIANCE |
| **EXPENSES** | | | | | | | | | | | | |
| Outsourced Services | $18,222 | $240,354 | $222,132 | $437,374 | $954,514 | $517,139 | $102,280 | $323,000 | $220,720 | $897,104 | $1,076,667 | $179,563 |
| Legal Services | 6,230 | 13,500 | 7,270 | 7,319 | 45,000 | 37,681 | | | | | | |
| Salaries and Related Expenses | 298,513 | 858,765 | 560,252 | 2,647,141 | 2,821,794 | 174,653 | 189,155 | 507,111 | 317,956 | 1,765,193 | 1,732,673 | (32,520) |
| Supplies | 59 | 750 | 691 | 1,769 | 2,500 | 731 | | 125 | 125 | 1,796 | 417 | (1,379) |
| Postage and Shipping Expenses | | 2,500 | 2,500 | 510 | 833 | 323 | | | | | | |
| Printing and Publications | | 2,000 | 2,000 | 3,398 | 6,667 | 3,269 | | 875 | 875 | | 2,917 | 2,917 |
| Travel | 6,898 | 14,100 | 7,202 | 40,381 | 46,400 | 6,019 | 1,836 | 9,500 | 7,664 | 43,517 | 31,667 | (11,850) |
| Conference, Training & Mtngs | 5,114 | 13,075 | 7,961 | 42,479 | 44,583 | 2,104 | 737 | 7,625 | 6,888 | 18,918 | 25,417 | 6,498 |
| Interest Expense and Bank Fees | | | | 1,915 | 1,500 | (415) | | | | | | |
| Miscellaneous Expenses | | | | 18 | | (18) | | | | | | |
| Dues, Licenses and Fees | 770 | 2,400 | 1,630 | 45,990 | 26,505 | (19,485) | 1,138 | 4,125 | 2,987 | 18,129 | 13,750 | (4,379) |
| Shared Allocation (Note 1) | 26,896 | 73,034 | 46,138 | 236,452 | 245,646 | 9,193 | 18,956 | 59,001 | 40,045 | 198,352 | 198,447 | 95 |
| IT Service Allocation (Note 2) | 29,991 | 88,648 | 58,657 | 249,607 | 294,101 | 44,495 | 29,726 | 87,866 | 58,140 | 247,407 | 291,509 | 44,102 |
| Planning & Eval | 276 | 1,032 | 756 | 2,785 | 3,452 | 667 | 8,526 | 31,735 | 23,209 | 85,919 | 106,147 | 20,228 |
| **TOTAL EXPENSES** | **392,968** | **1,310,158** | **917,190** | **3,717,139** | **4,493,495** | **776,357** | **352,354** | **1,030,963** | **678,609** | **3,276,334** | **3,479,611** | **203,276** |

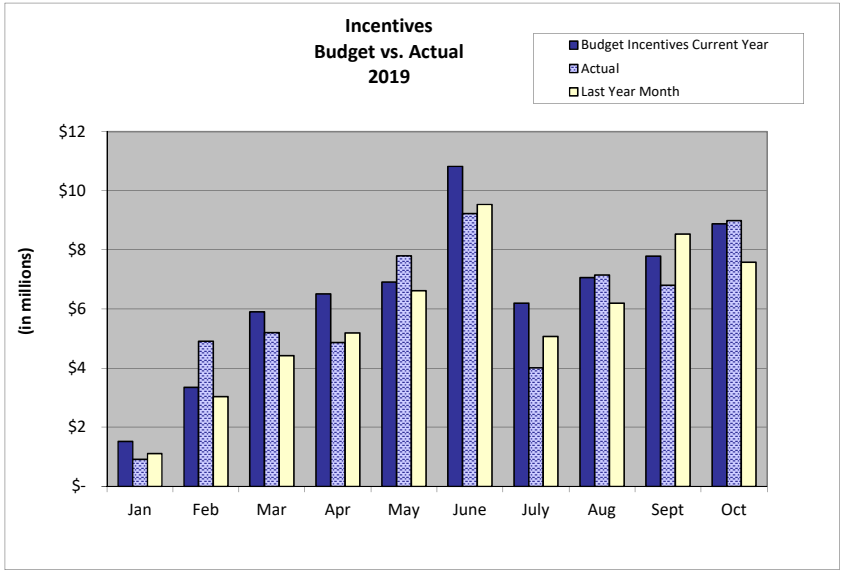
Note 1) Represents allocation of Shared (General Office Management) Costs
Note 2) Represents allocation of Shared IT Costs

Administrative Expenses 1st Month of Quarter


Cumulative Revenue & Expenses
Budget vs Actual
2019
(in millions)
$180
$160
$140
$120
$100
$80
$60
$40
$20
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Total Revenue & Expenses - Actual vs Budget
2019
(in millions)
$25
$20
$15
$10
$5
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Cumulative Incentives
Budget vs. Actual
2019
Budget Incentives Current Year
Actual
Last Year Month
(in millions)
$70
$60
$50
$40
$30
$20
$10
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct


Incentives
Budget vs. Actual
2019
Budget Incentives Current Year
Actual
Last Year Month
(in millions)
$12
$10
$8
$6
$4
$2
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct

# PINK PAPER

R00407

# Energy Trust of Oregon
## Contract Status Summary Report

Report Date: 11/18/2019

For contracts with costs through: 11/1/2019

| CONTRACTOR | Description | City | EST COST | Actual TTD | Remaining | Start | End |
|---|---|---|---|---|---|---|---|
| **Administration** | | | | | | | |
| | | **Administration Total:** | **13,944,803** | **6,719,178** | **7,225,625** | | |
| **Communications** | | | | | | | |
| | | **Communications Total:** | **3,968,425** | **2,762,785** | **1,205,640** | | |
| **Energy Efficiency** | | | | | | | |
| Northwest Energy Efficiency Alliance | NEEA Funding Agreement | Portland | 40,386,000 | 0 | 40,386,000 | 1/1/2020 | 8/1/2025 |
| Northwest Energy Efficiency Alliance | Regional EE Initiative Agmt | Portland | 36,142,871 | 33,630,216 | 2,512,655 | 1/1/2015 | 7/1/2020 |
| ICF Resources, LLC | 2019 BE PMC | Fairfax | 17,010,123 | 12,366,302 | 4,643,821 | 1/1/2019 | 12/31/2019 |
| CLEAResult Consulting Inc | 2019 Residential PMC | Austin | 8,138,843 | 5,784,832 | 2,354,011 | 1/1/2019 | 12/31/2019 |
| CLEAResult Consulting Inc | 2019 NBE PMC | Austin | 6,477,804 | 5,278,180 | 1,199,624 | 1/1/2019 | 12/31/2019 |
| Northwest Energy Efficiency Alliance | Regional Gas EE Initiative | Portland | 5,864,530 | 4,430,270 | 1,434,260 | 1/1/2015 | 7/1/2020 |
| Lockheed Martin Corporation | 2019 MF PMC | Grand Prairie | 4,728,273 | 3,509,857 | 1,218,416 | 1/1/2019 | 12/31/2019 |
| Energy 350 Inc | PE PDC 2019 | Portland | 3,583,989 | 2,734,678 | 849,311 | 1/1/2019 | 12/31/2019 |
| Cascade Energy, Inc. | PE PDC 2019 | Walla Walla | 2,401,712 | 2,021,148 | 380,564 | 1/1/2019 | 12/31/2019 |
| Intel Corporation | EE Project Incentive Agmt | Hillsboro | 2,400,000 | 1,600,000 | 800,000 | 11/13/2015 | 12/31/2019 |
| Evergreen Consulting Group, LLC | PE Lighting PDC2019 | Tigard | 2,271,740 | 1,816,240 | 455,500 | 1/1/2019 | 12/31/2019 |
| RHT Energy Inc. | PE PDC 2019 | Medford | 2,199,922 | 1,727,658 | 472,264 | 1/1/2019 | 12/31/2019 |
| TRC Engineers Inc. | 2019 EPS New Const PDC | Irvine | 2,135,341 | 1,703,019 | 432,322 | 1/1/2019 | 12/31/2019 |
| Cascade Energy, Inc. | PE PDC 2019 | Walla Walla | 1,921,485 | 1,575,662 | 345,823 | 1/1/2019 | 12/31/2019 |
| Northwest Power & Conservation Council | RTF Funding Agreement | | 1,825,000 | 1,695,057 | 129,943 | 2/25/2015 | 12/31/2019 |
| CLEAResult Consulting Inc | 2019 Retail PDC | Austin | 1,403,837 | 1,115,361 | 288,476 | 1/1/2019 | 12/31/2019 |
| Craft3 | Manufactured Home Pilot Loan | Portland | 1,000,000 | 0 | 1,000,000 | 9/20/2018 | 9/20/2033 |
| Michaels Energy, Inc. | PE 16 &17 Impact Eval | La Crosse | 539,000 | 535,044 | 3,956 | 7/1/2018 | 9/1/2019 |
| Craft3 | Loan Agreement | Portland | 500,000 | 500,000 | 0 | 1/1/2018 | 12/31/2019 |
| Pivotal Energy Solutions LLC | License Agreement | Gilbert | 490,500 | 369,925 | 120,575 | 3/1/2014 | 12/31/2019 |
| Uplight, Inc. | Optix Engage Online Audit Tool | | 467,000 | 405,538 | 61,462 | 6/1/2016 | 5/31/2020 |
| CLEAResult Consulting Inc | 2019 Residential PMC - Pilots | Austin | 400,790 | 175,959 | 224,831 | 1/1/2019 | 12/31/2019 |
| Open Energy Efficiency, Inc. | Automated Meter Data Analysis | Mill Valley | 400,000 | 355,467 | 44,533 | 1/1/2018 | 12/31/2019 |
| Balanced Energy Solutions LLC | New Homes QA Inspections | Portland | 381,575 | 226,912 | 154,663 | 4/27/2015 | 12/31/2019 |
| DNV GL Energy Services USA Inc | EB 2018 Impact Eval | Oakland | 350,000 | 78,919 | 271,081 | 5/9/2019 | 5/31/2020 |
| Craft3 | Loan Agreement | Portland | 300,000 | 300,000 | 0 | 6/1/2014 | 6/20/2025 |
| ICF Resources, LLC | 2019 BE NWN WA PMC | Fairfax | 270,876 | 224,453 | 46,423 | 1/1/2019 | 12/31/2019 |
| The Cadmus Group LLC | 2017 NB Impact Eval | Portland | 250,000 | 184,897 | 65,103 | 3/4/2019 | 3/31/2020 |
| CLEAResult Consulting Inc | 2019 Residential PMC - WA | Austin | 222,790 | 155,210 | 67,580 | 1/1/2019 | 12/31/2019 |
| ICF Resources, LLC | 2019 BE DSM PMC | Fairfax | 215,972 | 96,962 | 119,010 | 1/1/2019 | 12/31/2019 |

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

Report Date: 11/18/2019

For contracts with costs through: 11/1/2019

| CONTRACTOR | Description | City | EST COST | Actual TTD | Remaining | Start | End |
|---|---|---|---|---|---|---|---|
| CLEAResult Consulting Inc | 2019 Residential PMC - CustSvc | Austin | 176,490 | 126,139 | 50,351 | 1/1/2019 | 12/31/2019 |
| The Cadmus Group LLC | Site Speciific Impact Evals | Portland | 170,000 | 6,253 | 163,748 | 2/8/2019 | 1/31/2021 |
| DNV GL Energy Services USA Inc | Ind O&M Persistence Study | Oakland | 157,980 | 113,732 | 44,248 | 9/4/2018 | 10/1/2019 |
| Opinion Dynamics Corporation | PE Process Evaluation | Waltham | 150,850 | 140,910 | 9,940 | 4/2/2018 | 11/15/2019 |
| TRC Engineers Inc. | 2019 EPS New Const PDC - WA | Irvine | 124,474 | 105,719 | 18,755 | 1/1/2019 | 12/31/2019 |
| SBW Consulting, Inc. | BPA Air Source HP Study | Bellevue | 119,500 | 39,896 | 79,604 | 11/26/2018 | 11/30/2019 |
| Portland General Electric | Intel Mega project transition | Portland | 110,000 | 92,613 | 17,387 | 1/1/2019 | 12/31/2019 |
| Alternative Energy Systems Consulting, Inc. | PE Technical Review Assistance | Carlsbad | 100,000 | 28,305 | 71,695 | 5/8/2019 | 4/30/2021 |
| Cadeo Group LLC | Propensity Model | Washington | 99,840 | 99,840 | 0 | 3/15/2019 | 12/31/2019 |
| WegoWise Inc | benchmarking license | Boston | 90,000 | 44,228 | 45,772 | 6/15/2014 | 12/31/2019 |
| EES Consulting, Inc | Professional Services Agmt | Kirkland | 83,630 | 35,638 | 47,993 | 10/1/2016 | 9/30/2020 |
| Evergreen Economics | EM Process Evaluation | Portland | 72,000 | 62,734 | 9,266 | 5/6/2019 | 12/31/2019 |
| Earth Advantage, Inc. | Decrease REA to EA | Portland | 70,500 | 27,750 | 42,750 | 11/1/2018 | 10/31/2020 |
| Battele Memorial Institute | PNNIL Services Agreement | | 70,142 | 70,142 | 0 | 5/9/2019 | 3/30/2020 |
| Opinion Dynamics Corporation | Evaluation MHR Pilot | Waltham | 66,000 | 36,973 | 29,027 | 5/1/2017 | 3/31/2020 |
| SBW Consulting, Inc. | Streamlined TAS Assessment | Bellevue | 60,000 | 0 | 60,000 | 10/31/2019 | 4/15/2020 |
| BASE zero LLC | Quality Assurance Services | Bend | 58,825 | 57,553 | 1,273 | 3/1/2016 | 12/31/2019 |
| Craft3 | SWR Loan Origination/Loss Fund | Portland | 55,000 | 0 | 55,000 | 1/1/2018 | 12/31/2019 |
| Northwest Energy Efficiency Alliance | SmartThermostatPerformance | Portland | 50,000 | 50,000 | 0 | 9/15/2019 | 9/14/2021 |
| TRC Engineers Inc. | 2019 EPS New Const-Grid Harmon | Irvine | 50,000 | 49,943 | 57 | 1/1/2019 | 12/31/2019 |
| Verde | Community based EE | Portland | 50,000 | 17,000 | 33,000 | 3/22/2019 | 12/31/2019 |
| RWDI USA LLC | Net Zero Fellowship Grant | | 40,500 | 12,500 | 28,000 | 9/1/2018 | 12/31/2019 |
| Apex Analytics LLC | WhiskerLabs Optimization Pilot | Boulder | 40,000 | 35,763 | 4,238 | 3/20/2019 | 12/31/2019 |
| FMYI, INC | Subscription Agreement | Portland | 39,650 | 39,650 | 0 | 4/25/2016 | 2/1/2020 |
| INCA Energy Efficiency, LLC | Intel Mega Projects Eval | Grinnell | 35,000 | 651 | 34,349 | 8/1/2019 | 7/1/2021 |
| KEMA Incorporated | Billing Analysis Review | Oakland | 35,000 | 8,084 | 26,916 | 3/15/2015 | 12/31/2019 |
| MetaResource Group | Intel Mod 1&2 Megaproject | Portland | 35,000 | 12,417 | 22,583 | 3/1/2018 | 12/31/2019 |
| Northwest Energy Efficiency Council | Tool Lending Library | Seattle | 30,500 | 30,500 | 0 | 1/1/2019 | 12/31/2019 |
| American Council for and Energy Efficient Economy | 2019 Research Sponsorships | | 30,000 | 0 | 30,000 | 1/1/2019 | 12/31/2019 |
| INCA Energy Efficiency, LLC | Red Rock Evaluation | Grinnell | 30,000 | 1,587 | 28,413 | 6/10/2018 | 6/9/2020 |
| Community Energy Project, Inc. | Grant for MF Heating Workshops | Portland | 26,050 | 24,500 | 1,550 | 4/24/2019 | 12/31/2019 |
| University of Oregon | NB 2018 Net Zero Fellows Grant | Eugene | 26,000 | 9,398 | 16,602 | 10/1/2018 | 3/30/2020 |
| Cadeo Group LLC | RetailLightingTrackingAnalysis | Washington | 21,120 | 11,690 | 9,430 | 4/1/2019 | 12/31/2019 |
| Michaels Energy, Inc. | Large NB Impact Evaluation | La Crosse | 18,000 | 16,002 | 1,998 | 8/1/2018 | 3/31/2020 |

For contracts with costs through: 11/1/2019

| CONTRACTOR | Description | City | EST COST | Actual TTD | Remaining | Start | End |
|---|---|---|---|---|---|---|---|
| Rocky Mountain Institute | Innovation Team training E-Lab | Boulder | 16,000 | 0 | 16,000 | 10/1/2019 | 12/31/2019 |
| Efficiency for Everyone, LLC | Benefit Outreach- Appliances | Portland | 15,000 | 11,250 | 3,750 | 1/1/2019 | 12/31/2019 |
| Ekotrop, Inc. | Alternative Modeling Software | | 15,000 | 10,000 | 5,000 | 6/30/2019 | 1/31/2020 |
| DNV GL Energy Services USA Inc | NBProgram Techincal Guidelines | Oakland | 12,000 | 11,200 | 800 | 8/14/2019 | 10/30/2019 |
| HST&V, LLC | SEM Territory 3 Recruitment | Portland | 10,000 | 0 | 10,000 | 8/15/2019 | 12/31/2019 |
| LightTracker, Inc. | POS data development lighting | Boulder | 10,000 | 7,500 | 2,500 | 4/1/2019 | 12/31/2019 |
| Northwest Earth Institute | 2019 EcoChallenge | Portland | 10,000 | 10,000 | 0 | 7/23/2019 | 12/31/2019 |
| The Cadmus Group Inc. | NB Evaluation Plan | Watertown | 9,500 | 4,945 | 4,555 | 10/1/2017 | 3/30/2020 |
| Demand Side Analystics, LLC | TheromstatOpitmizationStudy OR | | 8,600 | 0 | 8,600 | 10/10/2019 | 5/30/2020 |
| Resource Innovation Institute | 2019 EE PETraining Sponsorhip | Portland | 7,500 | 7,500 | 0 | 2/6/2019 | 12/31/2019 |
| Northwest Energy Efficiency Council | 2019 BOC Technical Webinar | Seattle | 6,780 | 6,780 | 0 | 1/1/2019 | 12/31/2019 |
| | | **Energy Efficiency Total:** | **147,192,404** | **86,075,051** | **61,117,353** | | |
| **Joint Programs** | | | | | | | |
| Apex Analytics LLC | ResidentialPayPerformance P4P | Boulder | 83,000 | 5,245 | 77,755 | 8/1/2019 | 4/30/2022 |
| Structured Communications Systems, Inc. | ShoreTel Phone System Install | Clackamas | 72,845 | 65,287 | 7,559 | 1/1/2017 | 12/31/2019 |
| Pivot Advertising | TLM Pilots | | 40,000 | 22,532 | 17,468 | 5/7/2019 | 9/15/2020 |
| Illume Advising, LLC | Customer Insights Study | Verona | 34,000 | 16,451 | 17,549 | 7/20/2019 | 12/31/2019 |
| Infogroup Inc | Data License & Service Agmt | Papillion | 26,114 | 19,877 | 6,237 | 2/12/2018 | 2/12/2020 |
| Consortium for Energy Efficiency | Benchmarking Project 2019 | Boston | 20,000 | 0 | 20,000 | 1/1/2019 | 12/31/2019 |
| Daniel E. Ledezma | DEI Project Management | Portland | 19,100 | 0 | 19,100 | 1/1/2019 | 12/31/2019 |
| The Cadmus Group LLC | Capacity Savings Peak Periods | Portland | 8,500 | 8,499 | 1 | 5/1/2019 | 12/31/2019 |
| Empress Rules LLC | DEI Training & Consulting | | 7,500 | 0 | 7,500 | 9/1/2019 | 8/31/2020 |
| | | **Joint Programs Total:** | **311,059** | **137,890** | **173,169** | | |
| **Renewable Energy** | | | | | | | |
| Sunway 3, LLC | Prologis PV installation | Portland | 3,405,000 | 3,261,044 | 143,956 | 9/30/2008 | 9/30/2028 |
| City of Salem | Biogas Project - Willow Lake | Salem | 3,000,000 | 0 | 3,000,000 | 9/4/2018 | 9/4/2038 |
| Clean Water Services | Project Funding Agreement | Hillsboro | 3,000,000 | 2,013,106 | 986,894 | 11/25/2014 | 11/25/2039 |
| Oregon Institute of Technology | Geothermal Resource Funding | Klamath Falls | 1,550,000 | 1,550,000 | 0 | 9/11/2012 | 9/11/2032 |
| Farm Power Misty Meadows LLC | Misty Meadows Biogas Facility | Mount Vernon | 1,000,000 | 1,000,000 | 0 | 10/25/2012 | 10/25/2027 |
| Farmers Conservation Alliance | Irrigation Modernization | Hood River | 1,000,000 | 426,008 | 573,992 | 4/1/2019 | 3/31/2021 |
| 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 |

For contracts with costs
through: 11/1/2019

| CONTRACTOR | Description | City | EST COST | Actual TTD | Remaining | Start | End |
|---|---|---|---|---|---|---|---|
| Three Sisters Irrigation District | Mckenize Reservoir Irrigation | Sisters | 865,000 | 0 | 865,000 | 3/18/2019 | 3/17/2038 |
| 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 |
| 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 |
| Deschutes Valley Water District | Opal Springs Hydro Project | Madras | 450,000 | 0 | 450,000 | 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 | 300,000 | 100,000 | 1/1/2018 | 12/31/2038 |
| Farmers Conservation Alliance | Program Support | Hood River | 367,000 | 366,909 | 91 | 1/1/2018 | 12/31/2019 |
| 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 | | 350,000 | 334,523 | 15,477 | 4/9/2014 | 7/9/2034 |
| Clean Power Research, LLC | PowerClerk License | Napa | 303,601 | 303,601 | 0 | 7/1/2017 | 5/31/2020 |
| Energy Assurance Company | Solar Verifier | Milwaukie | 200,000 | 147,560 | 52,440 | 11/15/2018 | 10/14/2020 |
| City of Astoria | Bear Creek Funding Agreement | Astoria | 143,000 | 143,000 | 0 | 3/24/2014 | 3/24/2034 |
| Gary Higbee DBA WindStream Solar | Solar Verifier | Eugene | 100,000 | 10,714 | 89,286 | 10/15/2018 | 10/14/2020 |
| Kendrick Business Services LLC | Small Business Financial Dev | Albany | 84,750 | 16,940 | 67,810 | 8/1/2018 | 6/30/2020 |
| Wallowa County | Project Funding Agreement | Enterprise | 80,000 | 0 | 80,000 | 4/1/2018 | 3/31/2038 |
| SPS of Oregon Inc | Project Funding Agreement | Wallowa | 75,000 | 74,513 | 488 | 10/15/2015 | 10/31/2036 |
| Craft3 | NON-EEAST OBR Svc Agrmt | Portland | 60,000 | 60,000 | 0 | 1/1/2018 | 12/31/2019 |
| Clean Power Research, LLC | WattPlan Software | Napa | 56,000 | 56,000 | 0 | 11/17/2017 | 5/31/2020 |
| Oregon Solar Energy Industries Association | Solar soft costs install price | Portland | 54,200 | 30,525 | 23,675 | 12/21/2018 | 6/30/2020 |
| TRC Engineers Inc. | 2019 EPS New Const PDC-Solar | Irvine | 53,016 | 41,554 | 11,462 | 1/1/2019 | 12/31/2019 |
| Site Capture LLC | SiteCapture Subscription | Austin | 42,000 | 36,000 | 6,000 | 2/1/2018 | 1/31/2020 |
| Wallowa Resources Community Solutions, Inc. | Renewables Field Outreach | Enterprise | 40,000 | 36,658 | 3,342 | 2/1/2018 | 1/31/2020 |
| Clean Energy States Alliance | MOU Membership 2019-20 | Montpelier | 39,500 | 39,500 | 0 | 7/1/2019 | 6/30/2020 |
| Faraday Inc | Software Services Subscription | Burlington | 36,000 | 36,000 | 0 | 1/15/2019 | 12/14/2019 |
| Oregon Solar Energy Industries Association | SolarTechicalTraining Recruit | Portland | 33,500 | 0 | 33,500 | 9/15/2019 | 10/31/2020 |
| University of Oregon | UO SRML Contribution 2019 | Eugene | 24,999 | 24,999 | 0 | 3/9/2019 | 3/8/2020 |
| Robert Migliori | 42kW wind energy system | Newberg | 24,125 | 24,125 | 0 | 4/11/2007 | 1/31/2024 |
| Warren Griffin | Griffin Wind Project | Salem | 13,150 | 9,255 | 3,895 | 10/1/2005 | 10/1/2020 |
| Mid Columbia Economic Development | 2019 LMI Solar Grant | The Dalles | 10,000 | 6,000 | 4,000 | 1/25/2019 | 3/31/2020 |

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

Report Date: 11/18/2019

For contracts with costs
through: 11/1/2019

| CONTRACTOR | Description | City | EST COST | Actual TTD | Remaining | Start | End |
|---|---|---|---|---|---|---|---|
| Sustainable Northwest | LMI Solar Innovation Grant | Portland | 10,000 | 6,000 | 4,000 | 1/25/2019 | 4/30/2020 |
| Verde | 2019 LMI Solar Grant | Portland | 10,000 | 6,000 | 4,000 | 1/25/2019 | 4/30/2020 |
| Wallowa Resources Community Solutions Inc | LMI Solar Innovation Grant | Enterprise | 10,000 | 8,000 | 2,000 | 1/25/2019 | 11/30/2019 |
| Umpqua Community Development Corp. | LMI Solar Innovation Grant | Roseburg | 9,000 | 7,200 | 1,800 | 1/25/2019 | 3/21/2020 |
| Seeds for the Sol | 2019 LMI Solar Grant | | 8,350 | 6,680 | 1,670 | 1/25/2019 | 10/30/2019 |
| African American Alliance for Homeownership | LMI Solar Innovation Grant | Portland | 8,000 | 4,800 | 3,200 | 1/25/2019 | 11/30/2019 |
| Oregon Clean Power Cooperative | 2019 LMI Solar Grant | Corvallis | 6,250 | 3,750 | 2,500 | 1/25/2019 | 10/30/2019 |
| Rocky Mountain Institute | Membership to Elab 2019 | Boulder | 6,000 | 6,000 | 0 | 7/15/2019 | 7/30/2020 |
| | | **Renewable Energy Total:** | **22,306,173** | **15,005,194** | **7,300,979** | | |
| | | **Grand Total:** | **187,722,864** | **110,700,098** | **77,022,766** | | |
| | | **Contracts without incentives & without 2020-2025 NEEA:** | **123,604,257** | **94,870,240** | **28,734,017** | | |
| | | **Renewable Energy Incentive Total:** | **21,332,607** | **14,229,857** | **7,102,750** | | |
| | | **Energy Efficiency Incentive Total:** | **2,400,000** | **1,600,000** | **800,000** | | |

# Tab 5

# Policy Committee Meeting Notes

January 30, 2020, 3:00 p. m.

**Attending at Energy Trust offices**
Eric Hayes, Henry Lorenzen

Amber Cole, Michael Colgrove, Cheryle Easton, Fred Gordon, Tyrone Henry, Oliver Kesting, Steve Lacey, Debbie Menashe, Zabyn Towner, Peter West, Mark Wyman

**Attending by teleconference**
Alan Meyer, Anne Root, Roger Hamilton (ex-officio), Letha Tawney, OPUC

## Policies Reviewed

### 1. Conservation Funding for Schools 4.02.000-P

The committee discussed the Schools Funding policy. Staff proposed revisions to the policy to reflect recent collaboration and agreements on coordination between Energy Trust and Oregon Department of Energy (ODOE) with respect to public purpose charge funding for schools. As revised, the proposed policy will permit Energy Trust and ODOE to provide energy efficiency incentive funding to schools eligible for funding from ODOE of up to 100% of project cost. Under previous agreements with ODOE, Energy Trust funding and ODOE funding combined could not exceed the maximum incentive allowed through ODOE's schools program. In addition, the revised policy reflects ODOE and Energy Trust coordination on audits and reporting. Michael Colgrove reported on his appreciation of the important and productive work undertaken by ODOE, OPUC and Energy Trust staff to arrive at the agreements that are reflected in the proposed revised policy. Committee members recommend approval of the policy. Because of the extent of the changes, the policy will be presented to the full board through the Policy Committee report and not through the Consent Agenda.

### 2. Contract Execution Policy 5.05.009-P

The Contract Execution Policy was up for its regular three year review, and was presented to the Policy Committee Proposed revisions were offered to provide more clarity and specificity with regard to: governance with all of Energy Trust's funding agreements; in addition to the Grant Agreement with the OPUC; the policy's applicability to contract amendments; and references to "General Counsel," a title no longer in use at Energy Trust. Committee members recommend adding additional policy language to codify current staff practice of presenting information to the board on upcoming RFPs for significant contracts. Staff will revise the policy with this additional language and return to the Policy Committee at its next meeting for review and discussion.

Debbie Menashe reported on several other policies which are due for regular three year review: Using Reserves, Board Governance, Renewable Energy Certificate, and Program Approval policies are all in review in connection with other committees. Policy Committee members will review these policies and likely proposed revisions in the coming months along with other policies which will be due for their regular review.

## New Funding Opportunity Presentation

Mike Colgrove and Mark Wyman presented information to the committee about a new funding opportunity. In 2018, staff and policy committee members worked through a process for advising the policy committee and board of new funding opportunities that would potentially exceed $50,000 in additional revenue to Energy Trust. To ensure that board members are provided early notification and an opportunity to weigh in on whether to proceed, the New Funding Opportunities Process was adopted. The New Funding Opportunities Process contemplates a two-step process: First, make the Energy Trust executive team and policy committee aware of the opportunity in an "Appendix A" form on "Awareness or Ideation." Then, after more detail about the opportunity becomes available, staff would return to the policy committee to provide more detail about the opportunity and staff's intention with respect to it in an "Appendix B" on "Intention." In Appendix B, staff would seek approval to expend funds to proceed with a proposal or other next steps.

Given timing, Mark presented information on a possible upcoming opportunity, providing both the Appendix A on Awareness and Appendix B on Intention. Staff also asked the Policy Committee whether they had enough information to approve going forward to the full board with information and a request for proposal development funding. Committee members asked several questions about the opportunity and offered staff suggestions on ways to prepare for questions that might come up in a full board presentation. Staff will present information to the board at a future meeting.

## Board Presentation Previews

### Proposal for a Diversity Advisory Council Stipend Compensation Process

At the committee's last meeting, Debbie Menashe presented staff's proposed Diversity Advisory Council (DAC) stipend payment process to the policy committee. The DAC charter, approved by the board in July 2019, authorizes payment of stipends to DAC members. The charter also requires that payment for process for a DAC stipend be presented to the board for approval. Policy committee members expressed support for a DAC stipend and the benefits of stipends in reducing barriers to participation on the DAC. Staff noted that the stipend is assisting in recruiting efforts for the DAC. At their last meeting, the committee asked staff to return to the policy committee at its next meeting with more detailed comparison information about stipend amounts and considerations from other agencies. Staff provided additional information in a memo distributed to committee members. Staff also recommended stipend compensation for DAC members in the amount of $200 per public DAC meeting, with additional reimbursement for travel and transportation expenses. Stipend compensation would be provided pursuant to an agreement outlining terms and conditions for payment, will be reported to DAC members on a Form 1099 and will be payable following each DAC meeting attended.

The committee discussed staff's recommended stipend, noting that it is on the high end of similar stipend amounts paid by other agencies and organizations that pay stipends for similar committees. The committee recommends presenting the proposal DAC stipend procedure to the board at its next meeting for decision.

## Diversity Advisory Council (DAC) Members Recommended for Approval

Pursuant to the DAC charter, Energy Trust staff and DAC members requested Policy Committee approval for the appointment of new members to the DAC. The individuals listed below were recommended, and the committee approved their appointment:

- **Susan Badger-Jones,** former Energy Trust Eastern Oregon Outreach Manager and currently residing in La Grande, Oregon.
- **Shane Davis,** Human Resources Business Partner with the City of Portland, supporting several city bureaus.
- **Dolores Martinez,** Director of Community Engagement at Euvalcree, a nonprofit community organization in Ontario, Oregon.
- **Veronica Silva,** Bilingual Youth and Community Organizer for Rogue Climate, a community based organization based in Phoenix, Oregon.
- **Indika Sugathadasa,** a Portland-based small business owner of PDX HIVE, an education-focused real estate services company offering Home Energy Score (HES) services for Portland residences.
- **Sherry Tran,** small business owner in Bend, Oregon.

## Staff Updates

Oliver Kesting described the upcoming RFP for the Existing Buildings, Multifamily and Commercial and Industrial Lighting programs. Staff will present information on this RFP and the programs involved to the board at its next meeting.

**The meeting adjourned at approximately 5:00 p.m.**

# PINK PAPER

# Resolution 0899

**4.02.000-P Conservation Funding for Schools Policy**

January 30, 2020

**Recommendation**

Authorize the revisions to the Conservation Funding for Schools Policy as shown below.

**RESOLUTION 0899**
**CONSERVATION FUNDING FOR SCHOOLS POLICY**

**WHEREAS:**

1. **Proposed revisions set forth below reflect recent collaboration and agreements on coordination between Energy Trust, the Oregon Public Utility Commission, and the Oregon Department of Energy (ODOE) with respect to public purpose charge funding for schools.**
2. **Pursuant to coordination between Energy Trust and ODOE in compliance with procedures established among the two entities and in accordance with the revised policy as proposed, schools will experience greater support for energy efficiency projects.**
3. **Energy Trust's board Policy Committee has reviewed proposed revisions to the Conservation Funding for Schools Policy at its meeting on January 30, 2020, and recommends approval of the revised policy as set forth below.**

**It is therefore RESOLVED that the Energy Trust Conservation Funding for Schools Policy is revised as shown below.**

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed:

# 4.02.000-P Conservation Funding for Schools

| **History** | | | |
|---|---|---|---|
| Source | Date | Action/Notes | Next Review Date |
| Board Decision | May 8, 2001 | Adopted (R27) | November 28, 2001 |
| Board | November 28, 2001 | Reviewed/Revised (R58) | February 27, 2002 |
| Board | February 27, 2002 | Reviewed/Revised (R87) | February 2005 |
| Board | October 6, 2004 | Amended (R295) | October 2007 |
| Board | April 6, 2005 | Amended (R328) – see R331 | April 2006 |
| Board | May 4, 2005 | Amended (R331) | June 2008 |
| Board | February 14, 2007 | Authorized funding to 2007 (R426) | June 2010 |

| | | | |
|---|---|---|---|
| Board | July 28, 2010 | Amended (R557) | July 2013 |
| Board | August 17, 2011 | Amended (R592) | August 2016 |
| Board | September 28, 2016 | Amended (R783) | September 2019 |
| | | | |

**MARKED VERSION**

## Introduction

In 1999 the Oregon legislature passed Senate Bill 1149 (SB 1149). This bill created the Public Purpose Charge (PPC). The PPC collects money from electric bills to fund the Energy Trust of Oregon, energy efficiency programs for public schools to be administered by the Oregon Department of Energy (ODOE), and energy programs for the Oregon Housing and Community Services.

Energy Trust receives funding beyond the PPC. Beginning in 2002 and pursuant to a series of contracts with gas utilities, Energy Trust also collects money from gas bills to fund and support gas efficiency savings. Additionally, in 2007, the legislature also passed SB 838 to authorize the collection of supplemental funding for the acquisition by Energy Trust of more available electric efficiency savings.

SB 1149 specifically directs ~~funds~~ PPC funds to efficiency measures in K-12 schools ("SB 1149 schools"). These funds are administered by ODOE in "the Schools Program." ~~This policy coordinates how Energy Trust efficiency funds from non-SB 1149 sources, i.e., SB 838 and gas efficiency funds, may be combined with measures funded through the Schools Program.~~

## Energy Trust and ODOE Coordination for Schools

- On an ongoing basis, Energy Trust and ODOE will work together to develop mutually agreed-upon "Schools Coordination Procedures" to document how Energy Trust efficiency funds from non PPC funding, such as SB 838 supplemental funding and gas funding ("non-SB 1149 funding"), may be combined with Schools Program funding to benefit SB 1149 schools. Such Schools Coordination procedures shall be consistent with any guidance provided by the Oregon Public Utility Commission.
- Annually, Energy Trust will document how non-SB 1149 funding was used to fund efficiency measures in SB 1149 schools.
- ~~Energy Trust will make SB 838 and gas funds available for SB 1149 schools through its New and Existing Buildings programs, provided the proposed measures meet the Energy Trust cost-effectiveness criteria.~~
- ~~Energy Trust SB 838 and gas funds and Schools Program funds may be used for the same energy efficiency measure. However, Energy Trust funds (not including the cost of Energy Trust services such as audits or engineering support) and Schools Program funds, when combined, may not exceed the Schools Program's maximum allowable incentive or reimbursement amounts, or 100% of measure or project cost.~~
- ~~To ensure this, Energy Trust will provide ODOE, for all Energy Trust-funded measures at SB 1149 schools, project information including: district name, school name, measure description, date of installation and incentive amount paid for each measure.~~
- Energy Trust will inform SB 1149 schools about Energy Trust and ODOE coordination on energy offerings ~~may provide technical and/or administrative support for school projects, provided Energy Trust can claim savings from the measures it supports~~.

- Annually, Energy Trust will document how SB 838 or gas efficiency funds were used to fund efficiency measures in ~~K-12 schools~~SB 1149 schools.

**Reporting**

- In its biennial reports to the legislature, Energy Trust will not claim or report energy savings for efficiency measures at schools that have received both Schools Program Funding and Energy Trust non-SB 1149 funding or for savings for efficiency measures at schools~~where (a) the school district still receives SB 1149 funds and (b) the district has not fully allocated such funds. However, Energy Trust will continue to claim energy savings for New Construction Schools Projects and non-educational facilities,~~ which are ~~not~~ eligible for Schools Program funding.
- In reports to the OPUC, Energy Trust will claim and report energy savings ~~from~~ for ~~school~~ efficiency measures at schools for which it provided funds.

**CLEAN VERSION**

## Introduction

In 1999 the Oregon legislature passed Senate Bill 1149 (SB 1149). This bill created the Public Purpose Charge (PPC). The PPC collects money from electric bills to fund the Energy Trust of Oregon, energy efficiency programs for public schools to be administered by the Oregon Department of Energy (ODOE), and energy programs for the Oregon Housing and Community Services.

Energy Trust receives funding beyond the PPC. Beginning in 2002 and pursuant to a series of contracts with gas utilities, Energy Trust also collects money from gas bills to fund and support gas efficiency savings. Additionally, in 2007, the legislature also passed SB 838 to authorize the collection of supplemental funding for the acquisition by Energy Trust of more available electric efficiency savings.

SB 1149 specifically directs PPC funds to efficiency measures in K-12 schools ("SB 1149 schools"). These funds are administered by ODOE in "the Schools Program."

## Energy Trust and ODOE Coordination for Schools

- On an ongoing basis, Energy Trust and ODOE will work together to develop mutually agreed-upon "Schools Coordination Procedures" to document how Energy Trust efficiency funds from non PPC funding, such as SB 838 supplemental funding and gas funding ("non-SB 1149 funding"), may be combined with Schools Program funding to benefit SB 1149 schools. Such Schools Coordination procedures shall be consistent with any guidance provided by the Oregon Public Utility Commission.
- Annually, Energy Trust will document how non-SB 1149 funding was used to fund efficiency measures in SB 1149 schools.
- Energy Trust will inform SB 1149 schools about Energy Trust and ODOE coordination on energy offerings.

- Annually, Energy Trust will document how SB 838 or gas efficiency funds were used to fund efficiency measures in SB 1149 schools.

## Reporting

- In its biennial reports to the legislature, Energy Trust will not claim or report energy savings for efficiency measures at schools that have received both Schools Program Funding and Energy Trust non-SB 1149 funding or for savings for efficiency measures at schools which are eligible for Schools Program funding. In reports to the OPUC, Energy Trust will claim and report energy savings for efficiency measures at schools for which it provided funds.

# Tab 6

# Strategic Planning Committee Meeting

January 27, 2020

**Attending at Energy Trust offices**
Susan Brodahl

Michael Colgrove, Cheryle Easton, Fred Gordon, Debbie Menashe, Lizzie Rubado, Greg Stokes

**Attending by Teleconference**
Mark Kendall (Committee Chair), Roland Risser, Lindsey Hardy, Roger Hamilton, ex officio, and Letha Tawney, OPUC

**Meeting began at 10:00 a.m.**

## 2020-2024 Strategic Plan Management Proposal

Debbie Menashe thanked the committee for its efforts in developing a 2020-2024 Strategic Plan and noted that the committee's work going forward will be different. Instead of plan development, the committee will be monitoring progress of the plan, and the work of the committee will be scheduled accordingly. Staff and committee discussed anticipated meetings of the committee schedule for April, August, and November to track on interim progress, with an annual report to the full board at its meetings in May. This schedule contemplates that not "signposts" indicate a significant change for the plan If that were the case, the committee would reconvene for addressing any needed changes to the plan as well.

In early 2020, staff proposes working with the committee to develop a tool and processes for assisting the committee in plan management. Mark Kendall thanked Lizzie Rubado and Energy Trust staff for putting together a prototype plan management dashboard tool for committee review. Greg Stokes and Lizzie, who designed the prototype, explained how the intent of the dashboard tool is for reporting on the new strategic plan's progress indicators in a summary form. Greater detail could be reached through links embedded in the dashboard tool. The dashboard tool is envisioned by staff as an internal management and external informational tool. It is designed with emphasis on Focus Area 1, savings and generation progress indicators, the focus of many stakeholders. Focus Areas 2-5 are identified as in support of Focus Area 1 in the proposed dashboard tool.

Staff asked for feedback on the proposed layout, content, and cadence of reporting. At a future meeting, staff will provide information on the proposed metrics and seek committee feedback.

Committee members discussed the proposed dashboard tool prototype and frequency of reporting. Staff anticipates reporting on a quarterly basis to the committee, and annually to the full board along with other annual organizational results. This cadence of reporting is consistent with reporting to the OPUC. The committee then discussed the benefits of a succinct dashboard of results and metrics while acknowledging some

risk arising out of the inability to communicate context about those results and metrics when reported on an interim basis given the seasonality of Energy Trust's work.

Committee and staff then discussed various ideas for reporting, concluding that the dashboard has at least two purposes: one for plan management and one for transparency about Energy Trust's progress and focus on its strategic objectives.

Acknowledging these different purposes, Michael Colgrove suggested consideration of alternative approaches to providing transparency about strategic plan progress through use of Energy Trust's existing reporting tools. The dashboard would be used by Energy Trust staff and the committee to monitor and manage progress. Committee members asked Mike to investigate this dual approach with Energy Trust's reporting team.

To continue work on the proposed dashboard tool, staff will provide proposed metrics to the committee for review. Cheryle Easton will schedule a meeting of the committee in March to discuss the proposed metrics and any information on plan reporting. The committee will meet again in April to finalize the dashboard tool to present a proposal to the full board at the May board meeting.

**Meeting adjourned at approximately 11:30 a.m.**

**Next Strategic Planning Committee Meeting will be scheduled for review of proposed metrics and to discuss approaches for plan reporting.**

# Tab 7

# Diversity Advisory Council Meeting Notes

January 28, 2020

**Attending from the council:**
Oswaldo Bernal, OBL Media LLC
Charity Fain, Community Energy Project (by phone)
Kaeti Namba, NAYA
Kheoshi Owens, Empress Rules
Cheryl Roberts, African American Alliance for Homeownership

**Attending from Energy Trust:**
Mana Haeri
Ashley Bartels
Amber Cole
Amanda Potter
Erin Bloomquist
Kate Wellington
Cameron Starr
Greg Stokes
Sue Fletcher
Art Sousa
Debbie Menashe
Oliver Kesting
Michael Colgrove
Alina Lambert
Tyrone Henry
Alex Novie
Ryan Crews

**Others attending:**
Alex Bertolucci, CLEAResult
Greg Harr, Evergreen Consulting Group
Whitney Miller, CLEAResult
Ronnette Anderson, ICF
Angel Swanson, ICF
Shelley Beaulieu, TRC
Joe Marcotte, TRC
Rory Schmick, Stillwater Energy
Sada Naegelin
Susan Badger-Jones
Kris Alman
Eric Hayes, Energy Trust board
Mark Kendall, Energy Trust board
Henry Lorenzen, Energy Trust board
Anna Kim, Oregon Public Utility Commission (by phone)

---

## 1. Welcome and Orientation

Tyrone Henry, diversity, equity and inclusion lead, convened the meeting at 9:07 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/. The meeting was recorded on GoToMeeting. If you'd like to refer to the meeting recording for further detail on any of these topics, email info@energytrust.org.

Council members introduced themselves.

## 2. Open Council Member Discussion

*Topic summary*

There was a brief discussion of meeting topics, and holding a retreat for council members to complete a work plan and learn more about Energy Trust and areas in which members can be effective.

## 3. Business Programs RFP Presentation

*Topic summary*

Energy Trust is preparing to release a request for proposals (RFP) for its Existing Buildings program, Existing Multifamily program and commercial and industrial lighting initiatives. Staff explained this RFP is an opportunity to realign contracts and find efficiencies.

Debbie Menashe, director of legal and human resources, gave background on Energy Trust's contracting policies. The largest and most significant contracts are for program management contractors (PMCs) and program delivery contractors (PDCs); this RFP seeks proposals for each.

Previous RFPs have included diversity, equity and inclusion elements, and Energy Trust plans to build on those requirements with this RFP. Debbie noted spending requirements through subcontractors owned by minorities, women and service disabled veterans and emerging small businesses will ramp up through 2023 and be evaluated after three years. Energy Trust is also encouraging teaming between bidders, particularly smaller, more specialized firms, for outreach, technical services and operations.

*Discussion*
Council members asked about the services Energy Trust contracts for and why given the size of the staff. Oliver Kesting, commercial sector lead, said in this case it is for marketing, engineering, data analysis, outreach and related services specialized to these markets and that given the size of the programs, it cannot be done in house.

Members also asked how bidders will be evaluated and if they will be asked to report on demographics within their companies. Staff will encourage bidders to report on their internal demographics, in addition to reporting internal policies and practices and program design elements to meet Energy Trust's diversity goals.

Members said breaking down demographics is helpful to know which racial minorities the programs are reaching, and that it is important to know who owns the businesses and who is doing the work. They also asked what Energy Trust is doing proactively to support workforce development. Staff replied Energy Trust currently offers internships and supports diversity among trade ally contractors. Tyrone said he plans to do more outreach to school districts with high percentages of students of color, ethnic chambers and community-based organizations.

Members asked about plans to encourage partnerships between bidders in order to get subcontractors included on a higher level earlier in the contract. Creating meaningful relationships between subcontractors and prime contractors is a good idea since subcontracts can sometimes be kept at a distance. It is important to know how subcontractors are treated and accurately track contractor participation.

*Next steps*
At the council's February meeting, staff will seek one member of the council to serve on the RFP selection committee. The RFP will be released March 9, and staff will provide regular updates and seek input at future meetings.

**4. OPUC Performance Measures**
*Topic summary*
Debbie explained as part of its oversight, the Oregon Public Utility Commission every year identifies performance measures to track Energy Trust's work. For 2020, OPUC adopted additional performance measures around Energy Trust's Diversity, Equity and Inclusion Initiative: that the organization conduct a data enhancement project and bring updates on that to the Diversity Advisory Council four times a year; that it systematize the use of the Diversity, Equity and Inclusion Lens, bring that to the council for feedback, approval and updates on how it

has been used; that it complete 1,000 projects with trade allies that are minority owned; and that it hold at least one rural workshop to get feedback on how Energy Trust programs serve rural customers. These performance measures will be monitored and could be updated in 2021.

*Discussion*
No discussion.

*Next steps*
There will be a public workshop with OPUC on February 21 (rescheduled from January 31). Energy Trust plans to host at least one rural workshop in the spring.

**5. Update on Stipend Process**
*Topic summary*
The Diversity Advisory Council's charter calls for stipends for members. The board Policy Committee will make a recommendation to the board on the payment of stipends this week.

*Discussion*
No discussion.

*Next steps*
Debbie will email council member updates after the Policy Committee meets.

**6. Board Nomination Updates**
*Topic summary*
Debbie Kitchin from the Energy Trust Board of Directors and chair of the Nominating Committee provided background on two board vacancies and the nomination review process. The application period closed January 24 and nine applications were received. Five of the nine applicants are from outside Portland, three are people of color and three are women.

Debbie Kitchin thanked the Diversity Advisory Council for its helpful and useful suggestions for the process. She described how many aspects of the process were changed due the council's input. After the suggestion was made to reach out to groups that haven't been involved with Energy Trust before, board members met with community leaders in Klamath Falls. The event had a great turnout and resulted in seven nominations, though none applied. Debbie Kitchin said it was a good exercise and board members made good contacts. The organization is trying to deliver the message it wants connections to underserved communities and board members with experience outside of energy.

*Discussion*
Kheoshi Owens asked how many people of African descent applied to be on the board and how many are currently on the board. Debbie said none of the applicants are and one current board member is.

Cheryl Roberts wondered if people understand how important Energy Trust in. She suggested education is important to build trust and to get more people interested in working with Energy Trust, but that takes time.

*Next steps*
Four to six interviews will be conducted and two people will be selected.

**7. New DAC Member Updates**
*Topic summary*

Tyrone gave an update on new members coming to the council. About 10 people were interviewed and six were selected. The board Policy Committee will meet January 30 to confirm the selections.

*Discussion*
Kheoshi Owens asked how many of the new members are people of color. Tyrone said five of the six are.

*Next steps*
New members are expected to be at the February meeting.

**8. DAC Agenda Ideas**
*Topic summary*
Staff presented the council with proposed meeting agenda items for the coming year. Staff suggested a retreat could be held in the spring and that council members could be included in the orientation for new board members.

*Discussion*
For the February meeting, council members asked to go over the council charter, responsibilities and history. For members to be effective in their communities, they need to be educated about the organization. Members also expressed interest in meeting informally with new members before the February meeting and holding a retreat to set goals for the year. Michael Colgrove, executive director, suggested arranging a social before the February 18 meeting, either a dinner or other gathering. Energy Trust staff will put together some options.

As for future agendas, members said they can't judge the drafts without first having goals for the council. They also asked for flexibility in agenda items going forward.

*Next steps*
Staff will work with the new and existing council members to determine if a dinner can be held the night before the February 18 meeting.

**9. Public Comment**
Mark Kendall from the Energy Trust Board of Directors said he appreciates the council members' energy and suggested advisory council members should be involved in the board orientation process.

**10. Adjournment**
The meeting adjourned at 11:30 a.m. The next meeting is scheduled for February 18, 2020, from 9 a.m. to 11:30 a.m.

# Tab 8

# Resolution 901
# Approval of Diversity Advisory Council Stipend Compensation Procedures

February 25, 2020

**RESOLUTION 901**
**APPROVAL OF DIVERSITY ADVISORY COUNCIL STIPEND COMPENSATION PROCEDURES**

**WHEREAS:**

1. **Energy Trust's Diversity, Equity and Inclusion Policy calls for the establishment and maintenance of a Diversity Advisory Council ("DAC") "to provide advice and resources to the board of directors to support Energy Trust's diversity, equity and inclusion operations plan and to advise the board of directors on assessing measuring progress toward goals of such plan."**
2. **From December 2018 through June 2019, Energy Trust staff and board members Susan Brodahl and Ernesto Fonseca worked with seven community members, the "Foundational DAC", to design and draft a charter for the Energy Trust DAC.**
3. **In addition to the Foundational DAC, Energy Trust staff collected information and feedback from stakeholders, including members of Energy Trust's existing advisory councils, the Conservation Advisory Council and the Renewable Advisory Council, for consideration in forming and designing a charter for a new advisory council.**
4. **The Foundational DAC proposed a charter to the Energy Trust board of directors, and in July 2019 the board approved the proposed DAC charter.**
5. **Among other things, the approved DAC charter states that Energy Trust will offer stipends to DAC members "in accordance with procedures established by the DAC and Energy Trust staff and approved by the board of directors."**
6. **Energy Trust staff undertook a review of stipend compensation procedures for councils like the DAC around the region and proposed an amount and procedures as listed below to the Policy Committee on January 30, 2020:**

    - **$200 stipend compensation per public DAC meeting attended, either in person or remotely.**
    - **Reimbursement for travel and transportation expenses, but not time for traveling.**
    - **DAC stipend compensation will be paid after each meeting attended; expenses will be reimbursed upon receipt of supporting documentation.**
    - **DAC members may opt out of the stipend compensation.**
    - **To receive stipend compensation, the recipient must submit a Form W9 and complete a stipend compensation agreement which will include terms like independent contractor certification and limitation of liability.**
    - **Energy Trust will file 1099s for recipients of DAC stipend compensation.**
    - **Stipend compensation could be paid to the individual DAC member or the organization at which they are employed or represent, at the option of the DAC member and the organization with which they are affiliated, if any.**

7. **Energy Trust staff recommends DAC stipend compensation procedures consistent with the parameters outlined above.**

**It is therefore RESOLVED that the Board of Directors hereby approves procedures for payment of stipend compensation to the DAC consistent with the following parameters:**

1. **$200 stipend compensation per public DAC meeting attended, either in person or remotely.**
2. **Reimbursement for travel and transportation expenses, but not time for traveling.**
3. **DAC stipend compensation will be paid after each meeting attended; expenses will be reimbursed upon receipt of supporting documentation.**
4. **DAC members may opt out of the stipend compensation.**
5. **To receive stipend compensation, the recipient must submit a Form W9 and complete a stipend compensation agreement which will include terms like independent contractor certification and limitation of liability.**
6. **Energy Trust will file 1099s for recipients of DAC stipend compensation.**
7. **Stipend compensation could be paid to the individual DAC member or the organization at which they are employed or represent, at the option of the DAC member and the organization with which they are affiliated, if any.**

**It is therefore further RESOLVED that the executive director, or his designee, execute and implement the DAC stipend compensation procedures outlined above effective retroactively for DAC meeting attendance following July 2019.**

Moved by: Seconded by:

Vote: In favor: Abstained: 0

Opposed: 0